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Equity Research
Global

CREDIT SUISSE

Global Equity Strategy

2021 Research Outlook: Themes, Sectors and Styles

Investment Strategy | Strategy

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Themes: We continue to view rising inflation as the key macro theme and believe inflation will rise much more than the market expects (we see the US 10-year breakeven eventually rising to 3%). This is likely to drive investors into real assets, GEM equities and materials. We believe industrial production will catch up to consumption, and hence we are overweight industrial cyclicals and focus on opex names (employment agencies, software). We also focus on cheap indirect GEM exposure (e.g. alcoholic beverages).

Our top non-macro theme remains companies that facilitate a reduction in carbon emissions (with a particular focus on wind operators, insulation, industrial gases and copper).

Style: We reiterate our overweight of European value (having upgraded in mid-May) and maintain a small overweight of US growth. We stay overweight small caps globally (having upgraded in late June).

Sectors: We reduce cyclicals to benchmark. We take banks and telecoms up to overweight. Our top overweights remain mining, construction materials, renewable utilities and containerboard. For the first time since 2010, software is not our top overweight (it is now our fifth most preferred sector) and we have become much more selective in tech (we like telecom equipment, China tech and DRAMs). Our top underweights are big cap pharma, luxury, IOCs, non-content media and household products.

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Table of Contents

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Executive overview

Themes

Theme 1: Inflation expectations set to rise much more than clients expect

We continue to view high inflation as the main macro issue, and continue to believe the US 10-year breakeven will reach c3% by end-2022 (compared with 1.9% currently). Our view on inflation is the key differentiator of our macro view – the majority of clients we have spoken with see little inflation risk.

The drivers of our higher inflation expectations are: i) our aggregate policy indicator is currently looser than it was at the peak of the GFC and is set to remain abnormally loose for longer. This is a result of little appetite for fiscal austerity, highly dovish central banks and banks not needing to de-lever as they did in the aftermath of the GFC; ii) high money supply growth (which leads inflation by two to three years) implies 4%+ inflation in three years' time; iii) reversing or diminishing dis-inflationary forces (de-globalisation, rising oil prices, less impact from disruptive technology); iv) demographics – not only is labour supply becoming more limited relative to labour demand, but also by 2025 the UN forecasts that those born after 1980 will account for a larger share of the G7 population than those born before, and the policies they support such as higher minimum wages are likely to be more inflationary. If US President-elect Joe Biden's proposed $15 per hour minimum wage policy is implemented, this could add c5% to US labour costs, on our estimates; v) an extended period of negative real rates (for 5-10 years), above all, seems to be the only sustainable outcome to deal with extreme excess government leverage – austerity or default are not politically, economically or socially viable. We expect the Fed to in effect cap bond yields at c1.2-1.5%, but to allow inflation to rise to c3-3.5%, driving real bond yields down to c-2%. We believe Japanese secular deflation is an exception caused by a c80% fall in equity and house prices from peak to trough, a fall in nominal wages (owing to labour regulation that made retrenchment harder) and very reactive policy (i.e. no QE until five years after deflation started). Even near-term survey data implies a pickup in inflation and there is increasing evidence of shortages. The US and the UK are likely to have much more inflationary policies.

Our conclusions and recommendations in response to higher inflation: i) buy real assets (equities, real estate and commodities). Equities remain an inflation hedge until inflation rises above 3%. Office and retail real estate are unusually disrupted, explaining our strong overweight of residential real estate (and the associated subsectors of UK and US homebuilders) instead. Credit Suisse's Asian strategy team is highly overweight Hong Kong real estate. We expect the US 30-year to continue to steepen against the 10-year; ii) We see gold, which is driven by the TIPS and the US dollar, re-entering a strong bull market (we could see $2,500 gold price longer term, consistent with a TIPS yield of -2.5%). The P/E of gold stocks is close to 20-year-lows and gold has lagged behind Bitcoin recently; iii) GEM is the best performing region in periods of rising inflation; iv) cyclicals outperform as inflation rises, with the best performing sectors being construction materials, mining, residential real estate and banks. We are overweight these sectors.

Theme 2: The need to reduce carbon emissions

A year ago we highlighted the need to reduce carbon emissions as our key non-macro theme, and we continue to view it as such. The main drivers behind this theme are: i) the rise of ESG-related flows (with ESG being the 'fight-back' mechanism for active fund management, in our opinion) – $9trn of AUM has committed to have zero carbon emissions across their portfolio by 2050 (Net Zero Asset Managers Initiative); year-to-date ESG flows have been $16.4bn while non-ESG has had outflows of $59.5bn; ii) the rising popularity of the green parties (especially in Europe); iii) eight countries committing to have zero net carbon emissions by 2050 (China by 2060), with six committing it to law; iv) green-related investment being a form of fiscal QE; v) the reality of climate change (sea temperatures reached new highs in 2020); vi) the low cost of moving to carbon-neutral (the IMF and CCC revised down the net cost to c1% and 0.5% of

GDP by 2050; this is much lower than previous estimates and much lower than the cost of not moving).

We highlight the following ways to reduce carbon emissions.

Wind – The cost of wind is now on a par with gas (without subsidy). Our analysts expect €350bn of wind capex by 2030 (and recently doubled estimates). Renewable energy utilities have a FCF yield of 11.7% in 2021 (RWE, EDP, NextEra are Outperform-rated). Turbine OEMs is a three-company market. Transmission cables offer an attractive long-term opportunity and Credit Suisse analysts believe the addressable market could grow threefold by 2031. Our analysts' preferred names in this area are NKT and Nexans.

Nuclear – Its carbon footprint is similar to that of wind and lower than solar. IEA expects the nuclear share of global electricity generation to increase to 11% (from 10% currently) under a sustainable development scenario. In China, the National Energy Administration forecasts the nuclear share to increase to 22% by 2050 from 5% now. We like uranium miners: the top five miners control 60% of production and the market looks set to remain tight. Kazatomprom is Outperform-rated.

Hydrogen – (See the industrial gases/hydrogen section for more detail.) The hydrogen market could be a $2.5trn market by 2050, according to McKinsey (needed for storage, powering large vehicles and decarbonising steel/iron ore). Recently there have been significant announcements of government investment into developing the hydrogen industry, including in Germany (€9bn), France (€7.2bn), Italy (€8-12bn), Spain (€9bn) and Portugal (€7-9bn). Air Liquide and Air Products have c20% exposure to hydrogen and are both rated Outperform.

Batteries – Energy storage is a critical issue as we transition to more renewably generated power. Credit Suisse analysts forecast the battery market to be worth $204bn by 2030. LG Chem (24% market share in batteries) is rated Outperform, as is Johnson Matthey (for its catalytic converter).

Insulation – Some 40% of carbon emissions come from buildings and construction, therefore we believe insulation is critical. Since July, the UK, France and Germany alone have announced $21.5bn of insulation grants. We highlight TopBuild and Installed Building Products (both rated Outperform).

Reducing consumption of carbon-intensive products – The alternative meat market is estimated by Kearney to grow to $450bn by 2040 (from $5bn in 2018). Danone is a global leader in plant-based dairy products (which it aims to account for 20% of sales by 2025). We also see fish as an alternative source of protein (Tassal Group).

Other exposure to carbon emissions – Copper (renewables and EV require a lot more copper); mitigating the impact of climate change (pest control via Rentokil or Royal Boskalis Westminster, specialists in land reclamation).

Theme 3: Positive on GEM exposure

GEM is our highest conviction regional overweight on the regional side. GEM currencies against the dollar are close to Asian financial crisis lows on a discount to PPP, yet their export market share and basic balance of payments surplus are close to 20-year highs. GEM exposure typically outperforms if GEM currencies appreciate. GEM is the biggest regional winner from our macro expectation for a rise in inflation expectations and a fall in the dollar. GEM also benefits from improving trade relations with the US. GEM GDP (6%) in 2021 will still be 2% above DM (3.9%) on IMF numbers. We gain exposure to this theme via: our overweight of alcoholic beverages; 55% exposure to GEM and a vaccine play – the indirect exposure is particularly cheap, Diageo, Heineken, and Carlsberg (where implied DM P/E multiples are in the single digits); DM banks exposed to GEM such as KBC (Outperform- rated); GEM debt fund managers (the real yield pickup is unusually high). Stocks with high GEM exposure that have underperformed since the pre-virus market peak are: Pru, Carlsberg, Heineken, Prosus, Danone.

Theme 4: Focus on industrial cyclicals not the consumer

Industrial production (ex-China) is 3% off pre-COVID-19 levels, while consumption is 3.5% above. When GDP growth is above 2%, corporates tend to start to invest and core capital goods orders recover. We prefer companies exposed to opex over capex as corporate leverage remains high and cash flows might be used to pay off debt. This is reflected in employment intentions indicators, which are much higher than capex intentions indicators.

The sectors with large exposure to corporate opex are employment agencies (100% opex), capital goods (90%), ad agencies (90%), software (80%), hotels (60%) and airlines (25%). We are overweight employment agencies and software to gain exposure to the opex theme. Elsewhere, we participate in the industrial recovery with our overweight in mining, short-cycle capital goods, automation and non-residential construction.

Theme 5: Fiscal QE - the only answer into a recession

If GDP disappoints, real rates normally fall 5pp into a recession. This cannot happen this time around given the already low level of real rates, therefore governments must resort to fiscal QE. The multiplier on infrastructure in a recession tends to be 1.7x, while the IRRs on infrastructure are considerably above funding costs. Government investment in infrastructure is 20- 30% below its norm, resulting in the Global Infrastructure Hub forecasting a $15trn shortage of infrastructure by 2040 on the current trajectory. At the same time, there has been a U-turn in policy recommendation from official bodies (the IMF and OECD are urging governments to borrow and invest in productivity-enhancing infrastructure, unlike the aftermath of the global financial crisis (GFC) when they urged austerity). Politicians are reacting to this. The rise in the green vote and commitments to zero carbon by 2050 by many countries (2060 for China) gives this a green hue (insulation, railway, renewables, etc.).

We believe this is in effect financed by central banks. We could see the ECB buying infrastructure bonds from the EIB to leverage up seed capital provided by EU members (similar to Juncker bonds). We discuss the best ways to gain exposure to this theme in the construction section of this report.

Macro overview

Growth – 4.1% global GDP growth on CS forecasts in 2021

CS economists forecast GDP growth globally of 4.1% in 2021 – well above trend. They expect pre-virus levels of global GDP to be reached by H1-2021 and a recovery that is 3x quicker in Europe and 50% quicker in the US than in the aftermath of the GFC. We view the key drivers as policy, vaccines and pent-up demand.

- *Policy:* Our aggregate policy indicators (based on fiscal policy, monetary policy, corporate lending conditions and the US dollar) are still looser than at any time during the GFC. The big structural change is that this time around, policymakers have no stomach for fiscal austerity (which stopped the recovery in 2011/12), very loose corporate lending conditions in the corporate bond market and banks not having to de-lever. This is against a backdrop of ultra-dovish monetary policy.
- *Vaccines:* 1.5bn people can be vaccinated by mid-2021 and this could mean herd immunity for many developed markets is achieved by mid-2021, allowing these economies to return to normal.
- *Pent-up demand:* Unusually high personal savings ratios and low inventories.

In addition, so far defaults and bankruptcy data continue to fall. We expect IP to catch up to consumption.

US dollar – a structural bear market

We think the US dollar is in a five-year bear market, and we expect EUR/USD1.25 by end-2021 and EUR/USD1.40 by end-2022. This is driven by: i) US net foreign debt of nearly 70% of GDP; ii) the Fed set to print more money as a proportion of GDP than the ECB (which has not been the case year to date); iii) the current account surplus in Europe versus the US, which is unusually high and is consistent with 20% more expensive euro; iv) real 2-year rates in the Eurozone, which are c.10bp higher than in the US – the last time this happened EUR/USD was at 1.40; v) the view that the euro has become a much more credible reserve currency, yet just 20% of global FX reserves are in the euro compared with 28% in 2009; and vi) the absence of policy brakes on US dollar weakness (the Fed raising rates or the ECB cutting rates).

Bond yields: limited upside

We believe, any meaningful rise in US yields will be capped by the Fed. The Fed has been ultra-dovish and we think it would rather risk over- than under-stimulus, especially if the former Fed Chair, Janet Yellen (who believes that rising wage growth boosts productivity), is confirmed as Treasury Secretary. Since April, the Fed has bought just 43% of net issuance. We think this will change if yields rise much above 1.25%, with the Fed initially engaging in forward guidance rather than yield curve control. We expect the Bund yield to end 2021 at -0.3% and the 10yr Treasury at 1.3%.

Investment styles

European value: overweight

We maintain our overweight of European value (having upgraded in mid-May 2020): i) value tends to outperform as the Bund yield rises (we expect the 10yr Bund yield to rise to -30bp by end-2021) with value relative to growth in Europe being much more bond sensitive than that in the US; ii) value is still exceptionally cheap relative to growth and in absolute terms; iii) when earnings revisions for the overall market are positive (as is the case now), value tends to outperforms; iv) value normally rallies seven months after PMI and inflation expectations trough; and v) there is a record decoupling between value and cyclicals.

The normal outperformance for value over growth has been 20% over 16 months (and since 2010, 12% over five months) compared with 6.2% over 7 months so far.

Our preferred value sectors are those that are not technically disrupted, with an ESG angle and helped by government policy (construction materials, mining, homebuilders, tyre manufacturers, packaging). We also like the following deep-value sectors: tobacco, telecoms and banks (all of which we are a small overweight). Super eCap, value names that show upside on CS HOLT, include Siemens, Brenntag and DCC.

US growth: small overweight

We stick to a small overweight of US growth for the following reasons: i) the cost of equity at 8.5% can fall (which re-rates long-duration assets); ii) the P/E of growth is 43x, but during 'bubble' bull markets tends to reach 45x to 72x; and iii) there is unprecedented technical disruption.

Nevertheless, we have only low conviction because earnings revisions relative to value are weak and growth faces many of the same headwinds as those faced by growth in Europe. Quality growth stocks with low leverage and high operational quality include MSFT, Alphabet and Home Depot.

Small caps: overweight

European and UK small caps tend to outperform when PMIs rise or domestic currencies appreciate against the US dollar. In addition, European small caps are not expensive.

In the US, small caps have lagged behind the rise in ISM new orders and the fall in credit spreads. They tend to outperform if inflation expectations rise and remain cheap on P/B and DY relatives.

Cyclicals versus defensives

Cyclicals: reduce to benchmark

We move cyclicals (from which we exclude financials and energy) to benchmark from overweight. This does not lower our beta to GDP because we offset this by raising banks to a small overweight.

We reduce cyclicals to benchmark because: i) they move very closely with PMIs and are now discounting a PMI of 67. This equates to c4% GDP growth in the euro area, and is very close to Credit Suisse economists' forecast of 4.5% in 2021; ii) cyclicals have outperformed defensives by 40% – the most ever is 47% (and the norm is 15%); iii) cyclicals are now discounting a 2.1% 10-year inflation breakeven (vs 1.9% currently); iv) valuations on mid-cycle earnings are looking a little expensive.

However, we avoid taking weightings down further because: i) we think that inflation expectations will rise to 3% by end-2022 (and that is normally positive for cyclicals); ii) other macro drivers are supportive: bond yields are likely to head a little higher (we see 1.3% US 10-year), the yield curve steepen, and the dollar weakens; iii) cyclicals normally peak as PMIs peak (but it can be up to six months before), and we think PMIs peak in Q2; iv) positioning is still light (on Prime Data); and v) earnings revisions are very strong.

Which cyclicals? Our focus areas are cheap, non-technically disrupted, real assets focused on industrial cyclicals (as IP has lagged behind consumption), particularly where there is an infrastructure/green angle. Top of our list remains mining, construction materials, containerboard and premium tyres. We also particularly like those cyclical areas in which capital discipline or bargaining power mean there is likely to be a super-cycle: budget airlines & shipping, potentially also in copper and DRAMs. We are a small overweight of employment agencies. We move autos to underweight and are underweight in aggregate capital goods (which in Europe's case is a 'growth' sector).

Overweights

Banks: raise to small overweight

We raise banks to overweight and prefer them to non-financial cyclicals (a reversal of our previous stance). We raise our weighting in banks because: i) our macro assumptions for end-2021 (PMIs hit 55, EURUSD1.25 and Bund of -30bp) imply c.30% relative upside to the sector; ii) banks' cost of equity should be around 8%, meaning banks trade c60% below fair value, while their P/E, P/B and Credit Suisse HOLT P/B valuations are still sending buy signals; iii) banks have not fully reflected the closing of the Bund/BTP spreads (which is a proxy on euro break-up risk); iv) there is an extended TLTRO in Europe; v) there are fewer regulatory and litigation headwinds with more M&A; and vi) earnings revisions are staying positive relative to the market.

Our main concern has been a lack of provisioning. Our banks team forecasts excess provisioning to be just one-quarter of the level of provisioning seen during the GFC. However, bankruptcy data, a COVID-19 vaccine, as well as generous loan-guarantee schemes seem to suggest that provisioning will remain low. Bankruptcy and default data in US and EU has fallen very sharply. Moreover, we think banks' share prices are discounting a peak loss ratio of 7.4% (higher than the peak of the GFC).

We are concerned about disruption to captive asset management, corporate lending and payments, so choose to focus on retail banks and wealth management. We particularly like GEM-exposed banks. Our banks team's top picks include BNP, UBS, Julius Baer and ING.

On 9 November, we also highlighted our preference for banks in regions where tourism accounts for a very large share of GDP (Spain and Thailand in particular).

Telecoms: raise to small overweight

We think this sector offers the following attractions: i) deep value: the headline FCF yield of 10% drops to 8% after our team makes appropriate adjustments (for 2021) rising to 9.3% if we normalise capex – this is a record premium to the market. Our aggregate indicators and P/E relatives are close to 15-year lows. There have been high-profile cases of taking companies private at c25% premiums. ii) there is latent cyclicality for mobile as B2B is c30% of revenue, and has a beta of 2x to GDP (with a lag of six months). Also, the return of mobile roaming with travel should add c5% to profit. In the past 20 years, half the time telecoms have outperformed against a backdrop of rising PMIs iii) The sector is priced by HOLT to be value destroying, but becomes less so because: capex to sales is close to peak; fibre regulation appears to be easing on incumbents (so that even in 2022, only half of EU homes are passed by fibre challengers); M&A hurdles are lessening (after the decision to block the O2/Three merger was overruled by the ECJ); iv) This is a domestic sector, therefore it relatively benefits from euro strength; v) relative earnings revisions normally trough at their current level; vi) leverage is no longer a problem as it is very similar to the market, there is enough FCF to service the debt, and the yield on junk telecom bonds has fallen from 6.5% to 2.5%; vii) net consensus sell recommendations are unusually high and this has tended to be a buy signal. The CS European telecoms team focuses on DT (45% cheap on sum-of-the-parts) and Vodafone (13% FCF yield after selling its tower divisions). BT, KPN and Orange are rated Outperform.

Alcoholic beverages: reduce to small overweight

Valuations are no longer as compelling as they were. We view the alcoholic beverages sector as offering inexpensive, GEM-related, vaccine-recovery exposure, with far more limited disruption risk than other consumer staples and much less than the market. Alcoholic beverages is the most cyclical subsector among consumer staples (and should have outperformed by 14% more against the rest of the consumer staples given where PMIs are, in our view), dependent on a vaccine (50% of consumption is on trade and spirits are sensitive to duty free) and GEM (c53% of revenue). In some instances (e.g. Diageo versus Brown-Forman), the discount relative to US peers remains large, and these companies offer inexpensive indirect GEM exposure compared with their direct counterparts. We view spirits as among the least disrupted consumer staples and the most cyclical, with super-premium spirits having seen a CAGR of c.9% p.a. in the past 10 years. The Beverages team rates Diageo, Carlsberg and Heineken Outperform.

Mining: strong overweight

Mining remains one of our top-three overweight themes. We see the following supports: i) mining offers real asset exposure that benefits from our macro view of a rise in inflation expectations and weaker dollar; ii) So far, IP has lagged behind consumption globally ex China and mining benefits from IP catch up –Global IP is forecast to be 8% in 1H 21 versus -1.2% yoy currently; iii) China investment could see 14% growth in 2021 (vs. 9.7% yoy currently) according to CS economists – the lead indicators of infrastructure investment are still strong and CS economists expect real estate investment to accelerate to 6.5% from 4.1% in 2020; iv) industrial commodities prices should have performed better given current global and China PMIs; v) we think G3 investment in 2021 will be 4.2% versus -3.5% YoY currently; vi) a beneficiary from the green movement: five times more copper is required in renewables facilities than traditional thermal power stations, fuel cells are a net boost to platinum demand, a carbon-adjustment tax at borders would boost demand for European-quoted miners (which are less carbon emitting than their Chinese peers). China's move to reduce carbon emissions may also increase its imports of iron ore and copper and reduce its exports of aluminium (otherwise known as 'congealed energy'); vii) the sector is not technically disrupted; viii) valuations are still very cheap (EV/EBITDA relative is still 17% below its norm, yield relatives are abnormally high and on HOLT, market implied CFROI® is still very low. The FCF yield on maintenance capex and spot prices is 14.4x; ix) earnings revisions are very strong but relative performance has lagged behind; x) net consensus buy recommendations are low by historical standards. The Mining team's preferred names are Anglo American and Norilsk.

Utilities: strong overweight via renewables

Renewables now account for c55% of utilities market cap. They are growth (wind generation is likely to grow 15-fold over the next 20 years, with cost of wind now on par with gas without subsidy), the price of carbon is set to rise (to c$100 per tonne long term, according to BP), they are cheap (FCF yield on renewables is 11.6% and the P/E relative of the sector is still well below its norm, at levels that see the sector outperform typically). They are very attractive from the perspective of the environmental element of ESG, which helps flows and makes government policy supportive. Nearly everywhere, CO2 targets are becoming more ambitious and in some instances the main penalty for not using carbon-friendly energy is that the consumer will not buy the product (potentially a particular issue in Japan). Utilities also benefit from our macro view of a strong euro thanks to largely domestic earnings, and should benefit from a fall in real bond yields (given their leverage).

They are defensive, but we suspect that the rising importance of the carbon price makes this sector more cyclical than it used to be (and it is one of the most leveraged non-financial sectors and will benefit if, as we expect, into a recovery inflation rises more than bond yields). Year to date they have decoupled from PMIs. The long-term quality of earnings should be enhanced by moves to contract for difference and the fact that 24% of excess carbon emission allowances are to be taken out of the system each year by the EU Market Stability Reserve. We like RWE and EDP as renewable exposure. We think grids are growth given the considerable potential increase in electricity demand (particularly because of rising electric vehicle (EV) penetration) and the need to upgrade the grid; governments may encourage this given the very high economic multiplier (c3x) on grid investment. Therefore they should benefit from CPI-linked RAB growth for the UK and Italy. We also view UK water stocks as cheap index-linked proxies. Credit Suisse Utilities analysts highlight EDP, Enel and Snam.

Industrial gases/hydrogen: strong overweight

The industrial gases sector should be a future growth sector, with c20% of revenues coming from hydrogen. We see hydrogen as a vast growth market, with more potential end-uses for hydrogen emerging, such as powering large vehicles (trains, trucks, ships and planes), to supplement gas, and to decarbonise steel and fertilisers. New cheaper methods of hydrogen storage being developed. A carbon-adjustment tax and technology should by 2030 assist in making green hydrogen a much more competitive and viable alternative to fossil fuels. McKinsey expects the market for hydrogen and related fuel cells to grow to $2.5trn by 2050.

The sector has moved from a six- to a three-participant market, resulting in a sharp rise in profitability. Despite this improvement in industry structure, the P/E relative to growth stocks is now 1 standard deviation cheap and the sector is defensive owing to its long-term pricing of contracts. There is less risk from Chinese competition than five years ago. Air Liquide and Air Products are rated Outperform by Credit Suisse analysts.

Construction materials/homebuilders and related sectors: strong overweight

There are three key drivers of construction demand: i) governments investing more in infrastructure, funded in effect by central banks (the multiplier on infrastructure tends to be 1.7x in a recession) and real government yields well below infrastructure IRRs. Government investment in infrastructure is 20% to 30% below its long-term average. ii) Residential construction activity should be buoyed by housing shortages (in the UK, US and parts of Europe) and abnormally low real rates boost house prices, which boosts activity. iii) Nonresidential construction follows core capital goods orders, which are recovering and typically recover if GDP is above 2% (which it is set to be in 2021).

Our preferred ways to gain exposure to this theme are: i) UK homebuilders, which are discounting a 5% fall in house prices, but house prices are up 6.5% yoy; the COVID-19 vaccine should stem the rise in unemployment and therefore limit any fall in house prices; the sharp fall in construction wages should help margins, the sector is in effect cartelised and the P/B is in the middle of its 10-year range (we highlight Outperform-rated Taylor Wimpey). ii) US homebuilding companies (even now, US housing is just 4.3% of GDP, yet the NHAB survey suggests it should be close to 6%, P/B relatives are middling. Credit Suisse analysts rate D R Horton and CRH Outperform; iii) companies exposed to reducing carbon emissions from buildings – e.g. insulation as in our theme above. Some 25% of Schneider's business is exposed to this area. Green energy requires an upgrade of grids and cabling, potentially helping Nexans; and vi) cement/aggregates are looking very cheap and a carbon border adjustment tax should increase the incumbents' advantage (e.g. Lafarge, CRH).

Paper & packaging: strong overweight

We are overweight packaging and select other areas. Packaging looks inexpensive, has structural growth potential, offers recovery exposure and has very strong ESG credentials. Approximately 15% of packaging demand comes from e-commerce. Over time, fibre-based packaging is set to replace plastic (e.g. products such as Hexacomb). China is also banning waste imports, requiring the import of containerboard and recycled pulp (which could boost demand by 6-7% ultimately). Pricing, volume and ROICs for containerboard have proven very resilient in 2020.

Smurfit Kappa and Mondi trade at c14-15x 12-month forward earnings and both look inexpensive on HOLT. Around half of Stora Enso's value is environmentally friendly (forests, timber replacing cement, and paper replacing plastic in consumer products) in terms of ESG credentials. The sharp rise in US timber products has increased demand for sawn products.

Concessionaires: small overweight

We see the sector as a long-duration, domestic (beneficiary from a stronger euro), and non-technically disrupted inflation hedge (importantly, also able to outperform if inflation expectations rise more than nominal bond yields, as we believe they will; and cyclical through exposure to road traffic and freight volumes).

However, as valuations have bounced back on the back of the vaccine news, we stay a small overweight. Credit Suisse analysts have an Outperform rating on Aena (exposure to short-haul air travel and low-cost carrier exposure).

Auto components: tyres and airbags: small overweight

We do not think this area is technically disrupted. EVs wear tyres out 30% faster (shorter life cycle). High-end tyres are less exposed to the Chinese competitive risk, and the market tends to be concentrated. Around 70% of tyre profits come from the aftermarket. The fall in oil price this year and a COVID-19 vaccine should lead to an increase in miles driven. Tyre makers are unusually cheap on P/B relatives and performance discounts a level of profitability considerably below previous lows on HOLT. They correlate closely with the auto OEMs, but for the reasons outlined above are lower risk and therefore preferred to the OEMs. The sector has very strong relative earnings revisions and all the tyre companies look inexpensive on HOLT.

Airlines: overweight budget carriers

Airlines have been the most sensitive sector to rising COVID cases and in aggregate European airlines are still 40% off pre-virus levels relative to the market. The budget airlines are likely to enter a super-cycle, meaning that by 2023, EPS is probably higher than it would have been without COVID-19 disruption: no long-term disruption to recreational demand (rather than business demand) and enormous pent-up demand; much better capital discipline in the upcoming cycle (enabling the budget airlines to take share off the flag-carriers); better bargaining positions (against airports, aircraft manufacturers and unions); and barriers to entry of ownership of airport slots much more valuable in the long term (as the green lobby means it will be very hard to expand airport capacity).

From a macro perspective, airlines should benefit from a stronger euro (a lot of costs are dollar-denominated but revenues are domestic) and most of the rise in the oil price should have happened. On HOLT P/B, the sector remains cheap. Using 2023E EPS (as a proxy for mid-cycle EPS), Ryanair, Wizz Air and EasyJet are on P/Es of 11x, 12x, and 8x, respectively. The value of loyalty programmes may be being underestimated.

We avoid flag-carriers given the long-term disruption to business travel and higher costs. The Airlines team has Outperform ratings on Wizz Air and EasyJet, with Ryanair the top pick among the budget airlines.

Shipping: overweight

We believe shipping is set for a cyclical rebound as trade recovers and we see the possibility for a super-cycle (even if long term we think global trade will not outgrow global GDP). It is an industry that is fully consolidated (the top three alliances account for 85% of capacity, up from 29% a decade ago, and new orders are just 10% of the global fleet compared with 50% a decade ago). The sharp rise in freight rates compared with world trade volumes shows this discipline. A.P. Møller - Mærsk trades on 9% FCF yield on 2021 Credit Suisse analyst estimates.

Defence stocks: small overweight

P/E relatives of US names are at a 20-year low (compared with the market) and European names are at a c35% discount to US peers. Defence spending is considerably below historical norms. If all NATO members were to raise spending to 2% of GDP, defence spending would rise by c12%, on our estimates. The US has become a more unpredictable partner, prompting some countries (e.g. Germany) to increase defence spending. The world is becoming more tri-polar, with Russia and China becoming more assertive. We see a limited likelihood of technical disruption. Of the pure defence names, we highlight Outperform-rated BAE, Northrop Grumman and Ultra.

P&C insurance: small overweight

Insurance valuations are compelling (P/E relatives are at levels that have previously led to outperformance) and do not reflect the structural rise in the CFROI. Normally, the time to buy P&C and reinsurance is one to two months after a natural disaster. As long as premium increases are more than c6%, the premium increase offsets the negative impact of COVID-19 with trapped capital higher than capital raising allowing pricing to improve. This sector has much lower leverage than the rest of financials and is potentially less disrupted than banks. Outperform-rated stocks include Lancashire, Direct Line & Zurich.

Employment agencies: small overweight

Employment agencies move closely with employment PMIs, yet are discounting only current PMIs (which implies just 0.4% employment growth). They are domestic (and therefore benefit from a strong euro) and inexpensive (Adecco is trading at a 24% discount to Manpower with a 5.4% FCF yield on Credit Suisse 2021E EPS). Employment agencies are disrupted, but have invested or partnered with tech providers in some instances. Credit Suisse analysts recently upgraded the temporary employment agencies Randstad and Adecco to Outperform.

Global tech: small overweight

We maintain a small overweight of global tech (after reducing our weighting in September), but have become increasingly selective. Our concerns are: i) a large decoupling from earnings revisions; ii) demand being pulled forward, especially for elements of hardware; iii) more mature end markets in some areas (53% of ad spend is now online, global smartphone penetration rate is nearly 80%, a third of UK retail sales are already online) iv) high semi inventories; v) the value of the internet being close to our long-standing estimate of $6trn; and vi) increasing regulatory and tax risks (a 4% sales tax would take c20% off profits).

Nevertheless, we maintain a small overweight for the following reasons: i) tech has cyclical characteristics (a beta of 2x GDP into a recovery), while we see no clear evidence of over-investment in tech (which would diminish its cyclicality); ii) revenue estimates are in line with their trend; iii) tech is defensive (via its balance sheet, barrier to entry and tech investments facilitating cost cutting); iv) high cash conversion means that the FCF yield remains reasonable at 3% for global IT and 3.6% for the top 20 names (2021 median adjusted for share-based compensation); v) the regulatory risk covers only half the sector and generally looks manageable (though clearly increasing in China, Europe and the US); and vi) since 2010, tech has performed better in periods of rising than falling bond yields. Very often at the end of a bull market, there is a market bubble around a theme (this time of disruptive technology) which allows that theme to re-rate to P/E of 45-72x compared with 43x for the Nasdaq currently (on trailing earnings).

Software: overweight

Software had been our most preferred sector for the past decade, but we reduced our overweight in September to make it our fifth most preferred sector. This is mainly because of our concerns about high valuations (very elevated P/E relatives and the cloud trading on 7x 2022 revenues), high CRM penetration rates and falling earnings revisions.

Nevertheless, we still like software based on its attractive combination of cyclical and defensive features. Software has a beta of 3.5x to GDP in an upturn and offers exposure to opex (c80% of revenue) – software spending in aggregate is only up 2.7% in 2020. At the same time, software has a beta of only 0.5 to GDP in a downturn, a strong balance sheet, the highest CFROI of any sector apart from tobacco, it facilitates cost cutting and it is growth (IDC believes that data growth will be around 60% p.a. the SaaS market is lowly penetrated outside of CRM). Last, FCF yields are acceptable at 2.8%, owing to high cash conversion. Outperform-rated names include SAP, MSFT and Dassault Systemes.

Semis: small overweight

We like semis as a sector because it is highly concentrated, leading to an unusually disciplined capex cycle, end products are seeing rising semis content (10% CAGR for autos) the sector's FCF yield is above that of the market.

Credit Suisse analysts particularly like TSMC and SEC and focus on automotive (NXP, Renesas and STMicro) and industrial end users (Texas Instruments).

Other areas of tech we like

Elsewhere, we have particularly focused on telecom equipment with P/E relatives close to 30-year lows. Working from home has made 5G a necessity and c35% of the market (i.e. the China names) are now excluded from participating in many European and US projects. Ericsson is Outperform-rated.

Gaming's P/E-relative has de-rated to a 12-year low relative to the market, while the sector's structural outlook remains good (with Newzoo expecting gaming revenues grow by 8% p.a. until 2023 to reach global revenues of $200bn). Activision Blizzard and Frontier Developments are rated Outperform.

China tech is trading close to 16-year lows on P/E relatives. We continue to see a high chance of a China bubble that has yet to start and this could feed via Connects into China H shares. Prosus, Tencent and Alibaba are rated Outperform.

We also like cyber-security stocks, which trade at 0.9x 2026E global cyber spend and 0.2x the cost of cybercrime. Splunk and Ping Identity Holding are Outperform-rated.

Testing companies: small overweight

Testing companies are exposed to bounce-backs in global trade, commodity prices (c.30% of revenues), more complex supply chains, and the potential pivot to authenticating environmental claims (of ESG). P/E relatives are in the middle of their 10-year range. We highlight Applus (rated Outperform) as it offers inexpensive, high-quality exposure to the oil price.

Tobacco: small overweight

We maintain a small overweight of tobacco despite it going against our macro view, being partially technically disrupted and going against ESG trends. Tobacco scores at the top of our valuation scorecard, with by far the highest FCF yield and CFROI of any major sector. Relative earnings revisions are still above the market and there are no clear signs of an acceleration in disruption and there have been more regulatory controls on alternative tobacco products. The price elasticity of demand has risen, but is still only c.0.5. BAT (Outperform-rated) has a FCF yield of 12% using 2022 numbers according to CS analysts.

Benchmarks

Real estate: benchmark but overweight German residential real estate

We think office REITS and retail REITs remain highly disrupted, and the buy signal will be when the market is discounting prices that enable them to be converted into residential buildings (we do not yet have visibility on this). We admit that there is a large gap between the fall in bond yields and the performance of real estate (largely owing to the technical disruption and work-from-home impact of the pandemic) and that on 12m fwd P/E relatives, real estate is as cheap as it was at the peak of the GFC. We still like German residential real estate (as we have since 2008). We see these names as inflation hedges (with German real rates of nearly -2% in 2021). German housing still looks cheap; on average it costs about half as much to buy as to rent, when looking at mortgage rates vs rental yields, the house price to wage ratio is at average levels, and real house prices in Germany have not risen significantly and continue to lag other countries and are only up 25% since 2000 (c 1.1% p.a.). Home ownership is still only 45% (compared with 65% in the US) despite the top 3 income deciles having an ownership rate of 90%. The German housing market is also undersupplied. This subsector is not technically disrupted, in our view. P/E relatives are c20% below average levels (using 12-month forward earnings).

Underweights

Autos: move down to small underweight

The global sector is at a five-year high on price relatives to the market, with P/E relatives at an eight-year high. The sector's performance correlates very closely to credit spreads (owing to the importance of financing divisions) and the sector has fully discounted the fall in spreads (which, if anything, now appear too low). This remains a highly disrupted sector, with EV and AD bringing in new entrants without legacy costs. There is likely to be much more competition in China (which accounts for c40% of the profits of the German car companies) with China car sales already up 12% yoy. We have concerns about second-hand car values (which are up 11% yoy in the UK) as well as about how tougher regulations on combustion engines will affect these values and, in turn, leasing divisions. Underperform-rated autos include Mazda and Isuzu Motors. We have an overweight of tyres and airbags to get exposure to any recovery in auto sales.

Big-cap pharma: strong underweight

We moved to underweight in August and retain this view. i) Nearly all the macro factors are against pharma, which tends to be the worst performing sector when the dollar weakens (being the biggest dollar earner), PMIs rise, or inflation expectations rise. So far, we find that pharma is pricing in a PMI of c52, yet we see it rising to c60 (implying more underperformance). ii) There is likely to be a lot more political pressure. US branded drug prices are c50% above those in Europe, the US government accounts for c45% of total purchases and the US budget deficit is at record levels. Moreover, the US receives poor value for money on healthcare (for the amount of spending versus life expectancy). If drug prices were to fall to European levels, it would take at least 30% off EPS, on our calculations. President-elect Biden could use executive orders via MFN and HHS to reduce the prices paid by Medicare for drugs, which would then spread through the system. iii) When big-cap pharma has been under concerted political attack, it tends to trade more cheaply for longer (on 2022E earnings it is on the market multiple, whereas it trades at a 14% to 20% discount during times of political attack). iv) Pricing remains under pressure; v) there could be some areas of disruption (only 25% of products are unique, there could be shorter periods of uniqueness, and a move to value-based contracts); vi) relative earnings revisions are weak; and vii) net consensus buy recommendations are high for a sector that is still the largest in Europe (double the proportion of market cap than it was in 2008). Lundbeck and Orion are Underperform-rated by Credit Suisse analysts.

Consumer staples: underweight

We remain underweight the consumer staples sector as a whole, but like two subsectors – alcoholic beverages (a cheapish cyclical, GEM and vaccine-recovery exposed) and tobacco (pure deep value) – which account for c30% of the sector. We have the following general concerns: i) we want to industrial not consumer exposure (as highlighted in the thematic section); ii) consumer staples tend to be among the worst-performing sectors when inflation expectations rise; iii) the sector seems to be discounting a PMI of c54, but we think PMIs will rise to c60; iv) the sector is disrupted in many areas (much lower barriers to entry with shop space being infinite, the growth of 'craft' brands with the easier ability of social media to brand new products that compete against the established brands, limited scope for major M&A in some areas). Above all, c80% of growth in GEM is coming from local brands and GEM have accounted for c80% of consumer staples growth; v) valuations are only neutral; vi) the sector has the highest positive correlation with infection rates, therefore it is likely to be negatively affected by the COVID-19 vaccine with demand in some areas being pulled forward (e.g. hygiene, personal care); and vii) relative earnings revisions remain weak.

We are underweight beauty given extreme valuation and reliance on China for recent growth (and we see little incremental acceleration in China consumption compared with that elsewhere). Moreover, the one-off benefit of accessing third/fourth-tier cities online has now been seen. Beiersdorf and L'Oréal are both Underperform rated by Credit Suisse analysts.

We are underweight food producers and household products (these two subsectors suffer from declining asset turns and margins, a sign to us of a troubled business model); household products outperformed 3% YTD (with sales of household goods up 11% for example in the UK). Aryzta and Bell are Underperform-rated by Credit Suisse analysts.

We move food retailing to underweight from benchmark. If we include Ocado, the sector has outperformed 4% YTD. Food retailing benefitted from the pandemic (as consumers bought online or went to larger stores with wider aisles for 'health'-related reasons). In the UK, sales at food stores are up 5% YTD. There is ongoing secular disruption from: Aldi/Lidl (which still have a price advantage and still have a low market share, Amazon moving into fresh food, and vulnerability from high street real estate values. Relative earnings revisions are now worse than the market. Valuations are only neutral against other disrupted sectors.

Capital goods: underweight

Normally, given our positive view on industrial cyclicals and IP, it would seem natural to be overweight this sector. However, we have concerns that: 52% of the sector is 'growth' – more than any other cyclical sector – and growth capital goods stocks are both abnormally expensive and a Bund proxy (we are underweight European growth as shown in the style section); and we think corporates are more keen to spend on opex than capex (e.g. employment intentions are much stronger than capex intentions). Part of the reason for this is a low profit share of GDP (pre-virus) and extreme corporate leverage limiting long-cycle investment incentives. Among lead indicators, this sector is most sensitive to IFO and seems to be discounting a very strong rebound; both P/E and P/B relatives to the market are at extremes and the market appears to be assuming the CFROI remains at peak levels on HOLT.

We prefer short-cycle capex areas (Sandvik), automation, which is both growth and has a very strong correlation with PMIs, and is on the same multiple as tech with much less regulatory risk (Emerson, Eaton, Keyence, Fanuc); cheaper construction end-market exposure, especially given the upgrade required to electricity systems (Nexans), given our optimistic view on residential investment (Assa Abloy) and energy efficiency (Schneider).

Hotels: underweight

We prefer other COVID-19 vaccine beneficiaries (such as budget airlines, alcoholic beverages and concessions). The problem is that hotel capacity cannot be mothballed in the same way as aeroplanes can, therefore pricing tends to return only when capacity utilisation is high, which is why pricing did not improve sharply until four years after the GFC. This time around, the problems are worse because: i) supply from online rental portals is more pro-cyclical and moving into the business sector; ii) 60% of RevPAR is corporate and parts of this are permanently disrupted; iii) Online Travel Agents are providing price discovery. From a valuation perspective, P/E multiples on 2023E EPS do not look particularly cheap (26x for Accor, for example), unlike other pandemic-affected sectors, and European hotel groups are c50% more expensive than US peers. The European Hotels team prefers Whitbread as the least disrupted name.

Retailing: underweight

For 2021, we want to focus on industrial, not consumer, cyclicals. 2020 was an exceptional year for consumers, with disposable income growth at a 20-year high in the US, and next year inflation is likely to pick up more than wage growth. Much of the European retail sector (c70% by market cap) benefited from consumers staying at home, resulting in this becoming the second-most expensive sector in Europe on our composite valuation measure (at over 2std expensive). Earnings breadth is just about to turn negative relative to the market (and normally leads performance). The rising overseas component of revenues (particularly with the listing of Prosus) means that retailing underperforms when the euro appreciates (unlike retailing in other geographies). Inditex and H&M are rated Underperform by Credit Suisse analysts. We like Prosus given our positive view on China tech, our positive view on GEM digitisation especially in India and its cheap optionality.

Asset managers: underweight

We gain exposure to rising markets through private banks (UBS, Julius Baer) and wealth managers (FBK). We believe private banking and wealth-management services are more relationship-driven, resulting in less churn, therefore fees are less performance-sensitive than those for asset management. Moreover, we believe asset management is structurally disrupted by technology (enabling price discovery) and regulation (forcing price visibility). The shift from active to passive investment, with active fees sometimes more than 10 times higher than passive fees, has a lot further to go in Europe. Passive investment in Europe accounts for only 30% of equity AUM compared with 50% in the US. The consistent underperformance of active continues despite recent market volatility. EBITDA margins are extreme for a sector with such low capex to sales, indicating structural margin pressure. Data fees are likely to rise well above the rate of inflation (especially given the recent consolidation of data providers). There is a risk that UK fund managers will not be granted full equivalence status (hitting revenues and or costs). P/E ratios relative to the market and US peers look stretched.

Hargreaves Lansdown, Schroders and Standard Life Aberdeen are rated Underperform by Credit Suisse analysts. Our analysis supports the team's Outperform view on data providers (LSE).

Energy: underweight

We remain underweight the energy sector for the following reasons: i) the FCF yield on a $60pb oil price (c10.5%) is still less than that of other disrupted, ESG-conflicted sectors, such as tobacco (12%) or coal (25%) and much lower than mining (which is less disrupted and benefits from green-related spending on transport and energy unlike IOCs); ii) the risk remains that disruption is underestimated as carbon emission targets, bans on combustion engines and requirements for plastic recycling are brought forward; iii) energy transition comes with risks as renewables remain only a small part of the business and capex and energy companies might be overpaying for projects (as XOM did for XTO in 2008); iv) we struggle to be bullish on the oil price given our structural concerns about demand, shale being a swing producer (already the Baker Hughes rig count is up c30%) and the risk that OPEC discipline is weak (fearing stranded assets). In addition, better relations with Iran could add 2mbd to global supply as it did after the 2015 nuclear deal. Oil has already followed ISM (which is close to a peak), while speculative positions are neutral. Repsol, ENI and Occidental are rated Underperform by Credit Suisse analysts. For those who are bullish of the oil price, we would look at the testing companies, LatAm exposure and OFS companies who are making the transition to service wind (e.g. Subsea).

We prefer mining to oil & gas. We believe the mining sector is cheaper, less disrupted, offers exposure to the electrification of transport and renewables and a sharp recovery in global IP.

Luxury: Underweight

We think luxury has become too expensive, having been the best performing China-exposed sector year to date. China accounts for about half of growth and one-third of demand of global luxury consumption, and Chinse luxury demand is already very strong (with cosmetics, a proxy on luxury, up 21% yoy). There is evidence that the pandemic pulled forward consumption, with overseas travel being switched to luxury. Structural problems are starting to emerge. China housing, which accounts for half of Chinese household wealth, looks vulnerable on all our measures – there is a close correlation between Chinese property developers (which are starting to underperform) and the luxury sector. The Chinese consumer is overleveraged, with a debt-service-to-income ratio at 33%, having seen the biggest increase in leverage of any consumer group globally in the past seven years. Generally, we think the income and wealth inequality globally has risen to politically unacceptable levels and there will be more wealth tax/high-end income tax (Spain has already started this and 80% of Biden's proposed tax hikes fall on the wealthiest 1%). The luxury market is now well penetrated, with China already spending twice as much per unit of wealth than Japan. P/E multiples are extreme relative to the market and other branded consumer products. Revenue estimates of 13% in 2021 already look demanding. Brand value is higher in technology & tobacco.

Freight forwarders: underweight

Disrupted and expensive; we see global trade as likely to grow below nominal GDP structurally – Kuehne & Nagel is rated Underperform by Credit Suisse analysts.

Non-content media: remain underweight

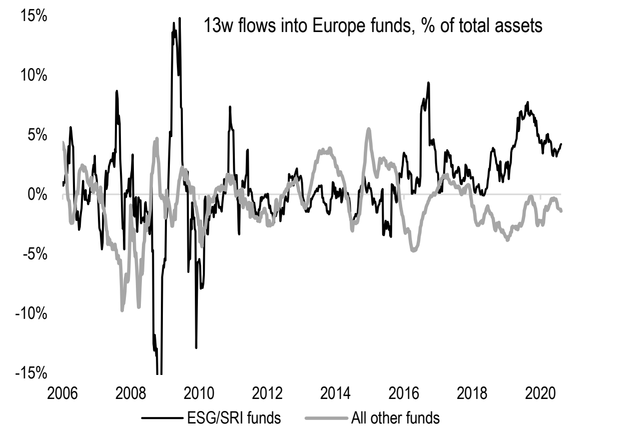
Non-content media is in structural decline. TV accounts for 27% of ad spend, but we think by the end of 2022, only 25% of time spent will be on media will be TV. TV viewership has been falling c2% p.a. in the UK. The demographics are against TV, with the over-65 age group viewing 3x the amount of TV of the under-25s. Social media cannibalises TV. Platform companies are moving more into content/streaming and have extremely large budgets. Moreover, subscription-based services (e.g. Netflix) or cross-subsidised platforms (e.g. Amazon TV) can significantly outspend traditional TV into a downturn. They also have considerable economies of scale. P/E multiples look cheap, but not as cheap as other disrupted sectors. Credit Suisse analysts rate ProSiebenSat Underperform.

Advertising agencies: underweight

Severe disruption from online, social media and consultants dominates any cyclical pickup for advertising agencies. WPP is more expensive (on 2022 estimates, which should be mid-cycle) than other disrupted sectors (banks and autos). On 2023 estimates, Facebook trades at a P/E of only 19x and has a lot of potential optionality in its businesses. Therefore we prefer exposure to an ad rebound via Alphabet and Facebook over the traditional agencies.

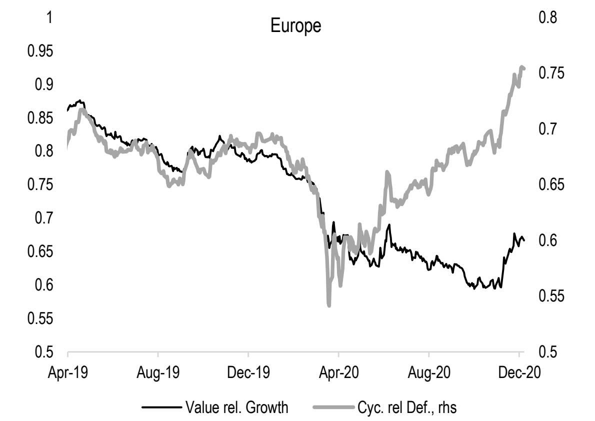
12 key charts

Figure 1: The only net inflows have been into ESG



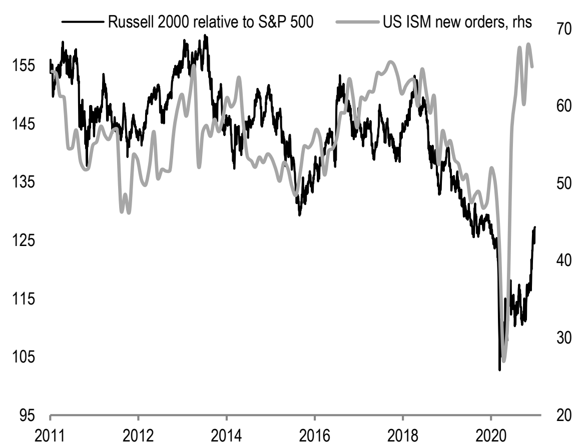
Source: EPFR, Credit Suisse research

Figure 2: European value has unusually lagged cyclicality



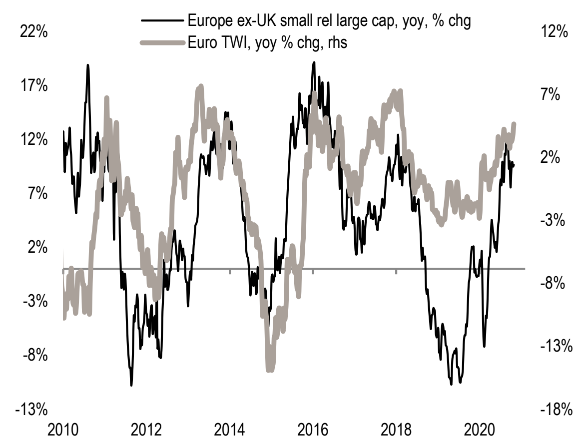
Source: Refinitiv, Credit Suisse research

Figure 3: US small caps are discounting a big collapse in ISM



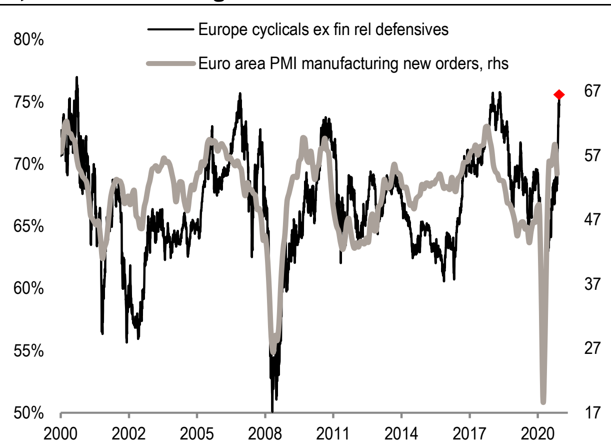
Source: Refinitiv, Credit Suisse research

Figure 4: Small caps in Europe follow the Euro, which should appreciate further in 2021



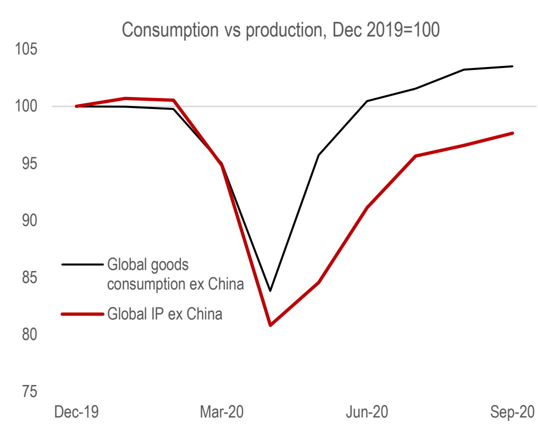
Source: Refinitiv, Credit Suisse research

Figure 5: Cyclicals are now pricing in a PMI of 67 = c4% GDP growth, hence we downgrade to benchmark



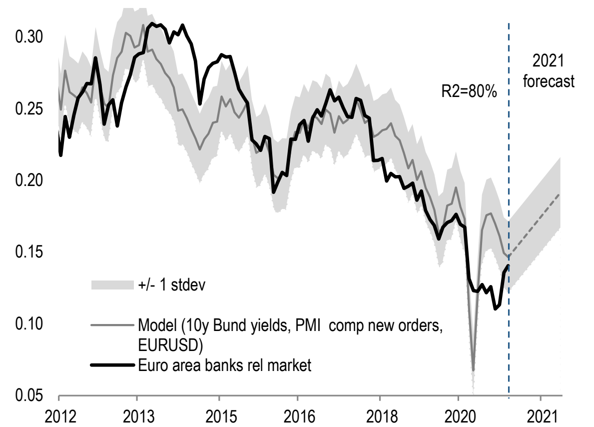
Source: Markit, Refinitiv, Credit Suisse research

Figure 6: IP has to play catch up to consumption; focus on IP plays



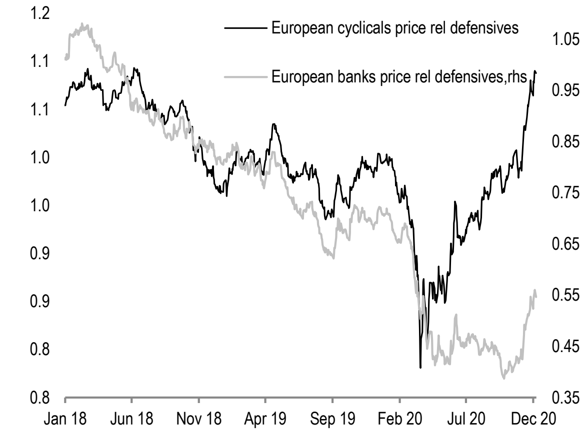
Source: Credit Suisse Economics, Credit Suisse research

Figure 7: Our European banks model indicates 30% upside for 2021



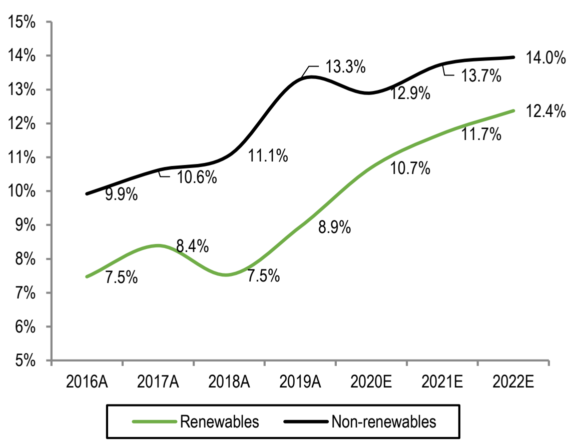
Source: Refinitiv, Credit Suisse research

Figure 8: Banks have abnormally lagged cyclicals



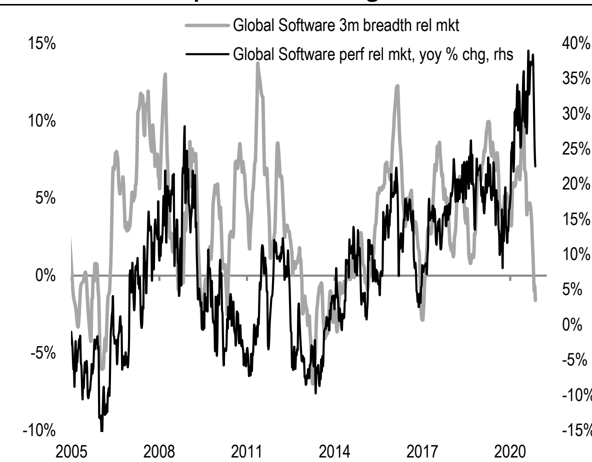
Source: Refinitiv, Credit Suisse research

Figure 9: Utilities FCF yield on maintenance capex remains very high



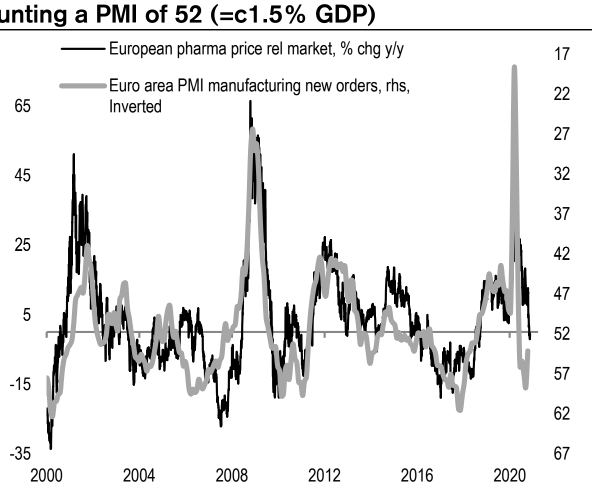
Source: Credit Suisse European Utilities team

Figure 10: A very big decoupling between earnings revisions of software and relative performance signals some caution



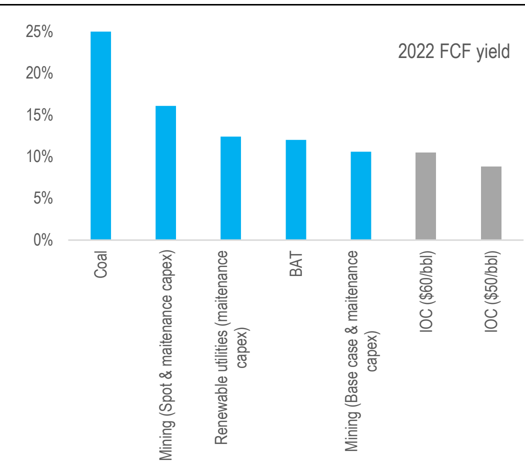
Source: Refinitiv, Credit Suisse research

Figure 11: Pharma underperforms if PMIs rise. They are discounting a PMI of 52 (=c1.5% GDP)



Source: Markit, Refinitiv, Credit Suisse research

Figure 12: IOCs are not cheap enough against other disrupted, ESG toxic sectors such as tobacco or coal



Source: Refinitiv, Credit Suisse research

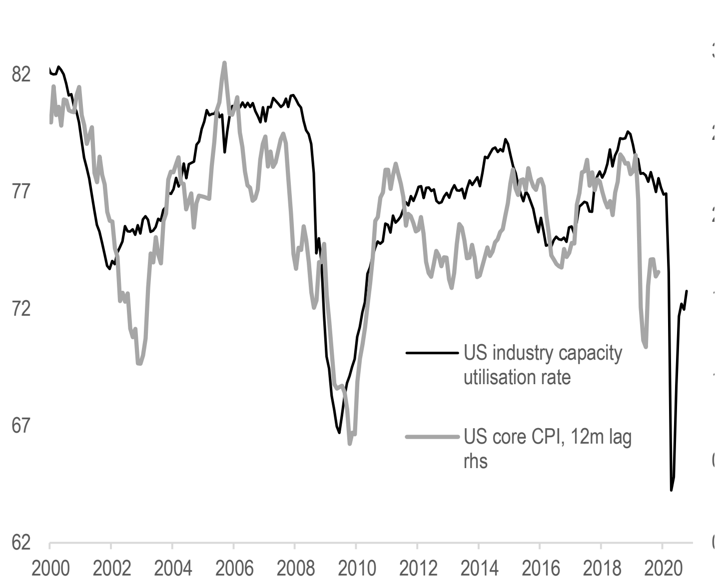
Themes

Inflation: the key macro issue for equities

Our view remains that the US 10-year breakeven inflation rate can rise from c1.9% to 3% on an 18-month to two-year view. This is a long-standing view (for more details, see COVID-19: Long-term inflationary consequences and what to do, 2 July).

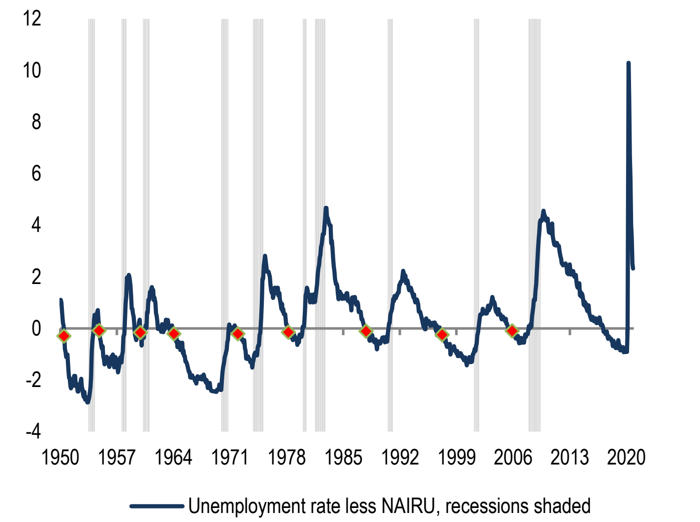
In the near term, we have had a disinflationary shock from COVID-19 because capacity utilisation is low and unemployment is high.

Figure 13: Capacity utilisation leads core CPI by a year



Source: Refinitiv, Credit Suisse research

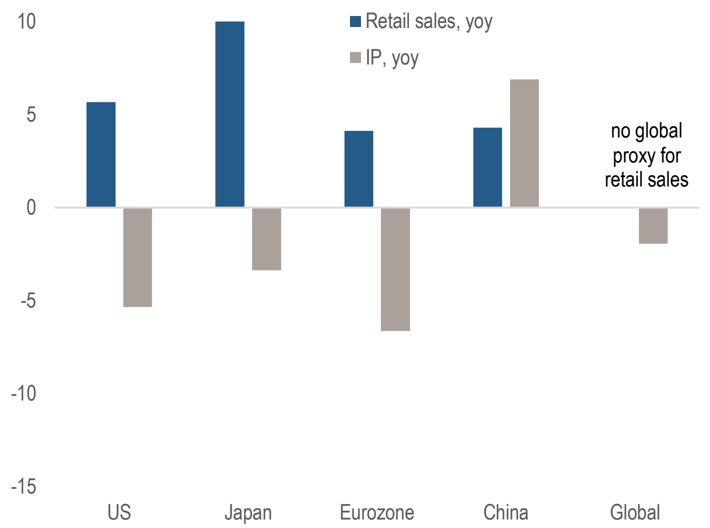
Figure 14: Unemployment rate less NAIRU remains elevated



Source: Refinitiv, Credit Suisse research

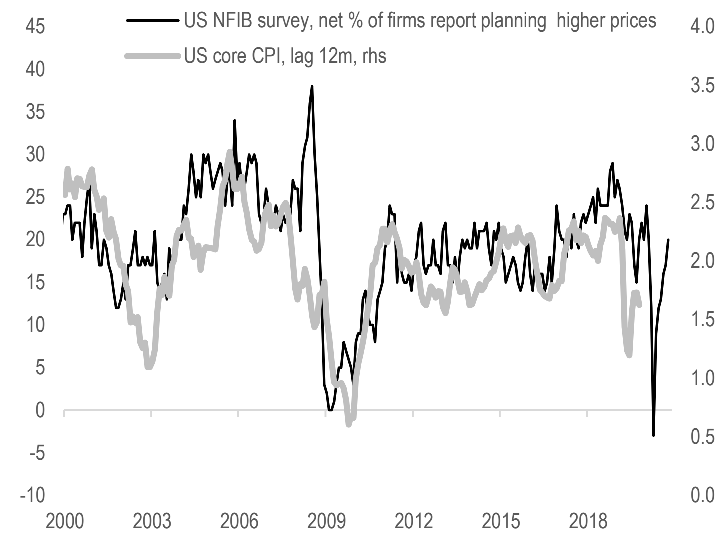
We wonder whether we are now close to the end of this disinflationary period; in many instances, supply (proxied by industrial production) is below demand (proxied by retail sales) and this could potentially lead to shortages (which already are being seen in some sectors). We can also see that the NFIB survey of the net percentage of firms looking to raise prices leads core CPI by a year, and again this implies a higher level of core CPI.

Figure 15: Consumption has held up much better than production



Source: Refinitiv, Credit Suisse research

Figure 16: NFIB survey showing net percentage of firms planning to increase prices leads core CPI by a year



Source: Refinitiv, Credit Suisse research

Interestingly, the IMF believes current inflation is being under-recorded by 23bp because the pandemic has led to a change in consumer habits and inflation baskets have not been updated by statisticians to reflect this (FT, 12 November).

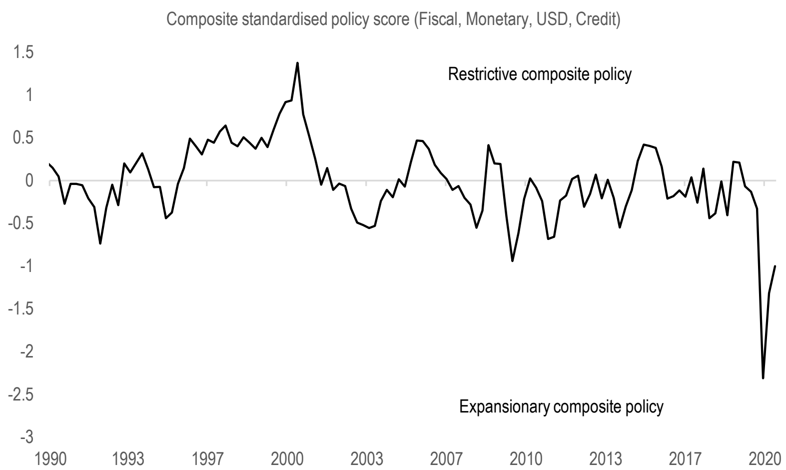
Why could the 10-year breakeven inflation rate rise to 3% eventually?

We think there are five key drivers for rising inflation (for more details, see [COVID-19: Long-term inflationary consequences and what to do](), 2 July): policy, money supply, disinflationary factors reversing, demographics and the need for higher inflation to deleverage the global economy. Taking each in turn:

1. **Policy**

Our US policy scorecard looks at four factors: monetary, fiscal, lending conditions by banks and the dollar. Policy this time around should remain much looser for much longer than in the aftermath of the GFC. We think that if policy is kept loose enough for long enough, it will eventually generate inflation in both the goods and labour markets.

Figure 17: US combined policy score is still abnormally loose



Source: Refinitiv, Credit Suisse research

Below we explore what has changed from a policy perspective in the aftermath of the GFC.

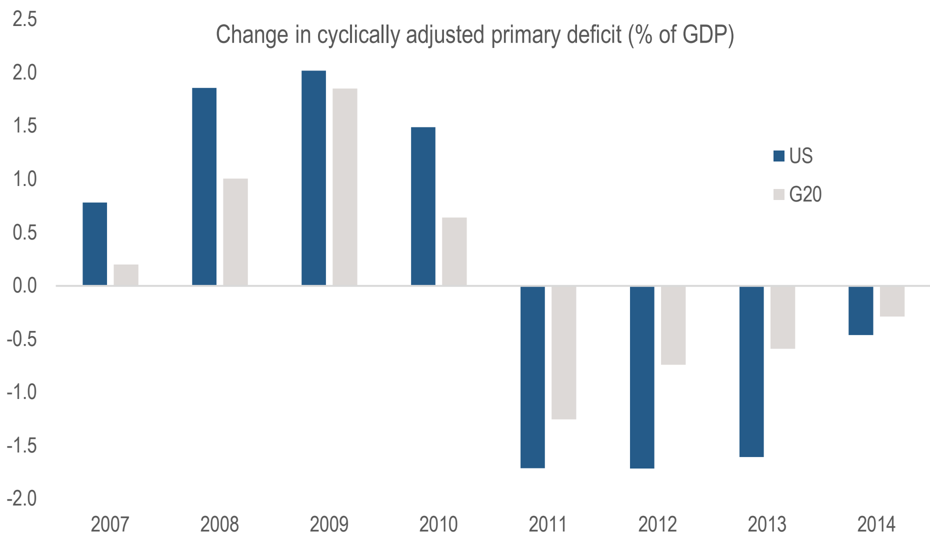
- **Fiscal policy**

There is no political will for austerity and there has been a volte-face in the policy advice coming from the leading international financial organisations. Both the IMF and the World Bank are urging governments to make use of low interest rates to borrow and invest in profitable infrastructure and not attempt to balance their budgets. Their advice was completely different a decade ago, when both institutions advocated a return to traditional fiscal policy and fiscal austerity in the aftermath of the GFC. Perhaps the new economic thinking is best summarised by former US Treasury secretary Larry Summers, who observed that “the benefits of a reduced probability of a financial crisis (owing to fiscal consolidation) do not outweigh the cost of a deficit reduction”.

We would note that politicians have the intellectual cover of Modern Monetary Theory (MMT), which advocates printing and spending until inflation rises, while a new generation of politicians in general have not experienced a government debt funding crisis and thus may not be particularly worried about it, especially if central banks buy the government debt. The best example of the change in attitude is perhaps seen in Europe and Germany. Not only has Germany been at the forefront of fiscal easing, but also France’s Europe minister, Clément Beaune, has said it was “unimaginable” that the Growth and Stability Pact would be re-imposed.

Indeed, the US looks likely to have its fifth fiscal package despite the budget deficit already approaching 20% of GDP. This contrasts sharply with the aftermath of the GFC, when in 2011/12, fiscal policy was tightened by c3% of GDP in the US (and c2.5% globally).

Figure 18: Most countries pursued fiscal austerity in the immediate aftermath of the GFC



Source: Refinitiv, Credit Suisse research

■ **Monetary policy**

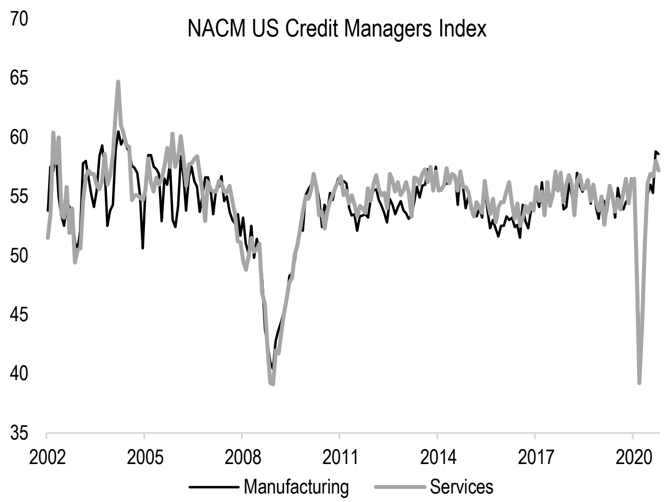
In our opinion, it is clear that the Fed has become much more dovish. The Fed is increasingly seeming to judge inflation not by looking at lead indicators of inflation (such as unemployment) but by actually looking at current inflation and this is likely to mean that policy lags. The Fed has indicated it no longer believes that the Phillips Curve works and, as a result, its most recent forecast is for interest rates to remain close to zero through the end of 2023, despite forecasting an inflation rate of 2% in 2023 and an unemployment rate of 4% in 2023. The Fed has also recently moved to average inflation targeting, implying a willingness to tolerate inflation rising to at least 2.5%. Indeed, Fed Chairman Powell has clearly indicated that he believes the risk of doing too little exceeds the risk of doing too much: "too little support would lead to a weak recovery, creating unnecessary hardship for households and businesses…. The risks of overdoing it seems, for now, to be smaller… even if policy actions ultimately prove to be greater than needed, they will not go to waste" as reported in the FT on 6th October. Furthermore, the nomination of ex-FOMC Chair Janet Yellen, who has in the past been very dovish, as Treasury Secretary only adds to the likelihood that this easy monetary policy will be maintained.

Again, this contrasts strongly with post-GFC monetary policy, which saw the ECB raise rates in April 2011.

■ **Banks' leverage**

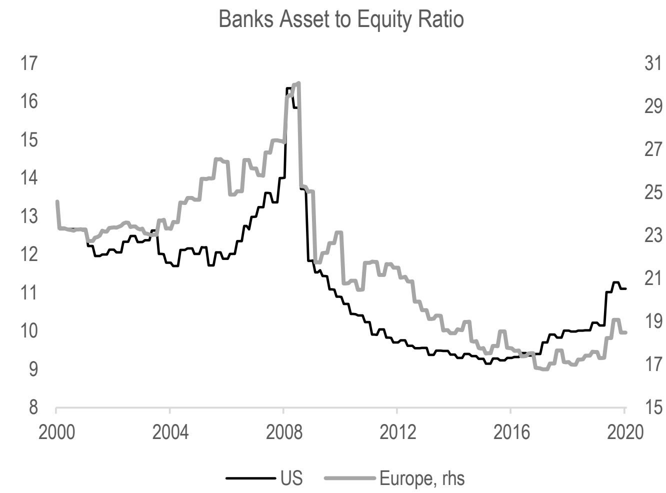
Post the GFC, banks had to deleverage aggressively. This process is now largely complete and should enable the money multiplier to work. Moreover, the very open nature of the corporate bond market has enabled corporate lending conditions to remain easy.

Figure 19: NACM US credit managers' credit conditions index is very loose



Source: Refinitiv, Credit Suisse research

Figure 20: Banks have de-levered significantly since the GFC



Source: Refinitiv, Credit Suisse research

■ **We think we are in a multi-year bear market for the dollar**

A bear market for the dollar is good for global growth because 80% of global trade and c61% of FX reserves are dollar-denominated. This is covered in the asset allocation section of this report. Again this is in contrast to post the GFC when the dollar entered a bull market in May 2011.

2. Money supply

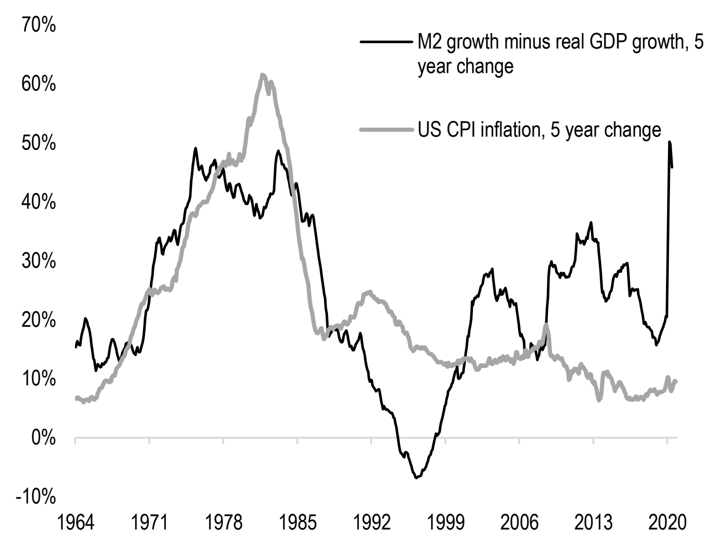
Money supply leads inflation by two to three years, while excess liquidity leads inflation by around four years. Both money supply and excess liquidity point towards higher inflation.

Figure 21: There is a much stronger correlation between money supply and inflation with a 2-3 year lead time

	Money supply correlation to inflation			
	CPI		Core CPI	
Money supply lead	M1	M2	M1	M2
No lead	-0.010	0.178	0.085	0.238
1y	0.092	0.279	0.118	0.260
2y	0.144	0.450	0.152	0.409
2.5y	0.137	0.516	0.168	0.494
3y	0.087	0.510	0.171	0.563
4y	0.020	0.449	0.109	0.526

Source: Refinitiv, Credit Suisse research

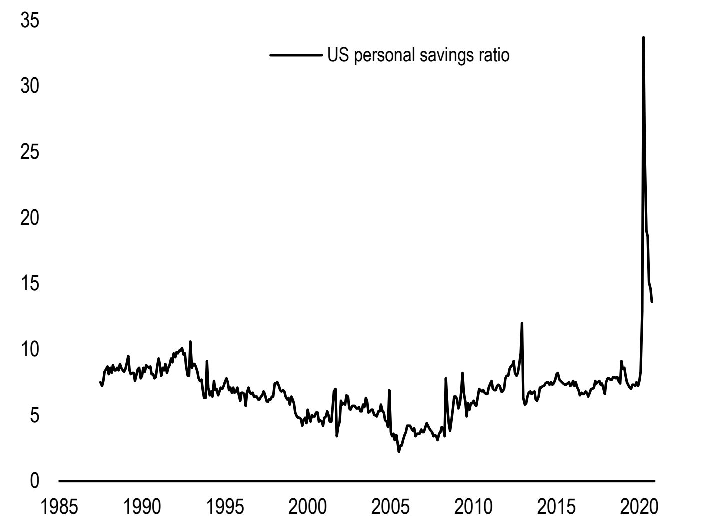
Figure 22: Excess liquidity leads inflation by 4 years



Source: Refinitiv, Credit Suisse research

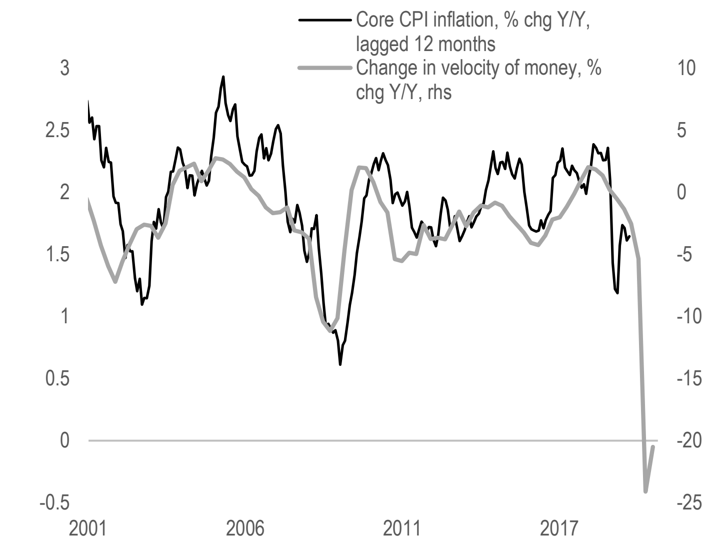
We can see that the money multiplier (or velocity of circulation) has collapsed, but with the household savings ratio already at 13.6%, we struggle to see US consumers saving more. So from here we believe higher money supply does lead to higher inflation.

Figure 23: The savings ratio is likely to fall…



Source: Refinitiv, Credit Suisse research

Figure 24: … the velocity of money, which leads inflation by 12 months or so, initially collapsed but is now recovering



Source: Refinitiv, Credit Suisse research

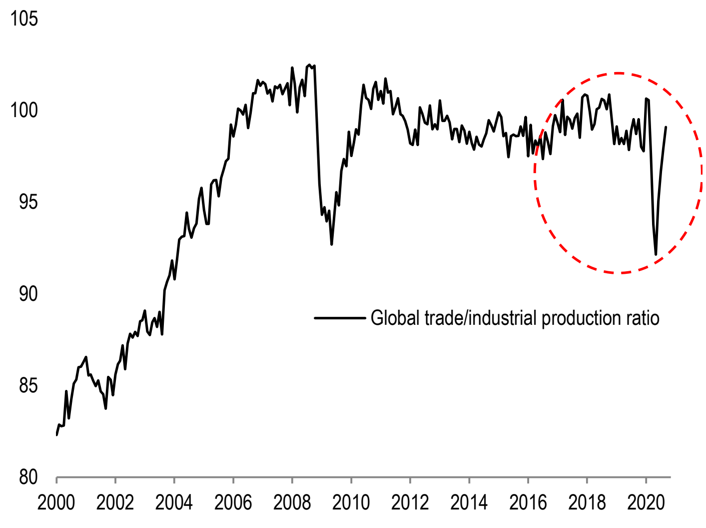
3. Global disinflationary forces have reversed somewhat

There have been five major disinflationary forces that may be reversing somewhat:

- Globalisation has peaked.

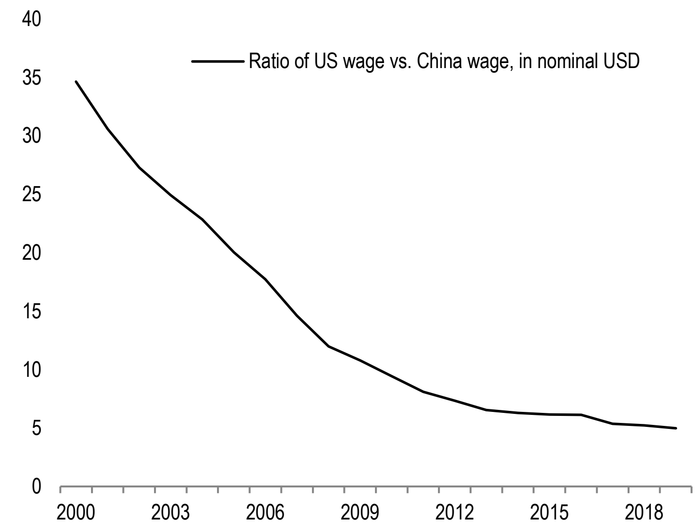
  Globalisation has taken c1% per year off inflation, according to the BIS. Globalisation was unleashed by China joining the WTO in 2001. Globalisation is diminishing because there has been saturation for industrial goods trade (currently global trade accounts for nearly 100% of global IP). China is no longer obviously as low cost, as we show below. The threat of tariffs and punitive tax treatment for offshoring under the incoming Biden administration may encourage on-shoring, and we see the increasing use of 3D printing (which can facilitate domestic manufacturing). Recently the American Chamber of Commerce highlighted that 40% of US companies are considering moving manufacturing out of China (FT, 6 October).

Figure 25: The global trade to industrial production ratio



Source: Refinitiv, Credit Suisse research

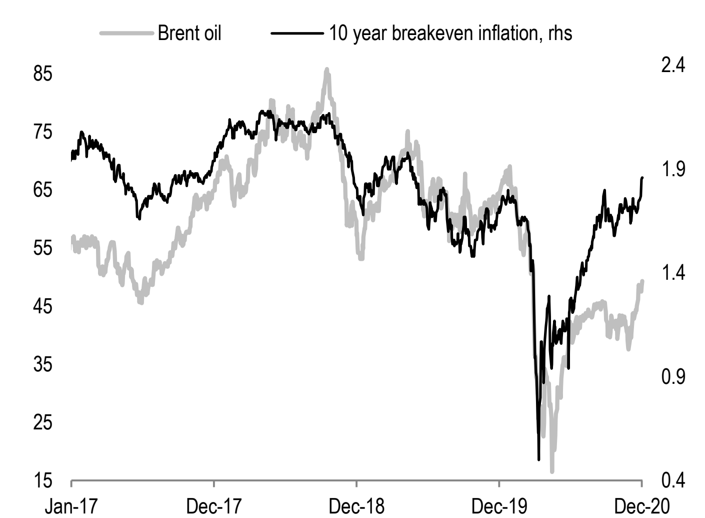
Figure 26: Ratio of US wages relative to China wages



Source: Refinitiv, Credit Suisse research

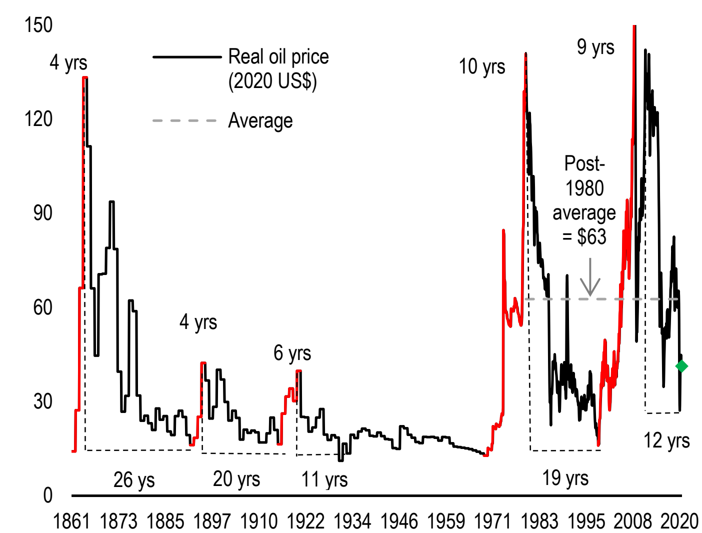
- We no longer have a bear market in oil, and oil and inflation expectations have been closely correlated. Historically, bear markets in oil have lasted 11-27 years (the last one was 12 years) and bull markets have lasted 4-10 years. The average inflation adjusted-oil price in the past 40 years has been $63pb in real terms.

Figure 27: Oil and inflation expectations are highly correlated



Source: Refinitiv, Credit Suisse research

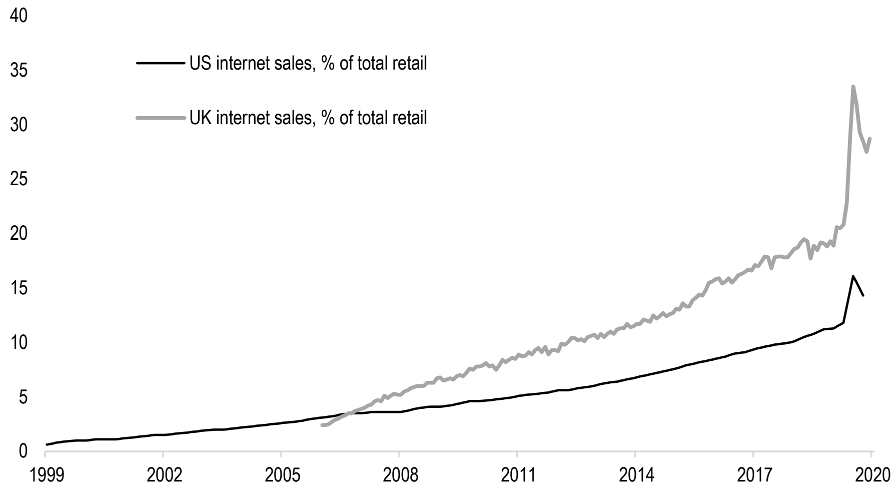
Figure 28: Relative to its long-run history, the real oil price is below to its 40-year norm of $63pb



Source: Refinitiv, Credit Suisse research

■ A lot of the impact of disruptive technology has already been seen. The UK has c27% of retail sales online and 80% of new insurance contracts are now priced online via price comparison sites.

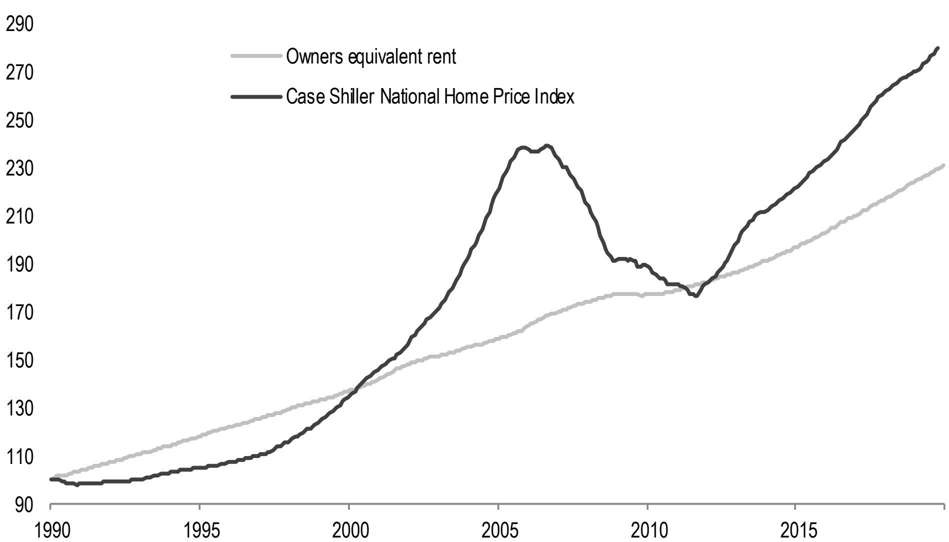
Figure 29: Internet sales as a percentage of total retail sales



Source: Refinitiv, Credit Suisse research

■ New measures of the CPI that incorporate asset prices could raise inflation metrics. Clearly the problem is that CPI inflation has not appropriately picked up the rise in asset prices (which resulted from QE). Over time, we think housing CPI will more accurately reflect house prices. (If house price inflation had been more accurately recorded over the past 30 years, then CPI would be 5% higher than it is today, on our calculations).

Figure 30: House prices have far outstripped owner equivalent rent



Source: Refinitiv, Credit Suisse research

■ The rise in minimum wages.

We believe (partly owing to the next point) that upward pressure on minimum wages is set to continue. Pre-recession, the wage share of GDP had reached levels that were the lowest ahead of any recession historically. We think that politically, socially and economically, it is not feasible to have a further fall in the wage share of GDP. President-elect Biden has called for a $15 per hour federal minimum wage. This would be very hard to implement without a change in the filibuster rule, but states are increasingly moving towards this on their own. Florida became the eighth US state to raise its minimum wage to $15/hour via a ballot measure on Election Day – under the measure, the state minimum wage will rise from its current hourly rate of $8.56 to $10 in September 2021 and then continue to increase by an additional $1 every September through 2026. An increase in the federal minimum wage to $15 per hour would add c5% to US labour costs, on our estimates.

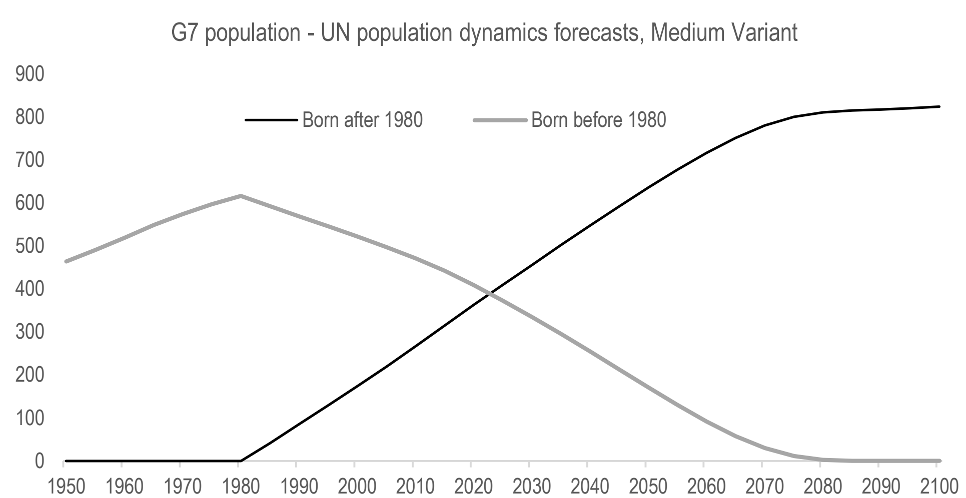
Figure 31: The wage share of GDP normally falls in a recession, but this time around it was already abnormally low and politically probably cannot be allowed to fall from here

Source: Refinitiv, Credit Suisse research

4. Changing nature of the electorate

In the G7 by 2025, the United Nations estimates that the number of people born after 1980 will be larger than those born prior to 1980. It is the millennials who have been particularly squeezed by rising asset prices and the loss of pricing power of low-wage jobs. We suspect that as they become a more active and influential political force, government policies will reflect their interests – and that is clearly for higher minimum wages and policies designed to inflate away their debt. It is the older generations that tend to be asset-rich and the net creditors (and thus benefit from periods of low inflation).

Figure 32: The UN forecasts that by 2025, those born after 1980 will account for a larger share of the G7 population than those born before 1980

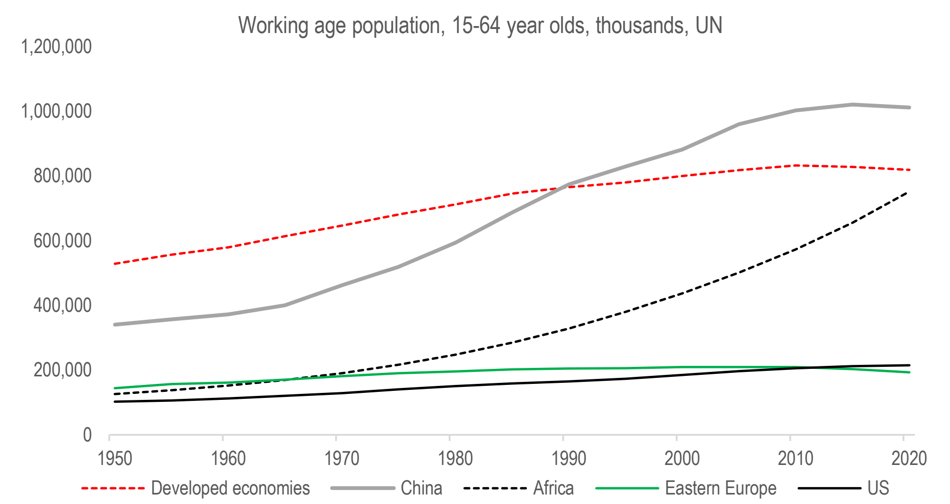


Source: United Nations World Population Prospects, Credit Suisse research

5. Ageing demographics could also be inflationary

A recent book by Charles Goodhart and Manoj Pradhan called the Great Demographic Reversal highlights that in the past 20 years the workforce has grown faster than demand (which means output has grown while inflation has declined in advanced economies), and that this is now reversing, which should lead to higher inflation.

Figure 33: Growth in the working age population has slowed in many of the largest economies, which could lead to higher inflation in the future

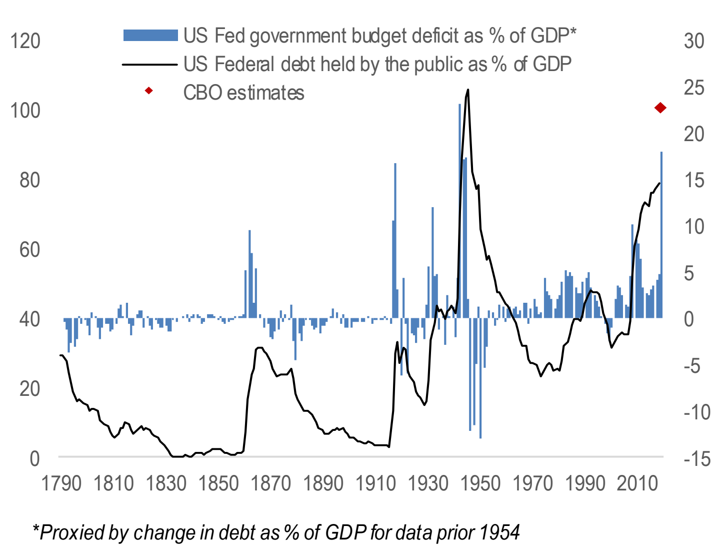


Source: United Nations, Credit Suisse research

6. Inflation is the only way out of excess leverage

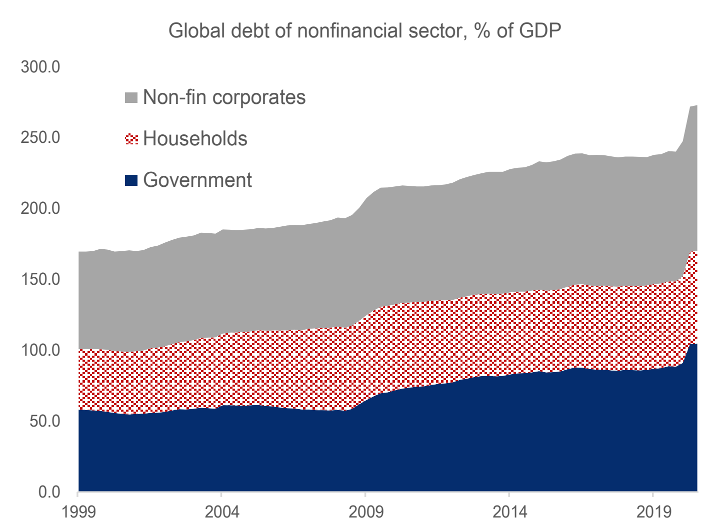
The problem is that aggregate leverage as well as government debt and deficit in the US are back to peak levels.

Figure 34: US government debt to GDP is set to rise to the highest levels seen since WWII



Source: Refinitiv, Credit Suisse research

Figure 35: Global leverage is close to an all-time high



Source: Refinitiv, Credit Suisse research

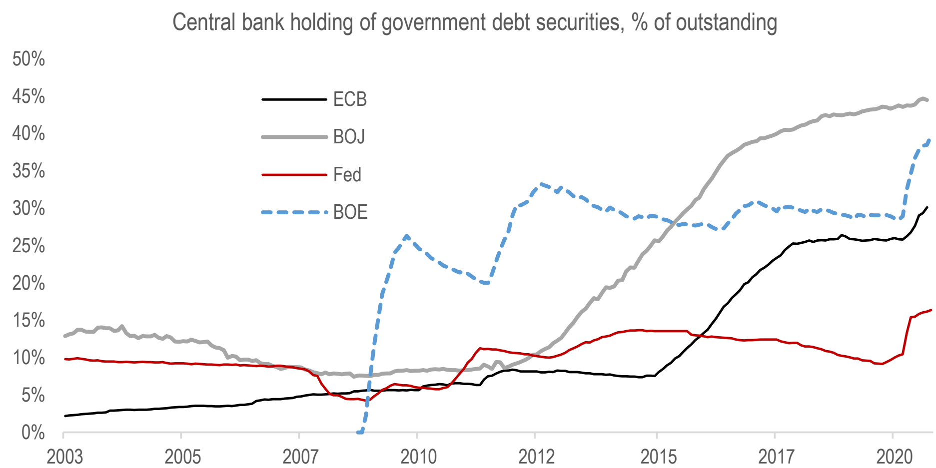
There are only three ways out of excess leverage, in our view: defaulting on the debt, fiscal austerity or inflating the debt away.

- Default

Defaulting on debt is not an option with fiat currency.

Central banks could turn their holdings of debt into zero-coupon irredeemable bonds, but currently they do not hold enough government debt to make this worthwhile (with the possible exceptions of the UK and Japan, where the central banks hold 40% and 45% of outstanding government debt, respectively, amounting to government debt holdings equivalent to 43% and 120% of GDP).

Figure 36: Central bank holding of government securities



Source: Refinitiv, Credit Suisse research

Thus they would also have to commit to open-ended QE at the same time as turning government debt into zero coupon irredeemables. This would also cause their currencies to collapse (and generate inflation). Thus all major central banks would have to commit to this at the same time. The problem is that the ECB would find it far harder to do this than the BoE or the Fed. This in turn would lead to a much stronger euro, which would in turn force the ECB to print much more money.

Clearly the other issue is that it is much harder to achieve a de facto default on private sector debt. As chart above shows, the issue is that not only government leverage but also private sector leverage is extreme. Private sector debt could be securitised and then bought by the central bank as indeed is happening in parts of the corporate bond market, but it would be much harder politically and constitutionally for central banks to turn private sector debt into a zero coupon irredeemable bonds, especially on the scale that would be required.

- Fiscal austerity

The issue is that stabilising government debt on current real bond yields would require fiscal tightening of c6% of GDP, which is politically and economically unviable, in our view. Unemployment would return to double-digit levels, deflation would begin, and that in turn would spur fiscal QE. Thus we would be back to where we started.

We believe it would be very hard logistically to raise taxes to the extent that would be required, as corporate capital can move and thus capital controls might have to be imposed (or there would need to be a move to a US-style tax system that is not geography-dependent). Thus austerity would have to be focused on spending cuts, and that in turn would be even harder to achieve politically (given the scale of public sector employment).

Thus we do not think major austerity is an option.

- Inflate away the debt

As a result, we believe inflating the debt away will likely be the solution.

Policy has to be kept loose until inflation rises. It is fortunate that many of the disinflationary forces of the past decade have diminished. We think central banks will allow inflation to overshoot (the Fed to at least 2.5% but we suspect eventually to c3-4%, especially if Janet Yellen is confirmed as Treasury Secretary) and bond yields are capped under some form of yield curve control.

We think the Fed would seek to cap bond yields at c1.25-1.5%. The Fed has clearly indicated that the dangers of too much stimulus are far lower than the dangers of too little stimulus.

We think the Fed would care about the level of bond yields because: i) the average duration of mortgage debt is more than 10 years; and ii) the average duration of IC corporate debt is around 8.7 years (and 70% of US corporate borrowing is via the corporate bond market).

Hence, we could see inflation expectations rising to 3%, maybe even 3.5%, while the Fed caps bond yields at 1.25-1.5% and that in turn pushes the TIPS yield down to around -2%.

If the TIPS yield gets to -2%, then only modest fiscal tightening is required and thus we can exit this crisis with low unemployment and stable government debt to GDP.

This would also inflate away excess private sector debt.

Figure 37: Fiscal tightening (as a % of GDP) and real bond yield required to stabilise government debt to GDP on the basis of 2021 primary budget deficit and trend GDP growth

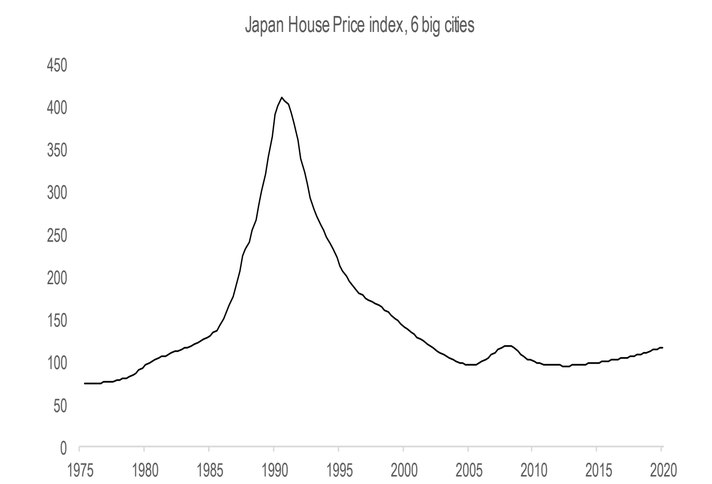
To stablise debt to GDP at 2021 level under different rates scenario (govt debt/GDP=146%, defict/GDP=10.2%, IMF)		
Real rates	Sustainable level of primary budget deficit, % of GDP	Fiscal tightening needed, p.p. GDP
1.0%	1.5%	8.7%
0.0%	2.9%	7.3%
-0.5%	3.7%	6.5%
-1.0%	4.4%	5.8%
-2.0%	5.8%	4.4%
-2.5%	6.6%	3.6%
-3.0%	7.3%	2.9%
-4.0%	8.8%	1.4%
-5.0%	10.2%	0.0%

Source: Refinitiv, Credit Suisse research

Why did we not get inflation in Japan?

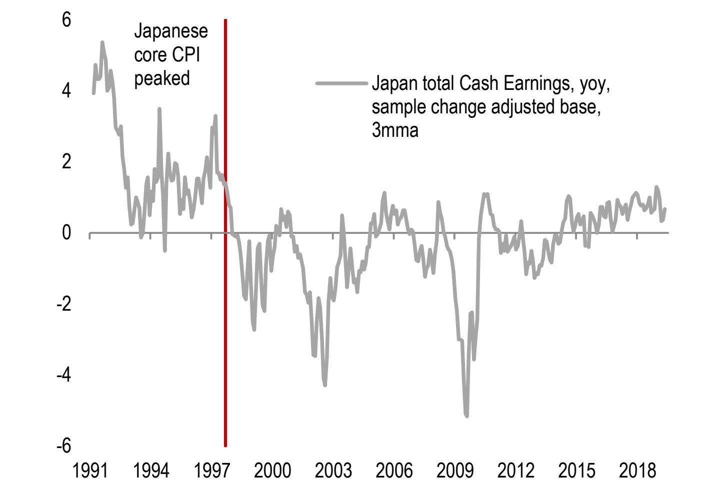
- Asset prices (housing, real estate and equities) fell 80% from peak to trough.
- Wages in nominal terms started to fall in the mid-1990s. This was because the 1970s labour law made it very hard to fire workers and thus the only way to reduce the wage bill was to cut nominal wages.
- Falling asset prices and falling wages unleashed massive deflationary pressure.
- Banks were technically insolvent once the Nikkei fell below c29,000 because 45% of unrealised equity gains had counted towards the Tier 2 capital of banks.

Figure 38: House prices fell by 80% in the six largest Japanese cities



Source: Refinitiv, Credit Suisse research

Figure 39: Nominal wage growth starts to fall in the 1990s

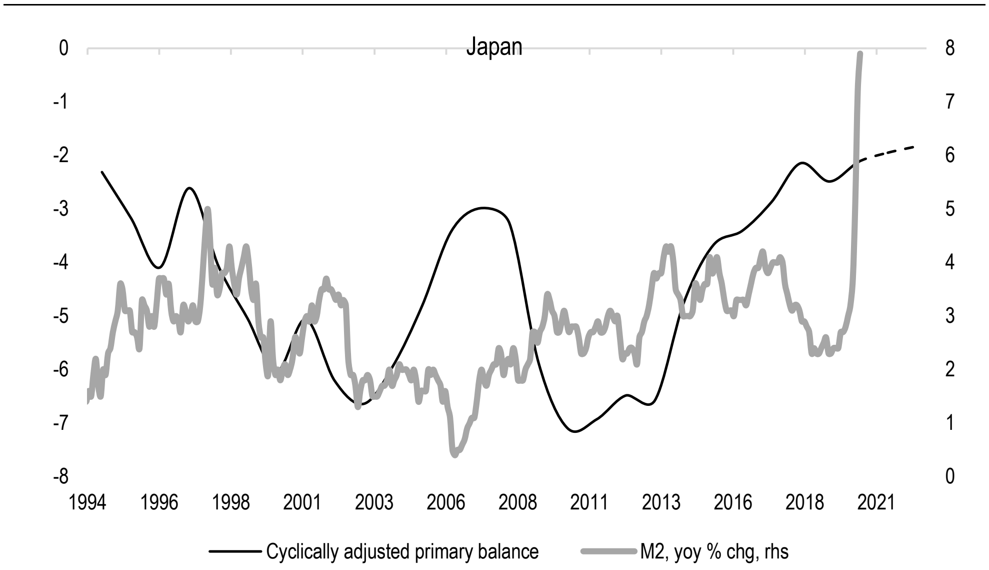


Source: Refinitiv, Credit Suisse research

- Policy was very reactive: the BoJ did not print money until five years after deflation started or recapitalise banks until four years after deflation started, and the fiscal stimulus was small (and offset by premature fiscal tightening such as the rise in the consumption tax in 1997).

  We can proxy policy by looking at the fiscal impulse from a change in the cyclically-adjusted primary budget deficit or an increase in the money supply.

Figure 40: Japan has never stimulated both monetary and fiscal policy aggressively… until now

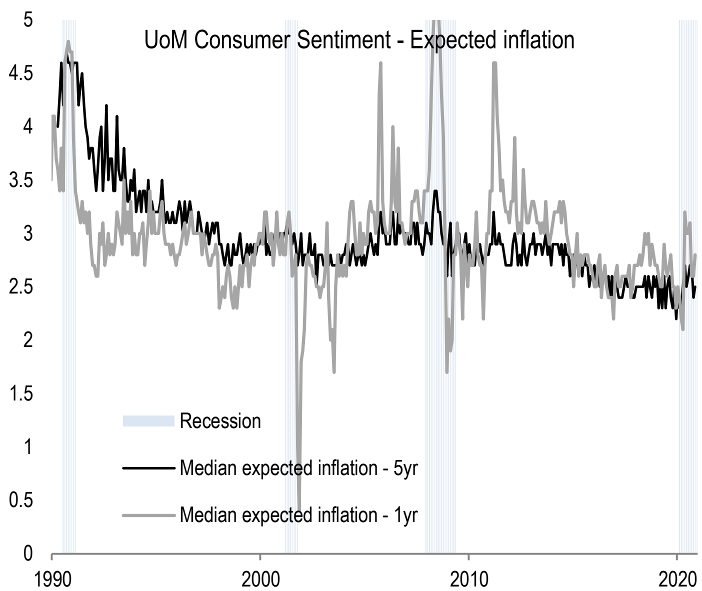


Source: Refinitiv, Credit Suisse research

When will inflation expectations rise?

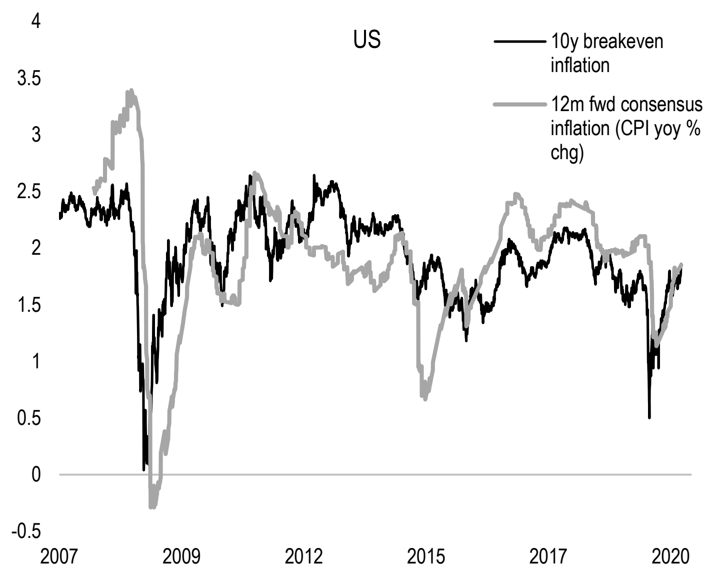
We can see that inflation expectations tend to move in line with economists' view of inflation a year out, and both are rising as shown in the right-hand chart below.

Figure 41: Consumer surveys expectations of inflation are mid-range…



Source: Refinitiv, Credit Suisse research

Figure 42: …but inflation breakevens tend to be moved by economists' view of inflation a year out



Source: Refinitiv, Credit Suisse research

Implications for bonds and FX

- **The regions that are most susceptible to this are the US and the UK.** Inflation in the past two decades or so in the US, the UK and Europe has been very similar. Going forward, we think inflation will be higher in the US and the UK.

  In the US, the Fed has a dual mandate (full employment and an inflation target).

  In the UK, the Chancellor sets the inflation target and has already changed it once before; in December 2003, Chancellor Gordon Brown changed the inflation target from 2.5% to 2% and the measure used was changed to the harmonised index of consumer prices (HICP). Furthermore, the UK tends to have majority governments (meaning fiscal expansion is more likely, which would boost inflation). Essentially, the less independent central banks become, the more we think politicians will be persuaded to keep the fiscal spending taps open.

Figure 43: The UK, US and Eurozone have had very similar levels of inflation over the past decade or two, but from here the US and UK look set to rise by more

	Headline CPI, annualised CPI			
	UK	US	Europe	Japan
10y →	0.6%	0.5%	0.4%	0.2%
20y	1.3%	1.3%	1.1%	0.1%
30y	2.2%	2.3%	na	0.4%

Source: Refinitiv, Credit Suisse research

- **The TIPS yield falls to minus 2-2.5%.** If inflation rises to 3% and bond yields are capped, then the TIPS yield falls.
- **The yield curve at the very long end steepens.** The Fed will want to control the 10-year yield (because of the duration of mortgages and corporate debt is c10 and 8 years, as above). We can see yield curve control lasting for 10 years not 30 years, hence the 30-year yield should steepen versus the 10-year.

Figure 44: US 30yr-10yr spreads have reached three-year highs

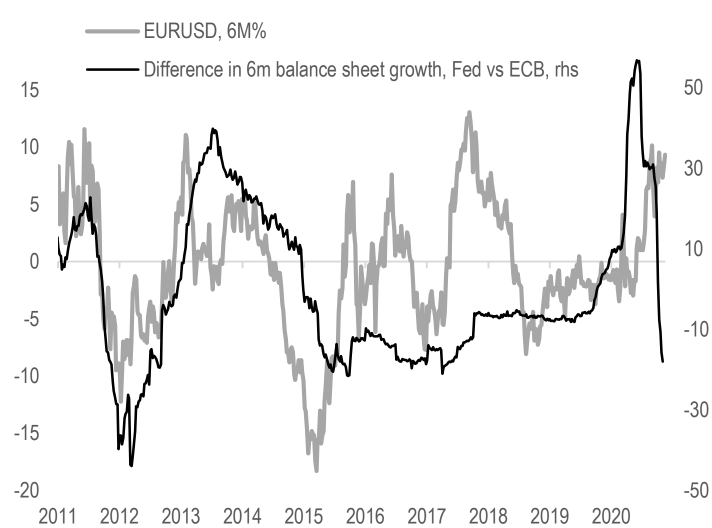
Source: Refinitiv, Credit Suisse research

- **The euro appreciates.** It will be very hard for the ECB to commit to infinite QE or a higher inflation target and thus the euro is likely to be in a structural bull market (see the dollar section of this report).

Figure 45: The US TIPS yield could go to -2.5%

Source: Refinitiv, Credit Suisse research

Figure 46: When the Fed increases its balance sheet by more than the ECB, the euro tends to strengthen



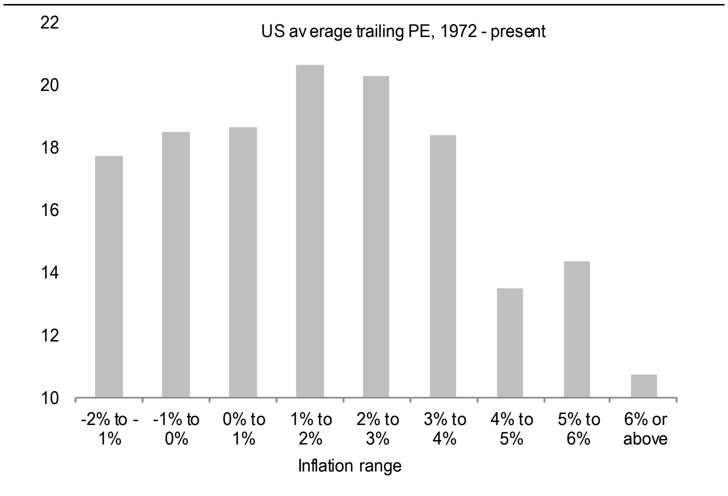
Source: Refinitiv, Credit Suisse research

Implications for asset allocation

Clearly the real asset categories that stand to benefit are commodities, equities and real estate.

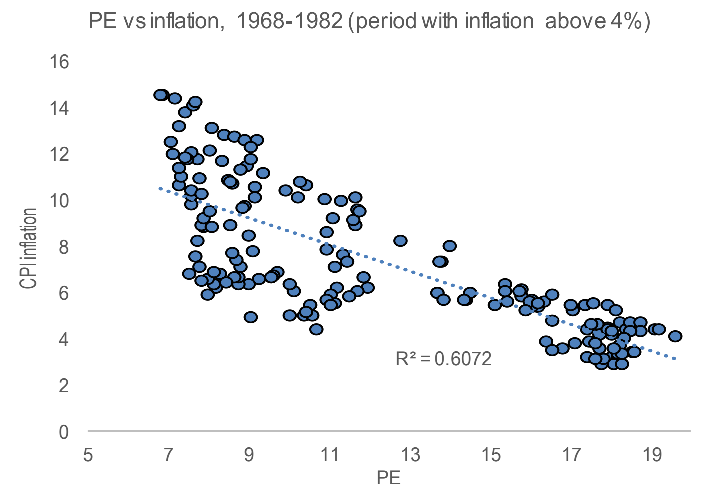
Equities historically have acted as an inflation hedge until inflation rises above 3%.

Figure 47: Rising inflation is good for P/Es until inflation exceeds 3%



Source: Refinitiv, Credit Suisse research

Figure 48: P/E vs inflation during periods with high inflation



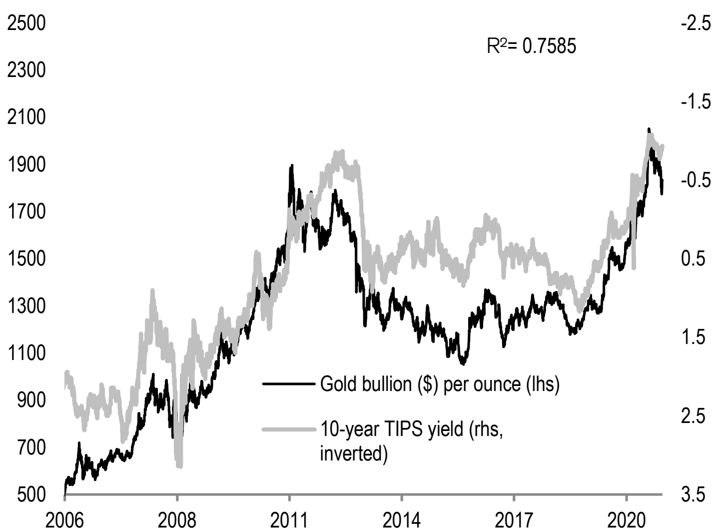
Source: Refinitiv, Credit Suisse research

If the real bond yield is permanently suppressed versus the real EPS growth rate, then the equity risk premium is going to show a much more attractive valuation than the P/E. See our report Why investors need to focus on the Equity Risk Premium, not P/E, 27 August, for a more detailed explanation of the ERP.

Implications for gold

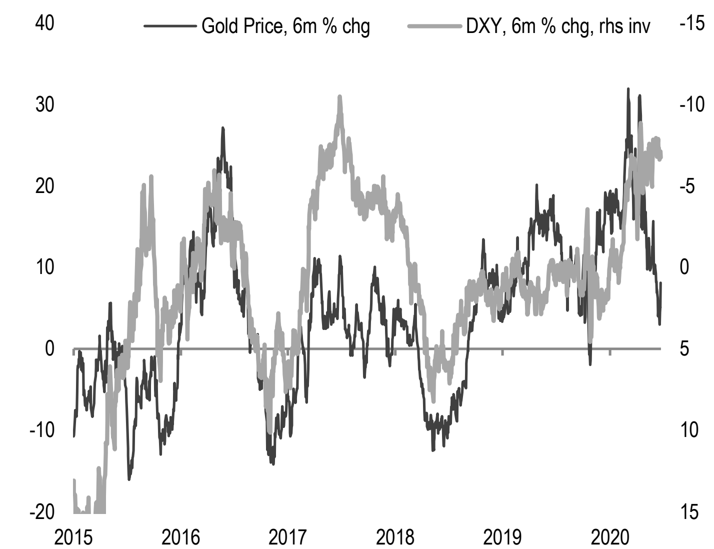
We continue to believe that gold can rise to $2,500 an ounce, the level that is consistent with the TIPS yield going to -2.5%, as we think it can. Higher inflation and a weaker dollar are also supportive of the gold price (given 95% of gold retail demand being non-US, a weaker dollar should support gold prices). Recently, the gold price has corrected despite a weak dollar and a fall in the TIPS yield. We think this represents a buying opportunity for gold.

Figure 49: Gold tends to track the inverse of real yields as proxied by the TIPS yield (rhs, inverted)



Source: Refinitiv, Credit Suisse research

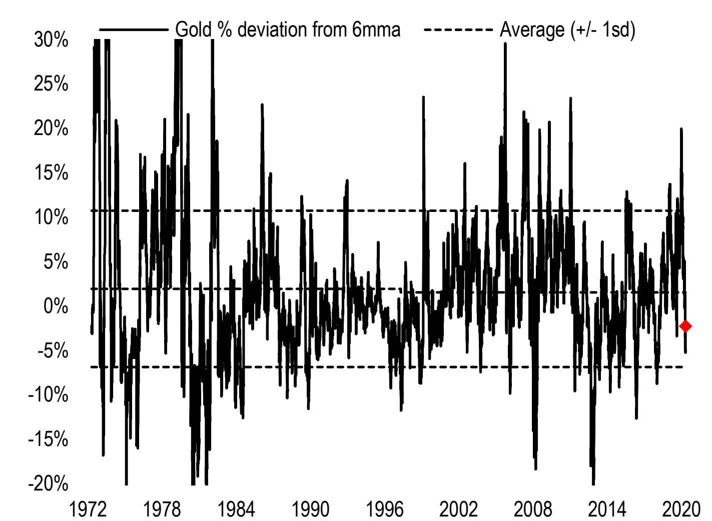
Figure 50: Gold and the dollar move inversely with each other



Source: Refinitiv, Credit Suisse research

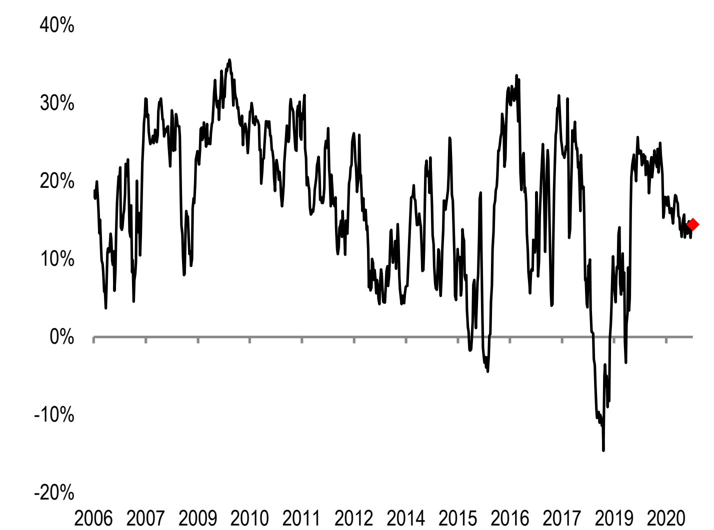
Gold is now oversold and speculative positions have declined.

Figure 51: Gold price momentum



Source: Refinitiv, Credit Suisse research

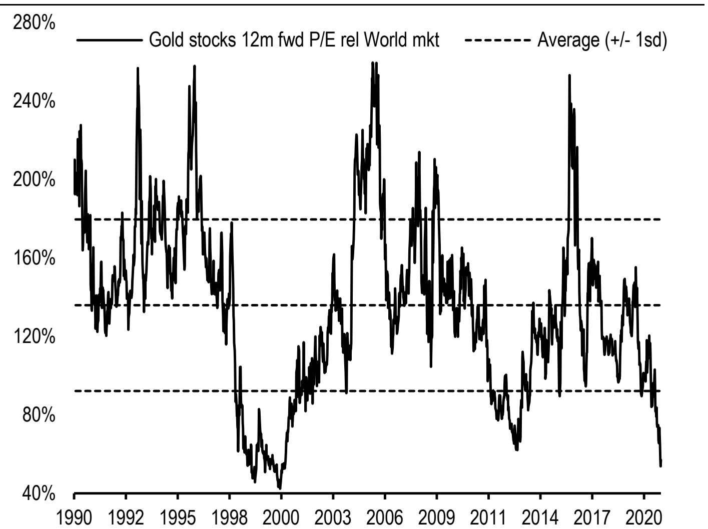
Figure 52: Gold net speculative positioning



Source: Refinitiv, Credit Suisse research

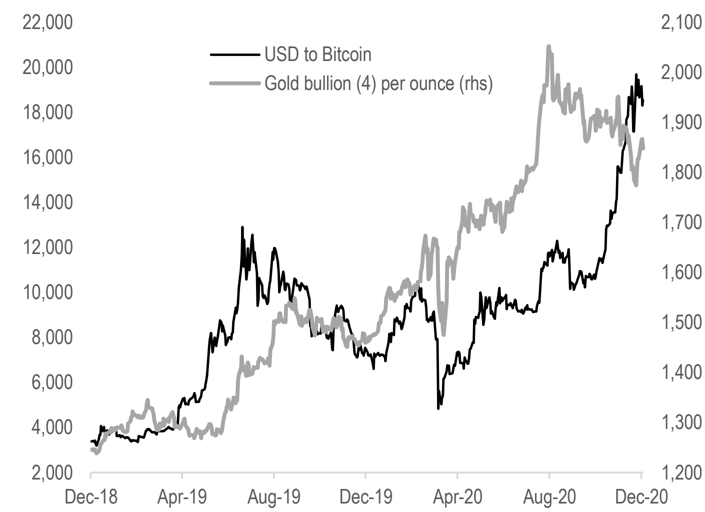
Gold stocks also look very cheap on 12-month forward P/E relative to the market. It is interesting to see that gold has lagged the bitcoin price. In theory, bitcoin should be driven at least in part by similar macro drivers as gold because it has no yield.

Figure 53: Gold stocks are cheap on a 12m forward P/E relative basis…



Source: Refinitiv, Credit Suisse research

Figure 54: The gold price has lagged the bitcoin price recently



Source: Refinitiv, Credit Suisse research

Below we show a screen of Outperform-rated gold stocks.

Figure 55: Outperform-rated gold stocks

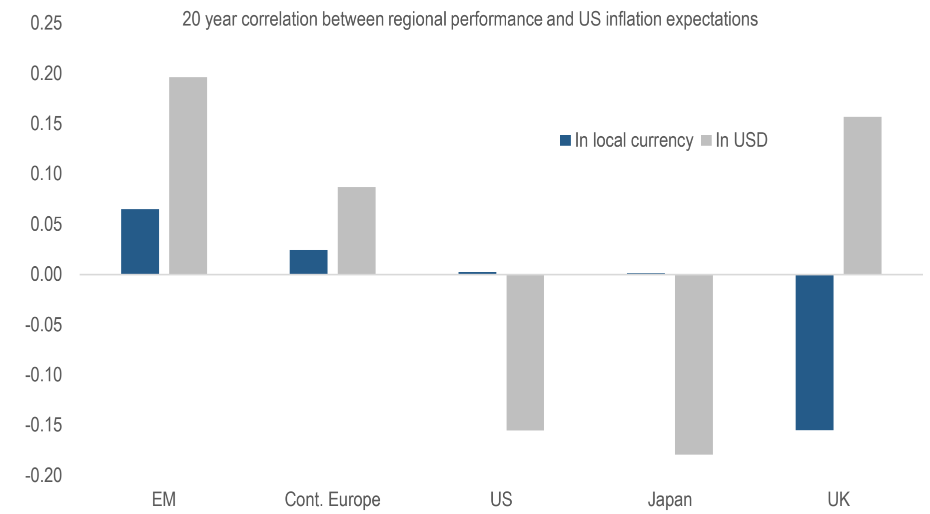
	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Evolution Mining	17.3	119%	8%	3.5	55%	4.0	2.8	91.8	-1.6	-2.0	3.1	Outperform
Newcrest Mining	15.3	105%	-41%	1.8	-13%	3.5	1.3	92.3	11.8	5.3	2.7	Outperform
Newmont	14.1	97%	-49%	2.2	5%	7.0	2.0	120.6	11.4	0.9	2.1	Outperform
Northern Star	13.9	95%	-6%	4.4	-12%	5.7	1.6	114.9	-25.4	-6.9	2.6	Outperform
Zhaojin Mining Ind.'H'	17.0	117%	-43%	2.6	-16%	na	1.1	-46.6	22.0	-0.8	1.8	Outperform
Zijin Mining Group 'H'	17.0	117%	-9%	4.5	93%	2.6	2.0	na	37.2	9.1	1.7	Outperform
Perseus Mining	8.9	61%	-80%	1.6	-14%	na	0.0	93.9	-99.2	-20.8	1.8	Outperform
Regis Resources	6.9	47%	-57%	2.3	-53%	5.5	4.5	383.1	-14.3	-5.3	2.7	Outperform
St Barbara	7.8	54%	-60%	1.3	-43%	10.9	2.2	148.5	-23.2	-9.6	2.4	Outperform
Endeavour Mining	6.8	47%	-79%	3.5	84%	11.9	0.0	177.8	0.9	2.2	1.8	Outperform
Agnico-Eagle Mns. (Nys)	17.7	na	-70%	na	na	7.0	1.4	32.8	13.5	2.8	2.1	Outperform
Barrick Gold (Nys)	16.3	na	-35%	na	na	10.3	1.3	72.3	20.2	5.4	2.0	Outperform
Yamana Gold (Nys)	11.6	na	-69%	na	na	12.5	1.2	109.3	17.8	3.9	2.4	Outperform
Oceanagold Cdi.	6.6	45%	-60%	na	na	15.7	0.1	246.3	-1,070.0	-15.3	2.4	Outperform
Shandong Gold Mining 'H'	18.4	126%	-44%	3.2	5%	na	1.2	-3.1	6.3	-1.9	1.8	Outperform
Zhongjin Gold 'A'	32.8	225%	-54%	2.4	-44%	na	1.3	na	55.6	14.1	2.8	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

Implications for regions

GEM tends to be the best performing regions when inflation expectations rise.

Figure 56: A rise in inflation expectations is good for GEM



Source: Refinitiv, Credit Suisse research

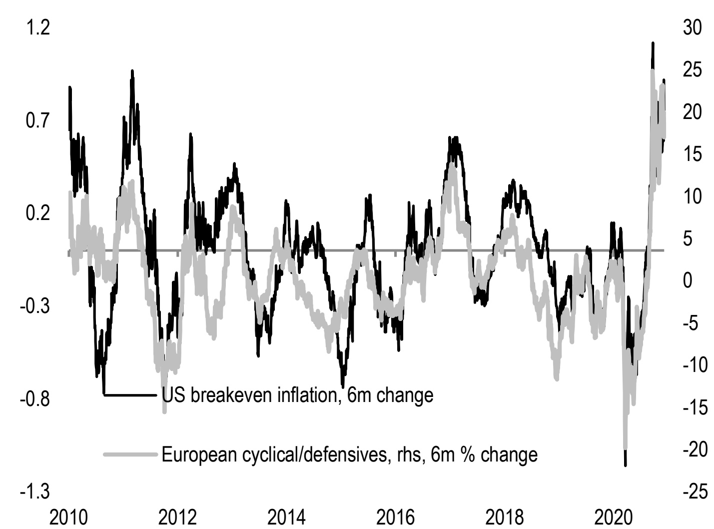
Implications for sectors

Cyclicals are highly correlated to inflation expectations and tend to outperform when inflation expectations rise. Cyclicals are discounting a 2.1% inflation rate, but we think the 10-year breakeven can rise well above this.

Figure 57: Cyclicals moved with breakeven inflation

Source: Refinitiv, Credit Suisse research

Figure 58: Cyclicals vs inflation expectations



Source: Refinitiv, Credit Suisse research

The sectors most correlated with a rise in inflation expectations are shown below; we have a two-factor model of inflation and ISM to see which sectors are most sensitive to inflation expectations. We find that construction materials (cement), real estate, and mining are among the best performing sectors when inflation expectations rise. The worst performers are pharma and consumer staples.

We are overweight mining, construction materials, residential real estate in Germany (and the associated plays of UK and US householders), banks and pulp and paper. (Oil appears higher on the scorecard than it should because a rise in the oil price historically caused a rise in inflation, and hence the causation is the wrong way around).

Dan Fineman, our Asia strategist, is a strong overweight of Asian real estate (see, 2021 outlook: The start of an earnings super-cycle, 26 November).

Figure 59: Global sectors correlation to inflation expectations and the cycle (the highlighted blue sectors are our preferred inflation plays)

Sectors correlated to Inflation exp. / Cycle (ISM)		
Global Sectors	**Infl. Exp. ↓**	**ISM**
Construction Materials	0.461	0.106
Real Estate	0.451	0.018
Banks	0.381	0.077
Metals & Mining	0.367	-0.007
Energy	0.311	-0.107
Diversified Financials	0.251	0.037
Paper & Forest Products	0.212	0.163
Consumer Durables & Apparel	0.196	0.322
Automobiles & Components	0.170	0.291
Utilities	-0.030	-0.387
Telecommunication Services	-0.058	-0.277
Retailing	-0.202	0.200
Healthcare Equipment & Services	-0.264	0.131
Food Products	-0.269	0.010
Beverages	-0.290	0.045
Software & Services	-0.311	0.064
Media	-0.337	0.016
Household & Personal Products	-0.341	0.018
Food & Staples Retailing	-0.487	-0.280
Pharmaceuticals & Biotechnology	-0.571	-0.065

Source: Refinitiv, Credit Suisse research

The need to reduce carbon emissions

In this section, our focus is not so much ESG in general but E specifically because we think E is going to drive the flows as well as government policy that cause a sharp increase in demand for many of the carbon-reducing products mentioned in this section (incentivised via fiscal incentives, government spending, regulation and/or a change in consumer spending patterns). This is an update to a similar section that appeared in last year's outlook.

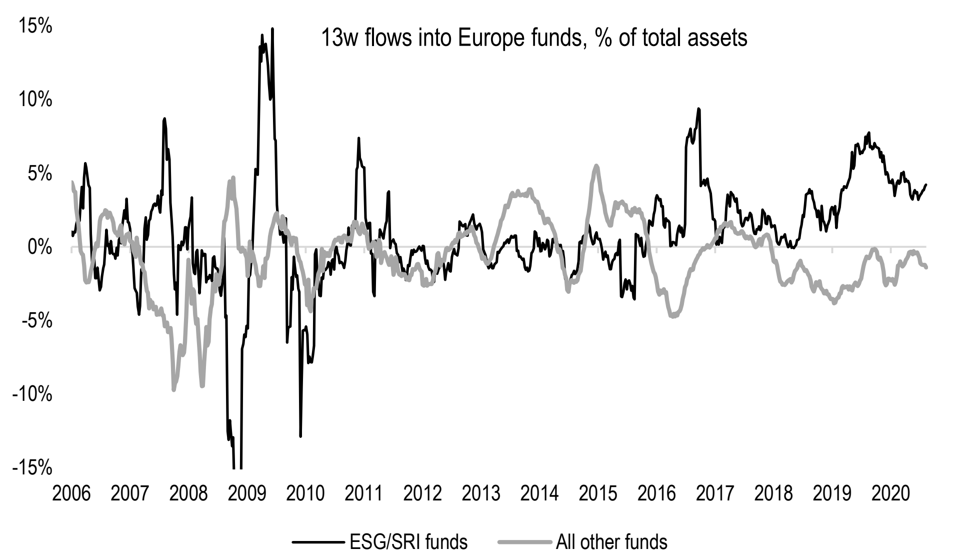
Why the focus on E of ESG?

- **Flows**

It continues to be very hard for fund managers to consistently outperform the index—S&P Research found that for the first six months of 2020, 42% of active funds in Europe underperformed their benchmarks, with the figure rising to 49% and 87% over a 12-month and 10-year view, respectively (S&P Global, 7 October). Regulation is forcing price visibility, and ETFs and passives are enabling very low-cost alternatives to active fund management. Therefore, the fight-back for active funds is ESG. Trustees might be willing to allow underperformance if they can see that fund managers are forcing companies to pursue ESG strategies.

ESG funds have seen inflows of $16.4bn YTD, compared with $59.5bn of outflows for all other funds in Europe.

Figure 60: Flows to ESG funds have been strong



Source: EPFR, Credit Suisse research

30 leading asset managers collectively overseeing nearly $9trn of assets have committed to have zero net carbon emissions across their portfolios by 2050 (FT, 12 December).

- **Politics – a steady rise in green parties**

Based on recent opinion polls, the Green Party is the second most popular party in Germany and in summer local elections in France, the Green Party (the EELV) did remarkably well, winning a number of large cities in the second round of elections, including Lyon, Strasbourg, Bordeaux and Besancon (Politico, 28 June).

In the UK, the environment ranked above the economy as the third most pressing concern for the country (below Brexit and healthcare) in the YouGov tracker prior to the COVID-19 pandemic. Even today, c40% of 18- to 24-year-olds in the UK believe the environment to be among the top three issues facing the country.

As the electorate becomes 'greener', politicians are forced to respond.

- **More countries are adopting net-zero carbon emissions targets, with many being enacted into law**

In June 2017, Sweden became the first country to put into law a timeline to ensure it is zero-carbon emitting by 2045 (with 85% of the reduction achieved through a reduction in emissions and 15% in offsets). Since then, we have seen the UK, France, Denmark, New Zealand, Hungary, Japan and South Korea all commit to net zero-carbon emissions by 2050, and China committing to the same by 2060. All of these countries apart from Japan, China and Korea have enacted this commitment in law.

In the US, President-elect Biden won the presidency after campaigning on a zero-carbon emissions mandate by 2050, including making electricity generation carbon-free by 2035. This can be partly implemented by Presidential Executive Order, via regulation to the EPA or SEC (climate disclosures), and Biden has indicated he would reinstate California's long-held authority to set its own emissions standards and could also grant waivers to other states that take similar actions. This could encourage other states to follow California and implement programmes similar to LCFS (20% reduction in carbon intensity by 2030).

- **Green-related fiscal QE is also about creating jobs**

The multiplier on improvements in grid (required for renewables) is c3x, according to Italgas and Endesa. In the UK, the increase in wind capacity alone is meant to drive 60k jobs and stimulate £20bn of private investment, with the Green New Deal creating 250k jobs (FT, 2 November).

- **A relatively small cost to get to a carbon-neutral economy**

The IMF estimates that the cost to global growth (relative to the baseline) of moving to a zero-carbon economy is 1% of global GDP. This compares with a cost of not moving that is much higher. If temperatures were to rise by 5C by 2100, the IMF estimates this could take c25% off global GDP relative to the base case. The UK Committee for Climate Change (CCC) also puts the cost of reaching net zero at just 0.5% of GDP by 2050 (down from last year's estimates of 1% to 2%) (FT, 9 December).

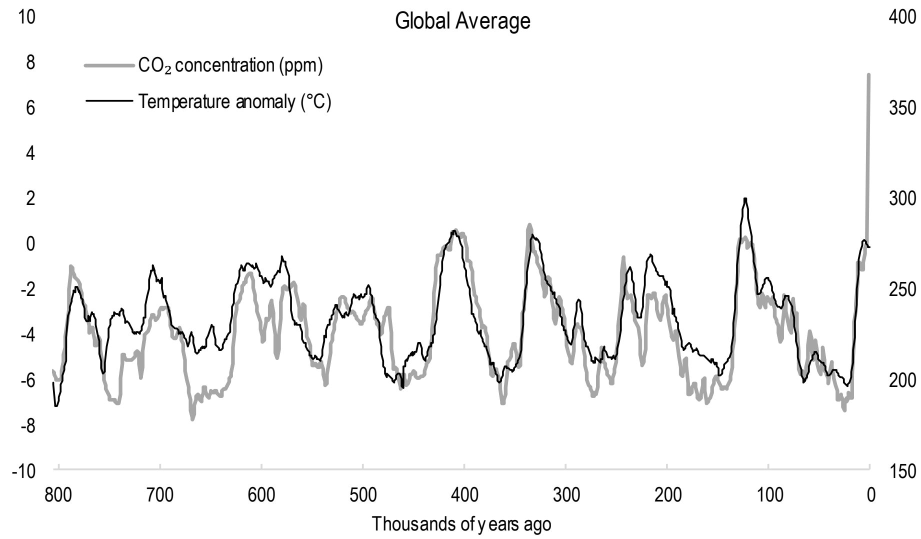
- **Consumer patterns drive green investment**

Major Japanese companies including Ricoh and Sony warned Minister Kano (the country's reform minister) that they would have to shift production out of Japan if they could not source enough renewables (FT, 27 November). This was because many consumers want to be able to buy products made with a zero carbon footprint.

- **Reality drives politics and flows**

According to NASA, 97% of climate scientists agree that climate change is extremely likely to be caused by human activities, and the scientific evidence for climate change is unequivocal, according to the International Panel on Climate Change. The most recent IPCC report (October 2018) highlights that on current government pledges, global temperatures will rise by 3.2°C by 2100 (compared with goals of a maximum increase 1.5°C to 2°C), and that to limit climate change to 1.5°C , CO_2 emissions would need to fall 55% by 2030 (they actually rose 2% last year).

Figure 61: There is a clear relationship between atmospheric carbon dioxide and temperature anomalies… pointing to a potentially much bigger rise in global temperatures



Source: Parrenin et al. (2013), Bereiter et al. (2015), Credit Suisse research

Indeed, the UN's World Meteorological Organisation (WMO) states that oceans hit record temperatures this year despite La Niña conditions (which have a cooling effect on the northern hemisphere, FT, 2 December).

In the next sections, we briefly examine the various means of tackling carbon emissions and the issues that arise from each of them; they are:

- reducing the supply of carbon;
- changing consumption habits;
- increasing efficiency of energy use; and
- the mitigation of impacts.

Reducing energy emissions

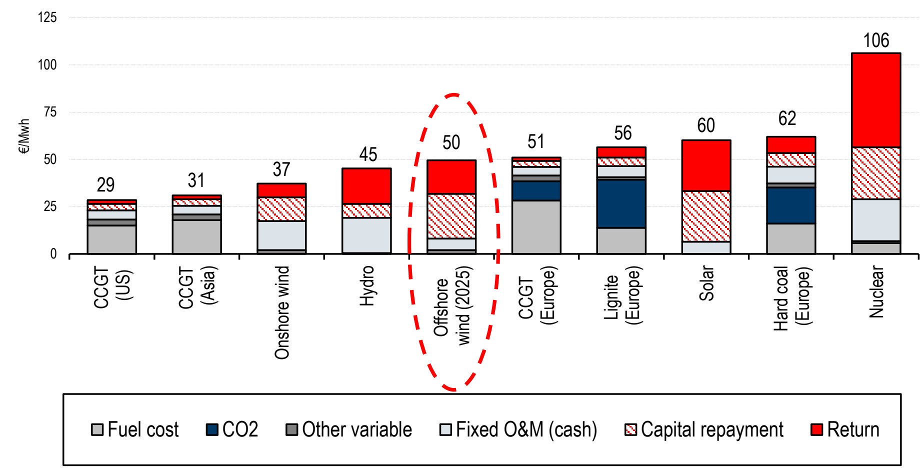
We highlight below a few themes on energy transition and emissions reduction we like. Our Global ESG Research team have covered this topic extensively in their reports: Energy Transition Primer – Race against the carbon clock, 9 Sep., and An investor's roadmap for the Energy Transition, 9 Sep.

1. **Wind**

Cost advantage

According to the IEA, offshore wind has the capacity to meet all of the world's electricity demand and is a 'game changer', with the cost of offshore wind forecast to fall another 40% by 2030 (having fallen c70% since 2012). Already in the UK, the implied wholesale price of offshore wind is, without subsidy, below that of Combined Cycle Gas Turbines (CCGT), excluding transitional costs. Our utilities team highlights that offshore wind needs €45-50/MWh over its life. The marginal cost is much lower. In the US, NextEra highlight that wind is economic at $20-$30 per MWh by 2025 compared to $30 to $40 for solar.

Figure 62: The fully loaded cost of offshore wind is below CCGT in Europe, with the marginal cost much lower



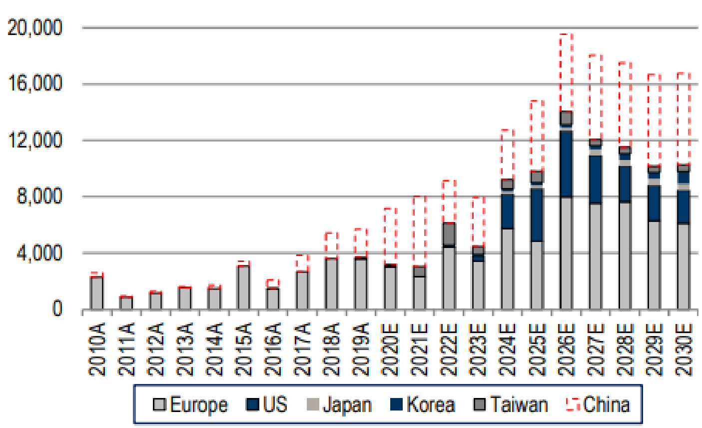
Source: Credit Suisse European Utilities team

Major investment, with benefit from relatively low penetration

This in turn makes wind a huge growth area: the IEA believes that there will be around $850bn of new wind investment in the next 20 years and a fivefold increase in capacity over the next five years. Most recently, in the UK, Prime Minister Johnson increased the wind target capacity in 2030 to 40GWh from 30GW (which compares to just 10GW today). By way of example, Wood Mackenzie forecasts new wind capital spending this decade to be very similar to US offshore oil and gas investment ($78bn versus $82bn, according to the FT, 9 July), while the DoE believes wind capacity in the US will increase six-fold by 2030 (FT, 3 Nov).

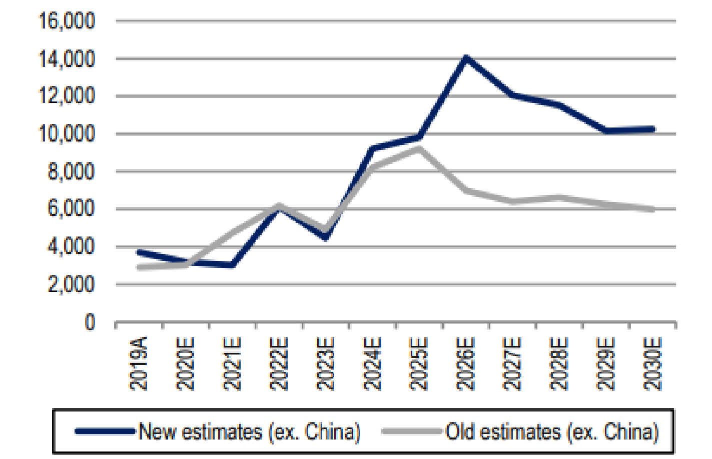
Our analysts have recently revised their forecasts of post-2025 offshore wind capacity growth from 6.5GM p.a. to 11.6GW p.a., driven by growth in new markets; they estimate that over the next decade to 2030, there would be €350bn of cumulative capex in the area (see CS Connection Series: Global Offshore Wind, investment across the supply chain, 2 Nov, for more details).

Figure 63: Our analysts' forecasts for global offshore wind installation, MW



Source: Credit Suisse European Utilities team

Figure 64: Old and new global offshore wind installation forecasts ex China (after 10% reduction), MW p.a.



Source: Credit Suisse European Utilities team

Exposed to hydrogen

Wind is also being used to fuel green hydrogen (see later). Australia has granted 'major project' status to a $36bn renewable energy project to build the world's largest power station and export green hydrogen. Within five years, it plans to build 1,600 turbines and by 2H 2025 aims to produce green hydrogen at under $2 per kg (the price at which hydrogen is economic relative to diesel).

Ways to gain exposure to the theme

Utilities

In the utilities section, we highlight the renewables. The extraordinary issue is that:

- Valuations: their FCF yield on maintenance capex is c11%.
- They are also exposed to the rising price of carbon (see the utilities section). In this regard, it is very interesting to note that BP has raised its carbon price assumption to $100 per ton, up from $40 (20 June 2020). According to the IMF, to achieve the target of limiting the temperature rise to 2°C, emissions need to be cut by roughly one-third by 2030 and global carbon prices need to be $75 per ton (IMF, October 2019).

Our utilities team's preferred stocks in this regard are RWE (35% EV in offshore wind), while EDP is also exposed to offshore opportunities through its OceanWind JV and ranked well on HOLT. In the US, the preferred picks are NextEra Energy Partners (where renewables are now about 87% of EBITDA).

Turbine OEMs

This is a three-operator market, in our view (GE, Siemens Gamesa and Vestas). Vestas is the leader in onshore, with Siemens Gamesa the leader in offshore. Siemens has a 65% share in the installed base of offshore wind. There is a strong installed base, and this should be able to generate service revenue which already account for about half of its profits. The higher the load factors on offshore wind, the further offshore they have to go and in turn the greater the potential service cost. The business model of wind turbines might end up being similar to that of jet turbines or lifts – whereby nearly all the value accrues from a service model.

Our analysts believe that, unlike in solar, China will not represent a competitive threat for wind. Chinese equipment has tariffs of typically 10-25%, and transport costs can add up to 10%. There are also differing grid standards, making it difficult for the Chinese companies to export out of China. Siemens, for example, has in the past licensed its technology to a Chinese multinational power generation and electrical equipment manufacturing company and collected royalties.

The concern at the moment is that the market has been trying to quantify the competitive threat from GE.

Transmission cables

Our analysts think there remains an attractive long-term opportunity and believe the addressable market could grow 3x by 2031 compared with the 2019 level.

A key operator is Prysmian, which has a 40% market share in global offshore cables, accounting for 10% of EBITDA. A further 15% of EBITDA comes from sub-marine interconnection cables (between countries) which are used to balance power more effectively and reduce the need for additional power generation capacity. Our team rates Prysmian Neutral due to the risk around telecom margins; their preferred names among the European cables are Nexans and NKT (see Putting Offshore wind tailwinds in perspective; upgrading Nexans and NKT to Outperform, 2 November).

Figure 65: Offshore wind exposure

		-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Sub-sector	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Rwe	Utilities	17.6	101%	9%	1.2	-45%	0.8	2.5	165.3	-4.1	5.5	2.1	Outperform
Edp Energias De Portugal	Utilities	19.4	111%	13%	1.9	19%	7.3	4.1	26.8	2.4	-2.6	2.1	Outperform
Nextera Energy Partners	Utilities	54.8	315%	23%	2.1	21%	8.4	3.7	na	nm	-1.6	2.1	Outperform
Vestas Windsystems	Turbine OEMs	34.5	159%	5%	9.6	126%	1.0	0.6	-31.5	-3.7	2.0	2.8	Underperform
Siemens Gamesa Renewable	Turbine OEMs	57.5	266%	78%	3.9	95%	272.0	-0.3	-31.6	-65.1	0.4	3.2	Neutral
Prysmian	Cables	20.1	93%	13%	3.0	-18%	4.1	1.5	-39.4	-0.3	-1.0	2.3	Neutral
Nexans	Cables	16.4	76%	-17%	1.9	32%	2.8	0.6	35.1	-15.5	-2.7	2.3	Outperform
Nkt	Cables	-117.1	nm	na	1.4	-6%	na	0.0	-7.0	nm	1.1	2.0	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

2. Nuclear

There are five reasons why we look more closely at nuclear:

The IEA Sustainable Development Scenario has nuclear becoming more important

Energy generation accounts for 42% of global energy-related CO2 emissions. By 2040, under the IEA Sustainable Development Scenario, CO2 emissions from the power sector have to fall by more than 70% despite overall demand for electricity rising by 46% by 2040. In their scenario, the share of nuclear share is expected to rise slightly to 11% of global electricity generation from 10% currently—this implies that nuclear generation for the next 20 years is likely to rise c60% (see the report from our ESG analysts: Energy Transition Primer – Race Against the Carbon Clock, 9 September).

Nuclear energy has some advantages and is potentially very low-carbon

Nuclear has some advantages:

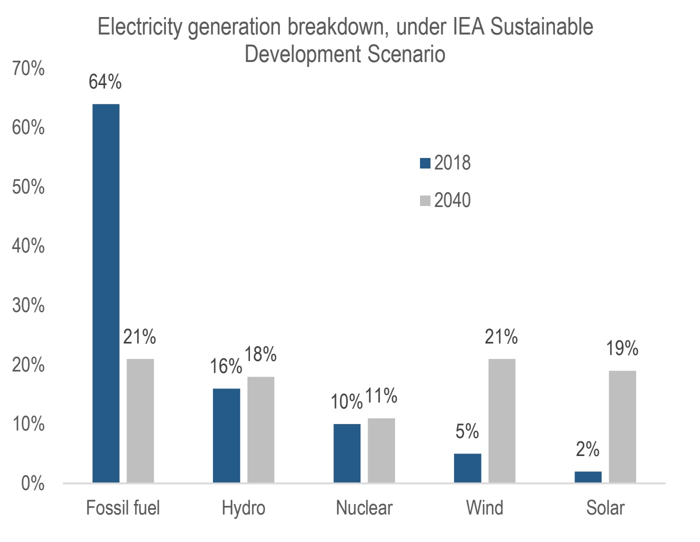
- It has a small land footprint compared to other renewables.
- Its capacity factors (i.e. electricity generated vs. generation capacity) are the highest.
- There are no extra requirements for storage and it is compatible with existing electricity grid/infrastructure.

- Moreover, the supply of uranium tends to be concentrated in politically low-risk countries such as Canada and Australia.
- The carbon footprint of nuclear-generated electricity is one of the lowest even among the renewables (for a kilowatt hour of electricity generation, the carbon footprint for nuclear is 4 grams). This is the same as wind but lower than solar (6g). In comparison, carbon foot print for coal even with carbon capture and storage is 109g (Columbia University, Earth institute).
- For many countries, nuclear counts as 'carbon-free' power generation and a key to achieving their carbon-neutral pledges (e.g. the UK).

Growing demand in emerging markets

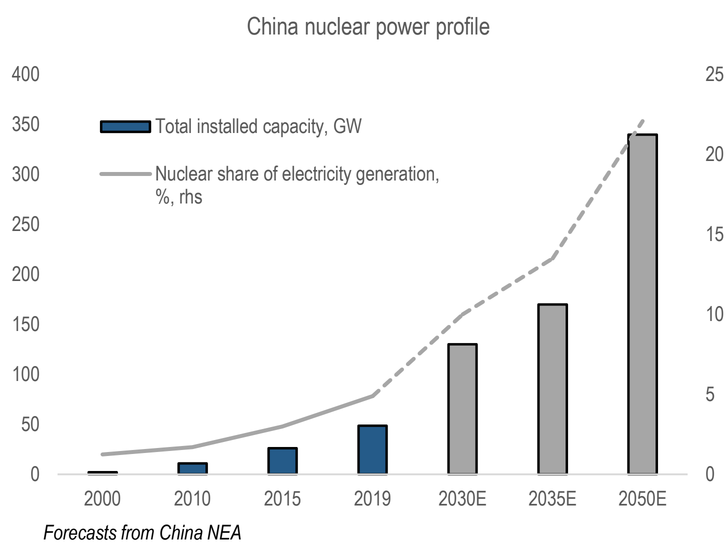
China is still growing (it currently has 48 nuclear reactors with 12 under construction) and plans to increase the nuclear share of electricity generation to 22% by 2050 from 5% currently, according to data from China's National Energy Administration.

Figure 66: Electricity generation breakdown today vs 2040



Source: IEA

Figure 67: China nuclear power profile



Source: China NEA

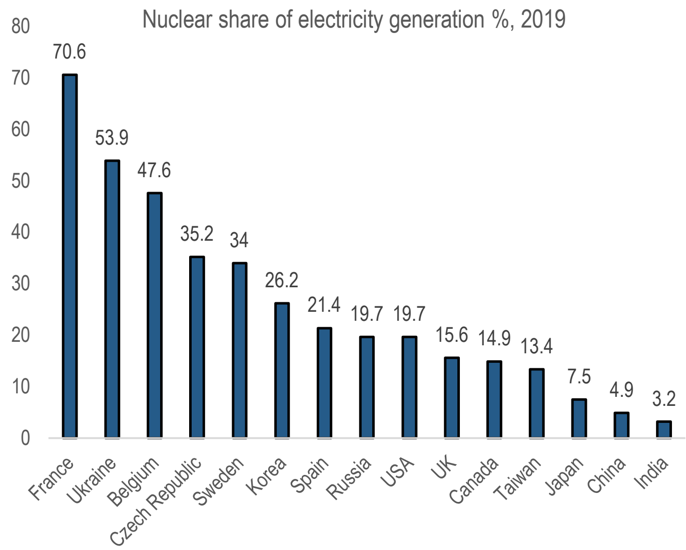
There is still a role for nuclear in the developed world

Some DMs are still investing in nuclear. In the US, Biden's $2 trillion climate plan includes support for the development of nuclear energy. In the UK, PM Johnson proposed up to £2bn spending to build mini nuclear reactors. Poland has proposed investing $40bn to build six new reactors over the next 20 years. In Japan, PM Suga has specifically flagged nuclear power will be part of the plan to help Japan become carbon-neutral by 2050.

Small modular reactors might have a role

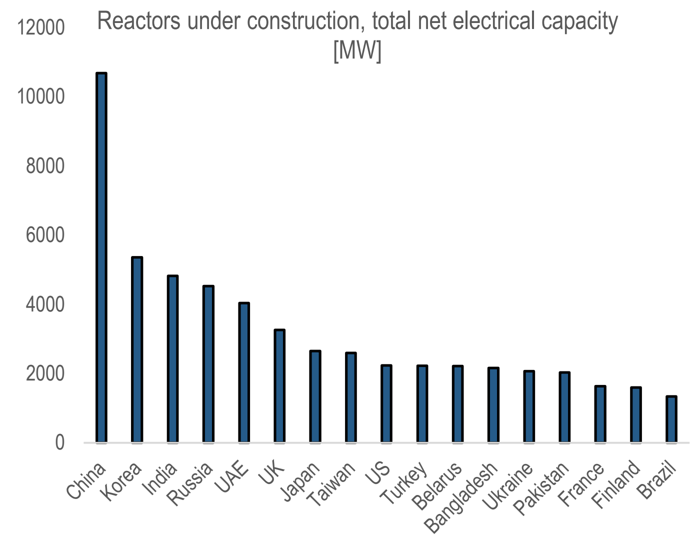
Small-scale nuclear reactors are quicker to build (3 to 5 years as opposed to 7 to 8 years) and with prefabrication and standardisation, the building costs could be as low as large-scale ones, according to research done by Cambridge University (FT, 11 Oct). Both the US and UK are actively looking into this area.

Figure 68: Nuclear share of electricity generation. EM is way behind the European level



Source: International Atomic Energy Agency

Figure 69: Reactors under construction, by capacity



Source: International Atomic Energy Agency

Uranium miners

The top 5 miners control 60% of the world's production of uranium. Our analysts think the market is tight and will continue to get tighter over the coming years as some mines reach the end of their lives and capex from major producers is falling. While there is some latent capacity that can turn back on, it requires higher prices in order to do so. So with utilities, particularly in the US, having still big requirements to fill in the medium term, they will have to soon turn to the long-term contracting market to incentivise mines to come back to production as well as new capex to be spent on greenfield mines. Our analysts rate Kazatomprom Outperform.

3. Hydrogen

We are very optimistic on the future of hydrogen, and we cover this in more detail in our industrial gases section. McKinsey believes hydrogen will be a $2.5trn market by 2050 (see *Hydrogen, Scaling Up* by McKinsey and the Hydrogen Council, November 2017). Hydrogen may have an increasing number of end-uses and could be used for large transport vehicles (ships, planes, trains and maybe trucks). Hydrogen may also become an important form of energy storage. Hydrogen is going to be increasingly used in heating (to replace or supplement gas). Also, hydrogen is being used to decarbonise a number of industries, including steel, iron ore and fertilisers. We highlight the industrial gas names (Air Products and Air Liquide). Other companies we do not cover include fuel cell companies (Powercell, Ballard or Plug Power), storage companies (Nel), transport (Nikola) and others. We included a comprehensive list in the industrial gases section of this report.

Our analysts have just published a Global Connection Series on this topic: see Hydrogen: A new frontier – Part 1: A primer on the European value chain, 8 Dec, and Part 2: A primer on the APAC value chain, 9 Dec.

Figure 70: Hydrogen stocks

Name	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Air Liquide	25.0	108%	-6%	3.4	-5%	4.1	2.1	7.3	-1.5	-2.3	2.0	Outperform
Air Prds.& Chems.	28.9	125%	10%	5.0	9%	0.8	1.9	15.4	-7.4	-0.3	2.3	Outperform
Plug Power	-94.5	nm	na	63.5	219%	-0.8	0.0	-85.4	nm	1.6	1.8	Not Covered
Nel	-145.3	nm	na	15.6	209%	-1.3	0.0	-81.4	nm	-9.0	3.1	Not Covered
Nikola	-21.6	nm	na	111.9	51%	na	0.0	na	nm	-17.5	2.8	Not Covered

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

4. Batteries – a long-term secular growth story

There are two key reasons we want to focus on batteries.

- The importance of storage of electricity

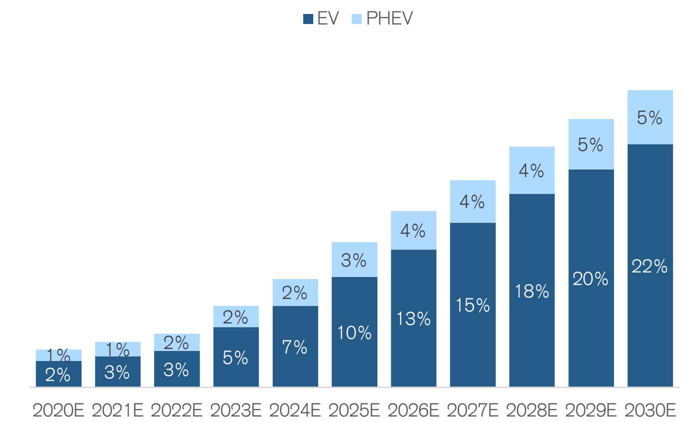
A greater reliance on renewable energy generation clearly means that power generated from renewables will need to be stored for times when the sun isn't shining or the wind doesn't blow (renewables tend to have more intermittent power generation than fossil fuels, making batteries essential to smoothing out power supply). The IEA forecasts that by 2040, 80% of global power production will be renewables compared to 28% in Q1 2020 (in the UK, 47% of electricity was provided by renewables in Q1 2020, according to the FT, 22 Nov).

- Electric Vehicles (EV)

We do not want to focus on EV given the complexities involved and difficulty of discerning the potential winners versus the losers. We would just highlight that valuations appear extended; if we look at the market cap of the pure EV plays (Tesla, Nikola and the Chinese EV names - Li Auto, NIO, Xpeng, BYD, and BAIC bluepark), they come to c117% of the market cap of the rest of the auto sector (or c57% of the total global autos market). We struggle to believe that many of the incumbents will not succeed in becoming key makers of EVs (e.g. VW plans to spend €33bn alone on EV by 2025 and are already the world's second-largest supplier of EVS by volume behind only Tesla; see FT, 5 November).

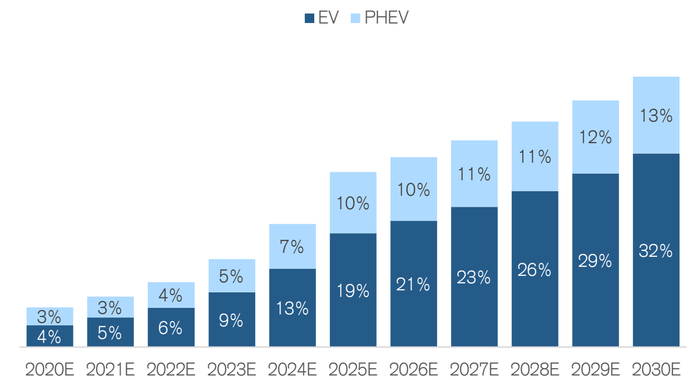
Already, Credit Suisse analysts note $243bn so far of stimulus for electric vehicles alone, and China aims to have 25% of all new car sales by 2025 being EV (see Beyond the Pandemic: The Green-Shaped Recovery, 1 September). Credit Suisse analysts forecast EV and PHEV penetration to reach 27% globally and 45% in Europe by 2030.

Figure 71: Credit Suisse global BEV and PHEV penetration forecasts



Source: Credit Suisse Japan autos research team

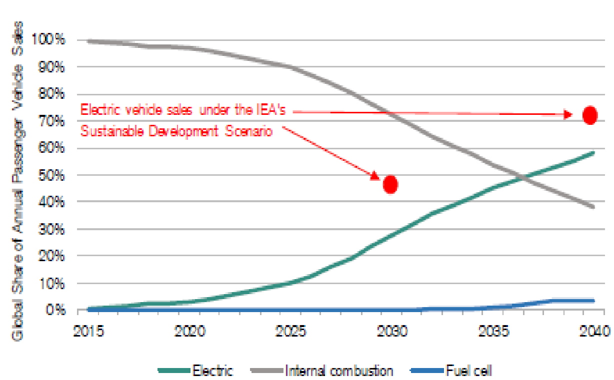
Figure 72: Credit Suisse European BEV and PHEV penetration forecasts



Source: Credit Suisse Japan autos research team

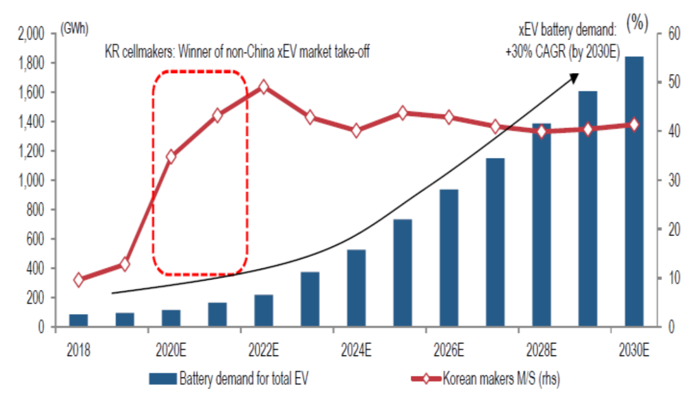
At present, batteries are one of the main limiting factors behind reducing the cost of EVs (with lithium-ion batteries representing about 30% of EV costs currently; FT, 4 October) and are absolutely critical to achieving the widespread use of EVs. Oliver Wyman believes that the total cost of a 50kWh battery will fall from €8k to €4.3k by 2030 (implying a 46% total decline in costs, or 6% compounded decline per year). Additionally, Credit Suisse auto analysts see the average selling price for battery packs declining by 29% per kWh by 2030.

Figure 73: Global share of passenger vehicle sales and forecasts



Source: Bloomberg NEF, International Energy Agency

Figure 74: Credit Suisse analysts' forecast Korean cell makers' market share to take off in 2020-22 based on tech and production capacity leadership



Source: Credit Suisse research

Credit Suisse analysts forecast the global xEV battery market to reach $204bn by 2030. When Tesla held its highly anticipated Battery Day in September, the company highlighted its aggressive growth plans for battery production, seeking to produce 3TWh hours of capacity by 2030 – this is 50x their current capacity (see Battery Day plan shows elevated growth narrative ahead, but consider challenges in manufacturing ramp, 23 September). Currently the world has capacity to produce just 320 GWh of batteries annually, and thus Tesla's demand alone would imply a c9.5x increase in global battery production.

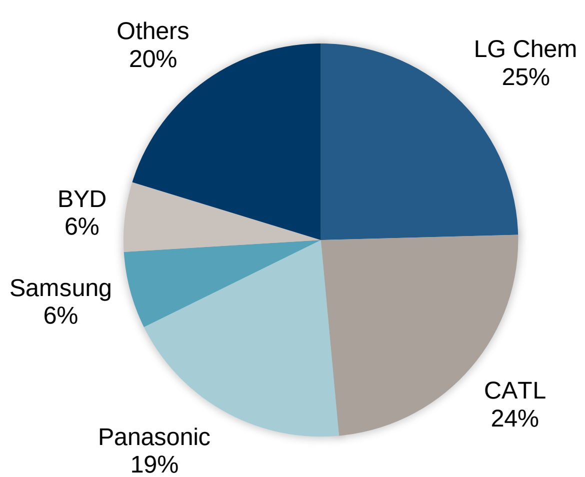
Tesla also announced in September that it plans to produce enough batteries in-house for 1.4m cars by 2022 (FT, 4 October). Currently LG Chem and China's CATL supply batteries for Tesla models made in China, while Panasonic supplies batteries for Tesla's US-manufactured vehicles.

Credit Suisse analysts note that there are different degrees of barriers to entry for the battery market, and market barriers should benefit incumbents, particularly Korean battery manufacturers:

- The technological barrier is low; in theory, any Chinese player can enter this market at any time.
- The commercial barrier is mid-to-high: it requires engineers' know-how, an ample orderbook, and sizeable initial investments to break even.
- The track record/relationship barrier is high: because it is related to drivers' safety and OEMs' brand image, the track record for safety, quality stability, and A/S possibility make this barrier high.

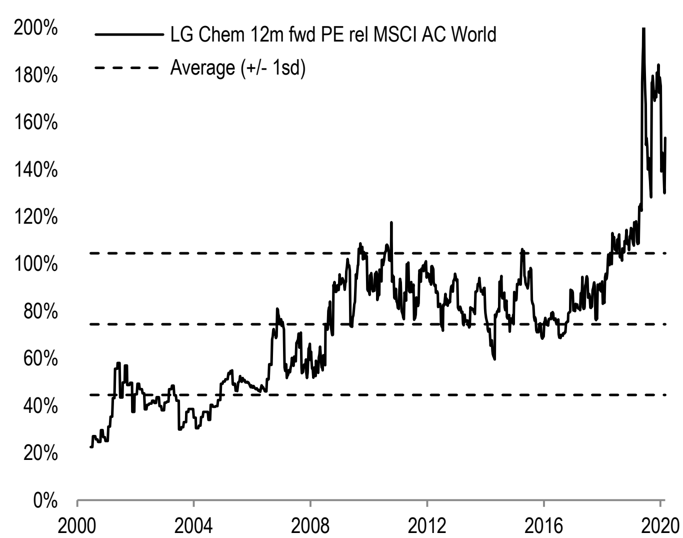
Our preferred way to gain exposure to the secular growth story of batteries is through South Korean battery manufacturer LG Chem (which is rated Outperform by CS analysts and had a 24% share of the battery market in 1H20). Its current order book is enough to keep it busy for over five years. LG Chem supplies batteries to Tesla for its cars manufactured in China and has partnerships with a number of large global auto manufacturers (including VW, Volvo, Daimler, Renault, General Motors and Hyundai and Kia). It trades on 31x 12-month forward earnings. However, if the xEV battery market is $204bn by 2030 (in line with our analysts' estimates) and LG is able to keep a 24% market share, then the whole of LG Chem trades on less than 1x 2030E revenue of the battery division (though our analysts highlight that currently around c60% of LG Chem's revenue comes from other business such as petrochemicals). We also note that LG Chem recently exclusively secured Tesla's battery order for Model Y at the China Gigafactory (see LG Chem secures Tesla model Y volume in China, as we expected, 23 Nov).

Figure 75: Battery cell manufacturers share, 2020



Source: Credit Suisse research

Figure 76: LG Chem has recently de-rated on 12m fwd PE relative



Source: Refinitiv, Credit Suisse research

We highlight Johnson Matthey (rated Outperform) for the following reasons:

- Credit Suisse analysts believe that eLNO technology for cathode materials represents at least an equal version of high-nickel NMC technology. The startup is due in 2022 with first sales in 2024 (and this is likely to be a material contributor to profits a few years later, according to our team).
- Catalytic converters are still needed in all non-battery-electric-vehicles (BEVs), including both plug-in and mild hybrid vehicles. They are penalised by the move away from diesel in Europe, but likely less so than is widely thought, in our analysts' view. In 2015, diesel catalytic converters required 6x more use of catalytic converters than a combustion engine, but both have risen in value, and gasoline by much more. Our chemicals team sees regulatory-driven growth from catalytic converters in Asia; and that by 2025 only 10% of new car sales will be fully EV (21% in China but just 7% in the US). With the average age of cars currently 12 years in the US, the stock of EV will be much lower. While not specifically reducing carbon dioxide emissions, catalytic converters improve air quality by reducing nitrogen oxide emissions (also an indirect greenhouse gas) and particulate matter.
- Hydrogen fuel cell technologies use a platinum-coated catalyst. JM's fuel cell business is a leading supplier of the CCM (catalyst coated membrane – the operational heart of a fuel cell), providing a further leg to growth if this takes off. Current sales from the company's fuel cell business are ~£40mn (1% of sales), with the company doubling capacity currently.

Other forms of energy storage: While pumped-hydro (pumping water up into reservoirs using excess energy and releasing it to spin a turbine when needed) is the main form of storage currently, this may face issues with water and land shortages in the future (FT, 22 Nov). Apart from lithium-ion batteries (which also may face a shortage of natural resources), there is increasingly more research and development into other emerging technologies for storing energy.

Vanadium redox flow batteries, first developed by NASA, use large tanks of charged electrolytes to store energy and can be scaled up quicker than conventional batteries (Invinity Energy Systems, Rongke Power and VoltStorage operate in this area).

Another technology is thermal energy storage, for example that being trialed by Siemens Gamesa (they heat volcanic rock to very high temperatures, which can store energy for up to a week and release energy as cooled).

Other technologies being developed to store energy include liquid air (liquefying air which is then heated to turn turbines), gravity storage (converting excess energy into potential energy by lifting and dropping heavy blocks), liquid metal batteries (using charged metals that separate when heated, similar to fuel cells), and hydrogen (which we have covered in more detail in our industrial gases section).

Below we show a screen of the global battery and energy story stocks.

Figure 77: Global batteries and energy storage stocks

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %		
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)
Lg Chem	31.4	136%	60%	3.8	57%	na	0.8	4.6	38.6	-2.5	1.7
Samsung Sdi	35.8	142%	45%	2.9	120%	na	0.2	-15.2	14.0	3.0	1.8
Panasonic	17.3	70%	-39%	1.4	-27%	5.0	2.1	65.4	-18.9	-1.9	2.6
Tesla	159.2	863%	18%	81.9	234%	0.6	0.0	-61.1	20.1	4.2	2.7
Contemporary (Sec) Amperex	82.6	381%	19%	na	na	na	0.1	na	-2.1	-4.1	1.8
Johnson Matthey	12.7	55%	-36%	1.5	-57%	6.5	2.3	80.9	5.0	-2.0	2.7
Siemens Gamesa Renewable	57.5	266%	78%	3.9	95%	272.0	-0.3	-31.6	-65.1	0.4	3.2
Nel	-145.3	nm	na	15.6	209%	-1.3	0.0	-81.4	nm	-9.0	3.1

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

5. Copper

In our 2020 outlook, we highlighted copper and continue to do so.

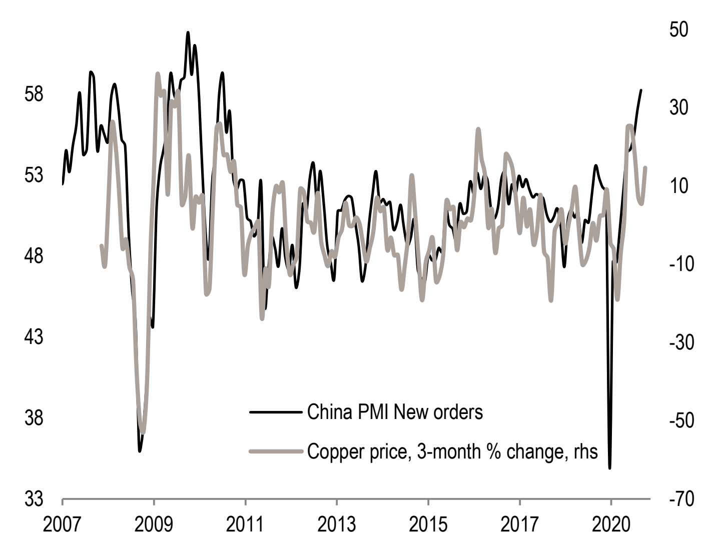
There is more to copper than meets the eye. Copper is needed in cars, for the grid transmission mechanism to recharge cars and in wind and solar power generation.

An internal combustion engine uses c.23kg of copper, compared with 40kg for a hybrid vehicle and 83kg for battery-powered vehicles. The International Copper Association forecasts that electric vehicles could account for 6% of copper demand globally by 2025, from less than 1% currently. The University of Grenoble went even further, suggesting that the current level of copper demand is half of all copper consumed since 1900.

Wood Mackenzie claims that there is a potentially a significant shortfall in copper by 2030 (c20% of current production) to satisfy demand coming from the shift to cleaner energy.

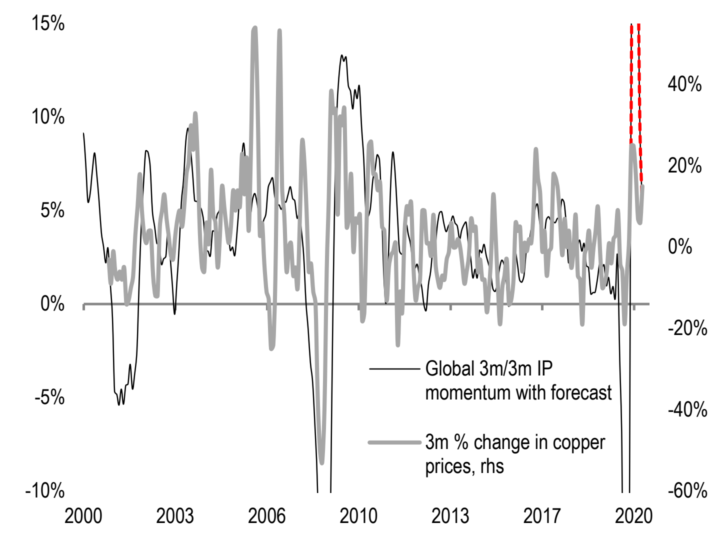
Clearly economic activity is critical for copper, but the proxies on economic activity would imply a higher copper price, as shown below and as explained in the mining section of this report.

Figure 78: Copper effectively trades in line with China PMIs…



Source: Refinitiv, Credit Suisse research

Figure 79: … and global IP



Source: Refinitiv, Credit Suisse Economics, Credit Suisse research

The copper-related companies listed in Europe, in terms of their EBITDA, are Antofagasta (purely copper), Boliden (40%), Glencore (35%) and Anglo (20%).

Figure 80: Copper plays – Antofagasta, Boliden, Glencore, Anglo

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Antofagasta	25.0	171%	-2%	2.5	3%	1.9	1.3	19.0	29.7	6.4	3.1	Neutral
Boliden Ord Shs	12.2	84%	-17%	2.0	-2%	4.5	3.2	100.0	17.1	3.4	2.9	Underperform
Glencore	14.7	101%	-21%	0.7	-49%	2.8	1.4	30.7	40.0	-4.5	2.1	Neutral
Anglo American	11.1	76%	-24%	1.2	-8%	1.1	2.5	109.4	18.0	4.3	2.1	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

6. Renewable diesel

Renewable diesel can reduce greenhouse gas emissions by 50-90% when compared with traditional crude-oil-based diesel by using complex feedstock such as animal fats and waste products. If we look at Neste, 80% of its diesel comes from renewable diesel from complex feedstock and, in turn, these products account for around 70% of its revenue. In particular, its biojet is a way of decarbonising jet travel (which accounts for up to 2-3% of global CO2 emissions). SAS has signed a letter of intent to replace all jet fuel on domestic flights with biofuel, primarily from forestry residue and waste, by 2030. IATA has fixed a goal of one million passengers on flights powered by a mix of conventional and sustainable jet fuel by 2025 against only 100k in 2017. There is increasing competition in bio-jet as the oil majors are also pursuing this avenue, but at the moment Neste is a global leader in biodiesel and the business has a ROACE of c50%, giving the overall business a ROACE of 23% (well above its long-term target of 15%). The primary concern is valuation (at 21x EV to EBITDA on consensus forecasts, far above the average of its global peers) and increasing competition from other oil companies such as Total, ENI, and Phillips 66 that are looking to enter the field (although they have yet to achieve the scale and profitability of Neste in this area). As such, CS analysts rate Neste Underperform.

Another stock with exposure is REGI, where c20% of its fuel comes from renewable diesel. It targets those markets that reward its lower carbon intensity (California, Oregon, British Columbia and Norway). REGI is rated Outperform and trades on c.17x 21E CS EPS (see Pure-Play biodiesel and renewable diesel; initiate at Outperform, 1 Sep).

Figure 81: Renewable diesel names

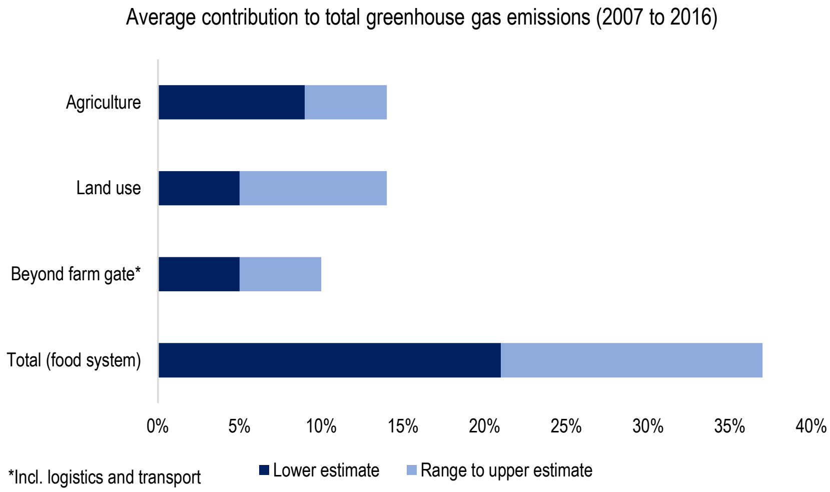
	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Neste	34.3	140%	77%	7.6	153%	1.5	1.6	-27.1	1.7	-1.6	2.7	Underperform
Renewable Energy Group	12.3	50%	-19%	2.0	112%	na	0.0	108.8	-10.9	1.1	1.9	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

7. Agricultural emissions

Recent analysis from the IPCC estimates that the total proportion of global greenhouse gas emissions accruable to agriculture ranges from 21% at the lower bound to 37% at the extreme, with agriculture representing 70% of global fresh water usage and 80% of tropical deforestation.

Figure 82: IPCC estimates show agriculture contributing between 21% and 37% of total greenhouse gas emissions globally



Source: IPCC, Credit Suisse research

One problem is that consumption of food tends to rise with income per capita.

We estimate below the overall increase in calorie consumption based on population projections and trends in calories per day.

Figure 83: Calorie consumption projections

	Population (m)			KCal per day				
Country	2020	2030 est.	Change	2020	2030E Scenario 1*	% Increase in Total Cal.	2030E Scenario 2*	% Increase in Total Cal.
India	1,380.	1,503.6	9.0%	2455	2639	17%	3682	63%
China	1,433.8	1,464.3	2.1%	3108	3265	7%	3682	21%
Indonesia	273.5	299.2	9.4%	2777	2965	17%	3682	45%
Sub-Saharan Africa	1,094	1,400	27.9%	2445	2503	31%	3682	93%
Nigeria	206.1	262.3	27.6%	2700	2735	29%	3682	74%
Ethiopia	115.0	144.9	26.1%	2131	2183	29%	3682	118%
World	7,794.8	8,548.5	9.7%	2847	3000	**16%**	3682	**42%**

**Scenario 1 estimates - UN projections and calorie model. Scenario 2 estimates - assumes convergence to current levels in the US*

Source: UN Population Projections, IMF, Credit Suisse research

While in Scenario 1 (modelling for calorie consumption per day based on current trends relative to GDP growth per capita) we see a c.16% increase in total calories consumed per day in 2030; in Scenario 2 (assuming global convergence to the calorie consumption per day seen in the US), we see a 42% increase in total calories consumed. In such a situation, even if we account for the greater calorie density in the foods consumed in the US, we would expect to see the ecological impact from agriculture increasing substantially.

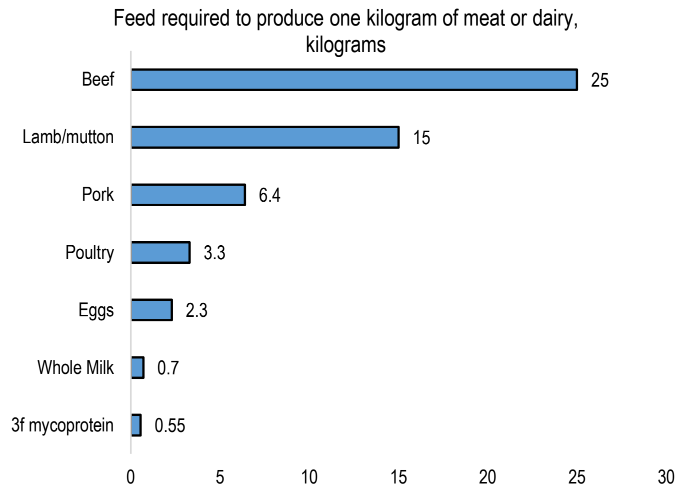
There is also potentially further demand on land use from biofuel crops, where biofuels do not come from waste products (e.g., in the US, China, Indonesia and Malaysia); we discuss this further below.

- **Beef:** Using a global lifecycle approach (accounting for second-order energy and transport emissions), the Food and Agriculture Organisation (FAO) estimates that 14.5% of global emissions come from livestock.

Within livestock, the biggest problem is cattle; accounting for 72% of agricultural emissions (this includes feed production, manure management, and enteric fermentation, but excludes any deforestation), thus we estimate that cattle directly account for 10.5% of all GHG emissions.

The problem that a kilogram of beef requires 25kgs of feed compared to 3.3kgs for poultry, and 0.55kgs for mycoproteins (alternative proteins).

Figure 84: A kg of beef requires 25kgs of feed



Source: FAO, Credit Suisse research

How to reduce carbon emissions for cattle

Project Bovair is a feed additive created by DSM, which claims it can reduce methane emissions by 30%. It is currently at the regulatory approval stage (targeted approval by 2021), with the aim to commercialise the technology by 2022 (with an estimated market size of €2bn). The main problem is monetising, as there is currently no pressing incentive for farmers to use this additive unless they are forced to (i.e. by regulation), the government foots the bill (i.e. subsidises the additive), there is a carbon tax on meat (i.e. it is cheaper to buy Bovair meat), or there is a significant shift in consumer behavior to avoid environmentally-unfriendly meat.

Research has also found other feed additives capable of reducing methane emissions.

- Fumaric acid (70% reduction in lambs and sheep);
- The seaweed *Asparagopsis taxiformis*, which is able to control methane production (up to 67%), simultaneously reducing energy demand, further economising feed usage (Climate Econometrics, 21 Sep).

There are several small listed producers of fumaric acid: Huntsman Corporation, Thirumalai Chemicals, Fuso Chemicals, and Nippon Shokubai.

Furthermore, companies such as Genus are aiming to drive productivity gains through genetic improvement (through their stock of porcine and bovine genetic material) by improving feed efficiency and herd management (reducing emissions per unit of end-product by increasing the conversion ratio of feed to product). Genus also owns the technology to screen for desirable genetic markers and has recently announced its use of CRISPR technology to breed disease-resistant herds. It is a global leader in the field with a market cap of c$3.5bn.

Reducing carbon in the production of foods

According to the US EPA, the management of agricultural soil accounts for 'almost half of the emissions from the agricultural economic sector.' A large amount of nitrogen in fertilisers gets released into the atmosphere as nitrous oxide, a greenhouse gas that is 300 times more potent than CO_2.

Yara is developing catalyst technologies to reduce the emissions of nitrous oxide from nitric acid production, required in the manufacturing of nitrate fertilisers (reducing the fertilisers' carbon footprint by 40%). The usage of robust and well-proven recommendation systems designed by Yara (Atfarm and Irix) also reduces the polluting run-off into rivers during the usage of the fertiliser.

In 2019 Pivot Bio, a start-up based in the US and back by Breakthrough Ventures Fund, also started selling nitrogen-producing microbes as a replacement for synthetically produced nitrogen fertilisers. Unmodified bacteria stops producing the nitrate essential for crops to grow if it detects the presence of artificially produced nitrate from a fertiliser. Scientists therefore modified the bacteria so that it will produce nitrate regardless of the presence of synthetic nitrate in order to allow a transition from nitrogen fertilisers.

There is also the potential for biological weapons using insects to attack pests; for example, Applied Bio-nomics in Canada sells over 10 predatory species such as predatory mites, which it says can be introduced in an environmentally safe manner with fewer unintended side effects.

Elsewhere, Trimble Navigation provides software for agriculture to enable more accurate drilling.

Figure 85: Agricultural emissions screen

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Dsm Koninklijke	26.8	116%	18%	3.0	37%	3.7	1.8	-8.8	-3.5	-4.1	2.3	Neutral
Yara International	11.8	51%	-25%	1.2	-30%	9.6	7.5	111.7	-3.6	-3.0	2.2	Neutral
Trimble	27.9	111%	1%	5.1	19%	2.6	0.0	-10.5	10.5	3.0	2.0	Not Covered
Huntsman	15.5	67%	13%	2.2	-32%	5.0	2.6	38.2	80.0	3.2	2.1	Not Covered
Fuso Chemical	18.9	82%	17%	2.2	32%	na	1.2	32.4	-1.9	-0.9	2.3	Not Covered
Nippon Shokubai	27.9	121%	54%	0.7	-44%	-1.7	2.7	127.1	-106.1	-5.2	2.4	Not Covered
Genus	40.8	254%	9%	5.1	36%	1.2	0.7	0.7	4.5	5.6	2.1	Not Covered

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

Reducing the carbon intensity of consumption

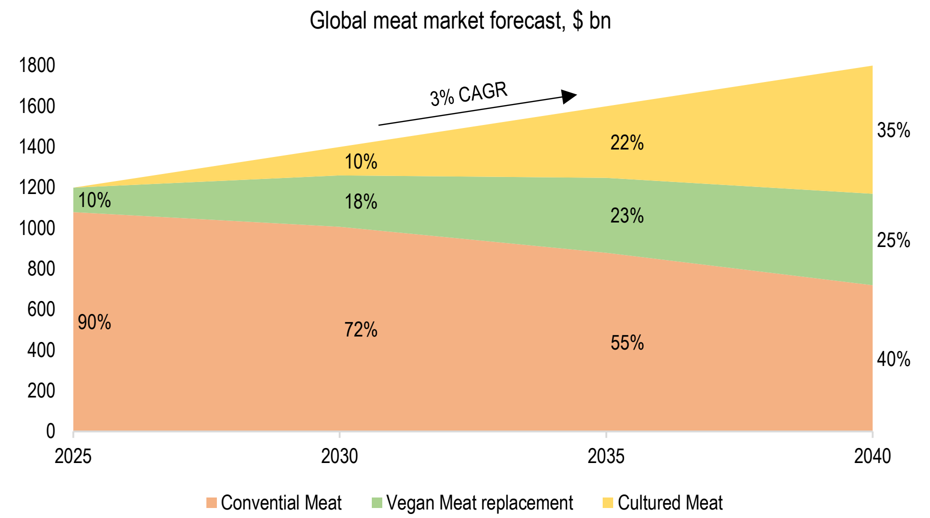
8. Changing consumption patterns

Plant-based foods

Producing a unit of meat uses 10-14x more land per calorie than a unit of grain, depending on the type of meat, and much more water. Research quoted by the European Commission suggests switching to a vegetarian diet would reduce water requirements by 35% to 55% compared with current baselines (Vanham et al, 2018).

Kearney forecasts the alternative meat market (meat replacement and cultured meat) to grow from $4.6bn in 2018 to $120bn in 2025 to $450bn by 2040, with the share of conventional meat declining to 40% by 2040. This implies that the alternative meat market grows by a CAGR of c.23% (2018 to 2040).

Figure 86: Global meat market forecasts from Kearney



Source: Kearney (2019), How will cultured meat and meat alternatives disrupt the agricultural and food industry?

There is a clear move to plant-based meat where the IP is higher than in plant-based dairy products, according to our analysts. CS analysts rate Beyond Meat Neutral owing to its very high valuation (c.17x 2021E sales) and the potential of other global food producers (such as Nestle) to move into this space.

Outperform-rated Danone is a leader in plant-based dairy products and aims to grow its plant-based products from c€2bn in 2019 to €5bn by 2025, to account for around one-fifth of sales. The Essential Dairy and Plant-Based (EDP) North America unit is now its largest business; with the company now shifting focus to expand its EDP product into new geographies. CS analysts rate Danone Outperform.

Our China strategists also highlight some of the upstream suppliers (processors and pea/soybean producers) that may benefit from the shift to artificial meats: Shuangta Food, Heilongjiang Agriculture, and Harbin High-Tech. However, they question whether Chinese consumers will replace meat consumption with new types of artificial meat given the long history of vegetarian meat substitutes in China, segmenting the two products as fulfilling distinct needs. See *Too early to move to new-type artificial meat in China*, 30 May 2019.

Lab-grown meat

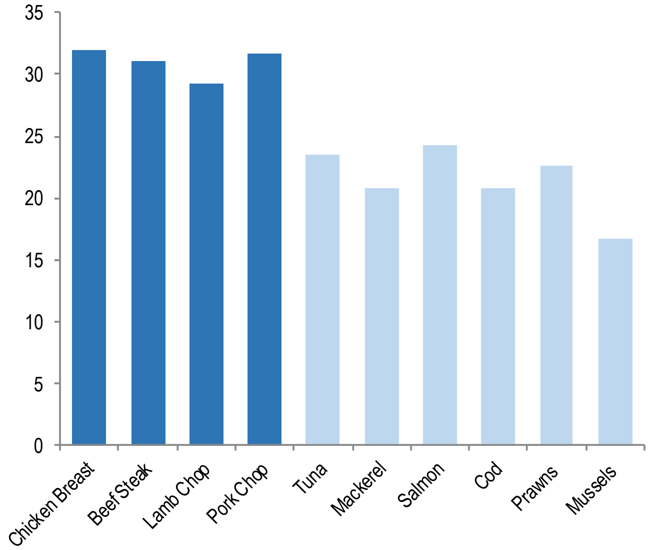
In December 2020, Singapore became the first country to give regulatory approval to lab-grown meat (FT, 2 Dec), paving the way for US start-up Eat Just to begin selling cultured chicken nuggets. Other start-ups that have raised funding for similar projects this year include Memphis Meats, Future Meat and Mosa Meat.

Fish as an alternative source of protein

One of the ways to reduce meat consumption is to seek alternative forms of protein. The protein content of fish is similar to meat, with fish penetration rates low (on a per capita basis, Americans consumed 16 pounds of seafood per year in 2017 compared with 91 pounds of broiler chicken alone).

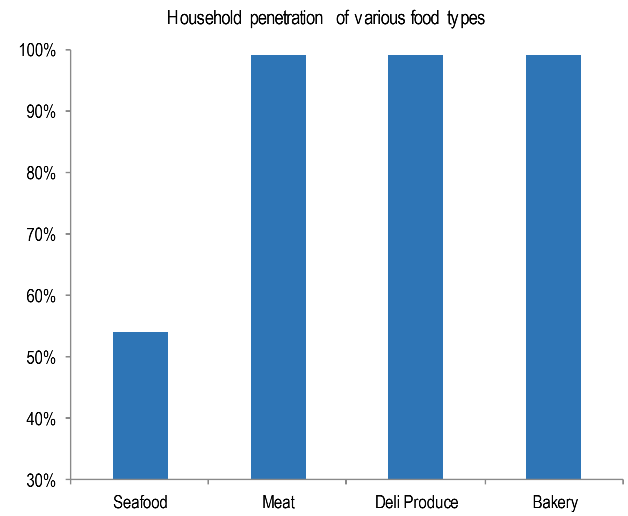
There are also health benefits to eating fish, such as improved sleep, a good source of vitamin D, improved brain function, and lower risk of heart attacks and strokes (Hosomi *et al,* 2012). Fish provides a lot of the essential fatty acids that are less abundant in vegetable-based diets and especially important in less developed countries where diets can be less varied.

Figure 87: Protein content (g) per 100 grams



Source: British Nutrition Foundation, Credit Suisse research

Figure 88: Household penetration of meats and fish (US) consumption



Source: Nielsen, Credit Suisse research

Mowi (rebranded from Marine Harvest in 2018) is the largest salmon producer in the world (c25% of the salmon and trout market) and the sixth-largest stock by market cap on the Oslo Stock Exchange. Mowi also farms halibut and white fish, which are broadly less resource-intensive, and it is known as a market leader in cleaner fish with less waste from farming and reduced ecological damage, topping the Coller FAIRR Protein Producer Index 2020 (ranking the world's 60 largest meat and dairy producers on 10 risk factors including GHG emissions, antibiotic usage, and deforestation and biodiversity). In January 2020, Mowi also became the first seafood company to issue a green bond, raising €200m for projects related to water and waste management, energy efficiency and sustainable feed.

SalMar, another Norwegian fish stock producer (primarily salmon), has piloted 'Ocean Farm 1', the world's first offshore fish farm, which tested the biological impact and technological sufficiency of farming from open ocean feedstock with encouraging results (improved fish health and a sizeable reduction in sea-lice) and has now moved to include it in their permanent production cycle.

Some of the aquaculture companies our analysts cover include ASX-listed Tassal Group (prawn and salmon, rated Outperform) and Huon Aquaculture (salmon, rated Neutral), as well as Thailand-based Thai Union Group (diversified seafood including tuna, sardines and shrimp; rated Outperform).

We would also highlight Nomad Foods, the UK-based frozen foods company that owns the Birds Eye (UK, Ireland) and Findus (Cont. Europe) brands and derives 40% of its sales from fish. It has also launched a "Green Cuisine" line of plant-based meat alternatives (as discussed above) which is a focus for management. Nomad Foods is rated Outperform by CS analysts.

Figure 89: Changing protein consumption patterns screen

Name	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Beyond Meat	929.3	4455%	557%	22.4	-13%	-0.2	0.0	-73.5	-281.4	-13.8	2.9	Neutral
Danone	15.0	72%	-39%	1.9	-44%	5.6	3.9	-20.3	-4.4	-2.4	2.4	Outperform
Mowi	17.9	86%	6%	3.2	-2%	3.0	1.2	36.0	-1.7	-4.7	2.5	Not Covered
Salmar	17.8	85%	15%	6.1	46%	3.9	3.8	37.8	8.0	1.0	2.5	Not Covered
Tassal Group	10.5	50%	-36%	0.9	-37%	na	5.0	59.8	-9.6	-3.0	2.3	Outperform
Huon Aquaculture Group	28.2	135%	48%	0.8	-52%	na	0.0	-81.8	-125.3	2.1	3.0	Neutral
Thai Union Group	12.2	58%	-36%	1.7	-34%	6.4	4.3	18.4	23.5	2.5	2.1	Outperform
Nomad Foods	14.0	na	-23%	1.2	-1%	na	0.0	29.5	0.5	-0.6	1.9	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

Improving efficacy of energy use

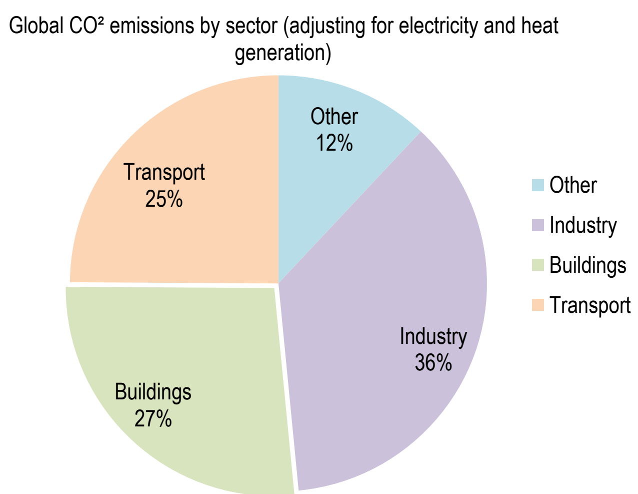
9. Insulation

There is set to be increasing focus on climate change policy relating to construction (increasing groundswell political support and stated intentions from elected officials).

The IEA finds that buildings and the construction sector account for 40% of global direct and indirect CO_2 emissions, with a potential for 40% more energy efficiency by 2040. Buildings alone account for 27% of CO_2 emissions. Figure 90 shows global direct emissions by sector, adjusted for electricity and heat generation.

We believe the price of carbon is set to rise strongly as well (as highlighted in the Utilities section of this report).

Figure 90: Global greenhouse gas emissions by sector



Source: IEA, Credit Suisse research

The rationale behind improving insulation:

- It increases energy efficiency (and therefore reduces carbon emissions).
- The payback is typically seven years (the cost of insulation is paid back by the energy saved).
- It benefits from the rise in housing starts.

A large number of pledges and announcements favour insulation. In the UK, the prime minister has pledged to spend £9.2bn on household insulation (including £6.3bn to insulate 2.2m disadvantaged homes, which could cut energy bills by as much as £750 per home per year. Two-thirds of the cost, up to £5k, would be borne by vouchers). France announced €6.7bn of spending on insulation in its €100bn coronavirus recovery plan (FT, 3 Sep). Germany announced €2bn on insulation.

In the US, Biden plans to upgrade 4 million buildings and weatherise (e.g. add double glazing) to 2 million homes over four years with the aim of reducing the carbon footprint of the US building stocks by 50% by 2035, creating at least 1 million jobs. According to his campaign statements about clean energy, he will also seek to “spur the construction” of 1.5 million sustainable homes. Although most of this will require an act of Congress, Biden may be able to set emissions regulations and regulate federal procurement and spending unilaterally through Executive Orders.

The other attractive feature of insulation is that demand is related to housing starts. We believe that in the US and UK there will be a sharp increase in housing supply. In the UK, the government is committed to increasing the number of housing starts to 300k from the pre-pandemic average of c160k (and has recently changed planning regulation to ensure that this happens).

We show below the insulation stocks.

Figure 91: Insulation and energy efficiency stocks

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Schneider Electric	21.3	114%	13%	2.7	29%	4.7	2.5	8.3	6.0	0.3	2.3	Outperform
Rockwool International B	28.6	153%	16%	3.5	46%	na	1.1	-6.5	18.0	3.2	3.1	Not Covered
Kingspan Group	35.4	190%	42%	6.5	101%	2.9	0.4	-16.4	23.5	8.6	2.8	Not Covered
Sig	-10.0	nm	na	0.5	-70%	-13.6	0.0	-125.2	nm	8.2	3.0	Not Covered
Legrand	20.6	110%	-14%	3.3	-7%	7.2	2.0	-22.2	1.5	-0.2	2.9	Underperform
Halma	41.0	183%	40%	7.9	47%	2.2	0.7	-39.6	-2.5	-1.0	2.9	Outperform
Owens Corning	12.6	67%	-30%	1.5	2%	8.2	1.3	40.5	56.2	6.8	2.3	Neutral
Topbuild	20.1	89%	-4%	4.5	91%	5.8	0.0	17.7	35.8	8.7	2.0	Outperform
Installed Building Prds.	18.4	82%	-23%	10.9	36%	4.6	0.0	188.9	38.1	9.0	2.3	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

10. Trains

The higher the price of flights, either due to taxation or the higher cost of carbon offsets, the cheaper train travel becomes on a relative basis. If, over time, trains are powered by renewables, they will be far more carbon efficient. The EU Green budget plans for €40bn on rail investment. Pre-crisis, the German government announced a 10-year €86bn investment plan for the German rail network, an increase of 54% over the previous spending round (FT, 14 Jan). The UK is still planning HS2. GetLink is one of the few pure plays exposed to this theme, operating the Channel Tunnel. The GoAhead Group also operates passenger transport (bus and rail), primarily across the UK. We note that this theme has been hit by COVID-19, with the UK government recently cutting planned rail investment by c10%.

Figure 92: Train names

Name	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Getlink	162.2	536%	75%	4.6	28%	1.0	0.5	14.1	nm	-4.7	2.9	Not Covered
Go-Ahead Group	13.5	45%	-13%	1.8	-87%	9.8	-1.0	-248.2	-58.3	-0.1	1.7	Not Covered

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

Mitigating the impacts of climate change

11. Land reclamation

Sea levels are rising—indeed, even if all CO2 emissions were to stop today, sea levels would likely still rise. Carbon Brief highlights that sea levels have risen around 20cm since the late 1800s and that a rise in excess of 1m is very likely by the end of this century; potentially up to 2m, with the New Scientist highlighting that this threatens 630m people. This requires better flood defenses. Royal Boskalis Westminster is exposed to this theme as a leader in dredging and land reclamation.

12. Pest control

Rising temperatures lead to pests spreading to other regions where they might have previously been unable to breed (for example, the warmer and wetter climate has allowed termites to spread to Paris for the first time; the Asian Tiger mosquito, known to spread dengue fever, is spreading rapidly across to Europe and the US). Pests are also not being killed off in the cold winter months as they were in the past when winters were colder.

This has led to a need for pesticides with longer residual lives and more pest control. Climate change and growing environmental awareness is also increasing innovation in pesticides/biocides, such as pheromone-enhanced ant insecticide; this shifts the focus to greener and higher-efficiency ingredients. Our analysts highlight Rentokil (rated Outperform) as the largest operator in this market, globally, with the highest R&D spend, allowing it to out-compete its smaller competitors.

Figure 93: Mitigation names

Name	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Boskalis Westminster	36.7	169%	59%	1.1	-41%	3.3	0.5	70.1	-230.0	4.3	2.1	Not Covered
Rentokil Initial	31.4	109%	22%	9.1	-69%	2.5	0.8	-42.6	5.9	3.6	2.2	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

Positive on GEM exposure

One of our high-conviction overweights is direct and indirect GEM exposure, driven by the following:

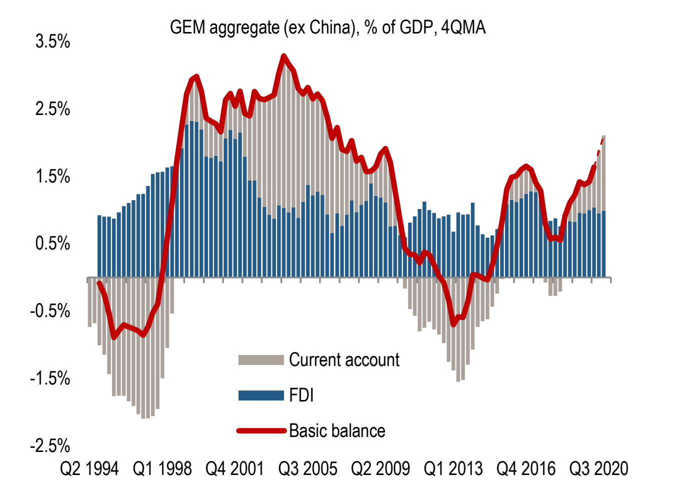
i. GEM currencies are cheaper than they were at the height of the GFC and almost as cheap as they were during the Asian Financial Crisis.

Figure 94: GEM currencies are, in aggregate (GDP weighted), around 30pp cheap when compared to their global export market share

Source: Refinitiv, Credit Suisse research

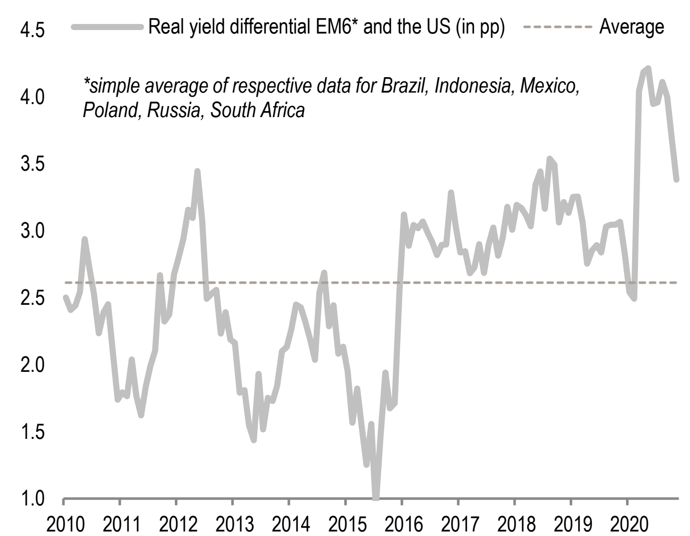
Yet their export market shares (which proxies competitiveness) and basic balance of payment surplus (current account plus FDI) are both close to 20-year highs. Additionally, the real yield pick-up in local currency terms is close to 10-year highs.

Figure 95: GEM countries (ex-China) have a basic balance of payments surplus at close to a 20-year high



Source: Refinitiv, Credit Suisse research

Figure 96: Emerging market real yield premiums in local currency terms are still unusually high

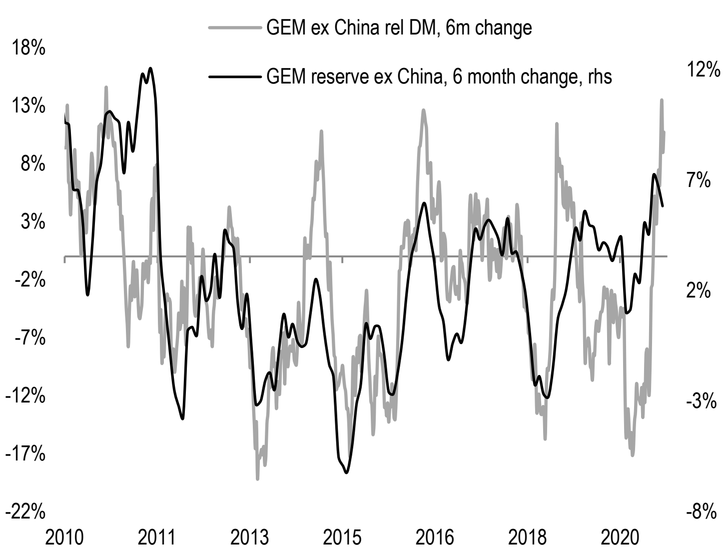


Source: Refinitiv, Credit Suisse research

The reasons why GEM currencies are so important are:

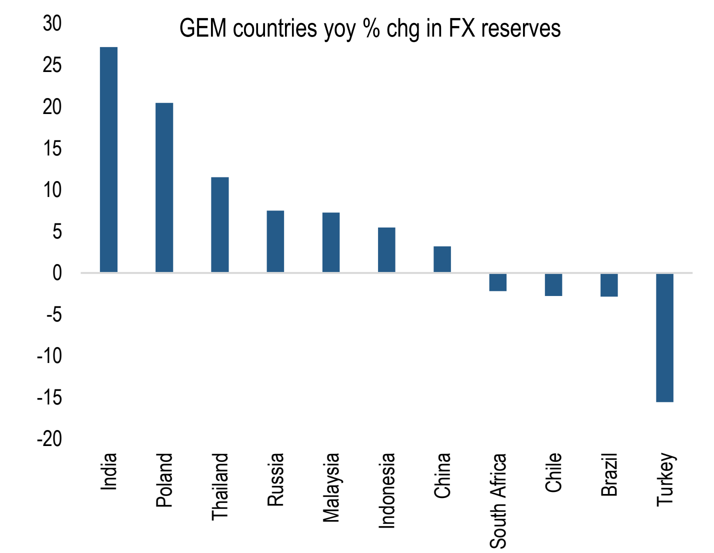
- GEM have c$5.4trn of foreign currency denominated debt.
- A stronger currency should lead to a fall in inflation (lowering the price of imports). In some instances (e.g. Brazil), much of their social security payments are index-linked and thus their fiscal position improves.
- As GEM countries benefit from the stronger currency, they tend to allow FX reserves to rise (i.e. they do not sterilize), which in turn leads to an increase in money supply, which boosts growth; this also potentially leads to a domestic bubble.

Figure 97: GEM relative performance vs change in FX reserves



Source: Refinitiv, Credit Suisse research

Figure 98: Year-on-year change in FX reserves across GEM

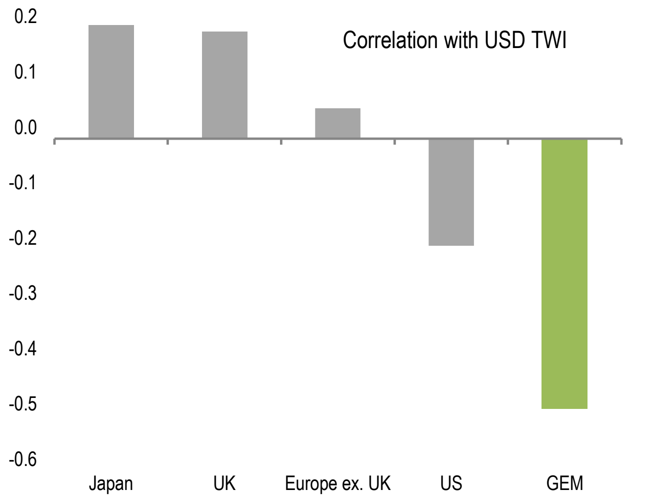


Source: Refinitiv, Credit Suisse research

- A stronger currency also helps boost the purchasing power of the consumer and tends to ring-fence savings.

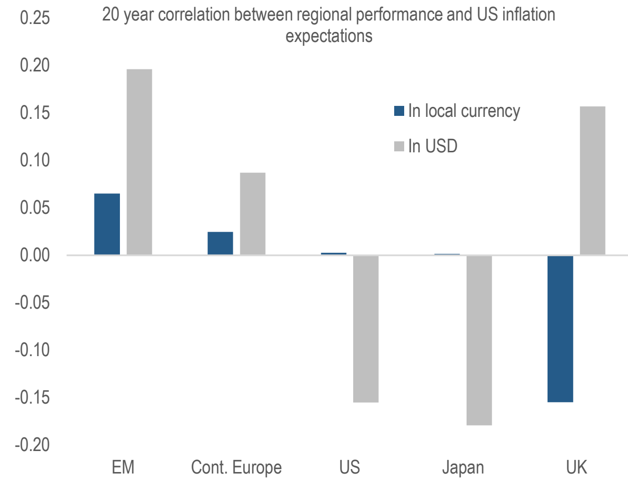
  ii. GEM is the best performing region when the dollar weakens or inflation expectations rise. We expect both to happen, as discussed in our macro section.

Figure 99: GEM is the best performing region when the dollar weakens…



Source: Refinitiv, Credit Suisse research

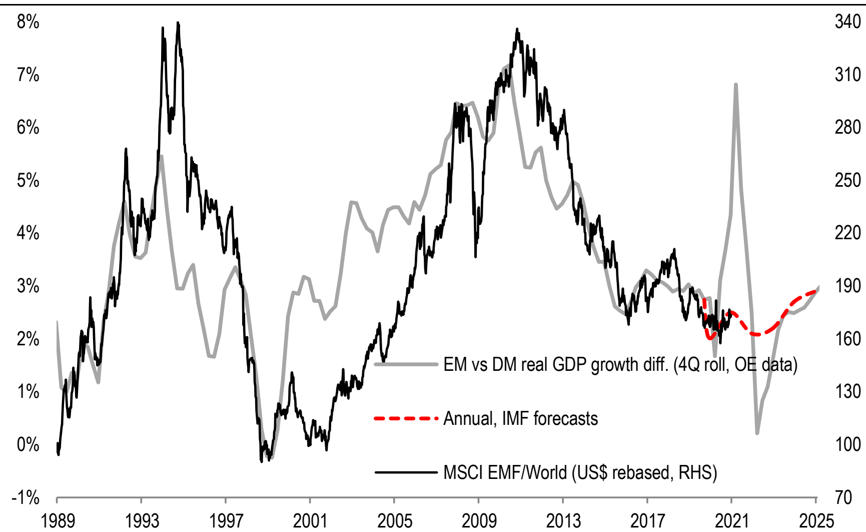
Figure 100: … and inflation expectations rise



Source: Refinitiv, Credit Suisse research

iii. GEM tends to outperform as the growth differential with DM increases.

Figure 101: When the EM GDP growth differential with DM increases, EM clearly outperforms



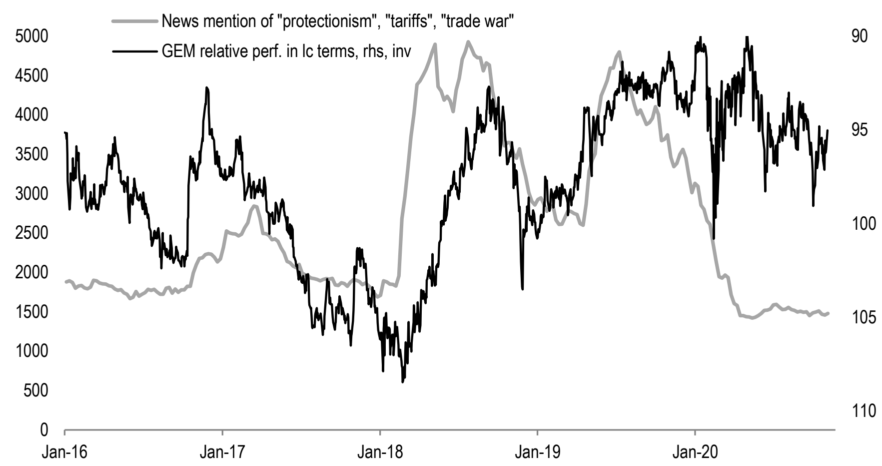
Source: Refinitiv, Credit Suisse research

The performance of GEM over DM tends to follow GDP differentials. The IMF sees EM (6%) outperforming DM (3.9%) by 2.1pp. in 2021.

iv. Biden's presidency may mean more conciliatory trade policies

GEM equities never really reflected an improvement in trade relations (based on Bloomberg news mentions).

Figure 102: GEM relative performance vs mentions of trade war



Source: Bloomberg Finance L.P., Refinitiv, Credit Suisse research

We expect Biden to be favourable for global trade because:

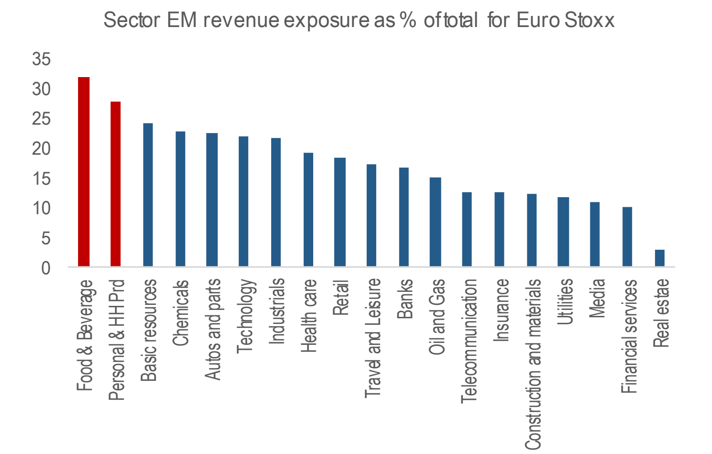
- Based on past statements, he appears to believe in multilateral not bilateral trade agreements (FT, 14 Oct). Although he has not explicitly addressed whether or not he would look to roll back the tariffs on China imposed by President Trump, he has said that "China can't afford to ignore more than half the global economy" (Time, 29 Sep), suggesting that he would like to pursue a less confrontational trade position with Europe and Japan in order to confront China with a more coordinated stance.
- The degree of interconnection between China and the US means that Biden may decide that the US is better off persuading China to buy more imports (China agreed to buy an additional US$200bn of US exports during Trump's presidency), especially as in some instances there is a greater benefit to US firms (e.g. GM produces and sells more cars in China than domestically).
- There have been clear areas of progress in the past year of China opening up its market to US companies– for example, allowing US financial companies to take majority stakes in Chinese financial companies (JPMorgan took full control of a Chinese joint venture in April 2020). This shows that it is to the US's advantage to work with China.
- As Vice President, President-elect Biden visited LatAm 16 times, compared with just once for President Trump.
- According to the Brookings Institution, Biden plans to rejoin various global initiatives, such as the WHO, UNESCO and the Paris Climate Accord (FT, 19 October).
- The only caveat is that Biden has indicated he will take a tougher line with Russia (FT, 10 Nov). He wrote earlier this year "We must impose real costs on Russia for its violations of international norms and stand with Russian civil society" (Foreign Affairs, 23 Jan).
- We should also note that Asia is forming its own trade association of 15 countries (via the RCEP, where tariffs have been cut by c90%). We think this could pave the way for a China, Korea and Japan free trade zone.

What looks attractive?

1. Consumer staples

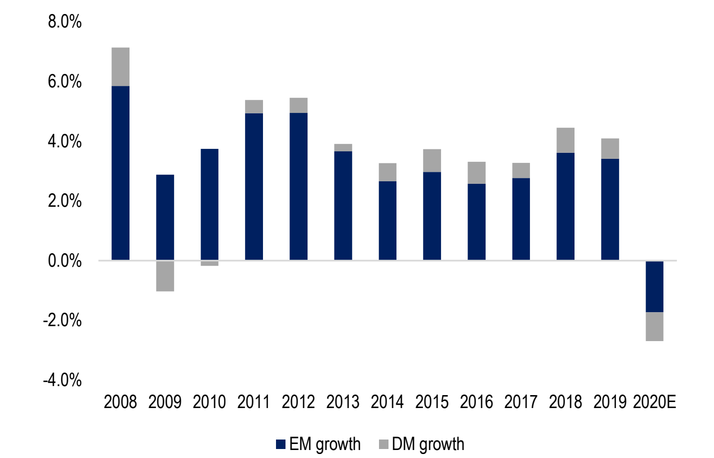
We would highlight that consumer staples tend to have the highest exposure to emerging markets; c83% of their growth came from emerging markets in 2019.

Figure 103: Consumer staples have the largest revenue exposure to EM among all European sectors



Source: FactSet, Credit Suisse research

Figure 104: EM growth drove c83% of organic growth



Source: Credit Suisse European Consumer Staples team

If we put their GEM exposure on the same multiple as their quoted subsidiaries, the developed market exposure is on a very depressed P/E.

We can also see this below:

Figure 105: Sum-of-the-parts valuation for consumer staples names

Firm	Listed companies and its subsidiaries/associates	GEM sales exposure	12m fwd PE	Average GEM PE/ Primary PE	Implied Developed Market P/E
BAT	BAT (UK)	38.0%	8.5	194%	3.60
	BAT (Malaysia)		16.6		
Colgate Palmolive	Colgate Palmolive (US)	52.0%	26.3	171%	6.08
	Colgate Palmolive (India)		45.1		
Unilever	Unilever (UK)	58.0%	19.1	250%	-20.5
	Hindustan Unilever (India)		59.2		
	Unilever (Indonesia)		36.4		
Nestle	Nestle (Swiss)	42.0%	22.3	266%	-4.6
	Nestle (India)		69.4		
	Nestle (Malaysia)		49.7		
Diageo	Diageo UK	42.5%	25.2	174%	11.5
	United Spirits (India)		48.6		
	Sichuan Swellfun (China)		39.1		
ABI	ABI (Belgium)	65.0%	22.4	147%	2.8
	AMBEV (Brazil)		23.3		
	Budweiser APAC		42.6		
Heineken	Heineken (Netherlands)	55.0%	27.1	173%	2.78
	Heineken Malaysia		24.6		
	United Breweries (India)		68.4		
	China Resources Beer (China)		47.9		
Carlsberg	Carlsberg (Denmark)	52.0%	21.2	120%	16.64
	Carlsberg Malaysia		25.4		

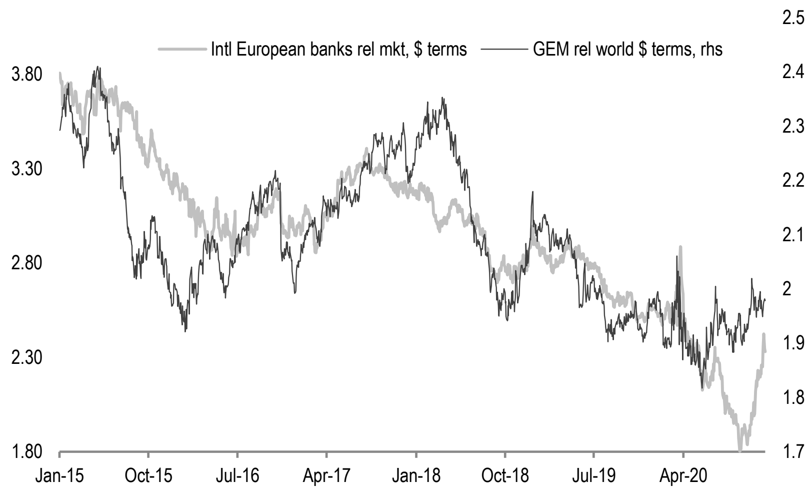
Source: Refinitiv, Credit Suisse research

Normally this would be an overweight. The problem is that the pro-cyclical environment that allows GEM currencies to appreciate means that consumer staples tend to underperform. We are overweight alcoholic beverages, which are the most cyclical of the consumer staples (as shown in our staples section) as well as a vaccine recovery plays. Our analysts prefer Diageo, Heineken and Carlsberg.

2. GEM-exposed banks

GEM-exposed (international) banks not surprisingly outperform their global peers when GEM outperforms in USD terms (as happens when GEM currencies appreciate).

Figure 106: International European banks tend to outperform global peers as EM outperforms



Source: Refinitiv, Credit Suisse research

GEM-exposed banks in DM are much cheaper than the direct plays. Below we calculate the discount compared with the local banks of the regions to which they are exposed. Our analysts have Outperform ratings on KBC in Europe (long-term high-quality name, with bancassurance and CEE to provide earnings support).

Figure 107: On a regionally weighted P/B basis, most GEM-exposed banks appear inexpensive

Bank	Emerging market revenue exposure	YTD weighted price perf by regional exposure rel to resp. regional banks	Price to Book	PB disc/prem to the relevant bank sectors	Credit Suisse rating
Standard Chartered	92% (72% NJA, 20% Africa & Mid. East)	-19%	0.2	-77%	Neutral
Santander	45% LatAm (27% Brazil, 7% Mexico, 5% Chile, 4% Argentina, 2% others)	-13%	0.3	-64%	Neutral
BBVA	63% EM, 15% Turkey – 47% LatAm (29% Mexico, 5% Argentina, 5% Peru, 4% Colombia, 3% Chile)	-33%	0.3	-60%	Neutral
HSBC	26% Hong Kong, 17% NJA, 8% LatAm	-14%	0.4	-55%	Underperform
Citigroup	31.5% (15% Asia, 13% EMEA, 4% LatAm)	-10%	0.5	-54%	Outperform
KBC	25% Eastern Europe	5%	1.0	-34%	Outperform
Goldman Sachs	20% Asia (majority of which is China)	5%	0.9	-24%	Outperform
Swedbank	25% Eastern Europe	0%	1.2	1%	Neutral

Note: The discount/premium is calculated over the regional banks P/B ratios, weighted by the exposure of each bank to that region

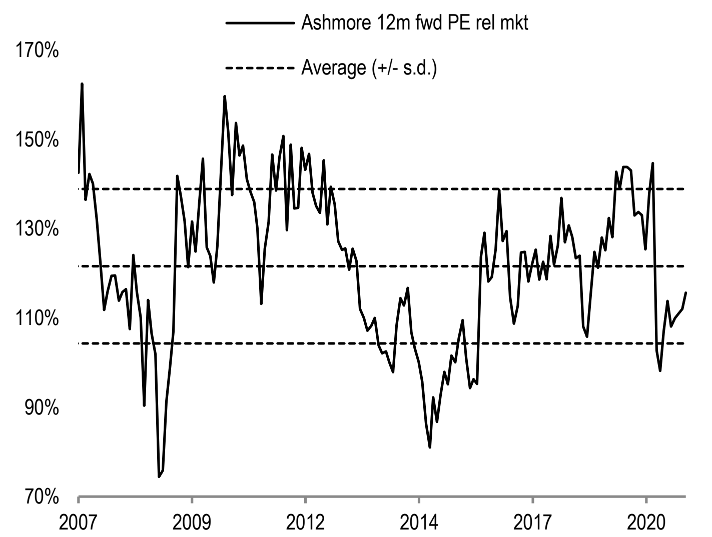
Source: Refinitiv, Credit Suisse research

3. GEM debt fund managers

CS rates Ashmore Underperform on performance concerns (particularly the three-year relative performance, which remains below benchmark) and doubts around its ability to win incremental new AUM until this is addressed.

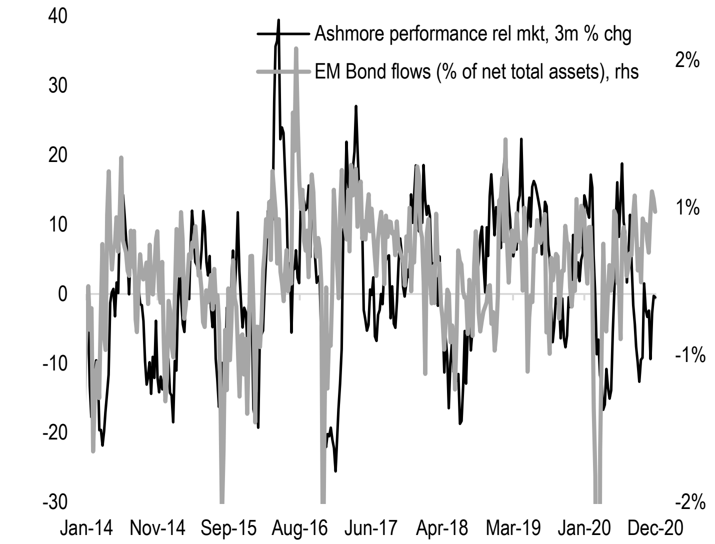
Conceptually, it is simply a way to gain exposure to the local GEM carry trade. Unlike most other assets, GEM local currency debt is difficult to invest in via an ETF (for example, in Indian or Russian debt) and thus putting a premium on the GEM debt fund managers (although this remains a key risk). We also think as DM debt aids diversifying at a time when DM bonds threaten to stop diversifying (see 2021 Research Outlook: Equities, Regions and Macro, 20 November).

Figure 108: Ashmore 12m fwd PE rel mkt



Source: Refinitiv, Credit Suisse research

Figure 109: Ashmore price performance correlated with flows to GEM bond funds



Source: Refinitiv, Credit Suisse research

4. Stocks with high GEM exposure

The following names have high GEM exposure. Of these, Danone, Heineken and Prudential have underperformed since the market peak on 20 February.

Figure 110: Outperform-rated GEM exposed plays in Europe

			-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Rel perf since 20th Feb 2020	GEM Exposure (%)	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Prosus	37%	90%	30.1	84%	-23%	5.7	-1%	na	0.1	7.9	2.2	20.3	1.9	Outperform
Asm International	54%	60%	21.8	99%	14%	4.0	88%	3.7	1.2	-1.7	1.8	3.2	1.8	Outperform
Unilever (Uk)	3%	58%	20.3	82%	-22%	46.8	73%	4.7	3.1	-4.2	0.5	-1.3	2.4	Outperform
Prudential	-5%	53%	9.2	81%	-33%	2.4	-28%	na	1.4	-3.8	0.7	-2.0	2.5	Outperform
Carlsberg B	1%	52%	21.1	89%	-10%	3.2	30%	4.1	2.2	-25.8	7.2	-0.1	2.0	Outperform
Heineken	-4%	46%	26.1	110%	4%	3.2	-13%	2.0	1.1	-24.1	-10.2	-1.0	2.6	Outperform
Danone	-20%	45%	15.3	74%	-37%	2.0	-42%	5.4	3.8	-21.1	-4.2	-2.2	2.3	Outperform
Kone 'B'	33%	45%	34.4	159%	11%	11.4	14%	2.7	2.5	-33.6	6.0	1.9	3.5	Outperform
Mondi	14%	45%	14.5	82%	-14%	2.2	-14%	6.8	2.5	62.3	0.3	0.7	2.1	Outperform
Symrise	17%	42%	37.1	159%	11%	5.9	10%	2.7	1.0	-20.4	-1.6	-1.5	2.7	Outperform
Schindler 'P'	14%	42%	31.1	144%	0%	7.1	-7%	2.7	1.6	na	4.5	1.4	2.7	Outperform
Schneider Electric	22%	42%	23.6	109%	15%	3.0	28%	4.2	2.2	8.8	5.0	2.1	2.3	Outperform
Diageo	4%	41%	24.8	104%	-6%	10.1	16%	3.3	2.3	-45.4	0.4	0.9	2.3	Outperform
Lafargeholcim	3%	41%	14.2	89%	-31%	1.0	-29%	8.7	4.2	46.2	10.1	0.4	1.7	Outperform

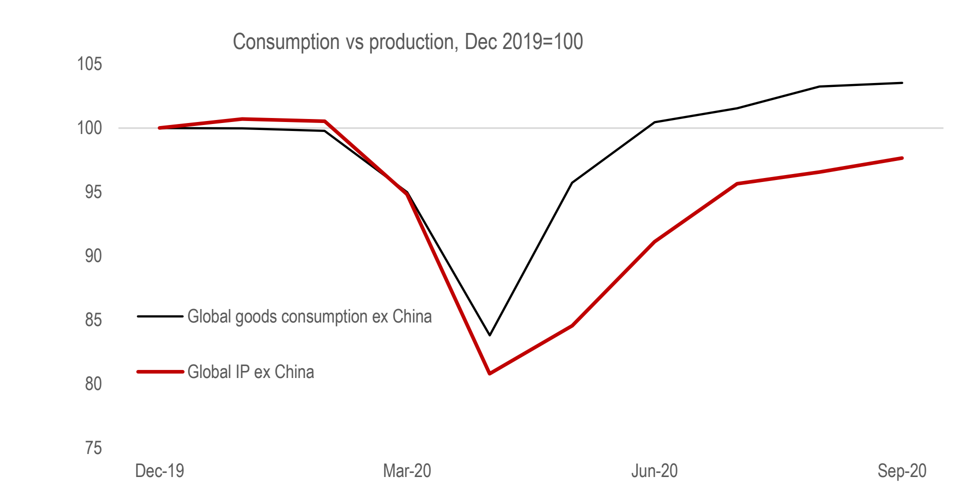
Source: IBES, MSCI, Refinitiv, HOLT, Credit Suisse research

IP names catch up to consumption

We are benchmark cyclicals for 2021, but our focus is on the industrial goods side, not the consumer goods side.

We can see that IP has lagged consumption significantly, and everywhere goods consumption is above previous peaks. This is because of policy (tax cuts, increases in welfare benefits, furlough schemes) and – as is typical in a recession – inflation has fallen by more than disposable income, thereby increasing the real purchasing power of consumers.

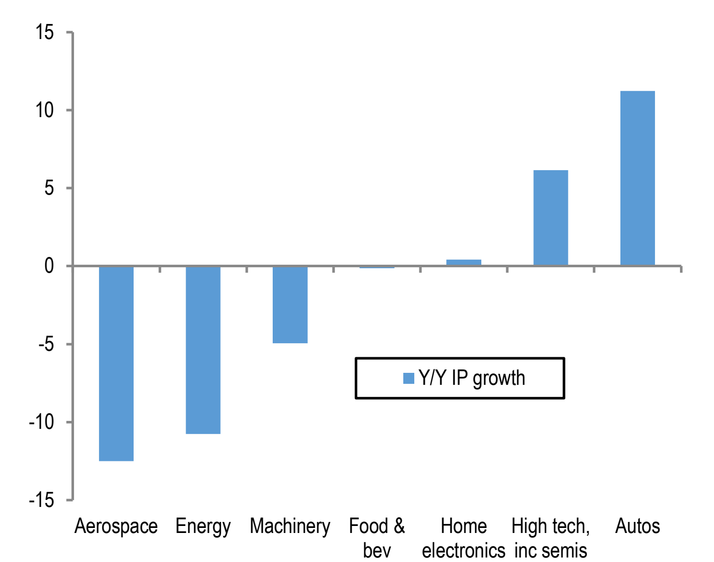
Figure 111: IP has lagged goods consumption globally (ex-China)



Source: Credit Suisse Global Economics

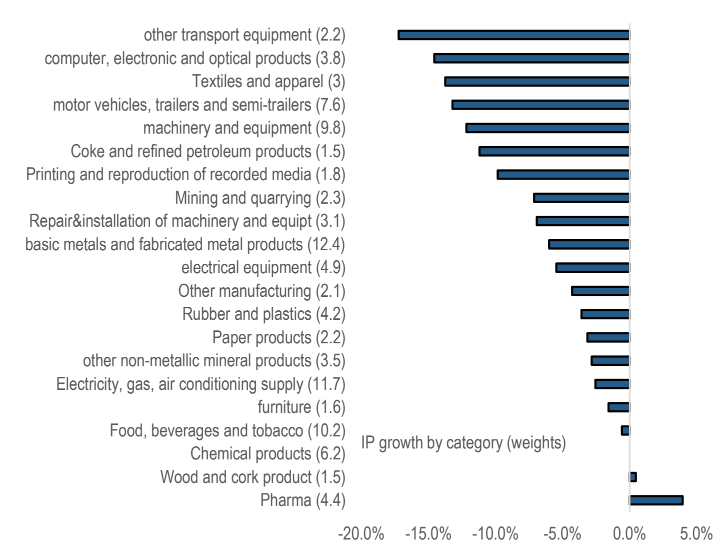
We believe it is developed market IP that has to recover from here. Below we show industrial production growth by industry. In the US, the weakness in IP has been concentrated in aerospace and energy, while autos and tech have seen robust growth. It is slightly different in the case of Europe, where the fall in IP has been widespread across industries (with the exception of pharma). Machinery and equipment, vehicles, metals and computer & electronic products combined contributed to 60% of the fall in IP.

Figure 112: IP growth by industry in the US



Source: Refinitiv, Credit Suisse research

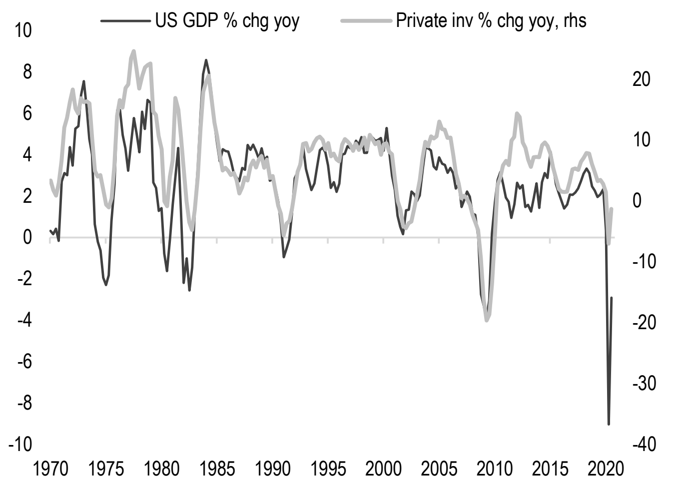
Figure 113: IP growth by industry in the euro area yoy Sep



Source: Eurostat, Credit Suisse research

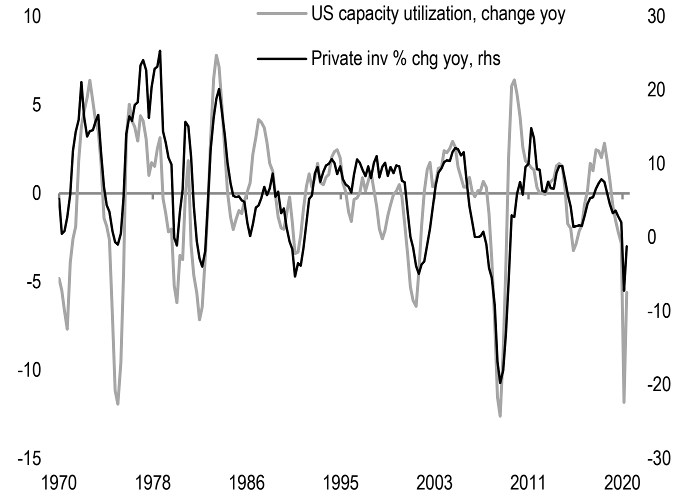
We believe the recovery in IP will also feed through to corporate discretionary spending. Essentially we can see that historically when GDP has been above 2%, corporates have started to spend. CS forecasts 4.2% GDP growth in the US in 2021. When capacity utilisation rises, investments start to rise. Core capital goods orders also imply a pick-up in investment.

Figure 114: Investment recovers when GDP is above 2%…



Source: Refinitiv, Credit Suisse research

Figure 115: …and investment tends to trough when capacity utilisation troughs

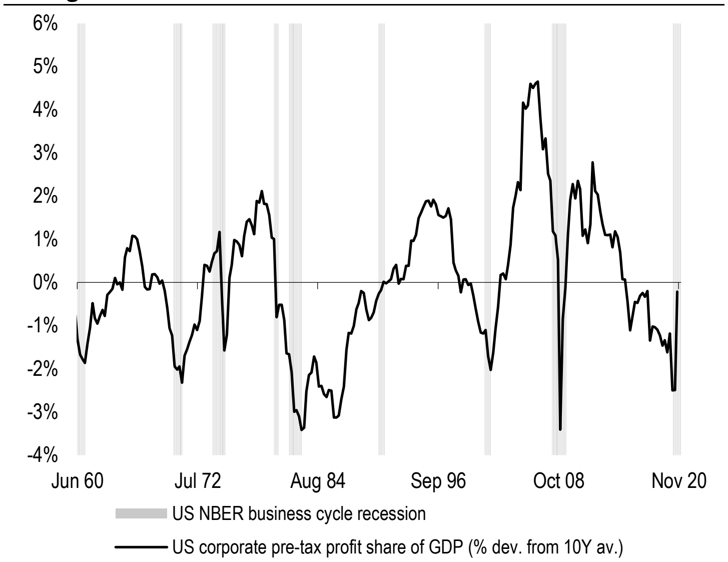


Source: Refinitiv, Credit Suisse research

Capex might lag more than normal

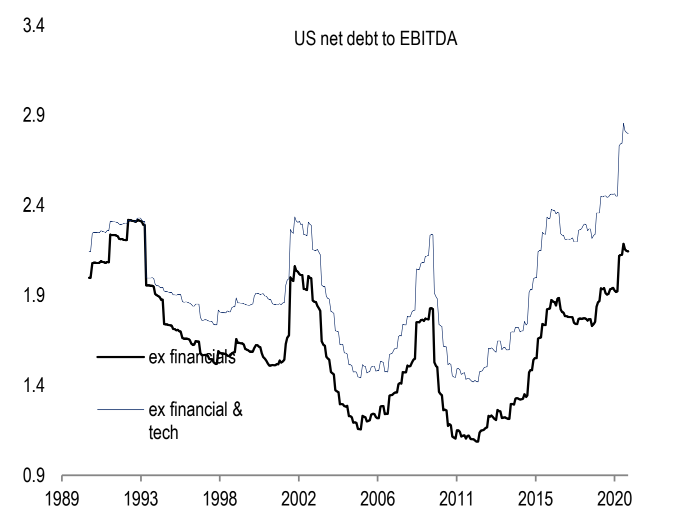
With a low profit share of GDP and high leverage, we think that this time around capex might lag a bit more than usual.

Figure 116: US pre-tax profit share of GDP, deviation from 10y average



Source: Refinitiv, Credit Suisse research

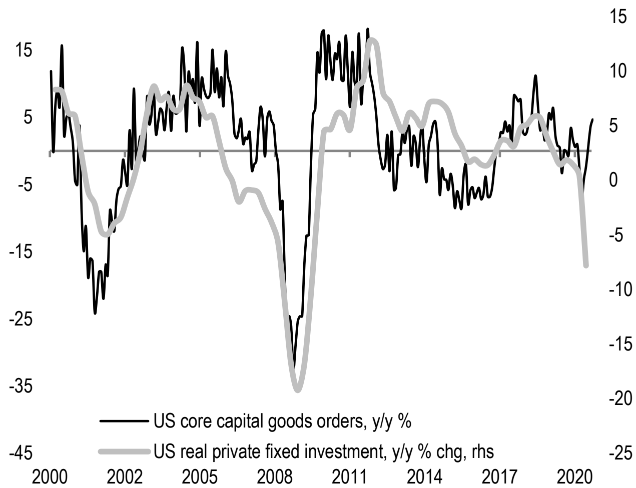
Figure 117: Corporate leverage is particularly high



Source: Refinitiv, Credit Suisse research

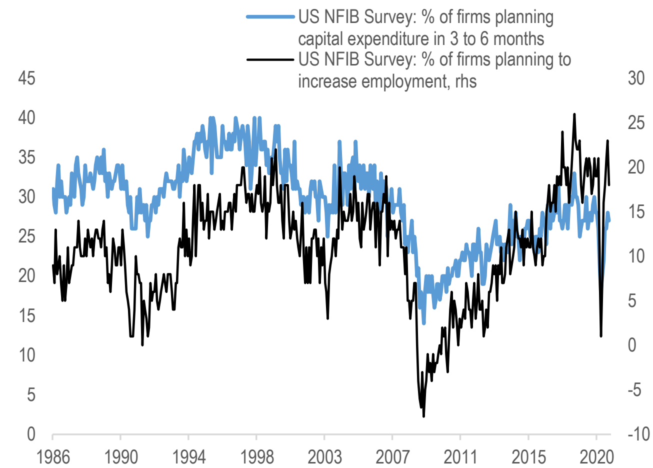
At the margin, corporates would rather spend on employment than capex as we can see in figure below (although the percentage of corporates looking to increase capex has recovered to levels close to what we have seen pre-crisis).

Figure 118: Core capital goods orders have picked up sharply



Source: Refinitiv, Credit Suisse research

Figure 119: US NFIB survey



Source: Refinitiv, Credit Suisse research

Ordinarily, opex rises before capex, and short cycle rises before long cycle capital spending. The longer the time period for the investment, the greater the degree of certainty required.

Below we show those sectors that have a high percentage of revenue coming from corporate discretionary spending. Of these, only capital goods has outperformed this year (because as we highlight in our capital goods section, the sector has the highest proportion of market cap of any cyclical sector in the 'growth' bucket).

Figure 120: Sectors with high % of sales coming from corporate spending

European Sector	Sales to corporate, % of total	12m Fwd PE	2022 PE	2020 YTD relative performance
Employment Agencies	100%	17.5	14.0	-5%
Capital Goods	90%	22.0	18.0	7%
Advertising Agencies	90%	12.2	10.3	-7%
Software	80%	23.5	22.4	-11%
IT Services	78%	32.6	25.1	1%
Hotels	60%	36.9	22.1	-13%
Airlines	25%	-14.2	14.2	-21%

Source: Refinitiv, Credit Suisse estimates

How to gain exposure to this theme

Employment agencies: We remain overweight employment agencies. They offer high domestic exposure and are short-cycle with cheap valuations. As above, employment expectations are more optimistic than investment intentions.

Software: This is now our fourth biggest overweight, having been our biggest overweight since 2010. Software spending is up 2.7% YTD. Clearly, the big surprise in 2020 has been the SAP profit warning; our analyst maintains his Outperform rating.

Short-cycle capital goods and automation: The rebound in IP is likely to be focused much more on industrial equipment. We can see below this is down 4% from peak in the US.

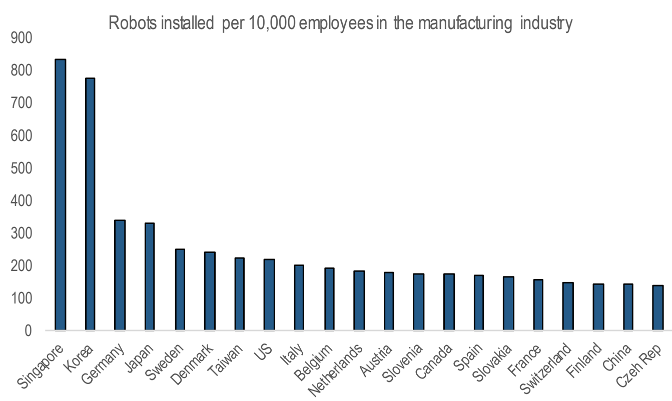
Figure 121: Investment by type – peak to trough change in GFC vs COVID-19

Real change in GDP and private sector investment by type	Peak date	Trough date	Change from peak to trough	Q4 19 - Q3 20
GDP	Q4 2007	Q2 2009	-4%	-3.5%
Total private fixed investment	Q1 2006	Q2 2009	-24%	-2.3%
Software	Q3 2008	Q1 2009	-2%	2.7%
R&D	Q2 2008	Q1 2009	-7%	-2.0%
Computer HW	Q2 2008	Q4 2008	-9%	20.9%
Industrial equipment	Q3 2007	Q1 2010	-32%	-3.8%
Residential investment - new structures	Q4 2005	Q4 2010	-61%	2.5%
Transport equipment	Q4 2006	Q2 2009	-70%	-22.8%

Source: Refinitiv, Credit Suisse research

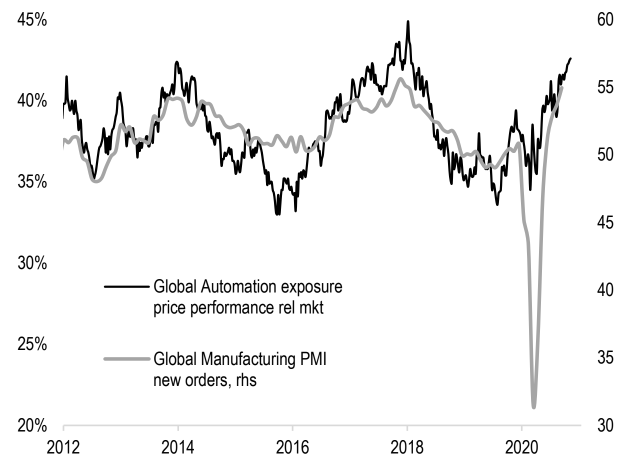
Automation: Automation offers both structural growth and cyclical exposure.

Figure 122: There continues to be significant support for the automation theme if robotics penetration in the US or Europe were to rise to levels seen in Korea and Singapore



Source: Refinitiv, Credit Suisse research

Figure 123: Automation tends to move with PMIs



Source: Refinitiv, Markit, Credit Suisse research

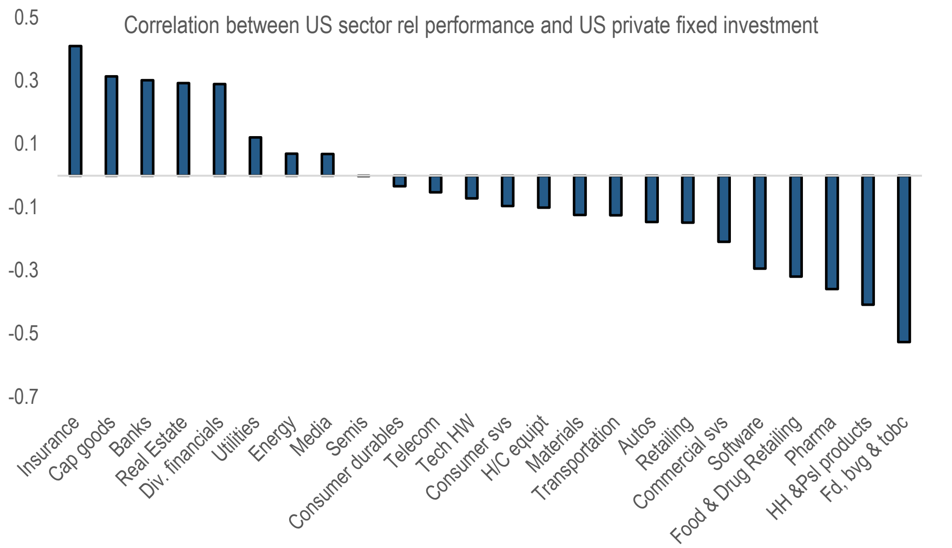
Mining: This is clearly more sensitive to IP than consumption.

Construction: We show in the construction section that core capital goods orders typically lead non-residential construction activity by nine months. Also, a fall in unemployment pushes up house prices and that in turn tends to lead to a rise in residential activity. We are overweight construction materials (cement, aggregates, insulation stocks).

We discuss each of the sectors above in more detail in our sector allocation section.

If we look at US sector sensitivity to capex, not surprisingly financial and capital goods do well when private fixed investment picks up. In Europe it is more complicated (with the capital goods sector exhibiting structural growth and are thus less cyclical).

Figure 124: US sector correlation with private fixed investment



Source: Refinitiv, Credit Suisse research

Fiscal QE – infrastructure and how to gain exposure

We view fiscal QE as the only solution

We have believed for some time that the only obvious policy response to a recession is fiscal QE (see Fiscal QE & construction – a strong overweight, 12 Aug 2019; COVID19: Long term impact, 4 May).

This is because in a recession real interest rates normally have to fall 5pp, which is not possible this time around. Therefore we think the answer has to be government investment. The multiplier in infrastructure investment (a composite of six separate studies by the IMF) is 1.7x and possibly higher (Endesa and Italgas believe it is closer to 3x). The financing is in effect done by the central banks.

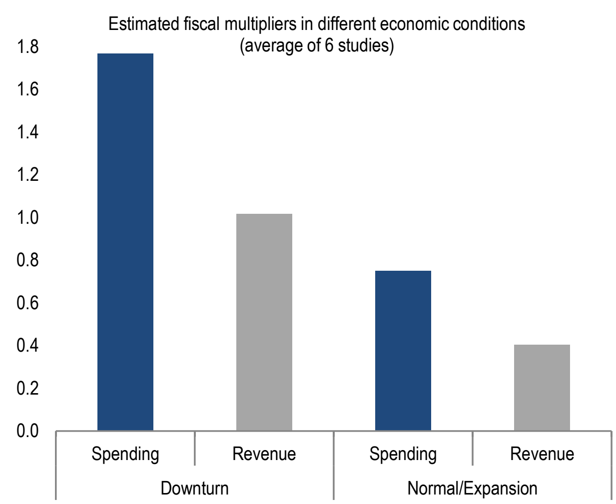
The RoI on infrastructure investment is 20%, according to the McKinsey Global Institute. The cost of government debt is a minuscule fraction of this.

Figure 125: Into a recession, the average cut in the real fed funds rate has been 5pp, which is no longer feasible

	Real funds rate easings		
	Start	Final	Easing
May-60	1.9	-0.1	2.0
Aug-66	3.1	0.7	2.3
Nov-70	4.5	-0.9	5.4
Nov-74	6.4	-1.6	8.0
May-81	8.7	-0.1	8.8
Sep-84	7.6	3.4	4.2
Nov-90	5.5	0.1	5.4
Dec-00	4.8	-0.4	5.2
Aug-07	3.3	-1.1	4.4
Average easing			5.1

Source: Refinitiv, Credit Suisse research

Figure 126: The multiplier for fiscal spending is much greater than it is for tax cuts, particularly in a downturn



Source: IMF, Credit Suisse research

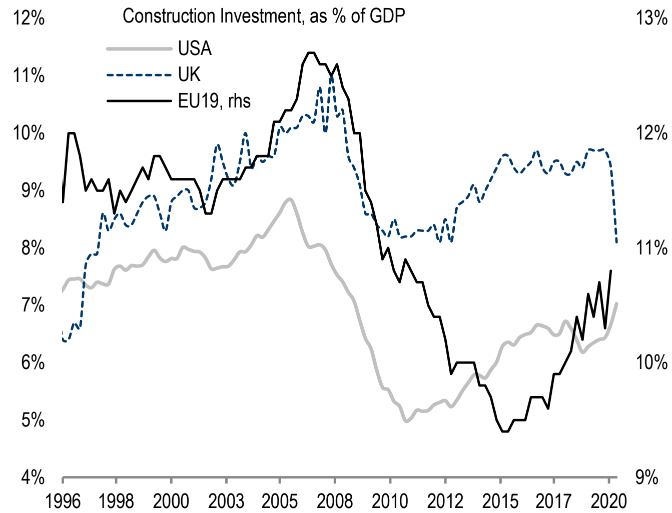
Construction shares of GDP are depressed

The starting point is particularly attractive because the construction share of GDP is low in the EU, below average levels in the UK and at normal levels in the US.

Governments to step up infrastructure investment

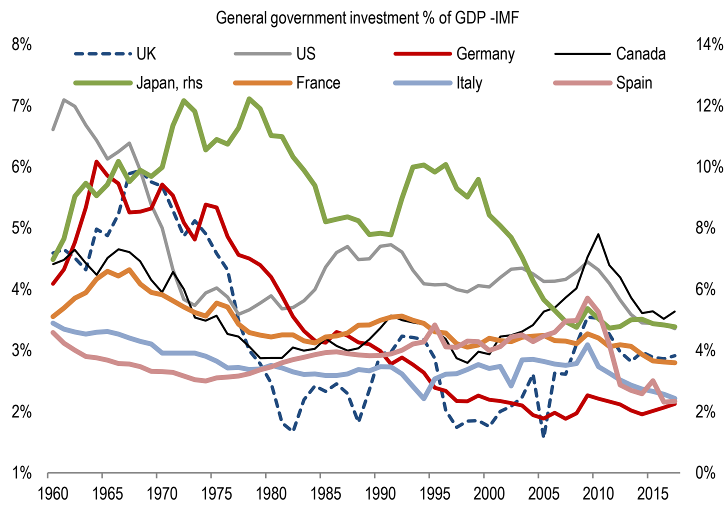
Government investment in infrastructure is in most countries 20% to 30% below its long-term average (governments cut infrastructure spending in the last downturn because it was easier than, for example, cutting the pay of civil servants). A Global Infrastructure Hub report released in 2018 saw a $15trn shortfall in infrastructure by 2040.

Figure 127: Construction as a % of GDP is well below average in the UK and Europe



Source: Refinitiv, Credit Suisse research

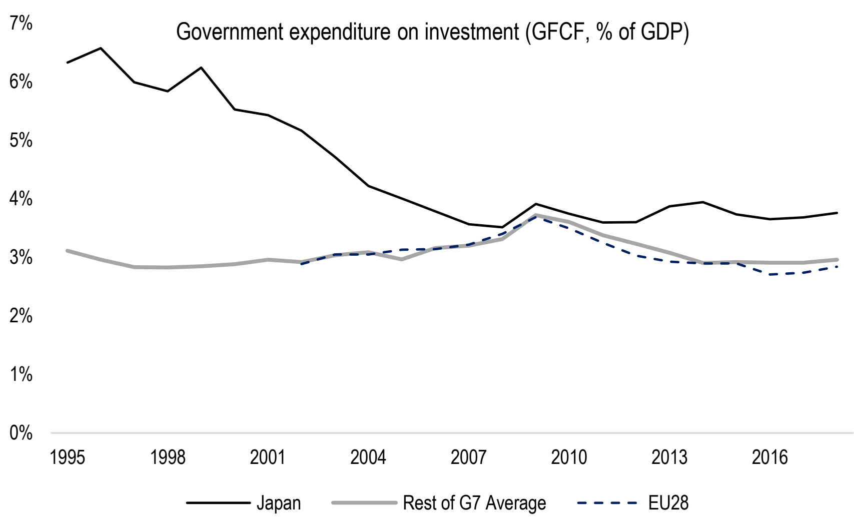
Figure 128: Public infrastructure spending has been declining



Source: IMF, Credit Suisse research

When Japan went down the route of public investment in the 1990s, its government expenditure on investment as a share of GDP rose to be double that of the G7 countries' average today.

Figure 129: Japan turned to public investment to stimulate the economy



Source: OECD, Credit Suisse research

Infrastructure could be a win on multiple fronts

Infrastructure could be a perceived 'win' on multiple fronts. It reduces government debt (owing to the multiplier effect as above), reduces unemployment and potentially, if green-related, wins the green vote.

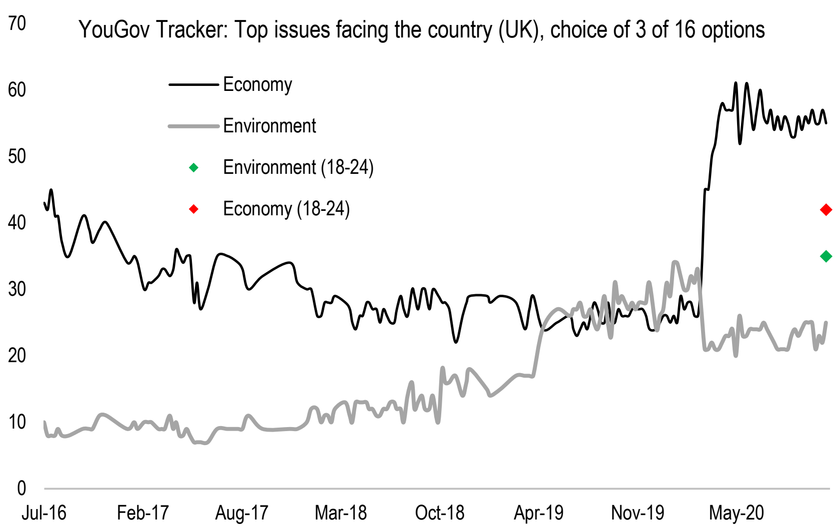
The green angle

A lot of the increased government infrastructure spending will have a 'green' angle attached to it (e.g. increased build-out of railways, tax credits on installing products that reduce CO2 emissions, increasing energy efficiency through insulation, and increased renewables). We highlight these companies in the Construction section. We have seen increasing groundswell political support for climate-related policy; with the Greens currently being the second-largest party in Germany on the Politico poll of polls voting intention, and gaining vote share in France, with the EELV (Europe Ecologie Les Verts) winning mayoralty in several major cities, including Lyon, Marseille and Strasbourg.

In the UK, the environment ranked above the economy as the third most pressing concern for the country (below Brexit and healthcare) in the YouGov tracker prior to the COVID-19 pandemic. Even today, c40% of 18- to 24-year-olds believe the environment to be among the top three issues facing the country.

Reflecting this, we have already seen eight countries (including the UK, Japan, France and South Korea) move to set legally binding net zero carbon emissions by 2050 (and China by 2060).

Figure 130: YouGov tracker of top issues facing the country (UK)



Source: YouGov, Credit Suisse research

The academics and agencies have changed their tune on infrastructure… as have politicians

We see a clear change in tone from both academics and politicians being reflected in policy.

- **IMF:** Its recent fiscal monitor argues “governments need to scale up public investment to ensure successful reopening, boost growth, and prepare economies for the future”, with low interest rates making borrowing to invest desirable. In contrast, in 2010 it advocated fiscal prudence in its post-crisis fiscal strategy brief: “to help anchor fiscal solvency expectations, credible fiscal exit strategies aimed at reducing government debt to prudent levels need to be designed and communicated now”.
- **MMT:** Modern Monetary Theory (MMT) says that politicians should print and spend until inflation rises. MMT appears to be gaining traction.
- **Politicians focusing more on capital than current spending:** Following the GFC, politicians cut infrastructure spending to support current spending (i.e. wages for government employees). This time around the tone is changing. In the UK, the most recent spending review announced a near 4% rise in capital spending (on schools, hospital and infrastructure), but a freeze on non-NHS public sector workers.

Figure 131 lists some of the infrastructure projects that have been announced. These amount to c.$4.5tn in total.

Figure 131: Infrastructure projects across DM

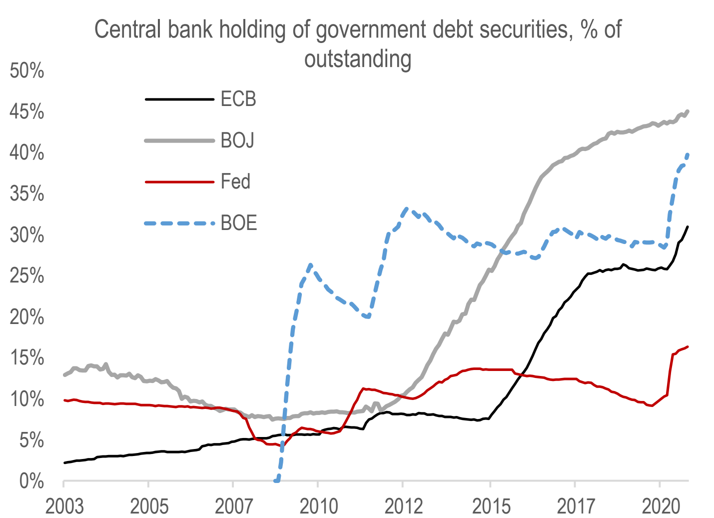
	Infrastructure project summary: DM			
	Allocation ($)	% of GDP	Stage	Timeline
UK	830 bn + 15 bn	29.0%	£640bn in infrastructure investment unveiled in March Budget, with an additional £12bn on affordable housing	2025
US	2 tn	9.3%	Proposal from Biden for investment in clean energy in transportation, electricity, and building sectors	2024
EU	1.35 tn	7.4%	EC and EIB mobilised €500bn by mid-2020, 6 months early; next stage is the InvestEU Programme, to mobilise an additional €650bn	2027
Germany	175 bn + 60 bn	5.8%	€150bn set aside in March 2019 for infrastructure, education, housing, and digital technology investment; €50bn added for climate change and innovation in June fiscal package	2023
France	35 bn	1.4%	€30bn of €100bn investment plan allocated to green initiatives including building renovation, transport, and hydrogen investment	2022
Canada	7.5 bn	0.4%	Three year Canada Infrastructure Bank plan announced 1 Oct 2020	2023

Source: Credit Suisse research

The question is, who is paying for this government infrastructure?

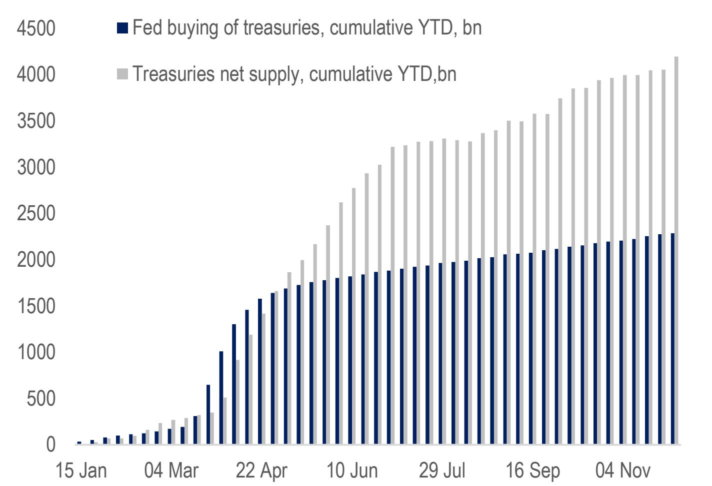
Our view is very simple: it will in effect be central banks. Central banks' ownership of government debt is rising very sharply, and the Fed has financed about half of the US budget deficit year to date.

Figure 132: Central bank holdings of government securities



Source: Refinitiv, Credit Suisse research

Figure 133: Since April, the Fed have bought only about c40% issuance



Source: Refinitiv, Credit Suisse research

We believe that, if necessary, these arrangements will be formalised.

- The ECB could leverage up bonds issued by the EIB where the allocations into an infrastructure fund held at the EIB would equate to those allocated by the fund (with the allocation probably done via the capital key). As an example, Germany could put €2bn into EIB Infrastructure bonds, which could then be leveraged up 100x by the ECB, then parceled back to various countries. The allocation into the fund and back to the countries (having been leveraged up) would be in line with their capital key, which in Germany's case is 26.3% of the Eurozone. In turn, national governments could indemnify the ECB should any of their infrastructure plans be loss-making. Germany would then be responsible for allocating the leveraged-up money to so-called 'profitable' infrastructure projects (and given the duration of many of these projects, it might not be known for 10 or 20 years whether they are profitable or not).
- The Chancellor has significant influence over the BoE; The Bank of England Act of 1998 requires the Treasury to specify once a year how price stability should be defined and the economic policy of the government. There would seem ample scope, therefore, for the bank's remit to broaden to encompass purchases of infrastructure bonds.
- The BoJ, by buying JPY12.6trn a year of ETF, is already by extension heavily involved in private markets.
- The Fed remains an independent institution, but it has a dual mandate and has already started to buy corporate bonds.

We have increasingly seen central banks in the UK and US acting in close concert with the Treasury. On 23 March the Fed announced it would be buying corporate credit and on 8 April the BoE directly (via the Ways and Means Committee) lent to the UK.

Macro overview

There are four key macro drivers: (1) global GDP growth, which we expect to be well above-trend in 2021 on the back of a vaccine and policy; (2) the US dollar, which we think will continue to weaken; (3) inflation expectations, which we think will continue to rise; and (4) range-bound bond yields, which we believe will not be allowed to rise meaningfully anywhere in the developed world, particularly in the US.

We discuss each of these drivers in turn:

GDP growth of 4.1% in 2021

CS economists expect GDP growth to be well above trend in 2021 (as does consensus).

Figure 134: CS economists' forecasts vs consensus

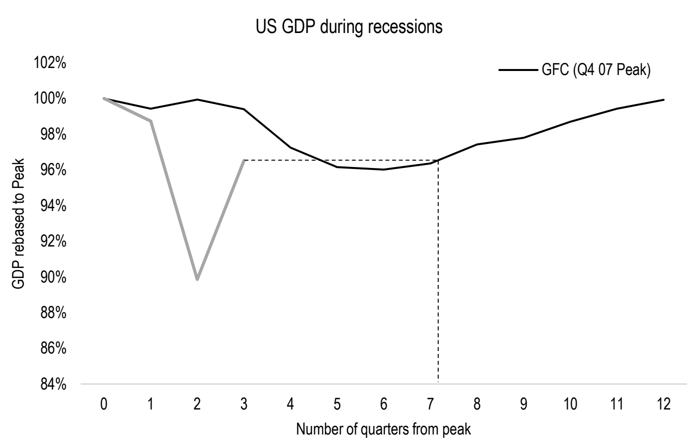
GDP Forecasts, yoy % chg	CS Economist		CS deviation from Consensus (pp.)	
	2020	2021	2020	2021
Global	-3.7	4.2	0.2	-1.0
US	-3.6	4.2	-0.1	0.5
Eurozone	-7.6	4.6	-0.2	0.0
China	2.2	7.1	0.2	-1.1
Japan	-5.0	1.5	0.3	-1.1

Source: Refinitiv, Bloomberg Finance L.P., Credit Suisse Economics

We continue to believe that the recovery this time around will be much faster and much more V-shaped than after the GFC.

We believe that pre-virus levels of GDP will be reached by the end of 2021 globally and in the US, and in 1H 2022 in Europe. This would make the recovery nearly 3x faster in Europe than the GFC and 50% faster in the US.

Figure 135: Already US GDP has recovered twice as quickly as it did post the GFC because of policy



Source: Refinitiv, Credit Suisse research

Figure 136: CS forecasts show GDP returning to pre-recession levels much more quickly than was the case post the GFC

	Peak to trough decline in GDP		Number of quarters to return to peak	
	US	Euro area	US	Euro area
GFC	-4%	-5.70%	14	29
COVID-19	-10.20%	-15.20%	8	10

Source: Refinitiv, Credit Suisse research

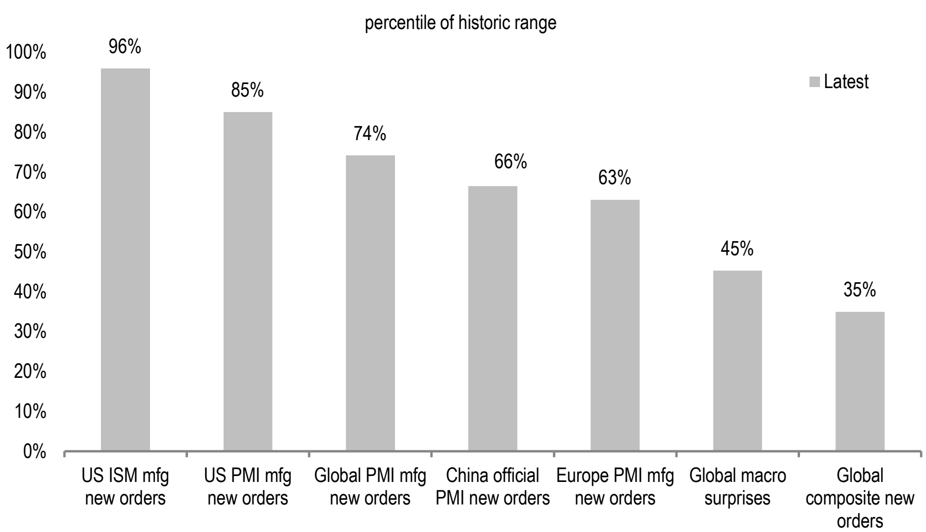
Global PMIs are consistent with c2.8% global GDP growth, compared with CS economists' forecast for 4.2% GDP growth in 2021. Hence, in 2021 we would expect global PMIs to rise to the high 50s from the current level of 52.6. Even with the lockdowns in November, global composite PMIs were essentially unchanged.

Figure 137: Global PMIs tend to lead global GDP growth, and global PMIs need to rise sharply to be consistent with 4.2% global GDP

Source: IHS Markit, Refinitiv, Credit Suisse research

While ISM might be high, composite PMIs are not, and we think they can rise further.

Figure 138: ISM and macro surprises are the outliers; most PMIs are not that high



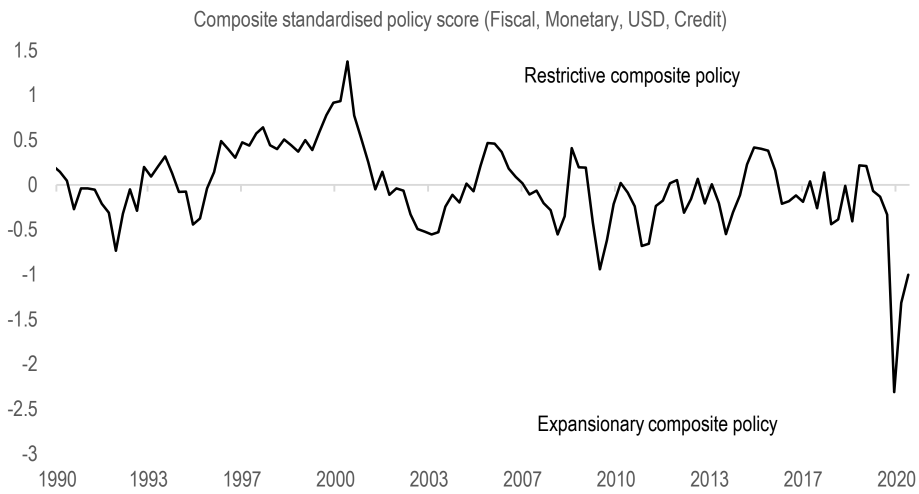
Source: IHS Markit, Refinitiv, Credit Suisse research

The three critical drivers of growth are policy, vaccines and pent-up demand.

Policy is much more important than economics

Our aggregate policy indicator of fiscal conditions, lending conditions to the corporate sector, monetary conditions and the dollar is still looser than it was at any point post the GFC. We continue to see policy being abnormally stimulative.

Figure 139: US composite standardised policy score



Source: Refinitiv, Credit Suisse research

We show the key differences we see between the post-GFC recovery and the current environment below.

Figure 140: Key differences between the post-GFC recovery and today

Post-GFC	Today
April 2011 - ECB raised rates, Bernanke judged inflation on unemployment v NAIRU	Dovish Central Banks across the world
Eurozone Crisis	Mutualisation of Eurozone debt, German fiscal easing
Fiscal tightening of c3% GDP in the US in 2011/12	IMF encouraging fiscal expansion, postponement of the Growth and Stability Pact
Dollar bull market post May 2011	Dollar entering bear market
Banks forced to aggressively de-lever	Capital requirements have been eased to release c$200bn capital in Europe
HY markets largely closed	Record corporate bond issuance
	Trade war to slow under Biden

Source: Refinitiv, Credit Suisse research

We discuss each of the six key aspects of policy below:

1. **Fiscal policy**

We believe the change in the management of fiscal policy has been driven by a change in the academic debate and practical experience.

On the academic side, policymakers have the cover of Modern Monetary Theory (which effectively advocates printing and spending until inflation rises). We also have seen the chief economists of both the World Bank and IMF suggesting that governments should use the current low bond yields to borrow and invest in productivity-enhancing infrastructure projects. Larry Summers, former US Treasury Secretary, summarised it very neatly, stating in 2019 that "the benefits of a reduced probability of a financial crisis do not outweigh the costs of deficit reduction" (Peterson Institute, 22 April 2019).

From a practical point of view, we have largely a new generation of politicians who are used to low bond yields, have not experienced 'funding strikes' and generally expect that central banks are going to fund the deficit.

In our opinion, the best example of this change is Germany, where the government plans to run a budget deficit until at least 2025. Moreover, there seems to be no desire to re-impose the Stability and Growth Pact. The French minister for Europe said it is "unimaginable" that it would be reintroduced in its current form (FT, 20 October). Even in the US, the key debate is around the size of the next stimulus package in spite of a budget deficit of c18% of GDP on CBO figures.

In the US, we expect a fiscal package of around $900bn to be passed in the next couple of months as proposed by a group of Democratic and Republican senators.

In regards to further fiscal stimulus, the probable very small Senate majority for the Republicans might allow one Republican senator to be persuaded to break the party line to vote for a larger fiscal package proposed by the new administration. The initial 2022 battleground for the US Senate is likely to include six Republican seats and three Democratic ones, suggesting more Republicans might be willing to break the party line if it increases their likelihood of re-election (Roll Call, 5 November 2020). Moreover, President-elect Biden has nearly half a century of experience in the Senate, which would suggest he understands how to negotiate.

Whatever happens, we believe that if there is an air pocket in growth in the US or elsewhere (that will initially be picked up by the stock market), we will get a policy response.

This is in contrast to the GFC, when there was fiscal tightening of c3% of GDP in the US and 2.5% of GDP in Europe over 2011/12. The Growth and Stability Pact was in operation against a backdrop of genuine concerns over a potential funding crisis.

2. **Monetary policy**

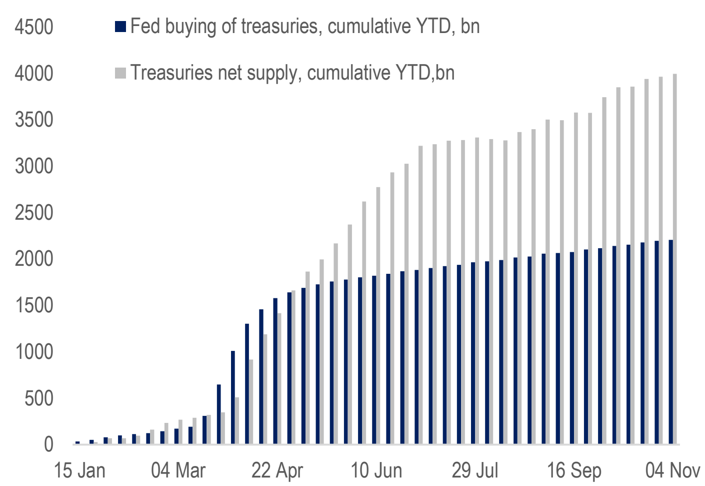
We think it is very clear that all major central banks will remain dovish at a time when aggregate monetary conditions are the loosest they have ever been. The Fed is not only using inflation (rather than unemployment versus NAIRU) to determine when to raise rates (and of course inflation lags the cycle by a year), but has also moved to an average inflation target (i.e. de facto implying that it will accept an overshoot in inflation to at least 2.5% core PCE). In fact, Fed Chair Powell said that "the risk of overdoing it, for now seems to be smaller" (CNBC, 6 October).

We also believe that the Fed would quickly implement yield curve control if the 10yr UST bond yield rose much above 1.2-1.5% – the reason being that the average maturity of mortgage debt is more than 10 years and the average maturity of corporate debt (which accounts for nearly 70% of lending in the US) is around 8 years.

Figure 141: We see monetary conditions at their loosest level in the past 25 years

Source: Refinitiv, Credit Suisse research

Figure 142: Fed buying of treasuries has lagged net supply very significantly recently, which will force the Fed to buy more



Source: Refinitiv, Bloomberg Finance L.P., Credit Suisse research

It is very clear that central bank buying is allowing sovereign and corporate bond yields to stay at levels that not only enable politicians (and corporates) to spend, but to revalue equities.

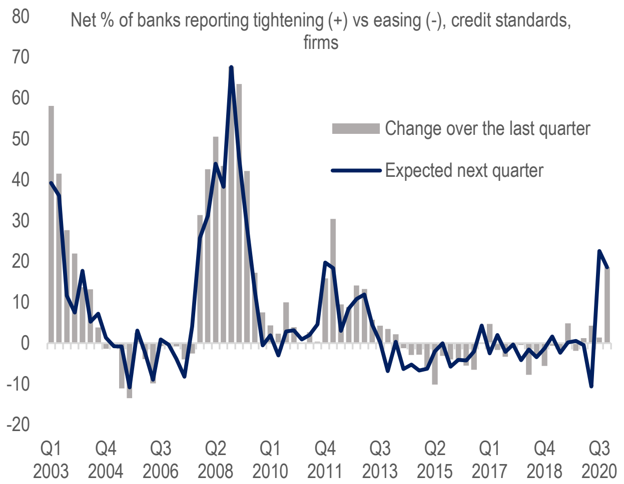
This is in contrast to the GFC, when the ECB raised rates in April 2011, while the Fed allowed QE to partially unwind.

3. Corporate lending conditions

In Europe, around 75% of lending is done via banks. European banks' lending conditions have tightened only marginally (in contrast to the GFC). The banks entered this crisis with balance sheets that had deleveraged and have been subject to rigorous stress tests.

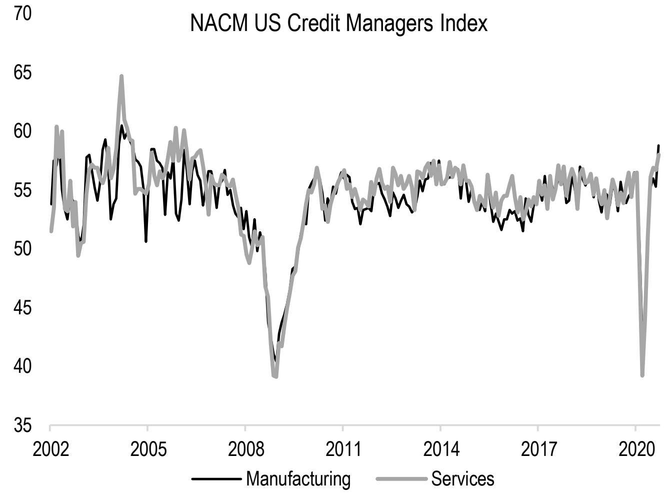
In the US, around 70% of lending occurs through the corporate bond market. The yield of sub-investment grade credit has hit new lows and corporate bond issuance is at record highs. Hence, overall corporate lending conditions remain very favorable if we look at the Credit Managers Index.

Figure 143: Bank lending conditions have tightened only marginally compared to the aftermath of the GFC



Source: Refinitiv, Credit Suisse research

Figure 144: The Credit Managers Index has recovered much faster than during the GFC



Source: Refinitiv, Credit Suisse research

This is in in contrast to the GFC, when banks were forced to deleverage and the high yield market was in effect largely closed, with credit spreads remaining elevated for much longer than this time around.

4. The dollar

As we argue below, we believe the dollar has entered a multi-year bear market. This is important because c60% of FX reserves and 80% of global trade is in dollars and thus if the dollar strengthens, then overall monetary conditions tighten.

This is in contrast to the GFC, when the dollar entered a bull market in May 2011.

5. No Eurozone crisis

The Eurozone has rapidly mutualised debt via aggressive ECB action, the EU Recovery Fund and the SURE bond. This pools the risk.

Germany has been willing to embark on rapid fiscal easing, addressing the structural problem of Germany not being willing to recycle its excess savings, which revealed itself in its current account surplus.

This is in contrast to the post-GFC period, when the Eurozone crisis resulted in very elevated spreads in the periphery, the need for fiscal austerity and reform (so that the ECB would buy peripheral debt) and a sharp fall in cross-border lending by banks. All of this was exacerbated by Germany not being willing to ease fiscal policy. As a result, it took the Eurozone just over seven years to reach pre-GFC levels of GDP.

6. Trade war to lose intensity

Biden has promised more cooperation on international trade. He has said that "China can't afford to ignore more than half the global economy" (Time, 29 September), suggesting he would pursue a less confrontational trade position with Europe and Japan in order to confront China with a more coordinated stance. Biden has made no mention of the US/EU trade deficit, suggesting an easier policy with the EU. Recently, Biden's top foreign policy advisor, Antony

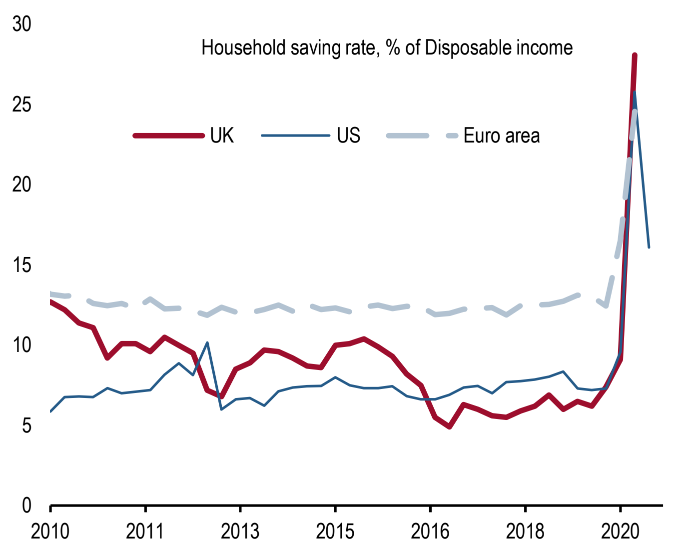
Blinken, said that Biden would want to end the 'artificial' trade war with the EU (FT, 23 September). This should benefit Europe and GEM equities.

A New York Fed study highlighted that by May 2020, the trade war had taken $1.7tn off the value of US companies (c.5% of S&P 500 market cap).

Pent-up demand with high savings ratio and low inventories

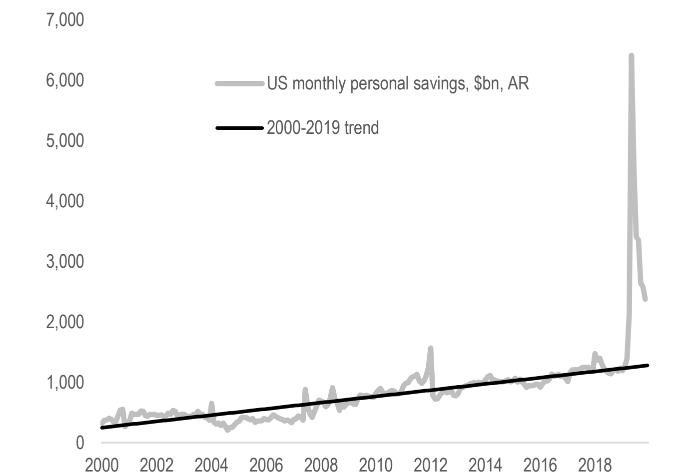
Household saving ratios across developed markets remain very elevated and US households continue to have access to savings, suggesting additional potential for savings to offset any further income pressure. In the US, there is around $1.1trn of 'excess' saving, i.e. savings in excess of the pre-COVID trend since May. That is worth around 10% of annual consumer spending.

Figure 145: Savings rates remain well above pre-crisis levels…



Source: Refinitiv, Credit Suisse research

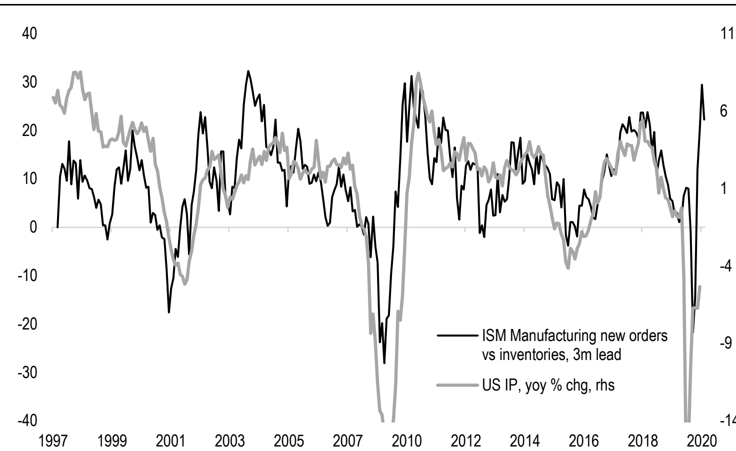
Figure 146: … with around $1.1trn of 'excess' savings accumulated in the US



Source: Refinitiv, Credit Suisse research

In addition, we would highlight that inventory levels remain very low. ISM new orders vs inventory has picked up significantly and suggests a pick-up in IP.

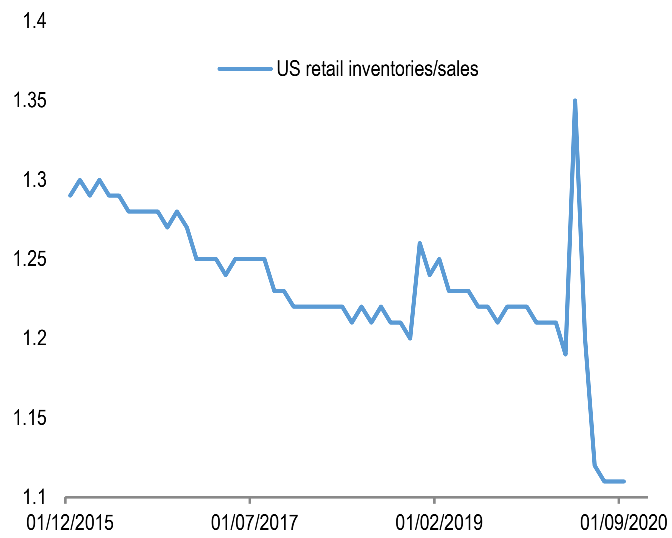
Figure 147: US ISM new orders vs inventories



Source: Refinitiv, Credit Suisse research

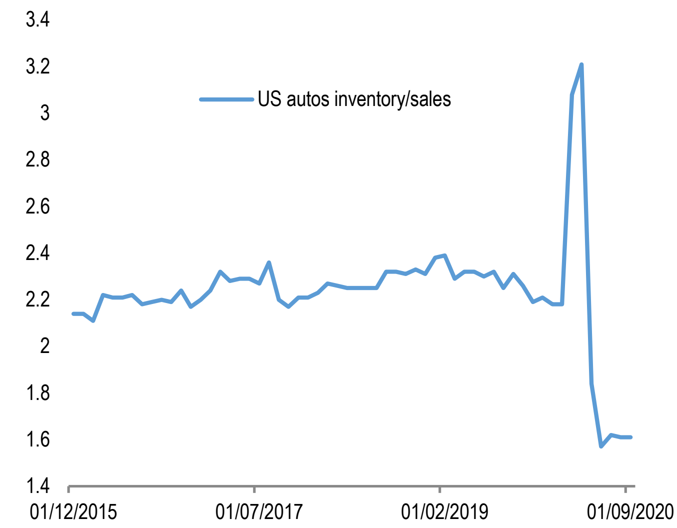
The low inventory levels are clearly reflected within the retail and autos sector.

Figure 148: US retail inventories



Source: Refinitiv, Credit Suisse research

Figure 149: US autos inventories

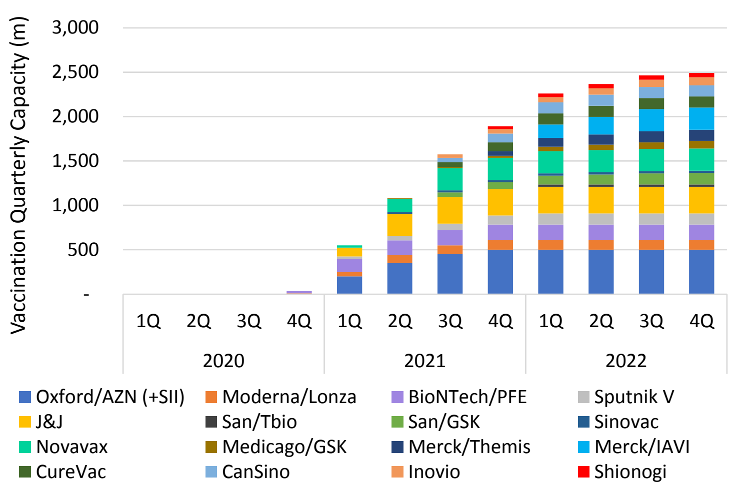


Source: Refinitiv, Credit Suisse research

Possibility of herd immunity by mid-2021 in DM

We believe there is a good chance of herd immunity by mid-2021 in many developed economies. Our pharma team believes up to 1.5bn people can be vaccinated by mid-year with most of the doses going to developed markets. Herd immunity requires probably 70% (maybe lower if a larger part of the population already had the virus) and developed markets total population is 1.2bn – hence around 840m need to be vaccinated.

Figure 150: The Credit Suisse pharma team has a blue sky scenario of nearly 570m of COVID-19 vaccines available by the end of Q1



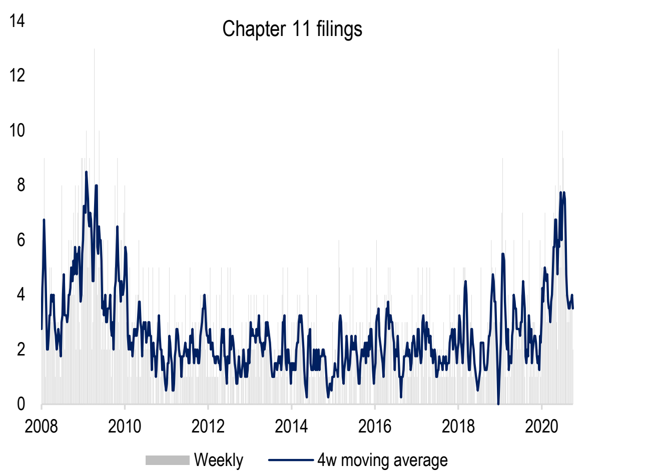
Source: Credit Suisse pharma research

We would stress that the elderly and those with preexisting conditions are most at risk from COVID-19. 92% of deaths in the US have been in people over the age of 55 (CDC, December 9), and in the UK 96% have had preexisting conditions (NHS, 9 December). These are groups that can be vaccinated potentially by the end of Q1 and in turn would allow healthcare capacity to be able to cope. We assume politicians are willing to impose lockdowns only when ICU bed capacity threatens to run out, so the vaccine news should allow the market to look through lockdowns.

The bankruptcy data continues to improve

Bankruptcy data has normalised and, so far, defaults have been low for the year. This is also the case in Europe (this is discussed in more detail in the banks section of this report).

Figure 151: Weekly chapter 11 bankruptcy filings (for large corporations only)



Source: Bloomberg Finance L.P., Credit Suisse research

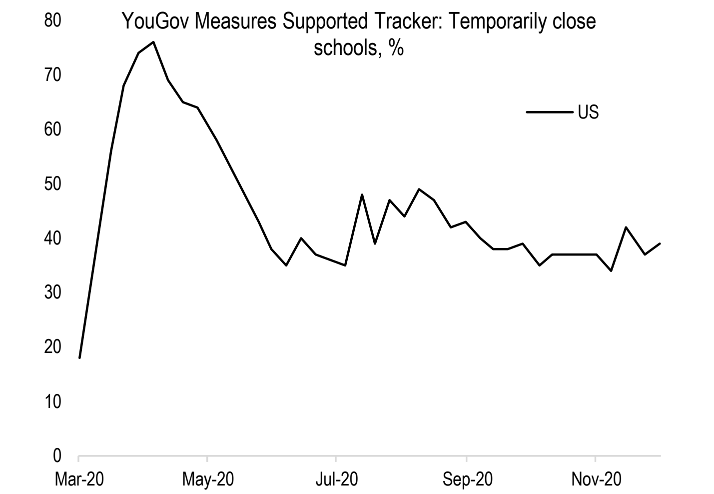
Figure 152: Total commercial filings

Source: Bloomberg Finance L.P., Credit Suisse research

Lockdowns remain localised in the US

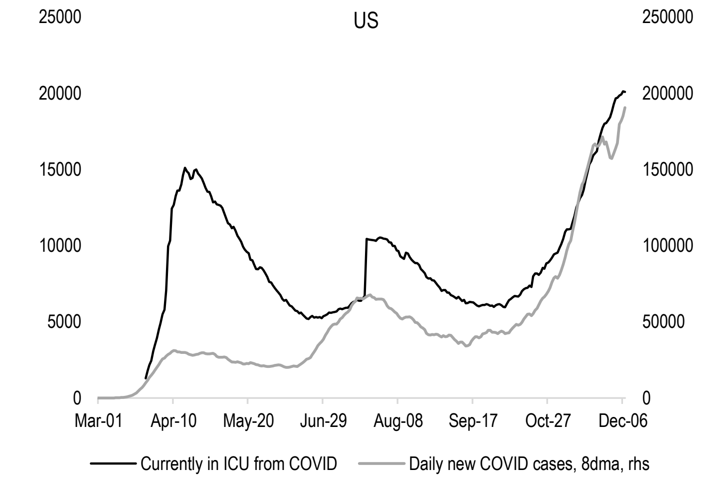
Clearly, with ICU occupancy above its previous peaks, there is growing pressure for more widespread lockdowns. However, there is limited public support for a nationwide lockdown. Moreover, if there were one, then: i) we think there would be an offsetting fiscal package; and ii) the market would largely look through it. European economic activity slowed more moderately than during the first lockdown in November for very good reasons, as highlighted in our 2021 Research Outlook: Equities, Regions and Macro.

Figure 153: US public support for a full lockdown including schools is limited



Source: YouGov, Credit Suisse research

Figure 154: Although case counts are rising, ICU occupancy is above its previous peak



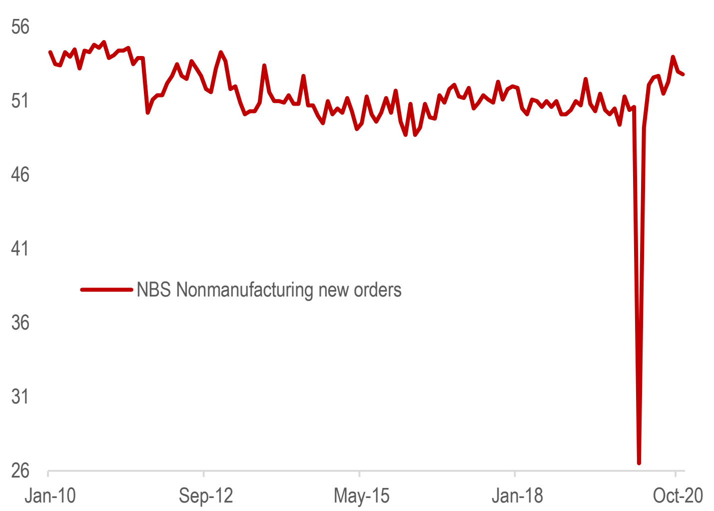
Source: The COVID Tracking Project, Credit Suisse research

China set to accelerate moderately

Our economists look for a modest acceleration in Chinese GDP growth to 7.1% in 2021 from 4.9% yoy for Q3 2020.

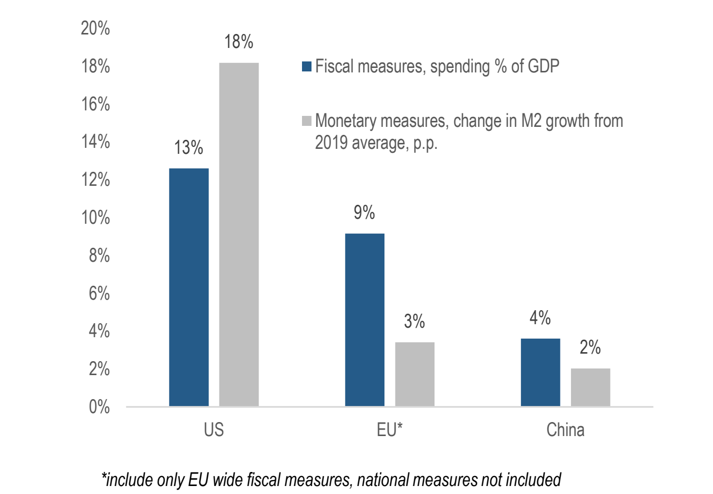
China has been able to recover much more strongly than investors had expected despite having one of the smallest fiscal and monetary stimuluses.

Figure 155: Service PMIs remain strong…



Source: Refinitiv, Credit Suisse research

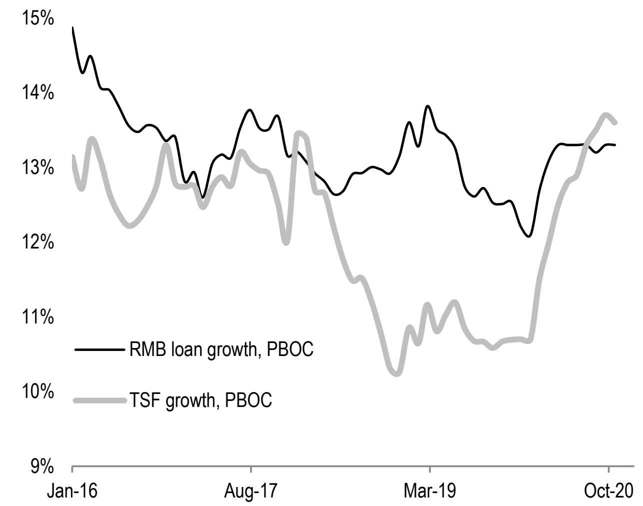
Figure 156: … despite only a small stimulus



Source: Refinitiv, Credit Suisse research

We have just started to see some tightening of policy. TSF growth looks like it has just peaked. There has been some recent tightening via the rise in corporate bond yields – up nearly 1pp from their lows (following SOE defaults) and a slowdown in the pace of SPB, but this we think is marginal.

Figure 157: TSF growth looks like it has peaked



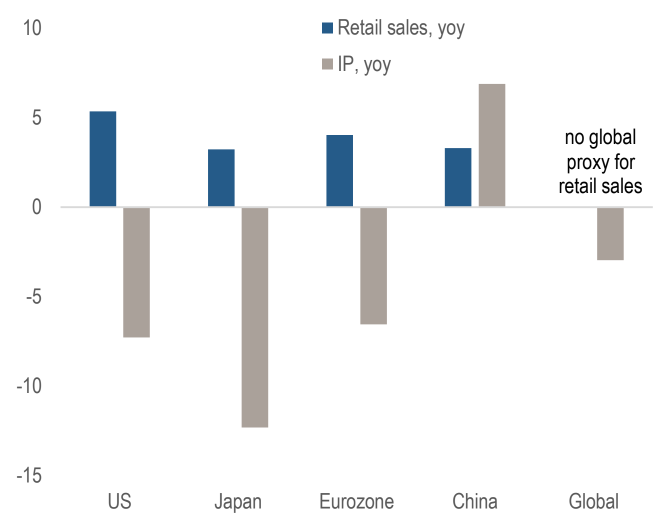
Source: Refinitiv, Credit Suisse research

Figure 158: China corporate bond yields are picking up

Source: Refinitiv, Credit Suisse research

It is the only economy that has seen a recovery in both supply (i.e. IP up 6.9% yoy) and demand (as proxied by retail sales) and, very surprisingly, its trade surplus has risen to an all-time high.

Figure 159: Both supply growth (production) and demand growth (retail sales) have turned positive in China



Source: Refinitiv, Credit Suisse research

Figure 160: China's trade surplus has increased to an all-time high

Source: Refinitiv, Credit Suisse research

We would expect the current account surplus to come under pressure as outbound tourism and overseas demand for household products, medical equipment and electronics normalises.

Figure 161: More than half of export growth in Q3 was from electronics, household products and medical equipment

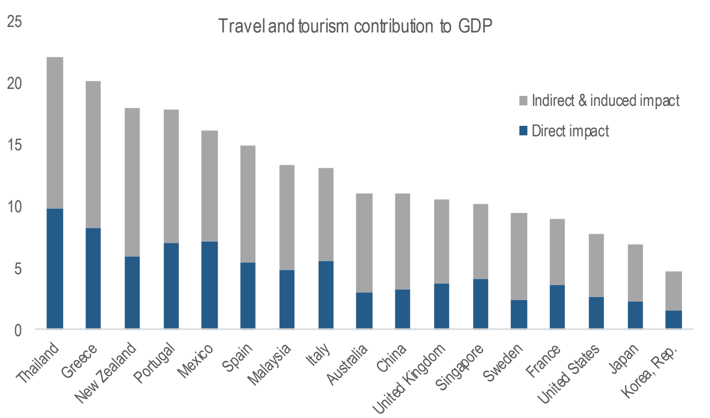
China exports, by category	% of total export	Growth, Q3 2020 vs Q3 2019	Contri to export growth,p.p.
Electronics (Computer, mobile phone, TV, etc.)	12.1%	24.5%	3.0%
Household products (Furniture, Lightings, HH electronics)	3.7%	26.0%	1.0%
Pharmaceuticals and medical equipment	1.6%	32.9%	0.5%
Total exports growth, Q3 2020 vs Q3 2019	8.8%	Sum of contribution from above categories, p.p.	4.5%

Source: Refinitiv, Credit Suisse research

Regions with the biggest bounce-back potential

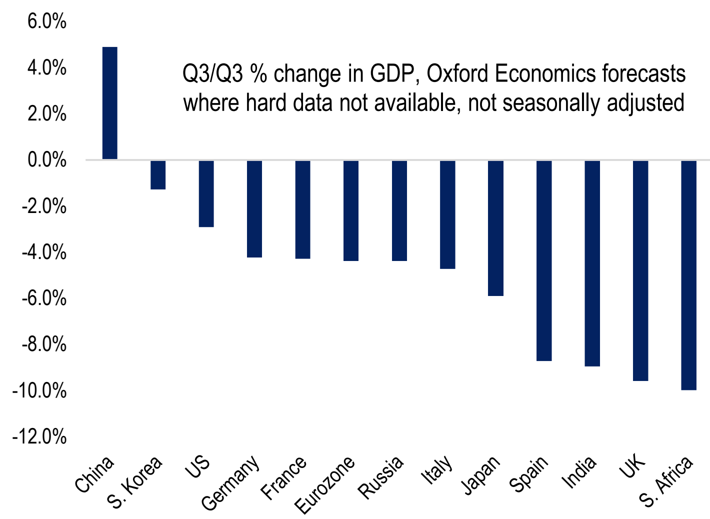
To some extent, not surprisingly, the regions with the largest bounce-back potential are either the most exposed to tourism or have had the largest fall in GDP.

Figure 162: The places that recover last are those most reliant on tourism



Source: Refinitiv, Credit Suisse research

Figure 163: Places with the largest hit to



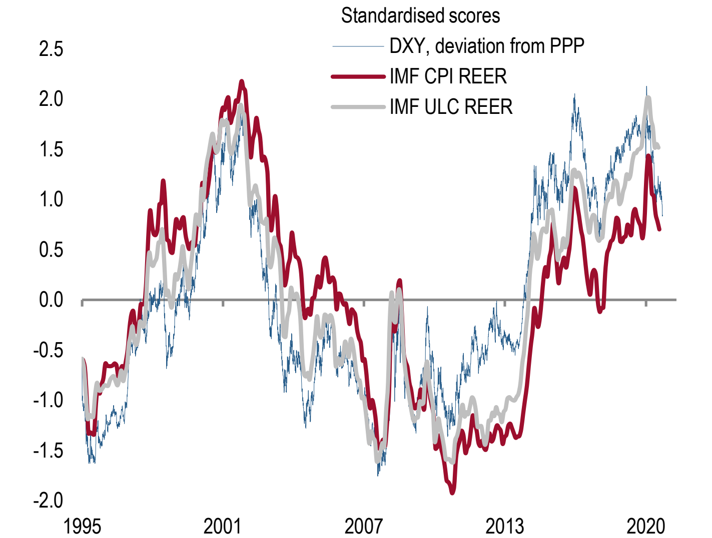
Source: Refinitiv, Credit Suisse research

More US dollar weakness

We remain US dollar bears for the following reasons:

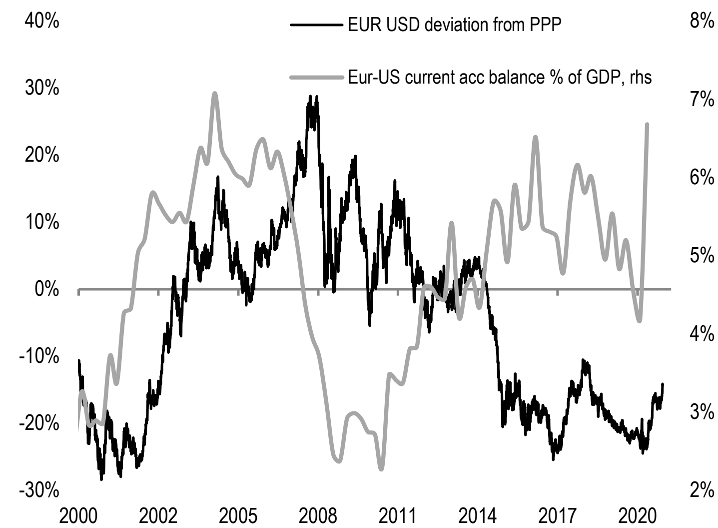
- **Valuation:** We can see below that the dollar is still overvalued (by 1.2std on average on our three measures) and that the last time the European current account surplus was c7% above that of the US, the euro was c30% overvalued relative to PPP (as opposed to c15% undervalued today).

Figure 164: The dollar remains expensive in aggregate



Source: Refinitiv, Credit Suisse research

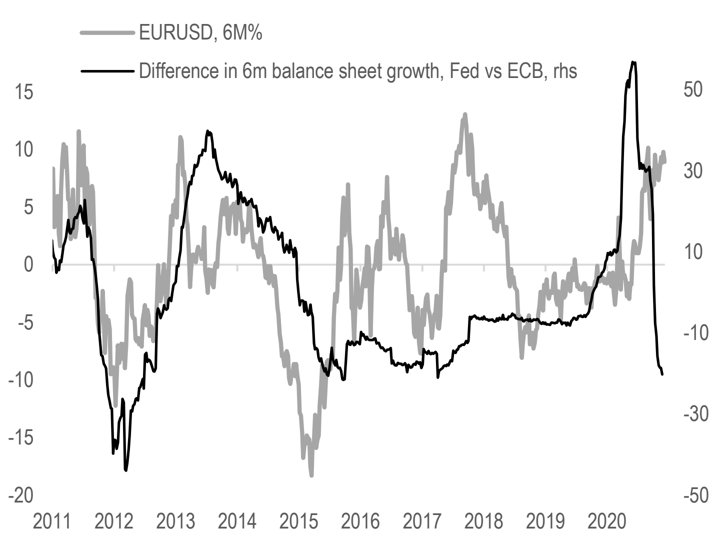
Figure 165: The Eurozone current account surplus is forecast to stay 5% above that of the US, and this implies the euro should be 20% higher



Source: Bloomberg Finance L.P., Refinitiv, Credit Suisse research

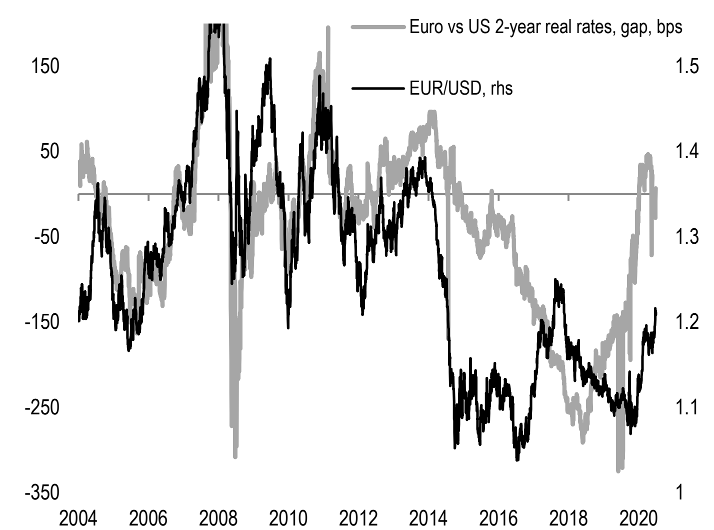
- **More printing by the Fed than the ECB leads to a weaker dollar.** If the Fed prints more than the ECB, the euro strengthens. With the US budget deficit at around 20% of GDP this year (nearly double that in Europe using IMF estimates) and the Fed committed to open-ended QE, the Fed would have to print proportionately more than the ECB. Year to date, the ECB has also printed c18% of GDP, more than the Fed and since April the Fed has bought only half of net Treasury issuance (see above), thus we see the Fed having to print proportionately more in the future than the ECB.
- **No real rate support for the dollar:** A rise in inflation expectations in the US (10y breakevens rose from 135bps to 190bps since the end of June, compared with Europe where it rose from 80bps to only 110bps), which has meant that two-year real note yields in the US are now nearly 50bps below those of the eurozone. This again is euro positive.

Figure 166: When the Fed increases its balance sheet by more than the ECB, the euro tends to strengthen



Source: Refinitiv, Credit Suisse research

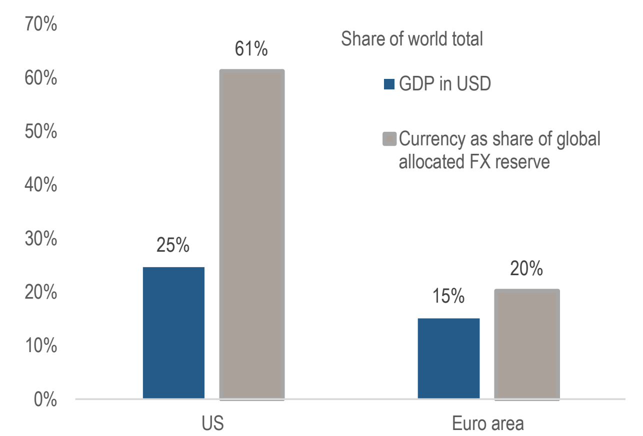
Figure 167: Real rate differentials are euro positive



Source: Refinitiv, Bloomberg Finance L.P., Credit Suisse research

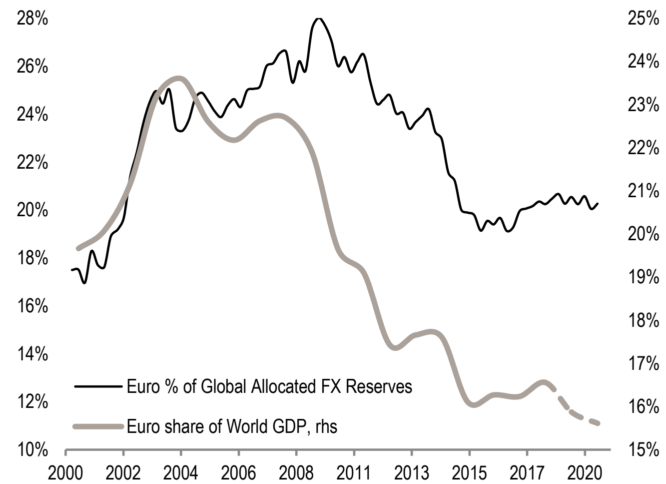
- **The world is overweight the dollar structurally.** We can see below that 61% of global reserves are in the dollar, while the US is just a quarter of global GDP. Only 20% of global reserves are in the euro compared with 28% in 2008.

Figure 168: 61% of global FX reserves are in dollars, but only 25% of global GDP, and the Euro area only accounts for 20% of global FX reserves



Source: Refinitiv, Credit Suisse research

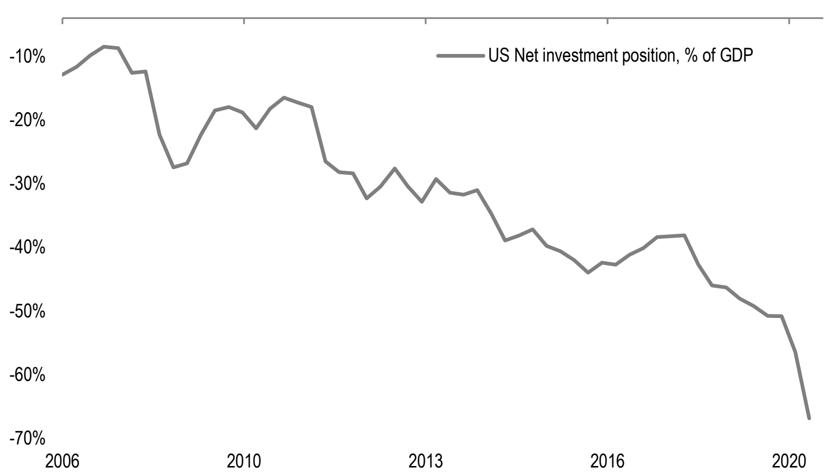
Figure 169: The Eurozone's share of GDP against its share of global FX reserves



Source: Refinitiv, Credit Suisse research

- **The US is a large net debtor now**

Figure 170: The US net investment position has hit –c67% of GDP



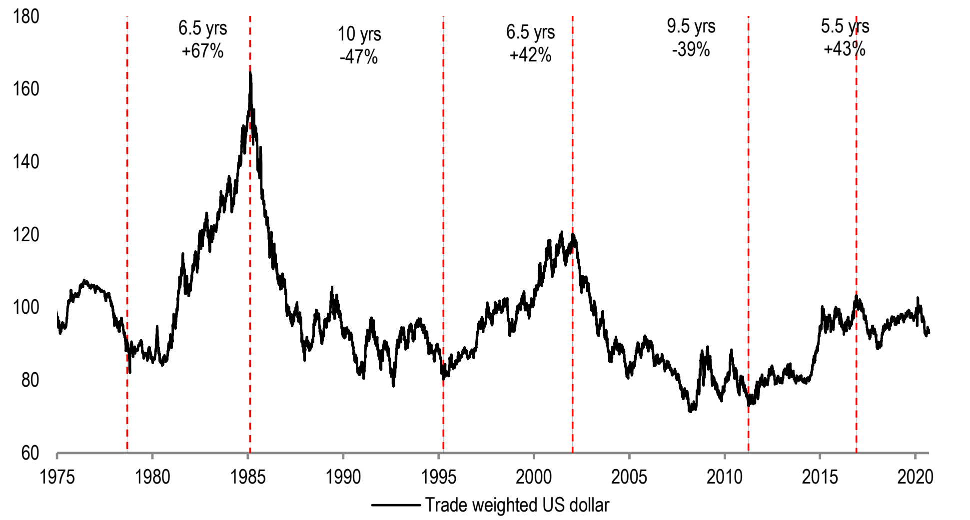
Source: Refinitiv, Credit Suisse research

- **Unlikely to see a central bank response that stops the dollar from weakening**

Usually currencies stop strengthening if there is a policy response, but this is missing in both the US and Europe.

The Fed appears not to be overly concerned because core PCE is just 1.4% and its new inflation target (using an average inflation rate of c2%) implies that it is targeting a core PCE of c2.5%. The question is whether the ECB then reacts by cutting rates. The problem is that it did not cut rates in March despite the worst recession on record (indeed, in Sweden rates are still above December levels). This is because the ECB seems to be increasingly realising that NIRP is counterproductive. Hence, we continue to believe that the dollar will weaken and the euro will strengthen, and that this is more than likely to be a multi-year process (dollar bear markets historically have lasted 9 to 10 years).

Figure 171: Dollar bull markets have tended to last no longer than seven years



Source: Refinitiv, Credit Suisse research

Inflation expectations to rise

We continue to believe that on a 2- to 10-year view, inflation will rise more than expected. The 10-year breakeven inflation rate currently is c1.9% and our view is that it can rise to c3% over the next 18-24 months (see COVID-19: Long term inflationary consequences and what to do, 2 July). We detail our view on inflation further below.

Figure 172: Breakeven inflation has risen in the US, but remains below levels seen just two years ago

Source: Refinitiv, Credit Suisse research

Bond yields likely will not be allowed to rise by much

Although we think inflation expectations are likely to pick up, we believe nominal bond yields will not be allowed to pick up by any significant amount. Our house view is for -0.3% and 1.3% 10-year Bund and Treasury yield, respectively, by end-2021.

The reason is that the average maturity of mortgage debt is more than 10 years and the average maturity of corporate debt (which accounts for nearly 70% of lending in the US) is around eight years. Thus for the Fed, the long end of the curve is much more economically important than it is for, say, the ECB or the BoE. The Fed has sounded extremely dovish in the past two months (consistently pointing out that the risk of over stimulus is much less than the risk of the opposite). We think the Fed might try to cap bond yields against a backdrop of falling PMIs or falling equities but would not want to be seen to ignite an asset bubble. It is probable that the Fed would increase its rate of buying rather than formally announce yield curve control.

Investment styles

Growth relative to value

This is one of the biggest debates we have seen among clients over the past couple of years and is likely to dominate discussions throughout 2021. In mid-May, we raised European value to overweight but stuck to an overweight of US growth (albeit reduced). We stick with this allocation but have low conviction on the US overweight for the reasons outlined below.

US growth: overweight

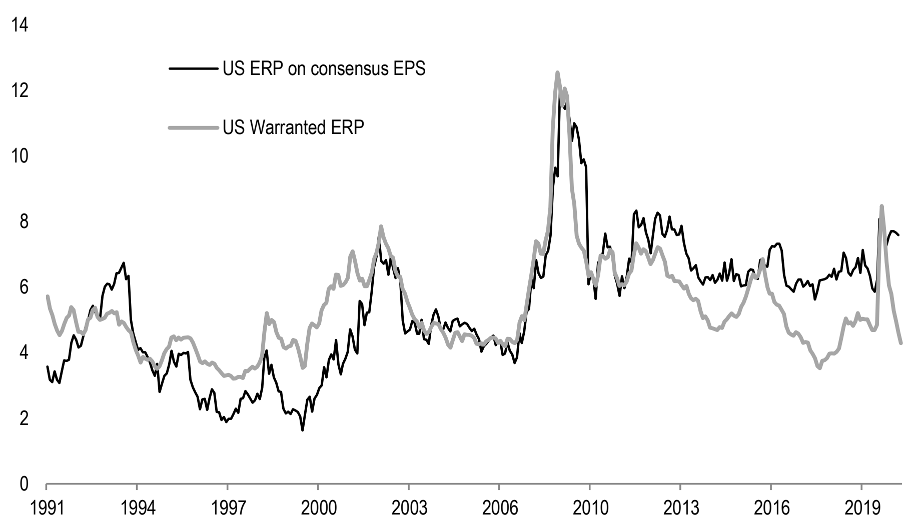
We have been overweight US growth for a decade for three reasons that we believe remain intact:

1. **The fall in the cost of equity.**

We think that the cost of equity (ERP + risk free rate) in the US remains too high (8.4%). The equity risk premium, currently at 7.6%, should be closer to 4.3% according to our warranted ERP model (which relies on lead indicators and credit spreads to determine where the ERP should be). Indeed, bull markets in the past have seen much lower ERPs at this stage of the cycle.

A 1pp fall in the ERP would more than offset a limited rise in the US treasury yield and lead to a falling cost of equity.

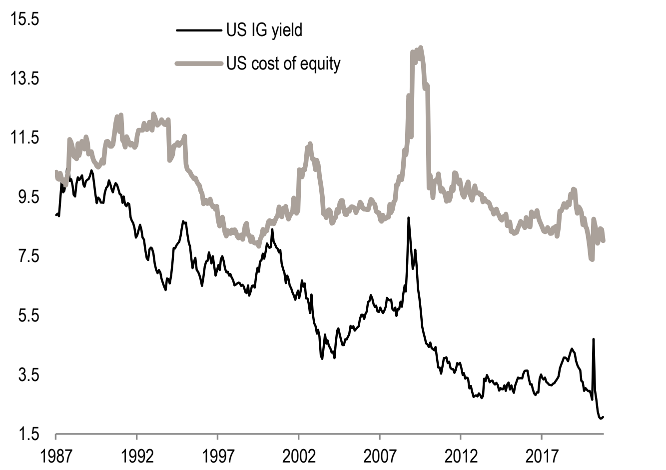
Figure 173: Actual ERP is more than 3 ppts above warranted ERP



Source: Refinitiv, Credit Suisse research

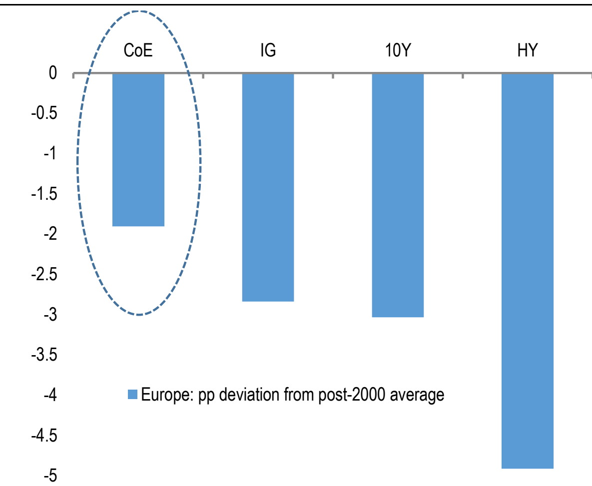
Another way to look at this is to say that cost of equity is closer to its historical norms than any other major financial variable (e.g. government or corporate bond yields) and is only slightly lower than it was a decade ago.

Figure 174: The cost of equity has not fallen much since 2000…



Source: Refinitiv, Credit Suisse research

Figure 175: … and is much closer to its norm than other costs of investment



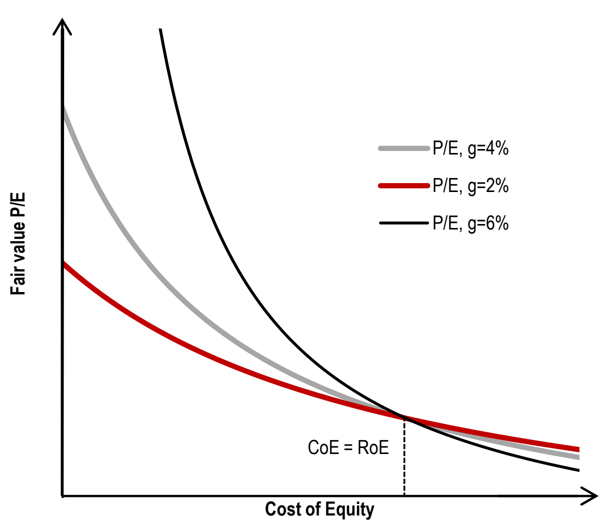
Source: Refinitiv, Credit Suisse research

When the discount rate falls, long-duration assets tend to re-rate and growth therefore outperforms.

A 1pp fall in the discount rate re-rates a growth stock (g=6%) by 50%, but a low-growth stock (g=2%) by less than 20%.

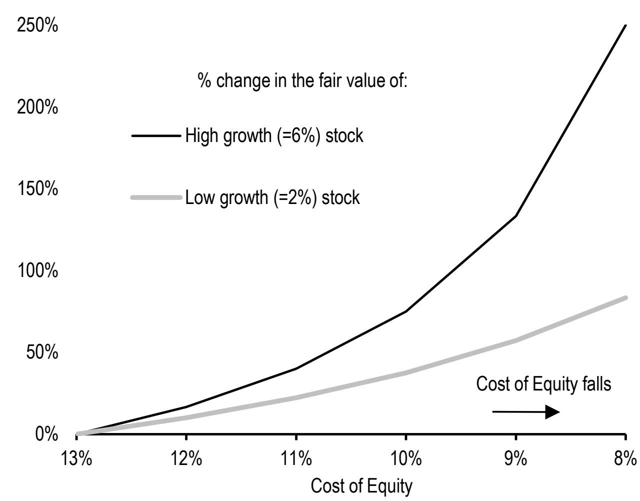
$$\mathrm{P/E} = \frac{\mathrm{RoE} - g}{\mathrm{CoE} - g} \times \frac{1}{\mathrm{RoE}}$$

Figure 176: A fall in the cost of equity re-rates high-growth stocks disproportionally



Source: Refinitiv, Credit Suisse research

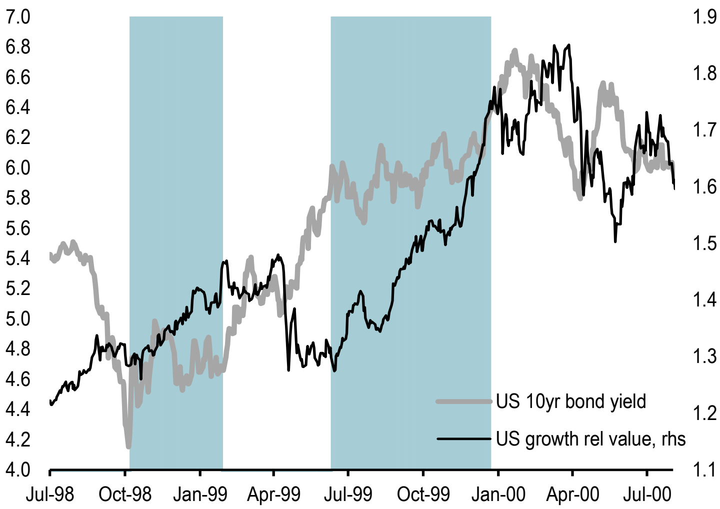
Figure 177: High-growth stocks have a larger upside from a fall in the cost of equity



Source: Refinitiv, Credit Suisse research

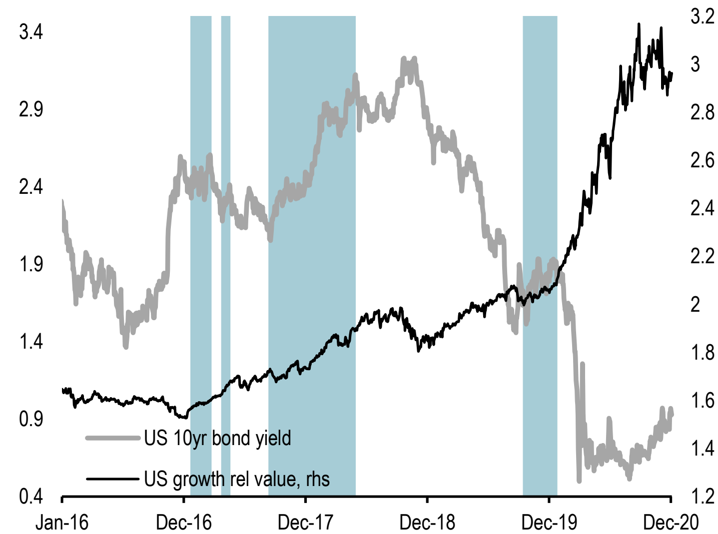
The fact that the ERP can fall more than the bond yield rises explains why US growth is able to decouple from bond yields and outperform while bond yields are rising, as was the case between 1998 and 2000 and during several periods over the past three years. We expect the US 10yr Treasury to end 2021 at 1.3%, in line with the CS house view.

Figure 178: Between October 1998 and January 2000, growth outperformed as bond yields rose…



Source: Refinitiv, Credit Suisse research

Figure 179: …this was also the case during several periods over the past three years



Source: Refinitiv, Credit Suisse research

2. Normally, valuations of growth become more extreme at a bull market peak

There have been three major growth-led bull markets in the past 60 years globally:

- **Early 70s:** This ended in the Nifty 50 bubble in late '72
- **End 80s:** This ended with the Japanese equity bubble in December '89
- **End 90s:** This ended in 2000 with the TMT bubble

In each of these instances, the P/E of growth rose to c45x-72x compared with 43x now (and the TMT and Japanese bubbles also happened against backdrops of rising yields). We would note that in 2007, inflation-adjusted equity returns never surpassed previous peaks, thus preconditions were not in place for a bubble.

Figure 180: The P/E of growth in the Nifty 50, TMT and Japan bubbles ended up on 45x, 60x and 72x earnings, compared with 43x currently

		S&P	Treasury yields	P/E
Nifty Fifty	01/12/1970	87	6.5	
	05/01/1973	120	6.4	45x
	Change (%, bps)	37%	-6	
TMT Bubble	31/08/1998	957	5.0	
	24/03/2000	1527	6.2	60x
	Change (%, bps)	60%	122	
		TOPIX	**JGB yields**	
Japanese stock bubble	04/01/1988	1690	4.5	
	18/12/1989	2885	5.5	72x
	Change (%, bps)	71%	97	

Source: Refinitiv, Credit Suisse research

It is worth remembering that in the Nifty 50 period, 10 US stocks ended up trading above 60x earnings despite a 10-year Treasury yield of c. 6.5%.

Figure 181: The P/E of selected Nifty 50 companies in 1972, and their subsequent annualised returns to 2001

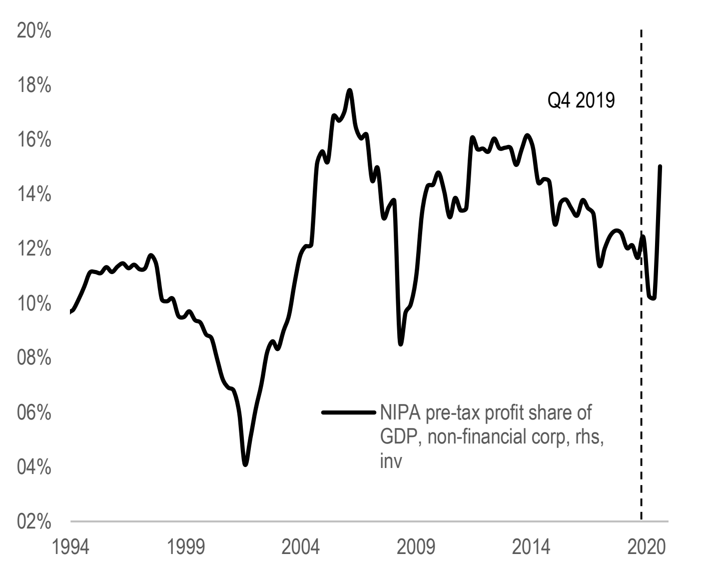
	1972 P/E	Annualized Return
Polaroid	90.7	-14.68
McDonald's	85.7	10.5
MGIC Investment	83.3	-6.84
Walt Disney	81.6	8.97
Baxter Travenol	78.5	10.1
Avon Products	65.4	6.04
Emery Air Freight	62.1	-1.37
Johnson & Johnson	61.9	13.35
Digital Equipment	60	0.93
Kresge (Kmart)	54.3	-1.07
Simplicity Pattern	53.1	-1.47
AMP	51.8	11.17
Black & Decker	50.5	2.45
Schering	50.4	13.19
American Hospital Supply	50	12.36

Source: Refinitiv, Credit Suisse research

3. Big areas of value remain disrupted

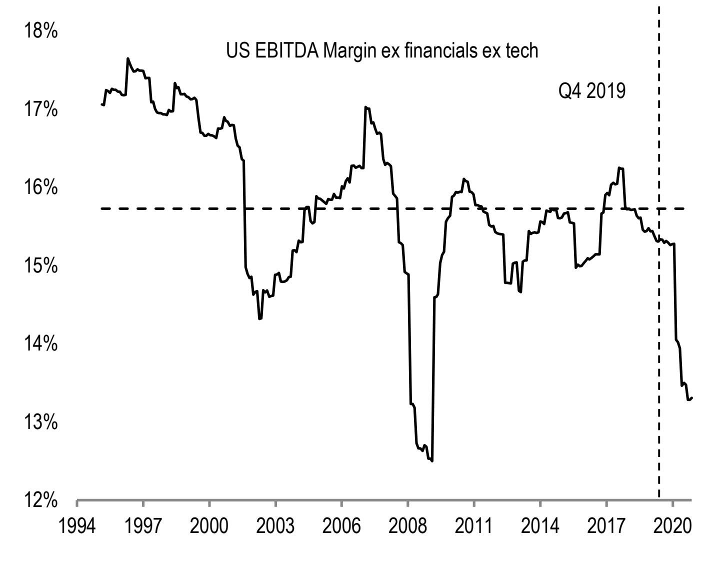
The best illustration of this is that in Q4 19 – before the COVID-19 crisis – both the profit share of GDP and the EBITDA margin ex tech were at seven-year lows.

Figure 182: The profit share of GDP fell over the 7 years ahead of 2020 (dotted line represents the start of the COVID-19 outbreak)



Source: Refinitiv, Credit Suisse research

Figure 183: EBITDA margins were below their norm already before the virus (dotted vertical line represents COVID-19/ horizontal line is the average)



Source: Refinitiv, Credit Suisse research

We discuss several of the disrupted value sectors below:

- **Autos:** Auto manufacturers are disrupted by electric vehicles (EV), autonomous driving (AD), and car sharing (which could reduce demand for cars as well as reducing the profitability of the after-market owing to bulk purchases). Not only does capex have to be ramped up well ahead of sales, but new entrants are also appearing in the AD market (e.g. Waymo, whose parent company, Alphabet, is able to cross-subsidise growth projects, leading to a lower cost of funding than OEMs). In many instances, the new entrants do not have legacy labour costs or legacy models to manage. China represents another threat, with its market accounting for c.40% of the profits of German car companies against a backdrop where the quality of Chinese cars is improving relative to foreign brands and where Chinese local brands have better brand recognition in EVs and, above all, local Chinese manufacturing accounts for just c35% of car sales (and even less so for premium cars). The more quantifiable threats of increased regulation and requirements to reduce CO_2 emissions also remain.

- **Big-cap pharma:** Branded drug prices in the US are c.50-70% above those in Europe at a time when 42% of big pharma purchases are made by the US government (nearly double the level of a decade ago), and 80% of their portfolios are non-unique, with nearly 70% of new products coming from outside the major pharma companies. There is also a clear-cut risk that the discount on biosimilars ends up being much larger than expected (owing to advances in tech) and a clear risk that personalised medicine brings with it value-based contracts.

- **Fossil fuel utilities:** Disruption from renewables, better battery storage, and smart metering. Fossil fuels are becoming increasingly uneconomic after adjusting for the price of carbon. Gas distributors are likely to be disrupted by battery storage and more widespread renewables rendering little need for gas distribution.

- **Tobacco:** The most recent issue is the rise of vaping, where the barrier to entry is very low and many of the brands were initially not owned by the established players. This has also led to a rise in the price elasticity of demand to 0.5X from 0.3X.

- **Non-conspicuous brands:** The risk is that Amazon and other portals could become trusted providers of non-conspicuous brands and bring increased price visibility (i.e. a basic household product has to sell for a similar price globally). Moreover, social media enables easier (and speedier) build-up of craft brands. In the case of food producers, the shelf space is no longer limited. For alcoholic drinks, the key risk is that in many regions, alcohol consumption is now falling as millennials tend to drink less than previous generations.

- **Financials:** Key business areas of banks (e.g. asset management, payment systems, loan origination and investment banks) are increasingly disrupted. In the Netherlands, for example, c.40% of new mortgages come from non-banks (c.20% of the outstanding stock). In the US, 70% of corporate lending is from the corporate bond market, whereas it is only 30% in Europe, suggesting much more disintermediation. Asset management is being disrupted significantly by technologies that enable passive investment (e.g. ETFs) and regulations that force price visibility. This particularly hits captive asset management.

- **Office and retail REITs:** Office REITs are vulnerable to financial jobs being automated (this is particularly problematic in areas such as insurance, back-office functions and paralegals), the outsourcing of back-offices to cheaper locations, working from home and desk-sharing technologies. In the UK, a third of retail sales are now done online, more than in any other DM.

- **Other disrupted cyclical areas:** These include GDS (e.g. through Winding Tree, a blockchain-powered decentralised travel ecosystem), hotels (e.g. through OTA and other online rental portals), employment agencies (with the threat of automation as well as AI matching employers and employees), and freight forwarding (Amazon's access to high-quality data enables it to better match demand with capacity or Fastweb). At the other end, Google's Asset Tracking platform integrated with its Maps API allows for dynamic product routing and further opens up the market to smaller innovators and non-content media (owing to the threat from Amazon Prime, Netflix and YouTube and many others).

- **Energy:** The IEA has stated that if the objectives outlined in the Paris Climate Accord are to be delivered, oil demand needs to fall by around 30% by 2040. Just over half of oil demand is transportation-related and the UK, for example, is banning all new diesel/petrol cars starting from 2030 (at the start of this year, it had been 2040). The recycling of plastics and the development and the development of hydrogen power will also disrupt the growth of petrochemicals.

On top of all of this, certain sectors become ESG-toxic in the eyes of many investors, such as fossil fuels or tobacco.

Why only low conviction on US growth?

As discussed above, we have only low conviction on our overweight of growth in the US.

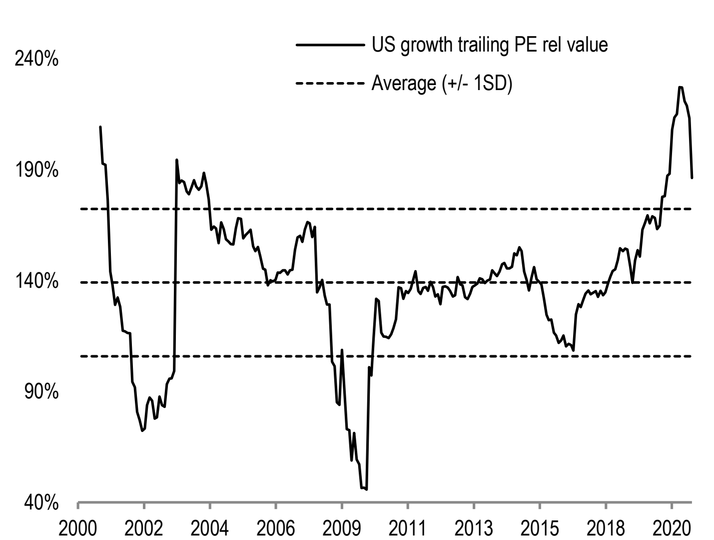
1. **Valuation is extreme against value**

While the valuation of growth has not reached its previous highs in absolute terms (see above), the valuation relative to value is clearly extreme using P/Es.

2. **A sharp decline in earnings revisions to be worse than value**

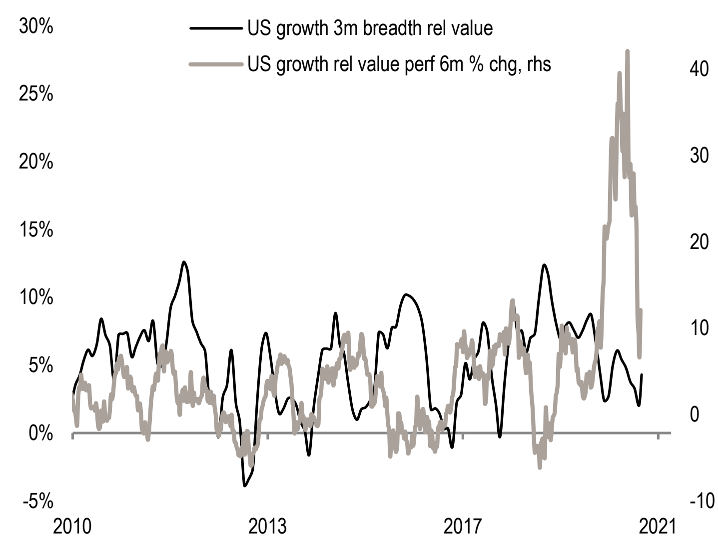
Earnings revisions of growth relative to value are unusually poor and this has yet to be fully reflected in performance.

Figure 184: The P/E of growth to value is not far below its 2000 peak



Source: Refinitiv, Credit Suisse research

Figure 185: US growth earnings revisions are poor in a historic context, and the market has not yet reflected this

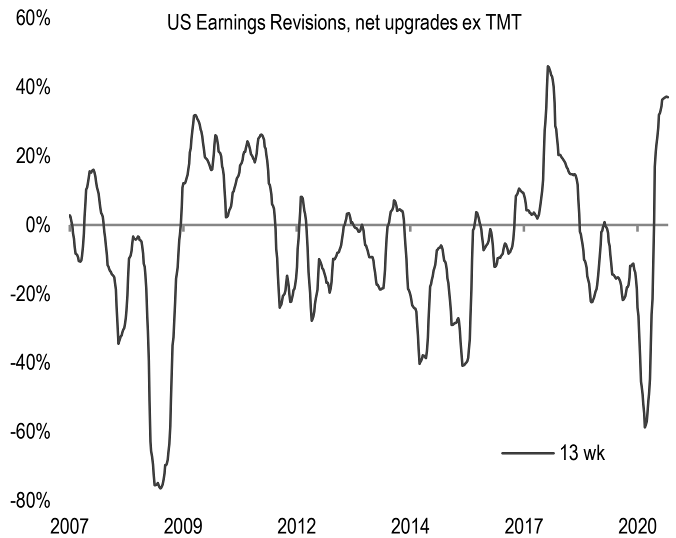


Source: Refinitiv, Credit Suisse research

3. **When overall EPS of the market is positive, that is a headwind for growth**

Clearly when profits are scarce, investors pay more for structural growth. When earnings revisions for the market turn positive, value tends to do relatively better (or less badly).

Figure 186: Earnings revisions in the US have turned strongly positive…



Source: Refinitiv, Credit Suisse research

Figure 187: … and this usually leads to poorer performance for growth

6m performance growth rel value			
		Earnings revisions	
		Above 0	Below 0
Earnings revisions	Rising	1.4%	2.8%
	Falling	1.9%	3.1%
Typical		2.3%	

Source: Refinitiv, Credit Suisse research

4. Pick-up in inflation expectations is a concern for growth

Inflation expectations have already started to pick up and, as we argue in the section on inflation, we expect inflation expectations to pick up further. Value used to have a pop 2 to 7 months after inflation expectations troughed or credit spreads peaked.

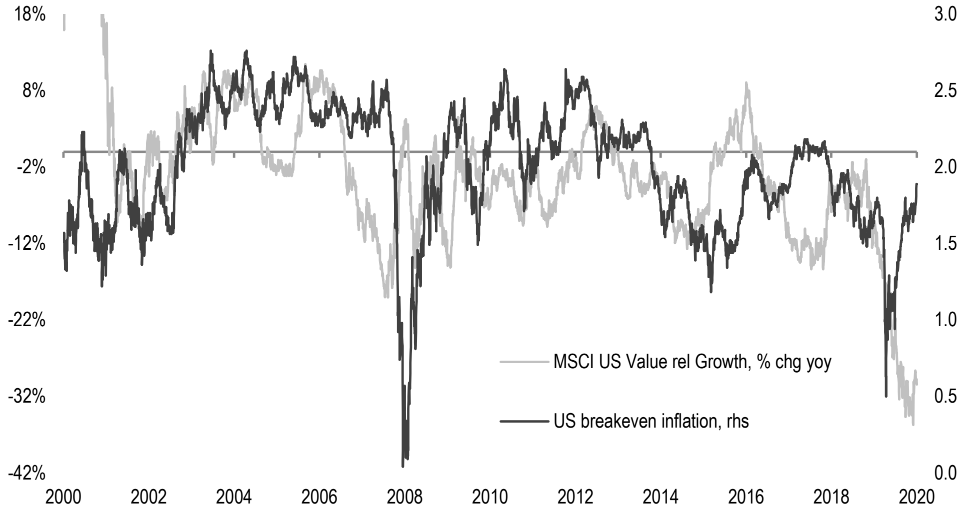
Figure 188: Growth tactically peaks after a trough in inflation expectations

US	*Months from peak in Growth*		
Peak in Growth rel Value	Peak in credit spreads	Trough in inflation exp.	Trough in ISM
06-Apr-99	-5.7	-6.1	-5.2
15-Jul-08	5.0	4.3	5.6
26-Nov-10	-5.7	-3.1	11.3
13-Apr-12	1.6	-6.8	4.6
Average	-1.2	-2.9	4.1

Source: Refinitiv, Credit Suisse research

In fact, US inflation expectations would imply a sharp outperformance of value.

Figure 189: Inflation expectations are in line with value outperforming growth

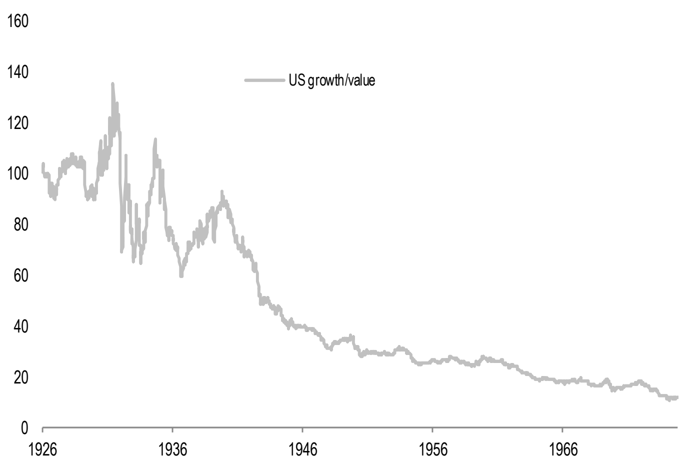


Source: Refinitiv, Credit Suisse research

Last, we would note that we have had the longest and greatest period of growth outperformance in size and length since 1926, while US growth has reached an all-time high relative to value (pre-1975 data is constructed from Fama-French factor returns data).

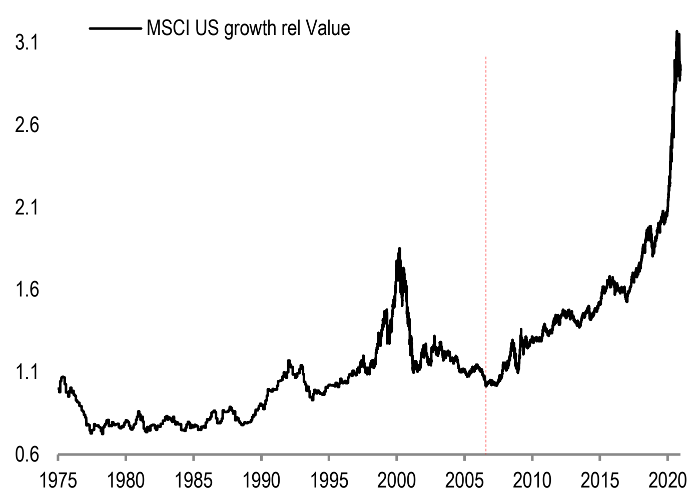
We believe that this has resulted in unprecedented crowding of trades.

Figure 190: US growth versus value prior to 1975, total returns, constructed using Fama-French factor returns



Source: Refinitiv, Credit Suisse research

Figure 191: Growth has structurally outperformed value since 2006



Source: Refinitiv, Credit Suisse research

We particularly like growth companies that have been awarded a HOLT eCAP, have net debt to EBITDA below 2x, are in the top 20% on operational quality, show upside on HOLT and are Outperform-rated by CS analysts.

Figure 192: US high-quality growth companies

Name	Rel perf since 25th May 2020	Net Debt/EBITDA (HOLT)	Operational Quality Percentile	eCap Award	FCF (HOLT)	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Alphabet A	1%	0.38	96	X	2.60	30.2	na	3%	6.2	26%	3.0	0.0	127.0	16.6	3.3	1.8	Outperform
Cognizant Tech.Sltn.'A'	23%	0.85	87	X	5.20	20.5	60%	-19%	4.0	-19%	5.6	1.1	13.9	3.2	1.1	2.7	Outperform
Danaher	12%	0.26	97	X	2.80	31.7	147%	23%	5.4	67%	2.9	0.3	3.5	9.7	3.1	1.8	Outperform
Ebay	-9%	0.14	81	X	7.00	13.9	38%	-10%	14.1	119%	7.1	1.2	36.3	-5.2	-5.9	2.5	Outperform
Hershey	-10%	0.20	83	X	2.40	22.9	110%	-24%	18.1	-20%	3.9	2.1	5.3	3.6	1.5	2.7	Outperform
Home Depot	-15%	0.37	87	X	3.60	21.5	58%	-20%	-91.2	na	5.0	2.3	13.9	5.9	5.2	2.2	Outperform
Intercontinental Ex.	-7%	0.21	98	X	3.90	23.0	136%	-13%	3.5	18%	3.9	1.1	76.6	1.3	4.6	1.8	Outperform
Microsoft	-8%	0.33	94	X	3.00	30.3	89%	20%	13.7	75%	2.9	1.0	56.8	6.6	1.3	1.7	Outperform
Sherwin-Williams	-3%	0.13	91	X	3.20	26.6	115%	-9%	15.8	-5%	3.4	0.7	7.6	7.0	1.7	2.2	Outperform
Texas Instruments	15%	0.53	92	X	4.00	28.8	123%	6%	17.4	93%	3.3	2.2	1.3	6.2	4.7	2.5	Outperform
Ulta Beauty	-3%	0.80	61	X	4.10	29.8	81%	-24%	8.3	-12%	2.0	0.0	4.0	-20.6	-6.5	2.1	Outperform
Universal Health Svs.'B'	-1%	0.17	89	X	6.10	12.3	57%	-35%	2.1	-23%	16.9	0.2	69.8	9.9	1.5	2.3	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

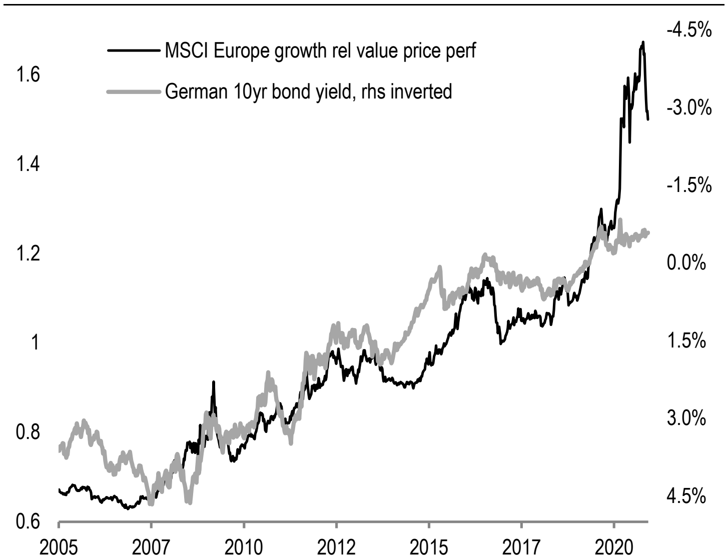
European value: overweight

Back in mid-May 2020, we went overweight European value. We maintain this view for seven reasons:

1. **Growth versus value in Europe is driven by Bund yields**

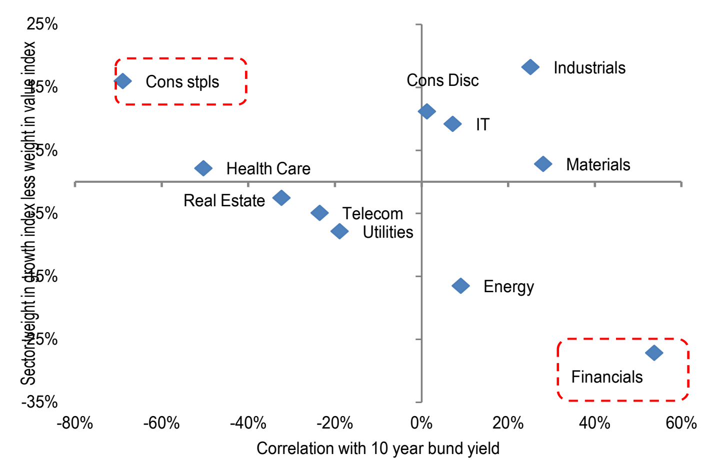
The ratio of growth to value in Europe has, unlike in the US, moved very closely with changes in the bund yield. This is because growth is overweight consumer staples (a bond proxy) and value is overweight financials (highly sensitive to interest rates).

Figure 193: European growth performs tends to be driven by the Bund yield…



Source: Refinitiv, Credit Suisse research

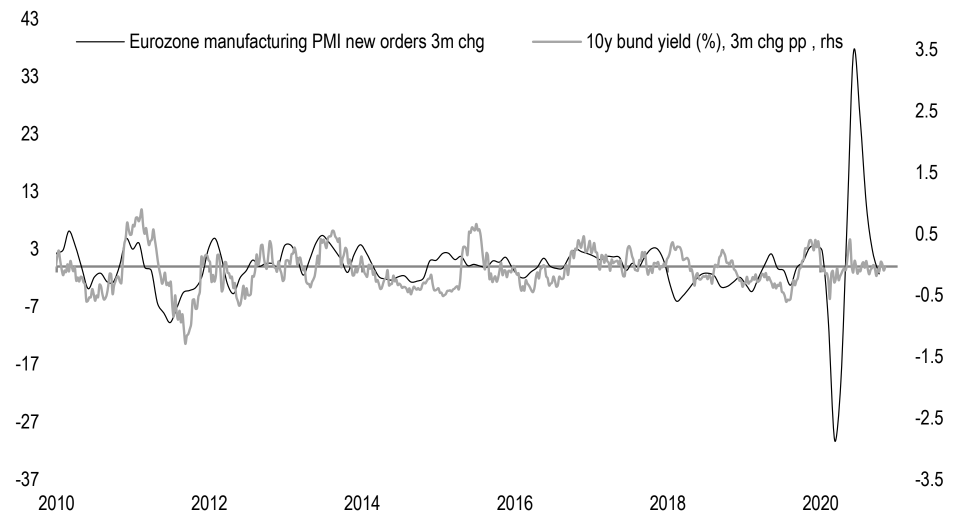
Figure 194: …as the largest components of European growth and value are both highly rate-sensitive sectors (in opposite directions)



Source: Refinitiv, Credit Suisse research

We do not expect any further decline in Bund yields, with the ECB refusing to cut rates in March despite one of the worst recessions in 300 years. Bund yields decoupled from PMIs. In line with the CS house view, we are seeing some upside to Bund yields (-0.3% on the 10-year Bund yield by end-21).

Figure 195: Bund yields did not fall when PMIs fell

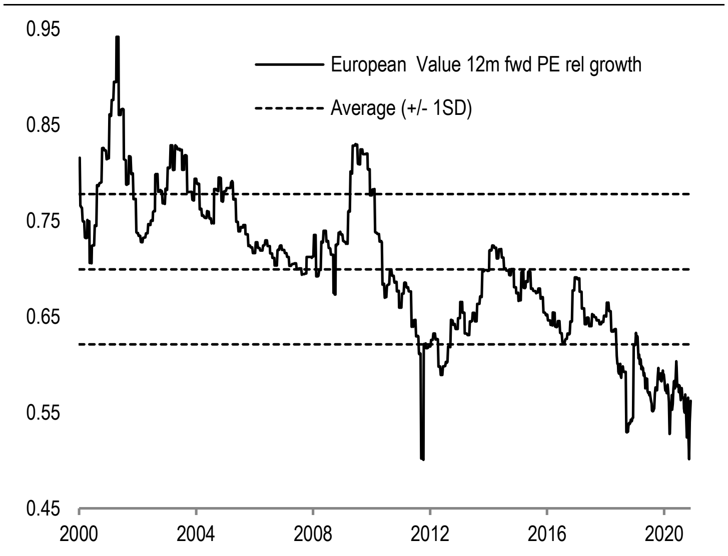


Source: Refinitiv, Markit, Credit Suisse research

2. **Value is at the bottom end of its historical range on P/E and P/B.**

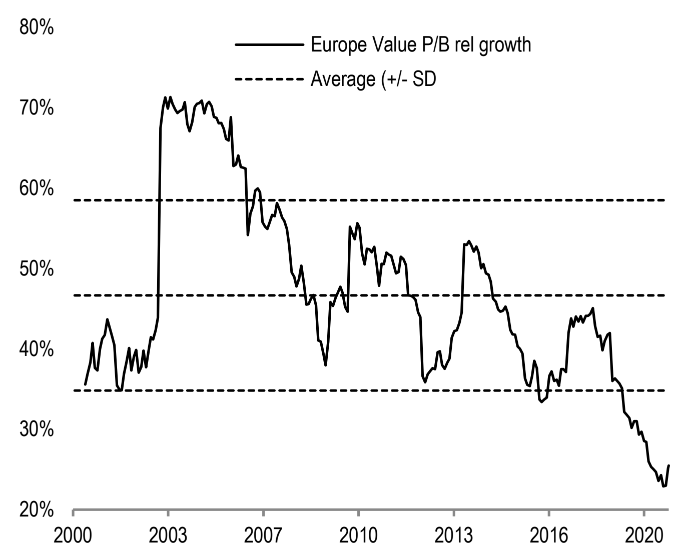
We can see below that value is as cheap as it has ever been against growth.

Figure 196: European value looks very cheap against growth on 12m fwd P/E…



Source: Refinitiv, Credit Suisse research

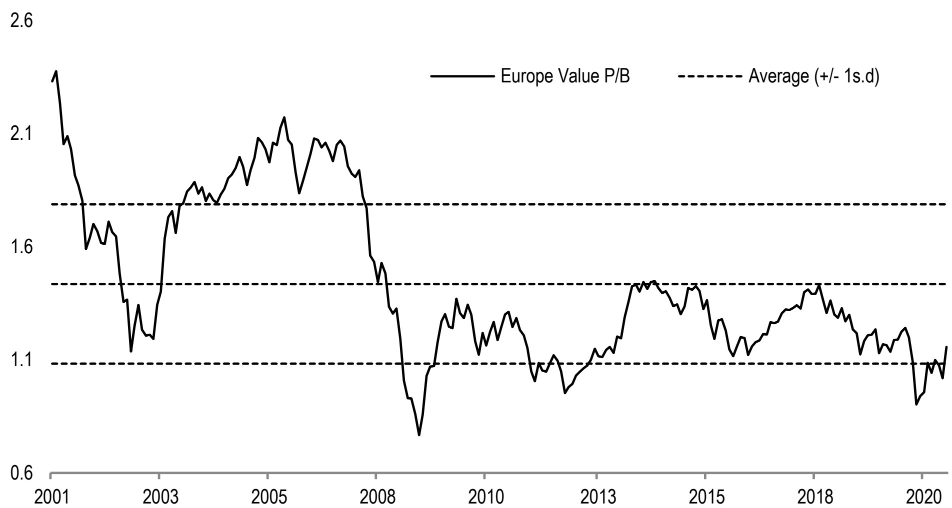
Figure 197: … and P/B relatives



Source: Refinitiv, Credit Suisse research

With earnings depressed, we think the best way to proxy mid-cycle earnings is to look at the P/B multiple of value, which is still 1 std cheap in absolute terms.

Figure 198: European value looks attractive on absolute P/B

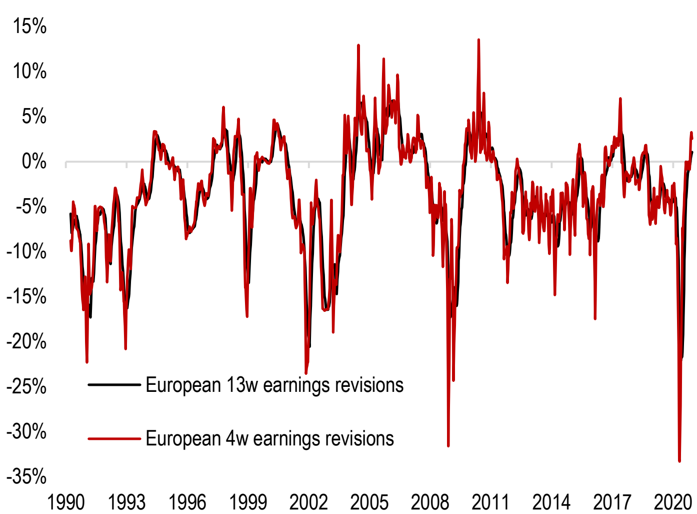


Source: Refinitiv, Credit Suisse research

3. European earnings revisions are positive

European earnings revisions have turned positive, which usually results in value doing better relative to growth.

Figure 199: European earnings revisions are positive…



Source: Refinitiv, Credit Suisse research

Figure 200: … and this usually results in value outperforming growth

3m performance value rel growth		Earnings revisions	
		Positive	Negative
Earnings revisions	Rising	0.1%	-1.0%
	Falling	-0.2%	0.1%
Typical		-0.3%	

6m performance value rel growth		Earnings revisions	
		Positive	Negative
Earnings revisions	Rising	0.1%	-1.3%
	Falling	-0.3%	-0.4%
Typical		-0.6%	

Source: Refinitiv, Credit Suisse research

4. Macro backdrop in place for value outperforming

Historically, the catalyst for value to outperform growth has been a peak in credit spreads (leads by c2.8 months), a trough in inflation expectations (leads by c2.7 months) and a trough in PMIs (leads by c1.9 months), but sometimes this can take up to 6-7 months (implying November).

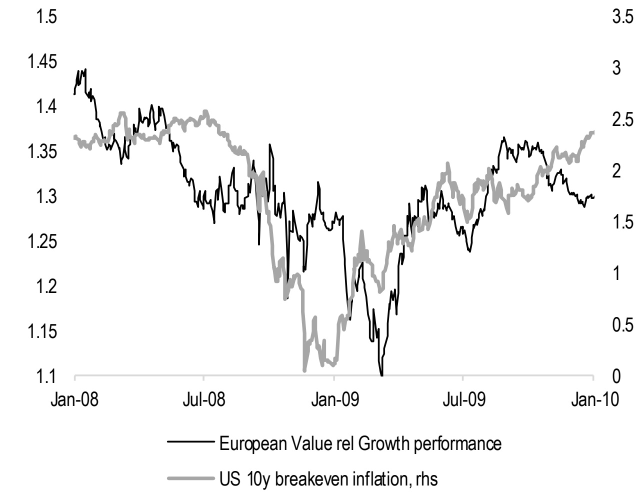
Figure 201: Three key catalysts for value to outperform

Europe	*Months from trough in Value*		
Trough in Value rel Growth	Peak in credit spreads	Trough in inflation exp.	Trough in PMI
26-Jan-99	-3.3	-3.7	-1.9
20-Feb-02	-4.7	-3.5	-3.7
07-Oct-02	0.1	0.1	na
09-Mar-09	-2.7	-3.6	-2.3
12-Sep-11	0.7	0.3	1.6
02-Aug-16	-7.1	-5.8	-3.1
Average	-2.8	-2.7	-1.9

**7th October 2002 is the start of the 4 year value bull market*

Source: Refinitiv, Credit Suisse research

Figure 202: During the GFC, value started to outperform four months after inflation expectations began to rise…

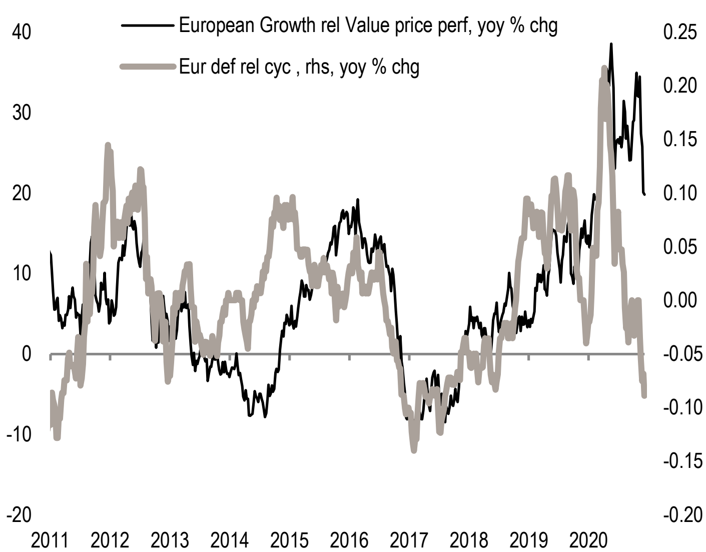


Source: Refinitiv, Credit Suisse research

5. A cyclical catch-up trade

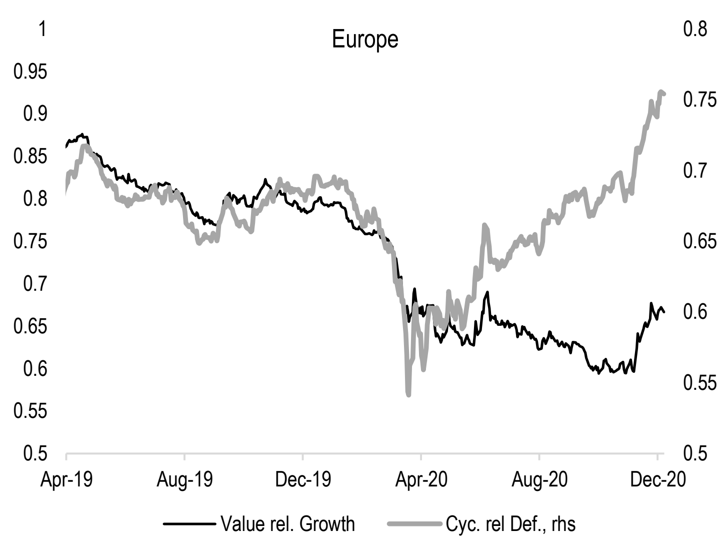
We can see a near record decoupling between cyclicality and value.

Figure 203: The ratio of cyclicals to defensives and growth versus value are closely correlated…



Source: Refinitiv, Credit Suisse research

Figure 204: …but in 2020, the correlation broke apart

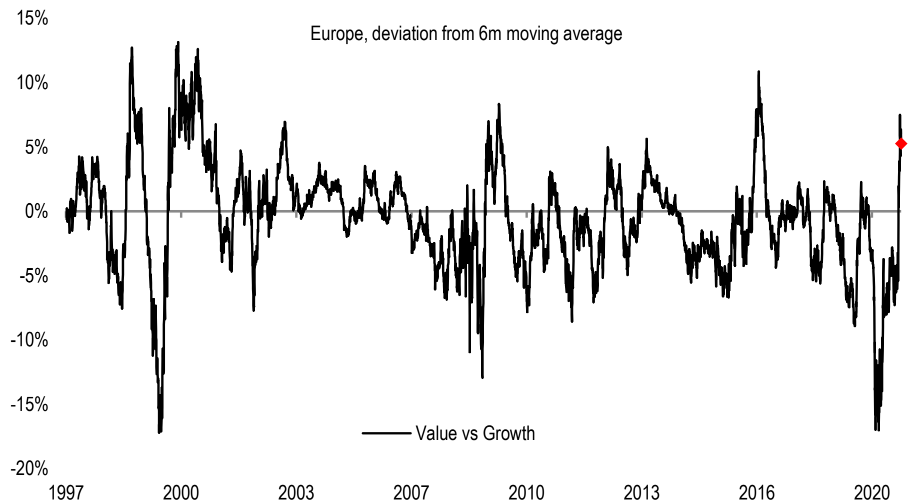


Source: Refinitiv, Credit Suisse research

6. Value is not overbought as it was oversold

Value is slightly overbought, but nowhere near as overbought as it was oversold when the pandemic started, nor is price momentum (recall also that if something becomes 20% oversold, to have the same impact in reverse it has to be 25% overbought).

Figure 205: European growth versus value momentum



Source: Refinitiv, Credit Suisse research

Moreover, the normal bull market in value is 20% over 16 months. Even if this a bear market rally, value should outperform by 12% over five months. So far it has outperformed by 6.2% over six months.

Figure 206: Periods when value has outperformed growth in Europe

------ Periods of value outperforming growth in Europe ------			
Start Date	End Date	Outperformance	Length (months)
Dec-80	Apr-82	10.9%	16
Oct-82	Jun-84	20.5%	20
Aug-86	Mar-90	19.2%	44
Dec-92	Aug-94	20.2%	20
Nov-96	May-98	12.6%	18
Jan-99	Aug-99	23.9%	7
Mar-00	Sep-01	64.6%	19
Oct-02	Nov-06	33.3%	50
Mar-09	Aug-09	24.8%	6
Jul-12	Jan-13	9.5%	6
Jul-13	May-14	9.0%	10
Aug-16	Dec-16	16.7%	4
Aug-18	Jan-19	5.1%	4
Aug-19	Oct-19	6.8%	2
May-20	Dec-20	6.2%	7
Average*		19.8%	16
Average (pre 2008)		25.7%	24
Average (post 2008)*		12.0%	5

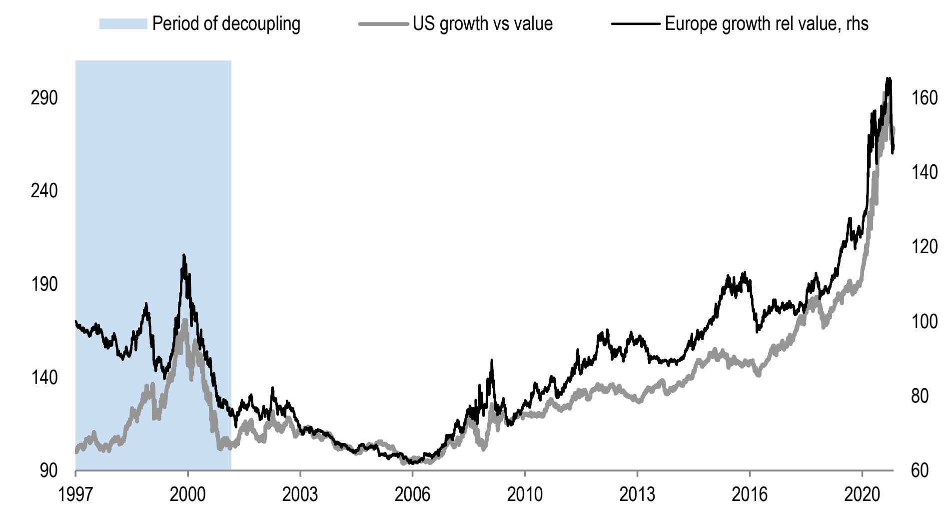
*average excluding current outperformance

Source: Refinitiv, Credit Suisse research

7. This is one of the situations where European value can outperform while growth in the US does well

Historically, European value has outperformed while US growth has outperformed about a quarter of the time. From a macro perspective, as we highlighted in our asset allocation outlook, we believe US fiscal policy could become significantly less proactive relative to Europe. This should allow European value to do well, while growth in the US outperforms (as we have seen to some extent over the past few months). Top down, we also prefer tech to consumer staples.

Figure 207: European growth tends to follow US growth…75% of the time

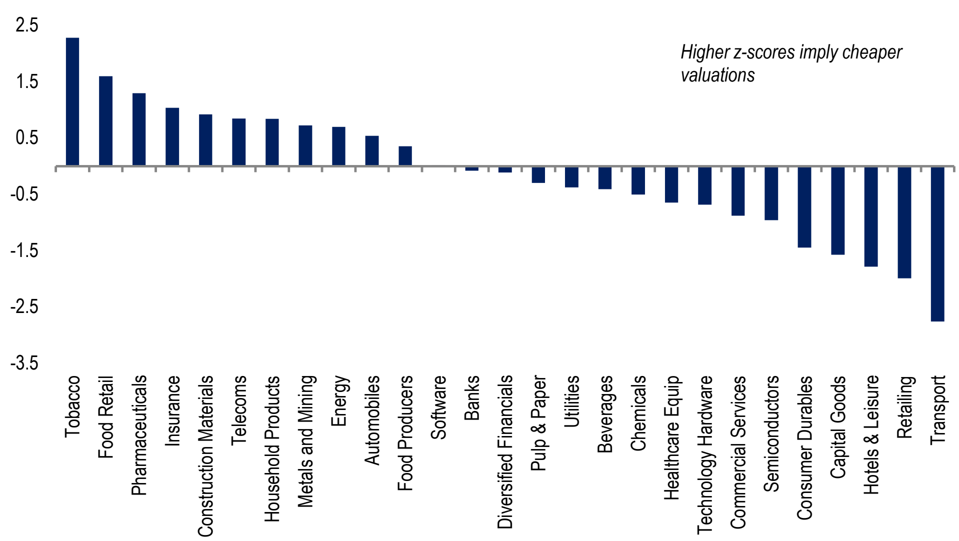


Source: Refinitiv, Credit Suisse research

What is value in Europe?

The chart below show European sectors ranked by their valuation z-score, with the highest score pointing to the historically lowest valuation relative to the market.

Figure 208: European composite valuation scorecard



Source: Refinitiv, Credit Suisse research

What type of European value do we like?

Our preference is to focus on value that is:

- Not technically disrupted
- A real asset play (and thus helped by our view of rising inflation)
- Helped by government policy (infrastructure) with an industrial angle (as we believe IP will normalize relative to consumption) (see theme on capex)
- Is not likely to be perceived as 'ESG-toxic'
- In some instances, we are just overweight deep value (we have a small overweight on tobacco & banks).

Figure 209: Areas of interest

European value - areas of interest	IP exposed	Not technically disrupted	Real asset plays	Aided by Gov. policy	Underperformed because of COVID	Green investment angle
Construction	X	X		X	X	
Homebuilders	X	X	X	X	X	
Mining	X	X	X	X	X	X
Concessionaires	X	X	X	X	X	
Packaging and trees	X	X	X		X	X
Cement	X	X	X	X	X	
Employment Agencies	X			X	X	

Source: Refinitiv, Credit Suisse research

We screen for European value overall, looking at Super eCAPs (companies with extraordinary profit persistence over the past 10 years; CFROIs maintained above 8% with low CFROI volatility) on HOLT that are not Underperform-rated.

Figure 210: European value – super eCAPs

			-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Super eCap	Net Debt to EBITDA 2020e	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Brenntag	x	1.52	19.6	94%	-10%	2.8	-10%	6.8	2.0	2.5	6.6	-0.3	2.0	Outperform
Capgemini	x	2.25	16.1	48%	-19%	2.4	7%	4.9	1.4	-22.3	1.4	0.1	1.9	Outperform
Danone	x	2.81	15.1	72%	-37%	2.0	-41%	5.5	3.9	-16.1	-4.1	-2.2	2.3	Outperform
Dcc	x	0.39	15.1	72%	-37%	2.2	-35%	na	2.7	55.7	5.8	-0.2	2.2	Outperform
Henkel Preference	x	0.50	18.4	73%	-23%	2.1	-40%	4.4	2.0	21.3	0.2	0.9	3.0	Neutral
Publicis Groupe	x	1.53	8.8	na	-49%	1.2	-49%	9.7	17.8	-12.4	0.9	0.0	2.5	Neutral
Securitas B	x	2.10	14.5	49%	-20%	2.7	-23%	9.7	9.7	-19.7	1.5	-0.9	3.0	Neutral
Siemens	x	4.28	18.0	86%	11%	2.1	-22%	6.5	-2.4	57.4	-13.7	-7.1	2.0	Outperform
Smiths Group	x	2.59	19.1	91%	-1%	2.6	-32%	9.5	0.6	-5.0	-7.8	-1.4	2.1	Outperform

Source: Refinitiv, Credit Suisse research

Small caps: prefer small caps to large

We upgraded small caps in continental Europe, the UK and the US to overweight on 24 June (see A time to be 'smaller').

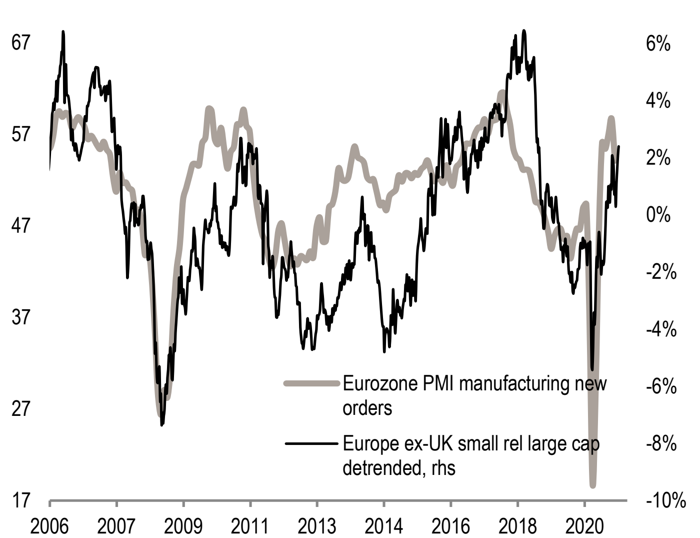
Our main concern is that small caps in the UK and the US have become very overbought, but as we show in their respective sections below, this is far from a clear 'sell' signal.

Continental European small caps: reduce to small overweight

We see the following supports:

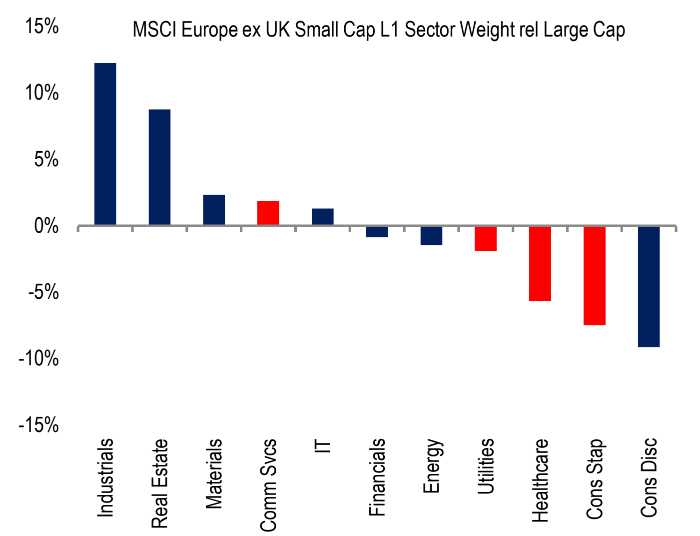
- Not pricing in a sharp rise in PMIs in 2021
- Small caps in Europe are much more cyclical than large caps and thus tend to outperform if PMIs rise. We think in 2021, 4.6% GDP growth will deliver a PMI in the mid-60s and this is not priced in by small caps.

Figure 211: European small caps outperform relative to large caps as PMIs pick up



Source: Refinitiv, Markit, Credit Suisse research

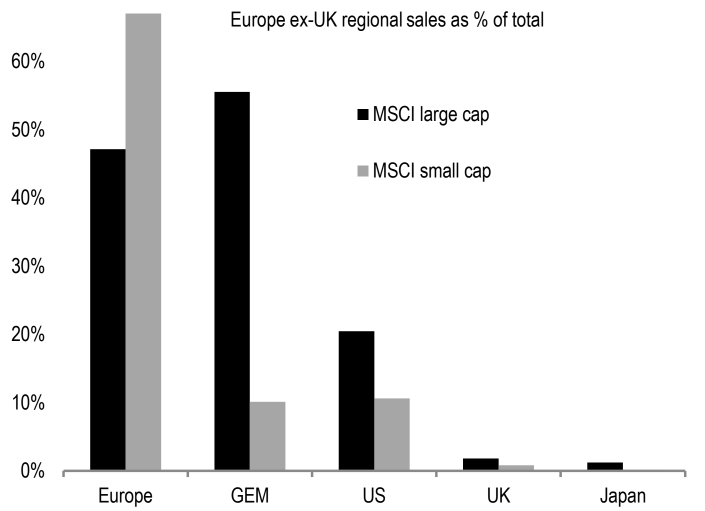
Figure 212: Small caps are overweight cyclicals relative to large caps (defensive sectors are highlighted in red)



Source: Refinitiv, Credit Suisse research

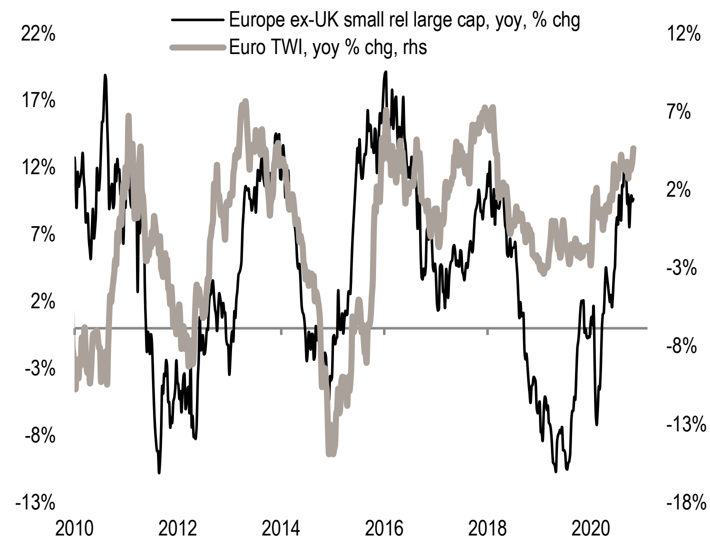
- Euro strength
- Small caps tend to have much more domestic exposure than large caps and tend to outperform as the euro strengthens. We believe the euro will end 2021 at least 5% higher on a trade-weighted basis – again this is not priced in.

Figure 213: Small caps are more domestic and have much less exposure to emerging markets



Source: Refinitiv, Credit Suisse research

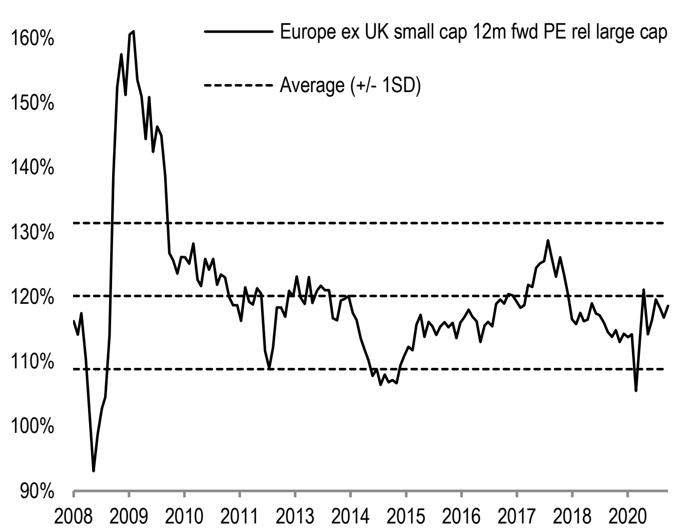
Figure 214: Small caps are already reflecting the stronger euro



Source: Refinitiv, Credit Suisse research

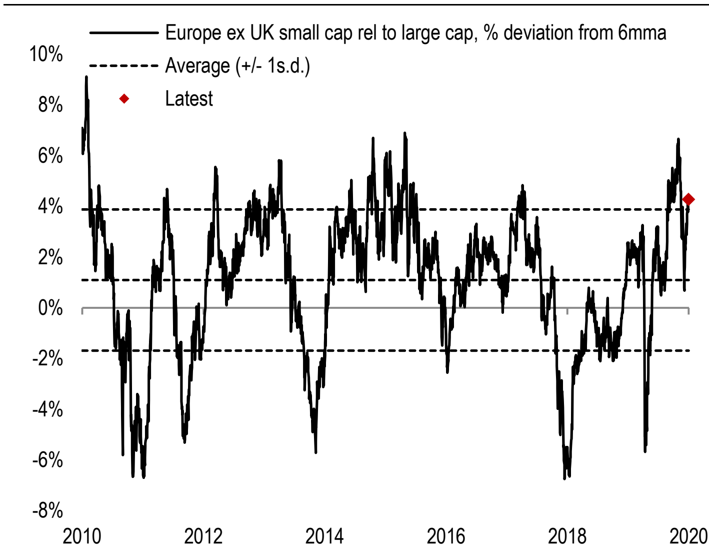
- Small caps are not expensive relative to large caps
- European small caps are trading on an 18% premium to large caps, roughly in line with the historical norm. In the US, the premium historically has been closer to 30%.
- Price momentum
- In contrast to UK and US small caps, Continental European small caps are only slightly overbought.

Figure 215: European small caps are trading in line with their norm relative to large caps



Source: Refinitiv, Credit Suisse research

Figure 216: European small caps are only slightly overbought

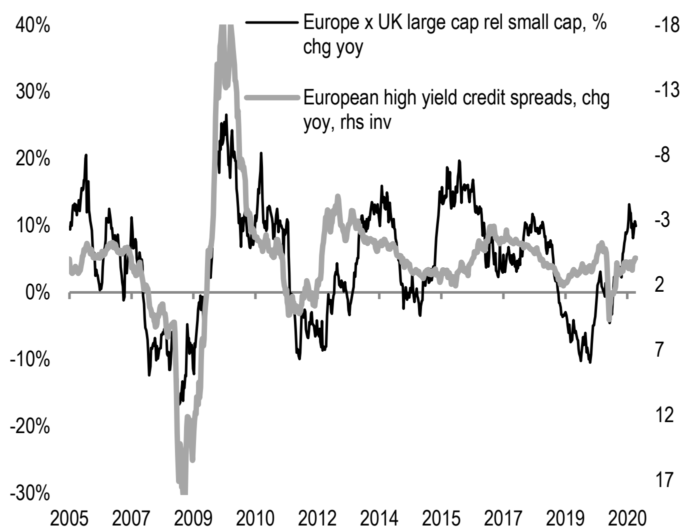


Source: Refinitiv, Credit Suisse research

- Credit spreads – limited risk from here

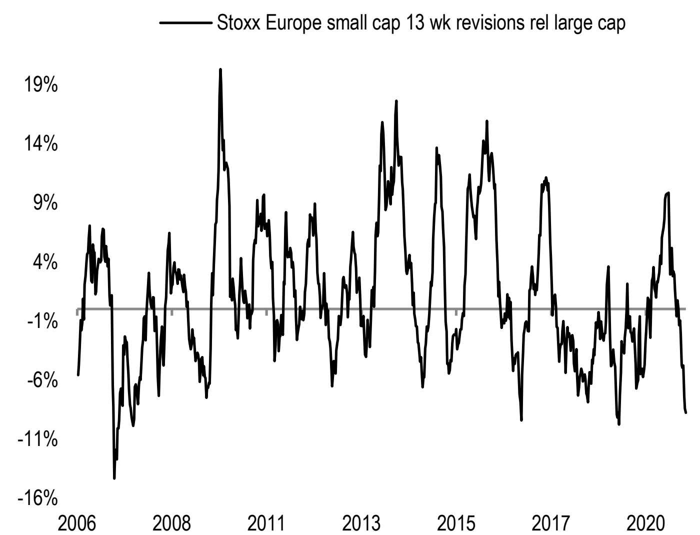
- In general, small caps are less diversified and have lower credit ratings than large caps. Consequently, small caps tend to outperform when credit spreads narrow and vice versa.
- While we do not see much downside risk to credit spreads, we are unlikely to see any widening as the ECB provides an effective backstop.
- Our main concern is that earnings revisions of small caps are much worse than those of large caps. Nevertheless, that may well be an issue of time lag (the market is anticipating a vaccine, helping small cap stocks, but herd immunity will take at least until mid-21).

Figure 217: Credit spreads unlikely to do much from here



Source: Refinitiv, Credit Suisse research

Figure 218: Earnings momentum of small caps is now worse than that of large caps



Source: Refinitiv, Credit Suisse research

- The screen below shows continental European small caps that are Outperform-rated by Credit Suisse analysts, have positive earnings revisions and show upside on HOLT.

Figure 219: Continental European small caps we like

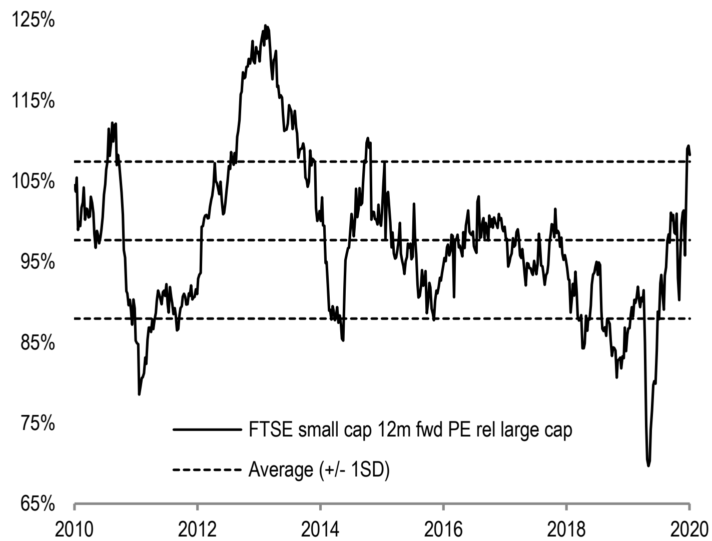
	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Acerinox 'R'	14.8	101%	-37%	1.3	-33%	8.7	5.2	88.8	0.4	-0.7	1.7	Outperform
Comet Holdings 'R'	35.0	139%	11%	6.7	65%	0.9	0.7	4.3	32.7	5.2	2.0	Outperform
Dialog Semicon.	16.7	71%	-21%	2.1	-40%	4.2	0.0	34.8	12.5	6.9	2.2	Outperform
Euronext	18.5	110%	-18%	6.7	2%	3.8	2.4	3.0	2.1	0.0	2.1	Outperform
Forbo Hdg.	20.9	84%	-5%	3.6	-2%	4.9	1.3	40.8	5.5	0.0	2.1	Outperform
Georg Fischer	25.7	119%	32%	3.2	1%	2.5	0.7	15.5	18.5	0.3	2.6	Outperform
Hellofresh	31.1	84%	-74%	31.8	92%	4.9	0.0	181.0	32.1	11.6	2.3	Outperform
Orange Belgium	19.5	152%	-17%	2.2	-42%	14.3	2.7	45.0	7.0	-0.1	2.2	Outperform
Sfs Group	22.7	105%	-13%	3.2	4%	2.9	1.7	47.3	11.3	2.0	2.5	Outperform
Softwareone Holding	22.7	90%	-35%	5.7	-18%	3.6	1.0	39.2	8.7	na	2.0	Outperform

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse estimates

UK small caps: reduce to small overweight

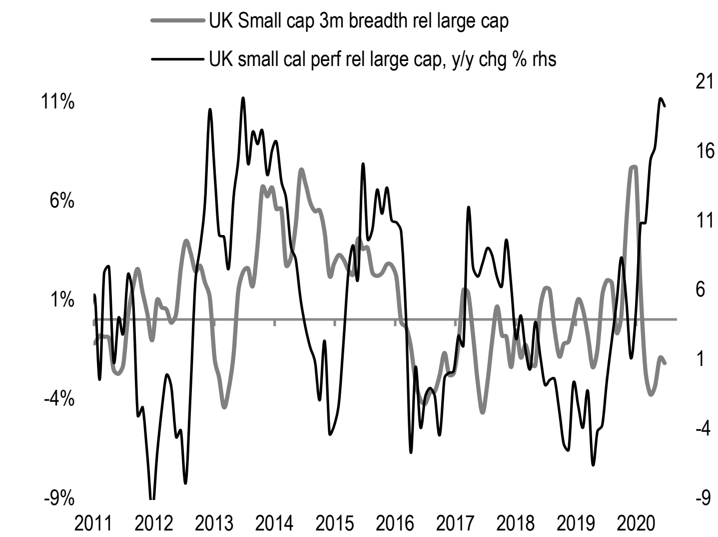
Our main concern is that valuations are becoming stretched and that the earnings revisions of small caps (relative to large caps) have remained poor (though showing signs of a trough).

Figure 220: UK small caps are clearly expensive



Source: Refinitiv, Credit Suisse research

Figure 221: And earnings revisions are poor, while the price is not reflecting this

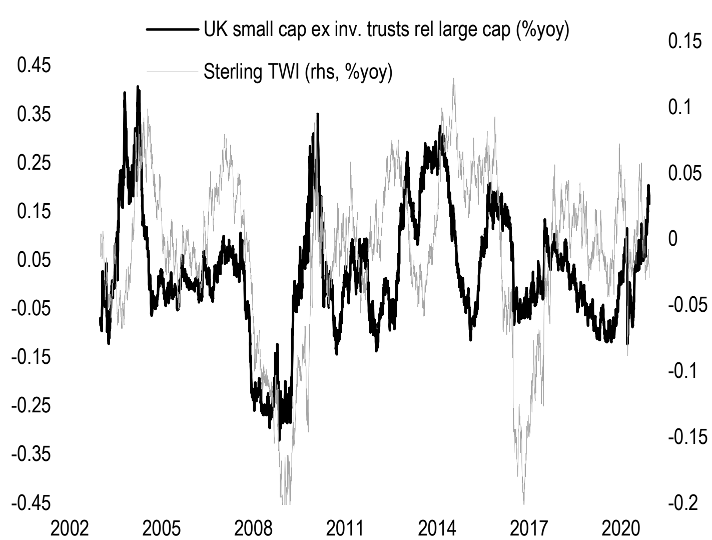


Source: Refinitiv, Credit Suisse research

Nevertheless, we stick to a small overweight as:

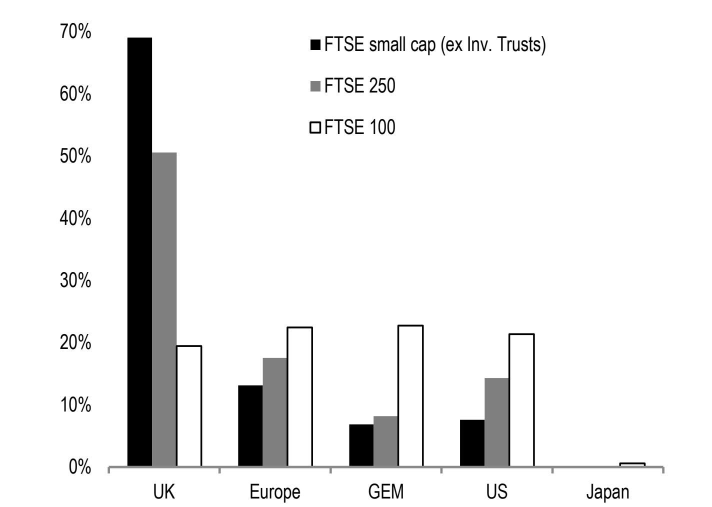
- Small caps tend to outperform when sterling appreciates
- Small caps are much more domestic than large caps and this means that small caps tend to outperform if sterling strengthens and vice versa. We are still fundamentally bullish on Sterling (see 2021 Research Outlook: Equities, Regions and Macro for more details).

Figure 222: Small caps usually outperform if sterling appreciates



Source: Refinitiv, Credit Suisse research

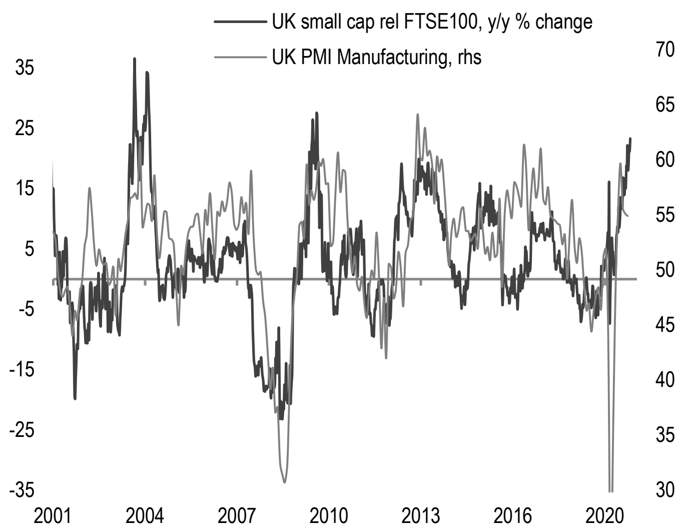
Figure 223: Small caps offer exposure to a domestic recovery in the UK



Source: Refinitiv, Credit Suisse research

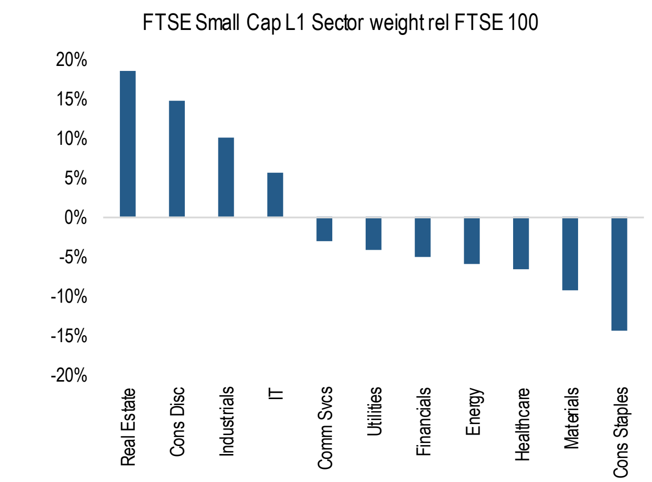
- PMIs likely to rise further helping small caps
- Small caps are more cyclical than large caps and thus tend to outperform when PMIs rise. As discussed above, we expect PMIs to pick up further in 2021 with GDP growth of 4.5% forecast in 2021 by our economists.

Figure 224: UK small caps are pricing in current PMIs



Source: IHS Markit, Refinitiv, Credit Suisse research

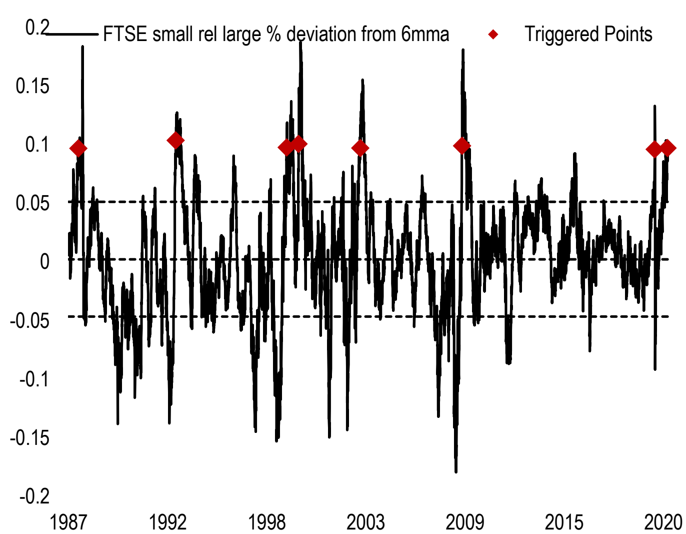
Figure 225: UK small cap have much more cyclical exposure than large caps



Source: Refinitiv, Credit Suisse research

- Small caps are overbought but this is not a sell signal
- We would note while this was a sell signal the last time they were so overbought, it was not a sell signal the previous six times going back to 1987.

Figure 226: UK small caps are overbought



Source: Refinitiv, Credit Suisse research

Figure 227: Past occasions when small caps were this overbought

Date	FTSE small rel large perf when its PM reaches near current overbought levels		
	1 Month	3 month	6 month
24-Jul-87	2.6%	12.8%	1.3%
29-Jan-93	0.0%	5.7%	5.7%
12-May-99	-2.4%	9.8%	2.4%
11-Jan-00	4.1%	4.1%	6.1%
08-Jul-03	3.8%	5.7%	3.8%
13-Apr-09	4.1%	6.1%	14.3%
10-Mar-20	-7.1%	-4.7%	1.2%
Average	**0.7%**	**5.6%**	**5.0%**
Typical perf	**0.1%**	**0.4%**	**0.7%**
% Rise	**71%**	**86%**	**100%**

Source: Refinitiv, Credit Suisse research

- The screen below shows UK small caps that are Outperform rated by Credit Suisse analysts.

Figure 228: Outperform-rated UK small caps

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Elementis	17.6	76%	-15%	1.3	-63%	5.0	0.2	-6.3	-8.8	1.3	2.3	Outperform
Senior	121.0	559%	513%	0.7	-76%	0.0	0.0	44.0	-323.5	-1.2	2.5	Outperform
Sthree	16.3	56%	-22%	3.5	-51%	2.5	1.0	15.6	-10.1	-0.2	1.7	Outperform

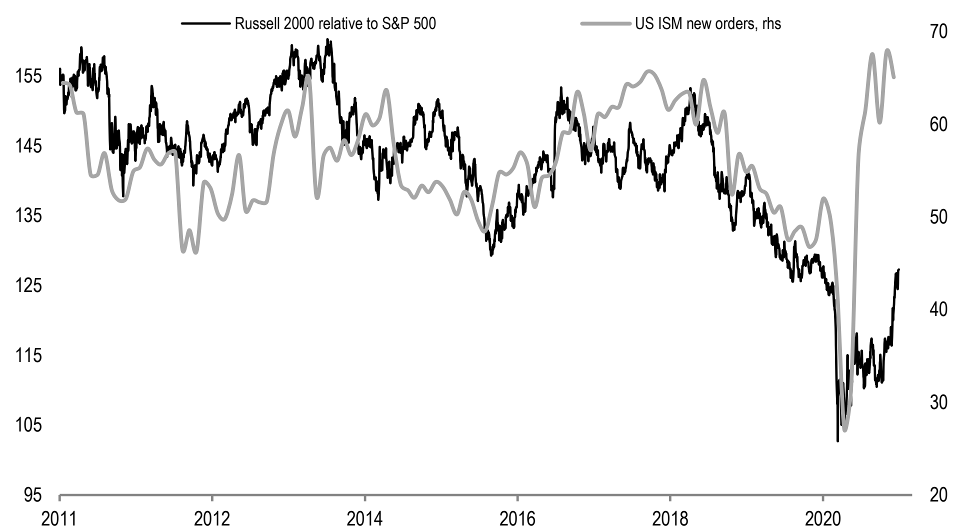
Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse estimates

US small caps: remain overweight

We note the following supportive factors:

- Pricing in much slower growth
- The relative performance of US small caps closely correlates to ISM new orders. US small caps are still pricing in much slower growth (ISM new orders of c.45). Even if we assumed ISM new orders were to slow to 55 over the next few months, this would still be in line with c.15% outperformance of small caps relative to large caps.

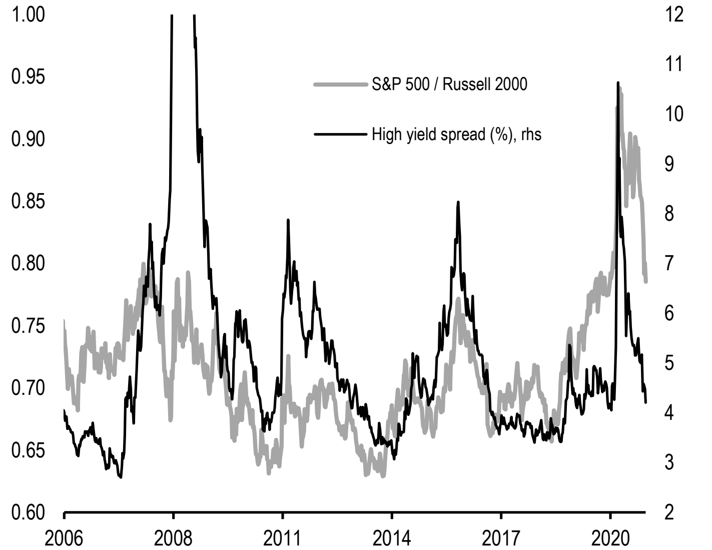
Figure 229: Historically, US small caps outperform large caps when PMIs rise



Source: Refinitiv, Credit Suisse research

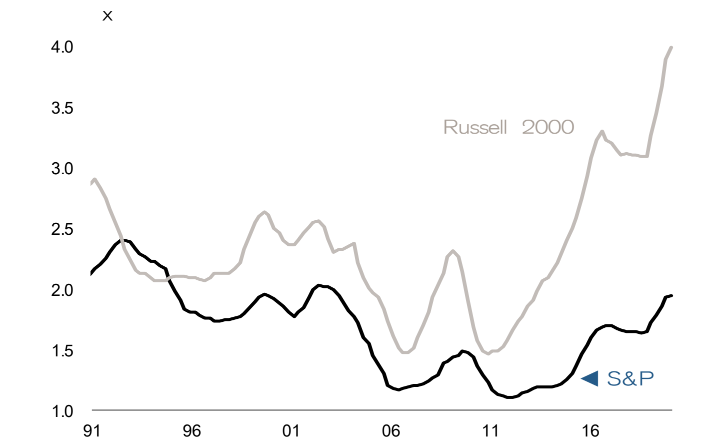
- The fall in credit spreads does not appear to be priced in
- Small caps have higher leverage and a lower interest rate coverage than large caps. Hence, small caps tend to underperform as spreads widen and vice versa.
- So far, small caps have lagged the narrowing in credit spreads.

Figure 230: Small caps are pricing in higher spreads



Source: Refinitiv, Credit Suisse research

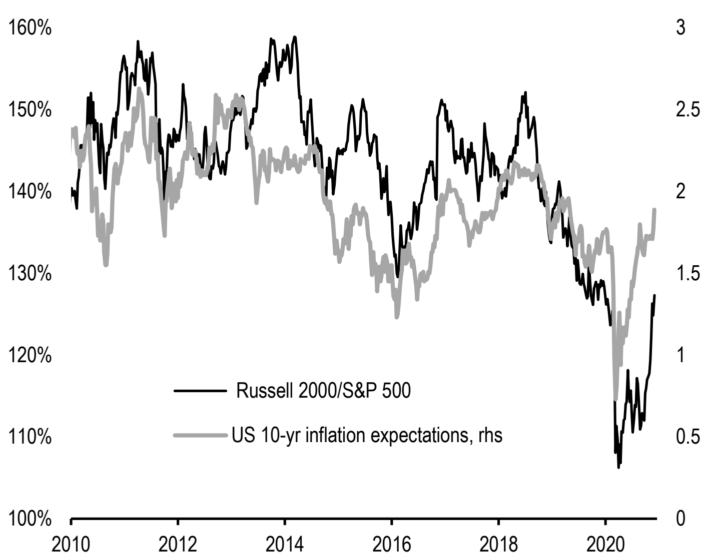
Figure 231: Net Debt-to-EBITDA – Large caps vs. small caps



Source: Refinitiv, Credit Suisse research

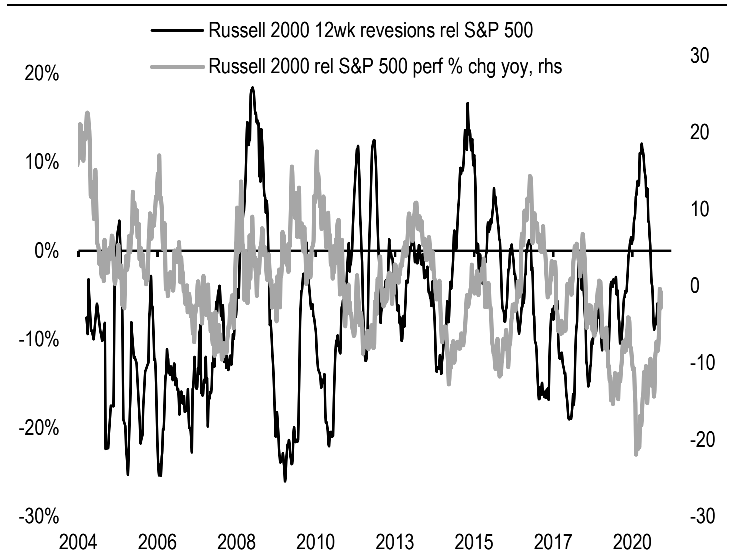
- Inflation expectations
- Small caps, being more cyclical than large caps, have a strong positive correlation with inflation expectations and we expect inflation expectations to rise to 3% by end-2022 from c.1.8% currently (see the front section of this report).
- Earnings revisions are reflected in performance
- Similar to Continental Europe and the UK, earnings revisions of US small caps have deteriorated relative to those of large caps. However, in contrast to the other regions, small caps are not pricing in a sharp improvement in earnings revisions.

Figure 232: Small caps outperform as inflation expectations rise



Source: Refinitiv, Credit Suisse research

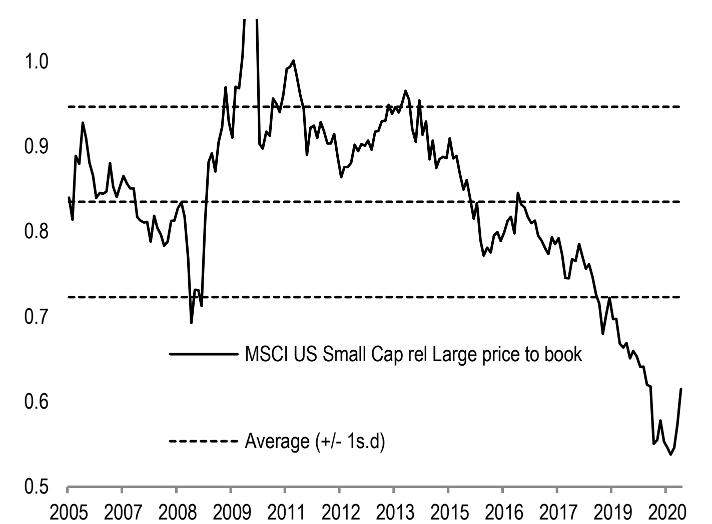
Figure 233: Relative earnings vs relative performance



Source: Refinitiv, Credit Suisse research

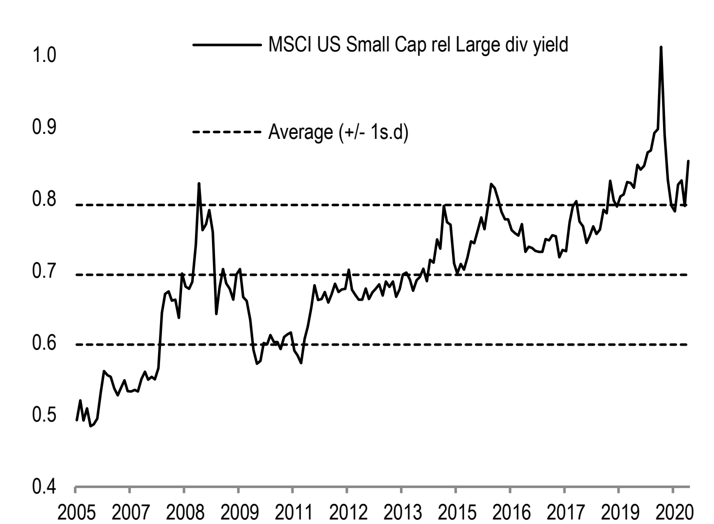
- Valuations look attractive
- US small caps are looking unusually cheap on both P/B and DY relative to large caps.

Figure 234: The P/B of small versus large caps has moved to extreme levels



Source: Refinitiv, Credit Suisse research

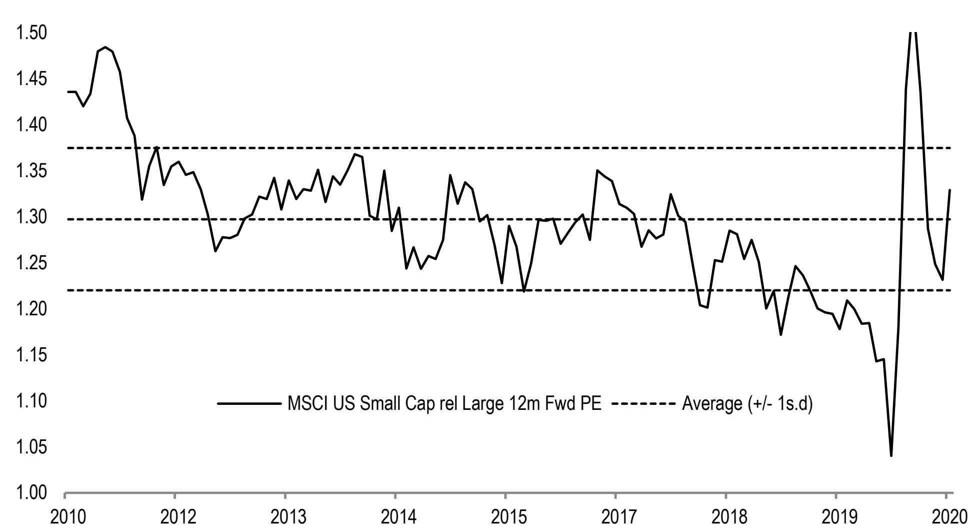
Figure 235: Small cap rel large cap DY



Source: Refinitiv, Credit Suisse research

- Even the P/E ratio of small caps relative to large caps has normalised.

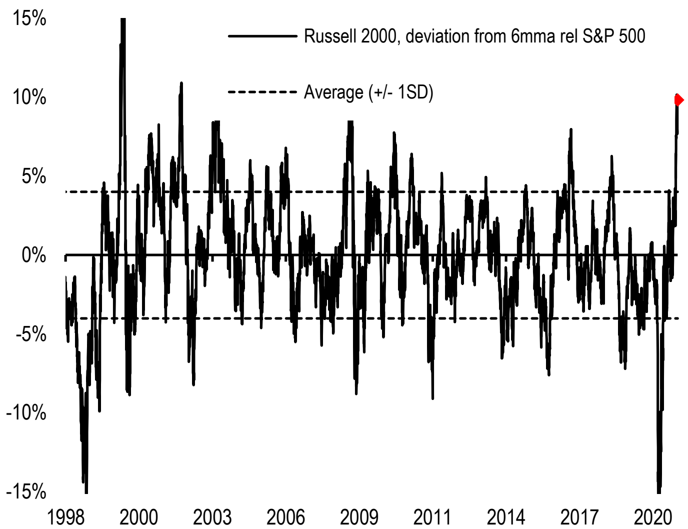
Figure 236: US small caps are not expensive on 12m fwd P/E



Source: Refinitiv, Credit Suisse research

- The only concern we have in regards to US small caps is the fact that their recent outperformance makes them extremely overbought and this historically has been a sell signal. We would note their over-soldness in the first half of 2020 was even more extreme.

Figure 237: US small caps are the most overbought in nearly 20 years…



Source: Refinitiv, Credit Suisse research

Figure 238: … this has historically been a sell signal

Russell 2000 rel S&P perf when c9.5% overbought (6mma)			
	1m	2m	3m
Mar-91	3.4%	2.9%	3.8%
Apr-91	-0.3%	-0.9%	-2.4%
Feb-92	-1.4%	-7.5%	-7.4%
Jan-00	11.1%	3.4%	-6.6%
Apr-02	0.7%	-1.6%	-3.2%
Aug-03	1.8%	1.2%	2.2%
Sep-03	-0.7%	1.2%	4.4%
Aug-08	-1.0%	-0.1%	-7.7%
Sep-08	-6.7%	-11.6%	-10.3%
Mean	0.8%	-1.4%	-3.0%
Median	-0.3%	-0.1%	-3.2%
% Rise	44%	44%	33%
Typical	0.1%	-0.1%	-0.2%

Source: Refinitiv, Credit Suisse research

- The screen below shows US small caps that are Outperform-rated by CS analysts, show at least 20% upside on HOLT and have positive earnings revisions.

Figure 239: US small caps that are Outperform-rated by CS analysts, show at least 20% upside on HOLT and have positive earnings revisions

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
New Residential Inv.	6.5	39%	-40%	0.6	-55%	na	4.8	33.5	3.3	22.4	1.7	Outperform
Bjs Wholesale Club Holdings	14.1	68%	-40%	-97.7	na	5.4	0.0	27.3	23.2	3.6	2.0	Outperform
Dana	9.7	53%	-20%	1.5	-52%	8.7	0.6	103.2	133.2	5.5	1.9	Outperform
Change Healthcare	11.5	53%	-16%	56.1	2%	8.9	0.0	29.9	10.3	0.6	1.6	Outperform
Acuity Brands	14.7	68%	-47%	2.3	-53%	7.5	0.4	54.3	0.6	-2.0	2.8	Outperform
Amedisys	39.3	182%	-6%	12.8	170%	3.1	0.0	73.6	19.8	0.6	1.9	Outperform
Amkor Tech.	11.7	50%	-39%	1.9	12%	na	0.0	95.3	23.5	3.8	3.3	Outperform
Ares Commercial Rlst.	9.1	54%	-41%	0.8	-30%	na	11.1	36.6	0.9	8.3	2.2	Outperform
Assetmark Financial Holdings	21.6	128%	-37%	2.1	-25%	na	0.0	172.3	2.7	0.9	2.6	Outperform
Caci International 'A'	15.9	47%	-23%	2.3	20%	7.7	0.0	43.5	8.5	0.7	1.9	Outperform
Cactus A	53.9	220%	44%	6.4	-41%	2.7	1.3	25.4	33.1	4.1	2.1	Outperform
Cimarex En.	11.2	46%	-73%	1.1	-67%	16.3	2.3	244.2	114.5	3.1	1.8	Outperform
Ehealth	14.5	125%	-81%	3.4	-28%	na	0.0	91.2	0.8	1.3	2.0	Outperform
Foot Locker	10.3	28%	-40%	1.8	-41%	8.2	1.4	43.5	27.1	4.7	2.3	Outperform
Globus Medical Cl.A	30.5	141%	-11%	4.3	-2%	na	0.0	68.8	19.8	4.1	2.3	Outperform
Graftech International	5.5	26%	-13%	-3.9	na	26.1	0.7	103.6	1.6	1.5	2.6	Outperform
Installed Building Prds.	17.4	70%	-34%	11.1	20%	5.6	0.0	259.2	3.8	0.4	2.3	Outperform
Kb Home	7.9	32%	-82%	1.4	-25%	na	1.1	71.1	7.9	-2.1	2.5	Outperform
Meritage Homes	7.2	29%	-66%	1.7	0%	1.3	0.0	205.6	11.7	3.8	2.1	Outperform
Pennymac Financial Services	4.2	34%	-56%	2.2	34%	na	0.9	109.5	33.9	20.6	1.9	Outperform
Pra Health Sciences	19.4	65%	-30%	6.6	6%	5.1	0.0	33.1	5.7	1.4	2.5	Outperform
Revolve Group A	32.2	87%	-26%	12.2	-9%	2.5	0.0	27.6	21.7	-3.5	2.1	Outperform
Slm	7.3	43%	-38%	1.7	-32%	na	1.0	41.7	41.4	0.5	1.9	Outperform
Syneos Health A	15.3	52%	-37%	2.2	-58%	5.4	0.0	20.3	5.7	-2.0	1.8	Outperform
Topbuild	19.5	79%	-16%	4.8	71%	5.9	0.0	40.9	9.9	1.4	2.0	Outperform
Two Harbors Investment	7.6	45%	-25%	0.5	-62%	na	7.1	52.9	8.0	-0.6	2.4	Outperform
United Therapeutics	10.8	67%	-44%	2.1	-41%	na	0.0	234.8	14.6	2.4	2.2	Outperform
Xerox Holdings	10.6	42%	10%	na	na	na	4.3	35.5	17.1	1.9	3.3	Outperform

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse estimates

Dividend aristocrats

Dividend futures still look quite pessimistic. In the US, dividend futures imply DPS c.6% lower at the end of 2021 than pre-virus levels, compared with EPS just slightly higher than pre-virus levels using bottom-up consensus earnings and on CS estimates. In Europe's case, DPS is expected to be c33% below pre-virus levels, while EPS using consensus forecasts is just c7% below pre-virus levels (or on our forecasts, 12% below pre-virus levels). This implies too much dividend pessimism is priced into markets, in our view.

Figure 240: Dividend futures are much more negative…

Dividend Futures	Euro Stoxx	FTSE 100	S&P
Implied 2020 chg %	*-33.5%*	*-37.7%*	*-0.7%*
Implied 2021 chg %	0.7%	-6.1%	-2.2%
Implied change from end-19 to end-21	-33.0%	-41.5%	-2.9%

Source: Refinitiv, Credit Suisse research

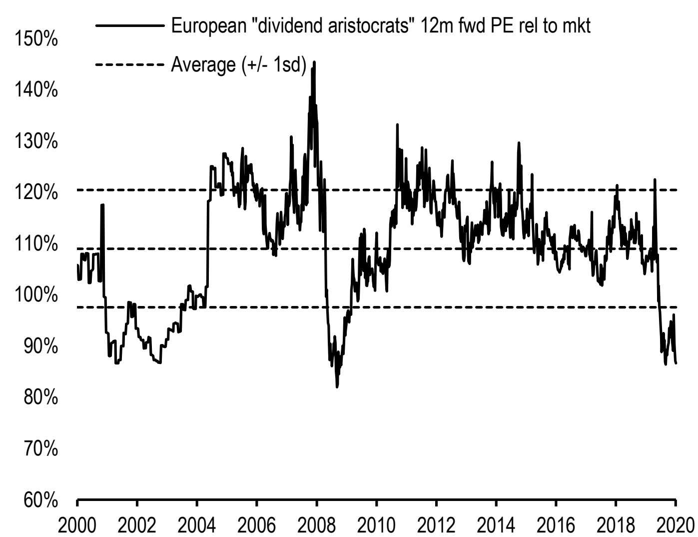
Figure 241: …than consensus EPS

Consensus Earnings	Euro Stoxx	FTSE 100	S&P
Implied 2020 chg %	*-33.4%*	*-43.1%*	*-15.3%*
Implied 2021 chg %	39.8%	47.2%	22.0%
Implied change from end-19 to end-21	-6.8%	-16.2%	3.3%

Source: Refinitiv, Credit Suisse research

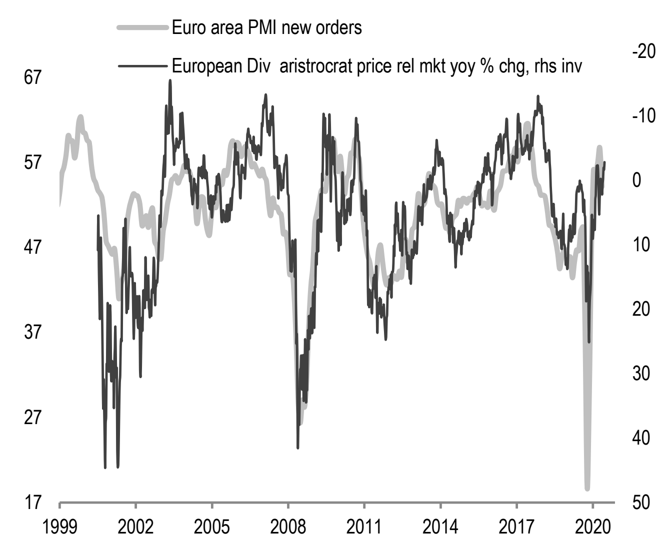
In our opinion, dividend aristocrats (companies that have increased their dividends consistently) are both trading cheaply and tend to outperform if PMIs fall (i.e. they provide diversification).

Figure 242: Dividend aristocrats are not expensive on PE relative to the market



Source: Refinitiv, Credit Suisse research

Figure 243: European dividend aristocrats vs PMI new orders



Source: Refinitiv, Credit Suisse research

It is also worth noting that since 1900, around 90% of total returns have come from dividends being reinvested, and dividend aristocrats have outperformed simple high yield as a style. Indeed, some corporates are technically lower risk than G7 governments because their CDS levels are lower (e.g. MSFT is AAA rated). We show below a screen of 'gold standard' stocks, which yield more than government bonds and could therefore serve as a good replacement for bonds in a multi-asset portfolio.

We believe stocks such as these could end up becoming part of the new '40' in a 60:40 portfolio.

Figure 244: European stocks with higher yields than government bonds

Name	Rating	CDS Spreads	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Deutsche Boerse	AA	33	20.7	123%	-8%	4.4	-3%	4.6	2.3	-9.0	-2.4	-1.2	2.1	Neutral
Equinor	AA-	21	17.0	69%	-9%	1.4	-28%	5.6	3.2	105.0	24.9	1.3	2.8	Outperform
Nestle 'N'	AA-	15	22.1	106%	-20%	5.5	11%	3.8	2.8	10.0	-0.4	-0.5	2.1	Neutral
Novartis 'R'	AA-	11	14.4	96%	-23%	3.4	1%	5.9	3.5	19.6	0.9	-0.9	2.1	Neutral
Novo Nordisk 'B'	AA-	24	21.1	141%	-28%	17.0	-9%	4.4	2.2	22.5	1.7	-0.4	2.7	Outperform
Roche Holding	AA	18	14.6	97%	-29%	7.9	-34%	5.8	3.1	119.6	-1.9	-2.0	2.0	Neutral
Sanofi	AA-	24	13.3	89%	-25%	1.8	-16%	8.0	3.8	76.6	-1.6	-1.4	2.0	Outperform
Svenska Handelsbanken A	AA-	6	10.8	87%	-39%	1.1	-42%	na	6.0	-7.5	6.7	-0.2	2.3	Outperform
Swedbank A	AA-	7	10.2	82%	-33%	1.3	-32%	na	3.5	-10.0	8.3	0.0	2.2	Neutral

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse estimates

The screen below shows US stocks that are part of the S&P dividend aristocrat index and are Outperform-rated by CS analysts.

Figure 245: Outperform-rated US dividend aristocrats

Name	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Abbott Laboratories	24.9	115%	4%	6.1	39%	2.3	1.3	-17.0	9.7	3.5	1.9	Outperform
Air Prds.& Chems.	28.9	125%	10%	5.0	9%	0.8	1.9	15.4	-7.4	-0.3	2.3	Outperform
Automatic Data Proc.	29.1	85%	-9%	13.1	17%	2.9	2.0	-13.3	16.7	3.1	2.9	Outperform
Caterpillar	24.2	112%	10%	6.9	27%	2.9	2.3	-0.4	4.8	0.0	2.5	Outperform
Coca Cola	25.7	105%	-10%	12.1	18%	3.0	3.0	-30.8	4.1	0.8	2.0	Outperform
Target	20.4	55%	-1%	7.5	78%	na	1.5	39.4	38.5	5.5	2.1	Outperform
Emerson Electric	22.5	104%	-7%	5.7	2%	4.9	2.4	28.1	2.1	1.0	2.5	Outperform
Johnson & Johnson	16.7	112%	-23%	6.7	15%	4.2	2.6	55.5	1.8	1.6	1.9	Outperform
Lowe'S Companies	17.0	46%	-29%	58.0	205%	6.6	1.5	82.3	4.0	5.4	1.9	Outperform
Mccormick & Company	31.7	152%	0%	7.3	5%	3.0	1.3	-48.6	-0.3	1.7	2.9	Outperform
Mcdonalds	25.9	50%	-7%	-19.2	na	3.0	2.4	-21.8	7.1	1.3	2.0	Outperform
3M	18.4	85%	-26%	9.9	-2%	6.0	3.4	28.4	4.2	1.2	3.1	Outperform
Pepsico	24.1	99%	-11%	13.7	10%	3.1	2.7	-19.6	2.9	2.5	2.1	Outperform
T Rowe Price Group	15.1	90%	-34%	5.1	-1%	5.6	2.4	155.7	4.6	2.0	2.8	Outperform
Sherwin-Williams	26.6	115%	-9%	15.8	-5%	3.4	0.7	7.6	7.0	1.7	2.2	Outperform
Chevron	38.4	156%	42%	1.2	-34%	2.2	5.5	96.8	nm	-2.7	2.2	Outperform
Sysco	32.4	155%	23%	34.3	159%	na	2.2	-52.3	3.0	-3.5	2.5	Outperform
Raytheon Technologies	21.3	99%	56%	2.6	-32%	1.8	2.5	-7.3	3.0	0.0	2.1	Outperform
V F	37.1	150%	42%	10.3	44%	1.7	2.1	-49.1	32.4	2.7	2.4	Outperform
Walmart	26.0	125%	11%	5.7	34%	4.6	1.4	13.1	7.3	1.2	1.9	Outperform
Chubb	13.9	120%	-15%	1.3	-11%	na	2.0	-19.8	-4.5	1.5	2.3	Outperform
Medtronic	22.0	102%	2%	3.0	0%	2.5	1.9	-23.6	18.8	8.8	1.9	Outperform

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse estimates

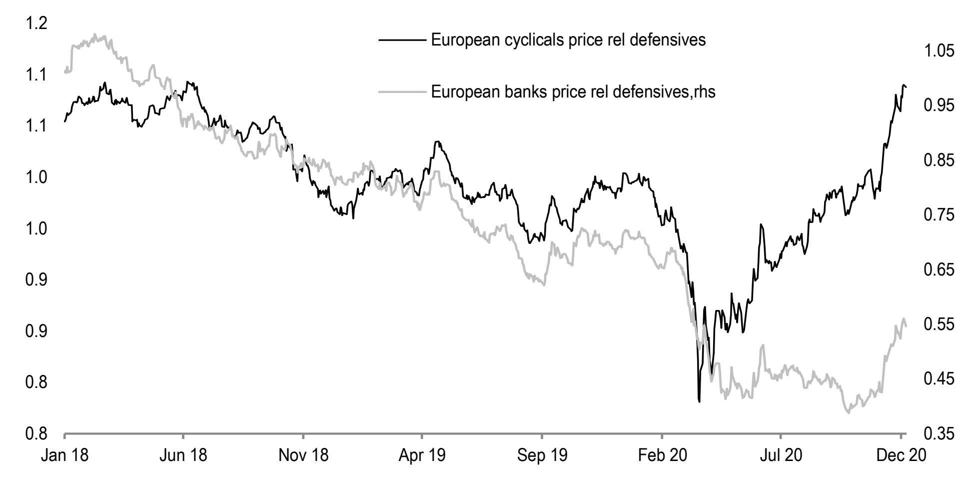
European cyclicals: reduce to benchmark

We take weightings down from overweight to benchmark for the following reasons:

1. We have altered our bias to banks from conventional cyclicals

Both are correlated but until now we have preferred conventional cyclicals. We now prefer banks to cyclicals as a whole, therefore we are still overweight 'cyclicality' but have altered the profile of that cyclicality. We can see this expressed differently with a significant decoupling between cyclicals and banks.

Figure 246: Cyclicals relative to defensive and value versus growth have significantly decoupled

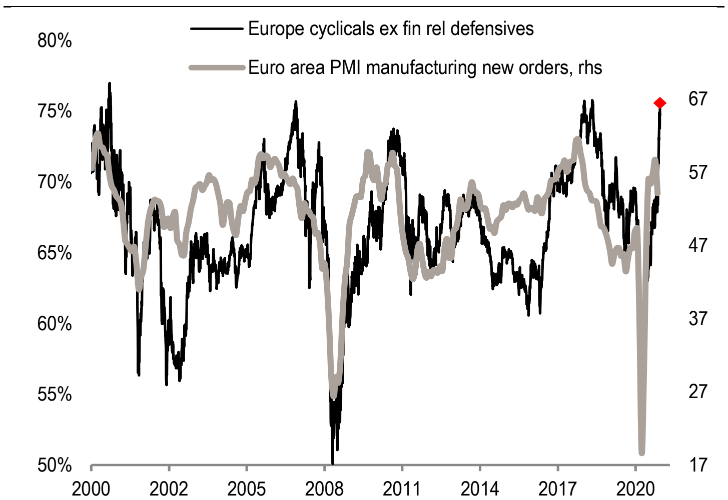


Source: Refinitiv, Credit Suisse research

2. Cyclicals closely follow PMIs and are now pricing in c4% GDP growth

Currently, the cyclicals to defensive ratio is discounting a PMI of c67 (as a technical note, our group of cyclicals excludes financials and energy). This is much higher than the current PMI, and consistent with c4% GDP growth. This is now very close to our economists' euro area GDP growth forecast for 2021 of 4.5%.

Figure 247: The cyclicals-to-defensives ratio is discounting PMIs at c67…

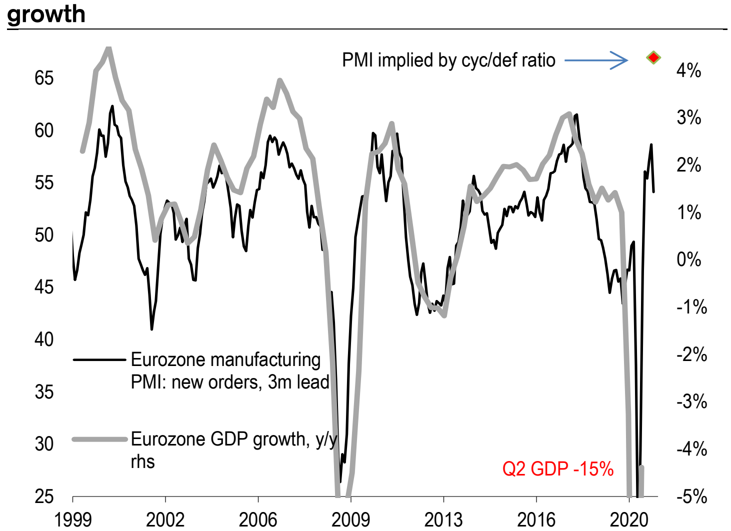


Source: Refinitiv, Markit, Credit Suisse research

Cyclicals: Consumer discretionary, tech, industrials, basic resources;

Defensives: Staples, utilities, telecoms, healthcare.

Figure 248: …which would be consistent with c4% GDP growth

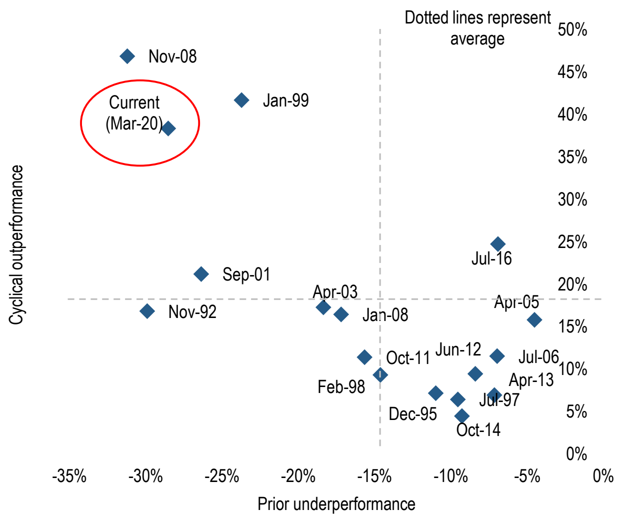


Source: Refinitiv, Markit, Credit Suisse research

3. Cyclicals have already outperformed twice as much as they 'normally' do

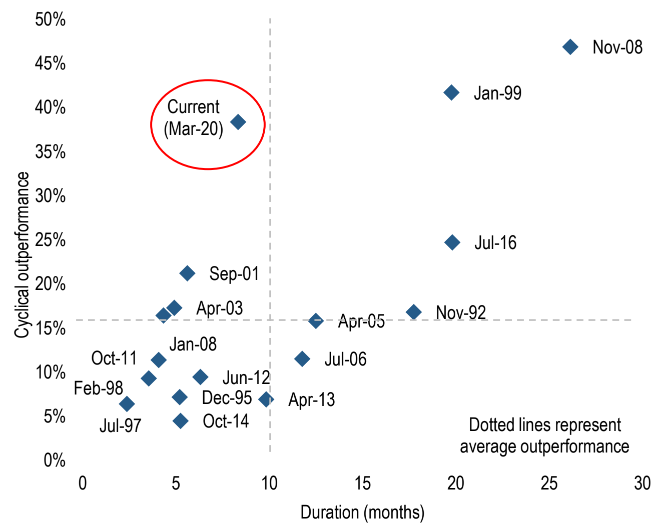
Normally, cyclicals outperform by 15% over 10 months, whereas this time around it has been close to 40% over 8 months.

Figure 249: Typically, the greater the prior underperformance, the stronger the subsequent rally



Source: Refinitiv, Credit Suisse research

Figure 250: Cyclical rallies normally last 10 months (compared to eight months) but we have never had a cyclical rally of more than 47%



Source: Refinitiv, Credit Suisse research

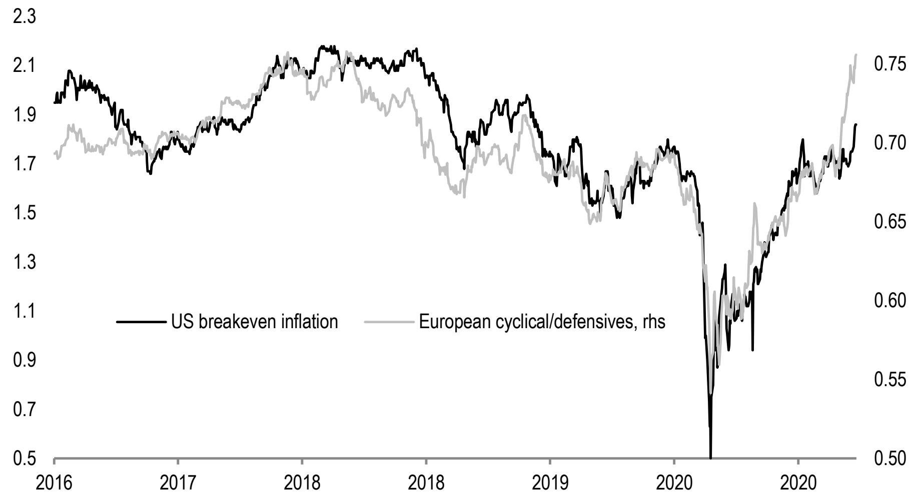
We think 40% outperformance is about right because:

- If cyclicals have underperformed a lot they have much more bounce-back potential. This time around they underperformed by 29%, therefore they would need to outperform by c40% just to get back to where they were pre-virus.
- Early-cycle cyclicals can outperform by more for longer. After November 2008, they outperformed by 47% over two years (the rally started in November 2008 and ended in January 2011).

3. Cyclicals are now discounting quite a large rise in inflation expectations

Cyclicals are discounting quite a sharp rise in inflation expectations. Although in the medium term we still think that inflation expectations will rise to 3%, cyclicals have now re-rated much more than inflation expectations, and we have seen a significant decoupling.

Figure 251: Cyclicals are discounting a 2.1% breakeven inflation rate compared with 1.9% currently

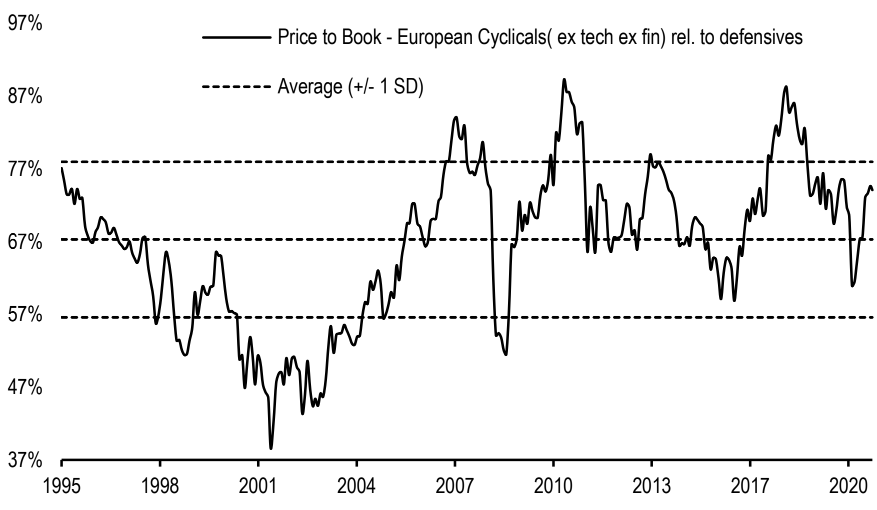


Source: Refinitiv, Credit Suisse research

4. Cyclicals are becoming in parts a little expensive

P/E ratios for cyclicals become less relevant and less useful when earnings of cyclicals are extremely depressed; especially if we operate under the assumption that the decline in earnings is temporary and that they will bounce back. Therefore, we believe investors should look at measures that proxy normalised earnings, such as price to book. On this measure, valuations are becoming a little expensive.

Figure 252: Cyclical to defensive P/B relative no longer cheap

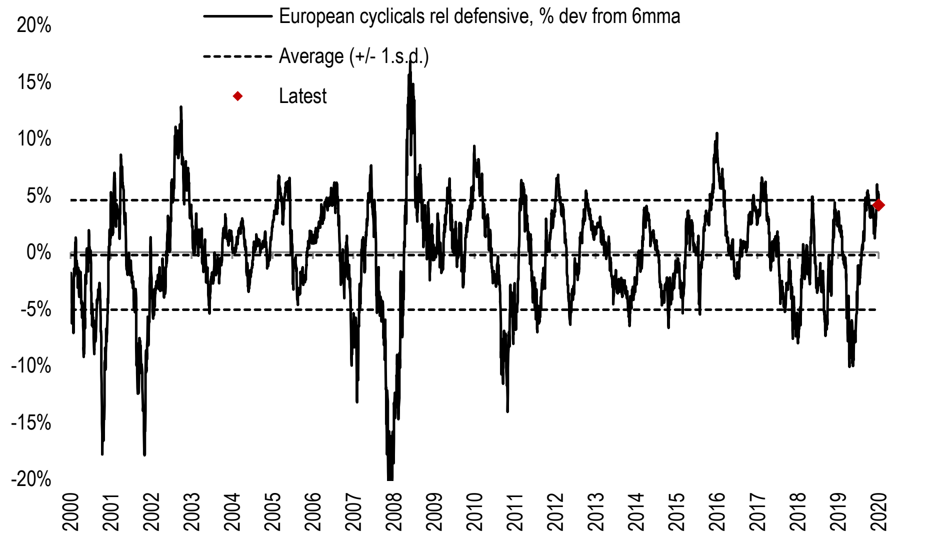


Source: Refinitiv, Credit Suisse research

5. Cyclicals are overbought relative to defensives

Cyclicals in Europe are now around a standard deviation overbought versus defensives.

Figure 253: Cyclicals are overbought relative to defensives



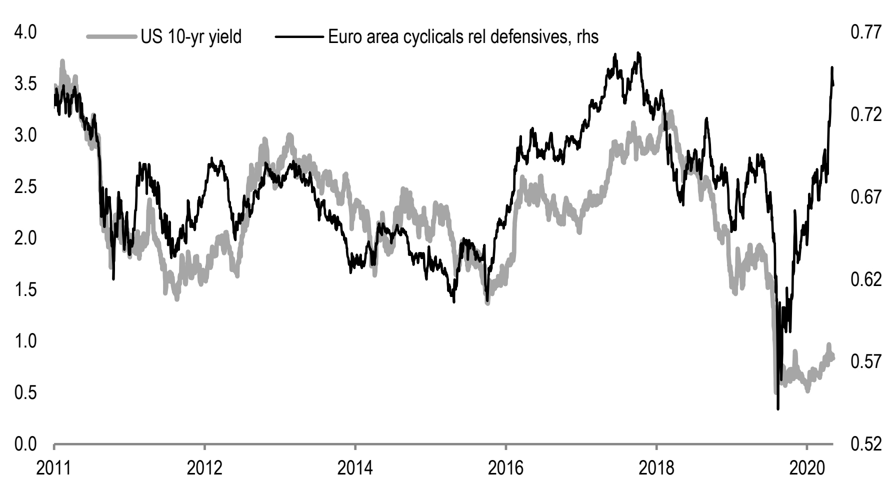
Source: Refinitiv, Credit Suisse research

Why do we avoid an underweight?

The following is supportive:

1. 83% of the time, the direction of bonds is correlated to the direction of cyclicals
As discussed in our Macro Overview in this report, we see the Bund yield rising modestly in 2021 (to minus 30bp). The issuance of mutualised debt could take the scarcity premium off Bunds. During the past two years, European cyclicals moves have been dominated by the US 10-year bond yield. We can see 10-year bond yields rising to1.2%, but we do not expect a larger rise because, with the average maturity of mortgage debt being 10 years if IC debt is 8 years, we think the Fed would resist such a move given that it is exceptionally dovish at the moment.

Figure 254: Higher yields tend to see cyclicals outperform defensives



Source: Refinitiv, Credit Suisse research

2. Cyclicals tend to peak after PMIs peak

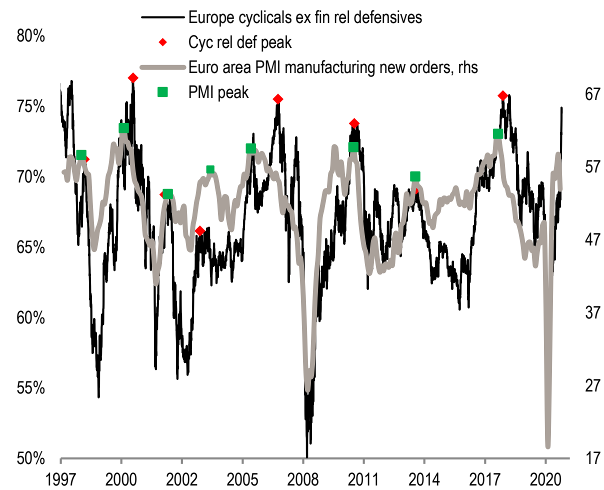
Historically, cyclicals have tended to peak after the peak in PMIs; we think the peak in PMIs is likely to be in Q2 2021.

Figure 255: Historically, cyclicals have peaked just after a peak in PMIs…

PMI Peak dates	Cyc. Rel def Peak	Cyc. turn before PMIs, mnths
Apr-98	21-May-98	1.7
Apr-00	04-Sep-00	5.2
May-02	07-Mar-02	-1.8
May-04	03-Nov-03	-6.0
Apr-06	09-Jul-07	15.5
Feb-11	14-Feb-11	0.4
Jan-14	17-Jan-14	0.5
Dec-17	21-Feb-18	2.7
Median		1.1

Source: Refinitiv, Credit Suisse research

Figure 256: …and we think PMIs will peak in Q2 2021

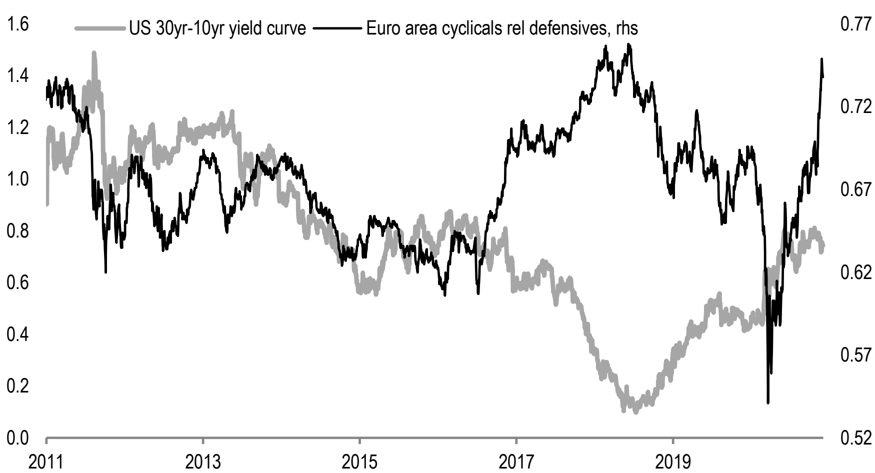


Source: Refinitiv, Markit, Credit Suisse research

3. Cyclicals tend to outperform if the yield curve steepens

We continue to expect the US 30-year to rise against the 10-year, which would be supportive for cyclicals relative to defensives.

Figure 257: Cyclicals outperform as the US yield curve steepens

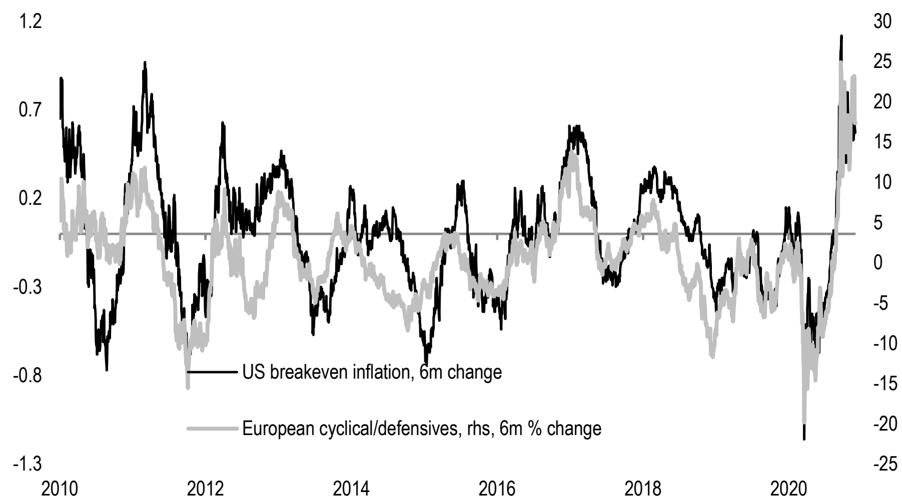


Source: Refinitiv, Credit Suisse research

4. Cyclicals outperform when inflation expectations rise

Our structural view remains that inflation expectations will, by the end of 2022, be close to 3% (as discussed in the inflation overview).

Figure 258: Cyclicals outperform if inflation expectations rise

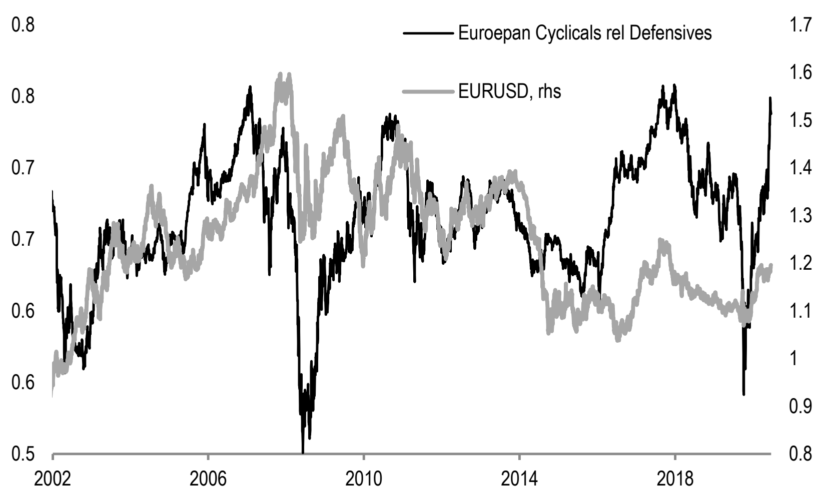


Source: Refinitiv, Credit Suisse research

5. A weak US dollar is usually good for cyclicals (see the Macro Overview for details); we are dollar bears

This is partly because a weaker dollar is good for global growth (with 80% of global trade and 61% of FX reserves being US dollar denominated, but just 25% of global GDP).

Figure 259: Cyclicals tend to outperform if inflation expectations rise

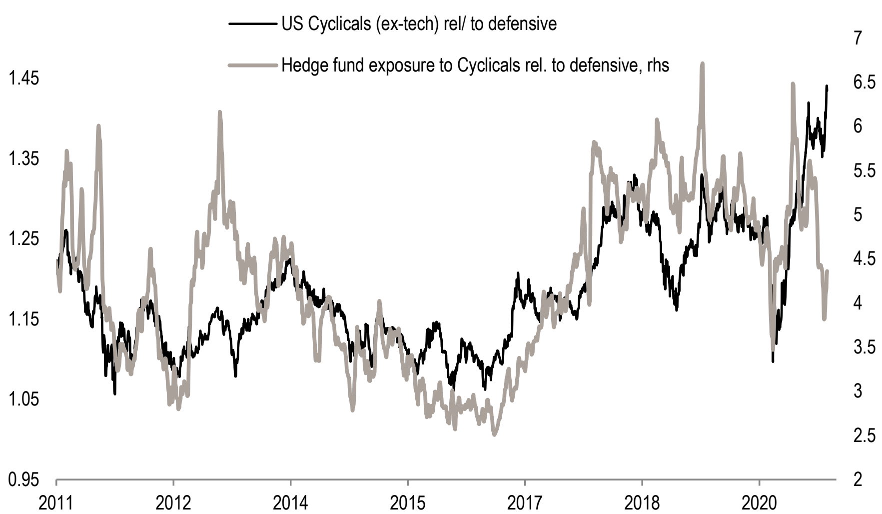


Source: Refinitiv, Credit Suisse research

6. Hedge fund positioning is quite cautious in cyclicals

If we look at hedge fund positioning from the Credit Suisse prime services data, we can see that in the US in particular (where the positioning data appears to be the most up to date) positioning is very cautious. We have seen one of the largest decouplings with price relative since 2011.

Figure 260: Cyclical to defensive prime positioning follows the cyclical to defensive ratio and positioning is neutral

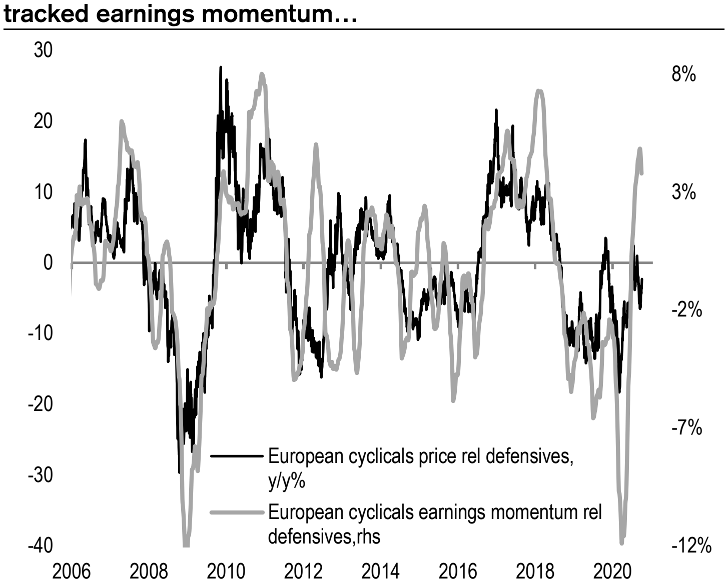


Source: Refinitiv, Credit Suisse research

7. If anything, cyclicals' performance has lagged behind earnings revisions,

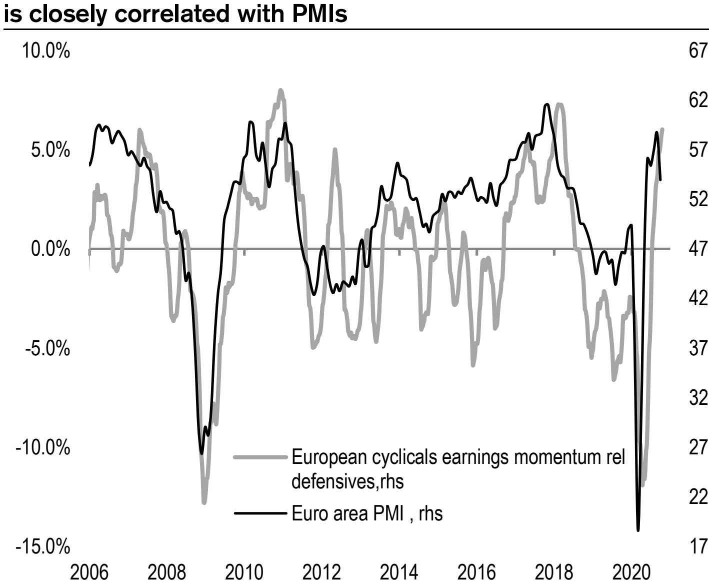
Earnings revisions likely to remain very strong because PMIs are likely to remain high

Figure 261: Cyclical relative performance has historically tracked earnings momentum…



Source: Refinitiv, Credit Suisse research

Figure 262: …with the relative earnings momentum of cyclicals is closely correlated with PMIs



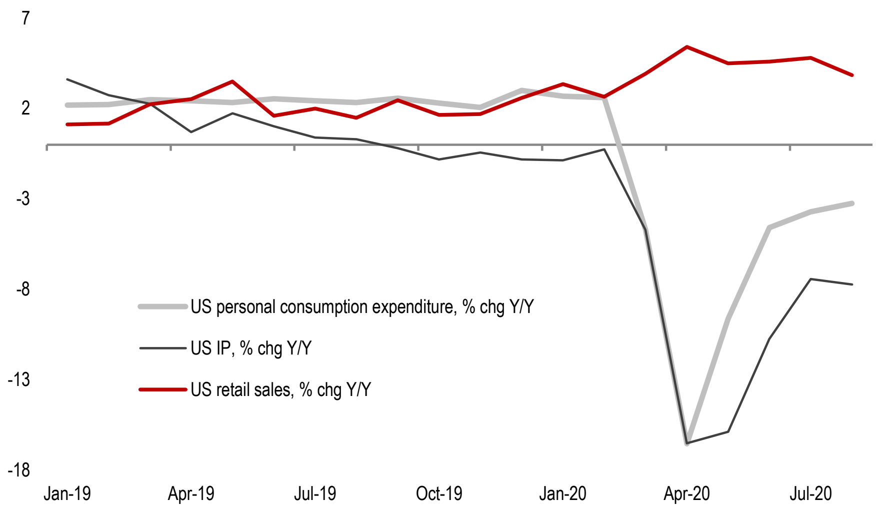
Source: Refinitiv, Markit, Credit Suisse research

Which cyclicals?

Our preference is for cyclicals that are:

- Industrial exposed because industrial IP has lagged behind consumption.

Figure 263: There is a gap between IP and consumption, which has to close… and that will be the normalisation trade



Source: Refinitiv, Credit Suisse research

- Not technically disrupted.
- Real asset exposed and thus outperform when inflation expectations rise.

We show below the two-factor model (which differentiates between the part of cyclical performance that occurred because of stronger activity and the part that occurred because of a rise in inflation that normally occurs as PMIs rise). This highlights from the cyclical side, construction materials, mining and paper and forest products.

Figure 264: Real asset cyclicals we like include construction, mining and paper and forest products

Sectors correlated to Inflation exp. / Cycle (ISM)		
Global Sectors	**Infl. Exp. ↓**	**ISM**
Construction Materials	0.461	0.106
Real Estate	0.451	0.018
Banks	0.381	0.077
Metals & Mining	0.367	-0.007
Energy	0.311	-0.107
Diversified Financials	0.251	0.037
Paper & Forest Products	0.212	0.163
Consumer Durables & Apparel	0.196	0.322
Automobiles & Components	0.170	0.291
Utilities	-0.030	-0.387
Telecommunication Services	-0.058	-0.277
Retailing	-0.202	0.200
Healthcare Equipment & Services	-0.264	0.131
Food Products	-0.269	0.010
Beverages	-0.290	0.045
Software & Services	-0.311	0.064
Media	-0.337	0.016
Household & Personal Products	-0.341	0.018
Food & Staples Retailing	-0.487	-0.280
Pharmaceuticals & Biotechnology	-0.571	-0.065

Source: Refinitiv, Credit Suisse research

- Helped by government infrastructure policy.
- Underperformed because of the COVID-19 pandemic (i.e. initially in the February to May period it had a negative correlation with the rate of infections).
- Are not too ESG handicapped: containerboard, copper, platinum, insulation-exposed companies are all needed to reduce global carbon emissions.

Figure 265: Our preferred cyclical value areas

European value - areas of interest	IP exposed	Not technically disrupted	Real asset plays	Aided by Gov. policy	Underperformed because of COVID	E of ESG positive
Construction	X	X		X	X	
Homebuilders	X	X	X	X	X	
Mining	X	X	X	X	X	
Concessionaires	X	X	X	X	X	
Packaging and trees	X	X	X		X	X
Cement	X	X	X	X	X	
Employment Agencies	X			X	X	

Source: Refinitiv, Credit Suisse research

We are also biased towards industries that are likely to have a super-cycle because of capital discipline or much improved bargaining power over input costs. We include in this list:

- DRAM producers;
- European budget airlines; and
- Shipping (specifically, Maersk).

Sector weightings

Figure 266: European sector weightings

	Over/underweighting score	Benchmark weight [(a)]	Recommended weight [(b)]	Difference from benchmark (bps) [(b-a)]	Change from previous (score)
Construction Materials	1.55	0.7	1.1	40	
Utilities	1.45	4.7	6.9	219	
Metals & Mining	1.35	2.5	3.4	92	
Banks	1.25	6.7	8.5	179	25
Software & Services	1.18	3.3	4.0	65	
Pulp & paper	1.15	0.5	0.6	8	15
Telecoms	1.12	2.8	3.1	37	12
Commercial Services & Supplies	1.12	1.9	2.2	26	1
P&C Insurance	1.05	4.9	5.3	32	-15
Chemicals	1.05	3.9	4.1	25	5
Beverages	1.05	2.6	2.8	17	-1
Semiconductors & Semiconductor Equipment	1.05	2.6	2.8	17	5
Technology Hardware & Equipment	1.05	1.1	1.1	7	5
Tobacco	1.04	1.1	1.2	6	
Transportation	1.03	1.5	1.5	6	
Life insurance	1.00	5.0	5.1	7	
Health Care Equipment & Services	1.00	2.5	2.5	3	
Real Estate	1.00	1.4	1.4	2	3
Leisure	1.00	0.9	0.9	1	
Household & Personal Products	0.95	3.6	3.5	-13	
Media	0.93	1.1	1.0	-6	
Diversified Financials	0.90	3.6	3.2	-31	
Automobiles & Components	0.90	2.6	2.3	-23	-10
Food & Staples Retailing	0.90	1.0	0.9	-9	-10
Retailing	0.85	2.0	1.7	-28	
Hotels	0.85	0.3	0.3	-4	
Capital goods	0.82	10.4	8.6	-176	
Pharmaceuticals & Biotechnology	0.80	11.3	9.2	-214	-10
Consumer Durables & Apparel	0.80	5.0	4.1	-95	-20
Energy	0.80	4.3	3.5	-81	-10
Food Products	0.74	4.3	3.2	-108	
Total		**100.0**	**100.0**		

Source: Refinitiv, Credit Suisse research

Figure 267: Global sector preferences

Global sector preferences	
Energy	-
Materials	++
Industrials	0
Consumer discretionary	-
Consumer staples	-
Health Care	-
Financials	+
Information technology	+
Communication services	+
Utilities	0
Real Estate	0

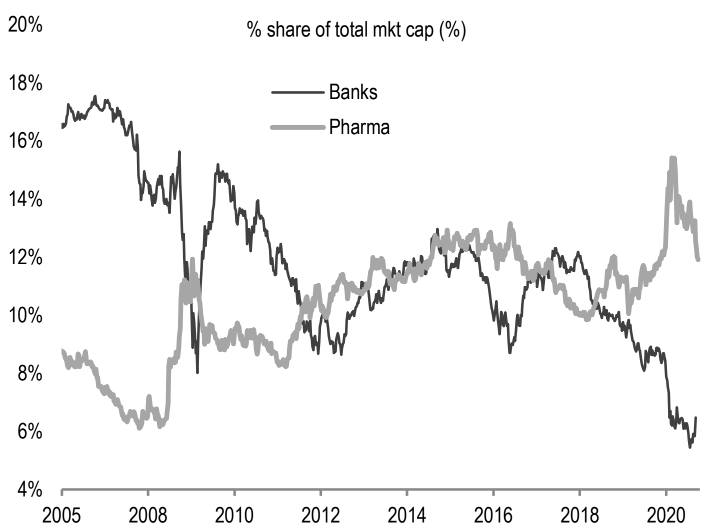
Source: Credit Suisse research

Overweight

Banks: raise to overweight

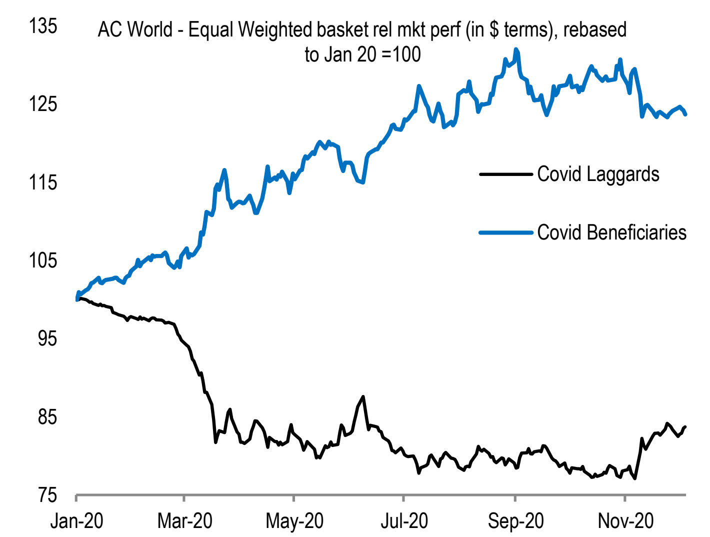
Although banks account for a much smaller share of the market than in the past, we think investors cannot completely ignore the sector (banks' share of European market cap has fallen to 7.1%, from 18% in 2007).

Figure 268: European banks account for only 7.1% of European market cap – only 60% that of pharma



Source: Refinitiv, Credit Suisse research

Figure 269: Banks are among the COVID-19-impacted stocks

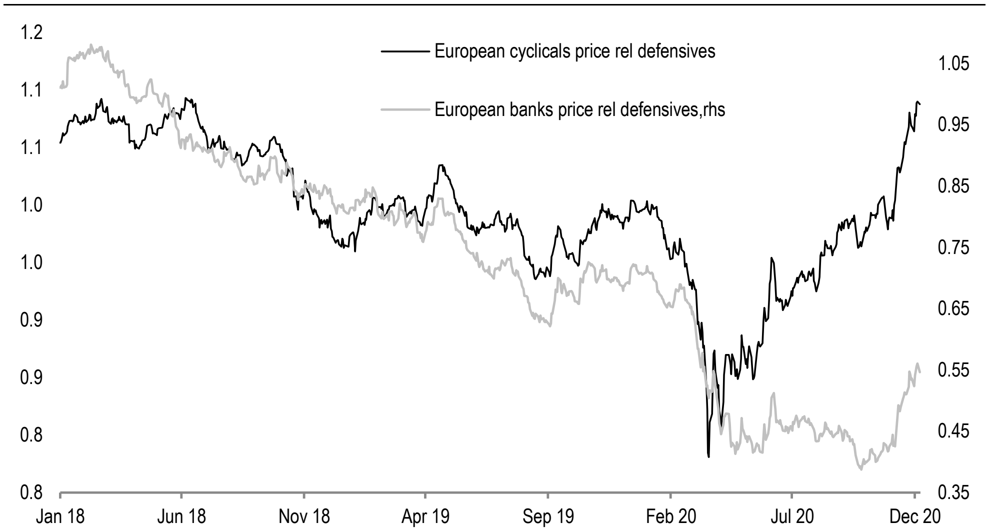


Source: Refinitiv, Credit Suisse research

On the back of the Pfizer/BioNTech vaccine announcement on 9 November, we upgraded traditional cyclicals to overweight (see Revisiting the impact of a vaccine). However, we stayed benchmark banks overall despite taking a more positive view on banks in countries where tourism accounts for a high proportion of GDP, with a particular focus on Spain and Thailand,

European banks so far have lagged the performance of cyclicals relative to defensives. We now downgrade cyclicals to benchmark and move to overweight banks. Thus banks, after mining, construction materials and parts of paper, become one of our preferred cyclical exposures.

Figure 270: European banks have lagged the performance of cyclicals relative to defensives



Source: Refinitiv, Credit Suisse research

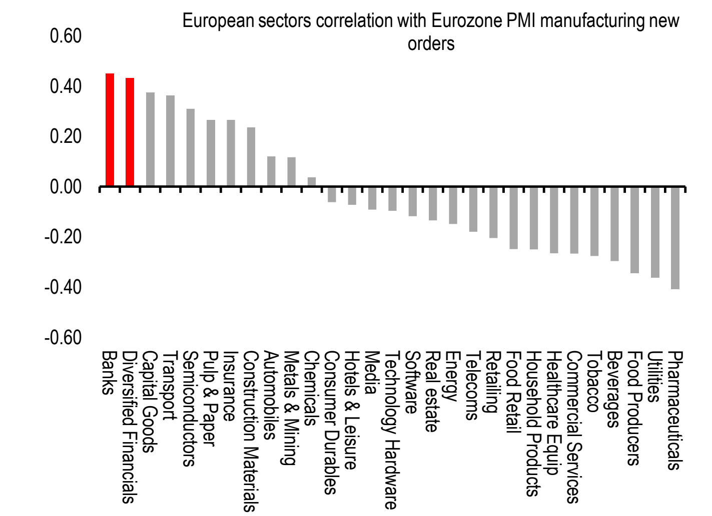
What is supportive?

We see six key areas of support for European banks in the near term.

1. **Macro supports**

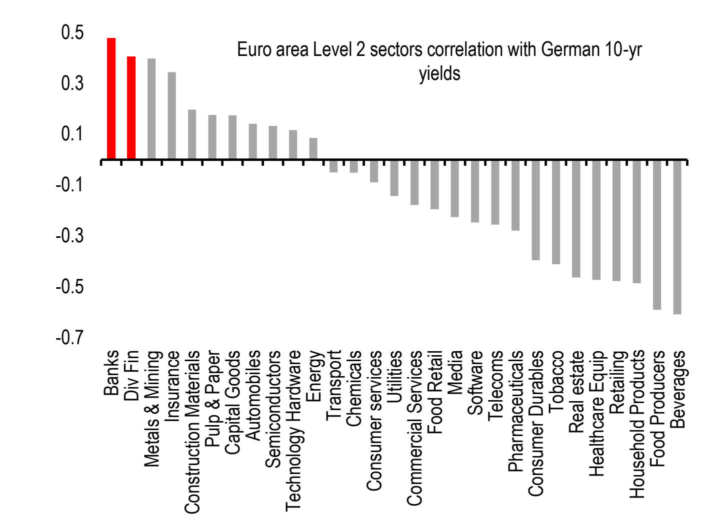
The banking sector is the most positively correlated sector to bond yields and PMIs, as shown in the two charts below.

Figure 271: Banks have the highest positive correlation with PMIs



Source: Refinitiv, Credit Suisse research

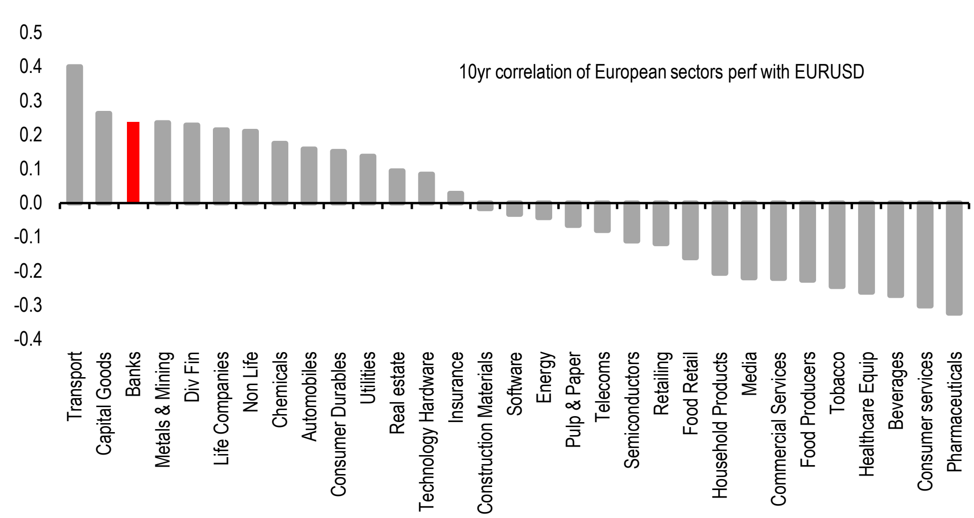
Figure 272: Banks have the highest positive correlation with 10-year Bund yields



Source: Refinitiv, Credit Suisse research

Banks are also the third most sensitive sector to the euro, outperforming when the euro strengthens.

Figure 273: Banks are the third-most positively correlated sector with euro strength



Source: Refinitiv, Credit Suisse research

Bringing all three factors together (PMIs, Bund yields and EUR/USD), we can explain about 80% of the relative performance of European banks, and note that banks are discounting c.42

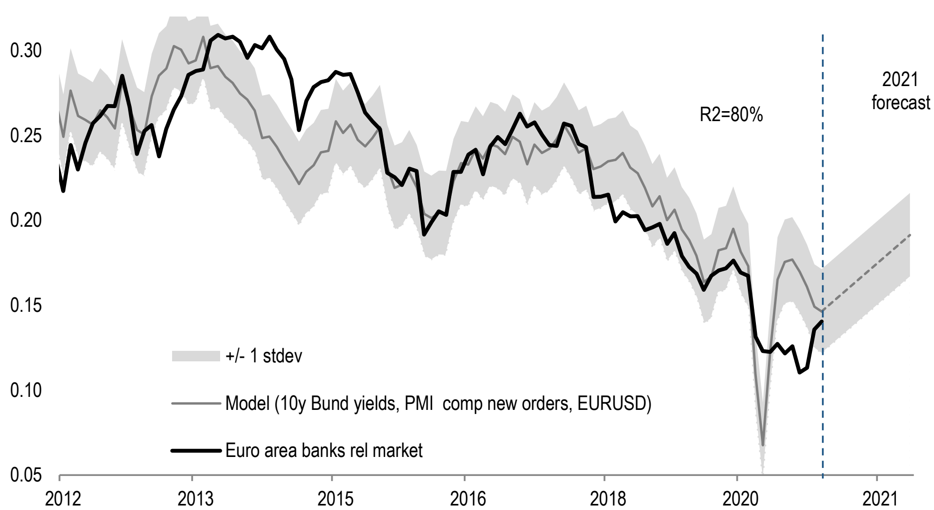
on PMI manufacturing new orders (assuming flat bond yields), or should have done only 4% better relative to the wider European market (owing to the recent fall in PMIs).

In our opinion, the macro backdrop for European banks will continue to improve throughout 2021:

- **No more downside to yields:** As highlighted in our macro outlook, we believe the downside to rates/Bunds is now very limited, given that both the Riksbank and the ECB declined to cut rates in March below last year's level as both central banks came to the conclusion that cutting rates further into negative territory would be counterproductive (because it could cause an asset bubble that would be both economically and socially problematic, hurt banks' profitability, and thus their ability to lend, and increase zombie capitalism). Moreover, a vaccine-fueled recovery and more fiscal stimulus in the US and Europe could result in a mild increase in Bund and Treasury yields. The CS house view expects -0.3% and 1.3%, respectively by the end of 2021.
- **Accelerating economic momentum in 2021:** We believe PMIs will rise to 60+ during Q2 2021 after a near-term lockdown-driven pause.
- **A stronger euro:** As we highlight above/in our macro outlook (see 2021 Research Outlook: Equities, Regions and Macro), we expect further euro strength against the US dollar.

Putting in our forecast of 10-year Bund yields of -0.3% (CS house view), PMIs of 55, and EURUSD of 1.25 (CS house view) by end-2021, banks offer 31% upside.

Figure 274: PMI, Bunds and euro can explain 80% of the relative performance of banks and gives 31% upside by end '21

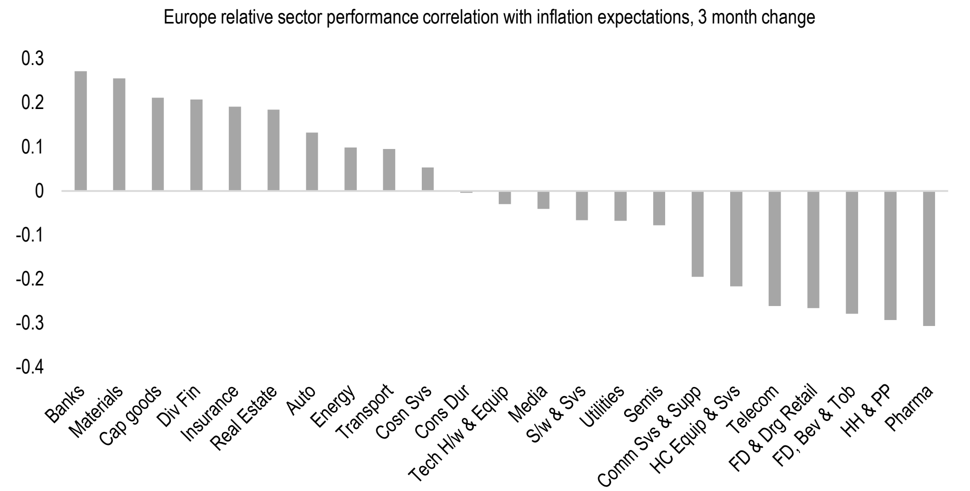


Source: Refinitiv, Credit Suisse research

- *Banks and inflation expectations*

As discussed in the inflation section at the front of this report, we believe inflation expectations can continue to move higher. Banks are the most positively correlated sector with inflation expectations. This might be largely due to higher inflation driving up rates, but rates are unlikely to move up to the same extent in response to higher inflation this time. Even if rates do not rise as much, a rise in inflation would push down real rates across the curve, effectively increasing credit quality (as it increases the value of real assets, especially real estate), which in turn helps collateral value.

Figure 275: Banks are the most positively correlated sector with inflation expectations



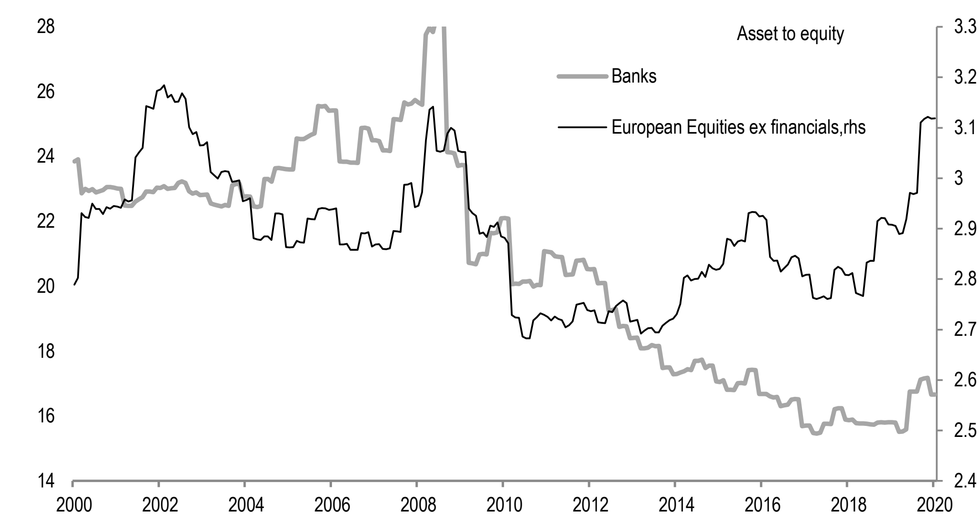
Source: Refinitiv, Credit Suisse research

2. Valuation attractive

■ *The implied cost of equity looks too high*

The cost of equity for banks is being, we believe, overestimated. Credit Suisse banks analysts use a cost of equity of 11-12%, and even higher for investment banks (with the market-implied level for the sector closer to 13%, as our calculations show below). We think the cost of equity should have fallen to be well below its historical norm as banks are now lower risk because they have deleveraged and also have been subject to much greater scrutiny and stress tests in recent years. The chart below shows the leverage of the banks relative to the leverage of the non-financials. While banks' leverage has been trending down since the GFC, non-financials have seen their leverage climb since 2013.

Figure 276: Leverage of banks has been trending down in Europe, and trending higher in the case of non-financial European equities, implying that banks' cost of equity should have fallen relative to the market



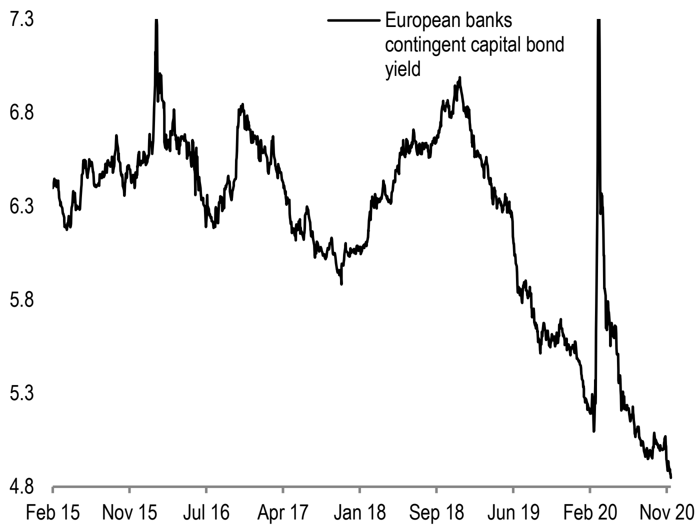
Source: Refinitiv, Credit Suisse research

The falls in CDS spreads and CoCo yields are indications that the cost of equity should be considerably lower.

Our view is that the cost of equity should be c.3% above that of the permanent write-down CoCos (the instruments that go to zero if CT1 falls below a certain level). The yield on the CoCos is now at c.4.8%, implying a cost of equity of c.7.8%. The Credit Suisse banks team estimates that pan-European banks should see a ROTE of c.7.5% in 2021, therefore they should trade at 0.96x book value rather than just under 0.6x, even if we assume banks have zero trend growth.

This indicates c.60% potential upside. If we assume that the structural issues (listed below) mean that only one-third of this upside is achieved, this still points to 20% potential upside for banks.

Figure 277: European CoCos



Source: Refinitiv, Credit Suisse research

Figure 278: Fair value

$$\frac{P}{TB} = \frac{RoE - g}{CoE - g} \Rightarrow$$

$$\frac{P}{TB} = \frac{7.5\% - 0\%}{7.8\% - 0\%} \Rightarrow$$

$$\text{Fair value } \frac{P}{TB} = 0.96x$$

Source: Refinitiv, Credit Suisse research

- *Some conventional valuations have reached new all-time lows*

Unsurprisingly, the valuation of European banks is not far above all-time lows in absolute and relative measures (see HOLT P/B below).

Figure 279: European banks trade close to an all-time low on HOLT P/B relative to the market…

Source: Refinitiv, Credit Suisse research

Figure 280: …the same is the case in absolute terms

Source: Refinitiv, Credit Suisse research

Moreover, the P/E relative is more than one standard deviation below its norm and was only clearly lower during the euro debt crisis.

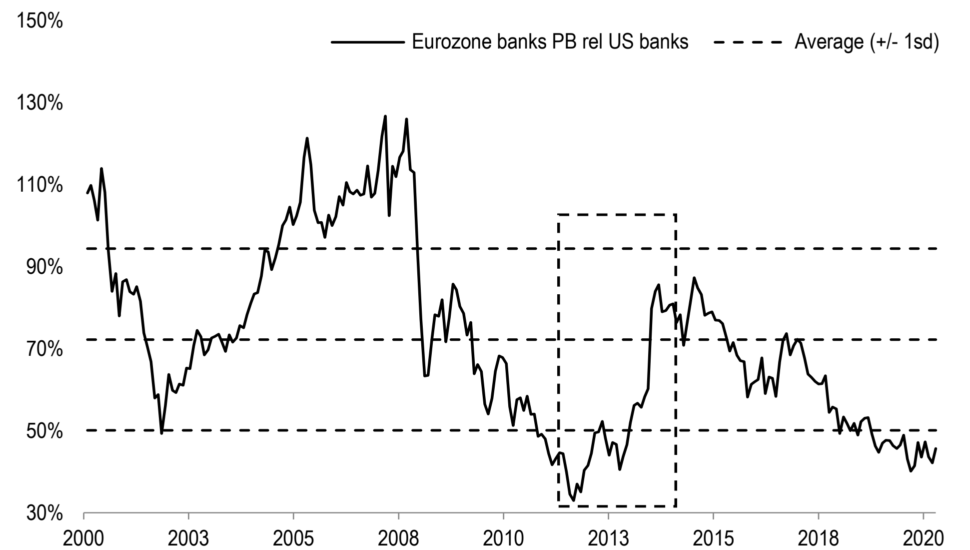
Figure 281: P/E relatives for European banks are still close to their lows

Source: Refinitiv, Credit Suisse research

- *Cheap relative to US banks*

European banks remain close to their historical valuation trough, and at the level from which they bounced in 2012 as sentiment towards European assets improved. When this happened last (July 2012), European banks outperformed US banks by nearly 50% over the following six months.

Figure 282: European banks are cheap on P/B rel US banks



Source: Refinitiv, Credit Suisse research

3. The importance of dividend yield implies follow-through

A lot of value funds cannot buy stocks with a zero yield. The return of a dividend would be a clear buy signal for banks.

The UK banking regulator (PRA) has already given lenders the green light to resume dividend payments, but set out guidelines to determine the size of any payout. The PRA expects to be satisfied that any distributions would not create excess vulnerabilities to stress for a given bank or impede its ability or willingness to support households and businesses (FT, 10 Dec).

In regards to Continental Europe, our banks team believes the ECB has given indications that banks may be able to pay dividends in 2021, but they may be asked to wait until after the EBA stress test in July 2021. This is in line with comments from Yves Mersch, vice-chair of the ECB's supervisory board, who said that Eurozone banks will be allowed to pay dividends again from next year if they can convince supervisors that their balance sheets are strong enough (FT, 25 November).

4. Move to European debt mutualisation structurally weakens any break-up risk

In the area of debt mutualisation, we have seen several further key developments in Europe in the past six months:

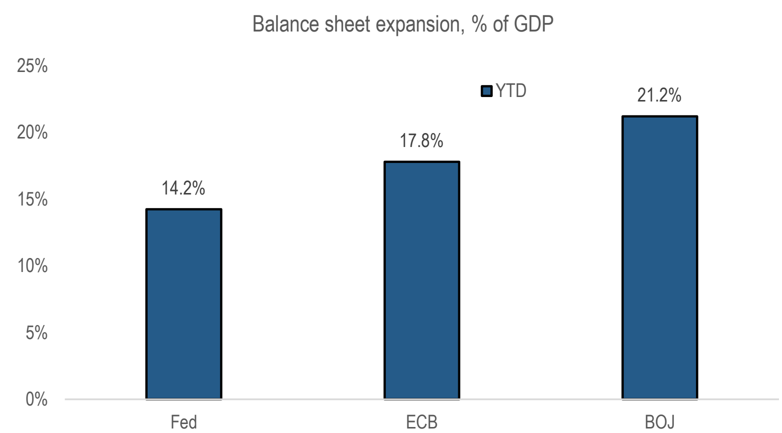
- **Issuance of SURE bonds** (European instrument for temporary Support to mitigate Unemployment Risks in an Emergency). These jointly-issued bonds will provide loans to 17 of the EU's poorer member states to help fund employment programmes in the near term. The programme is eventually intended to reach €100bn. In a sense, we think this represents a successful 'dress rehearsal' for the larger recovery fund issuance, and provides a more immediate source of support to countries facing financial difficulty.
- **Spain being able to borrow against the EU Recovery fund** (which should be up and running in 2H 21). Spain has borrowed €21bn against the EU recovery fund.
- **The changing German attitude towards fiscal policy.** The structural problem has been that Germany has saved too much, and this has persistently led European growth and inflation to disappoint. This 'oversaving' can be proxied by the substantial current account

surplus in Germany of nearly 8% of GDP (which is the macro manifestation of domestic oversaving).

The way to address this is simply through the easing of German fiscal policy. We have finally seen German fiscal easing of c8% of GDP with the €130bn emergency post-pandemic recovery fund. Finance Minister Olaf Scholz's draft budget for next year envisages net new debt of €180bn to finance further measures to tackle the coronavirus crisis. This would be the second-highest amount of net new debt since WWII (2020 was the highest amount, with €218bn of net new debt).

- **An even more aggressive ECB:** ECB purchases as a percentage of GDP have been larger than those of the Fed.

Figure 283: ECB purchases as a % of GDP are higher than the Fed's

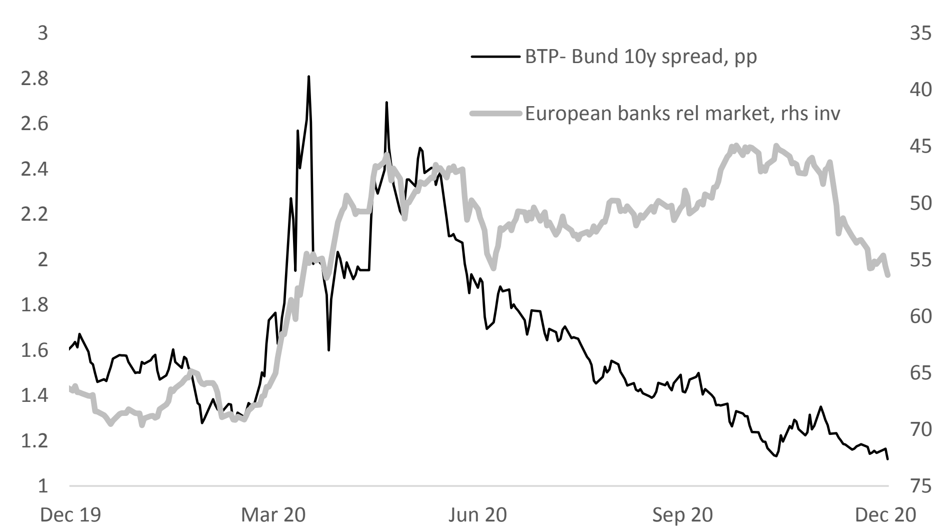


Source: Refinitiv, Credit Suisse research

- **Germany moving forward on bank reform.** In November 2019, Germany dropped its opposition to a common deposit insurance scheme (Euromoney, 12 November).

  The positive reaction associated with the Recovery Fund has already resulted in a very sharp fall in the BTP and Bono/Bund spreads, but this time around it has had a delayed impact on banks.

Figure 284: Banks have not outperformed in line with the falling BTP-Bund spread



Source: Refinitiv, Credit Suisse research

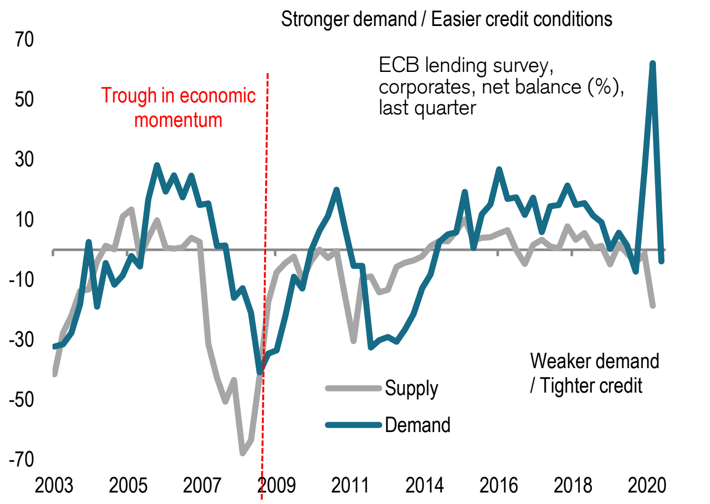
5. Many drivers of profits are improving

We see the following drivers of profitability:

■ **More loan growth**

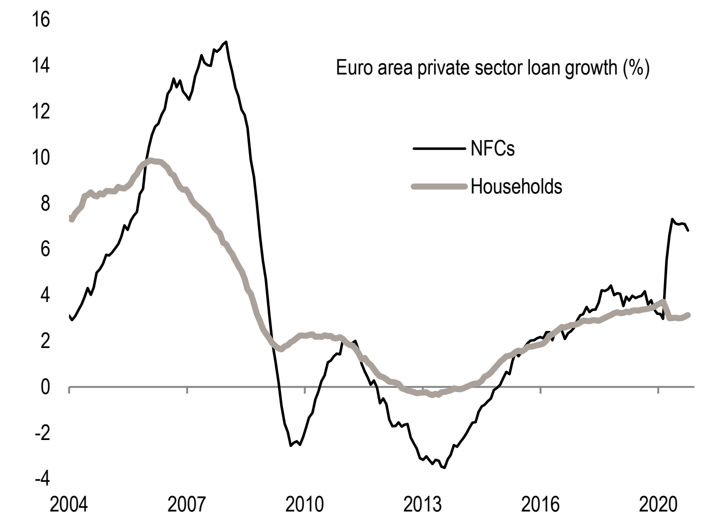
The survey data suggest still-good demand for loans, and this is reflected in actual loan growth, with loans to non-financial corporates growing at their fastest rate in a decade. Admittedly some of this is driven by government guarantees which is good for credit quality but not necessarily margins.

Figure 285: Lending conditions tightened much less than during the GFC



Source: Refinitiv, Credit Suisse research

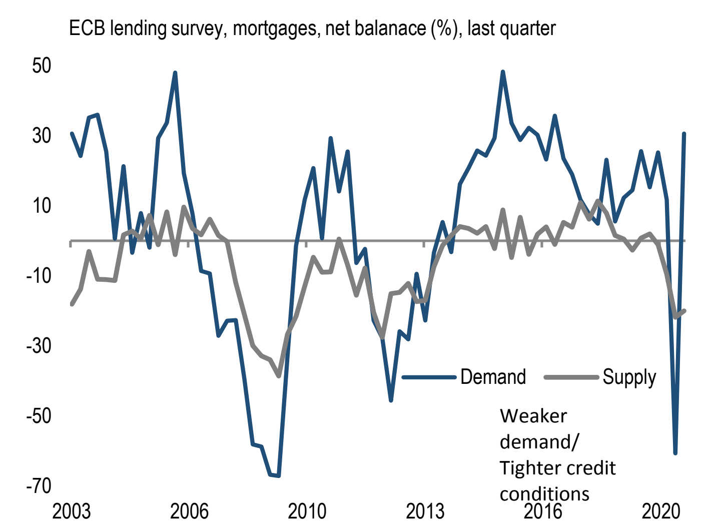
Figure 286: Loan growth to corporates is picking up sharply and remained stable in regards to households



Source: Refinitiv, Credit Suisse research

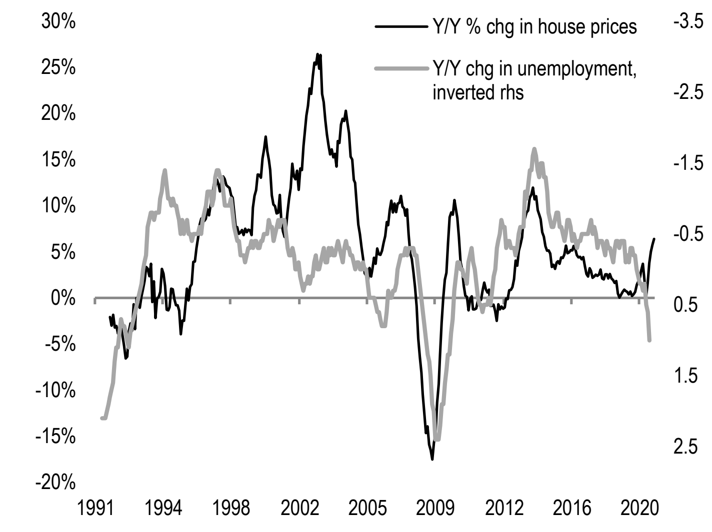
There was a large fall off in demand for mortgages on survey data, but this has started to bounce back. Essentially unemployment is the guide to housing volumes and often prices. Interestingly, this time around house prices in the UK picked up as unemployment rose, partly driven by the government's stamp duty holiday.

Figure 287: Mortgage demand inevitably collapsed as house buyers could not physically view properties under lockdown but has now recovered



Source: Refinitiv, Credit Suisse research

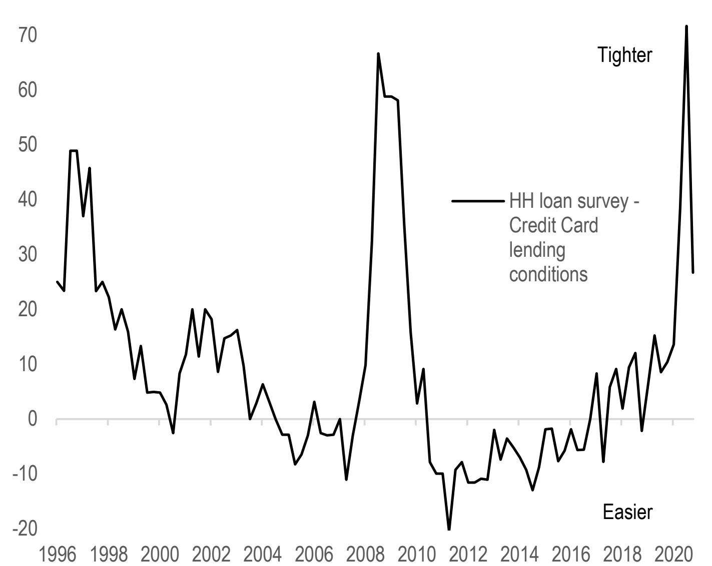
Figure 288: The unemployment rate and house price appreciation have been fairly closely linked but decoupled in 2020



Source: Refinitiv, Credit Suisse research

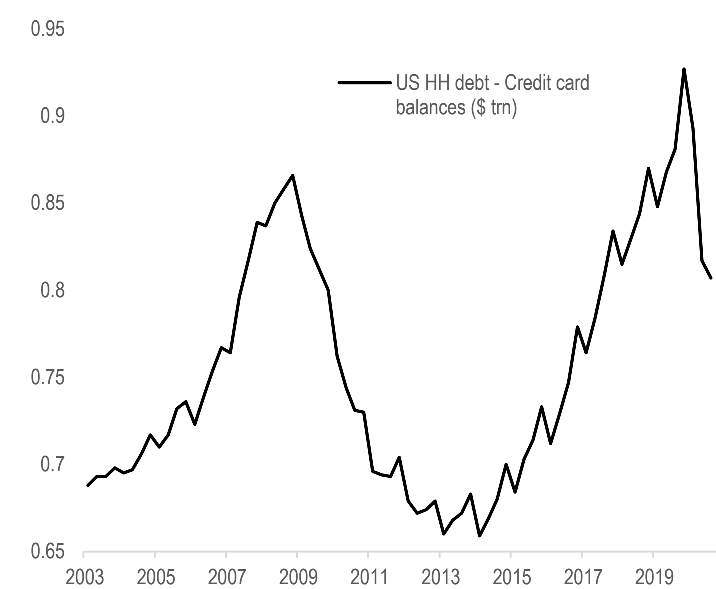
One highly profitable area that has seen a collapse in balances is credit cards. Balances fell by 13% in the US. Consumers used financial support from governments to pay off credit balances, and credit card companies tightened lending conditions. This area of growth is likely to return as economies normalise.

Figure 289: Credit card lending conditions in the US tightened…



Source: Refinitiv, Credit Suisse research

Figure 290: … and credit card balances came down



Source: Refinitiv, Credit Suisse research

- **The TLTRO3 round trip**

We believe that the big picture is that the ECB is trying to offset the damage NIRP does to banks.

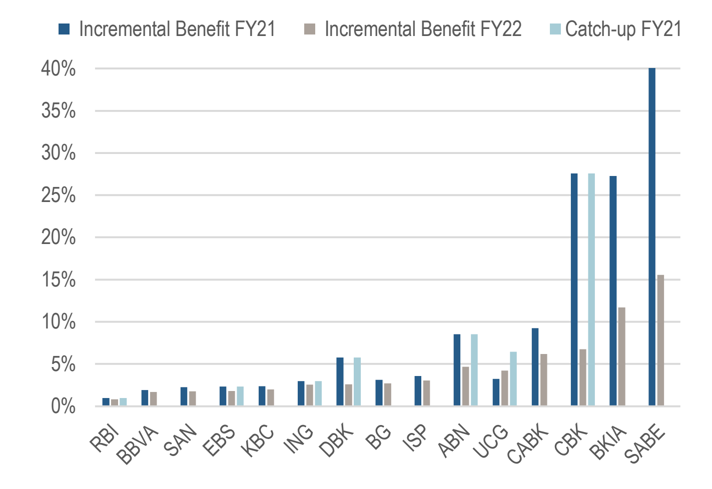
On Thursday 10 December, the ECB extended the current TLTRO -1% lending rate by one year, extended the effective duration by establishing three new 3-year operations until December 2021, and increased the capacity of the borrowing from 50% to 55% of eligible loans. At the same time, the 0% lending threshold is now set between 1 October 2020 and 31 December 2021, which leaves banks with a much higher starting point of lending given the big increases in year to date corporate lending (see December ECB package: TLTRO twist make it more difficult to achieve the 1% kicker, now all eyes on dividend decision).

According to our banks team, the Southern European banks remain the main beneficiaries of the increased liquidity (as we show below, we particularly like Spanish banks). Our banks team runs two scenarios:

1. Banks' access the ECB's funds at the current -1% lending rate until June 2022, but do not increase their take-up of the TLTRO (Scenario 1).
2. As the ECB increased the level of eligible loans that determine the banks' maximum TLTRO take-up, from 50% to 55%; the banks team assumes all entities will decide to increase their borrowings by an equivalent 10% during the announced windows in 2H21 (Scenario 2).

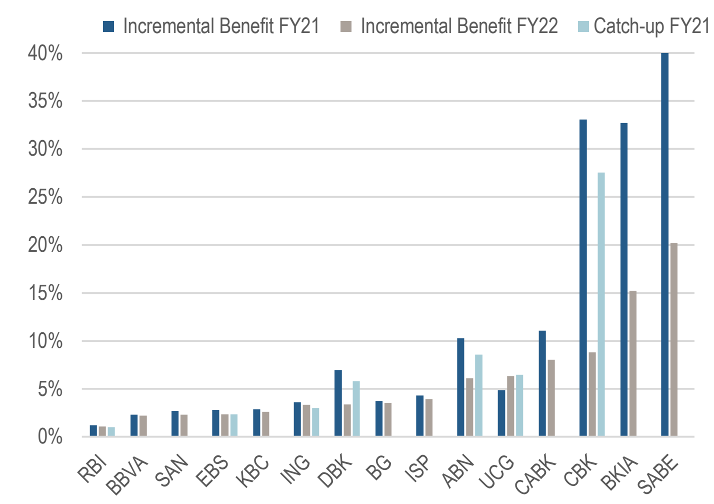
At the extreme, the TLTRO can boost banks' PBT by up to 40%, though admittedly for most banks it only improves PBT by a low-single-digit percentage. Moreover, our banks team argues that the boost to profits is already widely reflected in the consensus.

Figure 291: TLTRO Scenario 1 Impact on FY21NII as %of FY21 cons PBT



Source: European banks research team

Figure 292: TLTRO Scenario 2 Impact on FY21NII as %of FY21 cons PBT



Source: European banks research team

The net result of the TLTRO3 is that it makes banks more cyclical because their ability to access funds at -1% depends on their ability to maintain a flat/growing loan portfolio.

- **Regulatory easing**

Capital: As discussed already, banks have deleveraged aggressively since the GFC, as shown in the asset-to-equity charts above. Our banks team expects a tailwind of+30bps in Q4 from software amortisation.

- **A more level playing field against US investment banks**

It is quite possible that President-elect Biden will lead to a more level playing field between European and US investment banks (in terms of capital requirements). This at the margin helps the European banks.

■ **Less litigation risk**

Litigation has directly and indirectly been a considerable headwind for banks. Over the past five years, according to our banks team, litigation charges have cost European banks 3.5-5.0% of revenue and lowered ROE by 1pp for each of these years (in the UK, the direct cost of litigation has reduced pre-provisioning profits by around one-third since 2011). We would of course note that the litigation costs are very unevenly distributed across banks, mainly impacting IBs and UK banks.

Indirectly, it also resulted in a large increase in legal and compliance expenditure. We think both of these headwinds have largely passed. For example, in the UK, the PPI claims deadline was August 2019, with the total cost around 25x initial estimates, at £53bn, and in Europe as a whole, fines have been around $150bn.

■ **More M&A**

There have been several M&A announcements in the Spanish banking sector over the past few months. Moreover, the ECB has appeared increasingly willing to recognize an accounting gain if a bank buys a rival for less than fair value of the asset less its liabilities (this is the so-called 'badwill' gain). According to the FT (1 July), the projected €2bn gain from negative goodwill was a key factor cited by Intesa Sanpaolo in its takeover bid for domestic rival UBI Banca in February.

Our banks team thinks in-market M&A is very likely, but is somewhat sceptical about cross-border M&A. The team first wants to see a reform of GSIB rules and believes there is still very limited synergy potential. The exception could be limited purchases by large banks of bolt-on deals in markets where they already have a strong presence (e.g. CASA in Italy).

■ **Longer-term prospects for a housing bubble**

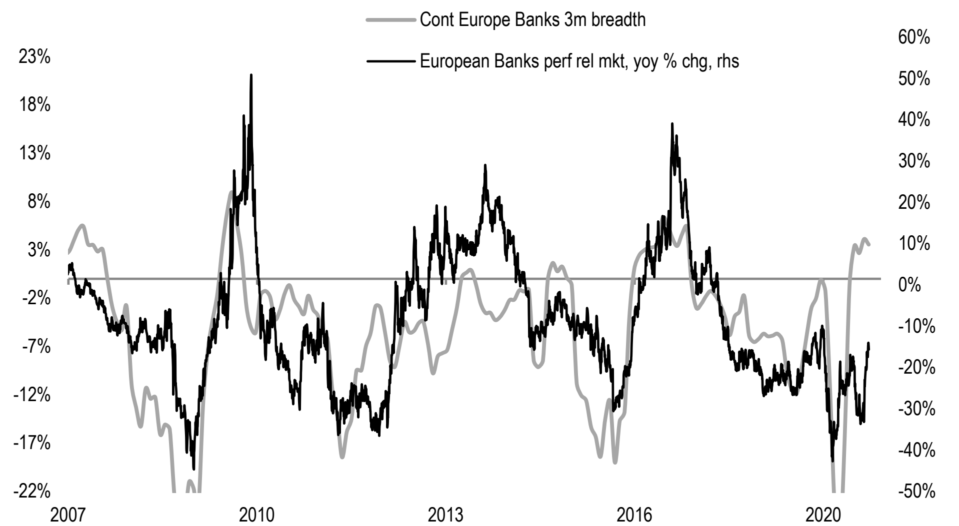
Although the short-term outlook for house prices might be less certain, we are very positive on residential real estate on a longer-term view. As we have argued several times before (see the real estate section of this report and our previous reports such as *COVID-19: Long-term impact*), we believe we are entering a period of extended negative real rates. This should drive investors further into residential real estate, especially as the rental yield is above the mortgage yield in most developed nations. These charts are shown in the real estate section of this outlook. This would help in two ways:

- **i.** **Loan growth:** The demand for mortgages should pick up.
- **ii.** **Collateral value:** As house prices pick up, banks' collateral value rises. Recall that European banks keep mortgages on their books and the majority of mortgage banks' collateral is housing.

6. **Good earnings revisions.**

Overall, earnings revisions of European banks have picked up sharply relative to the wider market and point to further outperformance for the sector.

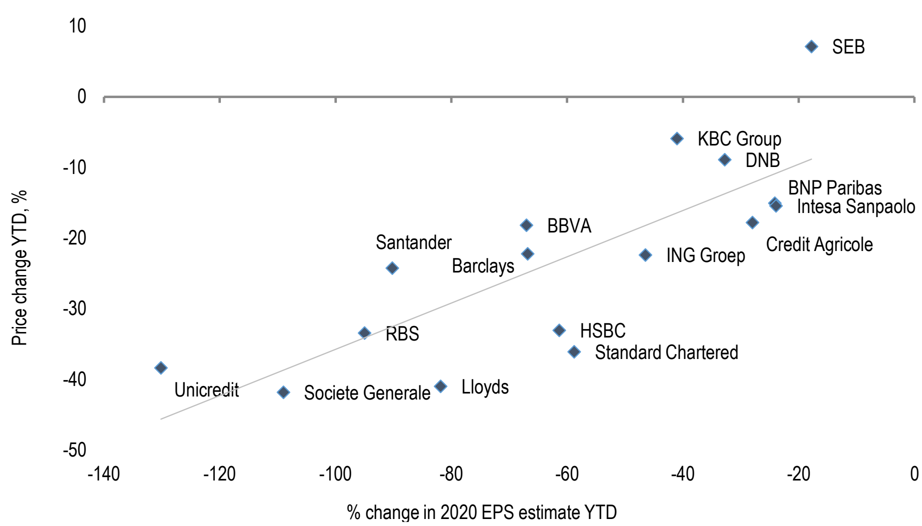
Figure 293: When earnings revisions fall, banks tend to underperform



Source: Refinitiv, Credit Suisse research

We would also note that earnings revisions have been a key driver of stock performance within the banking sector.

Figure 294: It may sound obvious, but earnings matter for share price performance on the stock level as well



Source: Refinitiv, Credit Suisse research

What are the risks?

1. The risk to provisioning

Our banks analysts are assuming a level of excess provisioning that is just a quarter of that seen during the GFC and the euro crisis (with a lot of this driven by the probably shorter length of the crisis as well as government guarantees).

Figure 295: Loan loss provisions above norm

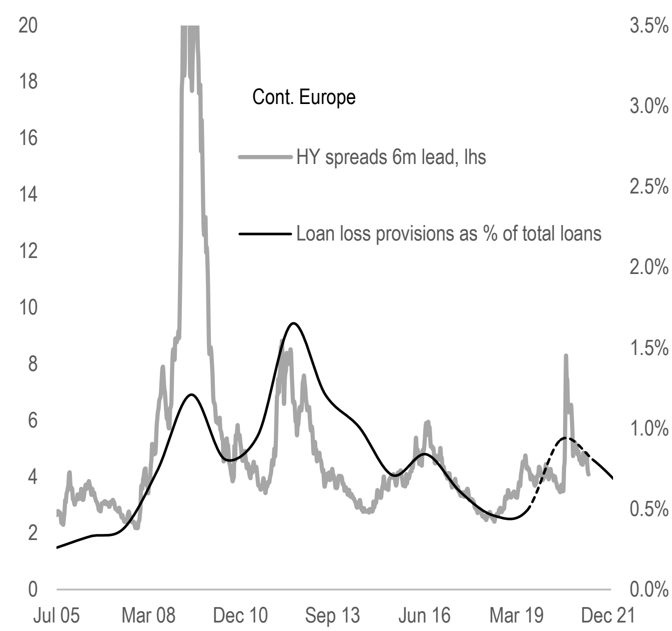
Total loan loss provisions as % of total loans above norm

	Cont. Europe	UK
GFC (08-10)	1.2%	3.6%
Euro crisis (11-14)	2.8%	
Covid -19 (expected 20-21)	0.7%	0.7%

Source: European Banks Research team

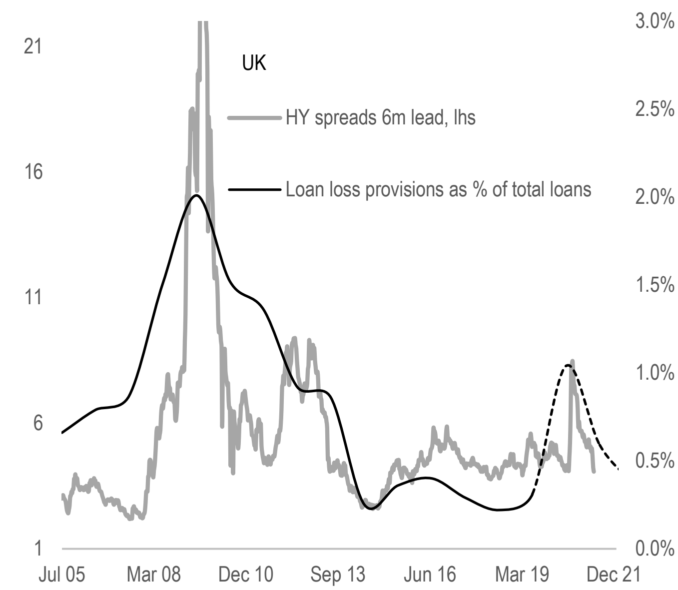
Our team's assessment seems to be consistent with credit spreads, which indicate significantly less stress than during the euro crises or the GFC.

Figure 296: Consensus provisions for Cont. Europe move in line with credit spreads in the EU…



Source: Refinitiv, Credit Suisse research

Figure 297: …and the UK



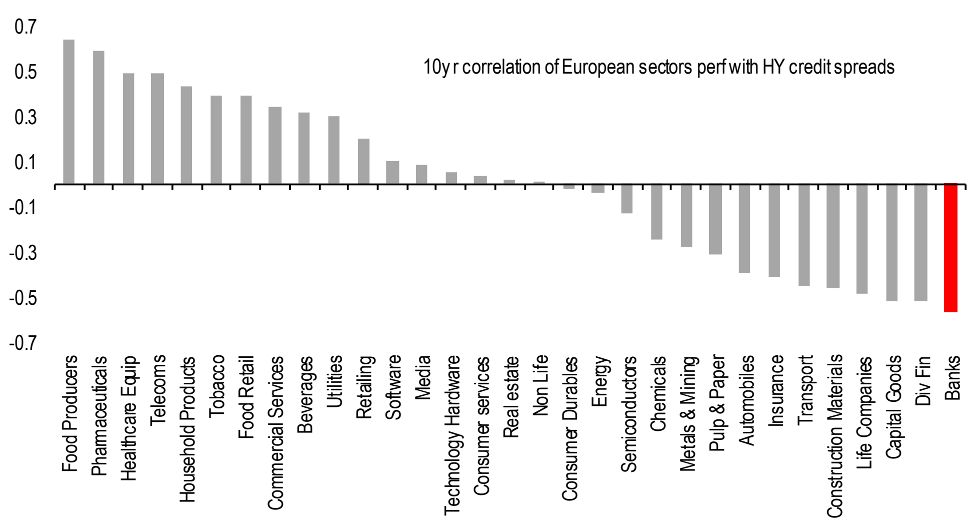
Source: Refinitiv, Credit Suisse research

So far bankruptcies have not risen as governments are still providing loan guarantees and banks offering loan moratoria. Our bank's team believes that NPLs will rise but if forward economic forecasts do not change, provisions might stay around Q3 levels. That would lead to a 20% upgrade to 2021E EPS for the sector (see European banks - 3Q20 wrap: Risky to remain too underweight?).

However, this could be where the sector's key risk lies. The ECB's supervisory board warned that many European banks are doing too little to prepare for a likely increase in bad loans due to fallout from the coronavirus pandemic. Under a severe scenario modelled by the ECB, European banks could face an extra €1.4tn of non-performing loans, more than in the GFC. Andrea Enria, president of the ECB's supervisory board, further said that shortfalls in banks' preparations for a rise in bad loans was one factor to be considered in its decision whether to allow banks to resume paying dividends (FT, 3 December).

Another way of looking at this is to note that historically banks have been the worst-performing sector when spreads rise.

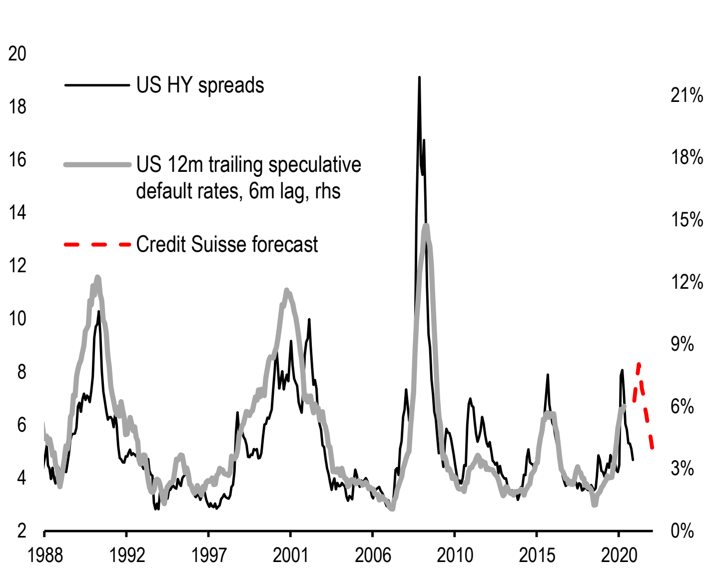
Figure 298: HY spreads have a negative correlation with banks



Source: Refinitiv, Credit Suisse research

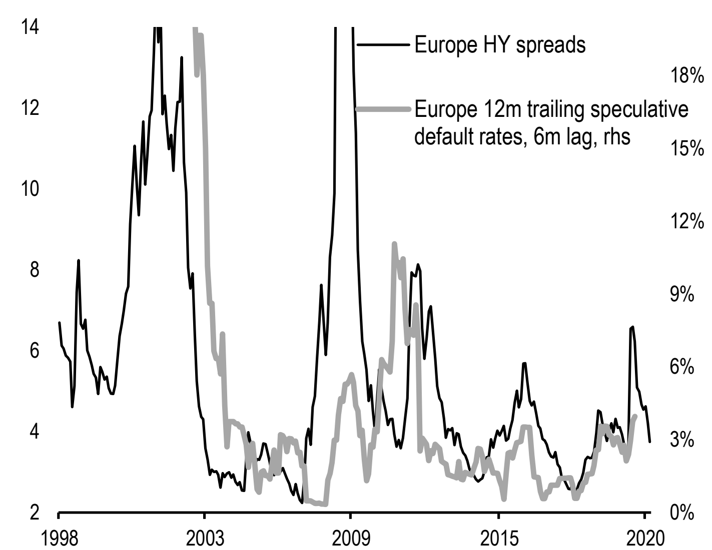
In the US, the forecasts for defaults seem to be higher than those being priced in by the credit market.

Figure 299: US HY default rate and spreads



Source: Refinitiv, Credit Suisse research

Figure 300: HY default rates and spreads in Europe

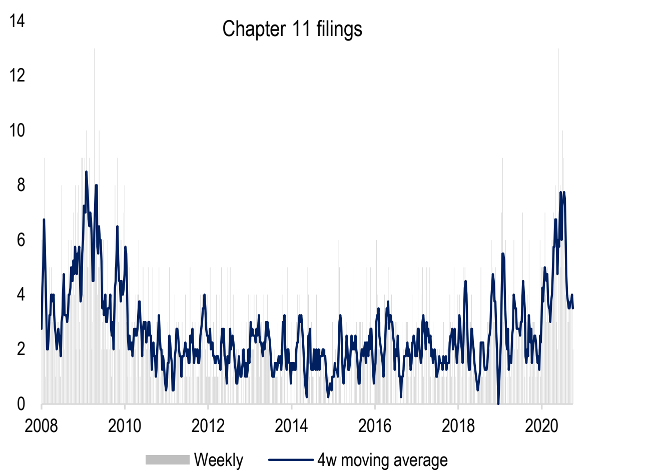


Source: Refinitiv, Credit Suisse research

However, we choose to be overweight banks despite this because:

- The actual bankruptcy and default data in the US have come in much lower than we would have expected, suggesting that defaults have peaked.

Figure 301: Weekly chapter 11 bankruptcy filings (for large corporations only)



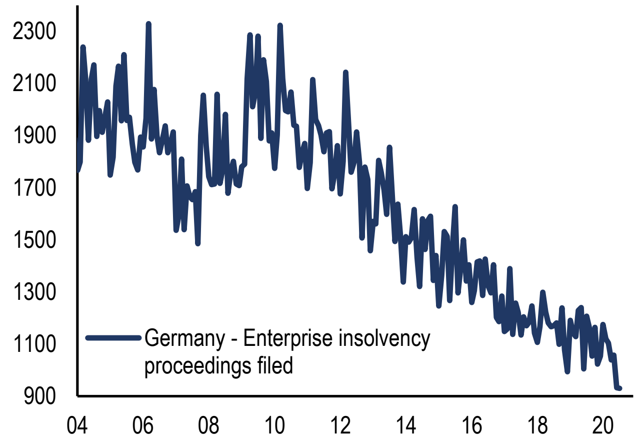
Source: Bloomberg Finance L.P., Credit Suisse research

Figure 302: Total commercial filings

Source: American Bankruptcy Institute, Credit Suisse research

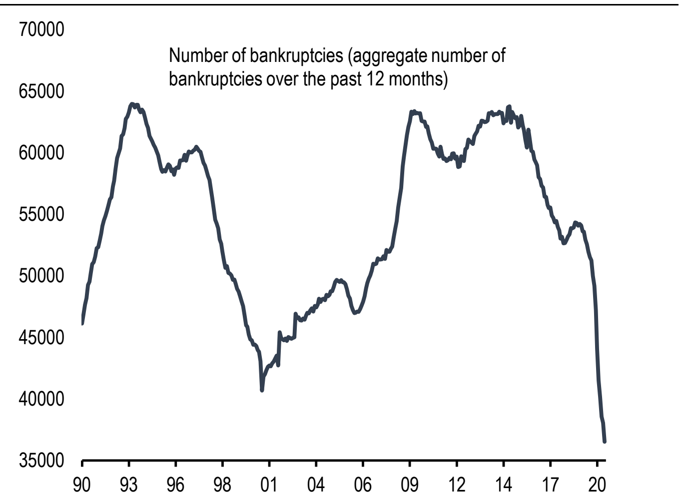
This is also the case in Europe.

Figure 303: German insolvencies remain low…



Source: Credit Suisse, Destatis

Figure 304: … this is also the case in France



Source: Credit Suisse, Bank de France

- Credit spreads are being 'nationalised' in Europe by the ECB, though we note that the ECB has recently targeted most of their purchases at government debt.
- The loan guarantee schemes looks to be very generous, and this combined with a V-shaped recovery and a moratorium on COVID-19-related defaults may mean that provisioning never rises by much. In the UK, for example, there has been £42bn of lending to UK companies via the Bounceback Loans Scheme, which charges no interest for the first 12 months (loans can be paid back over six years).
- A lot is already in the price.

European banks are trading at 4.2x 2020E pre-provisioning profits (PPP) against a six-year norm of 7.1x. With PPP being 1.6% of total loans, this implies that additional defaults of 4.6% are priced in on top of the six-year average of 2.8%, taking total priced-in defaults to 7.4% (assuming no loss recovery, if we assume a 50% recovery rate in defaults would be 12%), and above the level seen during the GFC (6%). As we mentioned above, the ECB has warned banks that under a severe scenario it modelled recently they could face an extra €1.4tn of non-performing loans (c.13% of the loan book of public pan-European banks) which if there is loss ratio of c50%, would imply peak defaults of c7.5% in a worst case. Admittedly part of the PPP discount is also to the structurally weaker growth outlook.

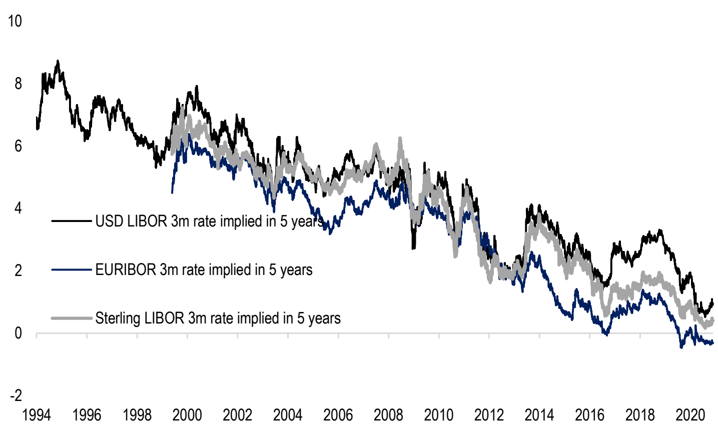
2. **Rates to stay low for a long time… but this is largely priced in anyway**

As we highlight above, the relative performance of European banks is closely following 10-year Bund yields. This is the case as 10-year yields tend to be good estimates of future 'short' rates and for banks', but profitability is closely linked to the shape of the short end of the curve (0 to 3 years).

In our view, there is likely to be some upside in the long end of the curve over the next 12 months, but we are uncertain about the impact this might have on the short-end of the curve this time around.

Nevertheless, the three-month rate implied in five-years' time is close to its lowest level ever (0.4% in the UK and -0.3% in Europe). Thus, particularly in Europe, there appears to be little downside to rate expectations. In effect, European short rates are assuming 'Japanification', which as we highlight in our inflation front section is far from being the case.

Figure 305: Short rates implied in 5 years are close to their lowest levels for dollar, sterling and euro



Source: Refinitiv, Credit Suisse research

As important, any further rate cuts are likely to be offset by more generous LTROs

We note that the Bank of Japan, which tends to be the most innovative major central bank, plans to exempt regional banks from negative rates if they agree to mergers or cost cutting. This could significantly reshape the country's financial sector. Regional banks with approved restructuring plans will be able to earn an extra 0.1 per cent of interest on their deposits at the BoJ (FT, 10 Nov). We think the ECB could consider a similar programme.

3. **European Banks remain heavily disrupted, unlike most of the other cyclical areas**

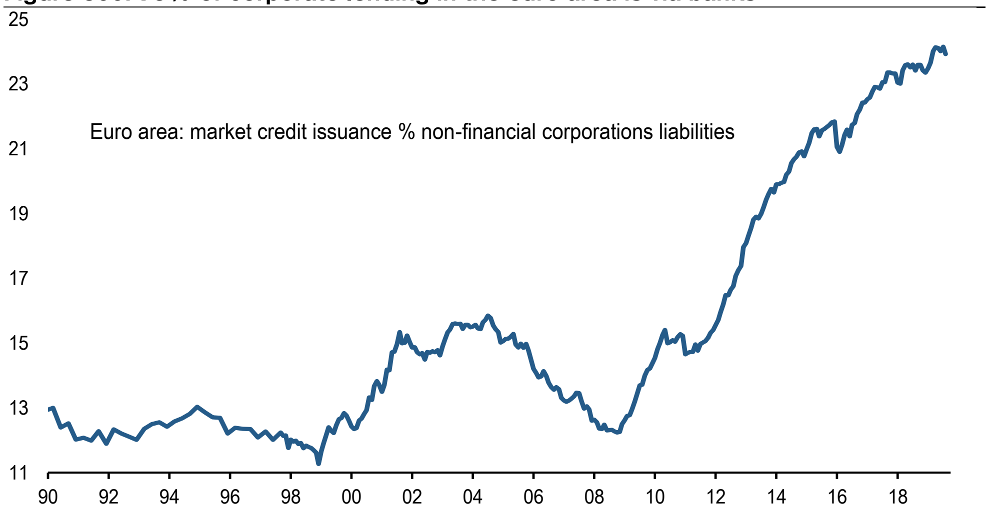
We have concerns about the following areas:

- **Corporate lending:** In the US, only c.30% of lending to corporates is done by banks rather than capital markets, while the number is closer to c.75% in Europe, and we think likely to fall sharply.

We believe the threat is particularly high for the following reasons:

  - Low credit spreads mean credit markets might undercut lending rates offered by banks. Therefore, this trend is likely to be accelerated by ECB action.
  - Better technology enables smaller loan sizes for securitised loans.

Figure 306: 75% of corporate lending in the euro area is via banks



Source: Refinitiv, Credit Suisse research

We acknowledge that some banks with large investment banking arms can benefit from this dis-intermediation trend (via origination and distribution).

- **Asset management:** Many banks rely on earnings from asset/fund management, but these areas are increasingly disrupted by ETFs, technological advancements allowing low-cost competition and tighter regulation (forcing visibility on fees and prices). The asset management industry is likely to attract even more competition and disruption, with EBITDA margins remaining unusually high given the industry's low capex-to-sales ratio, as shown in the asset allocation section of this report.

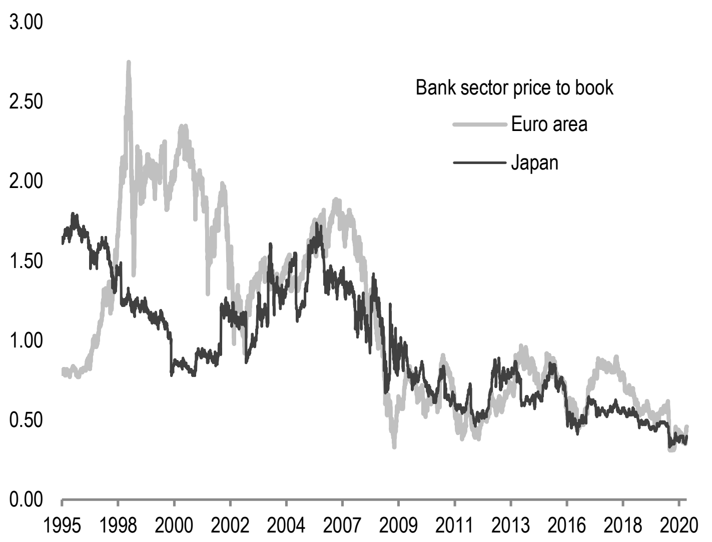
- **Payment systems:** Around 15% of banks' profits come from payments, although this is also the area with the highest ROE, according to McKinsey (22% ROE for sales and origination vs. 8% for the rest), therefore this is the focus of many disruptors. Moreover, new entrants tend not to have the legacy technology that goes with legacy business models.

  That being said, our banks team highlights that payment systems have suffered significantly throughout the recent lockdown period as economic activity came to a halt. This could slow the expansion of the disruptors. Moreover, following Wirecard filing for insolvency, oversight of payment companies is likely to increase, pushing up their compliance and regulatory costs. Many of the disruptors have seen significant declines in value through the COVID-19 crisis. Monzo's valuation in its top-up funding round in Q2 declined by 40% (Source: techcrunch.com, 16 June), while Virgin Money's share price has declined 40% from its December peak, almost twice the decline of the broader European banks index (-24%).

4. The warning of Japan

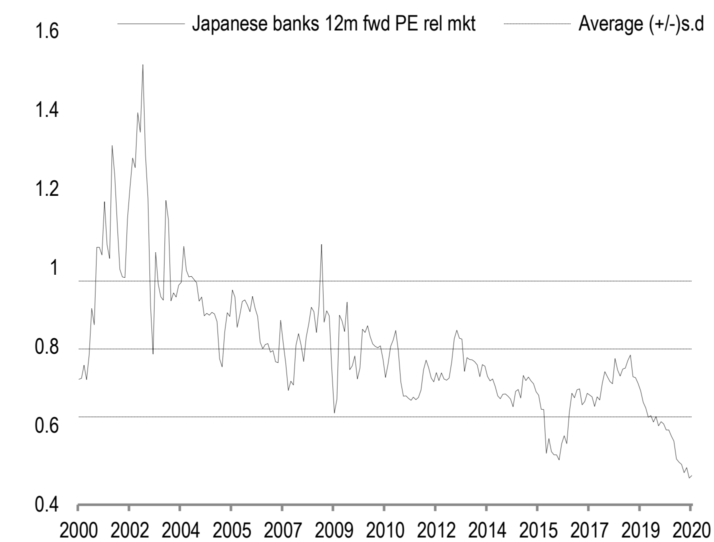
Over the last 15 years Japanese banks traded down to currently 0.4x book and to very low P/E relatives.

Figure 307: Japanese banks vs eurozone banks price to book



Source: Refinitiv, Credit Suisse research

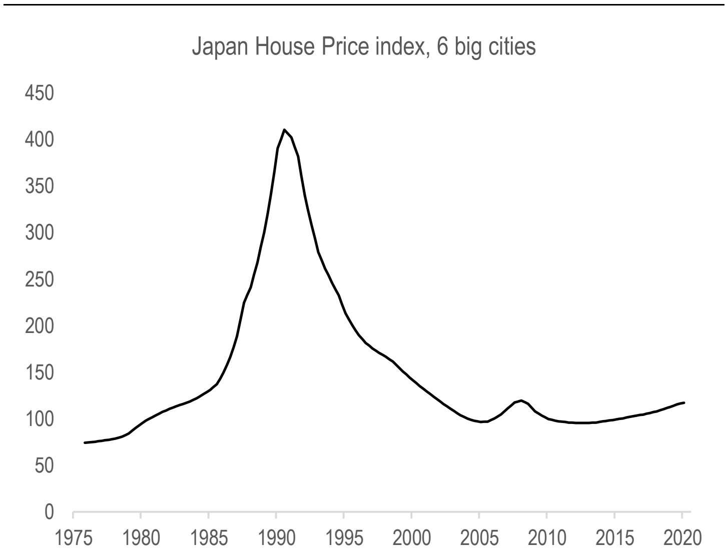
Figure 308: Japanese banks' P/E relative to the market



Source: Refinitiv, Credit Suisse research

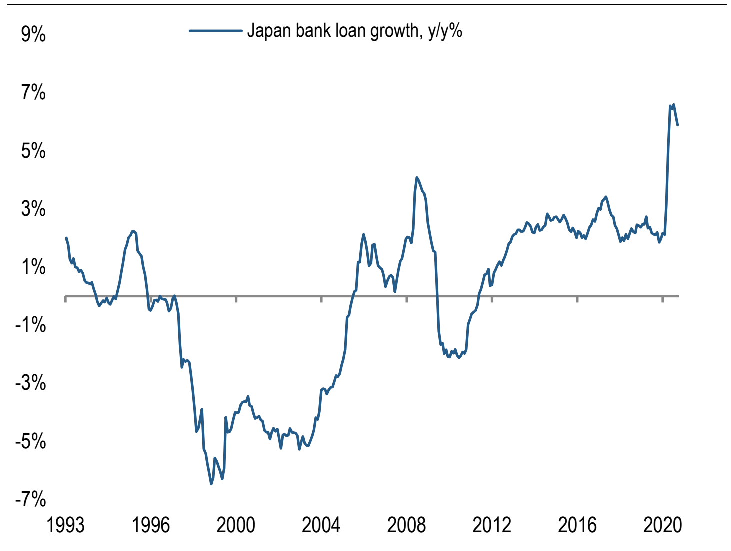
This was despite decent house price inflation (a proxy for collateral value) and reasonable loan growth.

Figure 309: Japanese house prices



Source: Refinitiv, Credit Suisse research

Figure 310: Japan loan growth has been fairly robust post-crisis



Source: Refinitiv, Credit Suisse research

Having said that, as highlighted in our inflation overview, we believe strongly that Europe is not Japan and thus Japan is not a precedent.

Investment ideas

Top picks

The screen below shows our banks team's top picks across European banks.

Figure 311: Our banks team's top picks for the sector

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Ubs Group	10.5	62%	-32%	0.9	-36%	na	2.9	-1.8	22.8	6.4	2.4	Outperform
Julius Baer Gruppe	12.8	76%	-31%	1.8	-19%	na	3.1	-33.3	9.0	3.7	2.5	Outperform
Credit Agricole	10.6	85%	-6%	0.5	-22%	na	4.0	27.6	6.5	0.5	2.2	Outperform
Bnp Paribas	9.3	75%	-19%	0.6	-33%	na	3.9	54.6	8.8	0.2	2.3	Outperform
Ing Groep	9.6	77%	-19%	0.6	-39%	na	4.1	42.7	-0.1	-0.6	2.2	Outperform
Intesa Sanpaolo	10.7	86%	-30%	0.7	-29%	na	6.6	27.5	2.9	5.6	1.9	Outperform

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse estimates

We on the global equity strategy team like wealth managers and retail banks.

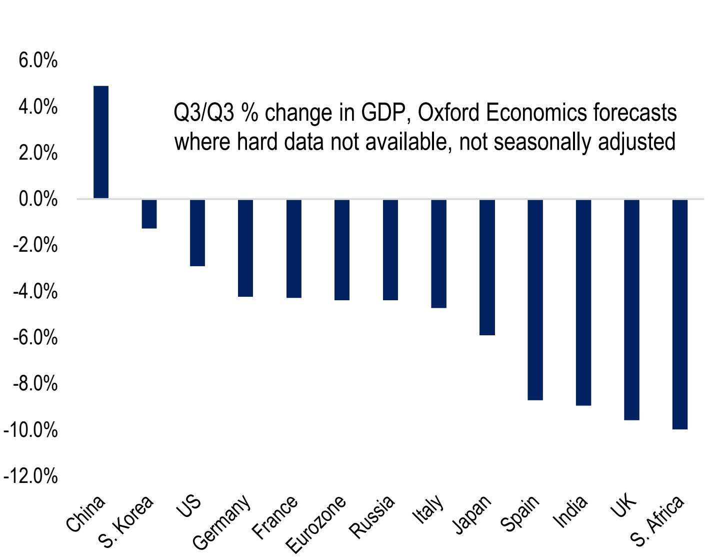
We particularly like retail banks for the following reasons:

- They are harder to disintermediate
- They are exposed to positive real estate trends
- They have huge cost-cutting potential as they continue to consolidate their branches
- The regulation tends to be easier on retail banks in contrast to investment banks

We particularly like mortgages banks in economies that experienced the biggest economic shock due to the coronavirus outbreak (Spain, the UK and Italy).

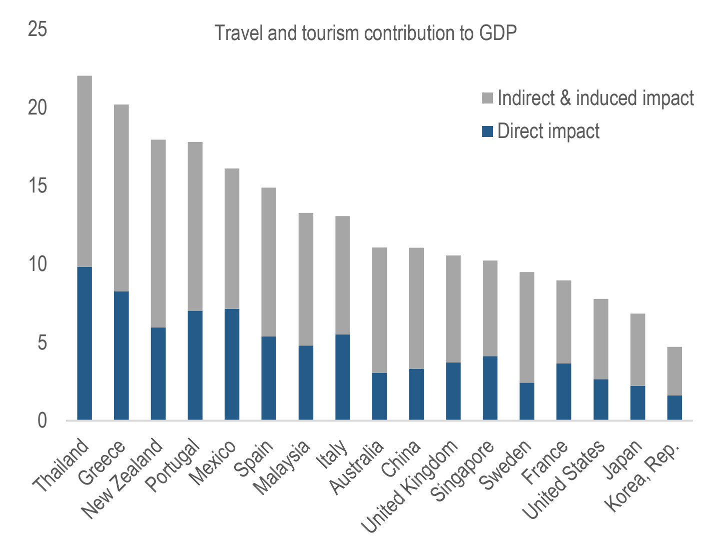
Spanish and Italian banks have the additional advantage that they are heavily tourism-exposed. As vaccines are distributed, this should enable a large bounce back in GDP in 2021.

Figure 312: Year-on-year fall in Q3 GDP



Source: Refinitiv, Credit Suisse research

Figure 313: Tourism exposure by country



Source: Refinitiv, Credit Suisse research

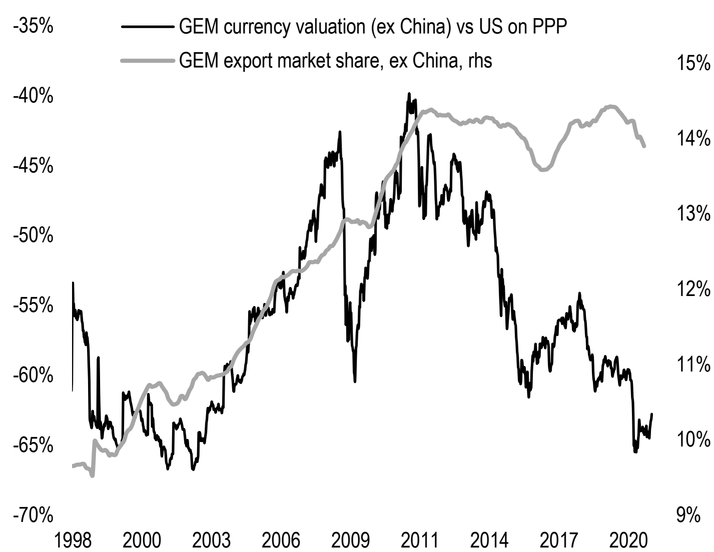
Last, Spanish banks also benefit from ongoing consolidation, making Spain our preferred country pick within banks. Our banks team has an Outperform rating on CaixaBank.

We like wealth managers such as Julius Baer given our positive view on equities, and we see wealth management as far less disrupted than asset management (as it is a relationship-driven business).

European banks with emerging-market exposure

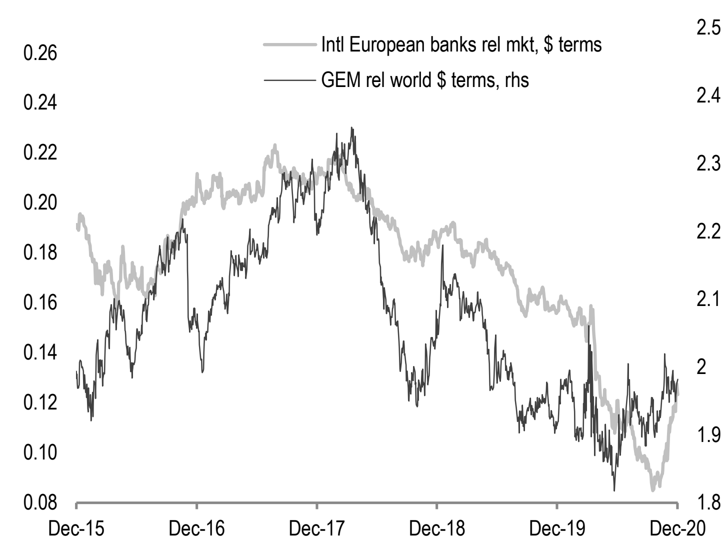
GEM-exposed banks might also be interesting (emerging markets are our biggest regional overweight). They tend to outperform when GEM currencies appreciate, and GEM currencies appear unusually cheap (a weaker US dollar, a fall in the TIPS yield and rise in inflation expectations are all also supportive of GEM). European banks with GEM exposure (about 35% of the index) have followed GEM performance closely but lagged behind the recent outperformance in EM.

Figure 314: Against PPP, GEM currencies (ex-China) are unusually cheap while export market share, a proxy on competitiveness, is close to its highs



Source: Refinitiv, Credit Suisse research

Figure 315: International European banks lagged behind the recent outperformance of EM



Source: Refinitiv, Credit Suisse research

Most GEM-exposed banks are trading at substantial discounts to our sum-of-the-parts calculations (except Swedbank).

Figure 316: On a regionally weighted P/B basis, most GEM-exposed banks appear inexpensive

Bank	Emerging market revenue exposure	YTD weighted price perf by regional exposure rel to resp. regional banks	Price to Book	PB disc/prem to the relevant bank sectors	Credit Suisse rating
Standard Chartered	92% (72% NJA, 20% Africa & Mid. East)	-21%	0.2	-77%	Neutral
Santander	45% LatAm (27% Brazil, 7% Mexico, 5% Chile, 4% Argentina, 2% others)	-14%	0.3	-65%	Neutral
BBVA	63% EM, 15% Turkey – 47% LatAm (29% Mexico, 5% Argentina, 5% Peru, 4% Colombia, 3% Chile)	-31%	0.3	-60%	Neutral
Citigroup	31.5% (15% Asia, 13% EMEA, 4% LatAm)	-8%	0.5	-55%	Outperform
HSBC	26% Hong Kong, 17% NJA, 8% LatAm	-16%	0.4	-54%	Underperform
Goldman Sachs	20% Asia (majority of which is China)	6%	0.9	-24%	Outperform
Swedbank	25% Eastern Europe	0%	1.2	1%	Neutral

Note: The discount/premium is calculated over the regional banks P/B ratios, weighted by the exposure of each bank to that region

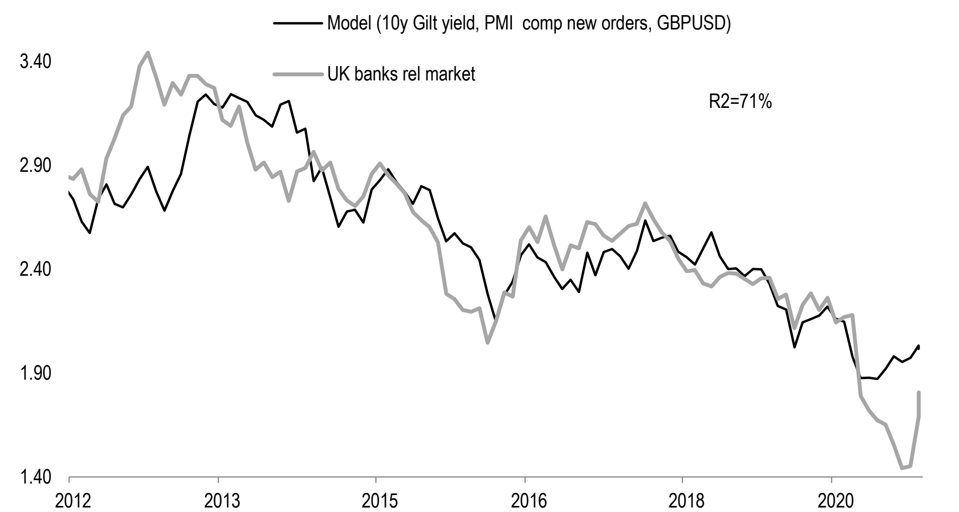
Source: Refinitiv, Credit Suisse estimates

UK banks

We like UK domestic banks assuming a Brexit deal. They have the following supports:

- **Performance model:** Our UK banks model based on gilt yields, PMIs and sterling explains around 71% of the performance of UK banks, and on this basis banks show about 10% upside.

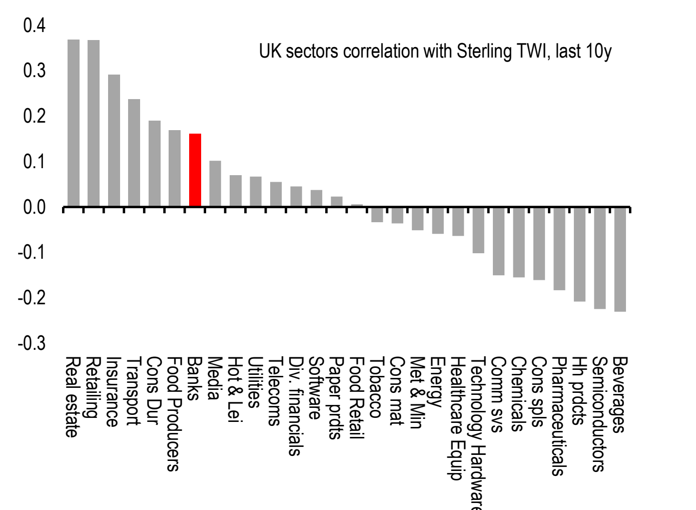
Figure 317: UK banks model



Source: Refinitiv, Credit Suisse estimates

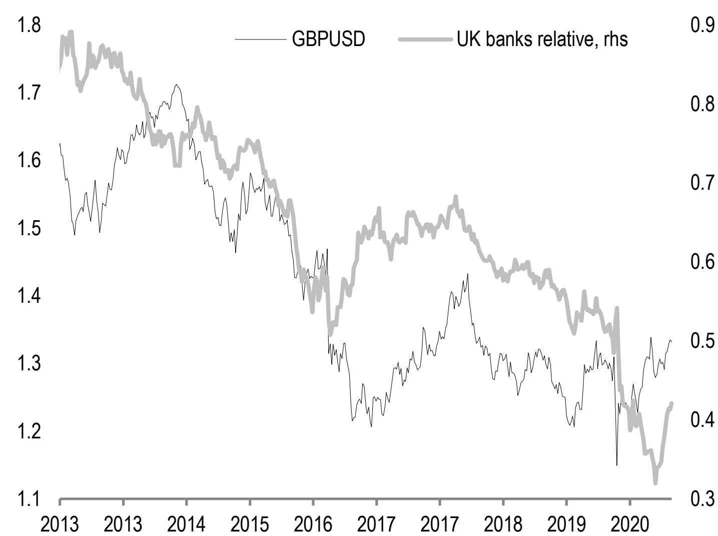
- **Top-down, an attractive industry structure:** UK banks operate within a very concentrated industry structure, are retail-focused (as discussed above, this is preferred because it is less disintermediated) and can mostly reprice their assets. The only other region that has these characteristics is Sweden, where banks trade on nearly double the price to book of UK banks.
- **Sterling:** We are bullish on sterling (see [2021 Research Outlook: Equities, Regions and Macro]) and clearly UK banks benefit from this.

Figure 318: Banks are highly correlated with TWI



Source: Refinitiv, Credit Suisse estimates

Figure 319: Banks and sterling have moved together

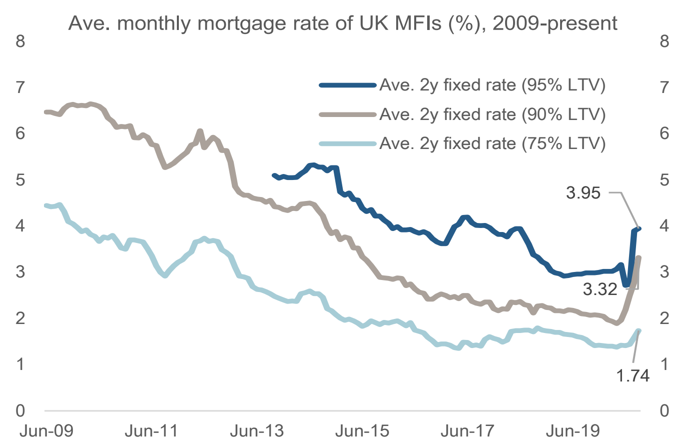


Source: Refinitiv, Credit Suisse estimates

- **Litigation:** Nearly all the litigation risk appears to be in the past (the last PPI miss-selling claims had to be completed by end-August 2019). In the UK, PPI cost nearly £53bn, which was around one-third of pre-provisioning profits over the past five years.
- **Rising mortgage rates:** Mortgage rates in the UK are rising, helping net interest margins. In addition, UK house prices are up 6.5% yoy, limiting the risk to mortgage NPLs.

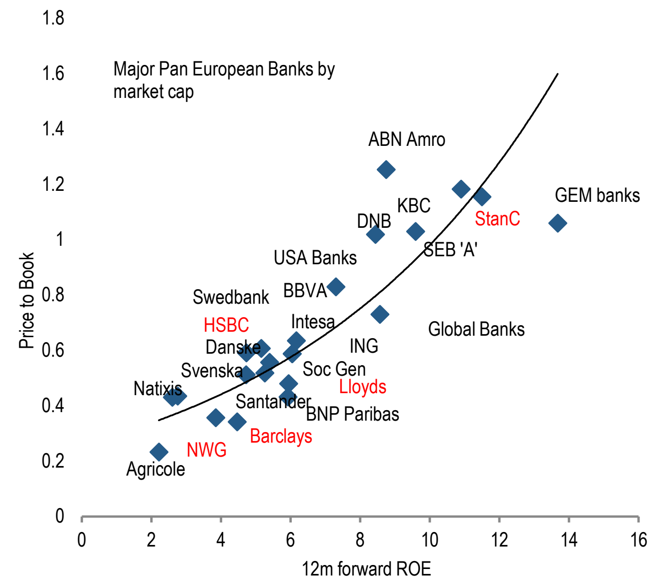
We acknowledge that UK banks do not look particularly cheap versus their peer group.

Figure 320: Mortgage rates are rising



Source: Refinitiv, Credit Suisse estimates

Figure 321: Price to book versus RoE for banks



Source: Refinitiv, Credit Suisse estimates

The screen below shows UK banks covered by Credit Suisse analysts. We particularly like Lloyds, which is rated Outperform.

Figure 322: UK banks under CS coverage

Name	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Barclays	10.3	83%	-12%	0.4	-43%	na	2.1	3.7	75.3	1.5	2.3	Neutral
Hsbc Holdings	12.8	103%	-16%	0.7	-60%	na	2.2	-10.1	8.5	-0.5	3.4	Underperform
Lloyds Banking Group	12.3	99%	-7%	0.6	-51%	na	0.6	-4.7	0.1	-1.6	2.3	Outperform
Natwest Group	16.6	134%	7%	0.5	-37%	na	0.0	-11.8	nm	-0.3	2.7	Neutral
Standard Chartered	11.0	88%	-32%	0.3	-75%	na	1.4	39.6	11.1	-1.0	2.5	Neutral

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse estimates

Telecoms: raise to small overweight

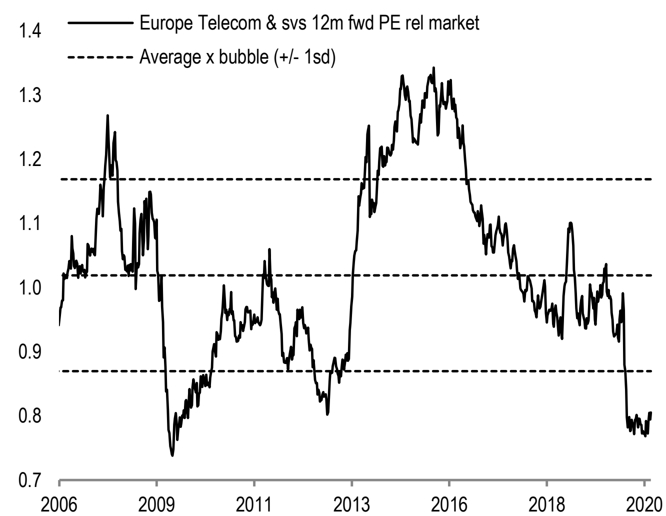
The telecoms sector has been perceived as something of a value trap in recent years, with concerns about high capex and underwhelming free cash flow generation and structural disruption weighing on performance. We now find this sector abnormally cheap, at a time when it is becoming less value-destroying, while there is perhaps more cyclicality than investors realise and earnings revisions are at levels where they normally trough. There are a number of factors that make the telecoms sector particularly interesting, in our view:

1. **Valuations have become too extreme**

On simple P/E relative to the market, the sector has reached the 2010 trough, which represented a point of maximum pessimism on defensive sectors. It is also notable that the sector's free cash flow yield relative to the market is now once again picking up to a meaningful premium once again. On consensus, the FCF yield of the sector is over 10%, as shown in the second chart below, though our telecoms team forecasts a FCF yield on 2021 estimates of nearly 8% after making a series of adjustments.

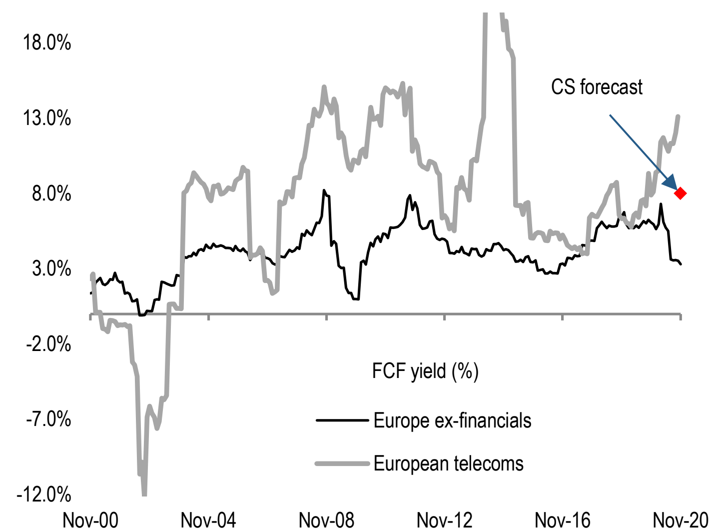
The sector has not offered this kind of free cash flow generation in either absolute or relative terms since at least 2015, and we discuss the improving outlook for free cash flow generation in more detail below.

Figure 323: The P/E relative of the telecoms sector is back down to its 2010 low



Source: Refinitiv, Credit Suisse research

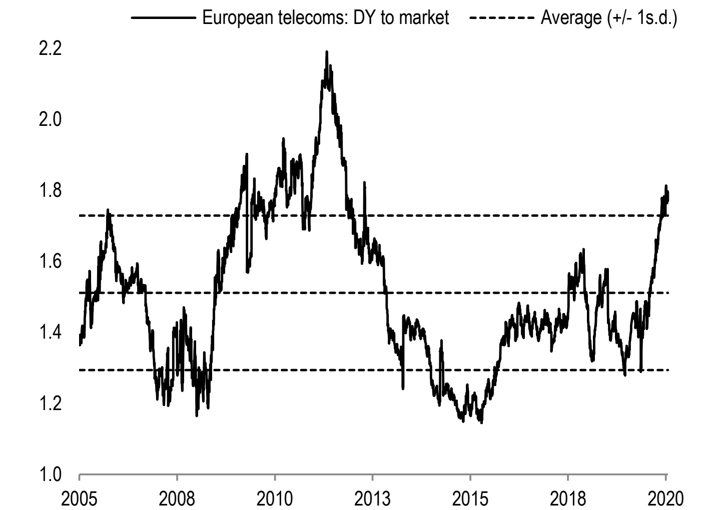
Figure 324: The sector is now offering a meaningful free cash flow yield premium to the market for the first time since 2015



Source: Refinitiv, Credit Suisse research

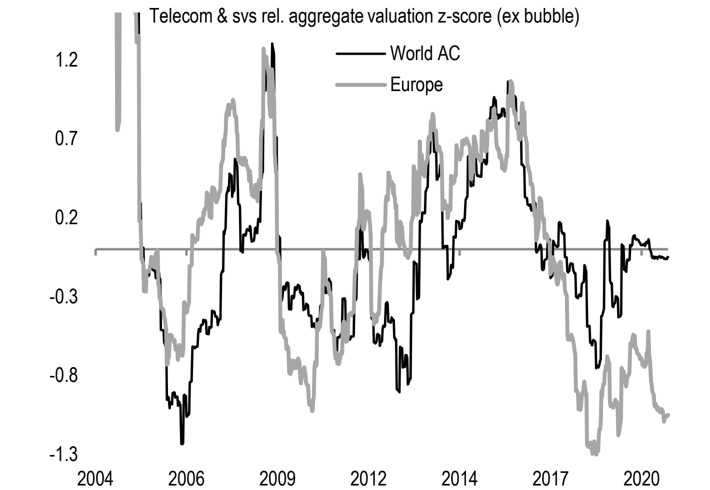
Other simple valuation measures paint the same picture: the sector's dividend yield relative is more than one standard deviation above average, while our composite valuation measure is, like the P/E, back to 2010 lows.

Figure 325: The DY relative of the sector is more than 1 standard deviation above average



Source: Refinitiv, Credit Suisse research

Figure 326: Our composite valuation measure is back down to 2010 lows



Source: Refinitiv, Credit Suisse research

This valuation is being underpinned by a sum-of-the-parts valuation. Our telecom team, for example, highlights that DT trades on a 45% discount to its sum of the parts. The FCF yield on Vodafone once it has spun its tower divisions is likely to be around 13% (assuming the tower business trades on a similar multiple to peers, at 20x EBITDA).

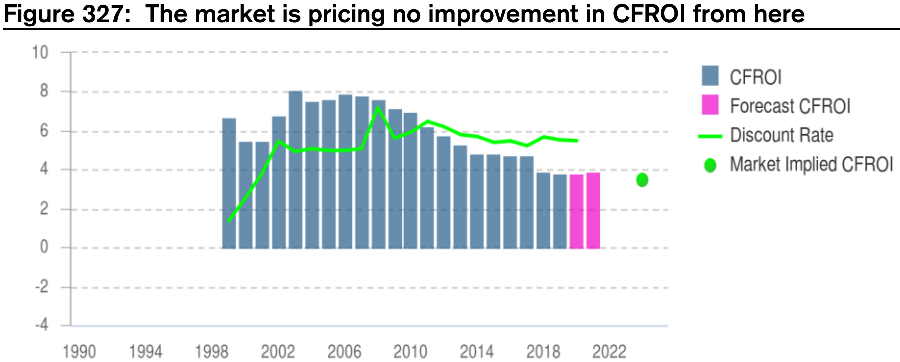
Being taken private shows value

Private equity firms, which have significant dry powder and perhaps longer time horizons, appear to increasingly see value in the sector. Recent quarters have seen some significant deals taking telecoms private: we saw MasMovil, Altice and TalkTalk all being taken private at 20% to 25% premiums.

2. **Why is the sector becoming less value-destroying?**

We acknowledge that this sector has been value-destroying, but it is priced to be so, with the market implying no improvement in CFROI; HOLT identifies 20% upside to fair value, assuming 1.2% asset growth and stable CFROI at around 4%.

Figure 327: The market is pricing no improvement in CFROI from here



Source: Credit Suisse HOLT

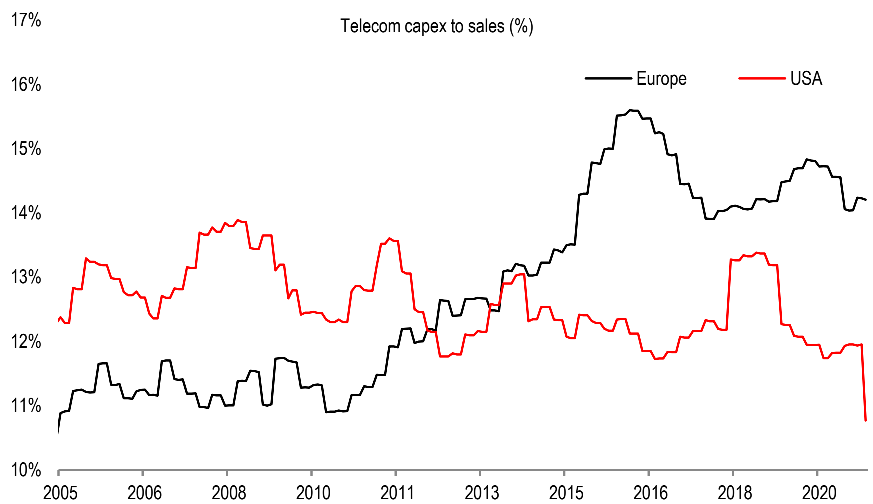
The upside to telecom multiples if the industry becomes less value destroying can be seen in the case of Elisa, the Finnish operator. Owing to its regulatory and competitive backdrop it is able to trade on c12x 2020E EBITDA compared to c5.5x EBITDA for the whole industry.

For the reasons highlighted below the sector might be becoming less value-destroying.

i. Capex to sales close to peaking

One of the big problems for the sector in the last decade has been the steady rise in capex to sales, depressing free cash flow. As the chart below highlights, the capex to sales ratio for European telecoms is much higher than that of US telecoms, and now on a declining path. Our team believes that France, Italy, Spain and Scandinavia have all passed the peak of their fibre build, which should then feed through into improving FCF. Our telecoms team forecasts that capex to sales for the sector will decline by 2 percentage points from its peak in 2019 over the coming 2 years. This should boost the sector FCF yield by 2024 by another 1.3p.p.

Figure 328: Capex to sales has scope to fall further in Europe



Source: Refinitiv, Credit Suisse research

ii. More scope for consolidation and a more favourable regulatory environment

This of course has been talked about many times, but we do find it encouraging that the ECJ overruled the 2016 decision to block the merger between O2 and Three in May. Also, European Competition Commissioner Margrethe Vestager has said she would be open to more cross-border M&A. She was quoted by the FT on 25 June as saying: "In a single market we would not consider it to be controversial if European businesses consolidate. In some sectors, there is indeed room for cross-border consolidation, the telco sector in particular, because here we still have very national markets. It would be good to have more pan-European players."

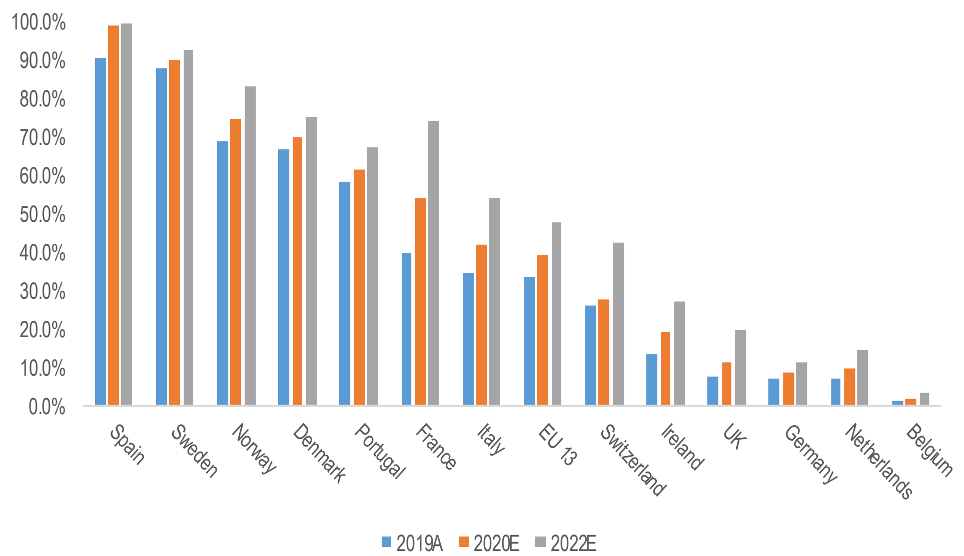
On the regulatory side, in the case of fibre, there tends to be no regulated wholesale pricing. The regulatory disadvantage for the incumbent is now considerably reduced (previously a wholesale price regime had been imposed that allowed 'virtual' operators to buy capacity more cheaply than it was being sold by the incumbent). It may be the case that EU regulators are realising that the regulatory regime has left the EU behind in many countries in 5G and fibre compared to global peers, after the EU had a lead in 2G and 3G.

iii. The fightback of incumbents

One of our previous concerns had been the extent of challenger fibre disrupting incumbents' business models. In parts of Scandinavia and Spain, the fibre challengers pass around 90% or more households (and these challengers are in some instances unquoted).

This threat now seems to be receding. If we look at the UK, BT was relatively late in its fibre build, but it is now responsible for around two-thirds of new fibre build, according to our telecoms team. Our team forecasts that by 2022, new entrants will still have only 50% fibre to the home coverage across the EU.

Figure 329: Our telecoms team forecasts that by 2022, new entrants will still have only 50% fibre to the home coverage
(chart shows % coverage by new entrants of fibre to the home market)



Source: Credit Suisse European telecoms team

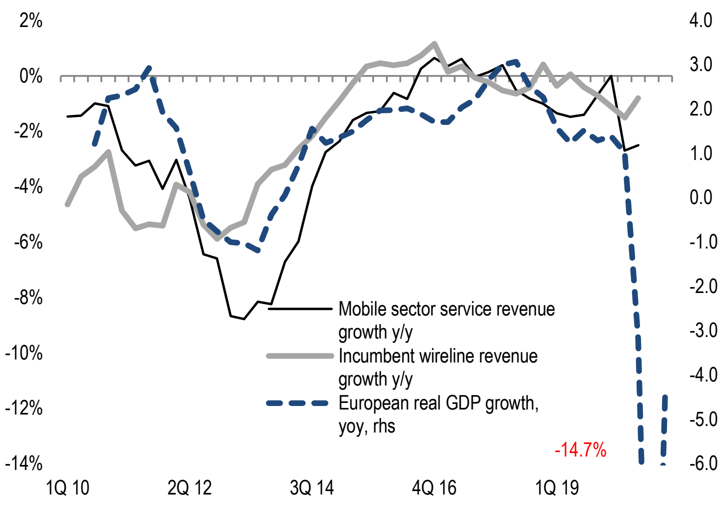
3. Macro might be a bit more supportive than it first appears for a defensive sector

While next year will clearly be a year of economic recovery, and thus might not appear a conducive backdrop for telecoms, we still believe there is scope for engagement for the following reasons:

- There may be a bit of proxy cyclicality from the vaccine

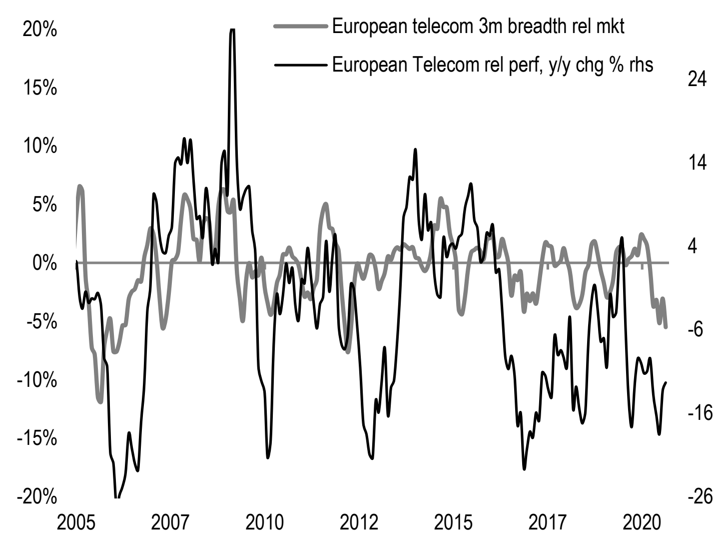
For mobile (which is about 60% of the market cap of the European universe), B2B is around 30% of total revenue and the beta of mobile revenue to GDP has been around 2x (as employment growth puts people onto corporate contracts, leading them to spend more). This is why mobile revenue tends to lag GDP by six months, as we can see below.

Figure 330: There is cyclicality to the sector's revenue growth, and thus scope for the sector to participate in an economic bounce-back in 2021



Source: Refinitiv, Credit Suisse research

Figure 331: European telecoms earnings momentum has been poor, but appears to be reaching levels at which it troughs



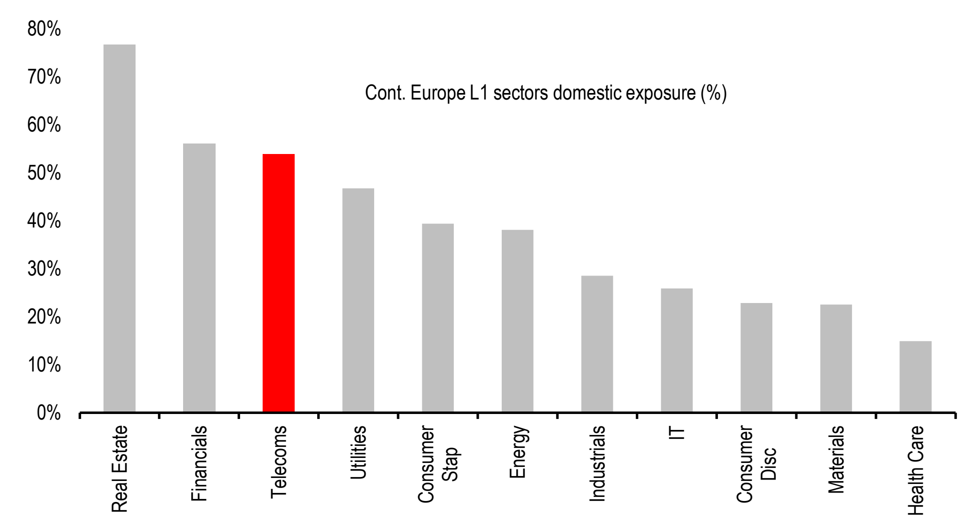
Source: Refinitiv, Credit Suisse research

This time around there is another tailwind, which is roaming charges. Although this accounts for only a small proportion of the revenue (2%), historically it has been very high-margin and thus accounts for c5% of EBITDA. This would be expected to return as tourism comes back in a significant way in 2021.

- A relative winner from euro strength among defensives

Unlike some of the other defensive sectors, such as pharma or food producers, telecoms do not derive a significant proportion of their revenues from overseas, and indeed the sector has been becoming if anything more domestic thanks to divestments. As a result, we would expect telecoms to suffer less from euro strength than most of the other defensive components of the market.

Figure 332: Telecoms have a relatively high share of revenues from Europe, which should make them somewhat more resilient to euro strength



Source: Refinitiv, Credit Suisse

4. Relative earnings revisions are at levels where they normally trough

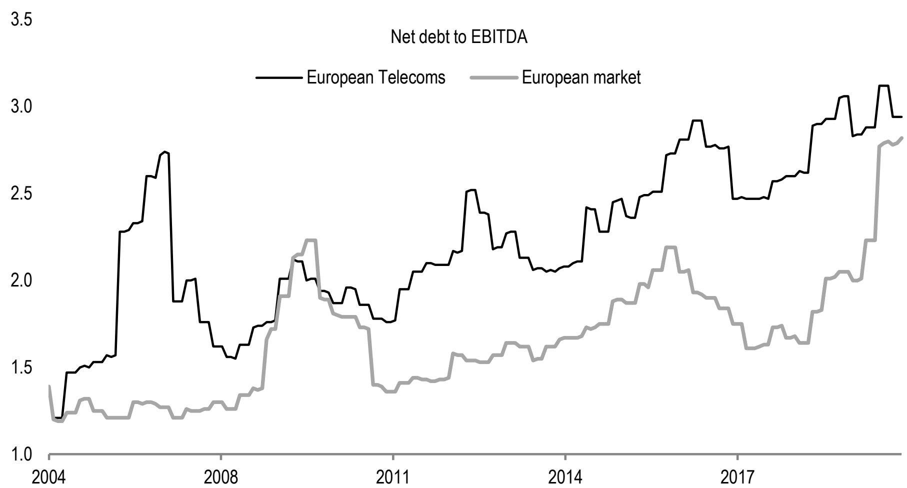
As the second chart above shows, the sector moves closely with earnings revisions, and these appear to have declined to levels at which they normally trough.

5. Financial leverage should not be a problem

Telecoms is one of the more leveraged sectors in the European market, with net debt/EBITDA now at 3x. We can see below that telecom leverage is no longer extreme. Moreover, high leverage is negative if the real cost of corporate debt rises, but positive if it falls.

We continue to believe, as discussed in the inflation section, that the real cost of corporate debt will fall from here, particularly with the ECB and Fed now proactively buying up corporate debt.

Figure 333: Leverage of the sector is no longer particularly extended when compared to the rest of Europe



Source: Refinitiv, Credit Suisse research

Equity FCF yields all appear high (this is of course after interest payments to service the debt), but that could be misleading given the companies' relatively high leverage. Our team notes that, at on an enterprise FCF to EV basis, valuations are still mostly attractive across the sector (with a sector FCF to EV yield of 5.9% in 2021 and 6.8% in 2022).

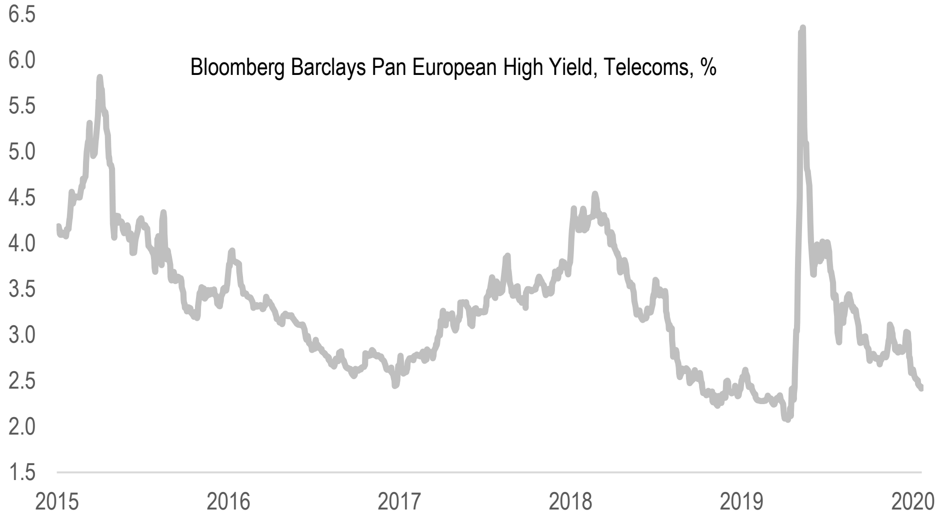
Figure 334: FCF to EV still shows the sector to be fairly attractively valued

	Adjusted equity FCF yield		Enterprise FCF/EV	
	2021	2022	2021	2022
Proximus	3.90%	3.80%	3.20%	2.90%
BT	5.50%	6.70%	4.90%	5.20%
DT	7.70%	10.80%	5.50%	6.70%
Orange	7.80%	10.30%	5.50%	6.40%
KPN	8.60%	10.10%	6.60%	7.40%
TEF	9.20%	9.70%	4.90%	4.90%
Telia	6.40%	6.90%	5.50%	5.90%
Telenor	7.50%	8.40%	6.00%	6.40%
Vodafone	9.90%	11.60%	6.50%	7.20%
Aggregate	7.70%	9.40%	5.90%	6.80%

Source: Refinitiv, Credit Suisse research

Even for the sub-investment grade part of the sector, borrowing costs are close to previous lows, as shown below.

Figure 335: High yield borrowing costs for telcos in Europe are close to historical lows



Source: Refinitiv, Credit Suisse research

Risks

The structural disruptive risks we have highlighted before could still dominate:

i. New forms of telephony (wireless or 5G), which usually end up cannibalising the old business models;

ii. The new entrants typically have no legacy costs or legacy network to maintain;

iii. The new entrants also have regulatory advantages (and regulators have in the past often forced incumbents to rent to altnets on lower prices than the incumbents' retail price);

iv. Often the new entrant is not quoted (e.g. private equity in fibre or in a different sector, such as utilities), therefore the 'market cap' of telecoms moves out of the quoted market;

v. Because spectrum is rented in Europe and not owned, the weaker companies have to continue to operate down to marginal cost (which is zero);

vi. Often diversification into content can be risky (e.g. overpaying for content).

What looks attractive?

Among the major European operators, our team has Outperform ratings on BT, Vodafone, DT, KPN and Orange.

Figure 336: European telecoms under CS coverage

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Altice Europe	-10.9	nm	na	-1.7	na	6.0	0.0	-66.8	nm	-0.1	2.6	Neutral
Bt Group	7.0	55%	-52%	0.9	-96%	19.7	-1.4	135.2	1.9	-0.3	2.3	Outperform
Cellnex Telecom	634.1	4963%	547%	5.0	-44%	0.6	0.1	-63.6	-126.9	1.5	2.0	Outperform
Deutsche Telekom	13.8	108%	-36%	2.3	-14%	12.0	4.0	40.2	-6.8	4.7	1.8	Outperform
Elisa	21.2	166%	-14%	6.2	3%	4.6	4.3	8.9	-0.8	-0.1	3.2	Neutral
Iliad	27.5	215%	-24%	2.0	-56%	-3.2	1.5	-32.0	8.1	0.6	2.6	Neutral
Infrastrutture Wireless	51.3	401%	25%	4.1	26%	2.2	2.9	-89.3	-18.2	-0.8	1.8	Outperform
Kpn Kon	18.7	147%	-39%	5.3	-8%	6.0	5.2	-30.2	-2.5	-0.2	2.2	Outperform
Orange	9.8	77%	-40%	1.1	-35%	8.2	6.4	14.1	0.1	0.3	2.0	Outperform
Proximus	11.5	90%	-42%	2.1	-43%	6.1	6.8	62.5	1.6	-0.2	3.1	Underperform
Swisscom 'R'	17.0	133%	-20%	2.8	-44%	5.0	4.6	29.1	0.4	0.1	3.3	Underperform
Telefonica	8.4	66%	-45%	1.2	-63%	17.4	9.7	5.8	-13.6	-1.7	2.4	Neutral
Telefonica Dtl.Hldg.	164.0	1283%	24%	1.1	-35%	17.0	7.2	32.5	nm	0.6	2.3	Outperform
Telenor	13.9	109%	-28%	5.7	13%	8.8	6.0	23.9	1.8	-0.5	2.3	Neutral
Tele2 B	17.1	134%	-31%	2.1	-27%	6.2	6.6	-6.8	8.6	0.1	2.0	Outperform
Telia Company	18.1	141%	0%	1.6	-33%	6.2	6.0	15.2	1.6	-0.5	2.9	Underperform
United Internet	15.8	124%	-34%	1.4	-85%	10.4	1.6	24.7	-5.8	0.1	2.3	Neutral
Vodafone Group	16.6	130%	-41%	0.4	-58%	6.2	6.2	41.5	4.2	-0.3	2.0	Outperform
Orange Belgium	19.5	152%	-17%	2.2	-42%	14.3	2.7	45.0	7.0	-0.1	2.2	Outperform
1&1 Drillisch	12.9	101%	-52%	0.8	-82%	7.0	0.2	59.2	-16.4	1.2	2.5	Underperform
Nos Sgps	11.4	89%	-59%	1.7	-54%	5.5	8.8	21.7	3.8	-0.4	2.1	Neutral
Talktalk Telecom Group	18.1	142%	-14%	2.7	-70%	8.4	2.6	-9.0	-4.7	-0.9	3.4	Underperform

Source: IBES, MSCI, Refinitiv, Credit Suisse HOLT, Credit Suisse research

Alcoholic beverages: reduce to small overweight

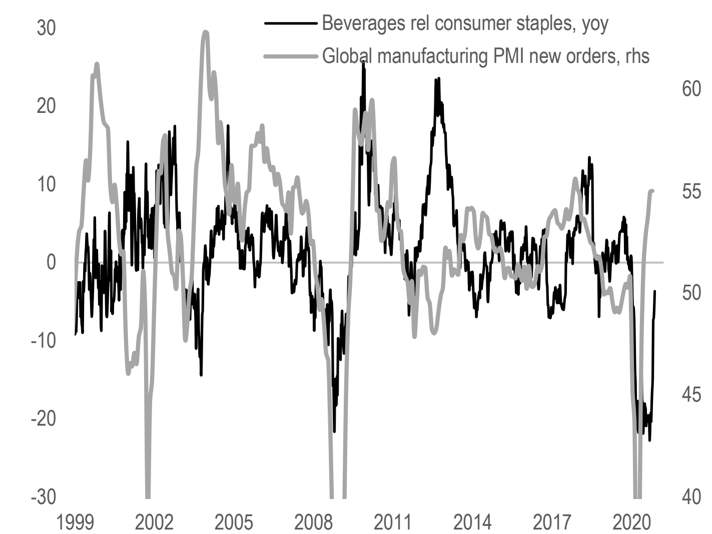
We reduce weightings to a small overweight because in the past month a lot of the extremes of valuation have disappeared. We still want to be overweight as:

Cyclical exposure within consumer staples

Spirits and beer are a way to gain exposure to normalisation of consumption as we get herd immunity around mid-year in most DM. Around half of sales come from drinking on-trade and, for spirits, duty free can be an important source of revenues.

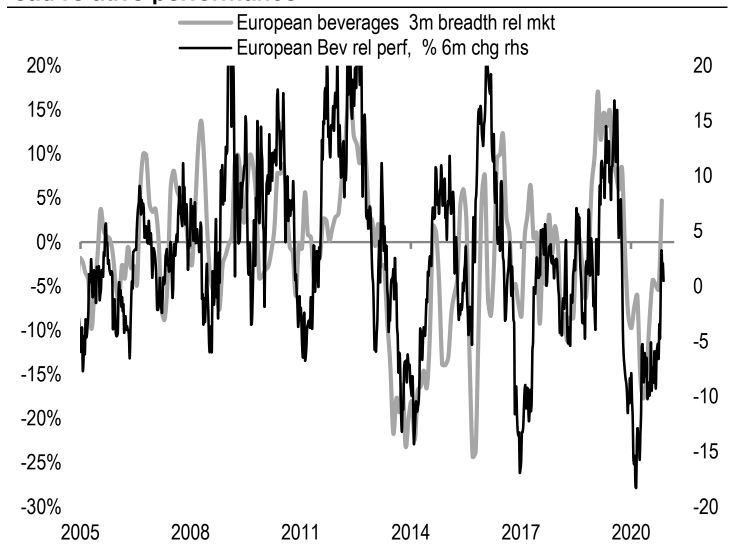
Normally, a rise in PMIs sees spirits/beers outperform other consumer staples (indeed, we think they should have outperformed by more against the rest of the consumer staples given where PMIs are). This has not happened this time around, owing to the limited re-opening of bars.

Figure 337: Beverages tends to outperform the rest of the consumer staples when PMI picks up



Source: IHS Markit, Refinitiv, Credit Suisse research

Figure 338: European beverages' relative earnings revisions lead relative performance



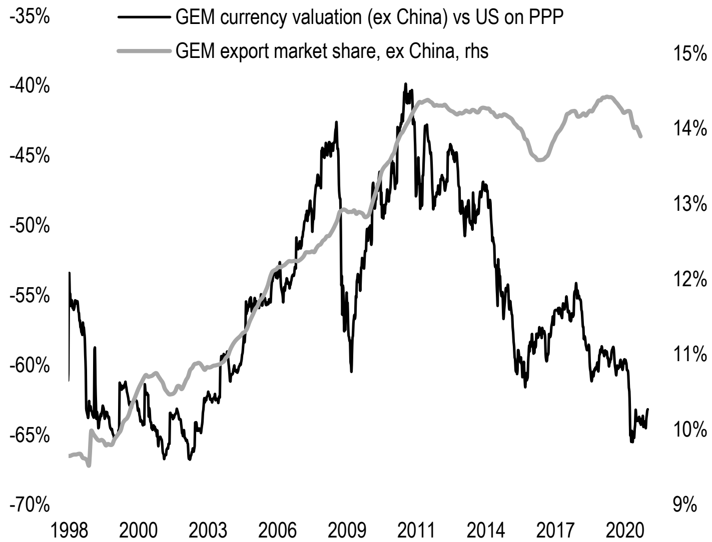
Source: Refinitiv, Credit Suisse research

GEM exposure

On average, 55% of beverages sales come from GEM. As highlighted in our Thematic section, the GEM currencies in aggregate look abnormally cheap at a time when the basic balance of payments surplus is close to a 20-year high.

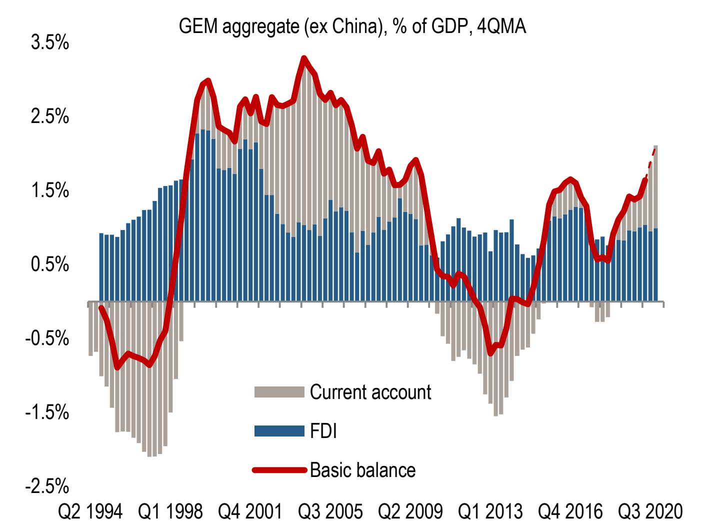
A rise in GEM currencies (especially in LatAm) helps to reduce the value of external debt of local subsidiaries as well as increasing the purchasing power of the consumers.

Figure 339: GEM currencies are, in aggregate (GDP weighted), around 30pp cheap when compared with their global export market share…



Source: Refinitiv, Credit Suisse research

Figure 340: …GEM countries (ex-China) have a basic balance of payments surplus

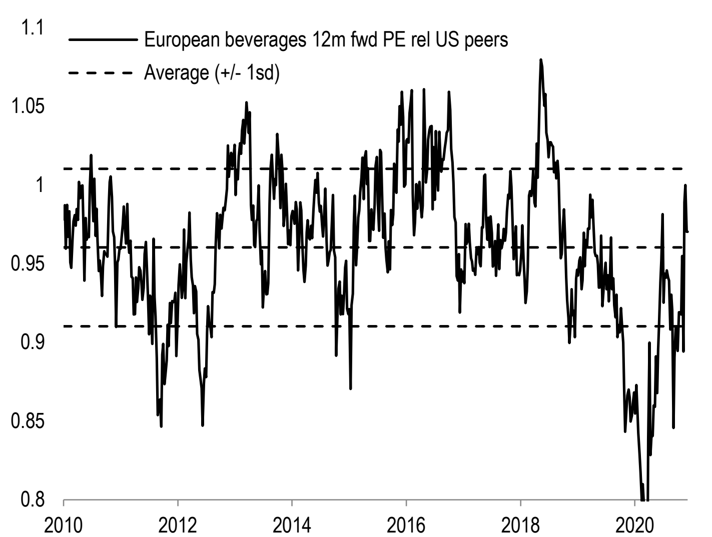


Source: Refinitiv, Credit Suisse research

Value

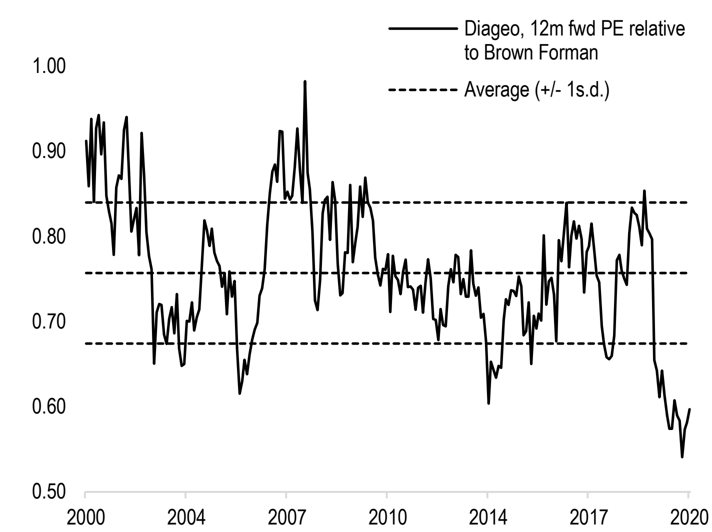
The European beverages companies may in aggregate have normalised versus their US peers on 12m forward P/E, but in some instances (Diageo versus Brown-Forman), the discount is still abnormally high.

Figure 341: European beverages names in aggregate no longer look cheap relative to their US peers on 12m fwd P/E…



Source: Refinitiv, Credit Suisse research

Figure 342: …but in some stances (such as Diageo vs Brown-Forman), the discount remain large



Source: Refinitiv, Credit Suisse research

More importantly, this is a particularly cheap way of accessing GEM exposure. If we put the emerging market earnings on the same multiple as those of the quoted subsidiaries, we find that the developed-market exposure trades on single multiples for ABI and Heineken.

Figure 343: Listed names versus their EM subsidiaries

European Beverages	Listed companies and its subsidiaries/associates	GEM sales exposure	12m fwd PE	Average GEM PE/ main PE	Implied Developed Market P/E	12m fwd PE relative to local markets
Diageo	Diageo UK	42.5%	25.22	174%	11.47	1.48
	United Spirits (India)		47.92			2.17
	Sichuan Swellfun (China)		39.75			2.62
ABI	ABI (Belgium)	65.0%	20.73	155%	-0.56	1.22
	AMBEV (Brazil)		21.12			1.72
	Budweiser APAC		43.26			2.63
Heineken	Heineken (Netherlands)	55.0%	26.10	165%	5.33	1.53
	Heineken Malaysia		23.72			1.52
	United Breweries (India)		61.33			2.77
	China Resources Beer (China)		44.24			2.92
Carlsberg	Carlsberg (Denmark)	52.0%	21.24	126%	15.26	1.25
	Carlsberg Malaysia		26.76			1.72

Source: Refinitiv, Credit Suisse research

Structurally, we prefer spirits

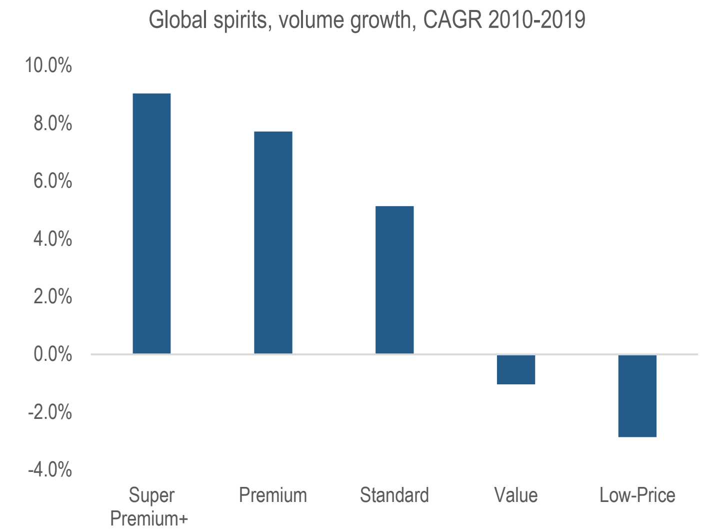
We like the spirits structurally for what we see as their big advantages:

- In the past decade, global premium spirits volume growth has been 9% CAGR.
- Ageing creates a barrier to entry, a disciplined supply, and underpins the value of the corporate (CS beverages analyst Sanjeet Aujla sees strategic inventory representing 58% and 38% of the gross investment base for Remy and Pernod, respectively).
- In term of brown spirits, if a product does not sell, its value can rise (or at least not fall).
- There tends to be a high income elasticity of demand for spirits, unlike beer, especially in emerging markets. As people become richer, they tend to drink more spirits and more ‘prestige’ brands.
- The penetration rate of Western spirits in China is very low (just c3%).
- It might be the case that President-elect Biden will look to reduce tariffs on spirits with the EU; he has spoken favourably about Europe, with his advisor saying he will end the “artificial trade war” with the EU (FT, 22 Sep).
- A key issue is the decline in the amount of alcohol consumption, but this is being offset by premiumisation (See European Beverages: 2020 Outlook – In Higher Spirits, 10 Jan).

Figure 344: Global total volume has been declining

Source: Credit Suisse European Beverages research

Figure 345: Premium spirits have seen superior growth over the past decade



Source: Credit Suisse European Beverages research

We highlight below the Outperform- and Neutral-rated alcoholic beverages names.

Figure 346: European Outperform- and Neutral-rated alcoholic beverages names

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %				
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS rel industry	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Anheuser-Busch Inbev	22.2	91%	-19%	1.7	-55%	3.3	1.2	-53.6	-52.4	12.1	2.6	2.4	Neutral
Carlsberg B	21.2	87%	-11%	3.2	28%	4.1	2.2	-26.1	-31.3	7.2	-0.1	2.0	Outperform
Coca-Cola Hbc	18.9	77%	-34%	3.7	-4%	0.4	2.0	-65.8	-8.8	2.0	-1.9	1.9	Outperform
Diageo	24.7	101%	-8%	10.1	14%	3.3	2.3	-42.8	-3.6	0.8	1.0	2.3	Outperform
Heineken	26.7	109%	4%	3.3	-13%	2.0	1.1	-26.2	41.4	-9.5	-0.9	2.5	Outperform
Pernod-Ricard	27.1	111%	2%	2.9	5%	3.4	1.7	-29.8	13.4	-3.1	-4.7	2.4	Neutral

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

Mining: strong overweight

Mining, especially copper, appears to fit our current investment criteria. Mining continues to be one of our top three overweights, and copper continues to be one of our favourite ESG themes.

We stay a strong overweight mining because:

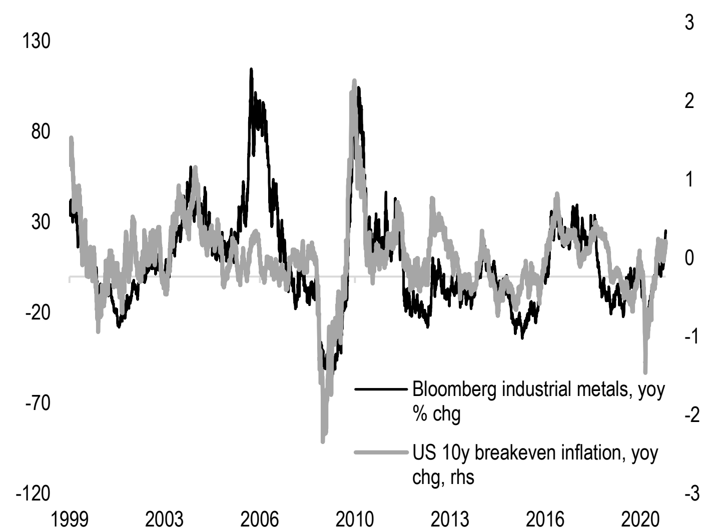
1. **It offers real asset exposure**

Commodity prices tend to rise with inflation expectations, therefore mining acts as an inflation hedge (see the front section of this report on inflation).

2. **It benefits from a weaker US dollar**

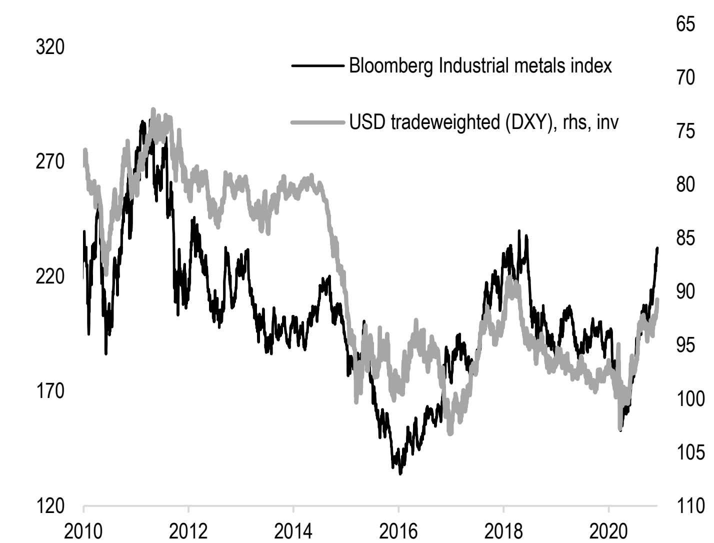
Industrial commodities benefit from dollar weakness (because less than 10% of copper demand comes from the US). Further, a weaker US dollar is good for global growth, with around 62% of FX reserves in dollars.

Figure 347: Commodity prices clearly move with inflation expectations



Source: Refinitiv, Credit Suisse research

Figure 348: Commodities benefit from dollar weakness

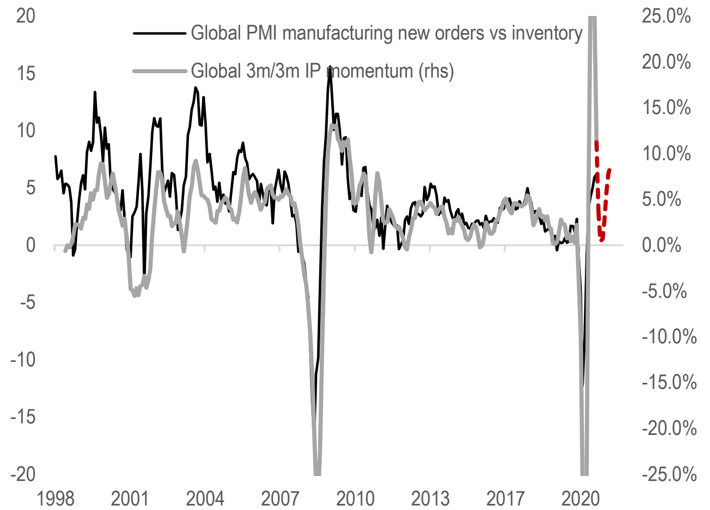


Source: Refinitiv, Credit Suisse research

3. **Drivers of demand should remain robust or accelerate**

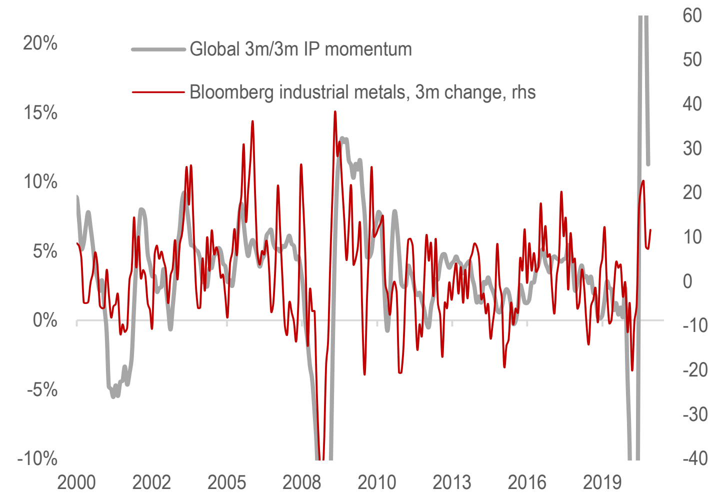
Metal prices are primarily driven by global IP and global investment growth. Our economists expect global IP growth in 2021 to recover to 8% yoy on average for 1H 2021 versus current IP growth of minus 1.2% yoy and G3 investment growth to be 4.2% in 2021 versus -3.5% Q3 yoy. We can see below, for example, that global PMI new orders versus inventories imply IP momentum to stay strong; industrial commodity prices in turn rise when global IP momentum is above 3% quarterly annualised.

Figure 349: Global PMI new orders vs inventory is consistent with IP to stay relatively strong…



Source: Refinitiv, Credit Suisse research

Figure 350: …if IP growth is above 3%, then industrial commodity prices rise



Source: Refinitiv, Credit Suisse research

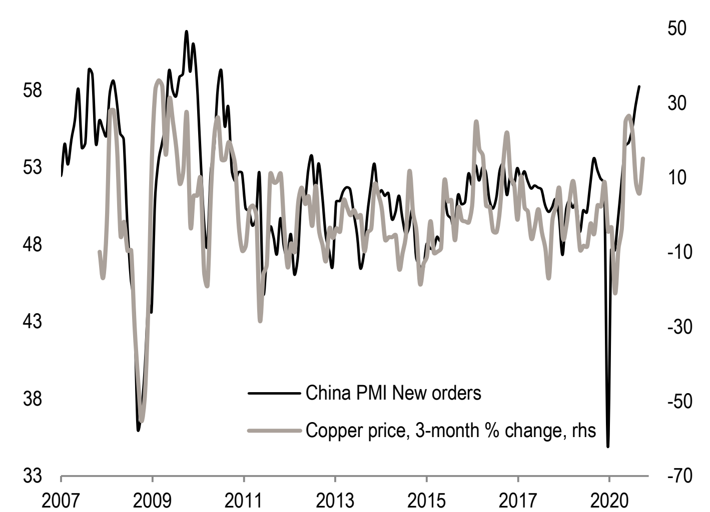
We consider the key drivers below:

- China exposure

The current level of China PMIs is consistent with a strong rise in copper prices. FAI was up strongly year-on-year, first led by infrastructure investment, and most recently by real estate FAI. CS economists expect real estate investment to accelerate from 4.1% this year to 6.5% in 2021, despite recent tightening measures (see *China: Three outlooks on real estate,* 2 Dec). Overall, our economists think total FAI will be in low double-digit growth in 2021, led by a recovery in manufacturing FAI, followed by real estate and infrastructure.

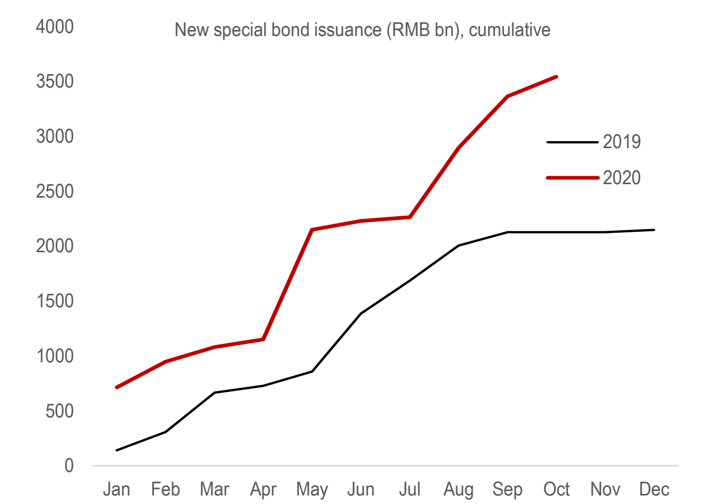
Lead indicators of infrastructure (e.g., special bond issuance), money supply growth and TSF growth all remain very strong.

Figure 351: The 3-month rate of change in copper tends to move with China PMIs



Source: IHS Markit, Refinitiv, Credit Suisse research

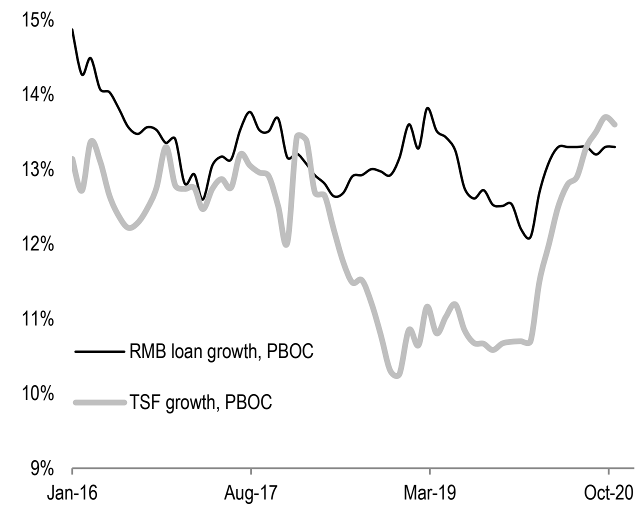
Figure 352: Special bond issuance is up strongly this year



Source: Refinitiv, Credit Suisse research

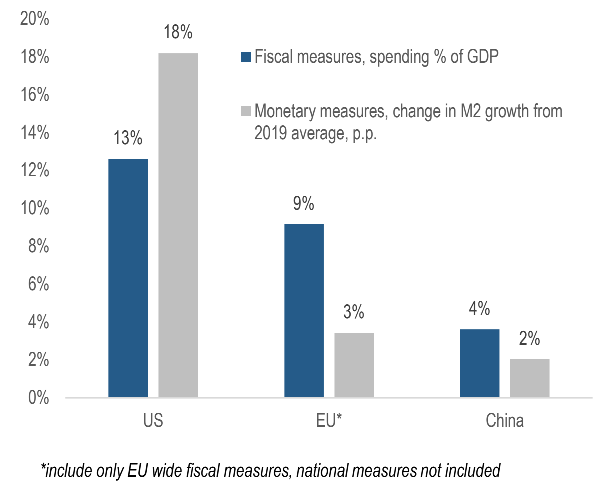
As we highlight in the GEM section, China has seen a normalisation in IP (up 6.9% yoy) and services. This is despite a much lower fiscal and monetary boost than elsewhere. Moreover, surprisingly, China's trade and current account surplus has increased (as export market share has risen). Therefore, Chinese growth is not relying on foreign capital (rather the reverse).

Figure 353: TSF growth has stayed strong in China



Source: Refinitiv, Credit Suisse research

Figure 354: China has a much lower fiscal and monetary boost than elsewhere



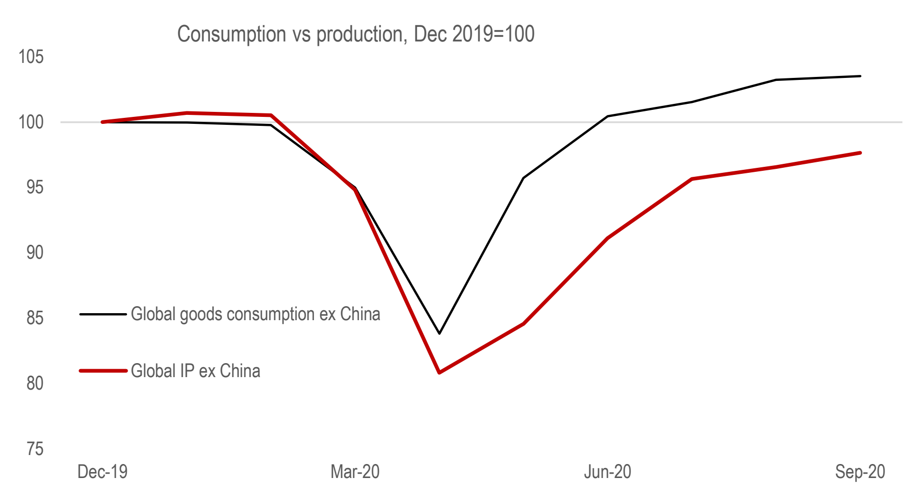
Source: Refinitiv, Credit Suisse research

■

■ IP recovery exposure versus consumption

■ Global IP has lagged behind global consumption, and we believe the two have to meet (for supply to meet demand; otherwise we would expect rampant inflation). Therefore, we favour being overweight industrial cyclicals.

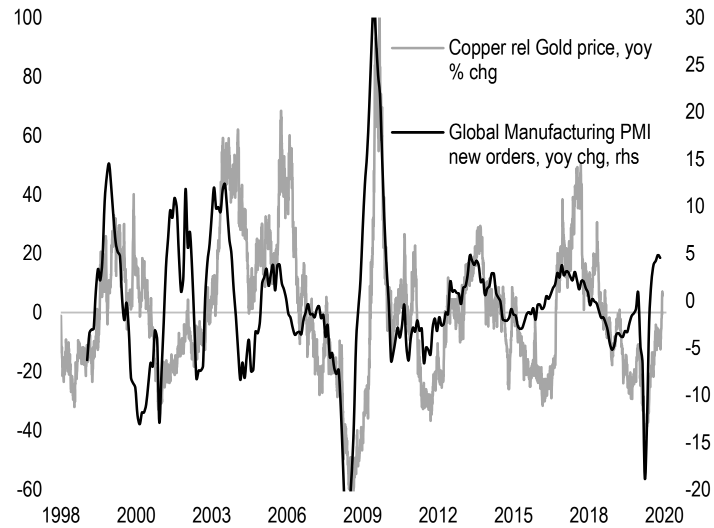
Figure 355: Global IP has lagged behind global retail sales



Source: Credit Suisse Global Economics research

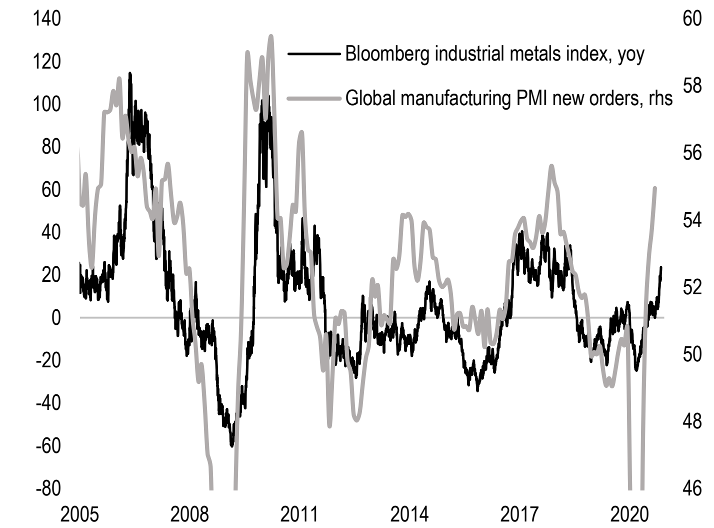
Copper should have outperformed gold by more, given the rise in global PMIs (it has risen largely because it is a store of value). We can also see that industrial commodities normally do better when PMIs are this strong.

Figure 356: Copper outperforms gold as PMIs rise



Source: IHS Markit, Refinitiv, Credit Suisse research

Figure 357: Industrial commodities should have done better given PMIs



Source: IHS Markit, Refinitiv, Credit Suisse research

- Global (green) infrastructure

Globally, we are seeing governments resorting to infrastructure investment (largely green related). This tends to be commodity intensive. Our commodity analysts estimate that the amount of copper use for renewables facilities is 4-5x of that for a thermal power station. Aluminium is used in solar panels. According to the World Bank, energy transition will require an extra six million tonnes of aluminum every year by 2050 for solar panels (for more details, see our commodity analysts' latest note: Base Metals Forecasts – Buoyant outlook after surprise 2020 for metals, 2 Dec). We discuss this topic in greater details in the Construction Materials section of this report.

4. **Exposure to China becoming carbon neutral**

Not only does China 2060 zero carbon target require an uplift in renewables (requiring more copper use) but China will also have to reduce its carbon footprint in aluminum, steel and copper production. To reduce these emissions, China may import more high quality iron ore, stop exporting aluminum and use less recycled copper and this could benefit Western producers.

This would potentially particularly benefit aluminum (nicknamed 'congealed' energy), and it make little logical sense in a world of carbon border taxes for China to be a net exporter (in 2019, China net export is about c.3180kt, accounting for 11% of non-China production).

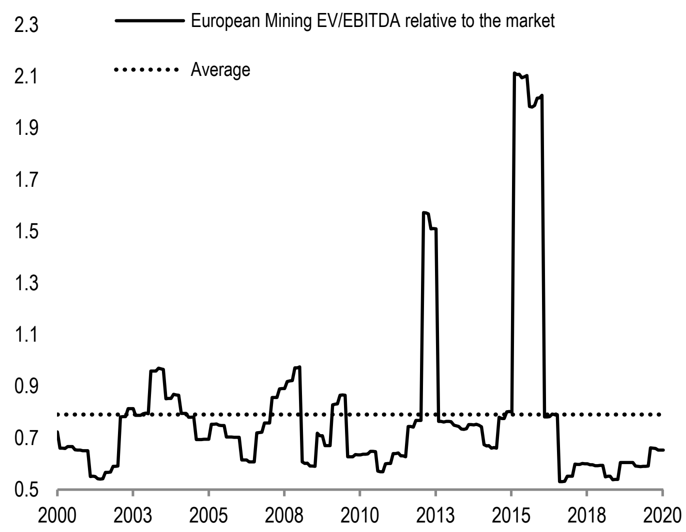
5. **Carbon adjustment tax at the border**

Both US President-elect Biden and the EU Commission are pushing for a carbon tax (indeed, part of the financing of the EU Recovery Funds is via such a scheme). France is making this a priority when it takes over the Presidency of the EU Commission in 2021 (FT, 4 December). This benefits the European quoted names, which tend to have the lowest carbon emissions per unit of output.

6. **Valuation still cheap**

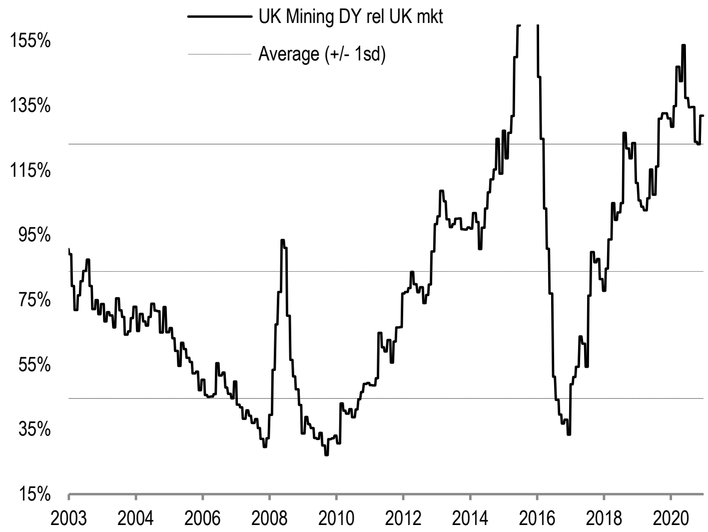
Valuations on a whole range of different measures look abnormally cheap. We see below the EV/EBITDA multiple for the sector is abnormally cheap given the deleveraging of the sector, and the dividend yield for the sector relative to the market remains far above its norm.

Figure 358: The EV/EBITDA of the sector remains depressed



Source: Refinitiv, Credit Suisse research

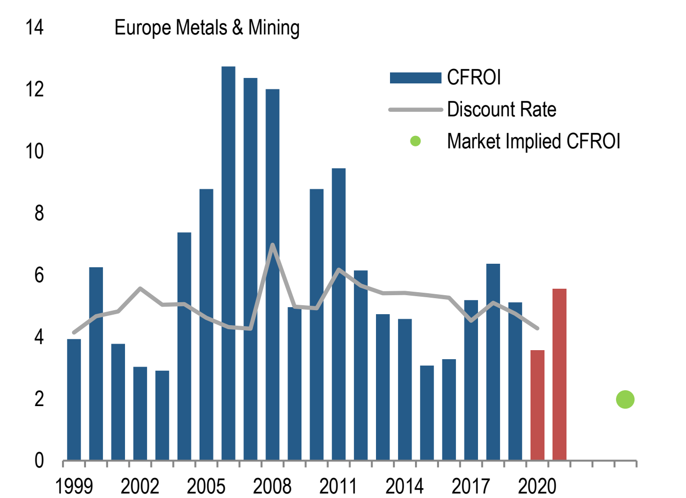
Figure 359: The sector is cheap on DY relative to the market



Source: Refinitiv, Credit Suisse research

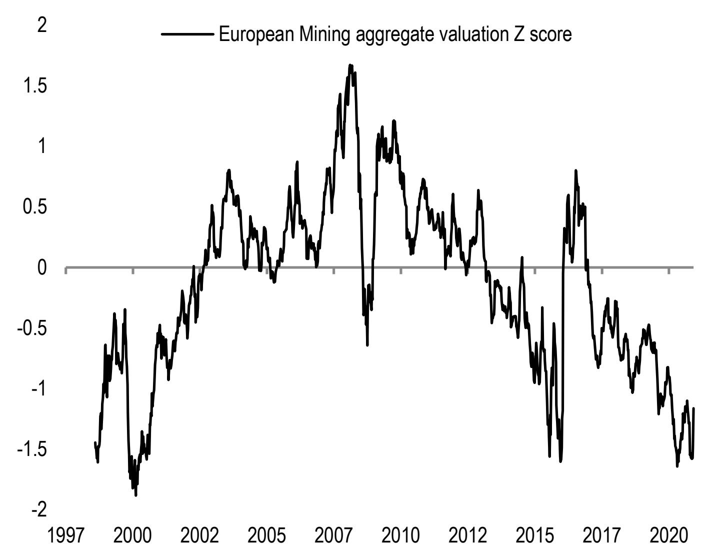
On HOLT, the market appears to be discounting a significant decline in profitability in the sector from current levels; it is close to trough levels seen in previous recessions.

Figure 360: The market appears to be discounting a significant decline in profitability for the sector



Source: Credit Suisse HOLT, Credit Suisse research

Figure 361: European mining looks very cheap on our aggregate valuation measure



Source: Refinitiv, Credit Suisse research

We show below the FCF yield after adjusting for stress tests on maintenance capex. On spot prices and maintenance capex, mining has a FCF yield of 14.4% for 2021. If iron ore prices fall to \$50/t and copper to \$2/lb, FCF yields remain at 5.6% for 2021. Our commodities analyst thinks iron ore could remain in the US\$125-150/t range in 2021 (see Commodities Notes, 11 December).

Figure 362: Free cash flow yields for the sector remain reasonably attractive even under a stress test scenario

FCF % Post WC	Base			Spot		Stress 1		Stress 2	
	2019	2020	2021	2020	2021	2020	2021	2020	2021
BHP Group	11.4%	11.4%	9.2%	11.7%	12.4%	10.8%	2.4%	10.6%	(0.3%)
Rio Tinto	12.7%	13.8%	14.0%	14.1%	18.4%	12.9%	4.3%	12.7%	0.8%
Glencore	11.6%	7.6%	10.2%	7.1%	11.3%	8.4%	8.3%	8.8%	7.0%
Anglo American	8.2%	4.5%	10.8%	4.9%	15.5%	4.2%	7.5%	3.9%	5.0%
Average	**11.0%**	**9.3%**	**11.1%**	**9.5%**	**14.4%**	**9.1%**	**5.6%**	**9.0%**	**3.1%**
Median	**11.5%**	**9.5%**	**10.5%**	**9.4%**	**13.9%**	**9.6%**	**5.9%**	**9.7%**	**2.9%**

Stress 1: Iron Ore US$50/t; Copper US$2.0/lb; Thermal Coal US$60/t; Coking US$120/t
Stress 2: Iron Ore US$30/t; Copper US$1.55/lb; Thermal Coal US$55/t; Coking US$100/t

Source: Credit Suisse European Metals and Mining research

7. Non-technically-disrupted exposure and increasingly ESG-friendly

The ore market is not technically disrupted, as there are few replacements. The iron ore market remains a cartel where the low-cost capacity is quoted.

Even in the technically disrupted areas, the outlook might not be that bad. For example, China has approved more coal power plant construction in the first half of 2020 than in all of 2018 and 2019 combined (FT, 25 June). In addition, although coal is highly disrupted and not perceived as ESG-friendly, it trades on a FCF yield of nearly 25% for pure US coal companies.

We continue to have an aversion to steel (essentially taking cartelised inputs and selling to monopsonies). We believe that steel is disrupted.

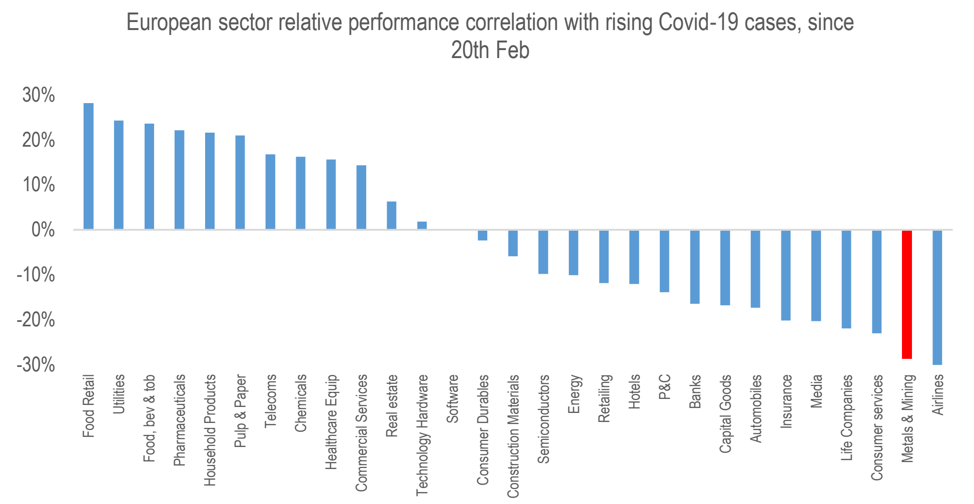
Mining is an ESG beneficiary particularly in the aspect of “E” because:

- We find that copper benefits from the move towards a zero-carbon world. Copper is needed in cars, for the grid transmission mechanism to recharge cars, and in wind and solar power generation (solar and wind power is 4-5x as copper-intensive as thermal power stations). An internal combustion engine uses c.23kg of copper compared with 40kg for a hybrid vehicle and 83kg for battery-powered vehicles. The International Copper Association forecasts that electric vehicles could account for 6% of copper demand globally by 2025, from less than 1% currently. The University of Grenoble went even further, suggesting that the current level of copper demand is half of all copper consumed since 1900. Our analysts expect to see elevated ROW copper demand in 2023-24 driven by decarbonisation (at 4% p.a.) (see Buoyant outlook after surprise 2020 for metals, 2 Dec).
- Platinum is also an important anode catalyst used in hydrogen fuel cells (50g per vehicle as opposed to 5g required in catalytic converters for combustion engines). Hydrogen works for larger vehicles (truck, ships and trains) and has a superior range compared with electric vehicles (see Hydrogen: A new frontier, 8 Dec).
- As above, Western producers benefit if there is both a carbon adjustment tax at borders and China moves to become more carbon-friendly.
- We also believe that over time consumers might demand products to be made using low carbon techniques. This is why for example Apple is moving to be 100% zero carbon by 2030 and in turn wanting to use only aluminum that is produced from low carbon energy (i.e. hydro). This again benefits the European miners.

8. Vaccine exposure

Mining has also been one of the most sensitive sectors to the impact from the COVID-19 pandemic, as shown in the figure below.

Figure 363: Mining has among the highest negative correlations with infection rates



Source: Refinitiv, Credit Suisse research

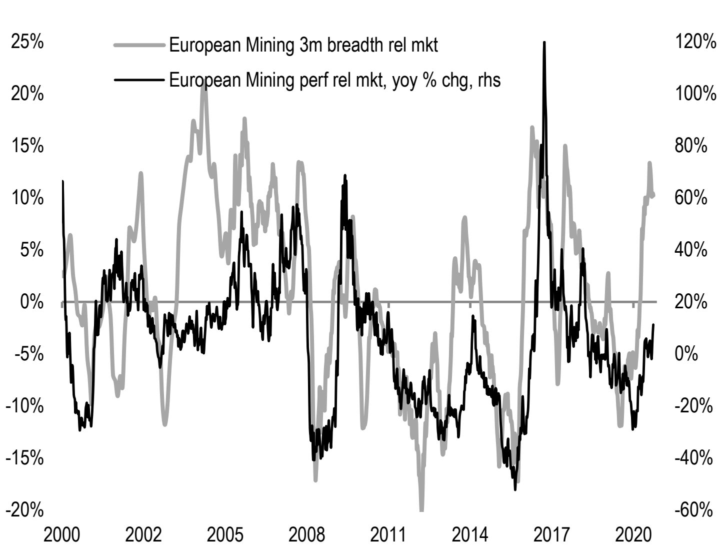
We believe that, as we go into 2021, investors will start to focus on those sectors that should perform better if there is a vaccine. A vaccine benefits the industrial exposure.

9. Strong earnings revisions

Relative earnings revisions of European mining have been very strong, but price performance has not reflected this.

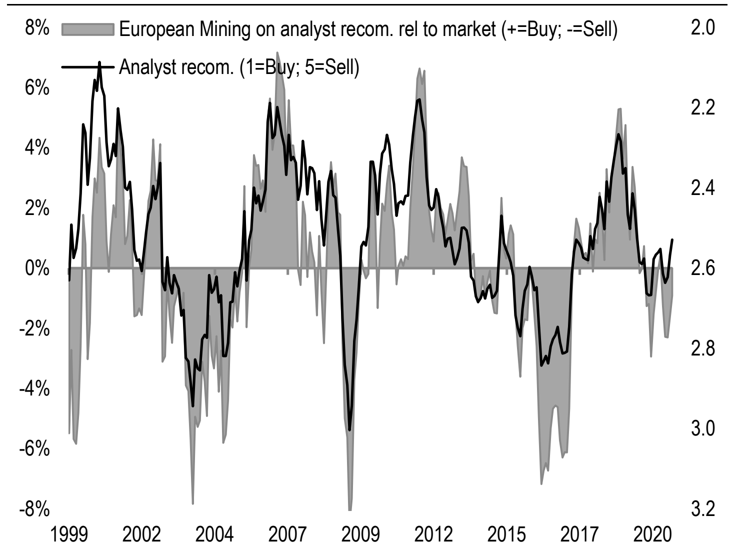
Net buy recommendations, a proxy on investor sentiment, appear to be low.

Figure 364: Relative performance of European mining has not reflected its strong earnings revisions



Source: Refinitiv, Credit Suisse research

Figure 365: …and sell-side net recommendations are only neutral



Source: Refinitiv, Credit Suisse research

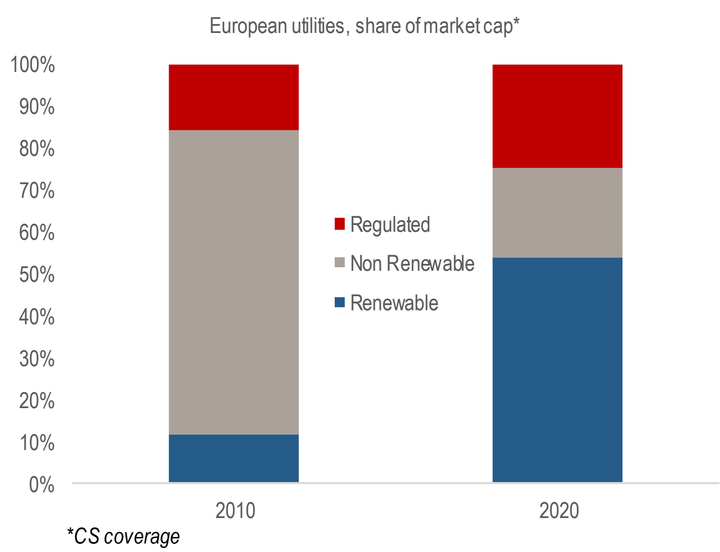
Utilities: remain strong overweight via renewables and grids

We upgraded utilities in August to overweight (see European utilities to overweight, pharma and energy to underweight, 4 August 2020). We see six main reasons to continue to be optimistic: 1) Renewables account for 2.5x more of the overall sector market cap than the disrupted areas; 2) There is very strong growth as wind is now competitive with fossil fuels and the price of carbon is set to rise (and electricity demand could outstrip expectations); 3) There is likely to be large 'E' of 'ESG' funds flow; 4) Valuation on FCF is compelling; 5) The sector in the long run may have more stable earnings while in the short term it may be a little more cyclical; 6) A supportive macro backdrop, with utilities being a clear beneficiary from a stronger euro and a likely fall in real bond yields.

1. The disruptors now easily outweigh the disrupted

The very disrupted areas, such as fossil fuel generation, now account for c.20% of market cap, down from 55% of market cap in 2010. Our team highlights that by end-2023, there will be almost no coal generation in the UK. The renewable-focused names now account for c55% of market cap, up from just 10% in 2010.

Figure 366: Market cap of utilities by renewable focused vs non-renewable focused companies



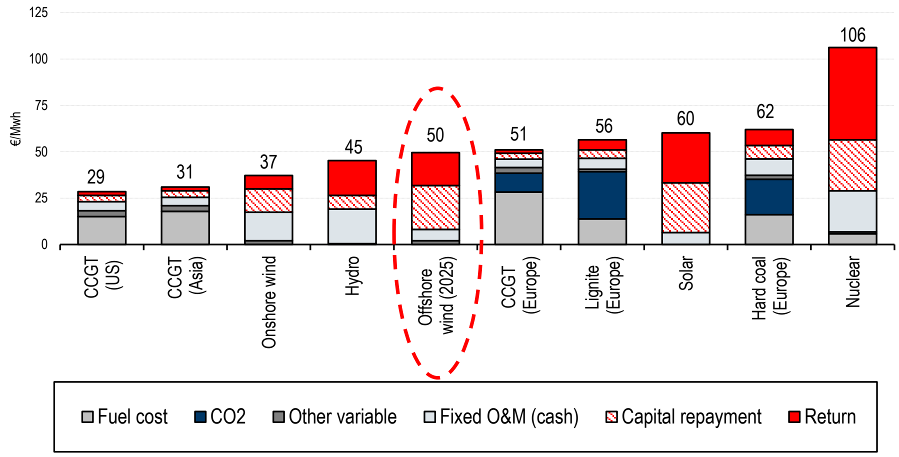
Source: Refinitiv, Credit Suisse research

2. A triple winner from the 'E' of ESG via a rise in the price of carbon and wind being economic

i. Offshore wind competitive with CCGT, taking out a lot of the regulatory risk

According to the IEA, offshore wind has the capacity to meet all of the world's electricity demand and is a 'game changer', with the cost of offshore wind forecast to fall another 40% by 2030 (having fallen c70% since 2012). In the UK, the implied wholesale price of offshore wind is, without subsidy, below that of Combined Cycle Gas Turbines (CCGT), excluding transitional costs. Our utility team highlights that offshore wind needs €45-50/MWh over its life (which equates to the price of power today two years out of €47). The marginal cost is much lower. In the US, NextEra highlights that wind is economic at $20-$30 per MWh by 2025, compared with $30 to $40 per MWh for solar.

Figure 367: The fully loaded cost of offshore wind is below CCGT in Europe, with the marginal cost much lower



Source: Credit Suisse European Utilities team

Subsidies are not needed and this therefore takes out a lot of the regulatory risk (10 years ago, for example, Spanish utilities suffered when the government retrospectively cut the subsidy on solar).

This in turn makes wind an attractive growth area: The IEA believes that there will be around $850bn of new wind investment in the next 20 years and a fivefold increase in capacity over the next five years. In the UK, our team expects wind to rise to account for at least a third of total power production by 2030 (from 17% currently). Most recently, in the UK, Prime Minister Johnson increased the wind target capacity in 2030 to 40GWh from 30GW (which compares to just 10GW today). By way of example, Wood Mackenzie forecasts new wind capital spending this decade to be very similar to US offshore oil and gas investment ($78bn versus $82bn, according to the FT, 9 July) while the US DoE believes that wind capacity in the US will increase 6-fold by 2030 (FT, 3 Nov).

Even if we look at Japan, companies such as Ricoh, Kao and Sony are warning that they may have to move production abroad unless they can access more renewable power because increasingly consumers will not buy products that have a high carbon footprint. We see this across industries: Apple, for example, wants to have zero carbon footprint by 2030 (FT, 28 Nov).

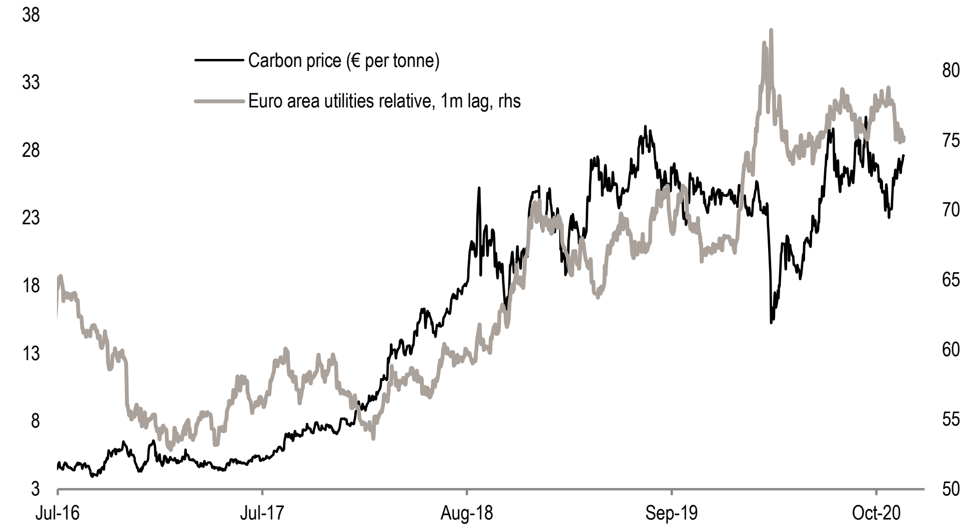
ii. CO2 price likely to rise from here

Around half of the market cap of utilities in Europe are renewables and thus very sensitive to the price of carbon. Only 20% of European market cap is from fossil fuels (which suffer from a higher price of carbon). We believe the price of carbon is likely to be structurally higher going forward.

According to the IMF, to achieve the target of limiting the temperature rise to 2°C, emissions need to be cut by roughly one-third by 2030 and global carbon prices need to be $75 per ton (IMF, October 2019). Limiting the rise in global temperatures to 1.5°C, which is rapidly becoming the accepted target, would require an even higher price of carbon. In this regard, it is very interesting to see that BP has raised its carbon price assumption to $100 per ton, up from $40 (20 June, 2020).

We can see below that the relative performance of utilities tends to follow the price of carbon, and note that the price of carbon in the UK is close to €50 per tonne currently.

Figure 368: Utilities have followed the carbon price



Source: Refinitiv, Credit Suisse research

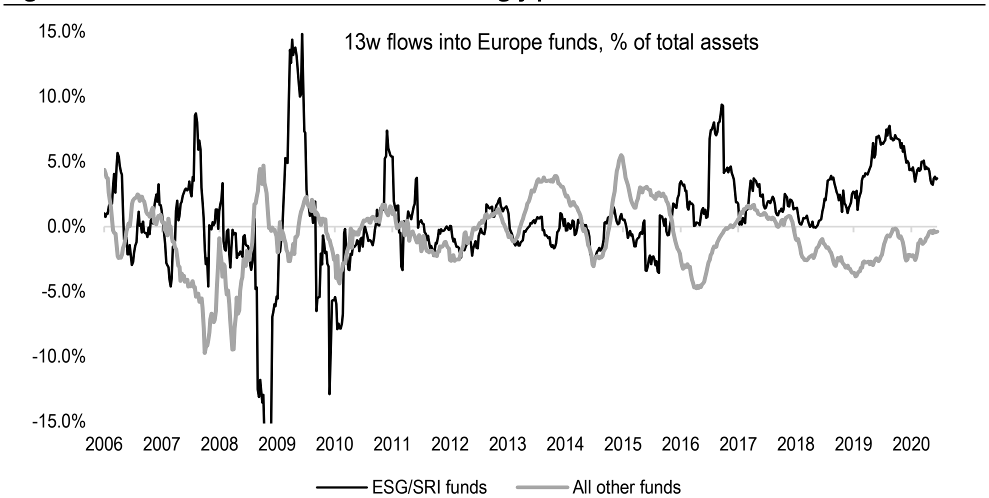
iii. Funds flow of ESG

We believe that climate change will become a much more important political topic and this drives policy, which drives government funding and regulation of renewables.

The other angle is that ESG is the fightback mechanism for active fund management. Trustees may be willing to accept underperformance if their portfolio is helping society at large.

We can see the flows into ESG this year compared to non-ESG below, with ESG flows representing an average 5% of assets over the last year, compared to 3% of assets outflows for other funds.

Figure 369: ESG flows have remained strongly positive



Source: Refinitiv, Credit Suisse research

iv. More aggressive carbon reduction targets

The global growth of renewables and rise in the price of carbon is now backed up by many more countries focusing on zero carbon emissions. In June 2017, Sweden became the first country to put into law a timeline to ensure it was zero carbon emitting by 2045 (with 85% of the reduction achieved through reduction in emissions and 15% in offsets). Since then, the UK, France, Denmark, New Zealand, Hungary, Japan and South Korea have committed to net zero carbon emissions by 2050, and China committing to the same by 2060. All of these countries apart from Japan, China and South Korea have enacted this commitment in law.

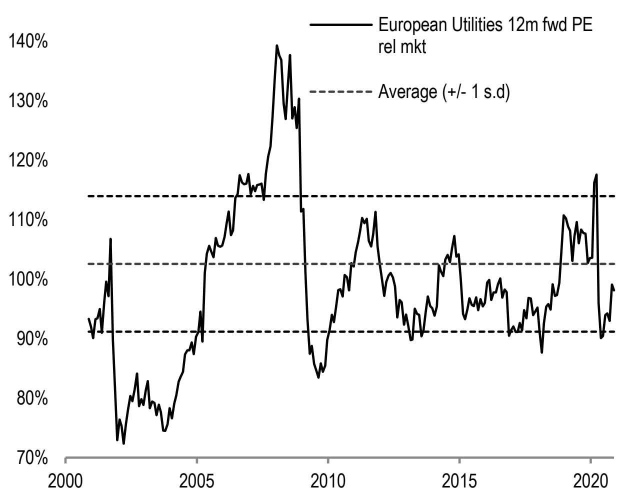
In September, the EU Commission proposed a reduction of 55% by 2030 compared to 1990 levels (see 2030 climate and energy framework), up from previous targets of 40%, putting the EU on a path to climate neutrality by 2050.

In the US, President-elect Biden also won the presidency on a zero carbon emission mandate by 2050, including making electricity generation carbon-free by 2035. This can be partly implemented by Presidential executive order (via regulation by the EPA or the SEC); Biden would also be able to reinstate California's long-held authority to set its own emission standards and could also grant waivers to other states that take similar actions. This would encourage other states to follow California and implement programmes similar to LCFS (20% reduction if carbon intensity by 2030).

3. Attractive valuations on FCF on maintenance capex

Despite these positives, the PE relative of the sector remains below is average, and at the lower end of its 10-year range. Even at current levels, the sector outperforms c80% of the time on a 12-month view.

Figure 370: Attractive on 12m fwd PE relative to the market



Source: Refinitiv, Credit Suisse research

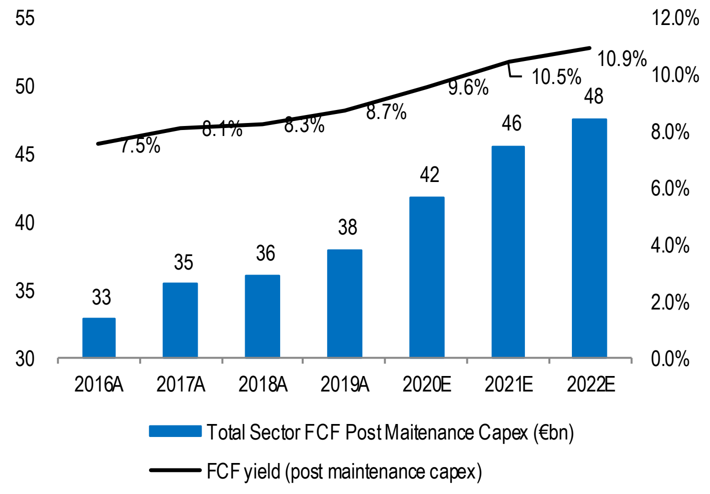
Figure 371: Historically this has been a buy signal 80% of the time on a 12-month view

Date	Eur. Utilities perf rel mkt when 12m fwd PE rel mkt falls to current levels			
	1 Month	3 month	6 month	12 month
22-Feb-01	3.3%	0.0%	15.0%	11.7%
22-Feb-10	-3.1%	-5.1%	-8.2%	-11.2%
22-May-13	1.5%	-1.5%	-1.5%	6.1%
22-Apr-15	3.2%	1.6%	4.8%	4.8%
22-Apr-18	0.0%	1.7%	1.7%	5.1%
Average	**1.0%**	**-0.7%**	**2.4%**	**3.3%**
Typical perf	**0.2%**	**0.5%**	**1.1%**	**1.7%**
% Rise	**80%**	**60%**	**60%**	**80%**

Source: Refinitiv, Credit Suisse research

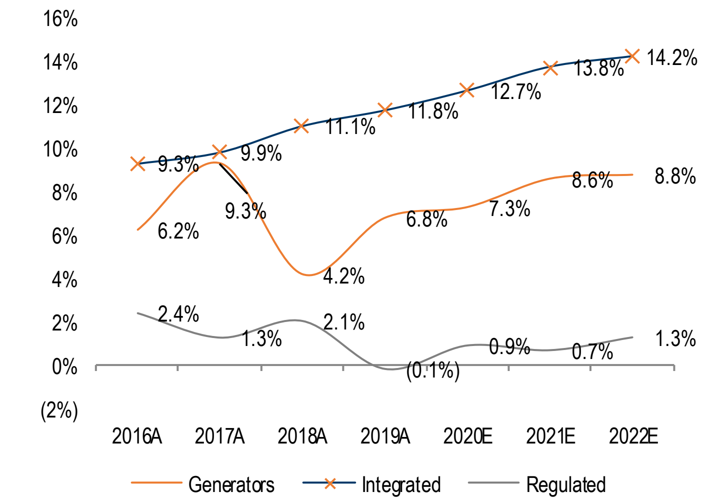
Valuation on FCF using maintenance capital spending also looks highly attractive. We think the valuation on maintenance capex is a reasonable way to look at utilities given that some of the very highly rated names are growing very quickly.

Figure 372: Utilities' FCF yield (post maintenance capex)



Source: Credit Suisse European Utilities research

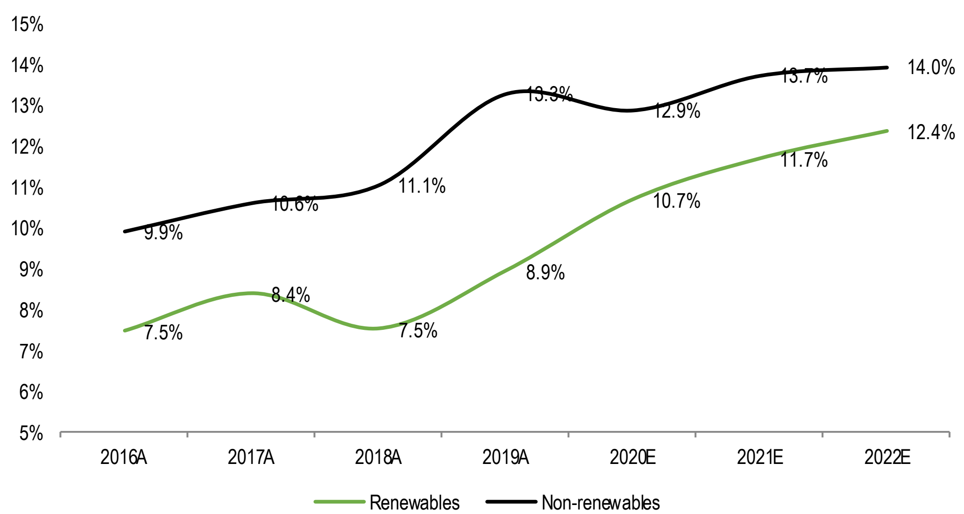
Figure 373: Utilities FCF yield (post maintenance capex) – by subsector



Source: Credit Suisse European Utilities research

We also show FCF yield broken down by renewables vs non-renewables utilities; the renewables have a higher FCF yield than IOCs on 2022 numbers (with the IOCs offering a FCF yield of 10.5% in 2022 on our team's numbers, 8.8% on the current energy price).

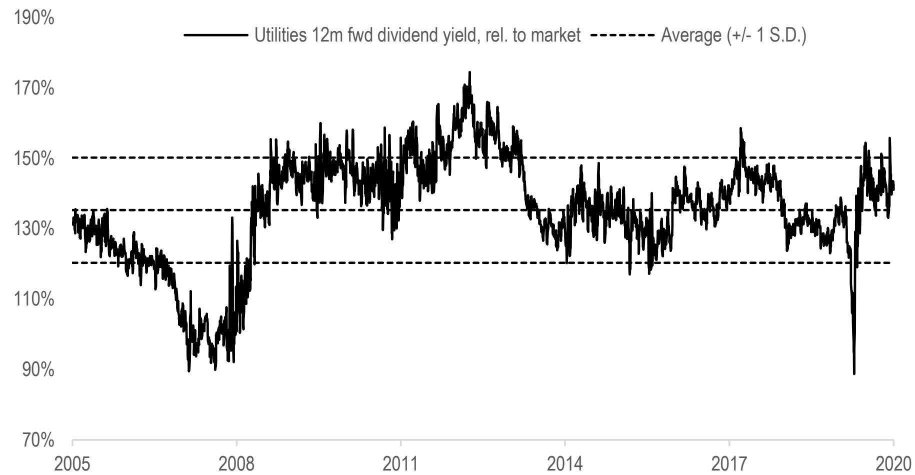
Figure 374: Utilities FCF yield (post maintenance capex) – Renewables vs Non-renewables focused Utilities



Source: Credit Suisse European Utilities research

The forward dividend yield relative is still attractive relative to the market.

Figure 375: Utilities 12m fwd dividend yield relative to the market

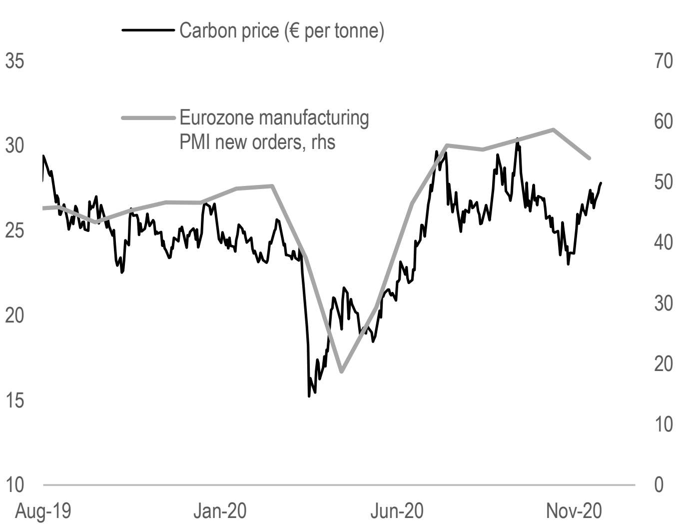


Source: Refinitiv, Credit Suisse research

4. The sector has become more cyclical in this recovery

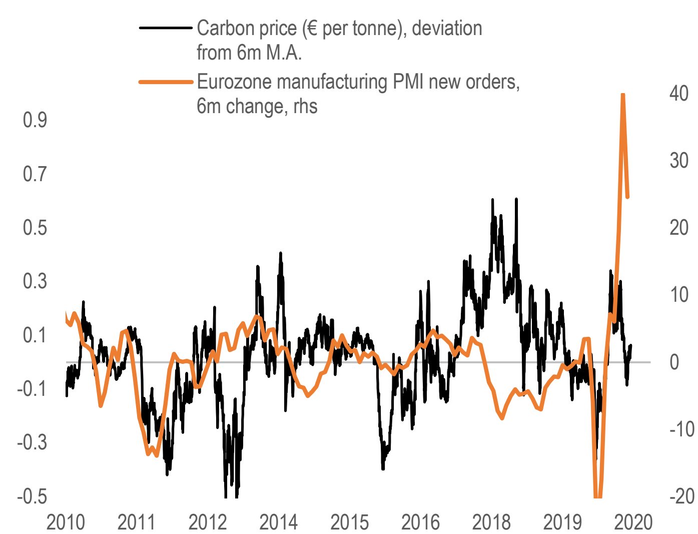
The increased importance of carbon has meant that, to some extent, utilities has become more of a cyclical sector in the short term. It is cyclical because, as we can see below, the price of carbon tends to increase when activity picks up. If anything, the price of carbon should be higher given the current recovery. It might also be more cyclical into this recovery because in some instances customers were unable to pay their bills.

Figure 376: Carbon price versus Eurozone manufacturing PMI new orders



Source: Refinitiv, Markit, Credit Suisse research

Figure 377: When the price of carbon rises, utilities typically outperform; 6m change in the carbon price vs 6m change in PMIs



Source: Refinitiv, Credit Suisse research

5. Long term, the quality of earnings is improving

In the longer term, the quality of earnings improve because:

i. There is less reliance on government subsidies;

ii. Carbon has an automatic stabiliser; the EU Carbon Scheme removes 24% of excess carbon emissions each year, which creates an automatic stabiliser;

iii. Merchant power prices are no longer going to be set by coal (in the case of Germany) or gas (in the case of Spain and the UK). Over time, as renewables become more important, governments will have to support longer-term price schemes (i.e. some form of contracts for differences). For example, in the UK, the government has auctioned 12GW of capacity on a contract for difference for 15 years with wind competing in its own category (FT, 25 Nov).

6. High multiplier for investments

For a long time, we have believed that we would get fiscal QE into a recession; i.e. government spending on infrastructure financed directly or indirectly by the central bank. The four principal reasons for believing this are: i) there is no alternative (because real rates normally fall 5% in a recession, which clearly can't happen this time), ii) construction employs c5% of the workforce and thus it is a very efficient way of reducing unemployment, iii) it can be financed by central banks and, crucially, iv) infrastructure investment has a high multiplier on GDP.

Across a range of studies, the IMF believes the fiscal multiplier associated with infrastructure spending is 1.7x. The utilities also have the potential to be significant beneficiaries from such spending: Italgas has highlighted that for its revenues, the multiplier from government spending is 3.3x, and for Endesa it is 2x to 3x.

As a result, this would very much appear to be the time for governments to invest in renewables and networks. In the UK, the 'green new deal' is meant to create 60k more jobs in wind (by quadrupling capacity to 40GW by 2030, FT 2 Nov). Our Utilities team highlights that to decarbonise gas via hydrogen, an investment of up to €60bn is needed. The EU's new hydrogen strategy envisages hydrogen rising from less than 2% of Europe's energy mix to 14% by 2050.

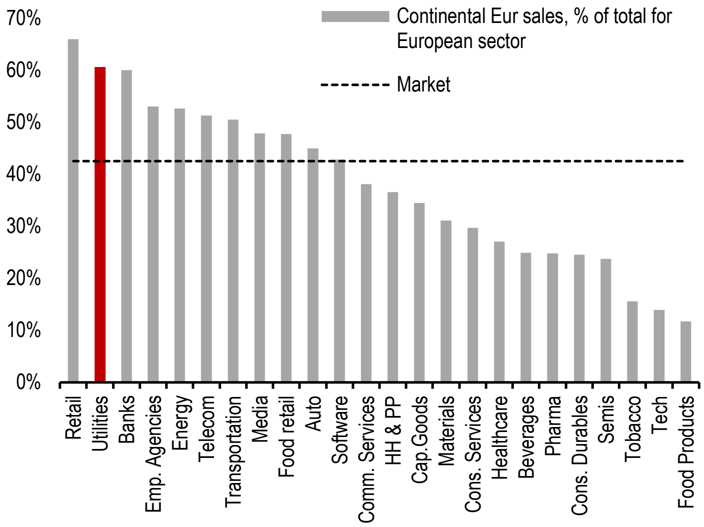
7. Macro supports

A number of macro factors remain supportive for utilities, among which we would highlight the following:

i. Offers European domestic exposure

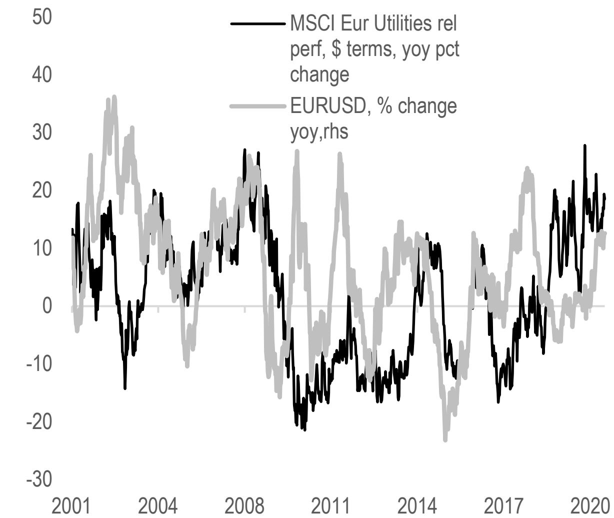
Investors clearly would want exposure to domestic plays in Europe if the euro appreciates, as we expect. We can see that utilities are one of the most domestically-exposed sectors.

Figure 378: Domestic sales as a percentage of total sales for European sectors



Source: Refinitiv, Credit Suisse research

Figure 379: European utilities' relative performance versus EURUSD performance



Source: Refinitiv, Credit Suisse research

We highlight elsewhere in this report why we are so bullish on the euro. In passing, the correlation with the EURUSD tends to be weak because often a stronger euro was a pro-cyclical trade as either a dollar funding crisis eased into a recovery, as it did in 2009 and 2020, or because there was a collapse in PMIs and the euro into the euro crisis.

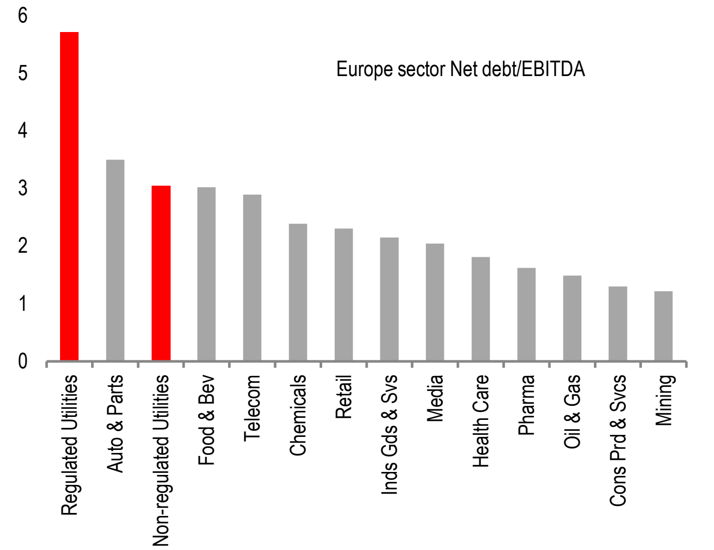
ii. A further fall in real bond yields.

We think that the real bond yield will become more negative as governments resort to inflation to deal with the excess government debt to GDP (see COVID-19: Long term inflationary consequences and what to do, 2 July). In other words, inflation expectations rise more than bond yields. Our view continues to be that the 10-year TIPS yield falls to minus 2%. This has three benefits for the utilities sector:

- A fall in the real cost of debt for a very leveraged sector

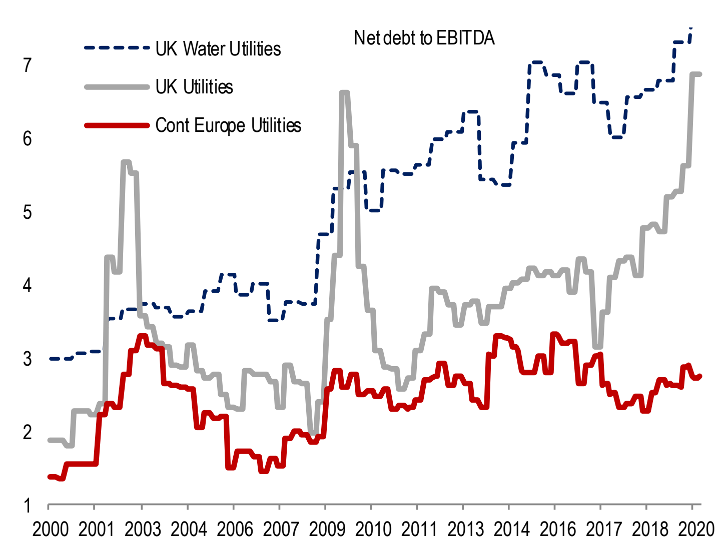
We can see in particular that the regulated utilities have the highest leverage of any sector.

Figure 380: Utilities have one of the highest net debt/EBITDA ratios of any sector



Source: Refinitiv, Credit Suisse research

Figure 381: UK water utilities have increased their leverage significantly

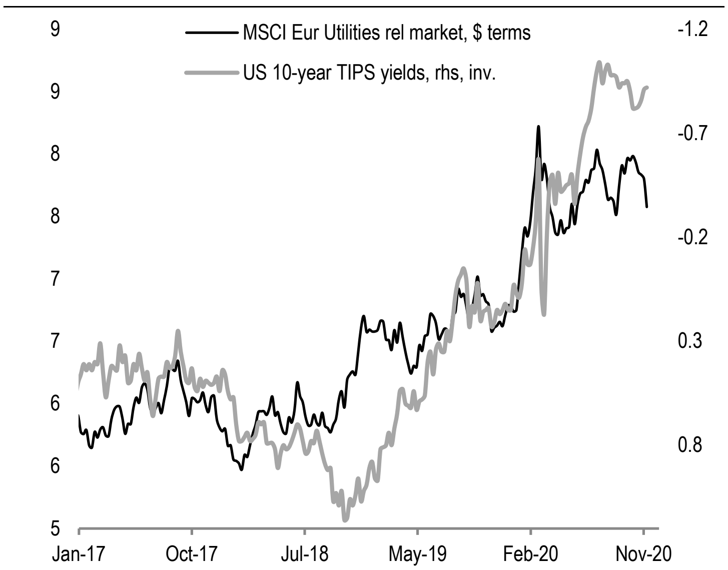


Source: Refinitiv, Credit Suisse research

- Underpins the value of private equity purchases of utility assets.

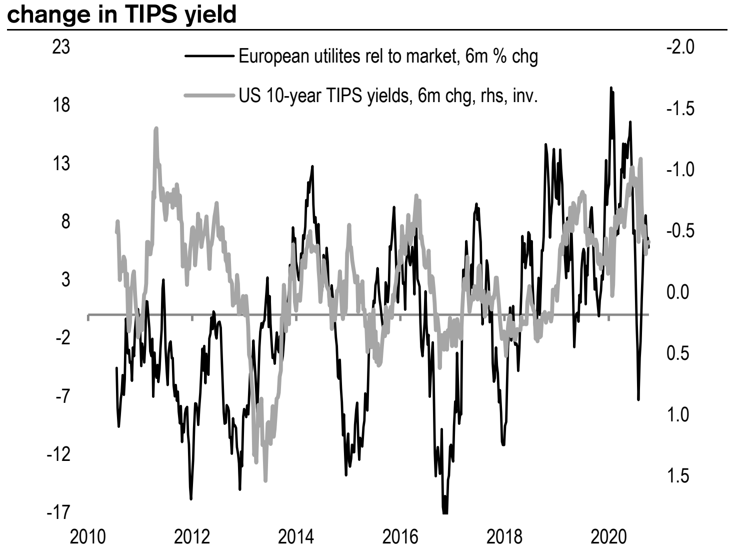
Some of the growth utility business models rely on funding their projects by selling completed projects onto private equity on much lower IRRs (Ørsted, for example, builds projects on IRRs of 6-7% and in the past these have then been sold to private equity or specialist funds on IRRs of 3% to 4%). The more negative real bond yield also underpins private equity demand for these projects.

Figure 382: European utilities outperform as the TIPS yield falls



Source: Refinitiv, Credit Suisse research

Figure 383: European utilities rel. to the market vs 6-month change in TIPS yield



Source: Refinitiv, Credit Suisse research

- Some regulated utilities in Europe have an effective index-linked return.

In the UK, the water stocks' base allowed returns are set at +2.9% real plus CPIH across the April 2020-March 2025 period, with a small true-up for UK RPI. From April 2025, the stocks will be completely CPIH-linked. National Grid is c50% linked to UK RPI, as is SSE (from April 2021, it will be progressively linked to UK CPIH instead of UK RPI). We show later that the UK water stocks should have re-rated further given the fall in the index-linked bond yield.

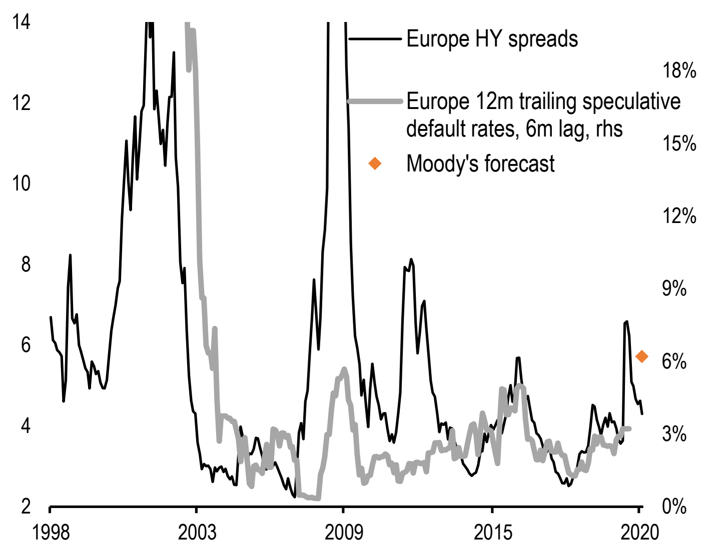
iii. A peripheral Euro play

There has been significant progress on mutualisation of debt as we discussed in the first part of our Outlook. This is important because nearly half of the market cap of our coverage universe comes from the periphery.

iv. Historically utilities has been a sector that outperforms when credit spread rise

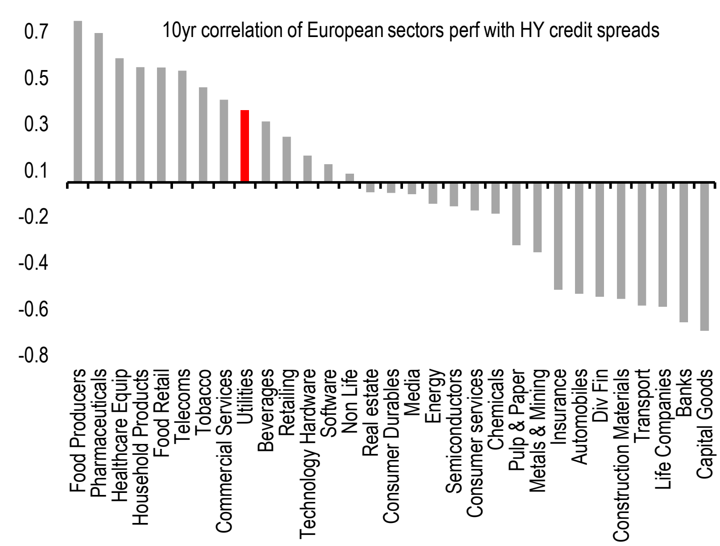
We are concerned that the implied default rate is too low.

Figure 384: HY default rates and spreads in Europe



Source: Refinitiv, Credit Suisse

Figure 385: Utilities sector is positively correlated with HY spreads



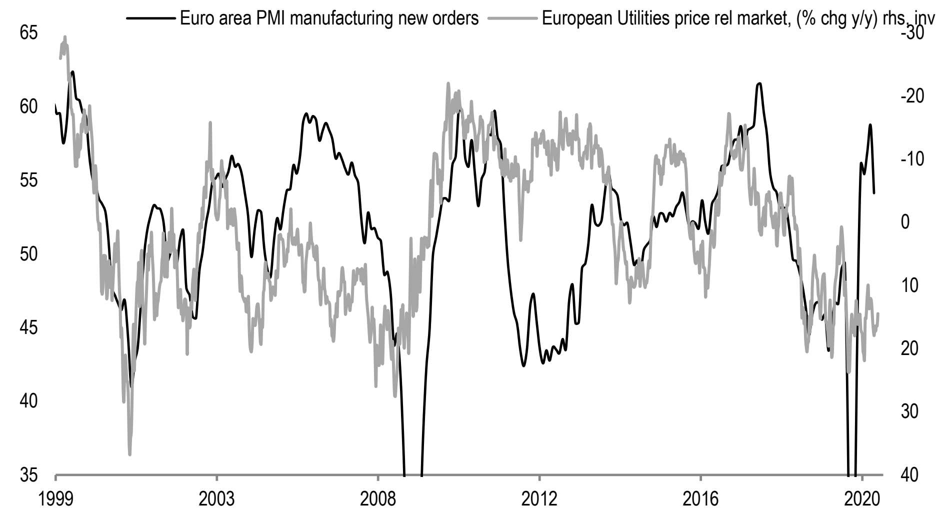
Source: Refinitiv, Credit Suisse

A decoupling from PMIs is evidence that it is different this time around

Clearly, the very simple worry is that this is one of the worst performing sectors when PMIs rise. This time around we would argue as in point 4 that earnings could be a little more cyclical.

More importantly, we think structural growth at cheap prices, the benefit from a fall in real bond yields, a rise in the price of carbon and the rise in the euro offset the 'negative' of a rise in PMIs, as highlighted above. We can see that in 2020 utilities have decoupled significantly from PMIs.

Figure 386: European utilities vs European PMIs new orders

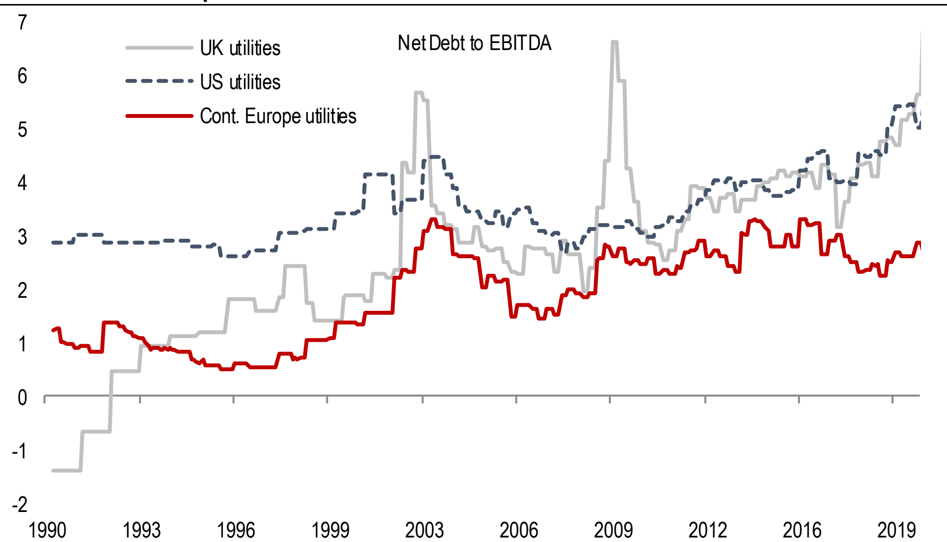


Source: Markit, Refinitiv, Credit Suisse research

8. Low leverage versus the peer group

European utilities have relatively low leverage compared with utilities in the UK and US, implying a boost to earnings if they were to move to global peer group levels of leverage.

Figure 387: Continental European utilities have significantly lower leverage than their UK and US counterparts



Source: Refinitiv, Credit Suisse research

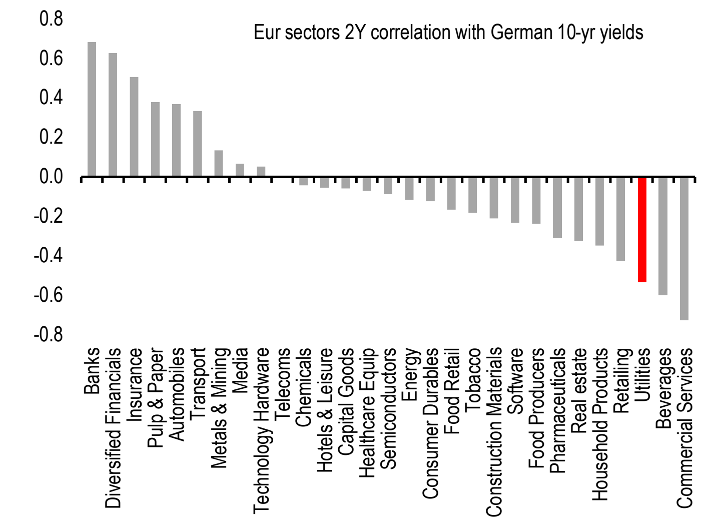
What are the risks for utilities?

We note the following risks for utilities:

1. Negative correlation to bund yields

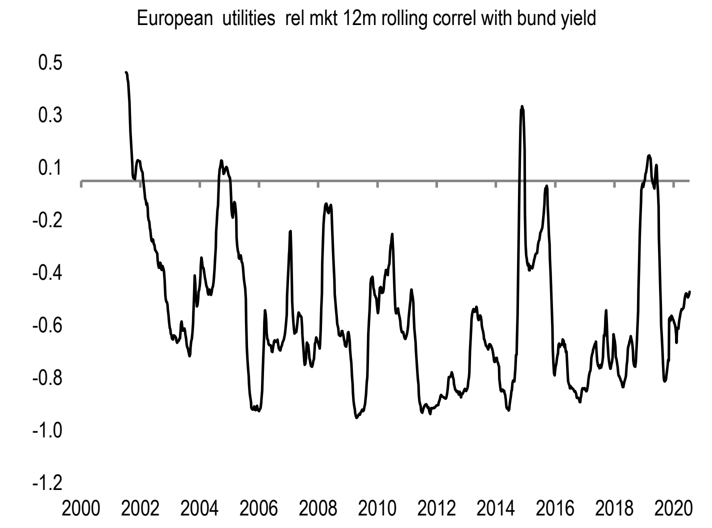
Utilities historically have been the worst performing sector when bund yields rise, and we think bund yields could rise very moderately from here (if the EU Recovery Fund establishes a new 'safe' asset).

Figure 388: Utilities is one of the sectors most negatively correlated with German 10-year yields



Source: Refinitiv, Credit Suisse research

Figure 389: Utilities' correlation with bund yield over time

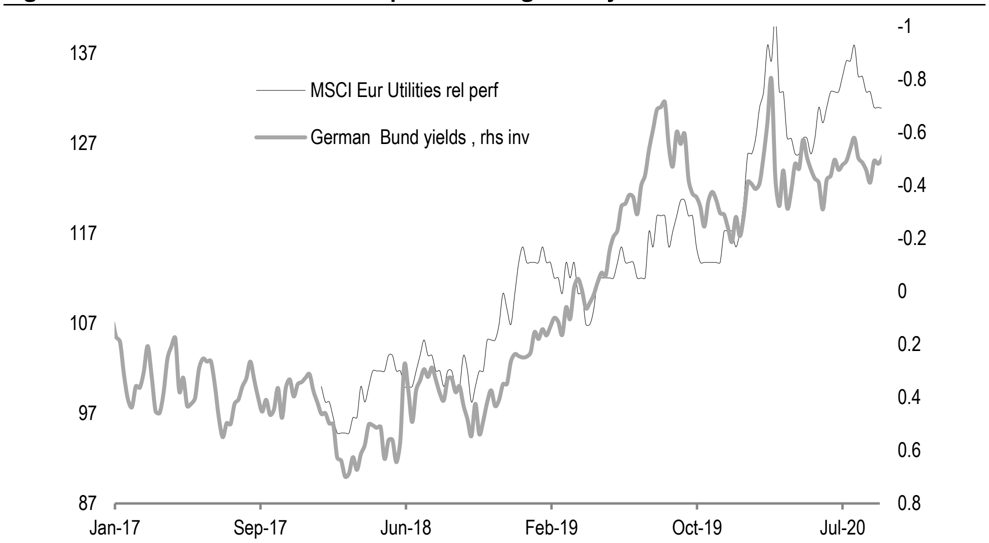


Source: Refinitiv, Credit Suisse research

We believe that this time around, the bund yields will not be allowed to rise very much, especially as the ECB steps up its buying.

There would also be some offsets if the bund yield were to rise. If bund yields were to rise, then the euro could appreciate a long way (which would help domestic sectors). Moreover, as discussed before, our core view remains that inflation will rise more than bond yields, hence real bond yields globally will fall (see COVID-19: Long term inflationary consequences and what to do, 2 July) and a fall in the TIPS yields is positive for global and European utilities.

Figure 390: Utilities have moved up with falling bund yields



Source: Refinitiv, Credit Suisse research

2. A domestic sector vulnerable to taxation

Utilities are domestic sectors and, as we highlighted in our report (COVID-19: Long term impact, 4 May), domestic sectors are particularly vulnerable to an increase in the corporate tax rate because it is harder for them to 'move' profits. We saw a recent example of this with Orsted, where the Danish government tried to impose a tax on its UK subsidiary. This we suspect will be less the case if they are performing a socially valuable function (such as decreasing carbon emissions). Moreover, unlike on previous occasions, there is less regulatory risk because a subsidy is no longer required for wind.

Which utilities look attractive?

We are primarily interested in the renewable names: RWE is 80% renewable by 2022, FCF yield (on maintenance capex) is 9%. This is mainly a European (German) story. EDP is 60% renewables, with a FCF yield (on maintenance capex) 12.1%.

Iberdrola is 30% renewables, with a FCF of 13% after maintenance capex. This has the largest exposure to the US and thus benefits from the US policies. ENEL is 29% renewables and has a FCF yield of 14% after maintenance capex, and has the highest GEM exposure. SSE is 50% renewables.

Below we show European utilities that are Outperform-rated by our analysts.

Figure 391: Outperform rated European Utilities

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
E On N	13.3	76%	-20%	2.6	-70%	-5.1	5.2	-29.5	-3.3	-0.7	2.0	Outperform
Edp Energias De Portugal	19.4	111%	13%	1.9	19%	7.3	4.1	26.8	2.4	-2.6	2.1	Outperform
Enel	15.4	89%	-1%	2.8	63%	5.4	4.3	33.4	-1.0	-2.6	2.0	Outperform
Rwe	17.6	101%	9%	1.2	-45%	0.8	2.5	165.3	-4.1	5.5	2.1	Outperform
Snam	13.2	76%	-24%	2.4	-13%	4.2	5.4	-18.6	-0.3	0.3	2.1	Outperform
National Grid	15.2	87%	-21%	1.4	-47%	-4.9	5.8	14.4	-4.8	-2.4	1.9	Outperform

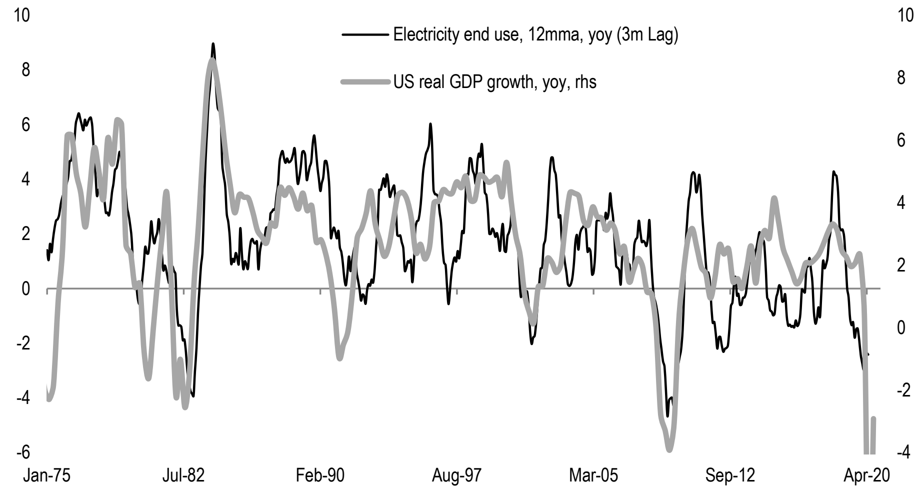
Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse estimates

We like the power grids

According to the European Environment Agency, if Electric Vehicles (EV) take an 80% share of the auto market by 2050, it would increase electricity demand by 9.5% across the EU as a whole, but by up to 25% in some member countries. The state-owned LLAB in Sweden said that its plans to produce carbon-free iron ore would use up a third of Sweden's current electricity capacity (FT, 27 Nov). Hence, an increase in EV and other uses could in all likelihood offset the fall in electricity demand that potentially occurs from energy switching technology, better metering (i.e. smart meters) and energy storage (which encourages corporates and households to take themselves off-grid). Indeed, Aurora Energy is suggesting that electricity demand could double by 2035 (FT, 2 Dec).

Looking shorter term, as the chart below highlights, there is a close relationship between GDP growth and electricity demand, and as a result the cyclical bounce back into 2021 should underpin electricity demand cyclically, while rising EV penetration underpins it structurally.

Figure 392: A recovery in activity into 2021 should help support electricity demand, as should the structural support of rising EV penetration



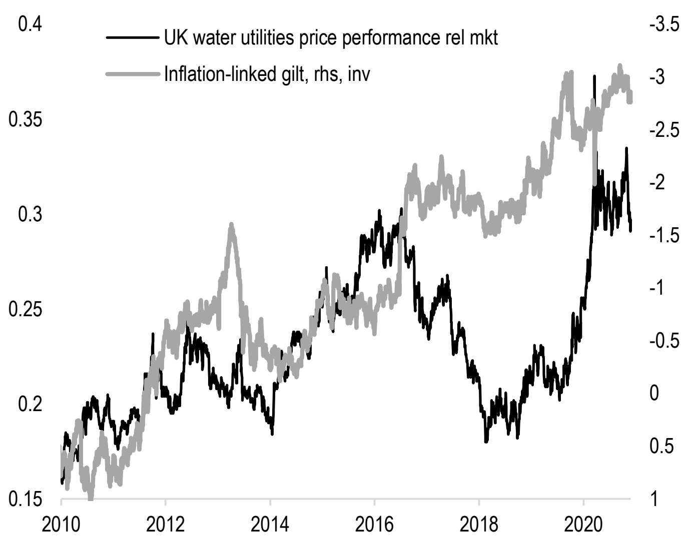
Source: Refinitiv, Credit Suisse research

Moreover, increasing the demand for electricity would also increase the need to upgrade the electricity grid, which brings genuine RAB increases for distributors. We would high National Grid (relatively cheap on a RAB basis versus its US business).

The UK water stocks: a cheap index-linked gilt proxy

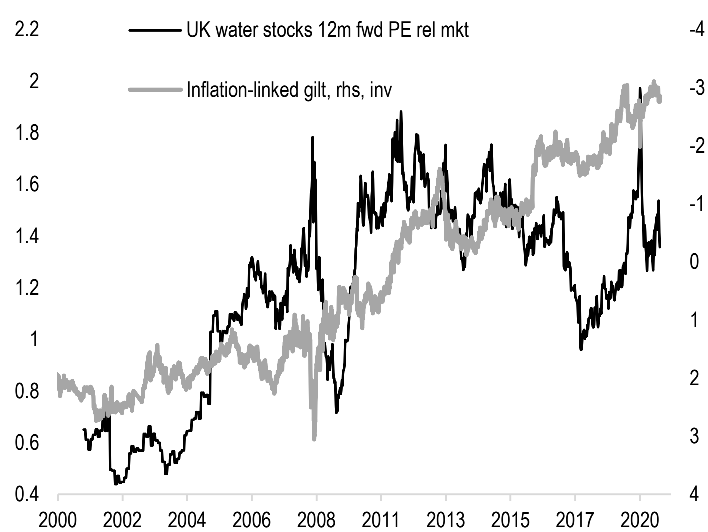
UK water stocks appear to be good index-linked bond proxies. They typically should trade in line with the long-dated UK RPI index-linked bond yield, but UK water stocks have lagged the fall in the index-linked bond yield and should have re-rated more given the fall in the bond yield.

Figure 393: UK water utilities versus the inflation-linked bond yields



Source: Refinitiv, Credit Suisse research

Figure 394: UK water utilities 12m-forward P/E versus inflation-linked bond yields



Source: Refinitiv, Credit Suisse research

- Water is not technically disrupted: Competition in retail has a minimal impact on value.

- The regulatory review of CPIH+2.9% has just finished and thus should be in place for the next five years.
- The premium to March 2022E RAB is mid-range at 11% and 15% for United Utilities and Severn Trent, respectively, compared with transactions in the past four years at 32% to 47%.
- The sector is a sterling play at a time when sterling is unusually cheap.
- The nationalisation risk looks moderate: Conservatives are due to have at least another four years in office and the new Labour leadership is much more moderate. Moreover, one advantage of very high government debt to GDP is limited nationalisation risk (as governments already have very high debt).

Elsewhere, the Italian network companies also have a CPI link that renews every three years, therefore they should be a CPI-linked play and as we argued before, we think inflation will ultimately pick up (see COVID-19: Long term inflationary consequences and what to do).

We had been cautious on some of the gas distributors structurally (if over time, renewables are more widespread, we get better interconnected systems and thus a wind surplus in Spain can be exported to, say, France, and over time we get battery/hydrogen storage of power), but even here some gas companies such as Snam believe that they could become hydrogen distributors.

Industrial gases/hydrogen: strong overweight

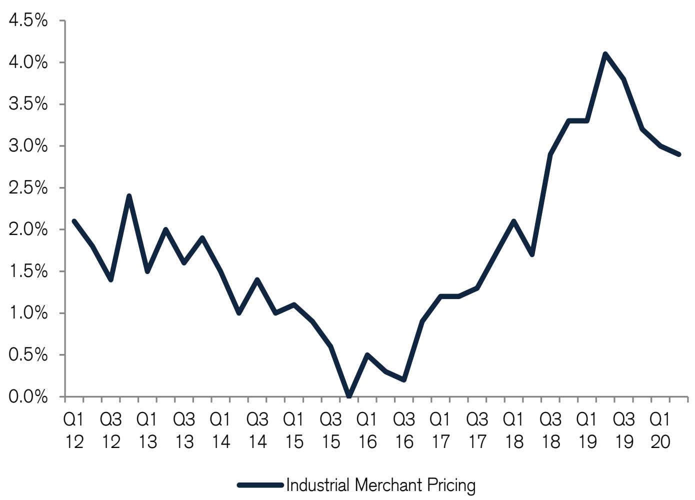
There are five main reasons why we think industrial gases/hydrogen are an attractive long-term investment.

1. **Consolidation**

Industrial gas companies are now consolidated into a three-plus company market (having been a six-company market), helping industry pricing power. The new management of Linde, following the merger with Praxair in 2016, has tended to be more capital disciplined than the previous management.

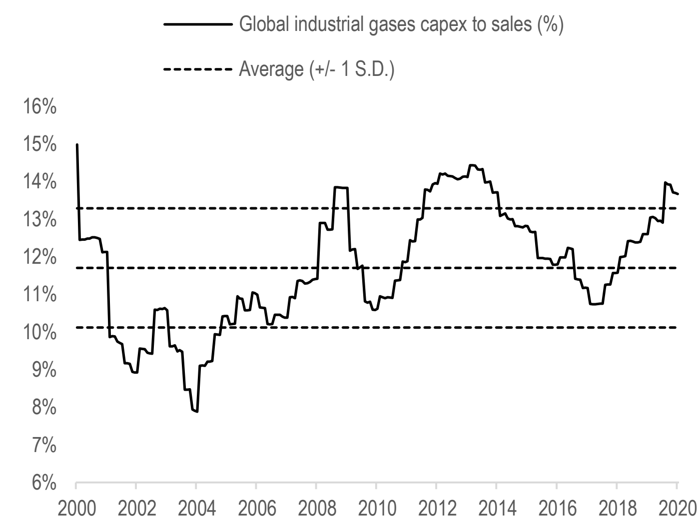
As a result, there has been an improvement in merchant prices. Indeed, the highly stable capex to sales ratio is a sign of capital discipline (especially as sales have been depressed by the COVID-19 pandemic).

Figure 395: Merchant pricing is improving



Source: Credit Suisse Chemicals team, Credit Suisse research

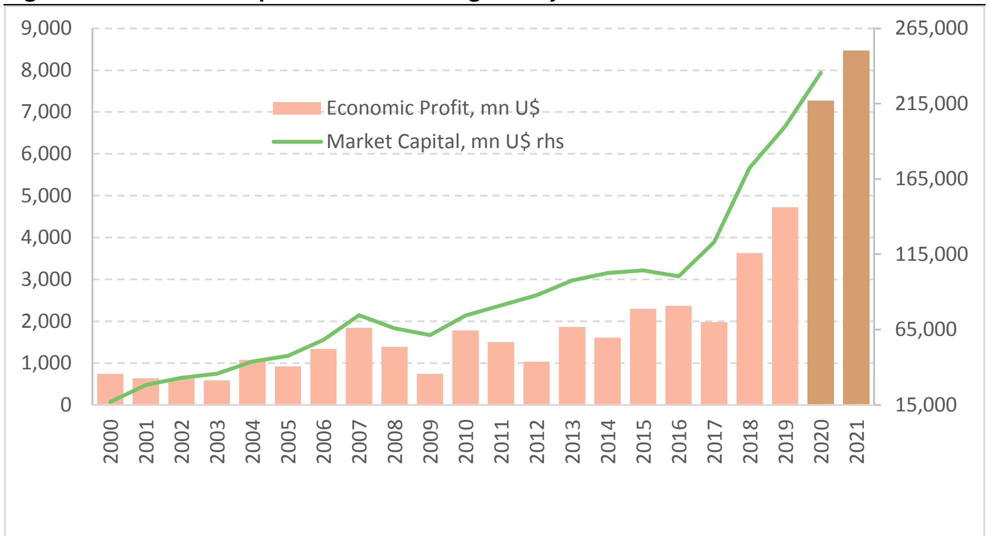
Figure 396: Industrial gases capex to sales



Source: Refinitiv, Credit Suisse research

We would also note that over the past few years, the amount of economic profit generated by the three major industrial gas companies has accelerated significantly and our HOLT team expects it to have quadrupled from 2017 levels by 2021.

Figure 397: Economic profit of industrial gas majors



Source: Credit Suisse HOLT

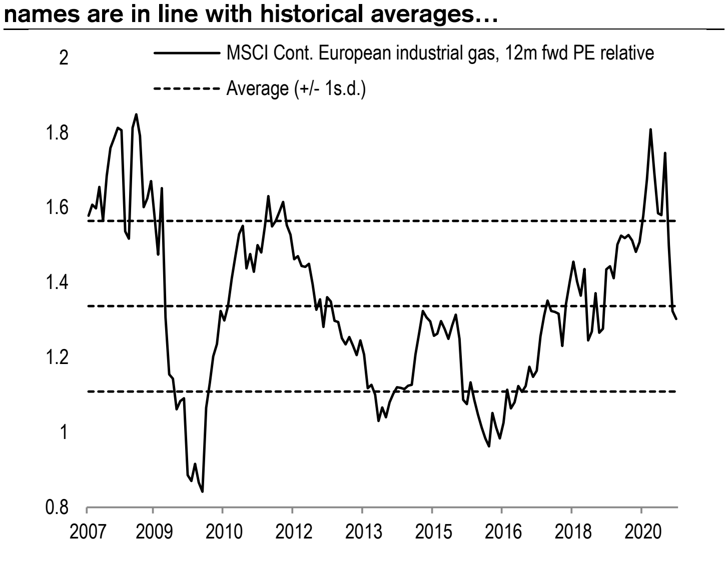
2. **Diminished competition from China**

Our European Chemicals analyst, Chris Counihan, believes the threat from Chinese competitors, which had been a concern, is now significantly diminished, and it is no longer a frequent discussion point with clients.

3. **Valuation is only in line with the market but cheap relative to other growth stocks**

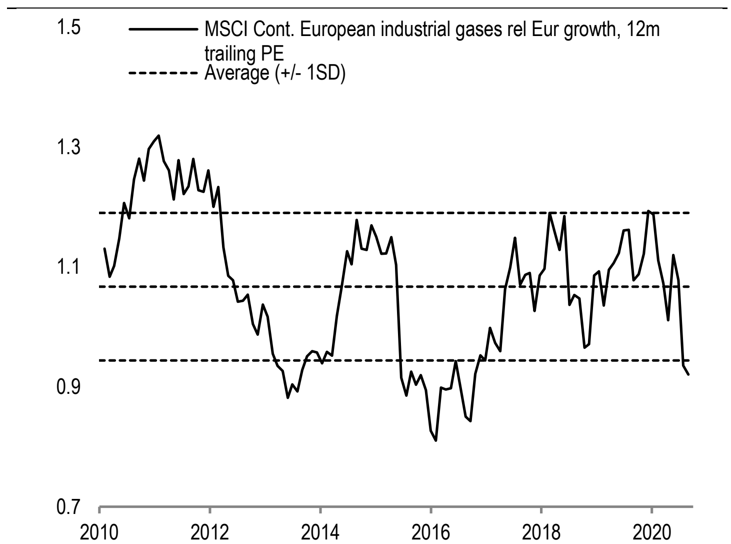
The sector trades roughly in line with its historical average on 12m fwd PE relative to the European market but is cheap relative to European growth stocks on 12m trailing PE. Thus neither its improved industry discipline nor the outlook for hydrogen appear to be reflected in valuations.

Figure 398: On 12m fwd P/E relative, European industrial gas names are in line with historical averages…



Source: Refinitiv, Credit Suisse research

Figure 399: …and cheap relative to growth stocks



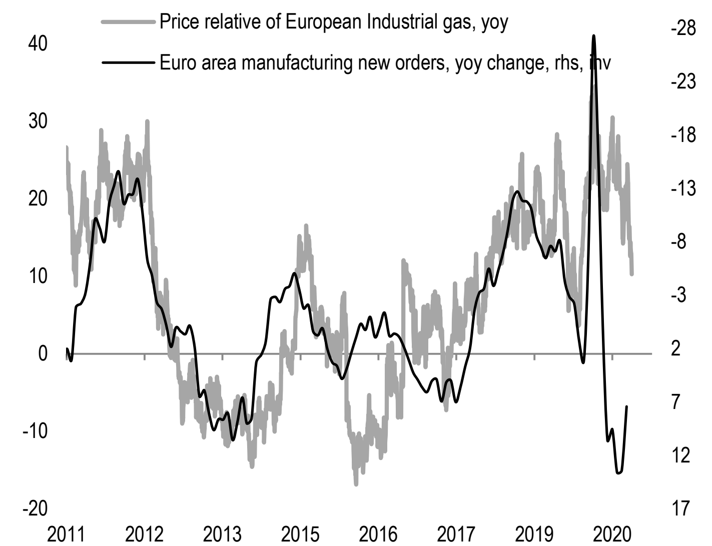
Source: Refinitiv, Credit Suisse research

4. **Stable quality earnings**

About a third of the sector's contracts are for 15 years and another third for 5 years. Hence, historically the sector has outperformed when PMIs fall. We see PMIs rising in 2021, to above 60 during Q2, but as highlighted earlier, cyclicals are now discounting this.

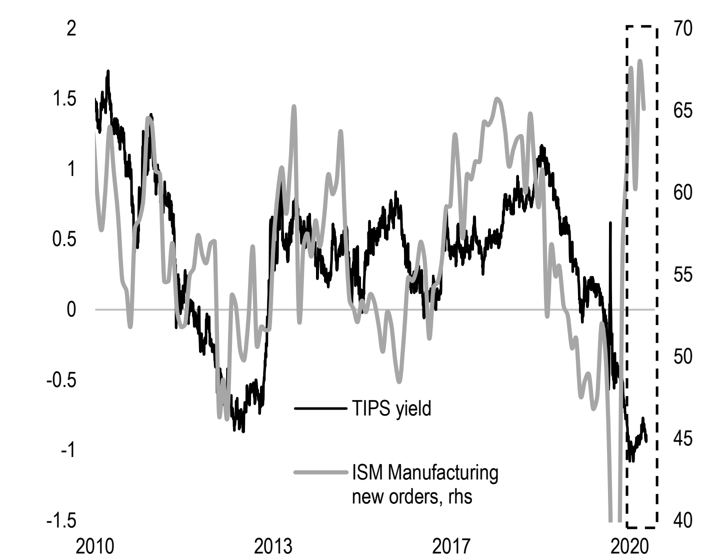
We think the decoupling between Bund yields and PMIs will remain extremely high and that this will to some extent limit the de-rating of growth stocks.

Figure 400: Industrial gas performance vs PMI new orders



Source: Refinitiv, Credit Suisse research

Figure 401: Unusually, we saw real yields fall as ISM picked up, helping to underpin secular growth



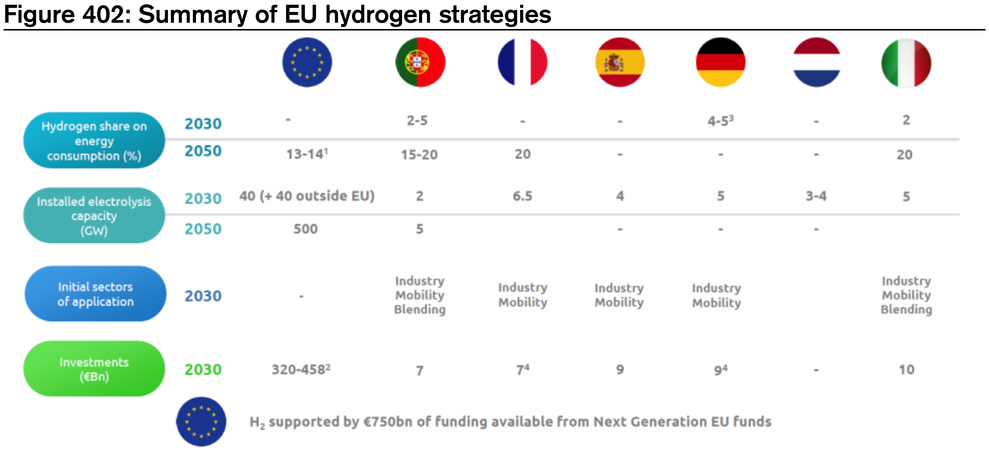
Source: Refinitiv, Credit Suisse research

5. Hydrogen remains a clear catalyst

Hydrogen accounts for c10-20% of industrial gas companies' output.

The IEA highlighted in its recent report that there is "unprecedented momentum" and growing support for hydrogen fuel today, with around 50 policy initiatives worldwide. Credit Suisse analysts have covered the European hydrogen value chain in detail in their report (see Hydrogen: A new frontier - Part 1: A primer on the European value chain, 8 December). Recently there have been several major announcements on spending to develop the hydrogen industry by governments in their fiscal packages (so far it includes €9bn in Germany, €7.2bn in France, €8-12bn in Italy, €7-9bn in Portugal, €9bn in Spain). Below we show a summary of EU hydrogen strategies. By 2030, there could be almost €460bn of hydrogen-related investments in the EU, according to Snam's estimates.

Figure 402: Summary of EU hydrogen strategies



Hydrogen share on energy consumption (%)	2030	-	2-5	-	-	4-5[3]	-	2
	2050	13-14[1]	15-20	20	-	-	-	20
Installed electrolysis capacity (GW)	2030	40 (+ 40 outside EU)	2	6.5	4	5	3-4	5
	2050	500	5		-	-	-	
Initial sectors of application	2030	-	Industry Mobility Blending	Industry Mobility	Industry Mobility	Industry Mobility		Industry Mobility Blending
Investments (€Bn)	2030	320-458[2]	7	7[4]	9	9[4]	-	10

H_2 supported by €750bn of funding available from Next Generation EU funds

Source: Snam

According to McKinsey, by 2030, the green hydrogen market will be worth $0.5trn, rising to $2.5trn by 2050. The FT highlighted that the hydrogen market could be worth $11trn in 2050 (see FT 30 Nov).The market cap of all the industrial gas companies is c$270bn. Around 20% of their total sales are hydrogen; therefore, if we pro rate their exposure according to their sales, c$50bn of market cap compared with a market size of $0.5trn in 2030 seems like a low price for the major producers of hydrogen.

We highlight below some examples of the increased use of hydrogen:

- **Hydrogen for transport:** The IEA pointed out in the same report that the majority of the initiatives have focused on transportation. Examples include fuel cells for cars (e.g. Toyota Mirai, and Japan also aims to have 800K hydrogen cars on the road by 2030 (FT, 30 November)), hydrogen trains (two iLint trains by French manufacturer Alstom are already in active service in Germany (BBC, 20 June 2018)) and hydrogen ships (Maersk, for example, announced its target to be carbon-neutral by 2050). Airbus plans its first zero carbon hydrogen powered plane by 2035 and ZeroAvia created the first hydrogen aircraft. A McKinsey report commissioned by the European Commission and Hydrogen Europe outlined a scenario in which 40% of aircraft could be hydrogen powered by 2050 in an efficient decarbonisation scenario (May 2020).
- **Hydrogen for storage of energy:** This is being pioneered by Mitsubishi Hitachi Power System. As renewable energy sources are often dependent on other factors (e.g. sun, windpower), balancing and energy storage are key components to operate a low-carbon grid successfully. Mitsubishi Power's system converts excess renewable energy into hydrogen, which is stored in mediums such as salt caverns, pipelines or vessels for up to several months. Gas turbines can convert the hydrogen into energy whenever needed to balance the grid and avoid an outage. Credit Suisse analysts highlight that companies such as Vopak are doing feasibility studies of storing green hydrogen in Ammonia before transport and shipment.
- **Hydrogen for homes:** In 2025, new-build homes in the UK will be banned from using natural gas. The Climate Change Committee (CCC) recommends that all boilers sold in the UK by 2025 are 'hydrogen-ready' and the UK aims to have two towns fueled by hydrogen by 2030 (FT Dec 9th). Snam Rete Gas started introducing a 5% hydrogen and natural gas blend into the Italian gas network in April, and its CEO, Marco Alvera, has said that hydrogen is "easy to transport and fuel" and "you can use it to stabilise the power grid, when other sources are unavailable" (FT, 28 November 2019). Our Utilities team highlights that to decarbonise gas via hydrogen, an investment of €60bn is needed.
- **Hydrogen for steel to decarbonise steelmaking:** Steel production accounts for c8% of fossil fuel use by replacing coke with hydrogen. SSAB believes this could be commercial by 2025. We have seen the largest Swedish steel producer, LKAB, announce investment plans for SKr 400bn (c$47bn) over the next 20 years of carbon-free iron ore (DRI) made using hydrogen (FT, 25 November).
- The EU wants to install 40GW electrolysers for the production of 'green hydrogen' (i.e. made without fossil fuels by using water electrolysis) by 2030, with hydrogen rising from 2% to 14% of the energy mix by 2050 (see High Hopes for Hydrogen, 19 June 2020).
- **Hydrogen cost:** The environmental cost of hydrogen depends on whether or not the electricity used to produce it is renewable (but many hydrogen facilities are in coastal areas, where there will be an increasing number of wind turbines). The cost of hydrogen energy has fallen from 40x the equivalent price of oil (in 2000) to 2x now (FT, 28 November 2019). Blue hydrogen (natural gas and carbon capture) is only 30% more expensive than petrol. Green hydrogen is double the price (made from electrolysis), but a recent report from the Hydrogen Council found that green hydrogen, currently costing $6/kg, could become competitive with grey hydrogen (costing $1.50/kg) by 2030, making it more competitive than petrol by 2030. The Hydrogen Council said hydrogen would be affordable for 22 different applications including trains and heavy-duty transport such as trucks and long-distance coaches. The cost of fuel cells is likely to fall very sharply.

- **Hydrogen helping to decarbonise agriculture:** Around 15% of the carbon emissions from chemicals come from the production of ammonia (FT, 7 Dec). The use of green hydrogen for ammonia (boosted by a carbon border adjustment tax on grey hydrogen) would be a way of decarbonising this aspect.
- **Carbon adjustment tax at border:** Both President-elect Biden and the EU Commission have discussed the possibility of this. A carbon adjustment tax would increase the cost of grey hydrogen (due to its higher C02 emissions) and help increase the competitiveness of green hydrogen relative to grey hydrogen which in turn would greatly increase its use as above.
- **Ammonia makes imports of hydrogen easier:** The hydrogen strategy in Europe relies partly on imports of hydrogen produced from North Africa and the Middle East. Transporting hydrogen is unusually difficult as it liquefies only at -250 degrees Celsius. Ammonia, which is used to make fertiliser, could be the answer. For the same volume, ammonia has 50% more hydrogen than hydrogen itself and liquefies at -33 degrees and can be handled easily, similarly to liquefied natural gas (Euractiv, 14 September 2020).
- **Carbon capture:** Industrial gas companies also specialise in carbon capture. Currently about c75% of hydrogen used is produced from natural gas (with the rest mostly being generated from coal), both are described as ‘grey hydrogen’. However, combining natural gas produced hydrogen with carbon capture technology can significantly reduce emissions and is so-called ‘blue hydrogen’. This might become a valuable source of profits for industrial gas companies as industries increasingly use carbon capture to offset emissions.

The screen below shows the major global industrial gas names. CS analysts have Outperform ratings on Air Liquide and Air Products & Chemicals.

Figure 403: Global industrial gas names

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Air Liquide	25.0	108%	-6%	3.4	-5%	4.1	2.1	7.3	-1.5	-2.3	2.0	Outperform
Air Prds.& Chems.	28.9	125%	10%	5.0	9%	0.8	1.9	15.4	-7.4	-0.3	2.3	Outperform
Air Water	12.9	56%	-30%	1.3	-27%	7.2	2.4	-25.9	1.3	0.6	2.2	Not Covered
Linde	27.8	120%	-4%	2.7	-57%	2.9	1.5	-1.5	4.2	0.9	2.0	Not Covered
Nippon Sanso Holdings	15.9	69%	-30%	1.9	-4%	5.5	1.5	-73.3	-0.8	0.1	2.4	Not Covered

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

Some other companies involved in the hydrogen to energy space are listed below. We note that a lot of these stocks still have small market caps. We would also highlight work by our Global ESG team (see Global ESG Strategy - Beyond the Pandemic: The Green-Shaped Recovery), which supports our structural overweight of hydrogen.

Figure 404: Stocks exposed to hydrogen outside of industrial gases

Company	Line of business	Market cap (bn$)	Ticker	Rating
ITM Power	Hydrogen energy equipment	1.2	ITM.L	Not Covered
Ballard Power systems	Fuel cells	4.6	BLDP.OQ	Not Covered
Powercell	Fuel cell stacks & systems	1.4	PCELL.ST	Not Covered
Bloom Energy	Fuel cells	1.6	BE.N	Outperform
PlugPower	Fuel cells	5.6	PLUG.OQ	Not Covered
Fuelcell	Fuel cells	0.5	FCEL.OQ	Not Covered
Nikola	Hydrogen trucks	9.2	NKLA.OQ	Not Covered
Hydrogenics	Hydrogen generation and fuel cell products	0.3	HYGS.OQ^I19	Not Covered
AFC energy	Fuel cells	0.1	AFEN.L	Not Covered
Nel	Solutions for the production, storage and distribution of hydrogen from renewable energy sources	2.6	NEL.OL	Not Covered
Cell Impact	Supplier of bipolar flow plates for hydrogen fuel cell	1.4	CIb.ST	Not Covered
Xebec Adsorption	Systems for gas purification and the production of renewable gases	0.6	XBC.V	Not Covered
PowerHouse energy	Waste-to-Energy systems	0.1	PHEG.L	Not Covered
Chart Industries	Equipment used in the production, storage and distribution of industrial gases	2.7	GTLS.OQ	Outperform
Mcphy Energy	Hydrogen production and distribution equipment	0.5	MCPHY.PA	Not Covered

Source: Refinitiv, Credit Suisse research

Construction materials: strong overweight

Construction receives a boost from three areas:

i. More government investment in infrastructure (as discussed above).

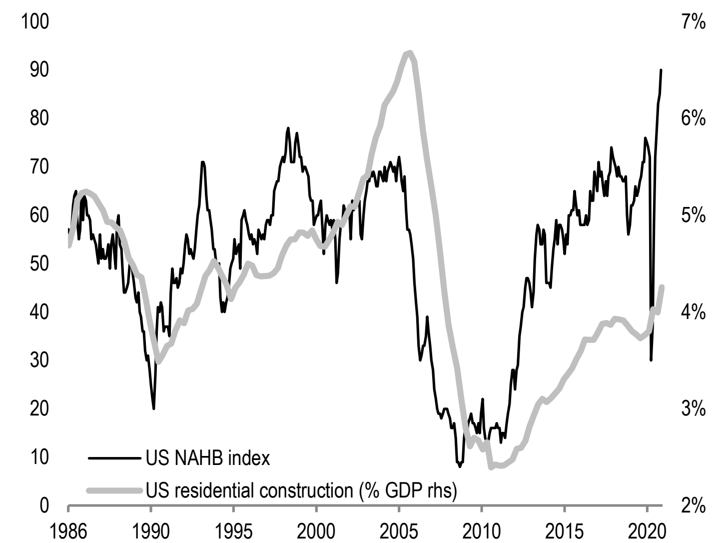
ii. Ongoing strength in residential.

iii. A strong recovery in nonresidential private activity.

Residential

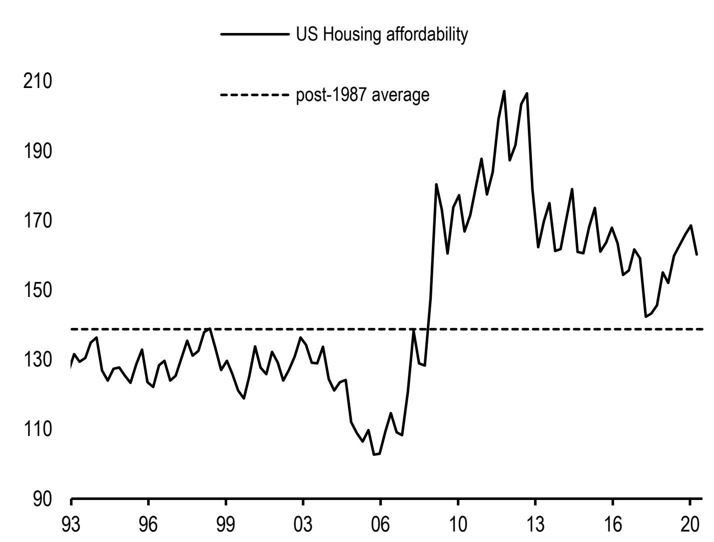
Around 40% of construction activity comes from residential real estate. In the US, housing as a percentage of GDP is still abnormally low at a time of high housing affordability, with only a small pandemic-related downtick in affordability.

Figure 405: Housing as % of GDP is low compared with the NAHB survey



Source: Refinitiv, Credit Suisse research

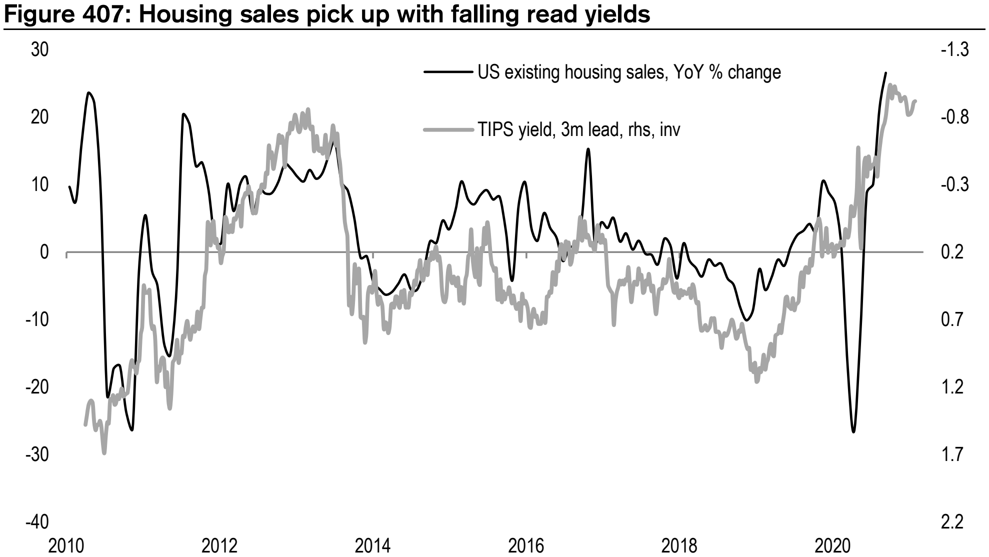
Figure 406: Housing affordability in the US remains attractive



Source: Refinitiv, Credit Suisse research

A further fall in real rates will, we think, cause even more of a boom in US real estate activity.

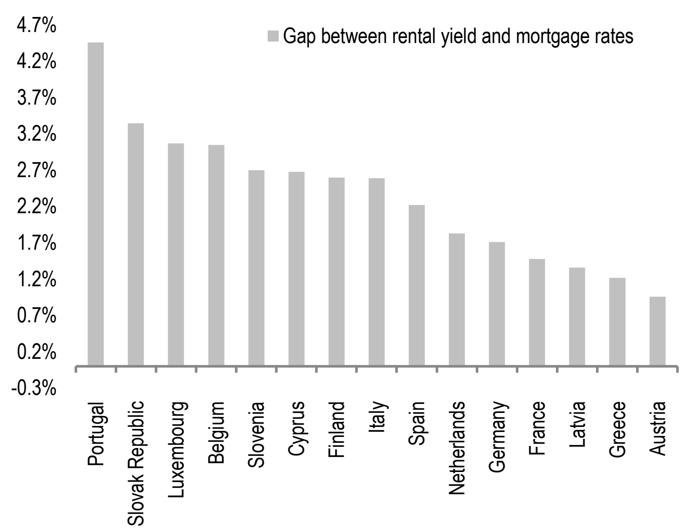
Figure 407: Housing sales pick up with falling read yields



Source: Refinitiv, Credit Suisse research

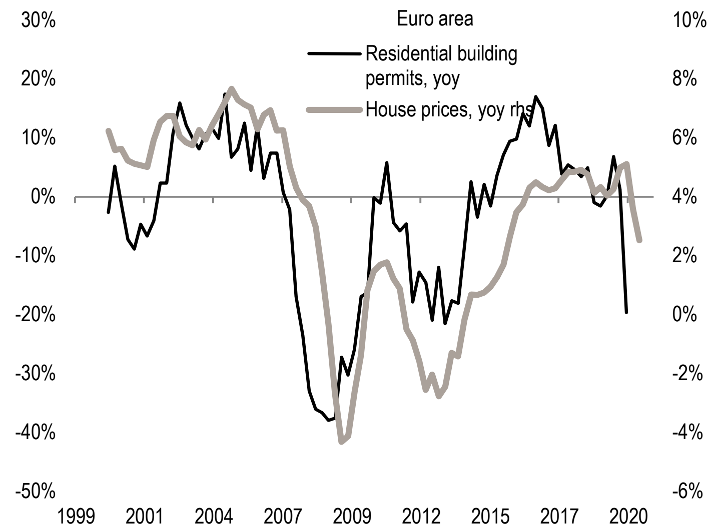
In Europe, in every country, it is much cheaper to buy than rent, which should also encourage residential activity. In the UK, for example, there is also a strong commitment by the government to have a c30% rise in housing starts to 300k homes a year.

Figure 408: In most European countries, the rental yield is comfortably above the mortgage rate



Source: Refinitiv, Credit Suisse research

Figure 409: As house prices rise, building activity accelerates



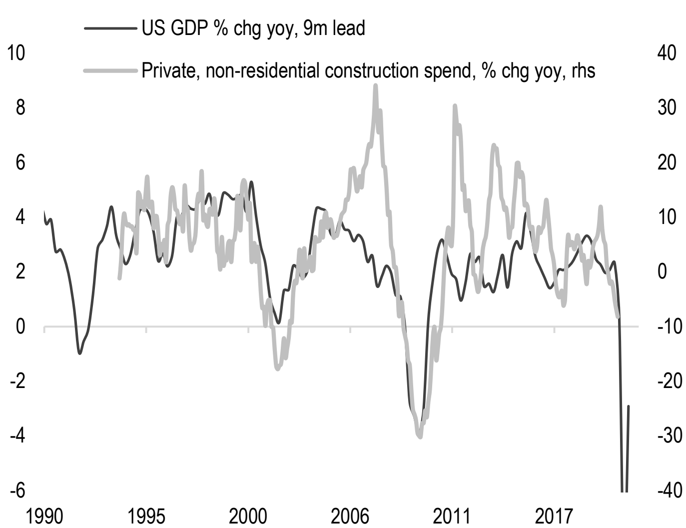
Source: Refinitiv, Credit Suisse research

All in all we are optimistic on house prices, given our top-down inflation view (see macro section), and this underpins residential real estate activity.

Nonresidential activity recovering

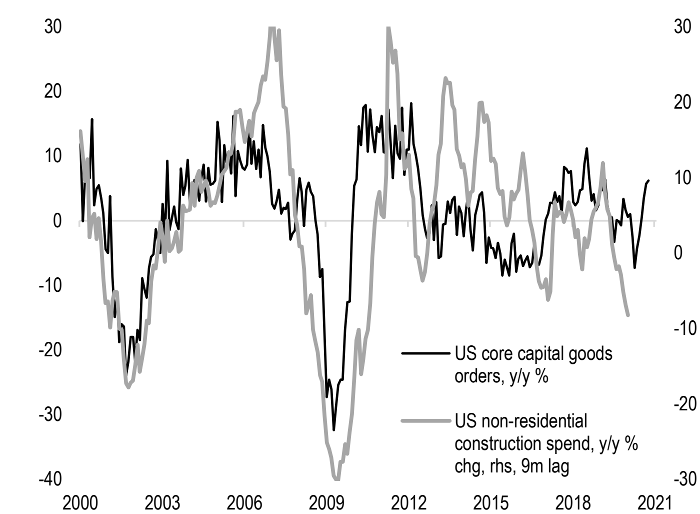
Ordinarily, when US GDP is above 2% (as it is set be in 2021) non-residential construction spend grows. Moreover, core capital goods orders tend to lead to a recovery in nonresidential construction.

Figure 410: Non-residential construction grows when US GDP grows above 2%



Source: Refinitiv, Credit Suisse research

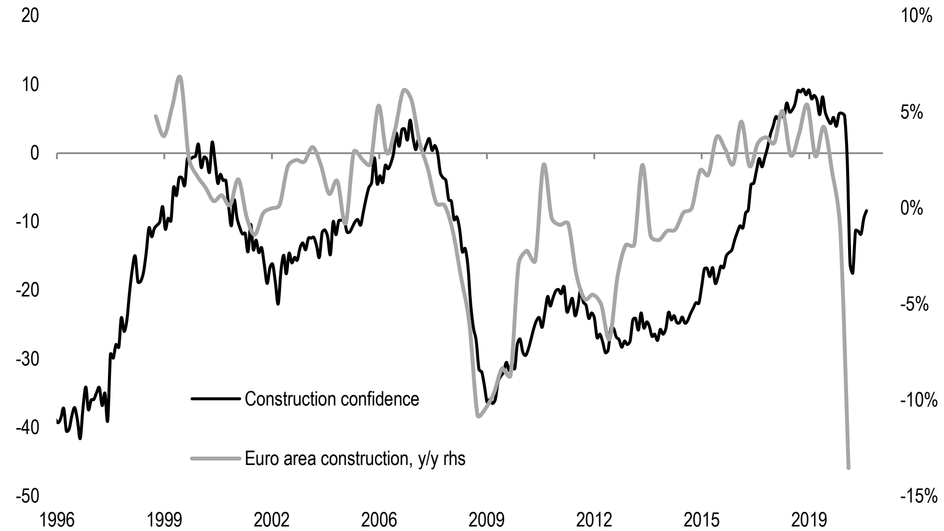
Figure 411: Core capital goods orders tend to load a recovery in non-residential construction spend



Source: Refinitiv, Credit Suisse research

We have seen euro area construction confidence begin to tick up, which tends to lead construction growth.

Figure 412: European construction confidence vs euro area construction



Source: Refinitiv, Credit Suisse research

Where do we invest?

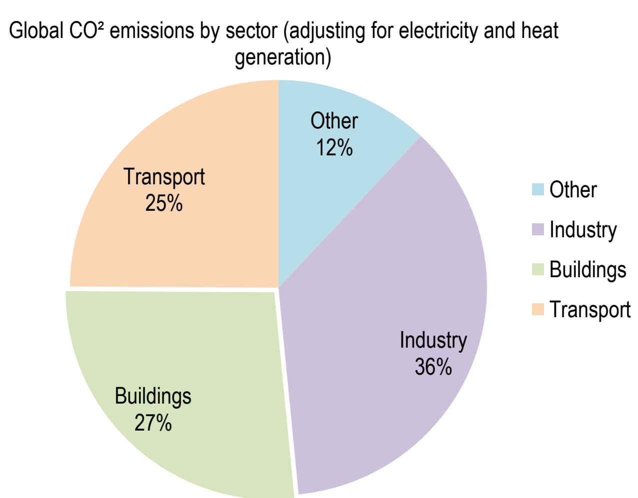
1. **Energy efficiency and carbon exposure**

There is set to be increasing focus on climate change policy relating to construction (increasing groundswell political support and intent from elected officials).

The IEA finds that buildings and the construction sector account for 40% of global direct and indirect CO2 emissions, with a potential for 40% more energy efficiency by 2040. Buildings alone account for 27% of CO2 emissions. Figure 90 shows global direct emissions by sector, adjusted for electricity and heat generation.

We believe the price of carbon is set to rise strongly as well (as highlighted in the Utilities section).

Figure 413: Global greenhouse gas emissions by sector



Source: IEA, Credit Suisse research

The following areas stand to benefit:

i. Insulation

The rationale behind insulation:

- It increases energy efficiency (and therefore reduces carbon emissions).
- The payback is typically seven years (the cost of insulation is paid back by the energy saved).
- It benefits from the rise in housing starts.

A large number of pledges and announcements favour insulation. In the UK, the prime minister pledged to spend £9.2bn on household insulation (including £6.3bn to insulate 2.2m disadvantaged homes, which could cut energy bills by as much as £750 a year. Two-thirds of the cost, up to £5k, would be borne by vouchers). France announced €6.7bn of spending on insulation in its €100bn coronavirus recovery plan (FT, 3 Sep). Germany announced €2bn on insulation.

In the US, President-elect Biden plans to upgrade 4 million buildings and weatherize (e.g., add double glazing) 2 million homes over four years with the aim of reducing the carbon footprint of the US building stocks by 50% by 2035, creating at least 1 million jobs. According to his campaign statements about clean energy, he will also seek to "spur the construction" of 1.5 million sustainable homes. Although most of this will require an act of Congress, the Credit Suisse US policy team thinks President-elect Biden will be able to set emissions regulations and regulate federal procurement and spending unilaterally through Executive Orders.

The other attractive feature of insulation is that demand is related to housing starts. We believe that in the US and UK there will be a sharp increase in housing supply. In the UK, the government is committed to increasing the number of housing starts to 300k from the pre-pandemic average of c160k (and has recently changed planning regulation to ensure that this happens).

The figure below shows those companies that are exposed to insulation and energy efficiency. BLD, IBP and OC have 79%, 64% and 38% of revenues, respectively, coming from insulation. SCHN also has 25% of its business in efficient building controls.

Figure 414: Insulation/energy-efficiency companies

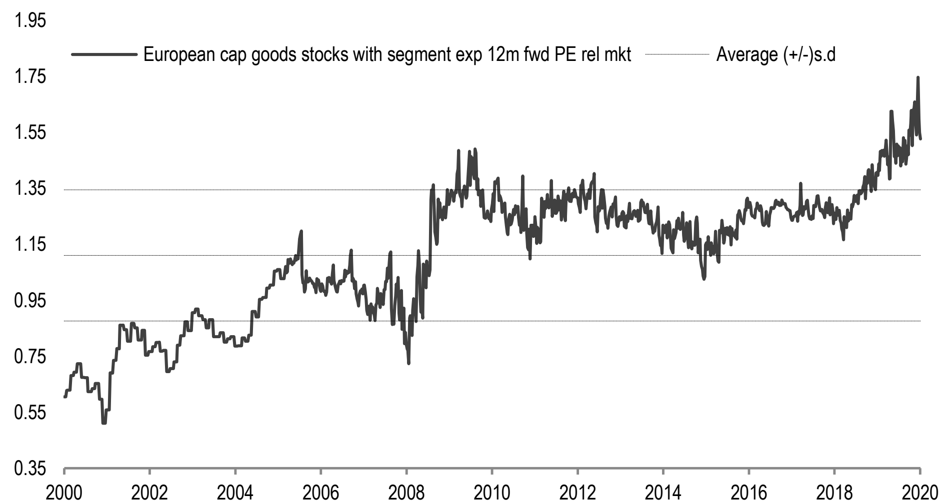
	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Schneider Electric	21.3	114%	13%	2.7	29%	4.7	2.5	8.3	6.0	0.3	2.3	Outperform
Rockwool International B	28.6	153%	16%	3.5	46%	na	1.1	-6.5	18.0	3.2	3.1	Not Covered
Kingspan Group	35.4	190%	42%	6.5	101%	2.9	0.4	-16.4	23.5	8.6	2.8	Not Covered
Sig	-10.0	nm	na	0.5	-70%	-13.6	0.0	-125.2	nm	8.2	3.0	Not Covered
Legrand	20.6	110%	-14%	3.3	-7%	7.2	2.0	-22.2	1.5	-0.2	2.9	Underperform
Halma	41.0	183%	40%	7.9	47%	2.2	0.7	-39.6	-2.5	-1.0	2.9	Outperform
Owens Corning	12.6	67%	-30%	1.5	2%	8.2	1.3	40.5	56.2	6.8	2.3	Neutral
Topbuild	20.1	89%	-4%	4.5	91%	5.8	0.0	17.7	35.8	8.7	2.0	Outperform
Installed Building Prds.	18.4	82%	-23%	10.9	36%	4.6	0.0	188.9	38.1	9.0	2.3	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

ii. The capital goods companies related to the construction cycle and energy efficiency

The problem is that the capital goods companies that have considerable exposure to construction also tend to be expensive structural growth companies.

Figure 415: Capital goods with construction exposure are not cheap



Source: Refinitiv, Credit Suisse research

Cable companies also offer exposure. In the Utilities section of this report, we discuss that electricity demand could surprise over the next decade, with Aurora Energy claiming that electricity demand will double by 2050 (FT, 2 Dec) and that there is a need to upgrade the grid to source the renewables and distribute to EV. Moreover, as in our utilities section, the grid investment has a beta of c3x. Our analysts have an Outperform on Nexans as a key pick in the cables sub-sector (highlighting the attractive long-term backdrop for offshore wind on the back of potential US and European government support); with Nexans' near-term EBITDA supported by cost savings running ahead of target and a strong order backlog (lower-risk).

Figure 416: Energy efficiency capital goods names

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Schneider Electric	24.2	116%	19%	3.1	34%	4.1	0.7	7.7	4.6	2.0	2.3	Outperform
Nexans	15.3	73%	-21%	1.8	28%	1.6	0.0	39.6	-14.6	-2.7	2.5	Outperform
Prysmian	18.8	90%	8%	2.8	-19%	4.3	14.0	-36.0	2.4	-1.0	2.3	Neutral
Atlas Copco A	31.8	152%	51%	10.2	32%	2.9	1.6	-7.3	1.8	0.6	3.3	Neutral

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

2. Homebuilders

The homebuilders offer real asset exposure, are technically undisrupted and are likely to see house prices rise.

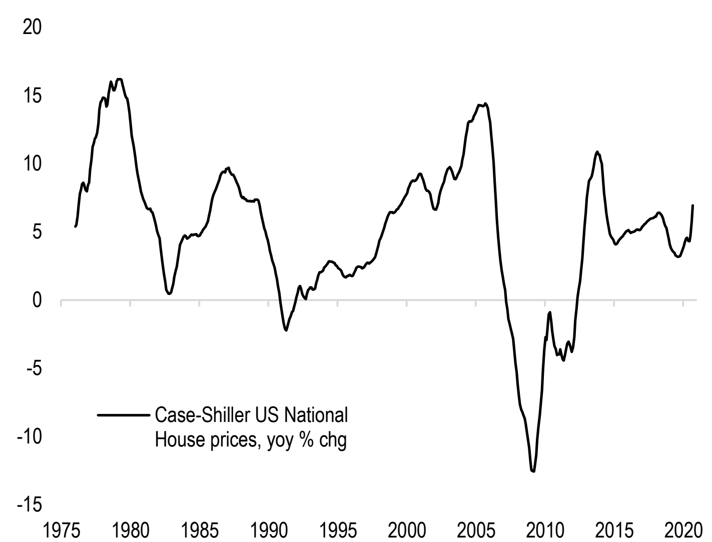
i. US homebuilders

As shown above, a fall in real bond yields boosts demand.

In the US, our housing analysts' national buyer traffic index had its highest 3-month average since its inception, which corresponded with the highest year-on-year percentage increase in homebuilder order growth in the past 15 years (see [Monthly Survey of Real Estate Agents](), 16 Nov).

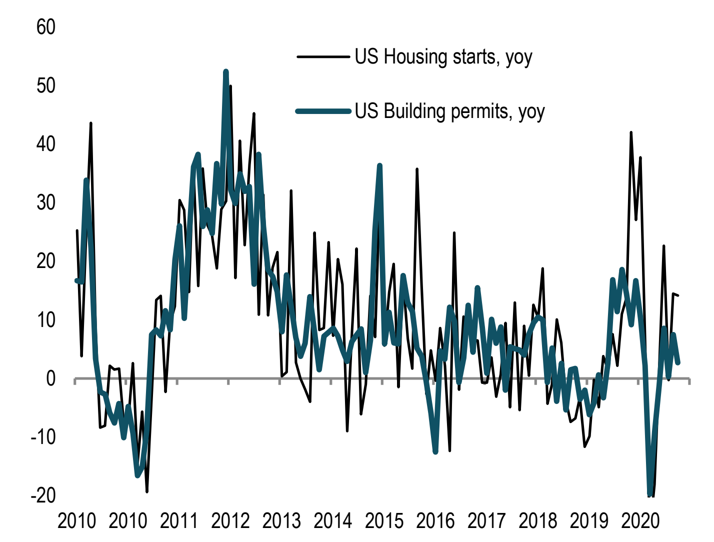
House prices remain up year on year, and housing permits and starts have already begun to recover.

Figure 417: House prices are still up year on year



Source: Refinitiv, Credit Suisse research

Figure 418: Housing starts vs permits

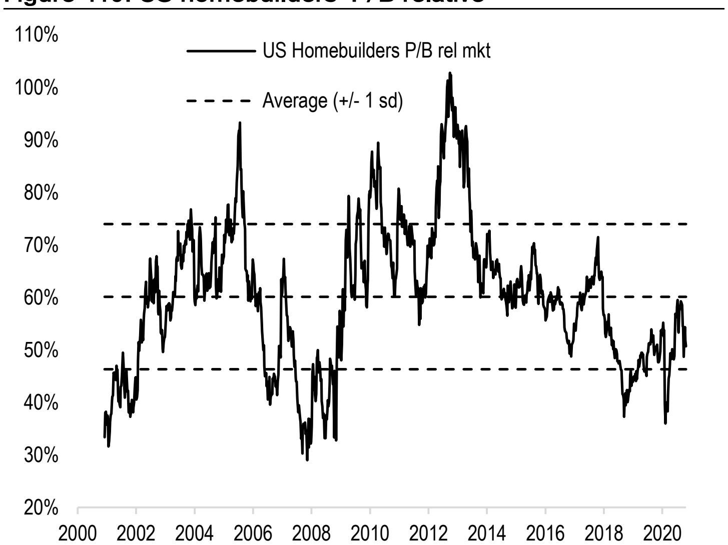


Source: Refinitiv, Credit Suisse research

If our inflation forecast on a 2- to 10-year view (see [COVID19: Long term inflationary consequences and what to do](), 2 July) is correct, US housing could become a particularly valuable store of value.

The P/B relative of homebuilders is moderately cheap and relative earnings revisions remain strong.

Figure 419: US homebuilders' P/B relative



Source: Refinitiv, Credit Suisse research

Figure 420: Relative earnings revisions remain strong

Source: Refinitiv, Credit Suisse research

The figure below shows our preferred US housing companies. Around 85% of Ferguson revenues are from the US and half from housing. Around one-fifth of CRH revenues are from housing.

Figure 421: Exposure to the US housing market

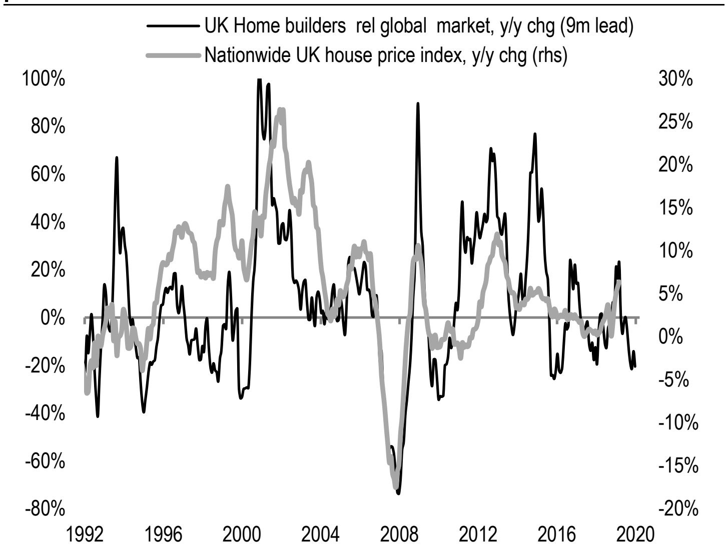
	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Ferguson	20.0	100%	-1%	3.4	2%	3.8	1.9	23.1	20.9	6.1	2.6	Neutral
Crh (Dub)	15.6	95%	-31%	na	na	4.7	2.5	42.7	17.2	3.3	2.0	Outperform
D R Horton	11.5	47%	-42%	2.9	46%	na	0.9	136.4	29.7	13.0	2.2	Outperform
Meritage Homes	10.0	41%	-52%	2.2	38%	na	0.0	80.0	63.4	26.6	2.1	Outperform
Kb Home	9.7	40%	-78%	1.7	-4%	na	0.9	33.0	21.7	-7.2	2.6	Outperform
Pultegroup	10.2	42%	-65%	2.4	27%	na	0.8	74.2	35.1	10.3	2.6	Neutral
Lennar 'A'	10.6	43%	-47%	1.7	-5%	5.6	0.3	107.0	19.0	5.8	2.2	Neutral
Toll Brothers	11.1	45%	-67%	1.4	-13%	na	0.9	12.7	14.9	5.6	2.9	Neutral

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

ii. UK homebuilders

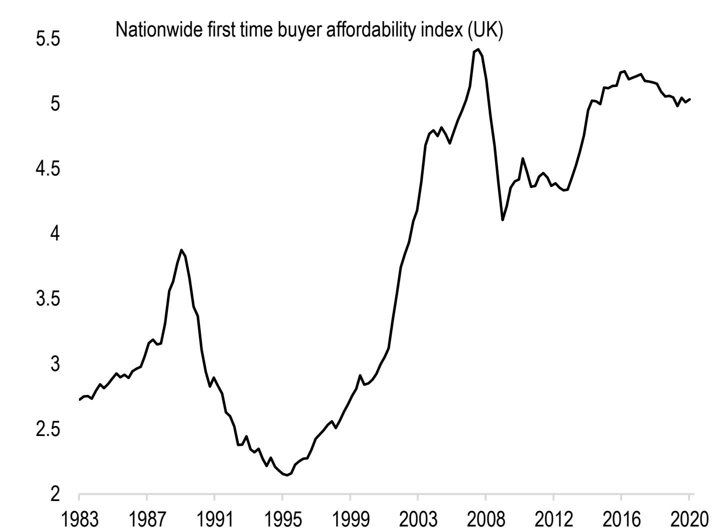
The UK homebuilders are already pricing in a significant decline in housing prices, at a time when house prices are rising 6.5% yoy (and accelerating). Affordability remains attractive.

Figure 422: Homebuilders performance against UK housing prices



Source: Refinitiv, Credit Suisse research

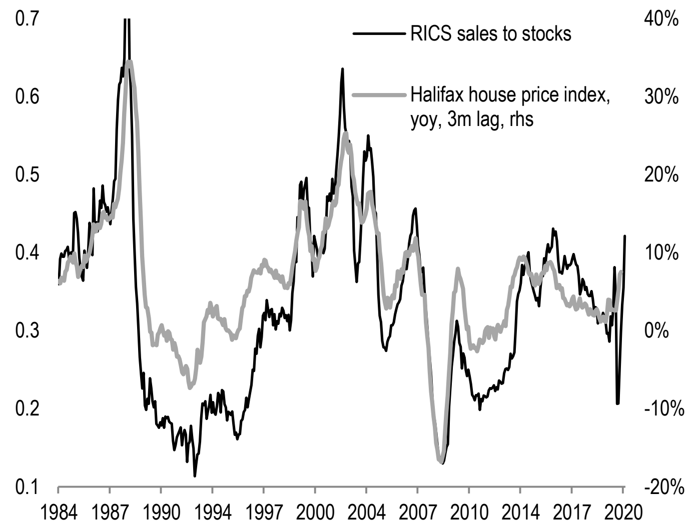
Figure 423: Affordability, measured as a % of 1985 mortgage payments, is still attractive



Source: Refinitiv, Credit Suisse research

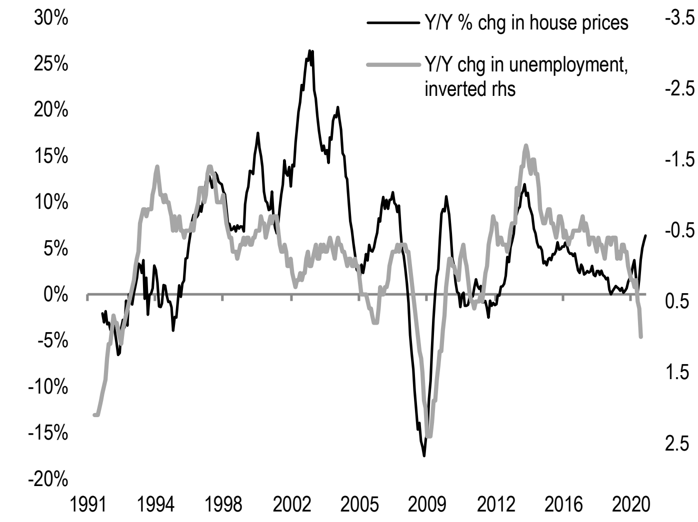
RICS sales-to-stock data has quickly rebounded across the UK (and it has led house prices); and mortgage approval growth is at a high last seen during the post-GFC recovery. We can see that unemployment tends to correlate to house prices; and if anything we expect only a small rise in unemployment from here.

Figure 424: Sales-to-stocks led house-price inflation in the UK



Source: Refinitiv, Credit Suisse research

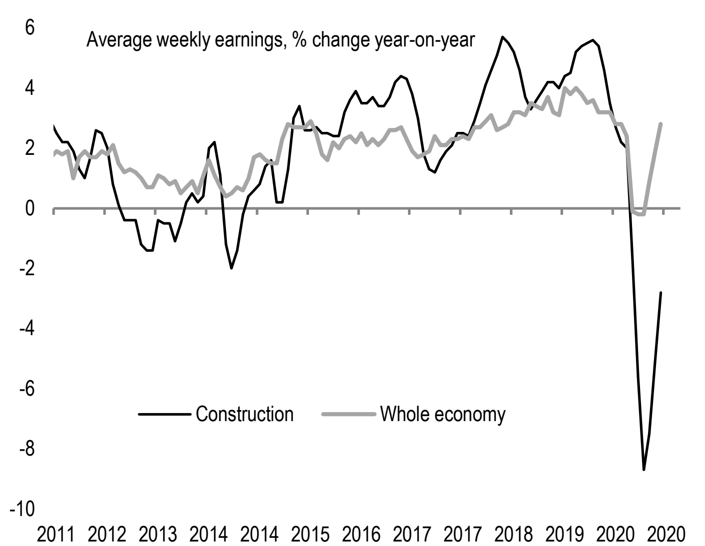
Figure 425: A rise in unemployment dampens house prices, and we only expect a small rise from here



Source: Refinitiv, Credit Suisse research

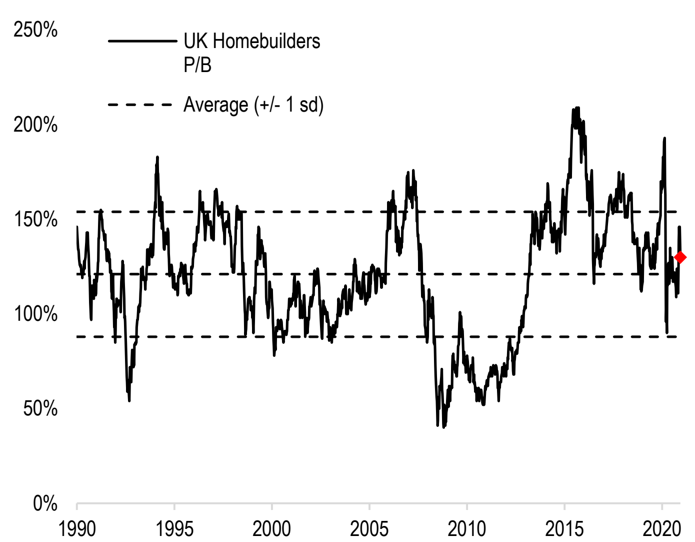
Alongside the rapid rise in house prices we have seen construction wage growth lagging behind the larger economy (helping margins). The sector has significantly de-rated on a P/B measure to be at the bottom end of its 10-year range.

Figure 426: Construction wage growth has now fallen sharply



Source: Refinitiv, Credit Suisse research

Figure 427: Valuations have de-rated on P/B to be at the bottom end of their 10-year norms



Source: Refinitiv, Credit Suisse research

Lastly; the micro-fundamentals for the sector remain positive:

i. The government is committed to building 300k houses (from c160k pre-pandemic), meaning future policy changes around issues such as planning regulation are likely to be supportive of development.

ii. In October, PM Johnson announced a proposal to enable first-time buyers to purchase new homes with 95% LTV, adding 2m owner-occupiers to the housing market.

iii. The sector emerged from the GFC highly concentrated (therefore the ratio of house prices to land prices has remained abnormally high) and homebuilders now also have land banks with much higher imbedded returns than they did pre-GFC.

iv. The sector has net cash and high margins.

v. It will be very hard for any government to wholly exit 'Help to Buy', which will be available to only first time buyers from April 2021, and proposed to end completely by March 2023. Owner occupancy of c64% makes it difficult for the government to intervene in the housing market too much without a strong political backlash. A wealth tax is likely to affect only very expensive homes, i.e. those valued at more than £1m, which is much higher than the average price of new homes built by homebuilders or there will just be a re-banding of council tax. We think it is more likely that changes to the tax on property in the UK will alter the tax status of capital gains rather than wealth tax (thus a person's prime residence may have some capital gains tax exemption removed).

We show below a screen of the UK homebuilders.

Figure 428: UK homebuilders

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Barratt Developments	11.4	46%	-23%	1.3	0%	25.5	2.7	121.0	13.4	7.8	1.9	Outperform
Persimmon	11.4	47%	-21%	2.6	11%	12.7	4.1	89.3	6.5	5.7	1.9	Neutral
Taylor Wimpey	11.5	47%	-23%	1.6	-19%	-4.3	2.0	68.0	4.3	3.4	2.3	Outperform
Bellway	10.1	41%	-24%	1.2	-26%	2.7	2.9	158.4	-4.3	5.5	2.0	Outperform
Berkeley Group Hdg.	13.9	57%	-2%	1.9	-19%	1.0	4.0	20.1	10.1	8.5	2.6	Neutral
Redrow	8.4	34%	-33%	1.1	-31%	15.9	3.0	173.8	5.8	5.6	1.9	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

3. We would also highlight cement and aggregates

The sector is extremely cheap and clearly would benefit from the rise in infrastructure spending.

Figure 429: The cement stocks look very cheap on a P/B relative

Source: Refinitiv, Credit Suisse research

President-elect Biden and the European Commission have said they are in favour of having some form of carbon-adjustment tax at the border (in the case of the EU, initially for cement, aluminum and steel), which would benefit the more domestic producers, which are significantly more carbon efficient. There is also no obvious substitute for cement. Lafarge has an FCF yield of 9.7% for 2020E (on consensus) and looks extremely cheap on HOLT.

We prefer the aggregate business because it is less threatened by imports.

CRH is a mix of businesses that we like (32% aggregates, 15% cement; with 20% of total revenues from US housing).

Figure 430: European construction companies

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Kingspan Group	34.1	163%	26%	6.6	78%	2.9	0.4	-1.3	27.1	7.2	2.8	Not Covered
Schneider Electric	24.2	116%	19%	3.1	34%	4.1	0.7	7.7	4.6	2.0	2.3	Outperform
Saint Gobain	12.8	61%	-25%	1.1	-20%	5.5	0.4	22.7	9.2	2.3	2.2	Not Covered
Lafargeholcim	13.7	86%	-33%	1.0	-29%	9.0	0.0	50.4	10.6	0.4	1.7	Outperform
Bouygues	12.8	61%	-30%	1.2	-22%	11.7	5.5	82.9	-6.9	-0.8	2.3	Outperform
Crh	15.4	na	-31%	1.6	-6%	6.7	2.4	49.8	9.5	2.1	1.8	Outperform
Ferguson	20.1	96%	0%	3.5	3%	3.7	1.8	33.0	15.6	3.4	2.5	Neutral
Akzo Nobel	20.5	91%	7%	2.8	4%	4.3	2.1	7.0	9.6	1.4	2.1	Outperform
Heidelbergcement	8.7	55%	-46%	0.7	-33%	12.0	2.6	63.0	29.6	0.8	2.2	Not Covered

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

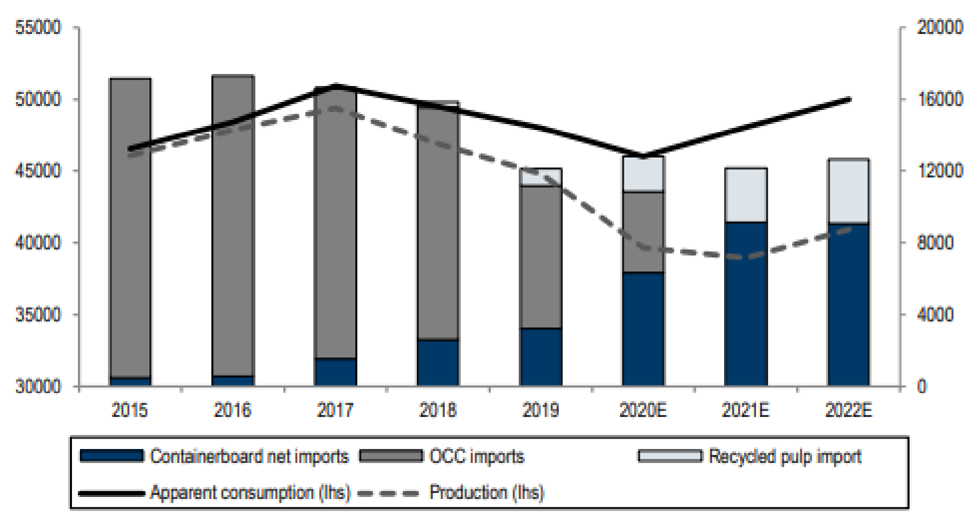
Paper & packaging: strong overweight

Containerboard

Why do we like containerboard?

- **The move to e-commerce** clearly increases packaging demand (with e-commerce, for example, accounting for around 15% of Smurfit's end demand).
- **It offers E & S of ESG exposure** as fibre-based packaging replaces plastics (in areas of both primary and secondary packaging and in some instances in protective packaging). This shift is still in its infancy (corrugated products such as Hexacomb can replace polystyrenes in protective packaging, which could boost demand by 5%). 85% of boxes are recycled and 80% of the raw materials that SKG uses are recycled, while the rest comes from certified renewable forests. This compares with plastics, where only 5% is recycled. We suspect that the growth potential in corrugated areas has been hugely underestimated. UK spending on goods and services branded as 'ethical' has risen 10-fold over the past 20 years, according to the Co-Op Food Group (FT, 28 November).
- **It also benefits from the China waste import ban introduced in 2018.** By 2021, China will ban all imports of solid waste, including recycled fibre (e.g. old corrugated containers, OCC). This means that the industry will lose 28m of fibre (around a quarter of Chinese paper production, c.6-7% of global supply). Thus China will have to import containerboard and recycled pulp. Through September, Chinese imports of recycled pulp were up 138% and imports of containerboard were up by 137%, which has pushed up net exports for both European and US producers (containerboard shipments were up by 3% and 2.4%, respectively, YTD).

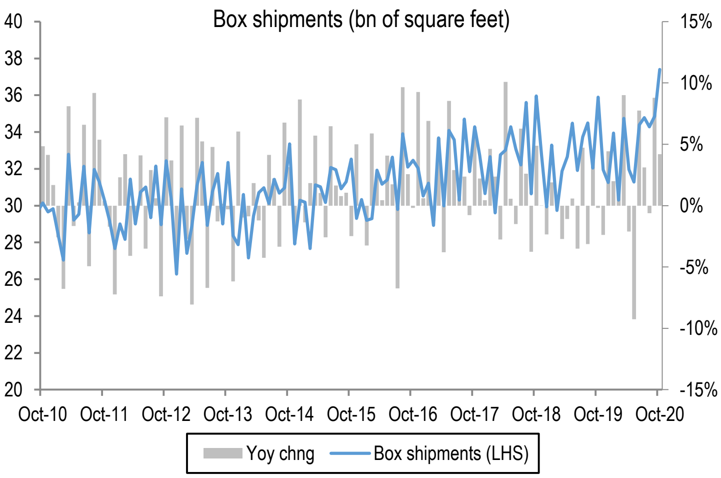
Figure 431: China is replacing waste paper imports with containerboard and recycled pulp imports



Source: Credit Suisse European Paper and Packaging team

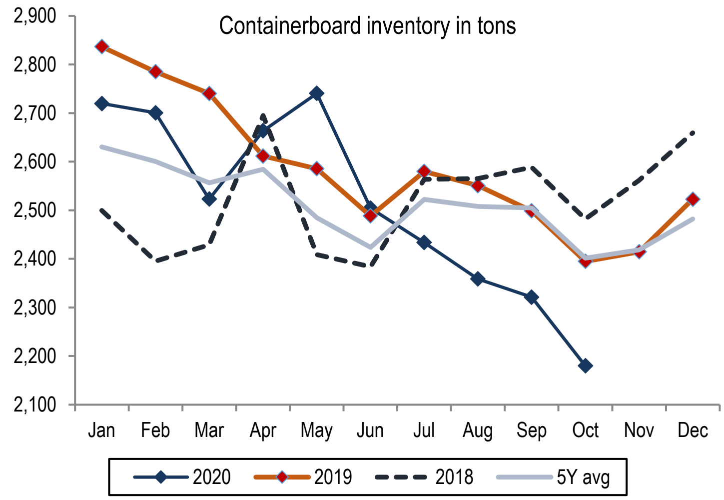
- **Proving resilient in a recession.** In 2020 H1, Smurfit Kappa's ROCE was 15%; at the low of the pricing cycle, its across-cycle ROCE target is 17%. (See *Containerboard: resilient domestic demand – surging import pull from China push exports higher*, 20 October).

Figure 432: Box shipments (billion sqft) were up strongly…



Source: Credit Suisse European Paper and Packaging team

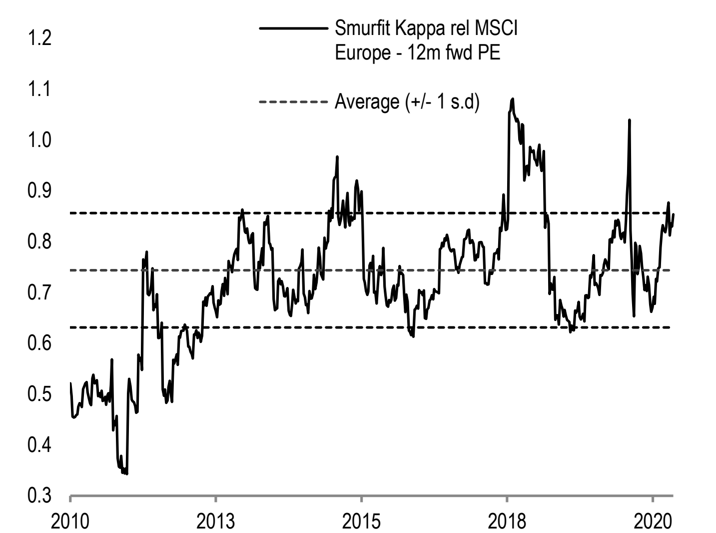
Figure 433: …while containerboard inventories (tons) were down



Source: Credit Suisse European Paper and Packaging team

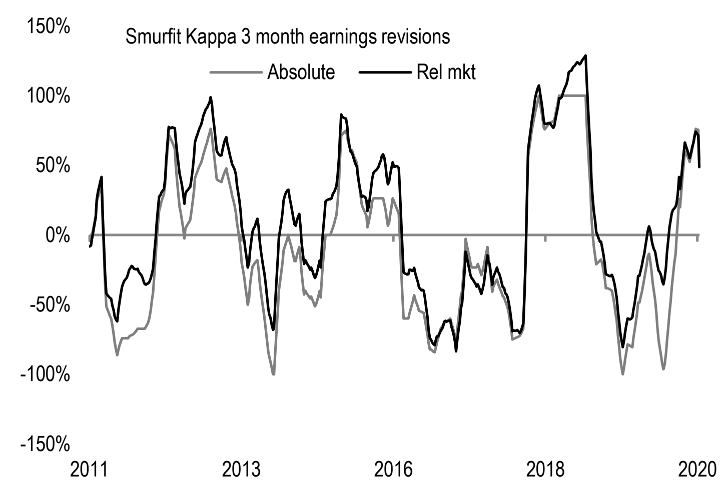
- The top containerboard/corrugated board producers have moved down the cost curve (hence International Paper's attempted merger with Smurfit Kappa in 2018).
- **Valuation:** The corrugated sector has not really re-rated despite resilient earnings revisions.

Figure 434: 12m fwd PE of SKG relative to European market



Source: Refinitiv, Credit Suisse research

Figure 435: SKG earnings revisions



Source: Refinitiv, Credit Suisse research

Elsewhere in the sector

ESG advantage by owning trees: Trees represent the vast majority of value for Holmen and SCA (and to a lesser extent for Stora).

The ESG and real asset advantages of Stora: Stora potentially offers the 'E' in ESG of owing trees, having paper replace plastic in consumer products (e.g. cups) and increased use of timber to replace cement in buildings. On a sum-of-the-parts, Stora's industrial assets would trade on nearly half the multiple of their peers after adjusting for their forest assets. Additionally, timber prices in the US have risen very sharply this year (which in turn increases demand for sawn goods; e.g. blanks from Europe to the US)

We would also look at office paper (Mondi) and would avoid newsprint and magazines (e.g. UPM).

- Below we show a screen of European paper and packaging names covered by our analysts. Our analysts like SKG and Mondi for containerboard exposure.

Figure 436: European paper and packaging companies under CS coverage

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Mondi	14.4	81%	-16%	2.2	-16%	6.9	2.6	69.4	0.3	0.7	2.1	Outperform
Smurfit Kappa Group	14.9	85%	7%	2.9	18%	5.8	3.7	18.3	6.3	-0.3	2.1	Outperform
Stora Enso R	17.2	97%	2%	1.5	0%	5.8	2.9	118.2	2.0	-0.9	2.4	Neutral
Upm-Kymmene	18.4	104%	3%	1.5	4%	2.4	4.5	139.6	1.2	-0.9	2.3	Neutral
Holmen B	31.7	178%	29%	1.5	11%	1.7	2.0	50.0	10.4	-0.3	3.1	Underperform

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse research

Concessionaires: small overweight

We have been a structural overweight of concessionaires, and like the following attributes:

i. We view this sector as a long-duration, domestic non-technically disrupted inflation hedge.

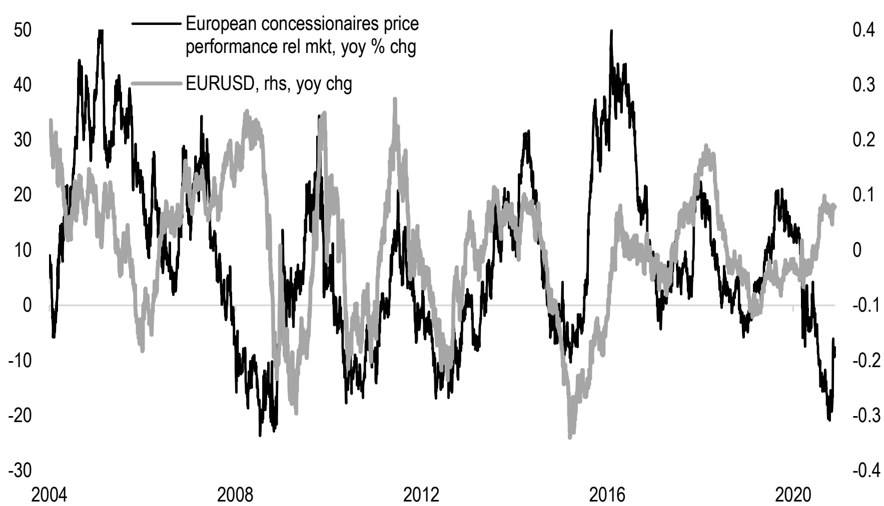
They are not technically disrupted. Roads will be required regardless of the type of vehicle in use. Although some aspects of air travel are challenged (business), we expect it to be leveraged into GDP growth, and think the ability to build new airports or even runways will be extremely limited (for environmental reasons), benefiting the incumbents.

The asset life tends to be very long, which is also attractive for institutions seeking to hedge similarly long-duration liabilities (especially with the degree of technical disruption to office and retail REITs, which form a lot of institutions' direct holdings in inflation hedges).

ii. Macro support: beneficiary from a strong euro

We think that the euro could end 2021 at USD1.25 and the sectors' revenues are almost entirely domestic. The sector has also significantly underperformed recent euro strength.

Figure 437: The relative performance of Continental European concessionaires against EURUSD

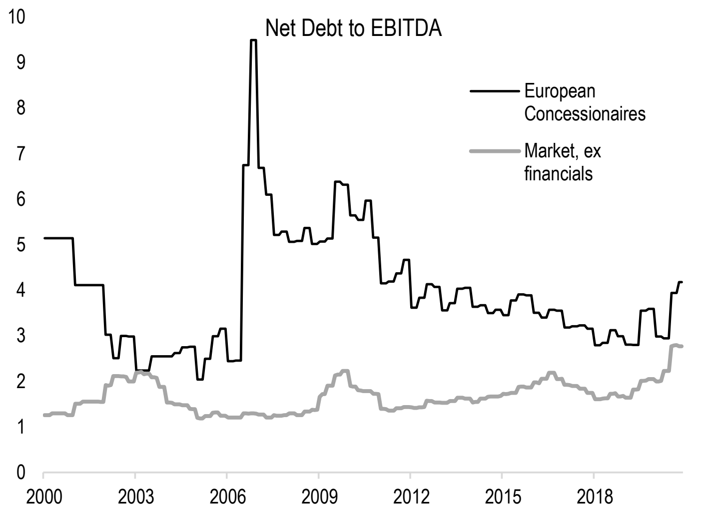


Source: Refinitiv, Credit Suisse research

iii. Exposure to inflation

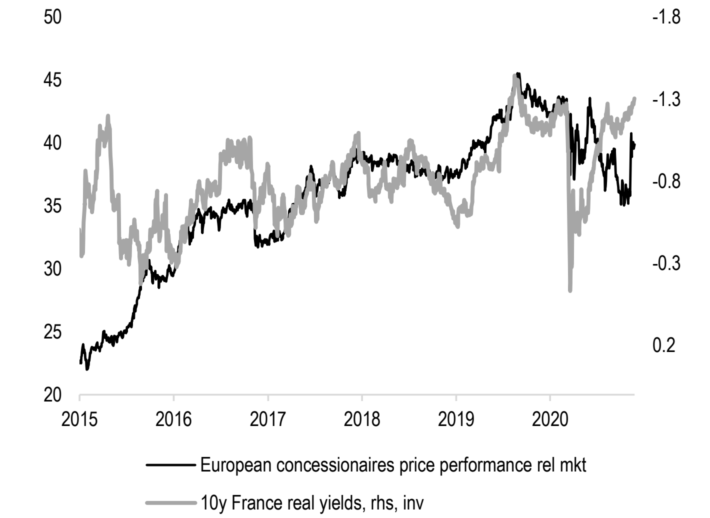
Many of the concessionaires have long-term CPI links; thus providing them with upside if inflation rises (as we believe will happen, as in our Macro overview). They also have high leverage with a net debt to EBITDA of 4.2x, and we believe the real cost of debt will fall (in other words, that inflation expectations will rise more than bond yields).

Figure 438: European concessionaires net debt to EBITDA



Source: Refinitiv, Credit Suisse research

Figure 439: The sector has traditionally outperformed with falling real yields

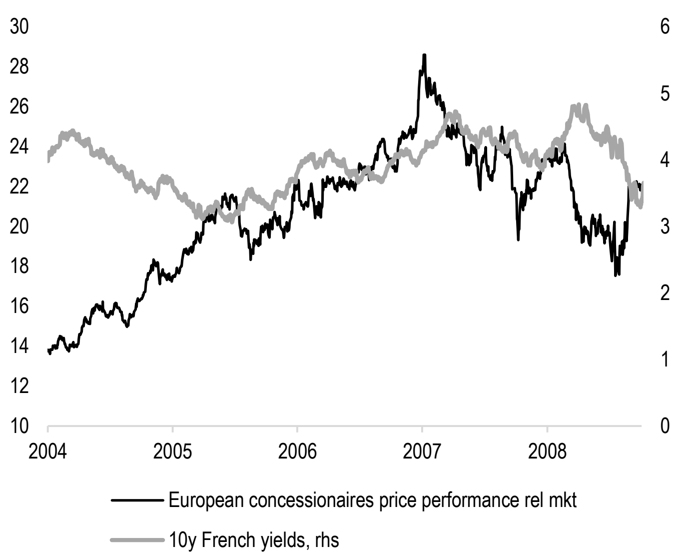


Source: Refinitiv, Credit Suisse research

Investors are concerned that this sector tends to underperform if bond yields rise. We expect little rise in yields and think that even if they were to rise, it would be inflation expectations rising more than bond yields, allowing real bond yields to fall. Moreover, if a rise in bond yields were to occur because of a stronger-than-expected recovery (which would be the likely explanation), there has in the past been clear occasions when the benefit of cyclicality outweighed the cost of higher debt.

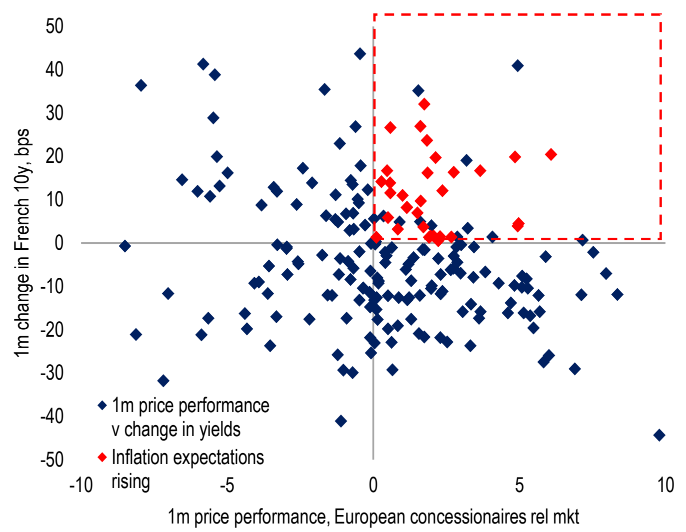
We can see below 71% of the time the sector outperformed with rising bond yields; inflation expectations were also rising.

Figure 440: However, we saw the sector was able to outperform with rising yields between 2005 and 2007



Source: Refinitiv, Credit Suisse research

Figure 441: When the sector outperformed with rising yields, 71% of the time it was alongside rising inflation expectations

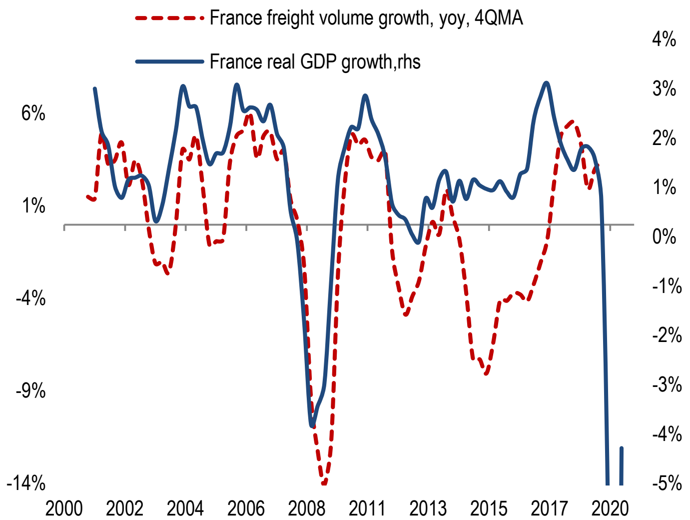


Source: Refinitiv, Credit Suisse research

iv. They are partly cyclical

This is partly cyclical via their inflation hedges (with CPI-linked pricing), but they are also heavily exposed to road traffic (both miles driven and trucking activity). Freight tends to follow GDP with a lag.

Figure 442: France real GDP growth vs freight volume growth



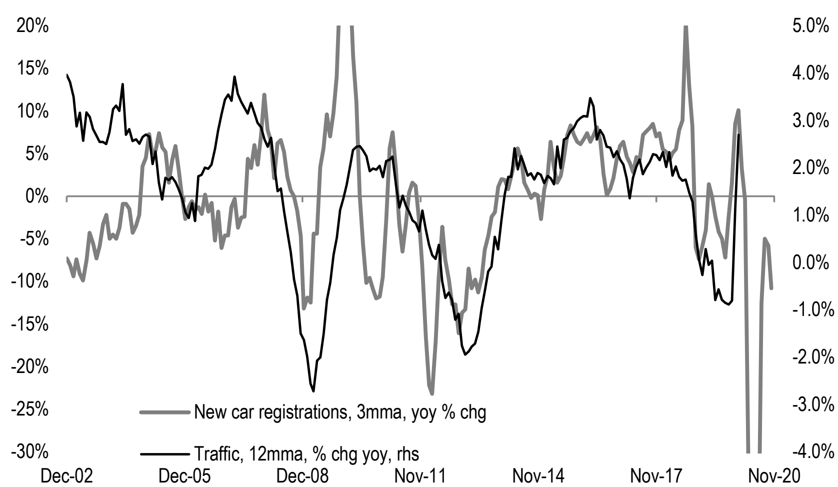
Source: Refinitiv, Credit Suisse research

Figure 443: INSEE business sentiment survey has yet to pick up; which would imply strong upside for traffic

Source: Refinitiv, Credit Suisse research

Although INSEE traffic data has yet to be released for 2020, the figure below shows that new car registrations (which have historically moved with traffic) have recovered very quickly from lockdown troughs.

Figure 444: New car registrations and traffic



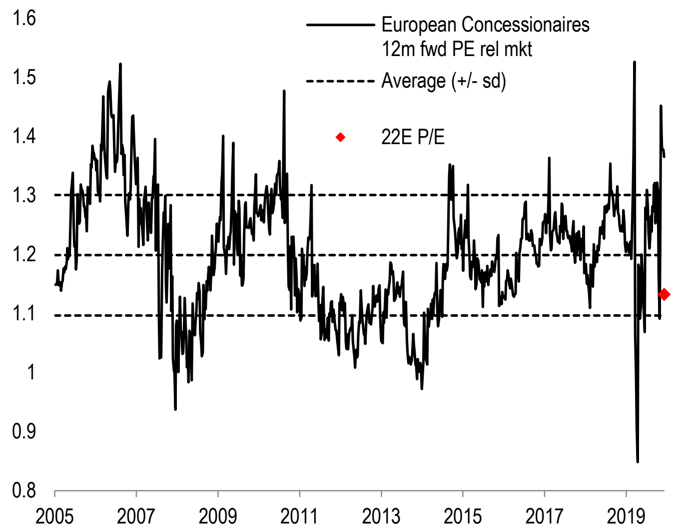
Source: Refinitiv, Credit Suisse research

v. They are exposed to construction, with up to a 30% of their revenues coming from construction (see our overweight of construction materials sectors). We think we are just at the start of a recovery in construction, as discussed in the section above.

vi. It is in part vaccine-dependent (where there is airport exposure) or simple cyclical exposure (via trucks).

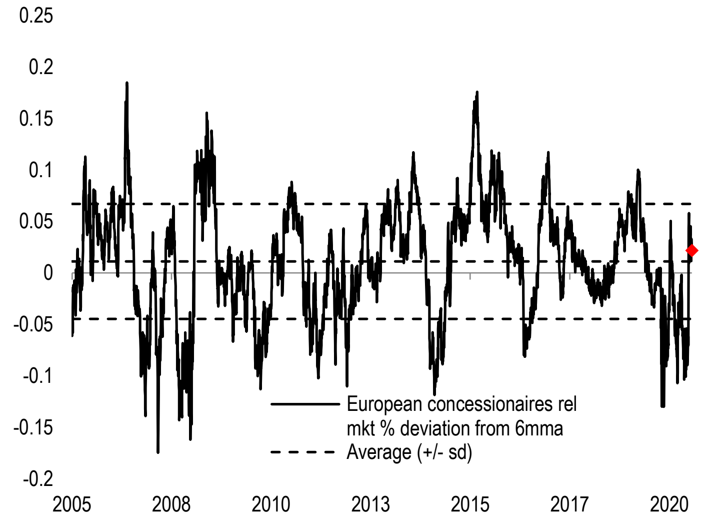
vii. P/E relatives are only slightly extended, and the sector is neutral on price momentum. Given the depressed nature of earnings we need to look at earnings on 2022E P/E relatives.

Figure 445: 12m fwd P/E relatives are only slightly extended



Source: Refinitiv, Credit Suisse research

Figure 446: Price momentum relative to the market



Source: Refinitiv, Credit Suisse research

We have an Outperform rating on Aena, preferred by our analyst on the basis of its exposure to short-haul air travel, primarily leisure travel, low cost carrier exposure (which we also prefer, see Airlines section); and its capex and opex flexibility, allowing it to deliver €127m of savings in Q3 20. Its 100% exposure to airlines leaves its 12m fwd P/E relatively elevated at c48; but it trades at c.16x 2023E (i.e. normalised) earnings on CS estimates. Further, its freehold ownership of the majority of its airports results in a very long asset life.

Figure 447: European concessionaires

			-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Segment	Price perf rel pan Europe mkt 6m chg (in Eur)	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Eiffage	Highways, Rail	-10.1%	12.1	58%	-30%	1.5	-17%	7.7	2.5	-31.6	-10.4	-0.6	1.9	Not Covered
Ferrovial	Highways, Airports	-13.7%	83.8	400%	65%	4.1	42%	0.5	2.3	-64.9	nm	8.9	2.6	Not Covered
Vinci	Airports, Highways, Rail	-8.6%	18.7	89%	-1%	2.3	-7%	3.4	1.2	-2.9	-20.1	1.3	2.3	Not Covered
Aena Sme	Airports	-6%	48.3	164%	79%	3.4	-25%	1.2	0.0	-14.8	nm	-4.6	2.8	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

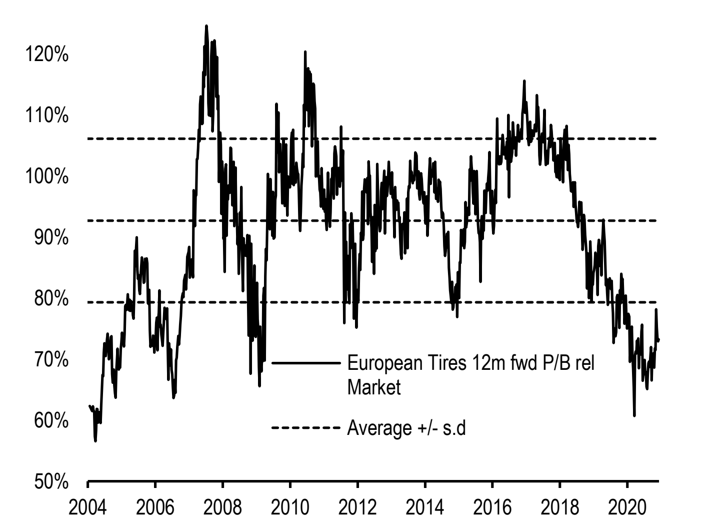
Auto components: small overweight tyres

Our preference is to be overweight the less disrupted areas of high-end tyres and airbags.

- **Less susceptible to technological disruption:** We believe that tyres and airbags should be relatively powertrain-neutral, supported by the faster acceleration and higher weight of electric vehicles (EV), which mean that tyres will need to be replaced more frequently. Goodyear says that "traditional tyres can wear out up to 30% faster on electric vehicles" (Goodyear press release; 6 March 2018).
- **A defensive cyclical:** Tyre manufacturers are exposed to cyclical upturns because more miles tend to be driven when growth picks up. Into a downturn, tyre manufacturers can be defensive because:
  - i. Weaker oil prices tend to encourage people to drive more;
  - ii. Around 70% of the profits from the tyre market come from the aftermarket, which is less sensitive to the cycle;
  - iii. In the case of airbags, the product cycle is very long (c7 to 8 years).
- **A concentrated market:** Around half of production in the tyre market is controlled by the top five producers. Airbag production is essentially a duopoly, supporting the manufacturers.
- **Less exposed to Chinese competitive risk:** Auto components are considerably less exposed to Chinese competitive risk because margins in China tend to be similar to elsewhere, and China is moving up the value-added curve less quickly in auto components than in autos. There has been a much higher competitive threat in the budget tyre segment from China, while 80% of Michelin's business is still in premium tyres (FT, 30 October 2019).

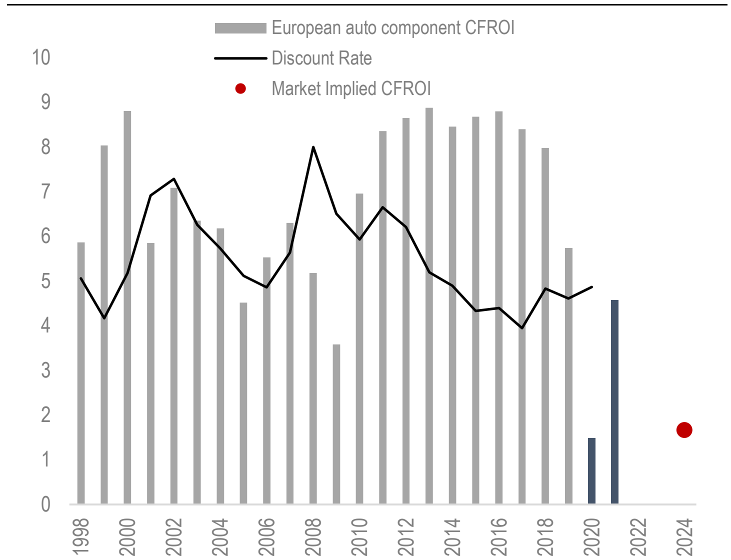
We can see valuations are very cheap if we look at P/B relatives of the tyres or the implied profitability of the components overall on HOLT.

Figure 448: Tyres are looking very cheap on 12m fwd P/B relative to the market



Source: Refinitiv, Credit Suisse research

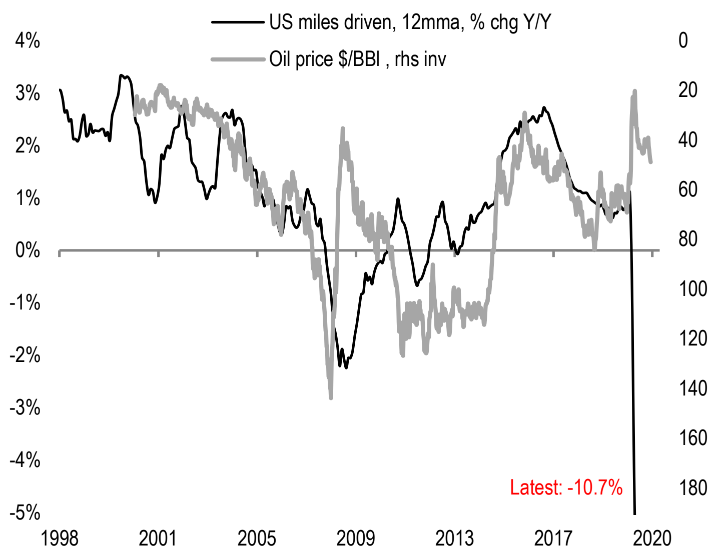
Figure 449: A significant decline in CFROI is priced in



Source: Refinitiv, Credit Suisse research

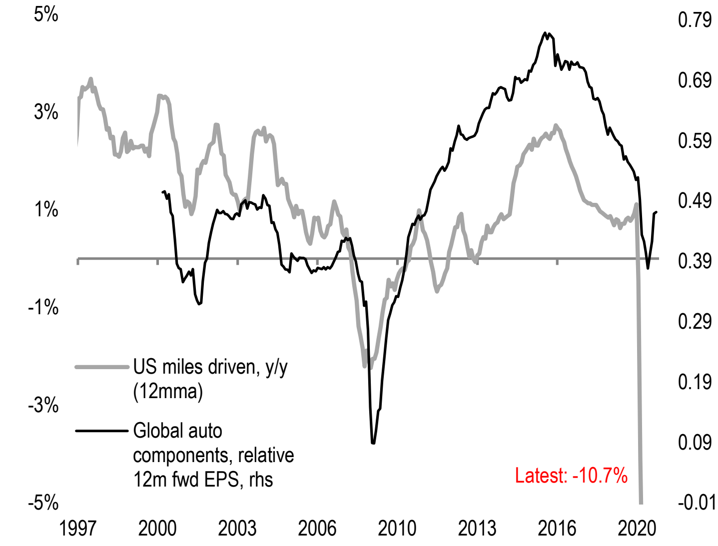
To some extent, miles driven never really reflected the collapse in the oil price, for example in the US; which has correlated to EPS. As larger proportions of the population begin to be vaccinated, we expect to see miles driven pick up again very quickly.

Figure 450: Historically, as the oil price falls, miles driven picks up



Source: Refinitiv, Credit Suisse research

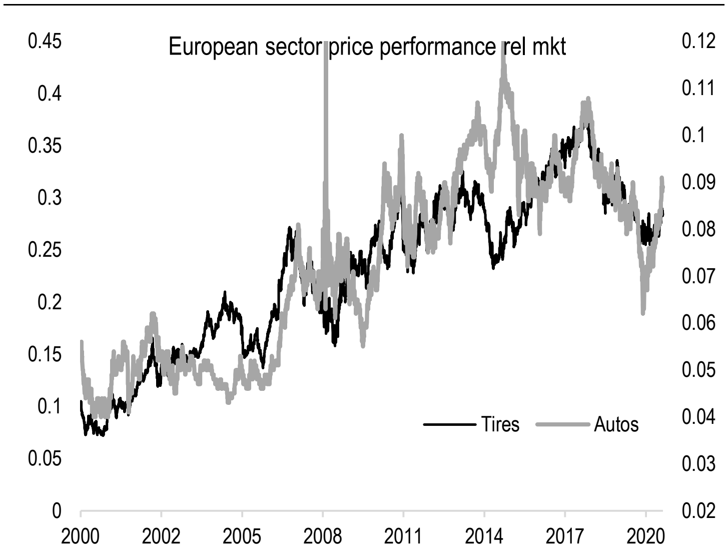
Figure 451: EPS for the component producers correlates with miles driven



Source: Refinitiv, Credit Suisse research

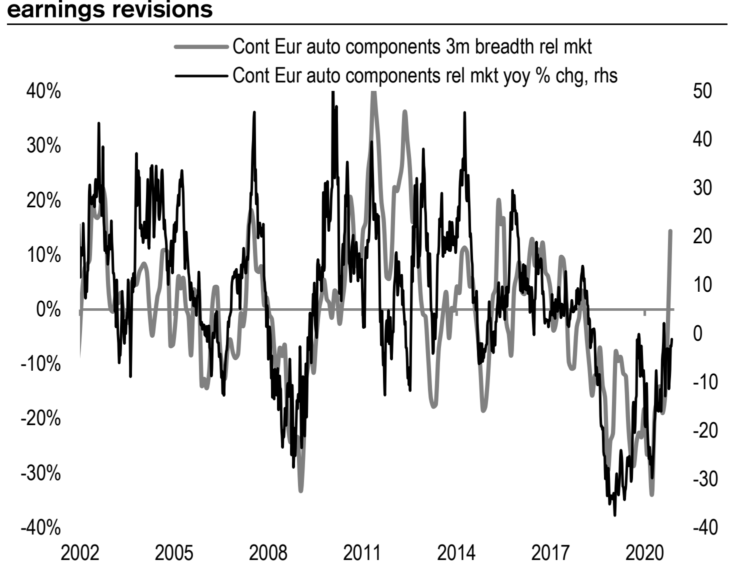
We can also see that the tyres names tend to move in line with European OEMs. Thus they are a hedge on the 'disrupted' auto sector as a whole (and have slightly lagged the OEMs recently). Furthermore, relative earnings revisions for the components overall have recently turned up very strongly, and performance tends to follow.

Figure 452: European tyres have moved in line with the OEMs…



Source: Refinitiv, Credit Suisse research

Figure 453: … and the components overall have very strong earnings revisions



Source: Refinitiv, Credit Suisse research

Our focus would be on high-end tyres and airbags.

Figure 454: European tyres and airbags

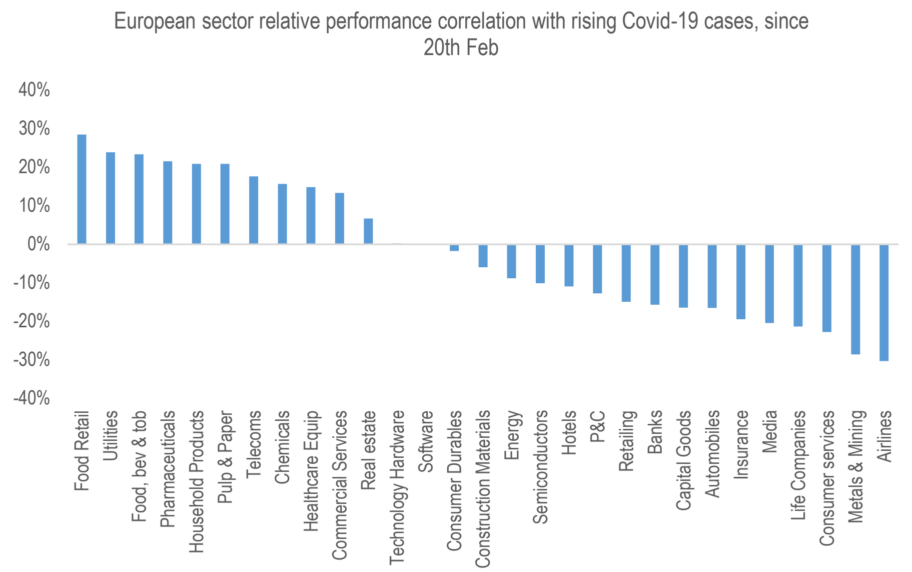
Name	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Continental	14.4	86%	-5%	1.4	-50%	2.7	2.0	125.4	1.6	0.8	2.7	Not Covered
Autoliv	15.2	90%	5%	3.8	13%	2.7	1.0	62.0	21.1	5.0	2.6	Not Covered
Michelin	12.8	76%	-5%	1.4	-25%	6.3	1.8	85.8	9.1	1.2	2.1	Not Covered
Nokian Renkaat	21.4	127%	5%	2.3	-37%	3.2	3.6	19.5	13.3	5.4	3.3	Not Covered

Source: IBES, MSCI, Refinitiv, HOLT, Credit Suisse research

Airlines: overweight budget, not flag carriers

We moved to overweight on 9 November (the day of the Moderna vaccine announcement). Airlines have been the most sensitive sector to COVID-19 infection rates. We highlight the budget airlines (c60% of European free float market cap) as we see long term disruption to business travel.

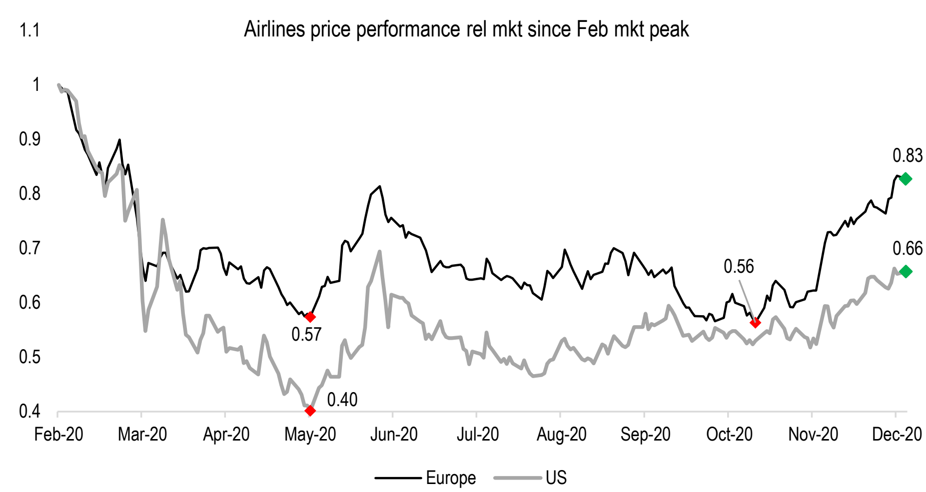
Figure 455: Airlines have been the most sensitive sector to COVID-19 case counts



Source: Refinitiv, Credit Suisse research

The airlines sector as a whole has regained only about 40% in the US, and 60% in Europe of their post-virus sell-offs, having made their lows relative to the market in May (with a double low in October in Europe), though as shown later on, some of the budget airlines are back to previous peak.

Figure 456: Airlines have regained only 40-60% of their post-virus sell-offs



Source: Refinitiv, Credit Suisse research

We like sectors where the cost-cutting means that we are potentially going into the new cycle.

Why we think we may be heading into a super cycle for budget airlines:

i. No disruption for the back end of the plane.

We believe the front end of the plane (i.e. business travel) may be permanently disrupted. A conference call or a video meeting can replace flights in many instances. This is not the case for holidays or recreational travel.

ii. Pent-up demand.

We think there will be huge pent-up demand for holidays (especially coming out of a Northern Hemisphere winter). When air travel corridors were briefly opened between the UK and the Canary Islands, bookings rose by 900%, for example.

The vaccine is going to make the most difference in the developed world initially because it is the developed world that has secured the required dosages to vaccinate most of their populations by mid-2021 and has the technology to do so (especially as the Pfizer vaccine requires storage at -70C). At a minimum, by the end of Q1 we would expect the high-risk groups (i.e. over 60 year olds and those with preexisting conditions) to be vaccinated.

The US shows that travel can return even with a pick-up in infections. Thanksgiving weekend saw the highest rate of travel since March (with air travel down 50% yoy).

iii. There is likely to be a much better capital discipline in the upcoming cycle.

This is because of the huge cash burn that the airlines have suffered in 2020. Some low-cost airlines (e.g. Norwegian, FlyBe) have had to file for Chapter 11. The budget airlines have a much lower cost base than the flag carriers and thus are in a position to take share at the back end of the plane. Ryanair is looking to upgrade to the lowest operating cost aircraft, is ordering new planes, and is intent on reinstating its schedule as soon as possible; whereas the flag carriers are cutting capex.

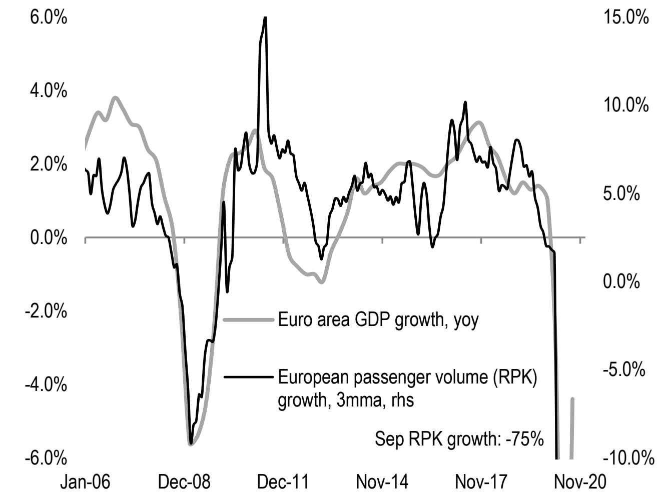
iv. Better negotiating position.

The airlines are in a better bargaining position when it comes to new aircraft and airport landing fees. Additionally, airlines that succeeded in securing early concessions in labour restructuring discussions with unions (especially before announcements regarding vaccine efficacy) should be the best positioned to maintain lower unit costs going forward; particularly favouring the European airlines in contrast to the US, where deals only began to be finalised in November (see Rewards for early success in labour restructuring, 26 November).

v. A barrier to entry ends up emerging via the control of airport slots, which become much more valuable.

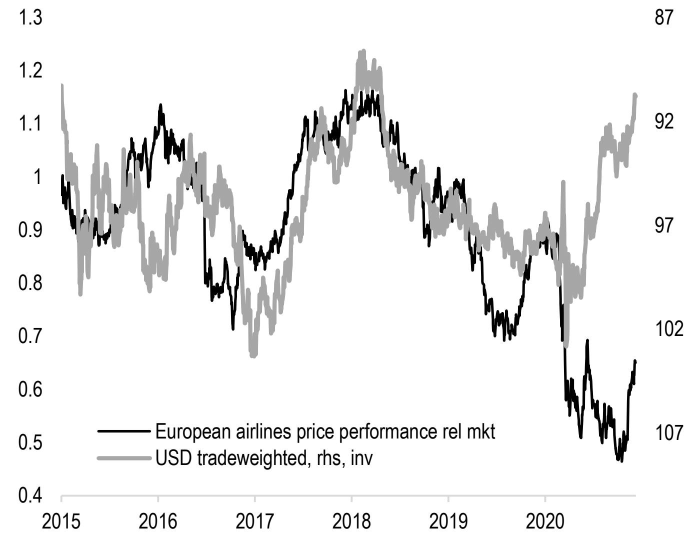
We think budget air travel will continue to grow at c2x GDP in the long term and thus within three to five years, many airports potentially are up to capacity constraints again. We believe as a result of the green lobby that it will be very difficult to build another runway, let alone another airport. New runways at Heathrow and Stansted have already both been consistently pushed back. We suspect that this means that control of slots ends up becoming a genuine barrier to entry. Easyjet, for example, controls c50% of slots at Gatwick (and ownership of slots could be viewed in the same way as ownership of spectrum for US telecom companies).

Figure 457: Air travel tends to grow at 2x GDP



Source: Refinitiv, Credit Suisse European Airlines team, Credit Suisse research

Figure 458: European airlines clearly benefit from dollar weakness

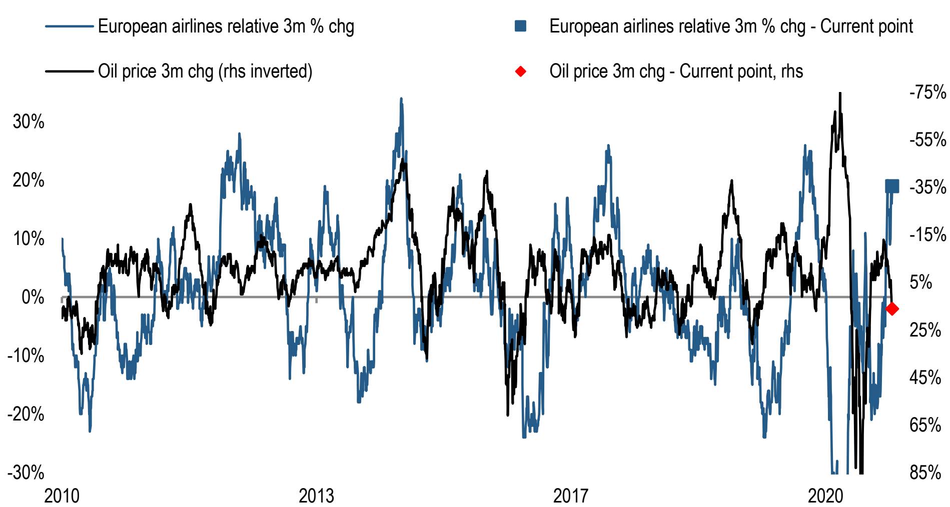


Source: Refinitiv, Credit Suisse research

Other factors that are supportive:

- Macro support of a stronger euro: budget airlines generate nearly all of their revenues domestically, but much of their costs are dollar-denominated (oil and aircraft). Thus they should benefit from a stronger euro. We can see that airlines are typically the best performing sectors when the euro strengthens.
- Had most of the hit from a higher oil price: We can see below that normally 10% on the oil price is about 5% off the relative performance of airlines. We think that the oil price has already seen the vast bulk of its near-term performance (see energy section).

Figure 459: The sector is moved by the oil price



Source: Refinitiv, Credit Suisse research

- The value of points. We note that the loyalty programs for the US airlines have been very valuable (Points Loyalty claims that American Airlines' loyalty scheme was worth 2x market cap, and that Delta Skymiles generated 13% of its revenues and half of its profits in 2019).

The key issue is valuation

Despite the large rally in share prices since the vaccine efficacy announcement in early November, if we look at valuations on 2023 earnings they are not expensive; the valuation contrasts with that of hotels.

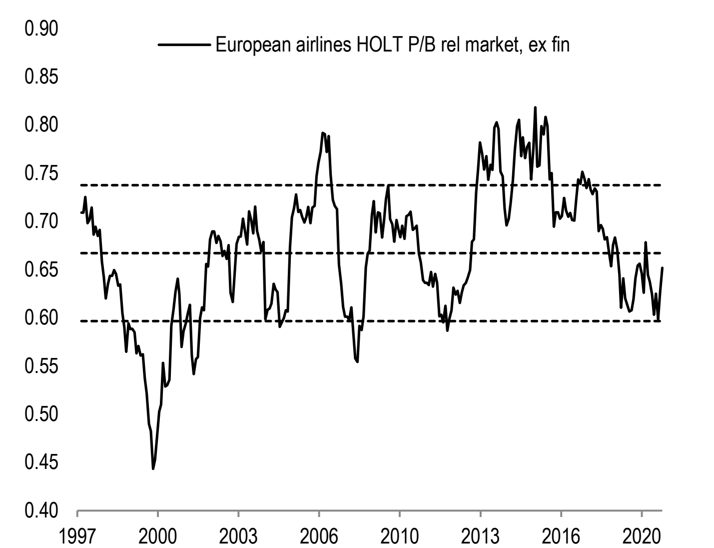
Figure 460: European Airlines remain very cheap on normalised earnings

	Absolute	
European Airlines	**% from pre-virus levels**	**PE on 23E EPS**
Ryanair	3.0%	11.4
Wizz Air	3.7%	12.0
Easyjet	-41.5%	8.0
Lufthansa	-34.9%	4.3
Air France	-47.7%	4.1
IAG	-60.5%	4.4
Index	-27.8%	8.0

Source: Refinitiv, Credit Suisse research

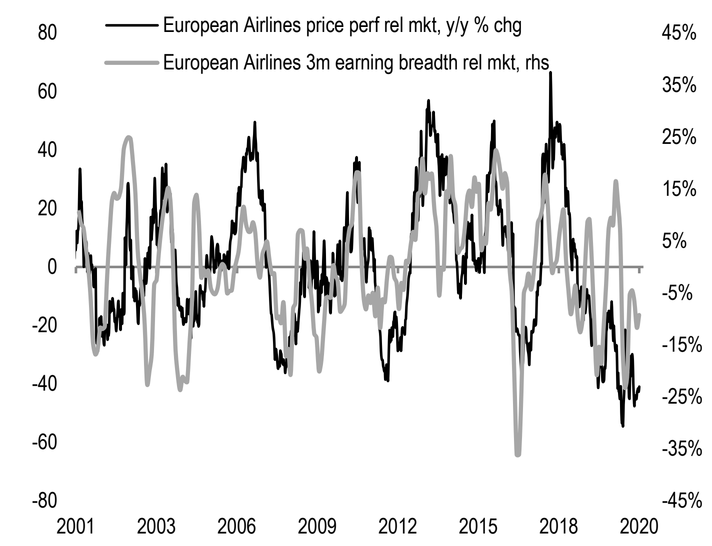
If we look at simple measures like the HOLT P/B of airlines relative to the market, not surprisingly the whole sector still looks cheap; and relative earnings revisions are beginning to turn, implying some upside for the sector.

Figure 461: HOLT P/B



Source: Refinitiv, Credit Suisse research, HOLT

Figure 462: Earnings revisions

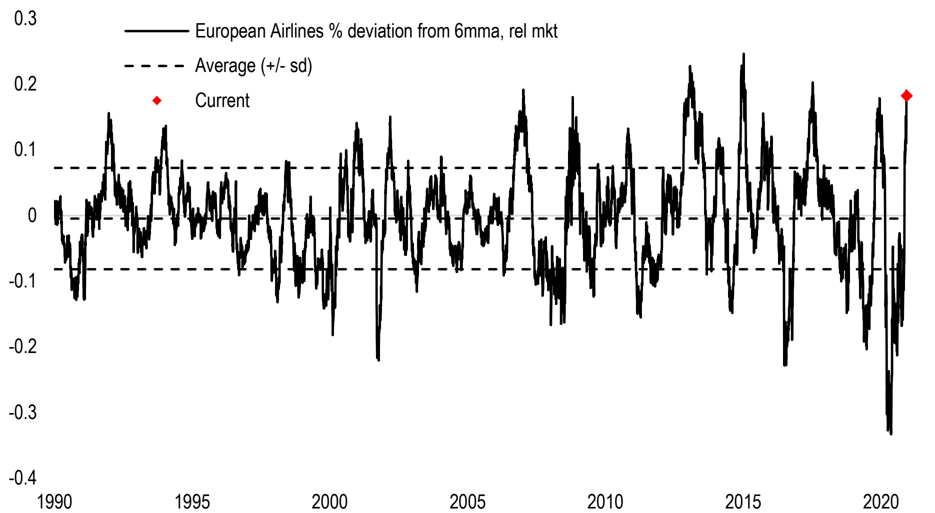


Source: Refinitiv, Credit Suisse research

Where is the risk?

- The sector is clearly overbought.

Figure 463: Price momentum



Source: Refinitiv, Credit Suisse research

Our analysts prefer Ryanair among the budget airlines.

Figure 464: European airlines under coverage

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Deutsche Lufthansa	-3.6	nm	na	0.5	-61%	-97.1	0.0	-22.3	nm	-14.1	3.7	Underperform
Air France-Klm	-1.1	nm	na	1.2	-92%	-273.2	0.0	-524.7	nm	-10.6	3.7	Underperform
Ryanair Holdings	139.5	461%	449%	3.8	-1%	-9.1	0.0	-47.8	nm	-49.6	2.3	Outperform
Easyjet	-22.8	nm	na	2.2	-12%	0.1	-1.9	-63.0	nm	-51.9	2.5	Outperform
Wizz Air Holdings	-293.3	na	na	577.3	715%	-1.6	0.0	-50.7	nm	-63.2	2.3	Outperform
Intl.Cons.Airl.Gp.	-9.0	na	na	0.2	-62%	-9.6	0.0	-35.9	nm	-19.7	2.2	Outperform

Source: IBES, MSCI, Refinitiv, HOLT, Credit Suisse research

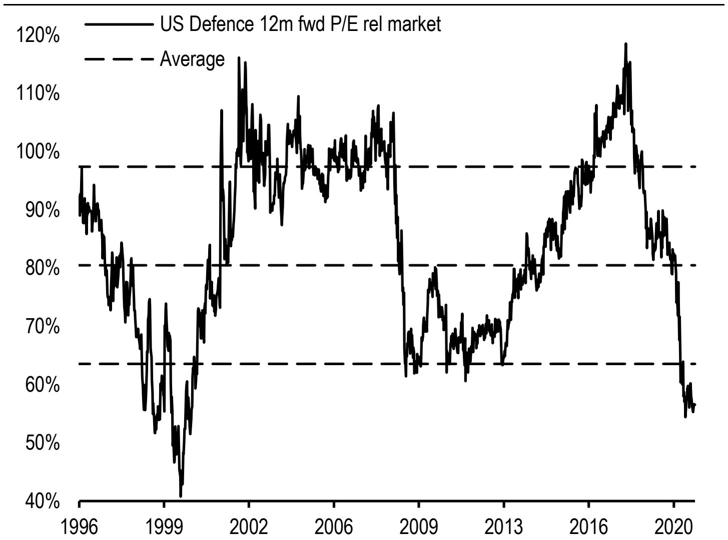
Defence stocks: small overweight

The main reasons for focusing on this area is that we think defence is still a structural growth story, but unlike most structural growth stories it is now abnormally cheap.

i. Inexpensive valuation

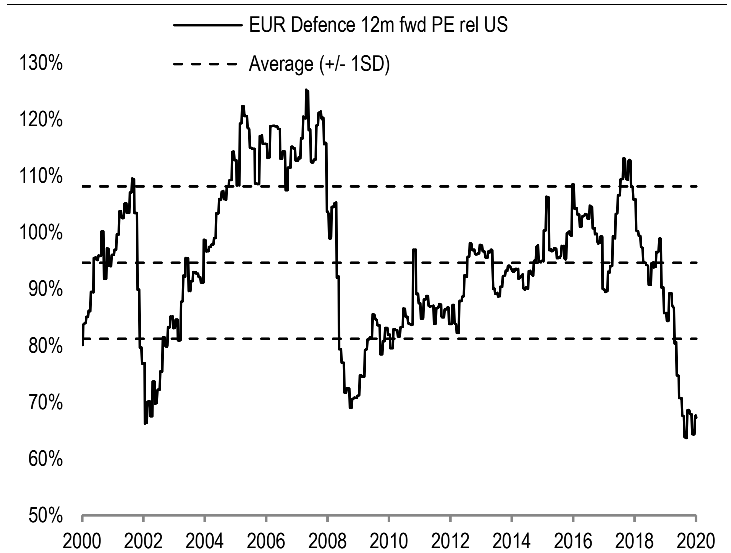
The P/E relative of US names is close to 20-year lows. The P/E relative of European names is close to a 35% discount to the US peers.

Figure 465: US defence looks abnormally cheap relative to the market…



Source: Refinitiv, Credit Suisse research

Figure 466: …and European defence looks very cheap against US peers

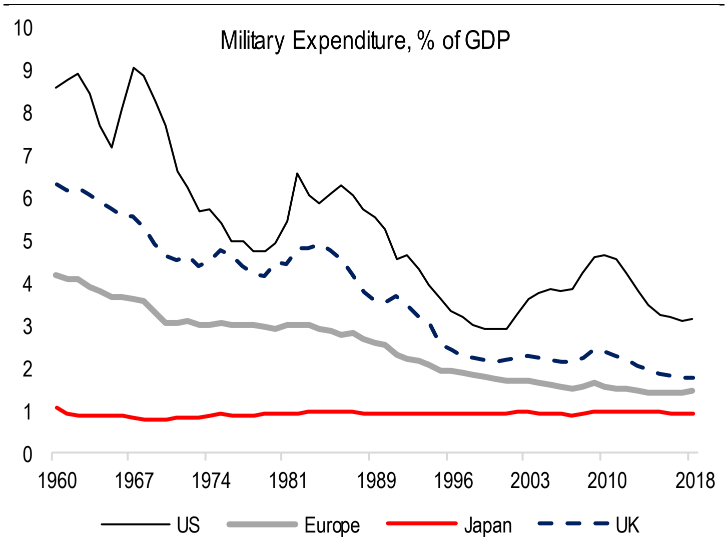


Source: Refinitiv, Credit Suisse research

ii. Structural growth

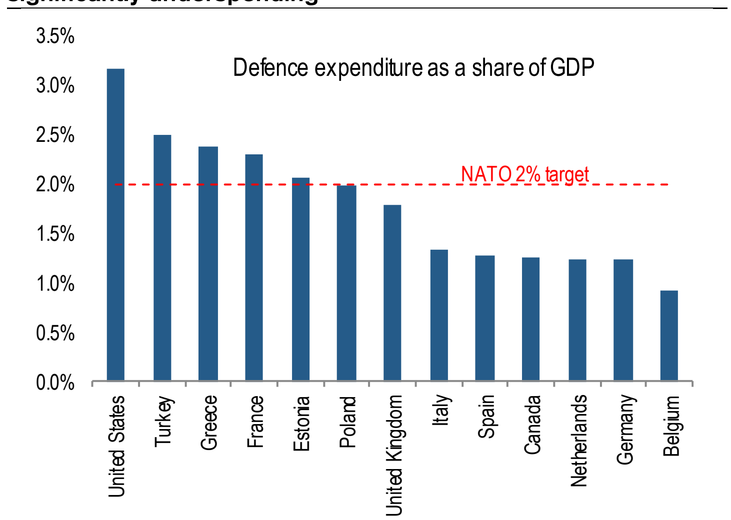
Defence spending as a share of GDP is still very low (40% below its norm in the US, 42% in Europe). If all NATO countries were to increase defence spending to 2%, then spending would rise by 12%.

Figure 467: Developed countries' military spending as a % of GDP is near historical lows



Source: Refinitiv, Credit Suisse research

Figure 468: Only 6 of NATO's 29 members meet the 2% target, with major economies such as Germany, Canada and Italy significantly underspending



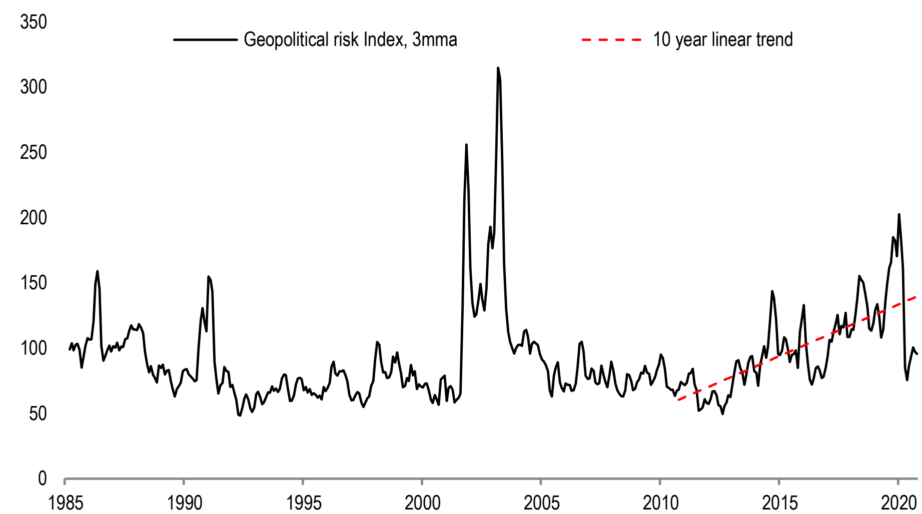
Source: Refinitiv, Credit Suisse research

iii. The catalyst for higher defence spending

Global geopolitics appear more unsettled in a tri-polar world (US, China, and Europe).

- With the US being perceived as unpredictable on defence over the last four years (e.g. President Trump withdrawing from Syria with little notice), other NATO countries are also more likely to increase their own defence spending. One of the highest-profile countries that underspends is Germany, which spends 1.2% of GDP on defence and plans to increase this to 2% of GDP by 2031.
- China has appeared more assertive, with President Xi for example refusing to rule out the use of force against Taiwan and flying jets across the Taiwan Straits for the first time in 20 years. In late August, the Chinese military fired an 'aircraft-carrier killer' missile into the South China Sea (see A&D weekly, 28 Aug). China's additions to its Navy in the last five years equate to the whole size of the UK Royal Navy (FT, 4 July). Xi has called for a harder edge to the way China has conducted itself, to 'dare to struggle and be good at fighting' (FT, 11 July). The US Undersecretary for Economic Affairs visited Taiwan in September, the most senior US official to visit Taiwan since the US broke off diplomatic ties with Taiwan in favour of China in 1979 (Reuters, 16 Sept). Henry Kissinger, ex US Secretary of State, has spoken of the danger of a new 'cold war' (FT, 8 Oct).
- With increasing conflicts across the globe (Hong Kong, Ukraine, Kashmir, North Korea and the Middle East); we have seen the Geopolitical Risk Index steadily increase over the last 10 years (and note that the recent amelioration is largely due to the COVID-19 pandemic taking over headlines as the index is based on newsflow).

Figure 469: The Geopolitical Risk Index has been on an upward trend over the last 10 years



Source: Economic Policy Uncertainty, Credit Suisse research

iv. Impact of the Biden presidency

President-elect Biden has said he does not foresee major reductions in the US defence budget as the military refocuses its attention on potential threats from 'near-peer' powers, such as China and Russia. His spending priorities include cyber/IT and unmanned aircraft as well as a more generalised focus on innovation in emerging technology (10 Sep, Stars and Stripes).

This is in line with the view of the Credit Suisse US aerospace & defense team, which expects a flat defence budget under the Biden Presidency in 2021 (see Outlook 2021: The year of regained momentum, 10 Dec).

There also appears to be strong bipartisan unwillingness to cut spending on defence (the 2020 defence appropriations bill passed the Senate 86-8; amendments to the 2021 NDAA which targeted 10% cuts to the DoD's 2021 budget have been defeated by wide margins in both the House and the Senate).

Moreover, Biden has said he will put further pressure on other NATO members to meet their spending requirements and shift the US's focus to Asia (FT, 17 June).

v. Not vulnerable to technical disruption

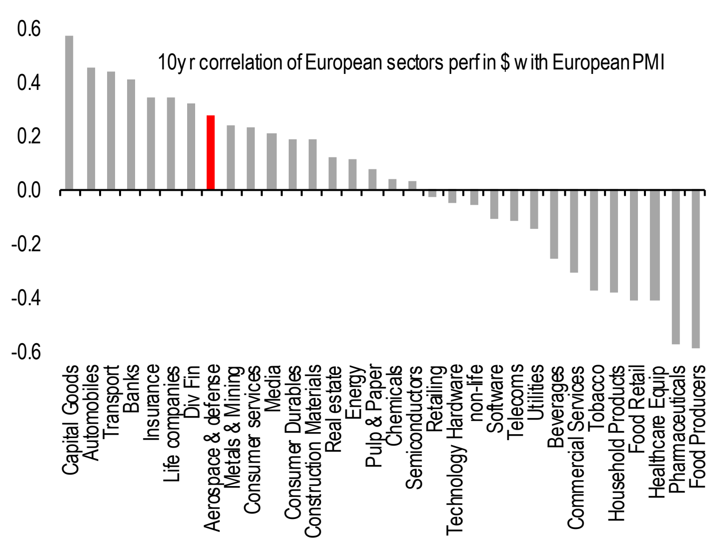
We see little vulnerability from technical disruption. Defence spending will always be required and will clearly not be outsourced; although obviously the types of defence spending alter (away from tanks towards cyber). The primary risk in this aspect is ESG. We do however see some scope for reconciliation between ESG and national security, given the latter's outsized importance.

vi. Defence spending could be considered part of fiscal QE

Whilst the EIB's remit excludes financing ammunition, weapons and military equipment, and infrastructure – it has begun to fund civil defence, cybersecurity, and dual-use technology (technology with both civilian and military applications such as aircraft or satellites). Former Vice President of the European Commission Jyrki Katainen even suggested changing the mandate of the EIB to include financing military infrastructure, calling for the issuance of 'defence bonds' that could in turn be bought by the ECB.

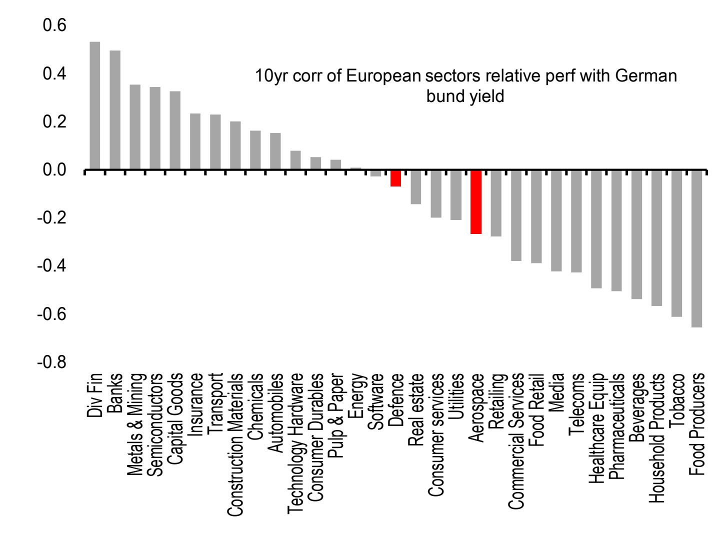
vii. Defence stocks are PMI and bond yield agnostic

Figure 470: Defense stocks are PMI agnostic…



Source: Markit, Refinitiv, Credit Suisse research

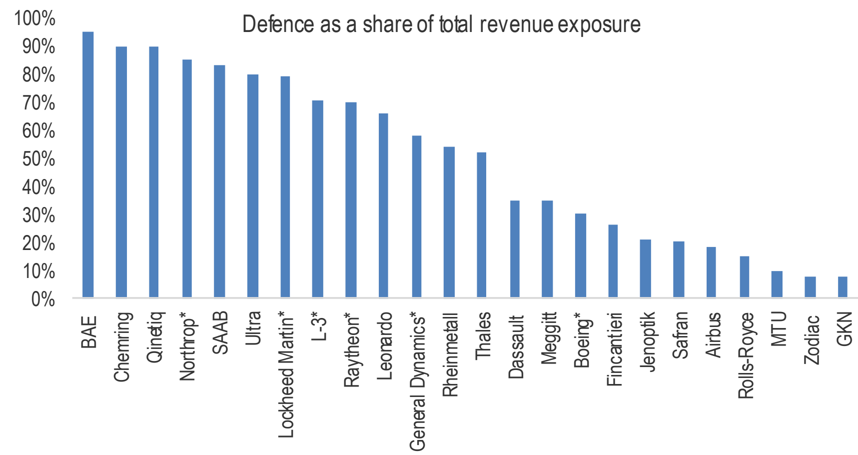
Figure 471: … and bond yield agnostic



Source: Refinitiv, Credit Suisse research

We prefer pure defence companies, such as BAE.

Figure 472: We prefer pure defence stocks (2019)



Source: Refinitiv, Credit Suisse research

We show below the European and US names with exposure to defence spending.

Figure 473: European and US defence stocks with their revenue exposure to defence

		-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Defence as a share of total revenue (%)	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Bae Systems	95%	10.8	50%	-30%	3.1	-39%	1.5	4.5	8.6	1.5	0.4	2.1	Outperform
Chemring Group	90%	17.0	79%	-5%	2.3	11%	2.3	1.6	6.0	5.8	4.1	2.0	Not Covered
Qinetiq Group	90%	15.1	70%	-22%	2.0	-42%	4.7	2.9	40.7	4.9	4.1	2.6	Neutral
Northrop Grumman	85%	12.6	58%	-39%	5.9	0%	6.8	1.8	58.0	1.3	1.0	1.9	Outperform
Saab B	83%	14.4	66%	-34%	1.6	-32%	3.9	1.7	40.7	-22.2	-4.8	2.0	Not Covered
Ultra Electronics Hdg.	80%	15.9	73%	-18%	3.5	-22%	4.5	3.0	14.1	2.1	0.4	2.5	Outperform
Lockheed Martin	79%	13.9	64%	-36%	32.8	-25%	6.3	2.7	100.7	1.4	1.1	2.1	Neutral
Leonardo	66%	7.0	32%	-48%	0.7	-50%	-6.2	2.0	-28.4	-3.9	0.4	1.9	Not Covered
General Dynamics	58%	13.4	62%	-31%	3.3	-24%	5.8	2.8	37.3	0.2	-0.2	2.4	Neutral
Rheinmetall	54%	11.6	54%	-31%	1.6	-22%	4.2	2.1	74.4	-151.7	-0.6	1.6	Not Covered
Thales	52%	14.2	66%	-26%	3.2	-9%	2.8	1.7	87.1	1.1	-0.5	2.2	Outperform
Dassault Aviation	35%	13.8	64%	-47%	1.8	-36%	na	1.4	116.4	-4.2	0.9	2.1	Outperform
Meggitt	35%	21.1	97%	16%	1.4	-30%	2.8	0.4	-29.4	-23.2	-1.4	2.7	Underperform
Boeing	30%	399.0	1843%	1157%	-15.2	na	-13.8	0.9	-63.5	nm	-5.6	2.7	Neutral
Fincantieri	26%	18.8	87%	-33%	1.1	-31%	nm	0.3	-84.1	nm	-1.3	3.2	Not Covered
Safran	20%	32.7	151%	37%	4.3	1%	2.1	0.6	-26.8	-8.2	-6.1	2.7	Neutral
Airbus	18%	34.8	161%	47%	12.6	42%	-13.6	0.3	-29.5	-4.5	-2.1	2.3	Outperform
Rolls-Royce Holdings	15%	-23.7	nm	na	-2.2	na	-22.0	0.0	-94.2	nm	-4.2	3.2	Underperform
Bodycote	10%	19.4	90%	-5%	2.1	-17%	7.9	2.3	45.0	2.0	-1.2	2.6	Outperform
Mtu Aero Engines Hldg.	10%	32.3	149%	43%	4.7	9%	1.1	0.7	-35.1	-1.1	0.0	3.1	Not Covered

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

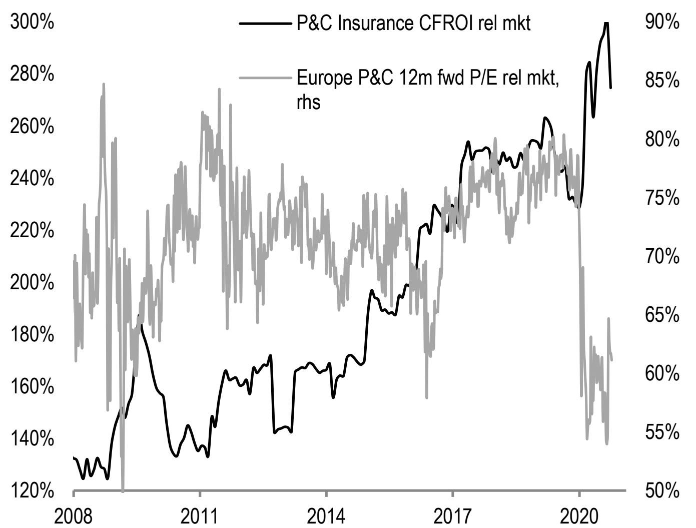
P&C insurance: small overweight

Why stay a small overweight?

i. Attractive valuation

The sector looks unusually cheap on P/E relatives, despite CFROI being nearly triple the market average.

Figure 474: The P/E relative is at a buy signal and the CFROI is now nearly triple the market (higher profitability should mean higher P/E relatives)



Source: Refinitiv, Credit Suisse research

Figure 475: The sector has tactically outperformed from these levels at these P/E relatives

European P&C relative price performance from these relative PE levels

Date	1m	3m
Nov-08	13.5%	0.4%
Jan-10	3.1%	1.4%
Aug-16	3.2%	9.0%
Average	6.6%	3.6%
% Rise	100.0%	100.0%

Source: Refinitiv, Credit Suisse research

ii. This is when they typically outperform.

After previous disasters, P&C companies (relative to the market) troughed on average 1 to 2 months later, as was the case with hurricanes Wilma, Katrina, Andrew and Hugo.

Figure 476: P&C insurance has gone on to outperform the market after disasters strike

	Local trough date	US P&C rel performance after…		
		1m	3m	6m
Hurricane Andrew (16-Aug-92)	14-Sep-90	-2%	11%	14%
Northridge Earthquake (17-Jan-94)	17-Jan-94	2%	8%	4%
911 terrorist attack (11-Sep-01)	20-Sep-01	4%	-3%	5%
Hurricane Katrina (23-Aug-05)	09-Sep-05	-2%	4%	-3%
Hurricane Harvey (02-Sep-17)	07-Sep-17	1%	3%	-1%
Average		0.8%	4.5%	3.6%
% of times positive		60%	80%	60%

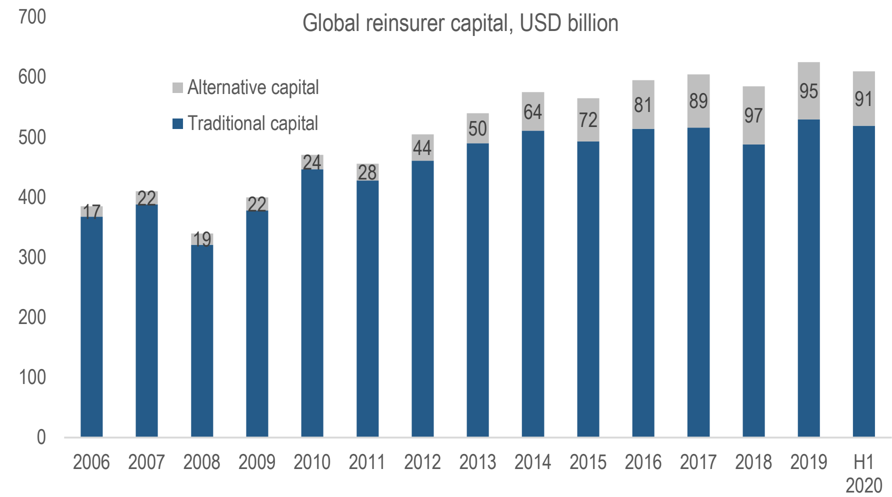
Source: Refinitiv, Credit Suisse research

Our team believes that P&C premiums will rise by c7%. With global P&C premiums of $1.6trn, this would imply a bigger pick-up in premiums (c$120bn) than the worst case estimates of losses (which is $107bn from Lloyds of London). Recently, companies have announced high premium increases (with Beazley raising premiums by 11% and Hiscox by 13%).

One of the reasons for the improving market is the increased discipline being demonstrated by incumbents in both the traditional and ILS space. Line exits and line size reductions are having a material impact on available capacity in certain lines of business. Due to the unique nature of the COVID loss, it is estimated that 20-30% of total ILS capacity may be trapped at renewals.

Both of these factors have not been offset by the expanded appetite from better capitalised incumbents, new market entrants or a reloading of ILS capacity.

Figure 477: Global reinsurer capital



Source: Refinitiv, Credit Suisse research

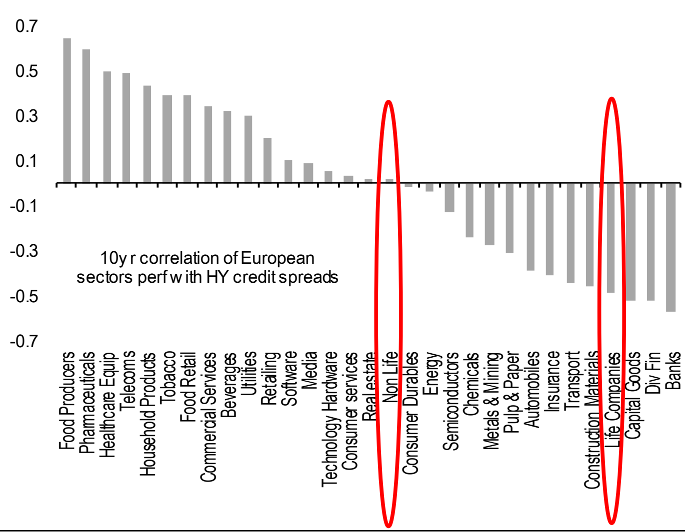
iii. Limited disruption

We believe that this sector is less disrupted than banks or asset managers; e.g. no open banking, no SIFI, no switch from active to passive investment, they tend to have stakes in many of the disruptors, and many of the disruptors need their back offices.

That being said, our financials team recently organised a conference on disruption in the financial space (for key highlights see Credit Suisse European Financials Disruption Conference 2020 – our key takeaways). The conference made it clear that the insurance sector is also facing growing disruption. Nevertheless, the P&C space is mainly facing disruption from digital MGA (managerial general agents) that get balance sheet support from incumbents (i.e. the disruption is coming from within the industry and often from the P&C companies themselves).

The main concern is any potential rise in spreads (see above), yet non-life companies are the most resilient to this within the financial space.

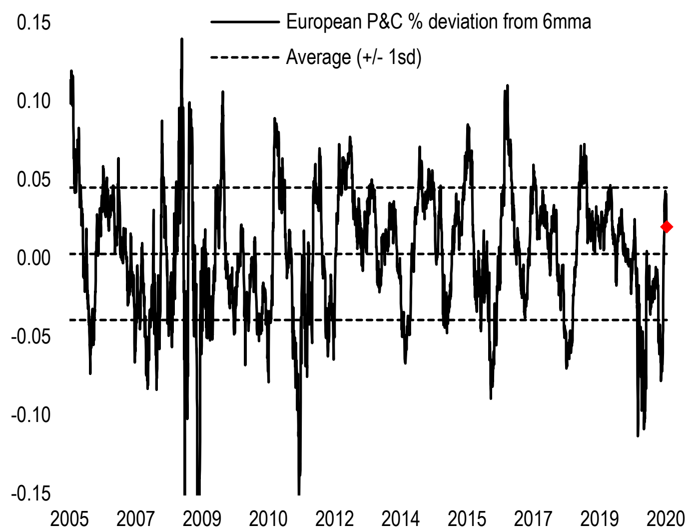
Figure 478: P&C companies have a low sensitivity to spreads, unlike banks or life companies



Source: Refinitiv, Credit Suisse research

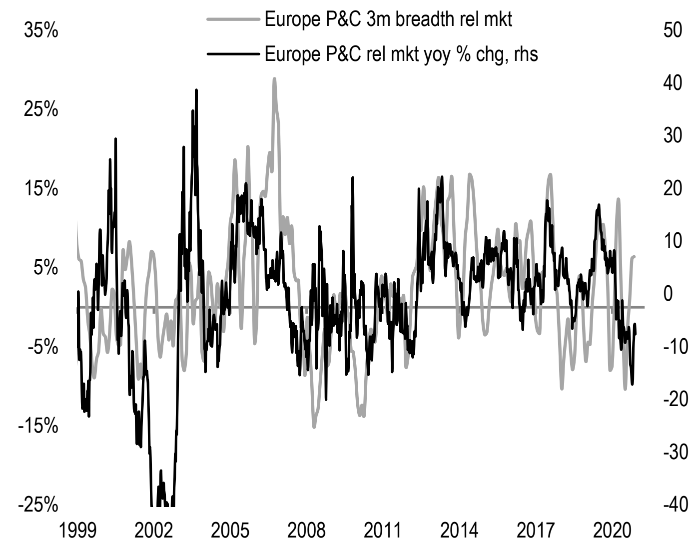
We would note that P&C companies are slightly overbought. Relative earnings revisions have turned positive and are expected to continue as the positive pricing environment continues to earn through. This is not yet reflected in prices.

Figure 479: The sector is slightly overbought…



Source: Refinitiv, Credit Suisse research

Figure 480: … but positive earnings revisions have clearly not been reflected in relative performance



Source: Refinitiv, Credit Suisse research

We show below the Outperform-rated P&C names. Our European Insurance team particularly likes Lancashire, Direct Line and Zurich.

Figure 481: Outperform-rated European P&C picks

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Zurich Insurance Group	13.8	118%	-8%	1.8	-2%	na	5.3	na	-4.1	4.2	2.4	Outperform
Direct Line In.Group	11.2	96%	-29%	1.6	-34%	na	11.0	-27.1	-0.9	0.2	1.8	Outperform
Gjensidige Forsikring	20.2	174%	-9%	3.7	10%	na	4.2	-59.2	11.2	2.2	2.8	Outperform
Rsa Insurance Group	14.4	124%	-8%	0.5	-41%	na	3.8	-38.0	8.2	-1.8	2.6	Outperform
Axa	7.6	65%	-33%	0.9	-19%	na	6.9	46.6	-6.7	-3.0	2.0	Outperform
Allianz	10.1	87%	-24%	1.5	-10%	na	4.9	17.4	3.6	-1.0	2.1	Outperform
Hannover Rueck	13.1	113%	-14%	1.8	-4%	na	3.4	-38.8	-3.9	1.4	2.6	Outperform
Lancashire Holdings	14.9	129%	-3%	1.7	-12%	686.4	1.5	-38.5	-99.2	2.5	2.1	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

Employment agencies: small overweight

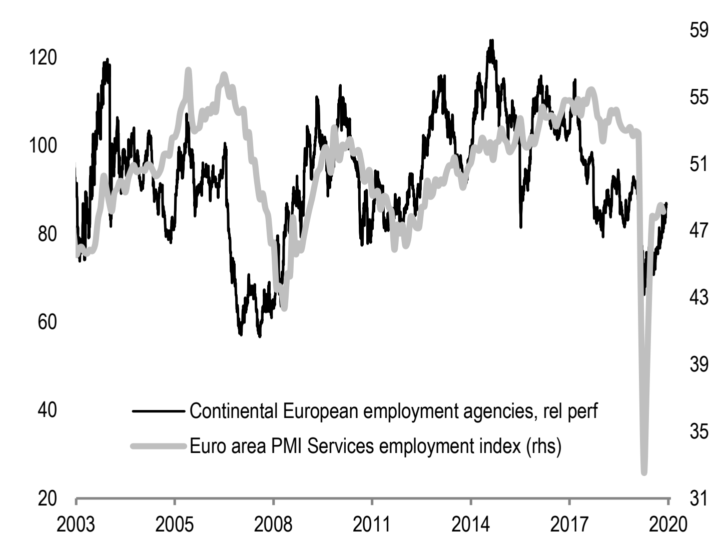
We view employment agencies as domestic cyclicals exposed to corporate expenditure, and we see the following positive aspects for the employment agencies. Credit Suisse analysts recently upgraded Adecco and Randstad to Outperform on the back of improving end markets, strengthening FCF and operational leverage to the cycle (for details see Generalist staffing: Upgrade Adecco and Randstad as end markets recover, 30 Nov).

We would also highlight the following:

- Employment agencies are very closely correlated to employment PMIs

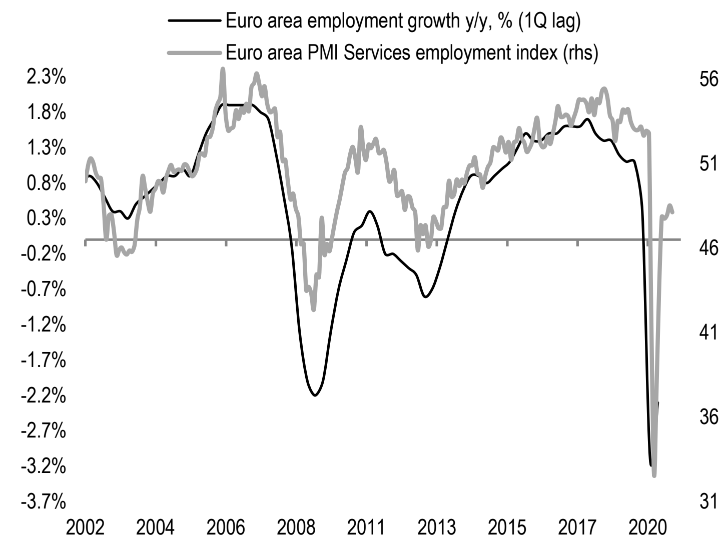
Currently they are only discounting a level of PMIs of c48 consistent with c0.4% employment growth.

Figure 482: Employment agencies are only pricing in the current level of employment PMIs



Source: IHS Markit, Refinitiv, Credit Suisse research

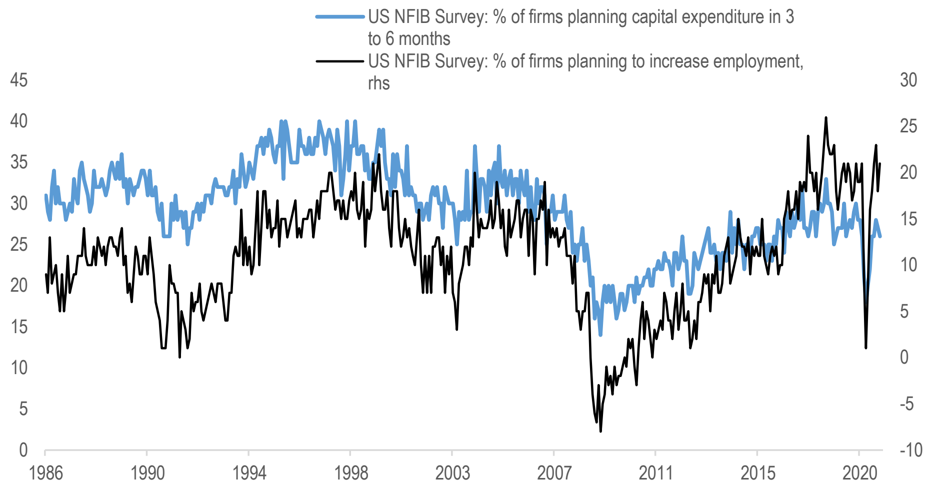
Figure 483: Employment PMIs are only pricing 0.4% employment growth and it should pick up to 2%+ in 2021



Source: IHS Markit, Refinitiv, Credit Suisse research

- If we look at US NFIB survey data, we can see that corporates planning to increase employment has increased more than firms planning to increase capex.

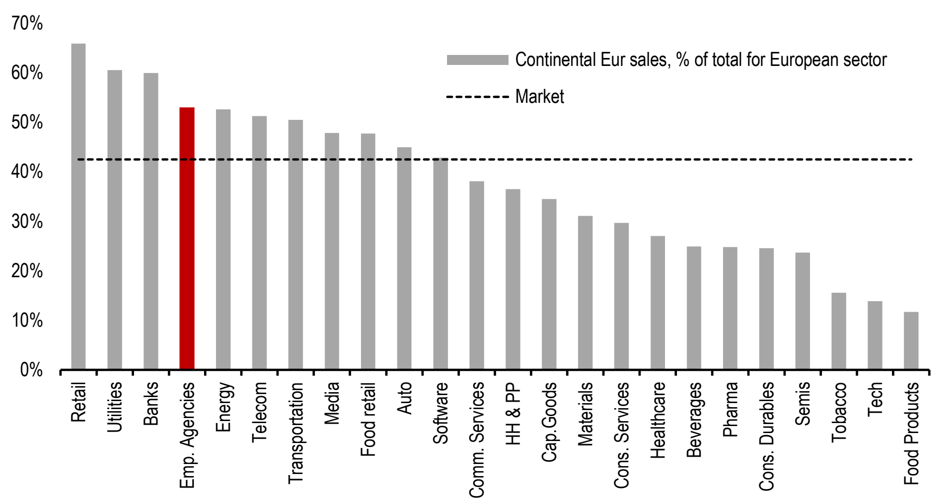
Figure 484: The US NFIB shows the percent of firms looking to increase employment has risen more than those planning capex



Source: Refinitiv, Credit Suisse research

- Employment agencies are a very domestic European sector and thus should benefit if the euro appreciates, as we think it will.

Figure 485: Domestic sales as a percent of total sales for European sectors

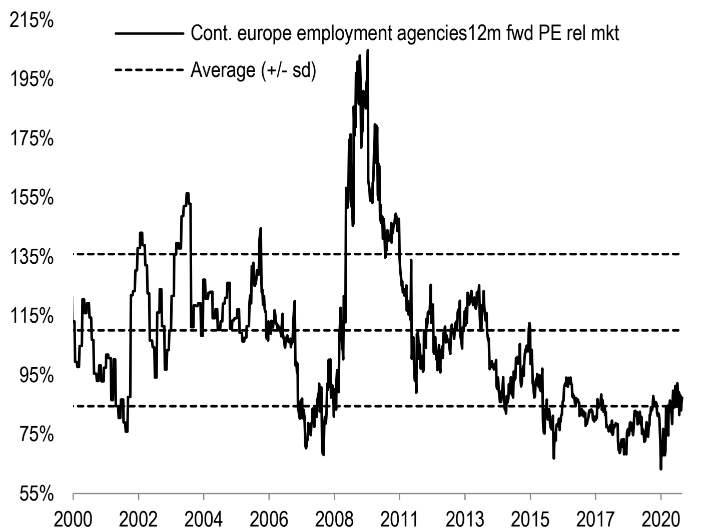


Source: Refinitiv, Credit Suisse research

- Valuations remain cheap on P/E or P/B relative to the market

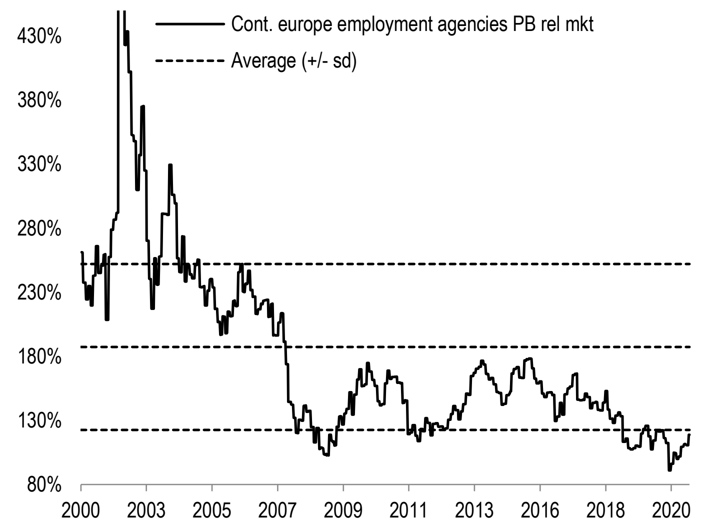
We can see on both P/E and P/B relative to the market that valuations remain close to 1 standard deviation below their historical average. The FCF yields look high at 5.6% end 2021 on our analysts' estimates (for Adecco and Randstad).

Figure 486: Continental European employment agencies are cheap on P/E relative…



Source: Refinitiv, Credit Suisse research

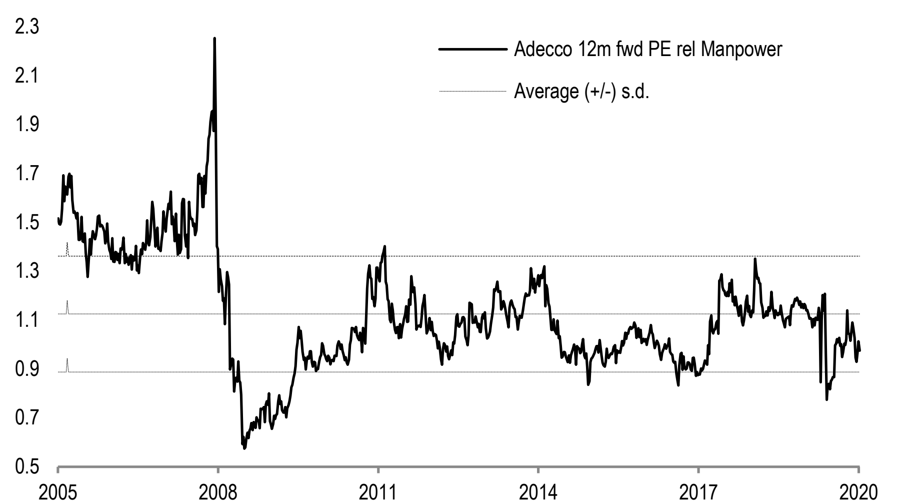
Figure 487: …and cheap on P/B relative



Source: Refinitiv, Credit Suisse research

Valuations are also attractive if we compare against US peers relative to historic norms, for example if we compare Adecco to Manpower. We also note that Adecco is on a 24% discount to Manpower on Credit Suisse 2021 estimates.

Figure 488: Adecco relative to Manpower on 12m fwd PE



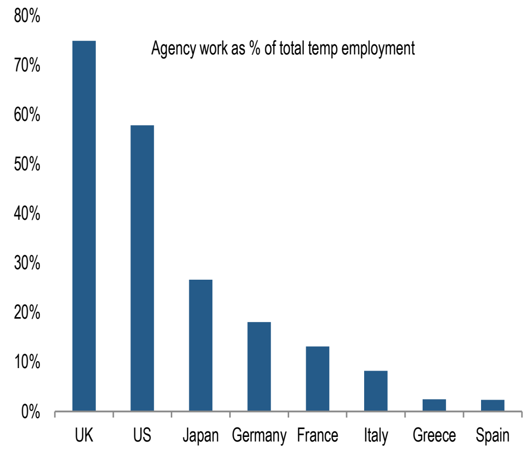
Source: Refinitiv, Credit Suisse research

Our analysts believe that their working capital is counter-cyclical (because agencies have to pay employees immediately but then get paid from the employer with a lag).

The main concern is of disruption for the sector through automation, LinkedIn and other online recruitment sites. The counter is that there is still a degree of under-penetration in the temporary agency markets.

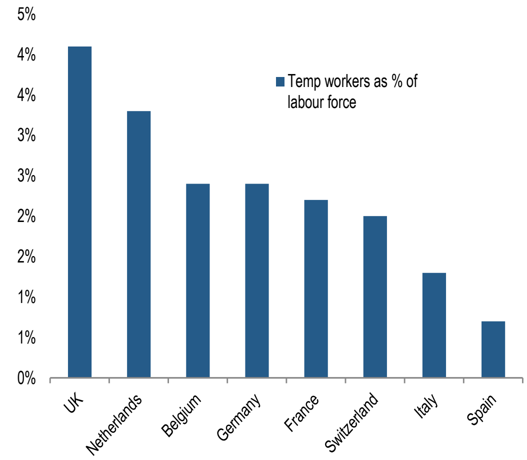
In the US and UK around 60% of part time workers use agencies, while in Europe in many regions this is below 20%.

Figure 489: Agency work as a proportion of total temp employment is still low in Continental Europe…



Source: Credit Suisse European Business Services team

Figure 490: … and so are temp workers as % of the labour force



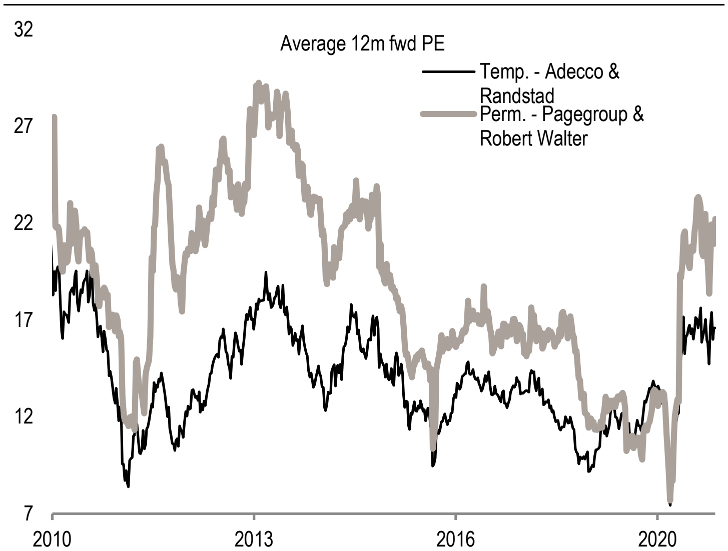
Source: Credit Suisse European Business Services team

Credit Suisse's analysts also note that while technology and automation still pose a structural headwind to employment agencies in the long term, they think this impact will be muted in the short term given the strong cyclical recovery in the labour market we are likely to see in 2021 and employments agencies' ability to support an evolving world of work (e.g. from helping companies to improve diversity and inclusion to employment agencies' ability to rapidly transition to flexible working arrangements).

In some instances, agencies have had a response by partnering with tech providers (e.g. Adecco and Mya) or investing in them (e.g. Adecco buying Vettery and Hired.com).

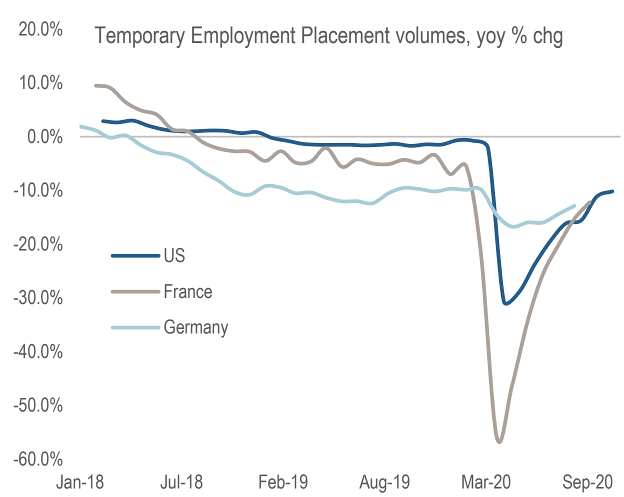
Our preference for a long period of time has been to focus on the temporary agencies versus the full time agencies (the latter are more disrupted). Moreover, the temporary agencies are trading on a discount to the full time agencies. We have also seen temporary placement volumes continue to strongly pick up in both Europe and the US.

Figure 491: Temporary vs Permanent employment agencies



Source: Refinitiv, Credit Suisse research

Figure 492: Temporary placement volumes have continued to pick up



Source: Credit Suisse European Business Services team

We show below a screen of the European employment agencies.

Figure 493: European employment agencies

Name	Sales exposure to UK	Sales exposure to Cont Europe	Temp recruitment, as % of gross profit	Market Cap, $, bn	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2019e, % FCY	DY	HOLT Price, % change to best	2019e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Hays	36%	37%	60%	3.23	38.8	134%	65%	2.8	-56%	15.0	1.1	-30.1	-26.7	8.2	2.5	Neutral
Sthree	30%	44%	65%	0.56	16.3	56%	-22%	3.5	-51%	2.5	1.0	15.6	-10.1	-0.2	1.7	Outperform
Adecco Group	10%	50%	88%	10.19	15.5	54%	-15%	2.1	-32%	7.5	4.0	-4.5	23.9	1.7	2.4	Outperform
Randstad	5%	63%	88%	11.75	16.6	57%	-8%	2.2	-19%	9.4	2.6	-34.7	20.7	0.3	2.6	Outperform
Robert Walters	34%	20%	30%	0.50	18.9	66%	-24%	2.3	-35%	2.7	3.1	-7.7	-0.1	-1.3	1.8	Underperform
Pagegroup	32%	40%	22%	1.99	26.3	91%	-3%	4.6	-41%	4.9	1.3	-32.4	-27.0	2.3	2.5	Underperform

Source: IBES, MSCI, Refinitiv, HOLT, Credit Suisse research

Tech: small overweight

We downgraded tech to a small overweight in mid-September (see Global Equity Strategy: Tech: no bubble, but time to be more selective). Our concerns remain:

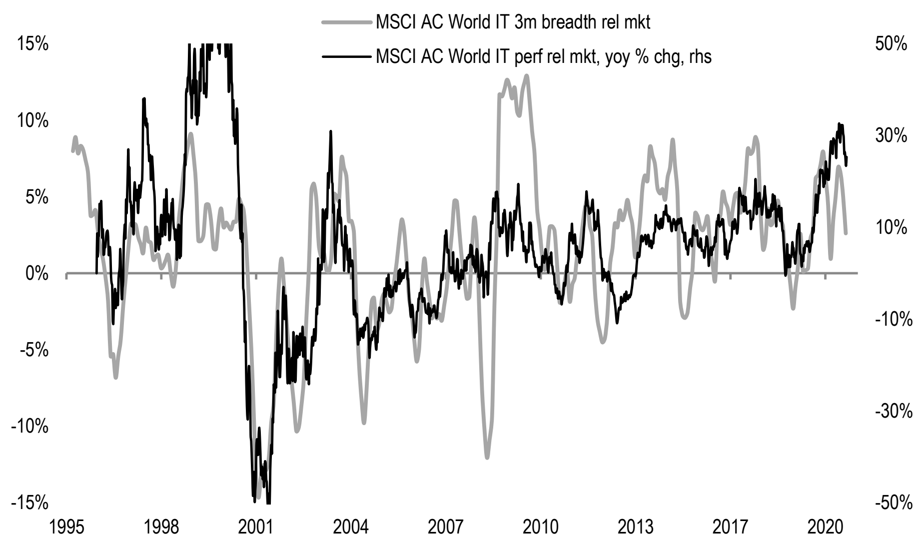
- A sharp decoupling from earnings momentum;
- The pandemic has brought forward sales with some of the growth drivers maturing;
- High inventory levels for semis;
- Internet exposure looks close to fair value on addressable market share; and
- High tax risk outside the US and growing regulatory risk.

We discuss each of these in turn:

1. A decoupling between earnings momentum and performance

A large decoupling has opened up between tech relative earnings revisions and performance of the sector. We think the correlation between earnings momentum and performance is a key indicator to monitor. The last two times we saw a bigger decoupling between the two series was in 2003 and at the end of the tech bubble, and both occasions were followed by tech underperforming the wider market.

Figure 494: Relative earnings revisions lead performance



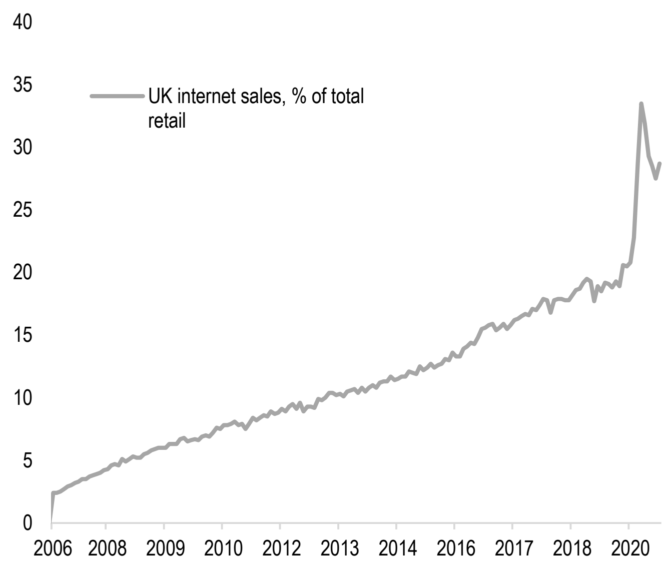
Source: Refinitiv, Credit Suisse research

2. The extent to which sales were brought forward is still unclear

We believe the pandemic has brought forward tech demand by two to three years and that the rollout of a vaccine may cause at least a partial reversal. The proportion of UK or US retail sales that are online increased sharply in H1 2020, but is now falling again. The more sales went online, the greater the benefit for the online platform companies and the associated food chain (data centers, Cloud, etc.). Our concern is that the underlying trend might be exaggerated.

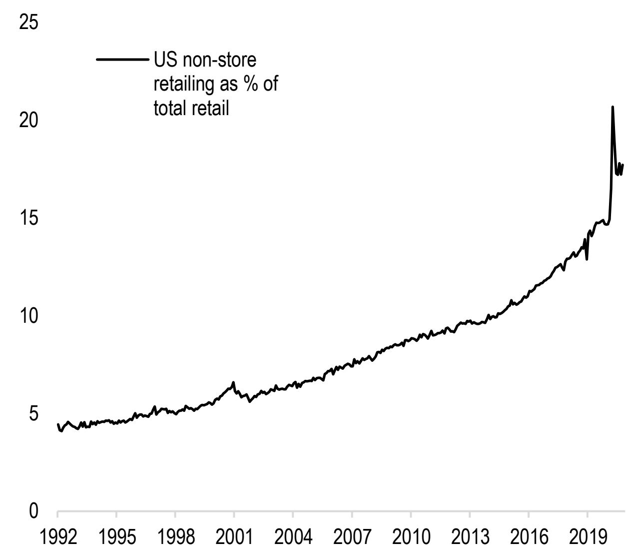
The pandemic also resulted in a rapid upgrade of consumer hardware (computers and tablets) as people needed to upgrade their systems to work from home. However, this could slow upgrades in the coming years. According to our Asia tech team, PC sales rose by 8% in 2020 (after falling by 14% between 2014 and 2019) and the team is expecting PC sales to fall by 6% in 2021. In contrast, smartphone sales are expected to be down 6.4% in 2020 as consumers delayed upgrades to afford PC/tablet upgrades and wait for 5G to ramp up further. The team expects smartphone sales to be up 8% in 2021.

Figure 495: Digitisation in UK retail had accelerated, but risks a reversal as life normalises



Source: Refinitiv, Credit Suisse research

Figure 496: Non-store retailing in the US peaked at c21% in April but has come down to 17%



Source: Refinitiv, Credit Suisse research

The extent to which demand was brought forward is also reflected in the US investment data. Computer hardware spending is up 20% from end-19, while software spending is up just 1%.

Figure 497: US investment data shows how consumers have brought forward tech hardware purchases

Real change in GDP and private sector investment by type	Peak date	Trough date	Change from peak to trough	Q4 19 - Q3 20
GDP	Q4 2007	Q2 2009	-4%	-3.5%
Total private fixed investment	Q1 2006	Q2 2009	-24%	-2.3%
Software	Q3 2008	Q1 2009	-2%	2.7%
R&D	Q2 2008	Q1 2009	-7%	-2.0%
Computer HW	Q2 2008	Q4 2008	-9%	20.9%
Industrial equipment	Q3 2007	Q1 2010	-32%	-3.8%
Residential investment - new structures	Q4 2005	Q4 2010	-61%	2.5%
Transport equipment	Q4 2006	Q2 2009	-70%	-22.8%

Source: Refinitiv, Credit Suisse research

As we highlight later on, some of the growth drivers are maturing: with smartphone penetration rates at 76%, 53% of advertising spent being online in the US and in the UK nearly a third of retail sales at peak were online.

3. Close to fair value on value of the internet looking at addressable market

The aggregate market cap of the internet stocks is increasingly in line with our fair value assumption.

Our rough calculations indicate the quoted global internet sector has a market cap of around $6.1trn, defined as follows: the quoted internet = MSCI ACWI Communications – MSCI ACWI Telecoms – Disney – Nintendo – Activision + internet retail (e.g. eBay, Amazon, Ocado, Alibaba). This compares with a PV of the internet of c. $6.2trn, on our calculations. The questions we consider are: what are the potential revenue streams (and their value), and can they justify such a market cap? We believe the internet sector has these key revenue streams:

- **Advertising revenues:** We think it is possible that, in five years' time, 60% of advertising revenues will be spent on internet advertising (including mobile and streaming services). This compares with c.53% of US advertising spending going online now. If we assume global advertising spend remains at roughly 1% of GDP, a 20% net margin on the advertising business (Alphabet's net margin is roughly 20%) and an ex-growth multiple of 15x, the capitalised ad-related earnings should be valued at roughly US$2.2trn in five years' time. Assuming a 10% discount rate, the PV is c.US$1.4tn.
- **Retail sales:** If we assume 35% of retail sales globally will be carried out online in five years' time (31% in the UK currently) at a net margin of just 3% (and assume that retail sales are 70% of the consumer share of GDP, and consumer share of GDP is 65%) and a third of this goes to the internet companies, the resulting earnings can be valued at $3trn in 2026 (assuming a P/E of 15x), pointing to a PV of $1.9trn (again using a 10% discount rate).

Figure 498: Illustrative analysis: Present value of advertising earnings online

Advertising Earnings	Methodology and assumptions	Value
Future online advertising spend (2026)	advertising spend at 1% of GDP (2026) and 60% of advertising spend done online	US$ 747bn
Capitalised earnings	at 20% margin and 15x multiple	US$ 2,242bn
Present value	assuming a discount rate of 10%	US$ 1,392bn

Source: Credit Suisse estimates

Figure 499: Illustrative analysis: Present value of retail sales online

Retail sales	Methodology and assumptions	Value
Future retail sales online	35% of retail sales online and retail sales are 70% of the consumer share of GDP (65% of GDP) and one third of this goes to internet companies	US$ 6,546bn
Capitalised earnings	at 3% margin and 15x multiple	US$ 3,021bn
Present value	assuming a discount rate of 10%	US$1,876bn

Source: Credit Suisse estimates

- **Non-retail sales:** We could further assume that, in five years' time, 3% of global consumption (which we assume remains at 55% of GDP) is spent on non-retail sales-related internet activities (e.g., smart home, health monitoring, gaming, video/music streaming, payment systems) and, if this is the case, a net margin of just 10% and a multiple of 15x could justify another US$3trn of market cap in five years' time (with a $1.9trn PV).
- **The Internet of Things:** While much of the business relating to the IoT is likely to go to companies such as consumer electronics manufacturers (e.g., GE, Miele, Philips, etc.), the internet companies are often the facilitators of the IoT and consequently are also receiving a share of the profit. A report by Transforma Insights (19 May 20) suggests the IoT could generate revenue of $1.5tn a year by 2030 and services, including connectivity, will account for 66% of spend, with the remainder accounted for by hardware, in the form of dedicated IoT devices, modules and gateways. If we assume 40% of IoT revenue goes to the internet companies at a margin of 20% and a multiple of 20x, this would add another $2.4trn of market cap in 2030, with a PV of $1trn.

Figure 500: Illustrative analysis: Present value of non-retail sales online

Non-retail sales	Methodology and assumptions	Value
Future non-retail sales online	3% of global consumption (which we assume remains at 55% of GDP)	US$ 2,055bn
Capitalised earnings	at 10% margin and 15x multiple	US$ 3,083bn
Present value	assuming a discount rate of 10%	US$1,914bn

Source: Credit Suisse estimates

Figure 501: Illustrative analysis: Present value of the Internet of Things (IoT)

The Internet of Things (IoT)	Methodology and assumptions	Value
IoT future revenue	40% of future IoT revenue of $1,500bn goes to internet companies	US$ 600bn
Capitalised earnings	at 20% margin and 20x multiple	US$ 2,400bn
Present value	assuming a discount rate of 10%	$1,018bn

Source: Credit Suisse estimates

Based on these assumptions, our calculation adds up to a present value of about $6.2trn. If we compare this with the current global internet stocks (including Amazon and Alibaba), we achieve an aggregate market cap of $6.1trn. We use an aggressive discount rate of 10%. Lowering this would of course significantly increase fair value.

Figure 502: Illustrative analysis: The present value of the internet is c.$6.2trn on simple assumptions

in bn USD	Advertising earnings (in 2026)	Retail earnings (in 5 years)	Non-retail earnings (in 5 years)	Internet of Things (in 10 years)	Total
Revenue (FV)	747	6,546	2,055	600	-
Capitalized earnings (FV)	2,242	2,945	3,083	2,400	10,670
Present value (PV - 10% discount rate)	1,392	1,829	1,914	1,018	**6,153**

Source: Refinitiv, Credit Suisse estimates

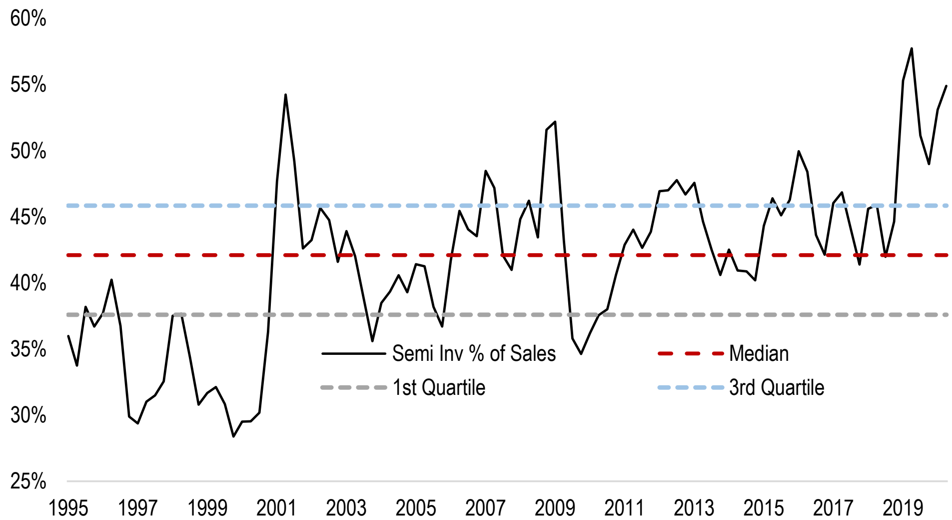
In the software section, we highlight that valuations have become extended.

4. Semis inventories are high

Short-term shocks can be caused by excess inventory, and semi inventories are running above their norm. The team highlights that there are a good reasons for this (such as the threat of supply chain disruptions owing to US/China tensions requiring higher inventories). Moreover, our semis team believes inventory levels are looking better coming out of 3Q (see 3Q20 tech inventory lowered across the chain as end-demand improves) – strong stay at home demand (PCs/Tablets/Chromebooks, gaming/game consoles, routers, TVs) and rising 5G penetration have brought down fabless inventory by 3 weeks in 3Q and global tech by a few days and should come down in 4Q.

Nevertheless, we do worry a bit when inventories are high as it implies a pull-forward of demand.

Figure 503: Semis inventory to sales data is above historical average

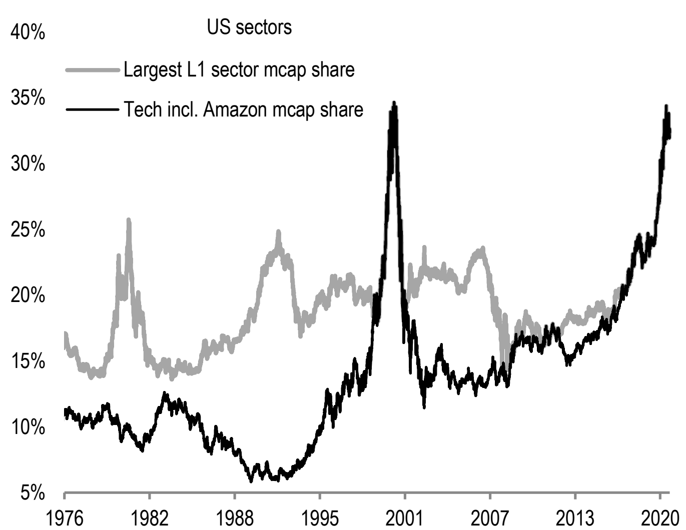


Source: US semis research, Credit Suisse research

5. Concentration

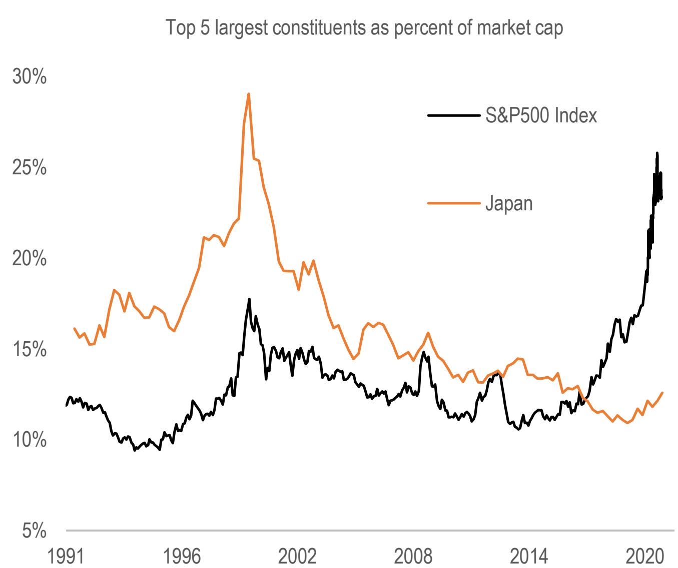
US tech has reached just under 35% of market cap, in line with the level reached in 2000, and the top five stocks are now 25% of market cap, nearly at the level seen in Japan in 2000 (30%).

Figure 504: The largest sector in the US has reached 25% of market cap before, and reached 35% in 2000



Source: Refinitiv, Credit Suisse research

Figure 505: Top five stocks as a proportion of market cap in Japan and the US



Source: Refinitiv, Credit Suisse research

6. Over-earning because they are under-taxed

If the tax proposals/measures of France or the UK were to be imposed globally and tech companies faced an additional sales tax of 4%, we calculate this could take c20% off profits. The UK has introduced a digital services tax of 2% on the revenues of search engines, social media services and online marketplaces that derive value from UK users. Spain has also approved a 3% digital service tax, which comes into effect in January 2021.

One of the key issues to follow is whether under President-elect Biden, the US government will continue with its tough stance against increased taxation and regulation on US companies operating outside the US (President Trump threatened to raise tariff barriers on countries that regulate US tech). We think Biden may be willing to implement more global measures (such as the OECD BEPS tax initiative).

We also highlight that in the US, EU and China, the regulatory headwind for tech is rising, though as we argue later on, we think it is manageable.

Figure 506: Change in 2022 earnings assuming a 4% additional tax on sales vs IBES consensus income estimates

Company	2022 IBES Consensus Sales ($mln)	2022 IBES Consensus Pre-tax profit ($mln)	2022 IBES Consensus Net Income ($mln)	2022 Pre-tax profit after 4% tax on sales ($mln)	2022 Net income after 4% sales tax ($mln)*	2022E Change in net income under 4% sales tax scenario	Percent decline in profits 2022E
Microsoft	198,579	78,852	65,665	70,909	59,050	-6,615	-10.1%
Apple	345,827	87,267	73,946	73,434	62,225	-11,722	-15.9%
Amazon	523,188	41,539	34,162	20,611	16,951	-17,211	-50.4%
Facebook	124,501	45,940	37,532	40,960	33,463	-4,069	-10.8%
Alphabet	251,185	58,699	49,226	48,652	40,800	-8,426	-17.1%
Total	1,443,280	312,297	260,531	254,566	212,489	970,260	-20.9%

* Using 2020E IBES estimates for tax rates

Source: Refinitiv, Credit Suisse research

So why do we maintain a small overweight?

While the environment is getting tougher, we believe the positives still outweigh the negatives and we maintain a small overweight of the tech sector for the following reasons:

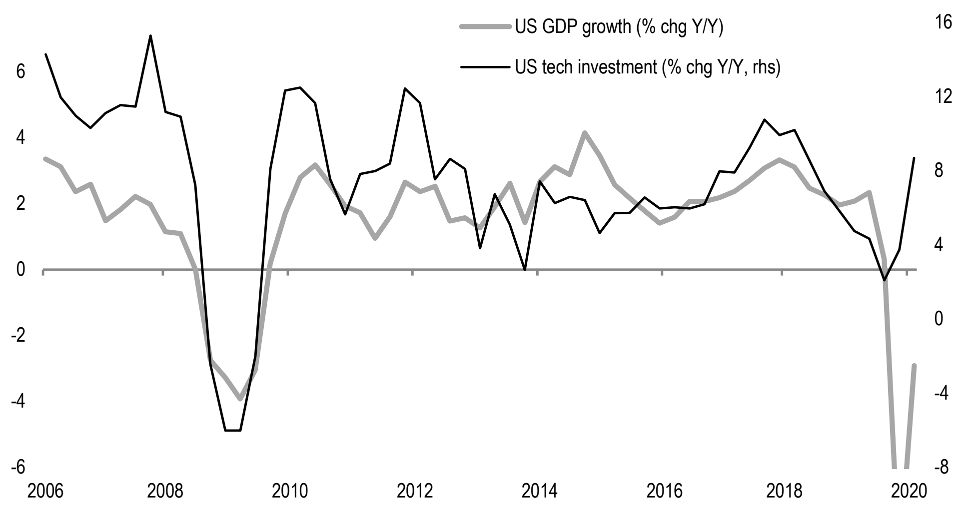
- Tech offers cyclical and defensive characteristics
- Tech revenue estimates are not excessive
- Using FCF, the valuations do not look extreme
- The regulatory threat in general appears manageable
- Bull markets normally end in a bubble and tech is not yet in a bubble
- US tech is likely to be a winner from a weaker dollar.
- Tech has outperformed more during periods of rising than falling yields.

We discuss each of these topics in more detail below:

1. Tech is a cyclical

Tech spending has a beta of 2 to GDP into an economic upswing.

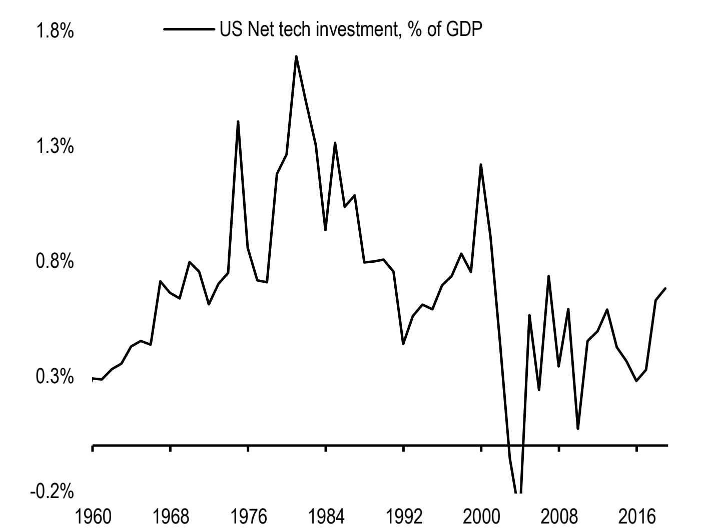
Figure 507: Tech investment has a beta of c2x to GDP growth in the US



Source: Refinitiv, Credit Suisse research

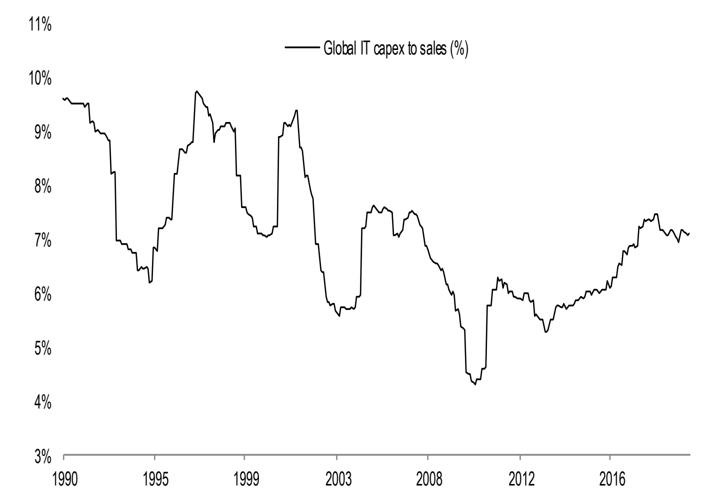
The danger comes when there is over-investment, but this does not seem to be the case when we look at the tech share of GDP or capex to sales.

Figure 508: The net investment share of GDP has recovered to average levels



Source: Refinitiv, Credit Suisse research

Figure 509: Global IT capex to sales



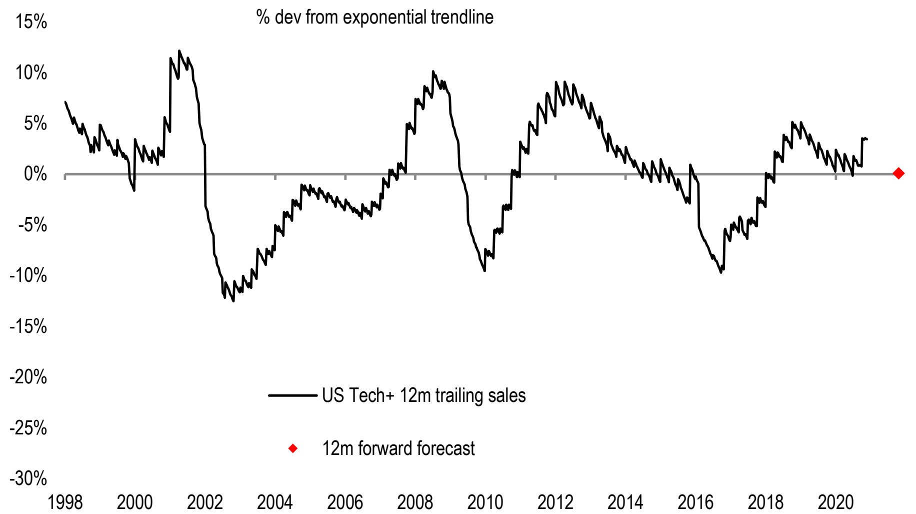
Source: Refinitiv, Credit Suisse research

We would caveat this by highlighting that with a move to software as a service (SaaS) and the cloud, a large part of expenditure that was previously considered capex is now opex and is therefore harder to measure.

2. Revenue estimates appear realistic top-down

Against a geometric trend, the sales of the tech+ group (i.e. tech plus Facebook, Alphabet and Amazon) have not risen significantly above trend (with a trend rate of growth of a CAGR of 10.2%). This is unlike the late 1990s, when sales rose to be c.12% above trend (compared with 0.1% now).

Figure 510: Tech sales are in line with their trend, unlike in 2000



Source: Refinitiv, Credit Suisse research

Many of the key growth drivers are still in place, but we admit they are maturing:

- The penetration rate of smartphones is now 76% and thus most people have access to platform companies and their services. However, we note 5G penetration rates are still extremely low (c.5%).
- Nearly 53% of advertising is now done online in the US (51% globally).
- Parts of SaaS such as CRM have to a large extent migrated to the cloud. For MSFT, more than 70% of commercial Office users have switched to a subscription-based model

Nevertheless, we continue to see tech as being growth because:

- **Greater connectivity – the rise of smartphones 5G/unlimited data plans:** Combining this with faster wireless networks and the increasing shift to unlimited data plans improves connectivity significantly.
- **The rise in computing power:** DeepMind has used the AlphaFold system of AI to predict the structure of proteins (and this could accelerate the discovery of drugs). 'This advance is our first major breakthrough in the longstanding grand challenge in science' (Demis Hassabis, CEO of Deepmind).
- **The cloud:** Not all areas of the cloud are as advanced as CRM. Our US software team believes Infrastructure as a Service offers a $500bn+ opportunity, while the current market size is still around only $75bn per year. In addition, parts of SaaS such as HCM (human capital management) and ERP software have only just started to migrate to the cloud.

In regards to the semis' exposure to the cloud, our semis team argues a decade ago server was less than 15% of DRAM demand; today, it is 30% and they believe in the next five years will be 50% plus.

- **Quantum computing:** The University of Science and Technology in China claims to have completed calculations trillion of times faster than existing supercomputers and 10bn faster than the quantum computer unveiled by Google last year (FT, 4 Dec).
- **The tech content of autos:** EV and AI should ensure a CAGR of 10% for the semi content of autos over the coming years.

- **The development of 3D printing:** 3D printing makes replication easier. In areas such as dental implants, drugs and jet turbines, this is having an impact already. Eventually, the development of FLINK (functional living ink) may have the potential to enable the 3D printing of human organs.
- **Smart homes:** Only a quarter of US homes have smart speakers, for example.
- **The use of autonomous driving:** Intel estimate that by 2050, the 'passenger market' will be $7trn market (FT 6/1/20).
- **The growth of data:** IDC estimates the volume of data/information created, captured, copied, and consumed worldwide will nearly triple in the next four years. The amount of data created over the next three years will be more than the data created over the past 30 years (IDC, May 8).

3. Tech is defensive

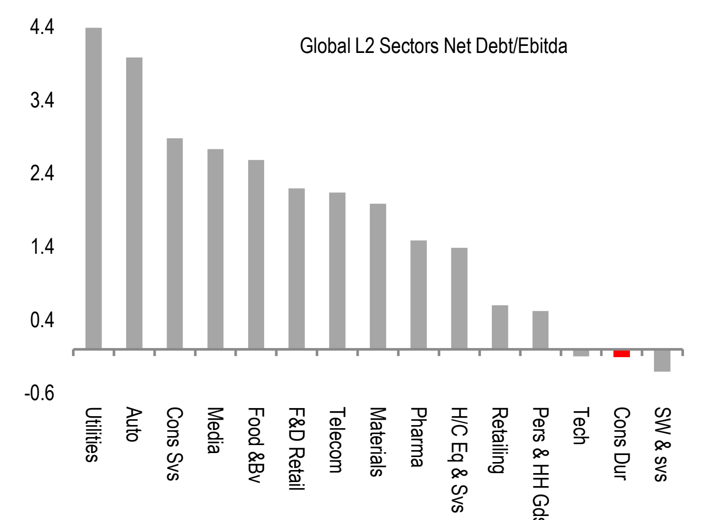
Tech is defensive for the following key reasons:

- The major tech companies have one of the strongest balance sheets
- The sector is used to deflation
- The sector has short product cycles
- The sector facilitates cost-cutting
- Many of the major markets have very high concentration

The defensive nature of tech is also backed up by its large economies of scale, the network effect and the dominance of certain companies within their industries (e.g. TSMC, ASML, MSFT).

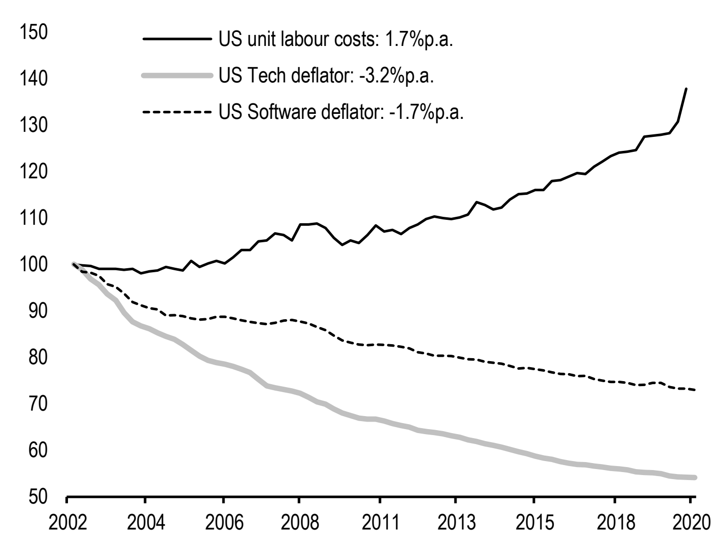
By not employing many people, the sector is less vulnerable to changes in labour regulation.

Figure 511: From a balance-sheet perspective, tech remains highly attractive



Source: Refinitiv, Credit Suisse research

Figure 512: The price of a unit of tech investment is falling relative to the unit cost of labour



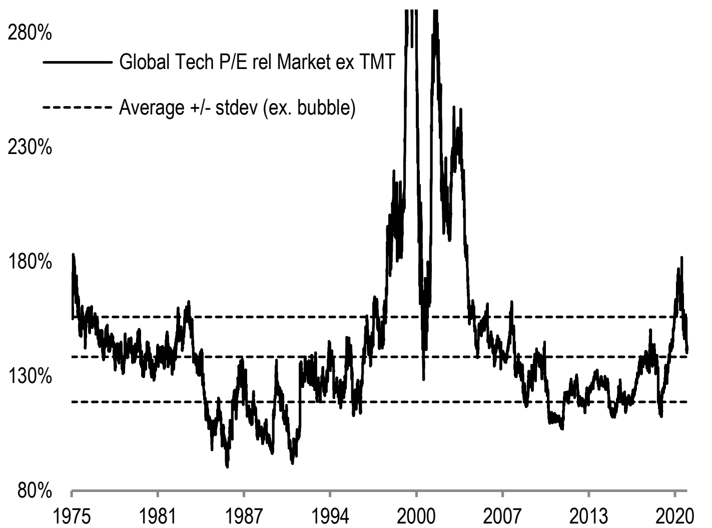
Source: Refinitiv, Credit Suisse research

4. Valuation – still looks reasonable using FCF

While there are individual companies within Tech+ that might be considered clearly expensive, we do not think tech overall looks overvalued.

The trailing P/E relative of the sector has fallen back to its ex TMT bubble norm. Admittedly the12-month forward P/E relative is one standard deviation above its ex TMT bubble norm. However, the last time the sector reached similar levels, it continued to rerate significantly; hence we think the 12-month forward P/E level alone cannot be taken as a sell signal.

Figure 513: Global Tech is now back to ex bubble norms on trailing P/E …



Source: Refinitiv, Credit Suisse research

Figure 514: … but one standard deviation expensive on 12-month forward relatives

Source: Refinitiv, Credit Suisse research

If we backtest the righthand chart above, two out of three times the multiple hit a similar level over the past 30 years, the sector continued to outperform.

Figure 515: Backtest of current forward P/E

Date	Global tech rel mkt ex TMT perf when 12m fwd PE rises to current levels			
	3 month	6 month	12 month	24 month
17-Dec-98	11.6%	19.0%	86.3%	33.9%
18-Jan-01	-21.3%	-35.8%	-33.0%	-52.5%
20-Sep-02	10.7%	17.1%	29.6%	6.6%
20-Feb-20	16.8%	na	na	na
Average	**4.4%**	**0.1%**	**27.6%**	**-4.0%**
Typical perf	**1.4%**	**2.9%**	**5.8%**	**12.5%**
% rise	**75%**	**67%**	**67%**	**67%**

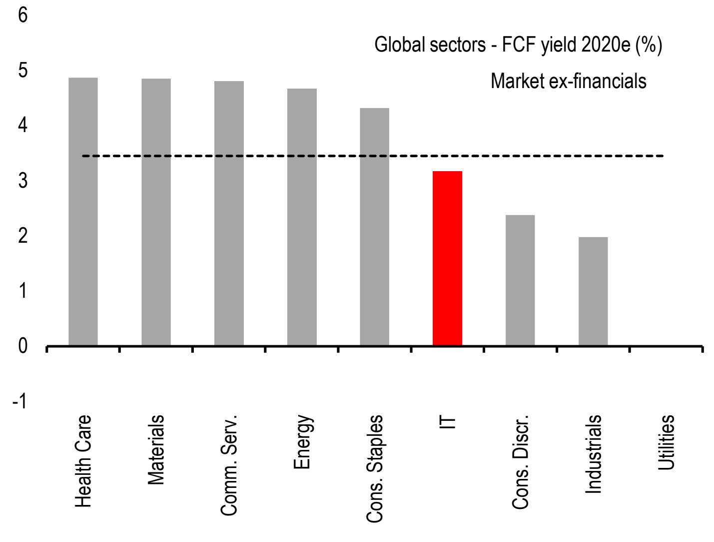
Note: Past performance is no guarantee of future returns.

Source: Refinitiv, Credit Suisse research

FCF is our preferred valuation method

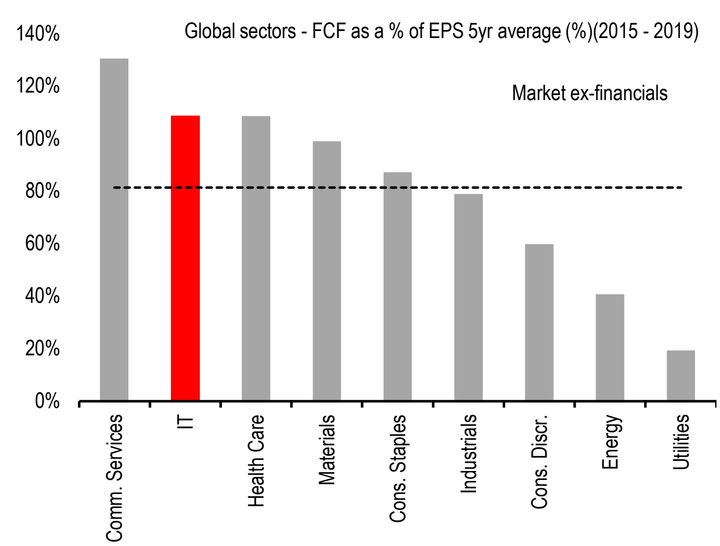
The very high free cash flow conversion (because many tech companies fully expense R&D) makes this our preferred valuation method. The FCF yield is just below that of the market, but the FCF conversion is significantly better than for the market overall.

Figure 516: 2020 Global L1 sector FCF yield is average…



Source: Refinitiv, Credit Suisse research

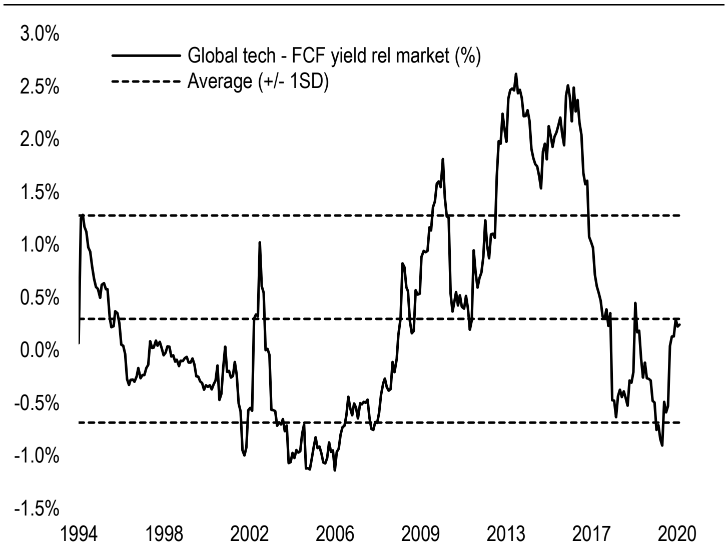
Figure 517: …because these sectors have very high cash conversion (Global L1 sector FCF conversion)



Source: Refinitiv, Credit Suisse research

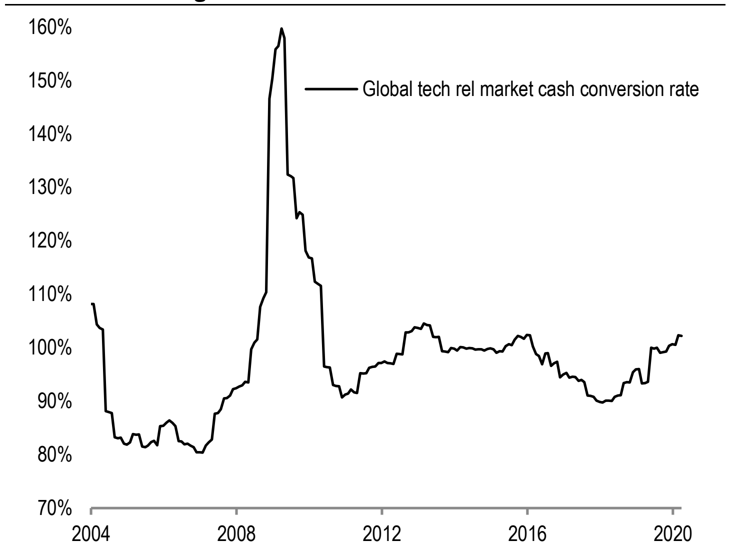
In fact, on a 12-month trailing basis, the sector's FCF yield is in line with both that of the market and its normal FCF yield relative to the market.

Figure 518: Global tech FCF rel market



Source: Refinitiv, Credit Suisse research

Figure 519: Global tech FCF conversion has been very stable at c100% of earnings



Source: Refinitiv, Credit Suisse research

Moreover, if we look at the biggest 20 tech stocks globally, they still offer a median FCF yield of 3.7% for 2021 even adjusted for Shareholder Based Compensation (SBC), with only five stocks offering a 2021 FCF yield below 3% (MSFT, AMZ, Netflix, ASML and Adobe). For this year, the median FCF yield is 3% (adjusting for shareholder-based compensation) with an average FCF yield of c4%.

Figure 520: FCF yields for major tech stocks globally

	FCF yield			
	2020 (adj. for SBC)	2020	2021 (adj. for SBC)	2021
AAPL	3.4%	3.6%	3.6%	3.8%
GOOGL	2.5%	3.4%	3.4%	4.3%
MSFT	2.6%	2.9%	2.9%	3.1%
FB	2.9%	3.5%	3.5%	4.0%
Tencent	3.0%	3.2%	3.6%	3.8%
AMZN	1.3%	1.6%	2.3%	2.6%
BABA	3.5%	3.9%	4.3%	4.8%
Samsung	4.6%	4.6%	5.4%	5.4%
INTC	8.4%	9.1%	7.1%	7.8%
ORCL	6.2%	6.9%	6.5%	7.2%
TSMC	2.5%	2.5%	3.4%	3.4%
IBM	10.0%	10.5%	8.9%	9.3%
AVGO	5.7%	6.7%	6.5%	7.5%
BIDU	8.0%	9.6%	9.2%	10.8%
TXN	3.3%	3.4%	3.6%	3.7%
NFLX	0.7%	0.8%	-0.5%	-0.3%
ADBE	2.0%	2.2%	2.3%	2.6%
QCOM	2.8%	3.4%	4.8%	5.4%
SAP	3.8%	5.1%	3.4%	4.5%
ASML	0.5%	0.5%	1.9%	2.0%
Average	4.0%	4.5%	4.4%	4.9%
Median	3.3%	3.5%	3.6%	4.3%

Source: Credit Suisse research

5. Only slightly tougher regulation

This is a very long and complex subject. Clearly, the political temperature has increased in nearly every major region. For the first time, the Big 4 appeared together in Congress this year, with one commentator (Richard Waters of the FT, 3 July) wondering whether this could be similar to Big Tobacco in 1994 or Big Auto in 2008.

President-elect Joe Biden has spoken assertively about tech regulation, suggesting "some of the things that are going on are simply wrong and require government regulation" (to the New York Times on 17 January 2020). He, along with President Trump, has also suggested revoking Section 230 of the Communications Decency Act, which holds that online platforms are not liable for what their users post on them.

According to media reports, an early draft of the EU's Digital Service Act regulation stated that the likes of Amazon and Google "shall not use data collected on platform… for their own commercial activities….unless they make it accessible to business users active in the same commercial activities." The draft also suggested tech companies may be banned from preferential treatment of their own services on their sites/platforms, to the detriment of rivals, and that companies should not be allowed to pre-install their own applications on hardware devices, such as laptops or phones, or force other companies to exclusively pre-install their software (FT, 30 September).

In the UK, the CMA wants to be able to impose fines of up to 10% of global revenue on tech companies that abuse their market position and have 'strategic market status' (substantially entrenched market power in at least one digital activity) or if they act as a gateway (FT, 10 December).

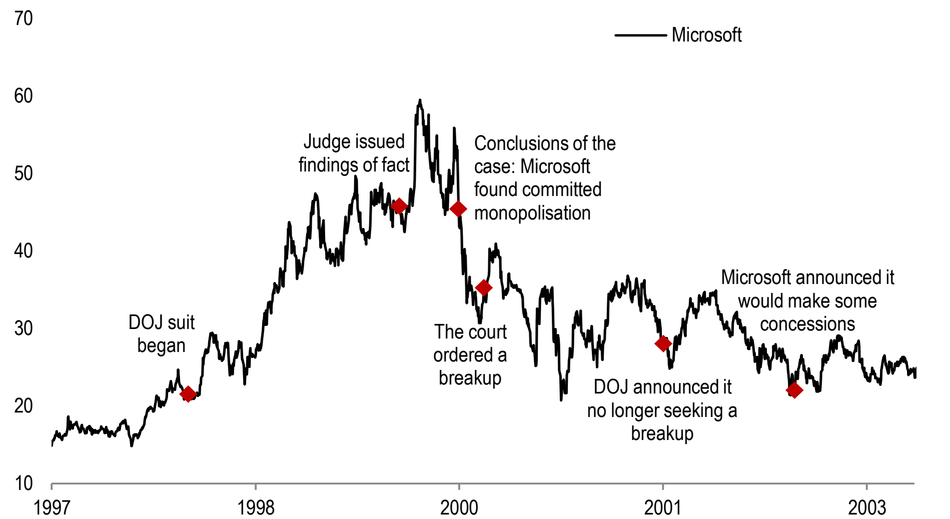
The US Department of Justice is investigating the issue of Google paying Apple and other device makers to set its search engine as the default on billions of mobile devices and computers worldwide. Google apparently pays Apple up to $12bn a year for this, with about half of its search traffic in 2019 coming from Apple devices (Business Insider, 21 October).

The US FTC and 46 states have brought antitrust cases against Facebook, accusing the company of using its social media dominance to thwart competition and calling for penalties that include a forced break-up (FT, 9 December).

Our view generally has been more relaxed on this issue for the following reasons:

- Republicans refused to sign the 449-page Congressional investigation into tech (though they back the antitrust enforcement mechanism). At the time of writing, we believe the probability of Republicans maintaining controlling the Senate is at c70%.
- Currently, regulation is concentrated on a few stocks (Apple, Google, Facebook and Amazon, which admittedly are nearly half of the total Tech+ universe). Software, semis, gaming and telecom equipment are largely outside of this debate. Indeed, the most contentious issue of paying for content and being responsible for content may really only affect big names such as Google, Twitter and Facebook.
- The FTC has tended to judge monopolies on the basis of price, quality and choice and for the most part, tech companies lead to lower prices, increased quality and greater choice for consumers. Moreover, tech companies are by their nature highly innovative and have the capex to pour into growth areas (such as Alphabet's WayMo, for example).
- It is often hard to call them monopolies in the classic sense of the word, as they are not sole providers but instead popular providers. (Apple is the third-largest provider of smartphones, for example).
- In a break-up scenario, it could be that the large tech companies could actually increase their value (this was the case for Standard Oil and AT&T).
- The problem for tech might be that transformative deals become harder, but often when deals have been done, the regulators have viewed them favourably or the deals have been regulated by a regulator from a different sector (e.g. Facebook's purchase of Instagram and then WhatsApp).
- Any investigation typically takes a very long time to complete, as we saw in the case of Google in Europe.
- We think the example of MSFT two decades ago was to sell only on the completion of the antitrust investigation.

Figure 521: Microsoft's share price throughout the antitrust case (US$/sh)



Source: Refinitiv, Credit Suisse research

6. Late-stage bull markets often end in bubbles

Late-cycle bull markets tend to end in bubbles. We have five main ways of assessing this question (excess in investment and inventory, revenue relative to trend, valuation, excess speculation and excessive price momentum). As we argue above, on most of our indicators the sector is clearly not in a bubble.

Figure 522: Summary table of the excess in tech

	Score (0 - Low, 5 - High)
Excess Investment	2.5
Excess Inventory	3.5
Revenue relative to trend	2
Valuation	3.5
Excess Speculation	3
Overbought	2
Average	2.75

Source: Credit Suisse research

Late-cycle bull markets have seen the P/E of growth go to 45x earnings

We have frequently noted that a normal end-of-cycle bull market (with a bull market defined by when the inflation-adjusted returns rise above the previous peak – and thus this condition was not fulfilled in 2007) sees a bubble in the theme of the time—e.g. Nifty 50, Japan or TMT. These bubbles have seen the theme being re-rated to between 45x and 72x earnings against a backdrop where bond yields were significantly higher (c5% to 6%) than present.

As a whole, the NASDAQ is trading on 42x 12-month trailing earnings, and the tech sector is trading on 27x forward earnings.

During the Nifty 50 bubble, many stocks reached valuations significantly above 60x earnings (e.g. Polaroid traded on 92x earnings), even when as above the bond yield was c6% as we show in the Style section.

7. **Tech performs better in periods of rising than falling yields**

Historically, tech has performed better when rates rise than when they fall.

Figure 523: Tech has tended to perform better when bond yields rise (88% of time outperformed)

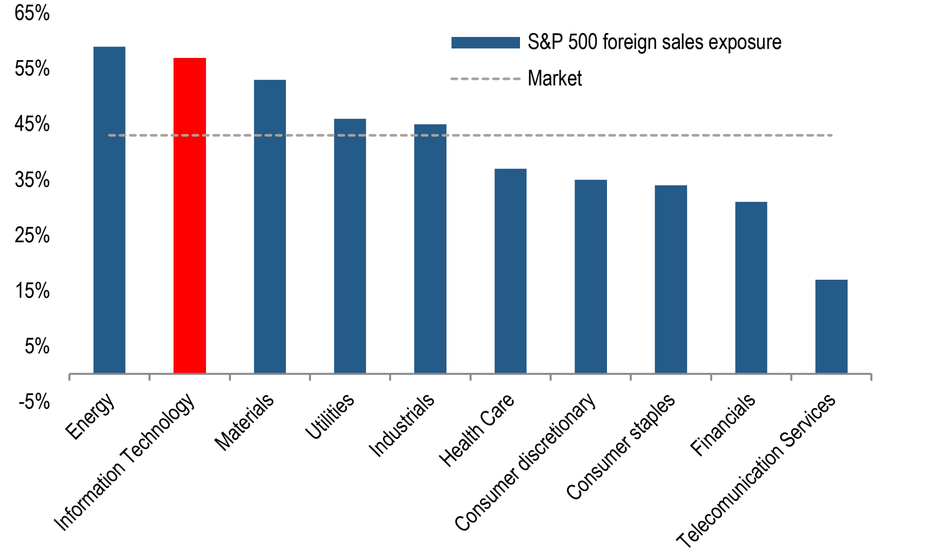
Bond yields			US Tech relative performance	Bond yields			US Tech relative performance
Major peak	Major trough	Change in yields	Peak to trough	Major trough	Major peak	Change in yields	Trough to peak
Apr-10	Oct-10	-161	0.0%	Oct-10	Feb-11	134	4.0%
Feb-11	Sep-11	-201	1.6%	Sep-11	Mar-12	66	3.8%
Mar-12	Jul-12	-97	-5.1%	Jul-12	Mar-13	66	-10.1%
Mar-13	May-13	-43	-1.7%	May-13	Sep-13	134	1.8%
Sep-13	Oct-13	-48	-0.9%	Oct-13	Dec-13	52	2.6%
Dec-13	Jan-15	-137	5.1%	Jan-15	Jun-15	85	2.4%
Jun-15	Sep-15	-45	0.8%	Sep-15	Nov-15	29	3.1%
Nov-15	Jul-16	-96	-5.3%	Jul-16	Dec-16	122	7.2%
Dec-16	Today	-40	11.2%				
	Average	-96	0.6%		Average	86	1.9%
	% of times positive		44%		% of times positive		88%

Source: Refinitiv, Credit Suisse research

8. **Benefits from a weak dollar**

Tech also happens to be one of the largest international earners from a US point of view, and thus it should be a beneficiary of a weaker dollar (see 2021 Research Outlook: Equities, Regions and Macro).

Figure 524: Tech is the most international of the US sectors after energy



Source: Refinitiv, Credit Suisse research

Subsector weightings

Software: small overweight

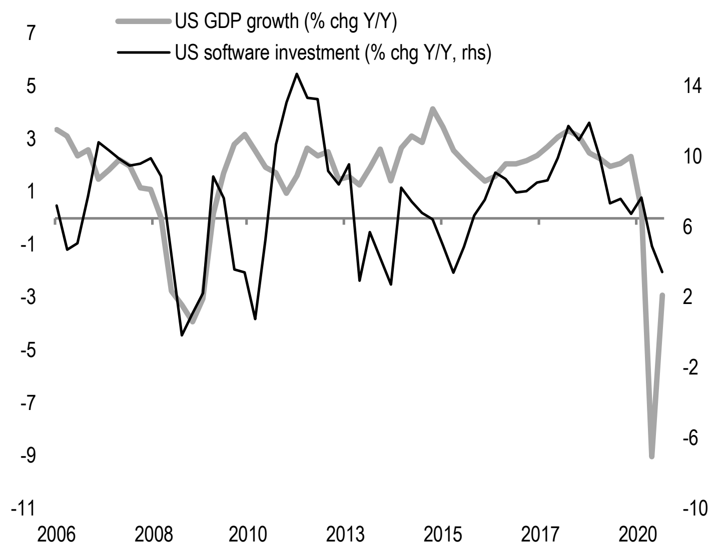
Software has been our biggest overweight since 2010. In September of this year, we revised it down to be our fourth-biggest overweight (for reasons highlighted later). We still see the following key structural benefits:

Software is a play on the recovery:

- **Low beta into a downswing but high beta into a recovery:** Although into the up-cycle, software capex has had a beta of nearly 3.5x to GDP into the downturn, the beta with GDP was just 0.5. This is because software can act as a cost-saving tool (see below for more details).

  In this cycle, we think as shown in our macro theme, opex will pick up before capex and we want to be overweight opex themes. Around 80% of software spend is opex-related.

Figure 525: Software spending has a high beta into a recovery…



Source Refinitiv, Credit Suisse research

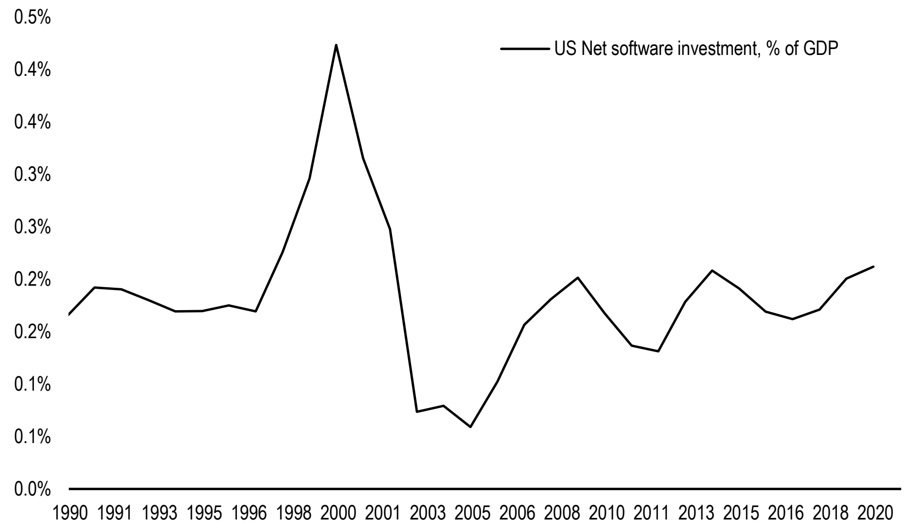
Figure 526: … and a low beta into a slowdown

Real change in GDP and private sector investment by type	Peak date	Trough date	Change from peak to trough	Q4 19 - Q3 20
GDP	Q4 2007	Q2 2009	-4%	-3.5%
Total private fixed investment	Q1 2006	Q2 2009	-24%	-2.3%
Software	Q3 2008	Q1 2009	-2%	2.7%
R&D	Q2 2008	Q1 2009	-7%	-2.0%
Computer HW	Q2 2008	Q4 2008	-9%	20.9%
Industrial equipment	Q3 2007	Q1 2010	-32%	-3.8%
Residential investment - new structures	Q4 2005	Q4 2010	-61%	2.5%
Transport equipment	Q4 2006	Q2 2009	-70%	-22.8%

Source: Refinitiv, Credit Suisse research

We do not find there is overinvestment is software, as shown below. Overinvestment would threaten the pricing power and cyclical recovery of software. Software spending is up just c2.7% since the end of 2019.

Figure 527: The net software share of GDP is only in line with its post-1985 norm (net of depreciation)

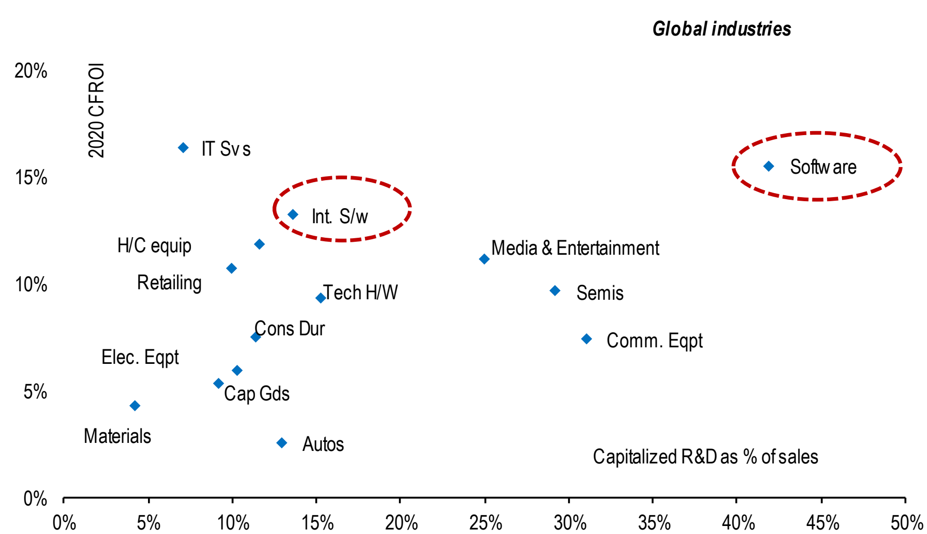


Source: Refinitiv, Credit Suisse research

Software is very high-quality because:

- **Capex and R&D ensure sustainable profitability:** There is a strong correlation between capitalised R&D to sales and CFROI, with software having a high capitalised R&D to sales ratio of c.45% while delivering a CFROI of c.15%. Moreover, the size of R&D for a company like Microsoft is very hard to replicate (c.$17bn for R&D in 2019).

Figure 528: Software has high barriers to entry



Source: Refinitiv, Credit Suisse research

- **Highest-CFROI sector apart from tobacco**

In fact, as we show in the tobacco section of this report, software has the second-highest CFROI across all sectors.

- **No leverage**

Software companies have very little debt and, in aggregate, the sector has net cash on its balance sheet.

- **Recurring revenues**

A large proportion of revenue streams are recurring. SAP, for example, has roughly half its revenues coming from maintenance and support contracts, with over two-thirds of revenue streams now being recurring in nature (cloud and maintenance), according to our analysts. For Microsoft, >70% of commercial Office users have switched to a subscription-based model and c.35% of Microsoft's revenues are coming from the commercial cloud.

The additional supports for software are:

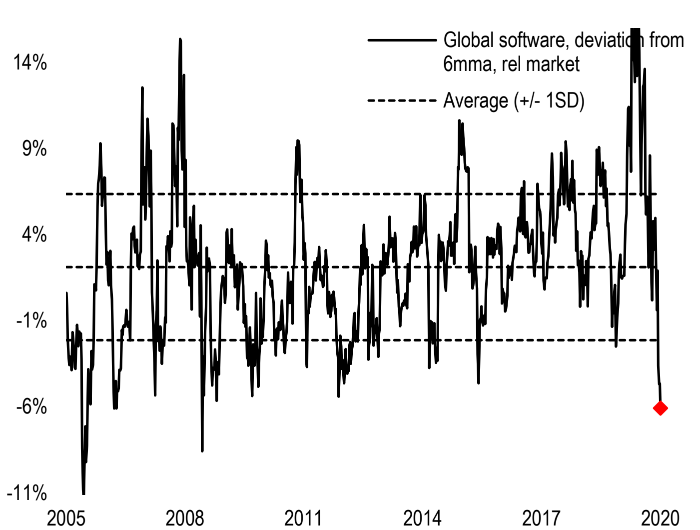
- **A cost-saving tool:** SAP's UK business experienced double-digit growth in the quarters following the Brexit vote, while its oil and gas-related business had its strongest quarter when the oil price fell below US$30pb in Q1 2016. SAP explained that when times are tough economically, corporates have to cut procurement costs, automate procedures and improve back-office efficiencies, and software can deliver all of these things.

Our analysts point out that moving to the cloud can save around 60% on platform costs. The capital saved can be redeployed into other areas of software (relating, for example, to machine learning). As labour gets better pricing power (owing to minimum wage legislation), then labour-replacing and cost-cutting initiatives are likely to accelerate.

- **The outlook for software tech spending is attractive:** Technology, especially software, has become a critical tool to cut costs and gain a competitive advantage for corporates. Data growth is a key driver of this. The amount of data created over the next three years will be more than the data created over the past 30 years, and the world is forecast to create more than three times the data over the next five years than it did in the previous five. IDC believes that data growth will be around 60% p.a. Data growth will be particularly strong in the corporate segment, with the consumer share of the Global DataSphere declining roughly 4% over the next five years (from 50%), according to IDC Global DataSphere Forecast, 18 May 2020.

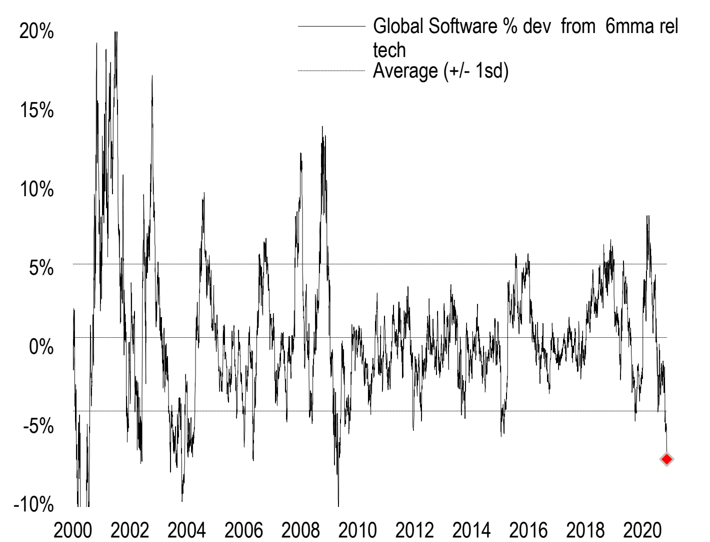
- **Software is oversold** relative to the market and relative to the rest of tech.

Figure 529: Price momentum relative to the market…



Source: Refinitiv, Credit Suisse research

Figure 530: … and relative to tech



Source: Refinitiv, Credit Suisse research

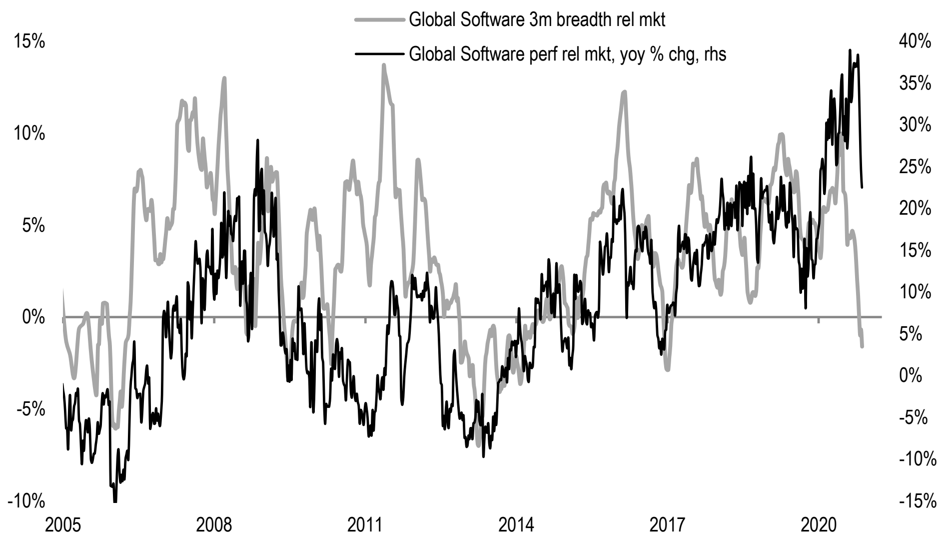
Why are we not more optimistic?

Three of the reasons for our downgrade in September are still in place:

1. **Software has decoupled substantially from earnings revisions**

As highlighted above, we think the relationship between earnings revisions and performance is key.

Figure 531: Relative earnings revisions are now positive and performance has followed relative earnings revisions



Source: Refinitiv, Credit Suisse research

2. **Market cap is high compared to total addressable market share**

IDC and Gartner estimate that the public and private cloud will be worth c$500bn by 2022. Based on our assessment, the market cap of the listed cloud is around c$3.4trn. Hence, the cloud trades on 7x 2022 industry revenue. If we assume a net margin of 20% (Amazon's AWS has an EBIT margin of c.30%), that implies a P/E of c33x 2022 for the sector. This is high but not extreme, in our view.

3. **Valuations are looking stretched on conventional measures**

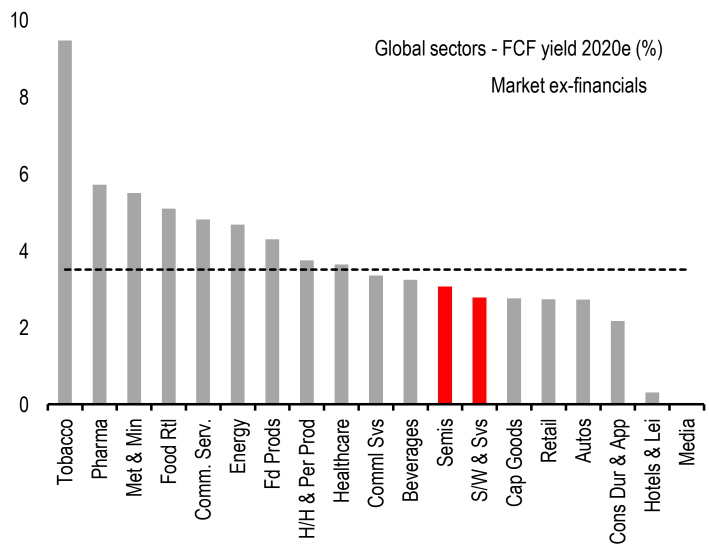
Global software stocks are clearly expensive on 12-month forward P/E relative to the market. The sector is trading at a level not seen outside the TMT bubble.

Figure 532: Global software does not look extended on P/E relatives

Source: Refinitiv, Credit Suisse research

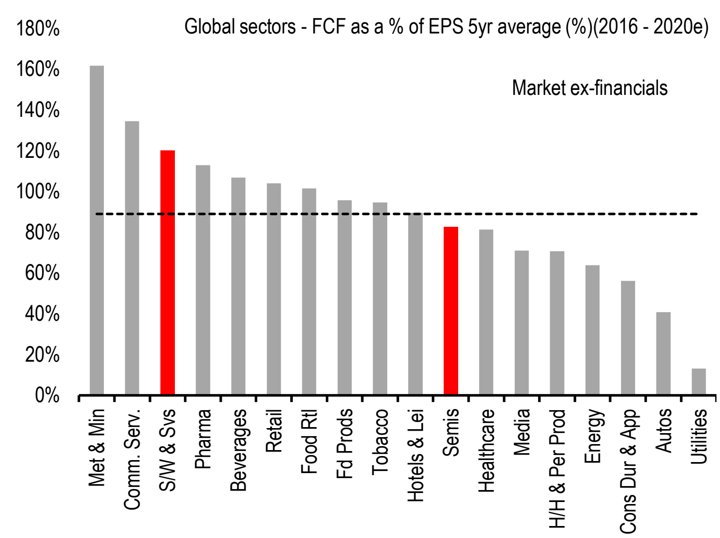
However, this is not a clear sell signal in our view because using the FCF (our preferred valuation method), the sector is trading only slightly below its historical norm and has high cash flow conversion.

Figure 533: 2020 Global L2 sector FCF yield



Source: Refinitiv, Credit Suisse research

Figure 534: Global L2 sector FCF conversion



Source: Refinitiv, Credit Suisse research

4. **SaaS is highlight penetrated**

While the cloud still offers a lot of growth opportunity (e.g. IaaS) some areas are increasingly well adopted (e.g. SaaS). As we mention above for MSFT, more than 70% of commercial Office users have switched to a subscription-based model.

Software incumbents

Our analysts rate the four incumbents in the US (MSFT and Oracle) and Europe (SAP and Dassault Systemes) as Outperform. We highlight SAP and MSFT:

- **Microsoft** offers a 2021E FCF yield of 2.9% (ex SBC) and has an AAA credit rating (one of only two companies with this rating globally), while our analysts forecast its revenue to increase by c.8.5% in 2021 (after 13.6% in 2020). The company has navigated many different tech cycles over the years, including PCs, the rise of the internet and most recently the Cloud, which should make it particularly resilient to disruption. Azure and Office 365 Commercial accounted for nearly 28% of its business in 2019, according to our analysts. MSFT seems to be out of the regulatory spotlight.
- **SAP:** SAP's HANA is the best in-memory database management system on the market, in our analysts' view. Moreover, we consider SAP's FCF yield of 3.4% (adj for SBC) for 2021E attractive, especially as c.70% of revenues are recurring (the cloud and maintenance contracts). SAP now trades on just 21x 12-month forward earnings with a 1.6% dividend yield.
- **Dassault Systemes:** Our European software team believes Dassault is one of best positioned companies in the sector, with ambitious targets that are underpinned by a sustainable growth trajectory. The company's 3DEXPERIENCE platform and move into life sciences via Medidata provide multiple levers of growth, and the team feels the company's recent CMD highlighted the scale of the future growth opportunity and management's conviction in Dassault continuing to take market share. Revised mid-term targets appear stretching, as they are slightly back-end loaded and imply an acceleration on past growth and margin trends. However, despite the high hurdle, the team still expects investors to reward management's strategy of investing for mid-term growth rather than short-term EPS, and the fact that Dassault remains one of the most attractive growth stories in European tech (see Dassault Systemes -Stretching targets).

Figure 535: Software incumbents

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Microsoft	30.3	89%	20%	13.7	75%	2.9	1.0	56.8	6.6	1.3	1.7	Outperform
Sap	21.3	62%	-17%	4.0	-22%	3.9	1.6	12.5	4.1	-3.2	2.4	Outperform
Dassault Systemes	38.0	111%	-4%	7.6	18%	2.2	0.5	-49.5	-2.3	-2.2	2.7	Outperform
Oracle	13.7	40%	-28%	15.2	116%	6.3	1.6	12.3	4.4	1.4	2.5	Outperform

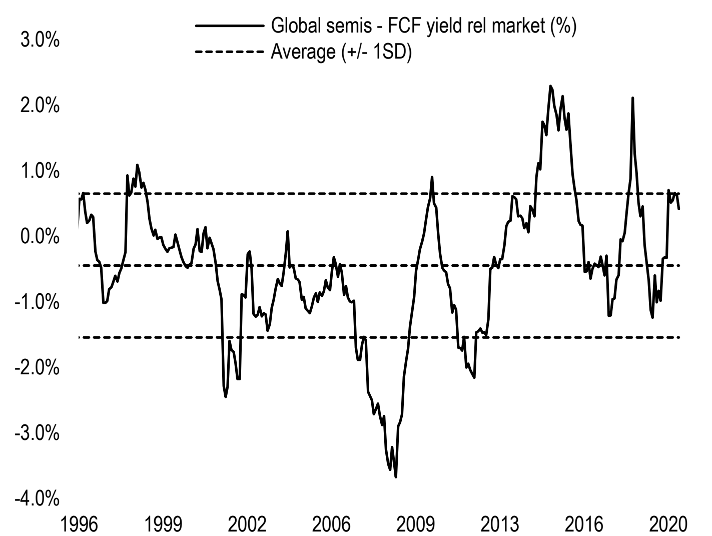
Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

Semis: small overweight

We raised semis to a small overweight in September from benchmark due to our preference for TSMC, ASML and SEC. We see the following supports for semis:

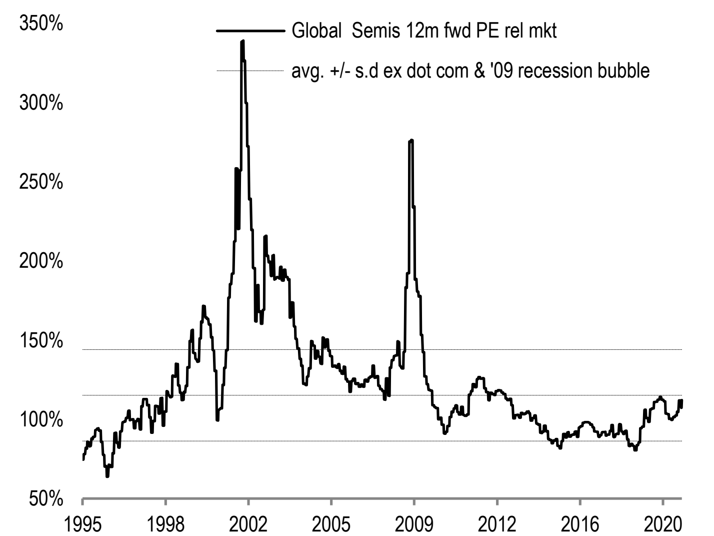
- The sector is clearly growth (including the internet of things, the rollout of 5G and autonomous driving). According to Verified Market Research, the global IoT market size was c$212bn in 2018 and is expected to expand at a CAGR of 25% from 2019-2026 and reach c$1,300bn by 2026. Gartner, for example, estimates that installed IoT endpoints for manufacturing and natural resources industries are forecast to grow to 1.9bn units in 2028. That is five times the 331.5m units in 2018.
- Semis are exposed to the cloud theme. Our semis team argues a decade ago server was less than 15% of DRAM demand; today it is 30% and they believe in the next five years will be 50% plus. Memory is disproportionately exposed to AI and the cloud. The more complex a device/system/process, the more memory it requires. According to our semis team, the ratio between logic and memory is 1:1 in a consumer device, 1:6 in an enterprise server, 1:12 in a cloud server and 1:35 in an AI server.
- The sector is much less susceptible to structural regulatory/tax issues in comparison with the social networks or online retailers.
- Semis are much cheaper than other components of tech. FCF looks attractive relative to the market and the P/E relative is below its long-run average.

Figure 536: Semis' FCF yield relative to the market is still attractive



Source: Refinitiv, Credit Suisse research

Figure 537: The 12m forward P/E of global semis is cheap relative to the market



Source: Refinitiv, Credit Suisse research

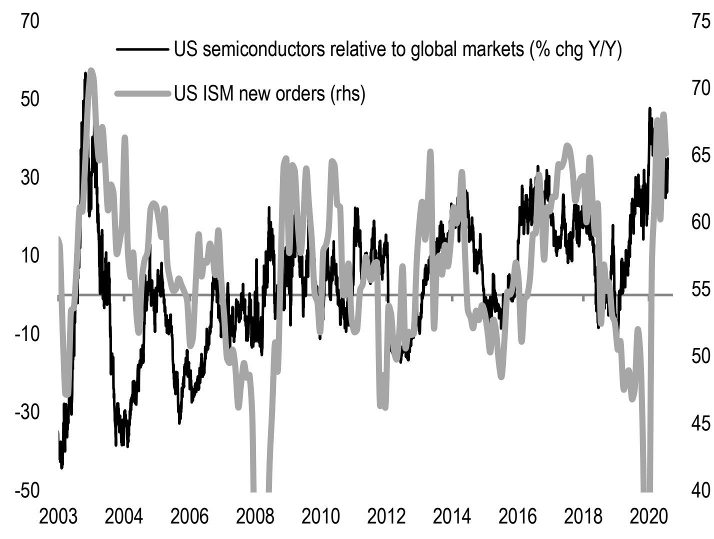
- Many areas have become sharply consolidated (the DRAM market is close to being a three-player market). ASML has no competitor in EUV lithography (with Nikon and Canon unable to do this). China has been slower to move into these areas than had been widely expected.
- TSMC is almost a unique monopoly courtesy of its manufacturing process, according to Randy Abrams, head of the CS Asian semis research team. Intel could fall two years behind TSMC (TSMC started producing the 5nm chips in October and Intel's equivalent - 7nm chips - are unlikely to appear until the end of 2022) and now even makes Intel a potential growing customer for TSMC. According to our analysts, TSMC appears to be five years ahead of its Chinese rivals on advanced technology. Samsung is the closest on process in the foundry sector, although its integrated model creates business conflicts with some

potential customers that have limited its scale and meant only a couple major customer wins including NVIDIA and Qualcomm, both single-digit customers for TSMC.

Nevertheless, we have a few concerns that limit us to a small overweight

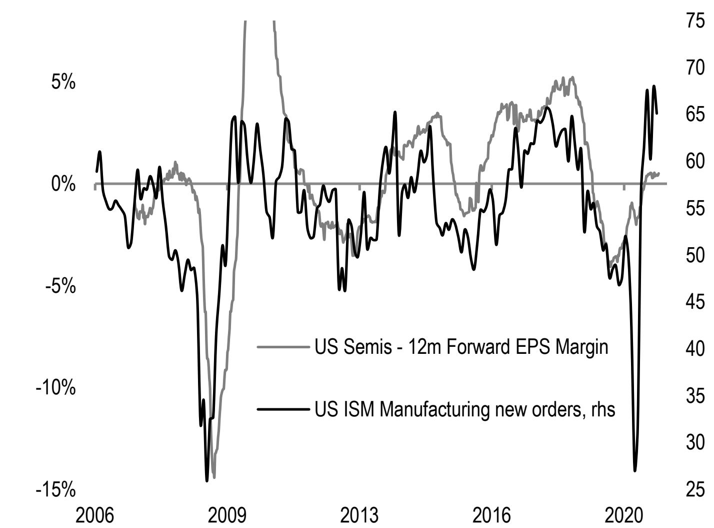
i. Semis are extremely cyclical and the sector's performance as well as margins are closely correlated with ISM new orders. We expect ISM new orders to fall from their currently very elevated levels.

Figure 538: The performance of semis correlates closely with ISM new orders…



Source: Refinitiv, Credit Suisse research

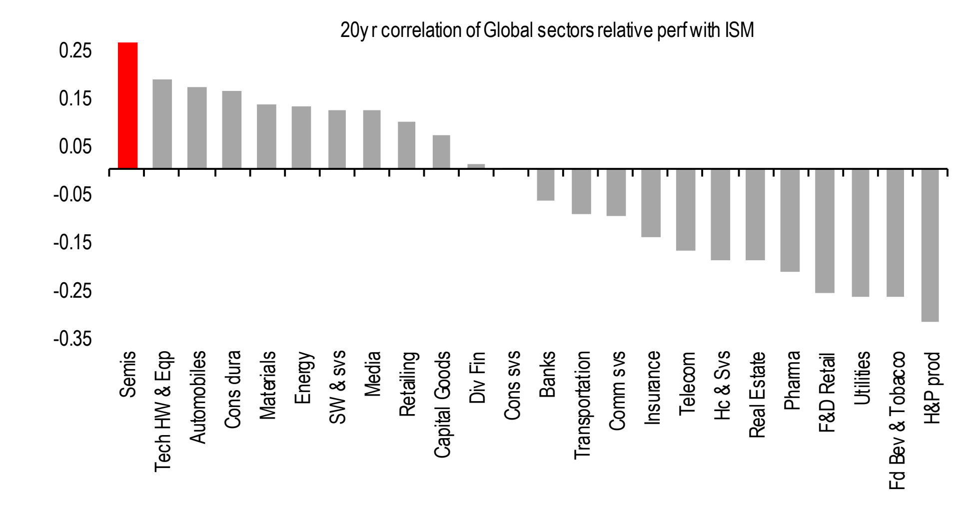
Figure 539: …as are margins



Source: Refinitiv, Credit Suisse research

In fact, semis is the sector with the highest positive correlation with ISM new orders, as shown in the bar chart below.

Figure 540: Semis is the most sensitive sector to a rise in ISM

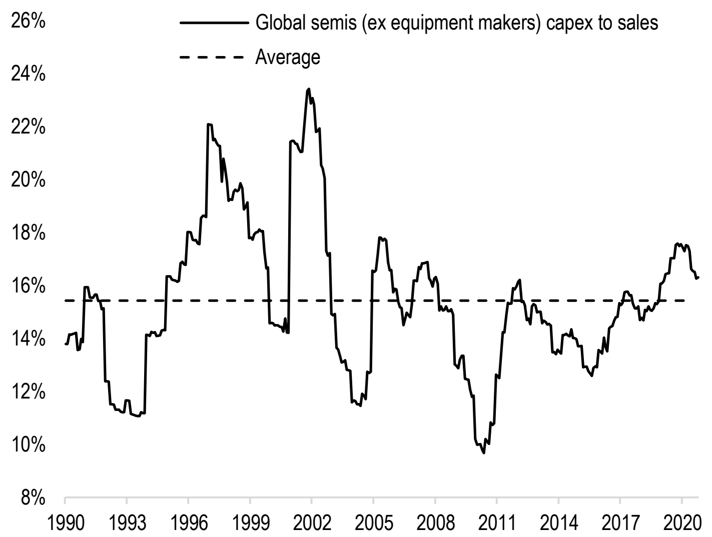


Source: Refinitiv, Credit Suisse research

ii. As already mentioned above, semi inventories are clearly extended.

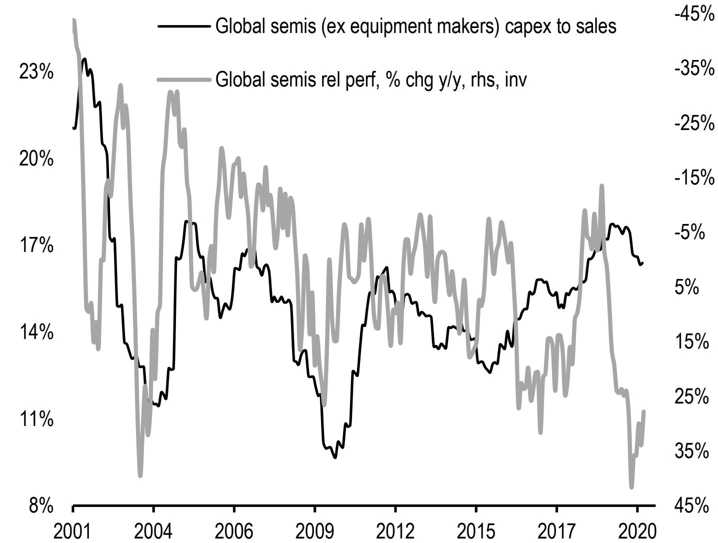
iii. If we look at global semis, capex to sales is above its 30-year average. Typically, a high capex to sales ratio has been a bad sign for performance a year later, We acknowledge that this time around the high capex to sales was anticipating future demand (5G cycle, autonomous driving, etc).

Figure 541: Global semis capex to sales remains just above average…



Source: Refinitiv, Credit Suisse research

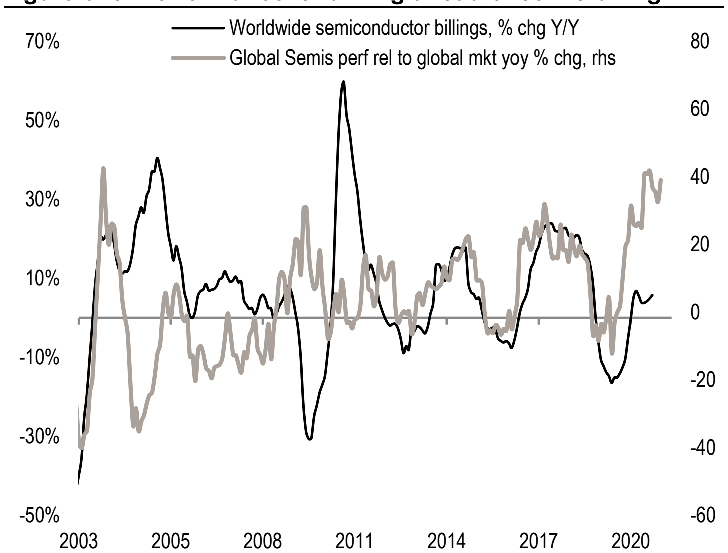
Figure 542: … and high capex to sales has historically been bad for relative performance , but not this time



Source: Refinitiv, Credit Suisse research

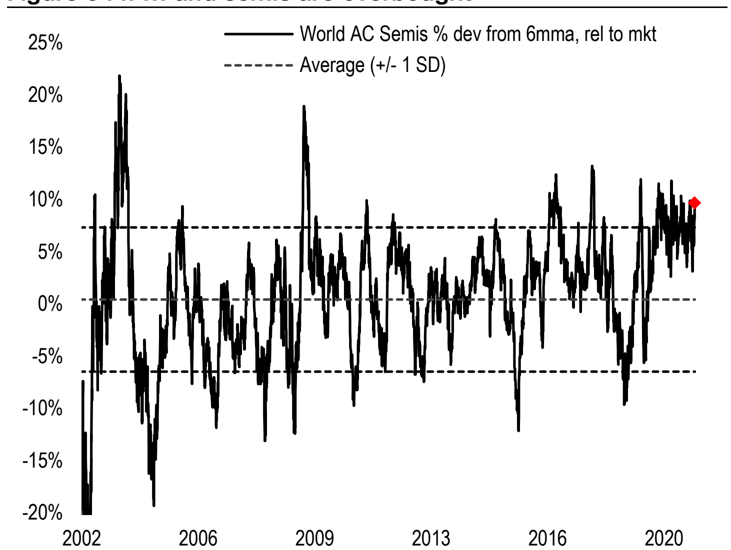
iv. The sector appears to be discounting a very strong rise in billings and it remains overbought relative to the market.

Figure 543: Performance is running ahead of semis billing…



Source: Refinitiv, Credit Suisse research

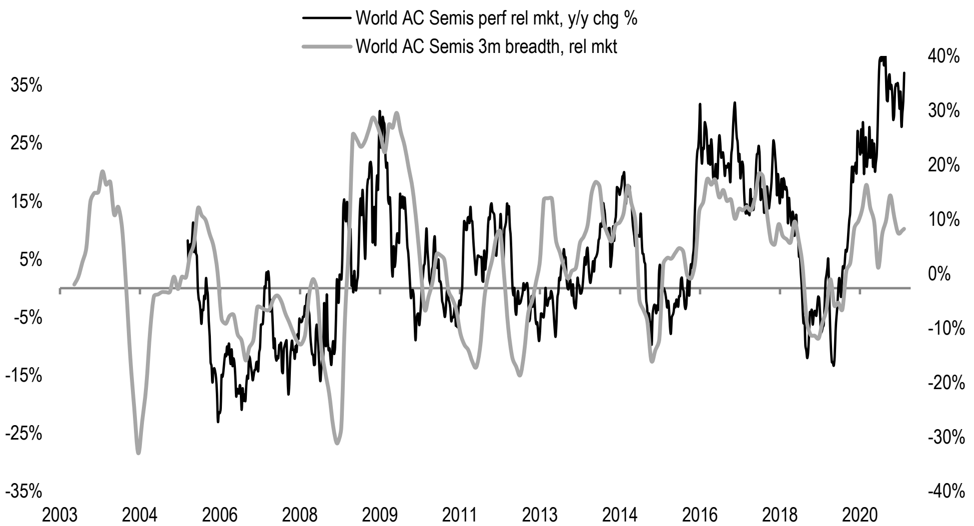
Figure 544: … and semis are overbought



Source: Refinitiv, Credit Suisse research

v. Performance has significantly decoupled from earnings revisions, which are admittedly better than the market.

Figure 545: Semis' performance is running ahead of earnings revisions



Source: Refinitiv, Credit Suisse research

What semis do we like?

We particularly like semis that have exposure to two themes:

- **Industrial/manufacturing uses:** As we argue in our theme on capex, we expect capex and industrial production to recover relative to consumer spend. Semis with exposure to this theme (rather than consumer electronics) include Analog Devices, Texas Instruments, Maxim and STMicro.
- **Automotive:** We expect car sales to recover throughout 2021. More importantly, as cars move towards autonomous driving, EV and more interconnected systems, the semi content share of cars is increasing. According to our European semis analyst, the average semi content in a car (all models included) is touching $500 today and should grow by c.10% CAGR over the coming years (after growing by 4-5% p.a. over the past 15 years). The semi companies with the biggest auto exposure are Infineon, NXP, Renesas and STMicro.
- **Semis exposed to cloud computing** – An on-going corporate shift in workloads to the cloud with rising usefulness of that data from better AI analytics provides a strong backdrop. In addition continued growth in the online business model also drives hyperscale data centers. Hyperscale service growth is still about 40% YoY and Internet service growth 15-20% YoY. Companies exposed include Broadcom and TSMC.

The screen below shows global semis stocks that are Outperform-rated by CS analysts and show upside on HOLT (above the line) and Underperform-rated stocks that look expensive on HOLT (below the line).

Figure 546: Global semis

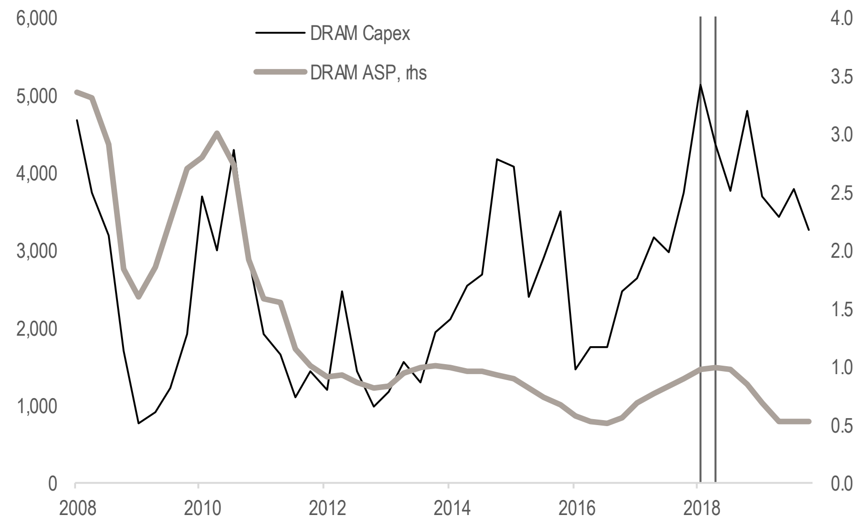
Name	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Applied Mats.	17.8	76%	-9%	9.9	97%	3.8	1.0	53.0	14.9	9.2	2.1	Outperform
Ase Technology Holding	12.8	55%	-28%	1.7	-9%	na	3.2	64.6	9.0	3.3	1.7	Outperform
Asml Holding	39.0	166%	26%	12.6	92%	1.4	0.7	0.7	6.0	2.9	2.3	Outperform
Broadcom	16.1	69%	-13%	6.6	18%	5.9	3.1	2.4	3.6	1.7	1.9	Outperform
Intel	11.3	48%	-34%	2.9	-12%	8.3	2.5	150.0	0.7	0.3	3.1	Outperform
Kla	21.1	90%	14%	15.4	37%	na	1.3	76.9	8.7	4.8	2.3	Outperform
Lam Research	21.3	91%	17%	14.1	218%	3.8	1.0	19.9	8.1	5.0	2.0	Outperform
Micron Technology	16.5	70%	-35%	2.1	9%	-0.3	0.0	159.8	-35.4	-2.8	2.0	Outperform
Nanya Technology	23.2	99%	-51%	1.8	-74%	na	1.8	10.4	-13.6	-1.0	1.8	Outperform
Novatek Microels.	15.0	64%	-16%	5.8	55%	na	4.4	73.2	14.4	6.3	1.7	Outperform
Powertech Technology	10.3	44%	-29%	1.8	-7%	na	5.1	30.6	-5.1	-1.2	2.1	Outperform
Realtek Semicon.	19.5	83%	-8%	7.1	118%	na	3.4	5.7	4.4	7.4	2.0	Outperform
Rohm	33.5	143%	-12%	1.3	9%	3.6	1.6	46.9	46.8	3.1	2.4	Outperform
Stmicroelectronics	27.5	117%	-2%	4.8	103%	1.7	0.5	24.1	20.1	4.0	2.1	Outperform
Texas Instruments	28.8	123%	6%	17.4	93%	3.3	2.2	1.3	6.2	4.7	2.5	Outperform
United Micro Eltn.	22.5	96%	3%	2.7	159%	na	2.5	11.7	33.3	1.8	2.3	Outperform
Dialog Semicon.	16.7	71%	-21%	2.1	-40%	4.2	0.0	34.8	12.5	6.9	2.2	Outperform
Daqo New Energy Adr 1:25	11.8	50%	-57%	4.9	231%	na	0.0	25.9	-6.3	0.2	1.9	Outperform
Radiant Opto-Electronics	9.1	39%	-33%	2.0	-16%	na	7.1	41.2	7.8	8.4	1.8	Outperform
Seoul Semiconductor	19.3	82%	-43%	1.7	-43%	na	0.9	4.0	3.9	4.5	1.8	Outperform
Chipbond Tech.	10.6	45%	-32%	1.5	-21%	na	5.4	41.4	4.2	5.4	2.3	Outperform
Chipmos Technologies	9.3	40%	-35%	1.3	-28%	na	5.3	106.2	-3.1	1.5	2.3	Outperform
Parade Technologies	20.5	87%	-5%	7.4	35%	na	2.0	34.7	7.8	5.2	1.7	Outperform
Will Semiconductor 'A'	54.6	233%	-29%	22.7	54%	na	0.2	98.0	5.5	4.0	1.6	Outperform
Amkor Tech.	11.7	50%	-39%	1.9	12%	na	0.0	95.3	23.5	3.8	3.3	Outperform
Advantest	28.3	120%	-25%	6.4	105%	0.8	0.9	-32.8	-6.5	-2.1	1.9	Underperform
Disco	31.7	135%	18%	5.2	64%	1.1	1.3	-20.3	4.7	5.5	2.6	Underperform
Infineon Technologies	28.6	122%	11%	4.3	24%	1.6	0.8	-11.5	11.2	2.8	2.2	Underperform
Semicon.Mnfg.Intl.	65.4	279%	-2%	2.4	70%	-34.3	0.0	-29.0	36.0	4.1	3.1	Underperform
Gcl-Poly Energy Holdings	-121.3	nm	na	0.7	-56%	na	0.0	-105.3	nm	-7.7	3.1	Underperform
Meyer Burger Tech	-16.4	nm	na	2.5	15%	-8.4	0.0	-26.8	nm	-32.4	2.7	Underperform
Ferrotec Holdings	13.5	57%	-33%	1.1	-1%	na	1.7	-141.9	-45.0	3.9	3.0	Underperform
Formosa Sumco Technology	23.2	99%	-6%	2.8	3%	na	2.6	-22.5	-2.3	-0.8	3.0	Underperform
Jcet Group 'A'	63.8	272%	22%	5.6	51%	na	0.2	-41.0	47.0	2.0	2.4	Underperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

We do like the memory market

Our head of global tech research, John Pitzer, would highlight that for the first time we have seen memory capex to sales peak prior to prices peaking, showing a very well disciplined cycle. The average selling price (ASP) for DRAM peaked in Q3/Q4 2018, whereas DRAM capex had already peaked in Q2 2018.

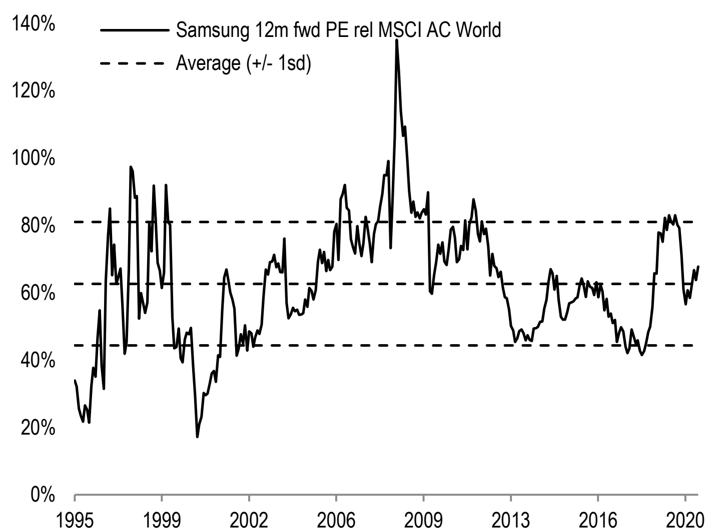
Figure 547: DRAM capex peaked prior to the cyclical peak in DRAM ASPs



Source: US semis research

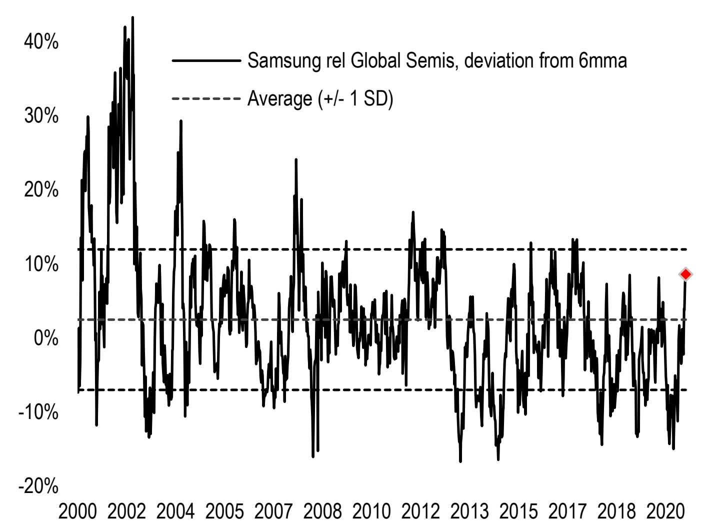
We particularly like Samsung Electronics. It controls c44% of the DRAM market (which is now a three-player market) and 21% of the global smartphone market. For all of this, its FCF yield is c5.4% for 2021E and it distributes about 40% of its free cash flow. It also has exposure to telecom equipment and as above foundries.

Figure 548: Samsung's 12-month fwd PE has de-rated relative to the market



Source: Refinitiv, Credit Suisse research

Figure 549: Samsung looks oversold relative to global semis



Source: Refinitiv, Credit Suisse research

We also believe there is a strong case to be overweight natural monopolies such as TSMC and ASML. Credit Suisse's analyst upgraded TSMC to Outperform earlier this year with view that Intel's manufacturing difficulties will create opportunities for TSMC (TSMC - Intel delay adds more optionality in CPUs, 27 July).

Telecom equipment: overweight

We like this sector for the following reasons:

A beneficiary from increased spending

The COVID-19 pandemic and accompanying lockdowns imposed around the world have highlighted that the ability to work from home has become critical to economic activity. For example, Jonathan Dingel and Brent Neiman of the University of Chicago's Becker Friedman Institute estimate that 37% of jobs in the US can be done from home (June 2020). Moreover, there is a very strong social benefit angle. High-speed internet connections mean that children can be educated and entertained at home.

We thus believe that fibre and 5G internet connectivity is no longer a luxury, but a necessity similar to water, sewage or electricity.

We believe this will result in governments requiring a more complete and speedier 5G roll-over and fibre roll out. This will likely be mandated and we suspect that the regulatory regime for telecoms operators will be made more generous (to allow them make a CFROI above their discount rate – something they have not done in a decade). There are examples of this in our telecom section (where we upgrade to overweight because of this easier regime).

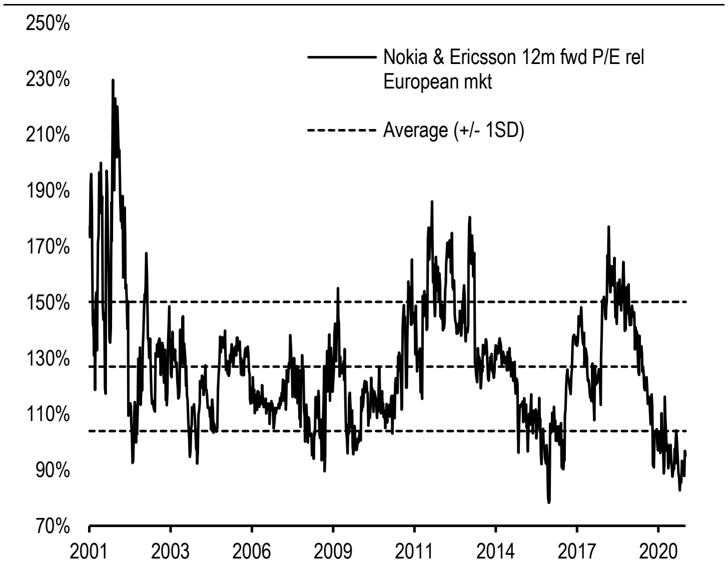
So far, 5G is in its infancy. IDC highlights that only 13% of phones shipped in 1H 2020 were 5G enabled. Apple has only just launched its 5G iPhone 12.

Credit Suisse analysts forecast 1%/4%/2% growth globally in wireless capex for 2020/21/22, with a slower but longer 5G cycle ahead (see 5G - Slower but longer growth ahead, still early days). We can see that the capex to sales for telecoms operators globally is depressed versus their historical norm.

Valuations remain attractive

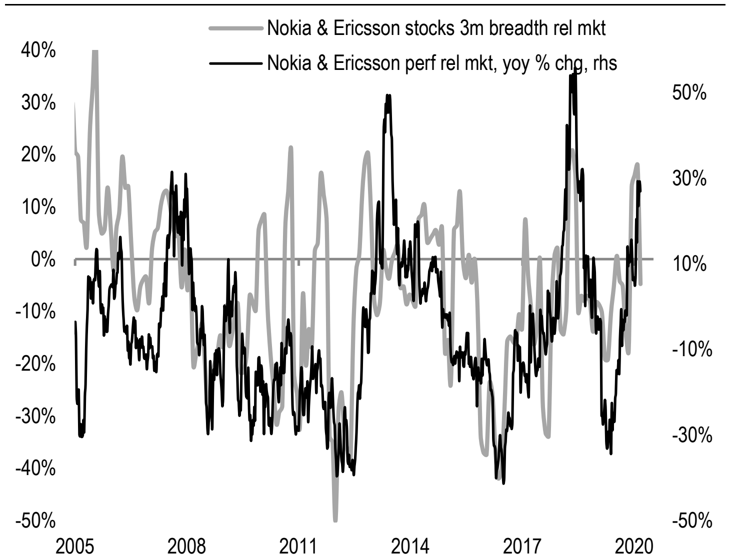
We find the forward P/E of the telecom equipment names is attractive relative to the market. However, we would also note that, similar to other areas of tech, earnings revisions have fallen and this is not reflected by performance.

Figure 550: Telecom equipment companies look cheap on 12m fwd P/E relative to the market



Source: Refinitiv, Credit Suisse research

Figure 551: Telecom equipment companies' relative earnings revisions



Source: Refinitiv, Credit Suisse research

Chinese companies blocked from providing 5G infrastructure in the US, parts of Europe and elsewhere

Huawei and ZTE, which make up c35% of the global market, have effectively been excluded. A large number of countries and telecom companies have excluded Huawei from their 5G networks, including Australia, Japan, the UK, India and the US. Also individual telecoms companies, including Canada Telcos, Orange France, TIM Italy, TEFD Germany and others have excluded or switched from Huawei providing 5G.

CS analysts rate Ericsson Outperform. Neutral-rated Prysmian also benefits from its exposure to fibre (25% of 2019 EBITDA was from fibre and it would also benefit from increased spending on fibre and 5G). SEC has a very small market share but has won some important contracts recently ($6.6bn Verizon 5G deal, FT, 6 September) and remains cheap, in our opinion.

We show the 5G and fibre exposed names below:

Figure 552: Below we show a screen of telecom equipment companies exposed to 5G and fibre

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Exposed to 5G												
Ericsson B	17.1	68%	-31%	4.2	50%	4.5	1.6	77.6	8.3	-1.1	2.0	Outperform
Intel	11.3	48%	-34%	2.9	-12%	8.3	2.5	150.0	0.7	0.3	3.1	Outperform
Analog Devices	25.1	107%	-3%	4.4	8%	3.9	1.6	-26.7	2.4	4.5	1.9	Outperform
Keysight Technologies	21.8	87%	-3%	7.7	35%	3.8	0.0	124.8	11.9	6.3	1.7	Outperform
Anritsu	19.8	79%	-35%	3.4	23%	5.9	1.4	6.5	6.1	-0.9	2.0	Outperform
Samsung Electronics	13.4	53%	8%	1.9	12%	5.8	2.1	142.2	13.0	2.5	1.8	Outperform
Exposed to Fibre												
Nokia	15.4	61%	-58%	1.2	-48%	5.8	0.0	111.1	-8.0	-2.8	2.3	Neutral
Prysmian	20.1	93%	13%	3.0	-18%	4.1	1.5	-39.4	-0.3	-1.0	2.3	Neutral

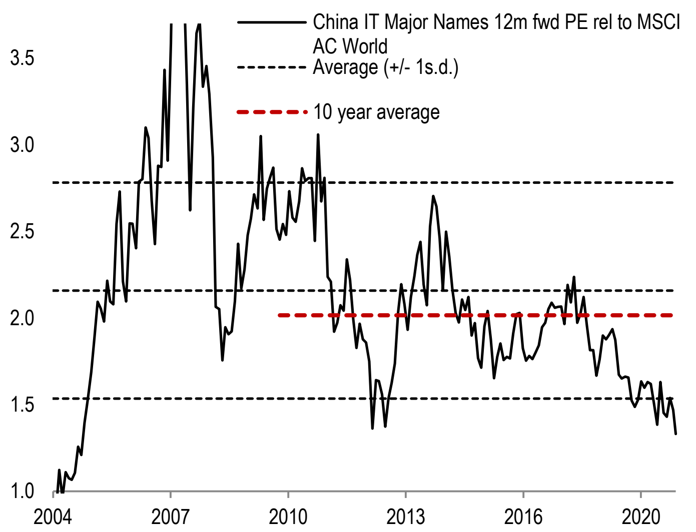
Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

China tech: overweight

We continue to be positive on China internet/tech names. PE relatives for China major tech names (Alibaba, Baidu, JD and Tencent) are at the bottom end of their historical range.

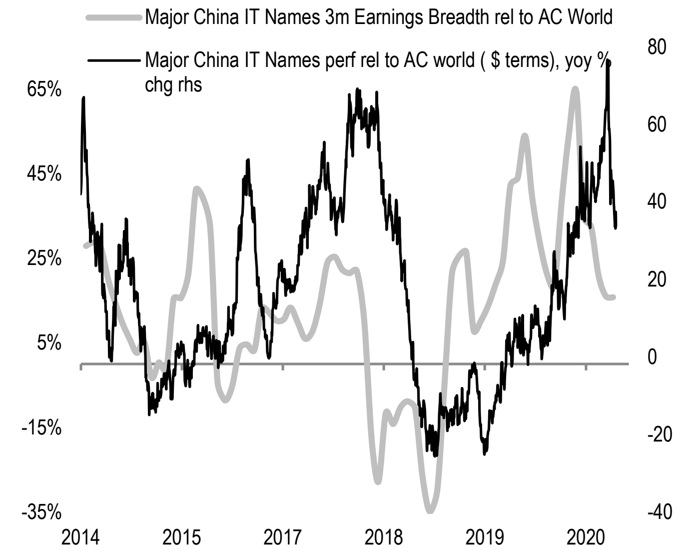
Earnings momentum has fallen recently but is still better than global earnings revisions.

Figure 553: China tech does not look expensive relative to the Chinese market…



Source: Refinitiv, Credit Suisse research

Figure 554: …and performance is not far off earnings revisions as revisions show signs of troughing



Source: Refinitiv, Credit Suisse research

We continue to see the potential for an asset bubble in Chinese equities for the following reasons:

- We continue to believe that the high household saving ratio (at c.38%) is unlikely to be invested into: (i) overseas assets (because of a stronger RmB and secure capital controls), ii) government bonds (as the real bond yield is 2.8%), or (iii) housing, because housing turnover implies flat prices. Hence, we think it is likely to go into domestic equities.
- Chinese excess liquidity has picked up.

For more details, see 2021 Research Outlook: Equities, Regions and Macro.

Figure 555: Chinese excess liquidity is picking up, which helps Chinese stocks' performance

Source: Refinitiv, Credit Suisse research

Clearly there has been a much bigger regulatory risk recently but we believe this is reflected in the price. Our China internet analysts think that while the antitrust regulation could have an impact on investor sentiment in the near term, it will have limited operational and financial impacts for the big platform companies, as these companies have strong fundamentals (i.e. better service quality, large traffic, superior ecosystem, etc); see New Anti-trust regulation, likely limited operational impact but overhang into 1H21, 12 November. Chinese tech names have the advantage of the 'Great Firewall'.

We would note that Tencent WeChat has been regulated as a bank and that Pony Ma has kept himself in the limelight.

Figure 556: Chinese tech stocks with exposure to the Chinese consumer

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Alibaba Group Holding Adr	22.6	61%	-39%	6.7	-17%	4.5	0.0	na	13.8	4.0	1.6	Outperform
Jd Com Adr 1:2	37.6	102%	-60%	10.6	27%	3.4	0.0	22.1	2.9	1.5	1.7	Outperform
Tencent Holdings	31.2	na	-24%	11.6	-1%	2.6	0.3	68.0	3.3	0.6	1.7	Outperform
Bilibili Adr 1:1	-89.5	na	na	22.0	135%	na	0.0	-86.9	nm	6.6	1.7	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

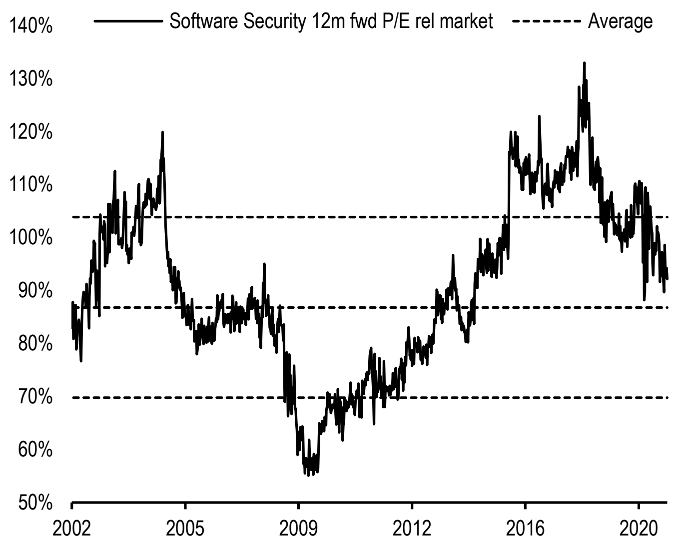
Cyber security

Cyber security is an area of increasing importance for corporates, the internet of things, the usage and storage of personal information, digital intellectual property, and an increasingly remote workforce. Prominent incidents of security breaches have occurred in a diverse range of industries, with a significant business impact. According to RiskIQ, the San Francisco-based cyber security company, cyber-criminals cost the global economy $2.9m every minute last year, for a total cost of $1.5trn. According to Accenture, the global economy will lose $5.2trn over the next five years because of cybercrime, with insurers, banks and capital markets facing a $700bn hit.

The global cyber security market is estimated to grow $270bn by 2026 (of which about $210bn will be spent on external services), according to Forbes and the Australian Cyber Security Growth Network. This compares to a market cap of the listed sector of c.$250bn (please note this does not include non-listed businesses such as Kaspersky Lab). That means they are trading at 0.9x 2026E revenue, and a 0.16x cost of crime ($1.5trn).

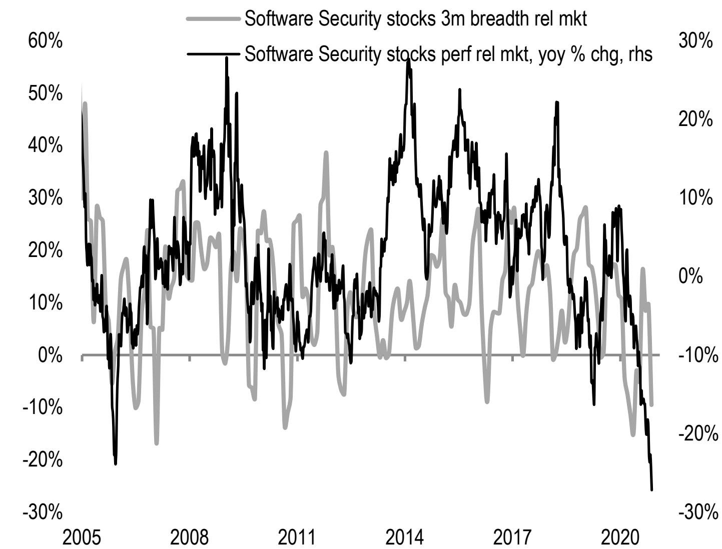
The sector is also only trading in line with its norm on 12m forward P/E relative to the market, and the performance is already pricing in the poor earnings revisions.

Figure 557: Software security companies are neutral on PE



Source: Refinitiv, Credit Suisse research

Figure 558: Relative earnings revisions



Source: Refinitiv, Credit Suisse research

The screen below shows a selection of cyber security companies that are covered by CS analysts. Clearly, the dilemma is that the cloud security names are on very high multiples.

Figure 559: Software security and defence stocks

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Check Point	16.9	49%	-31%	4.8	0%	6.5	0.0	45.7	5.9	2.2	2.8	Neutral
Nortonlifelock	13.1	38%	13%	1,166.1	9320%	4.8	2.6	-32.0	25.3	2.4	2.4	Neutral
Palo Alto Networks	42.6	125%	-54%	22.6	11%	3.8	0.0	-54.7	-1.1	2.0	1.9	Neutral
Splunk	466.0	1364%	258%	15.3	17%	-1.2	0.0	-76.3	nm	-4.4	2.1	Outperform
Zscaler	386.4	1131%	175%	36.1	41%	0.2	0.0	na	-8.4	5.0	2.2	Neutral
Fortinet	31.9	93%	-48%	15.1	35%	4.4	0.0	52.2	15.0	2.7	2.4	Neutral
Crowdstrike Holdings A	653.0	1911%	365%	37.9	36%	0.4	0.0	-93.8	nm	6.0	1.9	Neutral
Ping Identity Holding	53.6	157%	-52%	2.3	-35%	1.0	0.0	-7.7	31.6	0.7	1.8	Outperform

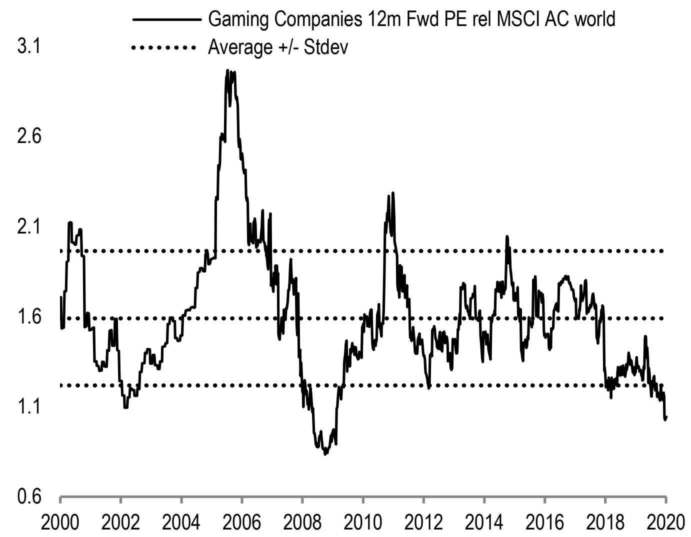
Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

Gaming: overweight

Gaming stocks have de-rated to be close to 12-year lows on P/E relatives. The gaming industry is expected to record a c.8% CAGR from 2020 to 2023, according to Newzoo, to reach revenues of around $200bn (for more details, see Newzoo Global Games Market Report 2020).

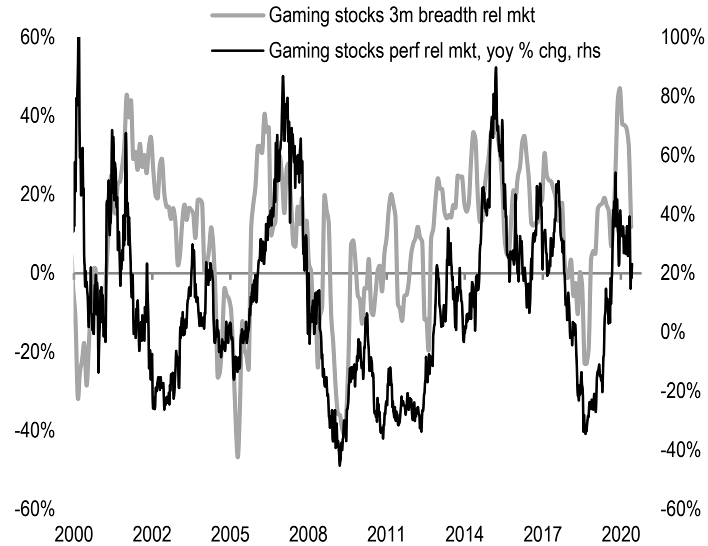
In contrast to many other parts of tech, the performance of gaming stocks has not decoupled from earnings revisions.

Figure 560: Gaming companies also look cheap relative to the market



Source: Refinitiv, Credit Suisse research

Figure 561: Relative earning revisions versus market performance



Source: Refinitiv, Credit Suisse research

Moreover, the content producers remain protected by high barriers to entry as it takes many years and significant investments to develop a blockbuster computer game (blockbuster games typically cost more than $100m to develop, with GTA V, for example, costing $250m to develop and market). Even Fortnite, which became a global phenomenon in a couple of months, had been in the making for half a decade and looked less than successful before the popular Battle Royale modus was added.

Games are increasingly sold digitally rather than physically. According to our analysts, the move to digital lowers piracy, reduces the impact of the second-hand market (physical CDs) and increases demand by reducing the sharing of games. Most importantly, though, it increases the economic share for the publisher by eliminating the retail share (and packaging cost) from the value chain. This increases gross and operating margin by c.20% (for more details, see Cloud busting: Content still king in gaming, 25 September).

Credit Suisse analyst Matthew Walker highlights that the entry of Google and other tech companies into the cloud gaming space may be negative for Sony and MSFT but could end up being positive for the game publishers. Traditionally Sony and MSFT take 30% publishing fees on every game sold for their platform, but with a new distribution platform entering the market, competition is likely to increase, which could reduce distribution fees. When EPIC started its own platform in the computer game space, incumbent Steam had to reduce its fees from 30% to 20%.

This also reduces the dependence of the game makers on any one platform company, as shown in the recent disagreement between EPIC and Google/Apple (which led to Fortnite being banned from their app stores).

The big issue as we see it is the degree to which earnings and revenues were bought forward by the lockdowns. Relative earnings revisions have rolled over (but not as much as performance).

Figure 562: Top picks among global game stocks

Name	P/E (12m fwd) Abs	P/E rel to Industry	P/E rel to mkt % above/below average	P/B Abs	P/B rel to mkt % above/below average	2020e, % FCY	2020e, % DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	2020e Momentum, % 3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Tencent Holdings	31.2	na	-24%	11.6	-1%	2.6	0.3	68.0	3.3	0.6	1.7	Outperform
Activision Blizzard	22.8	na	-14%	4.9	36%	4.2	0.5	78.1	5.3	3.7	2.0	Outperform
Frontier Developments	43.6	na	-33%	na	na	1.1	0.0	-41.3	16.2	8.0	1.7	Outperform
Sea 'A' Spn.Adr 1:1	-119.5	na	na	-280.1	na	0.0	0.0	-101.1	nm	8.2	2.0	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

Apple: concerns

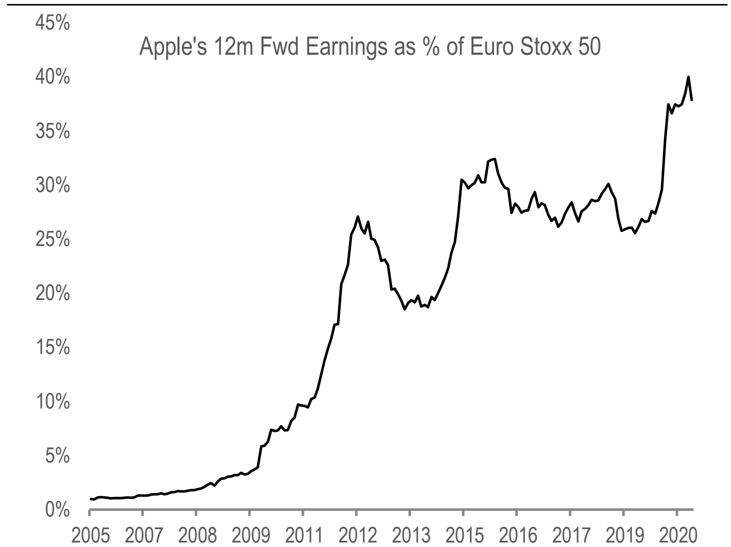
While single stocks are usually not our specialty, Neutral-rated Apple's market cap is now bigger than many of the sectors and regions we look at, which we think justifies a comment from our side.

Apple's market cap is 65% of the Euro Stoxx 50 (38% of Euro Stoxx 50 earnings). Such a large market cap clearly raises questions about Apple's addressable market share.

Figure 563: Apple's market cap is 65% of the Euro Stoxx 50

Source: Refinitiv, Credit Suisse research

Figure 564: Apple's earnings are 38% of that of the Euro Stoxx 50



Source: Refinitiv, Credit Suisse research

The vast majority of Apple's end market is the consumer. With a global population of around 7.5bn, a company with an EV of $2trn is essentially capitalised at $267 per person.

If we just look at individuals classified as high income according to the World Bank (annual income exceeding $12,000), that brings the size of Apple's addressable market down to around 1.25bn people, or a market cap of $1,600 per head.

To generate this level of value per person, and assuming a 20% margin, and a terminal multiple of 15x (which might be generous), spend per addressable population would need to be $533. To us this appears ambitious, even if 15-20% of Apple's revenue are due to corporate customers.

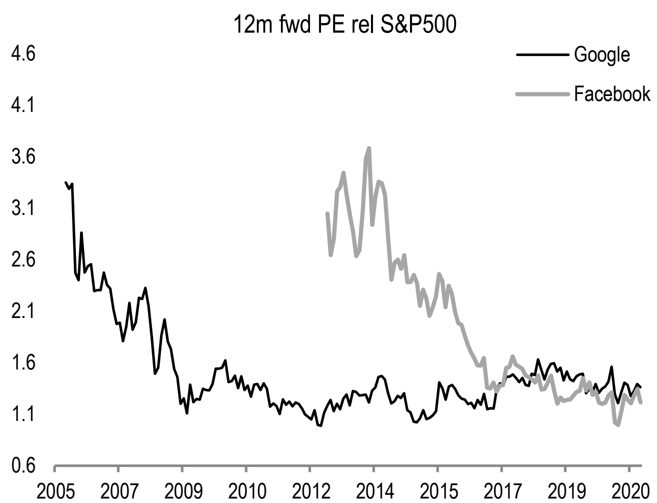
We also note the risk that the ongoing DoJ investigation may stop Google's $12bn payment a year to Apple (which is c.22% of its FY2020 service revenues).

Last, we would flag a comment from our HOLT analyst, John Talbott, who notes the market is embedding 8% sales growth, margins improving to 32% and a decline in asset turns longer term. The perception of AAPL has shifted significantly over the past few years, moving from a product-driven hardware company to one with a stable CFROI profile (i.e., software/service focused) and steady growth. Execution towards this new perception is critical in the years ahead. For John's most recent note, see Apple (AAPL) in HOLT: Valuation Elevated vs. History; R&D Efficiency Slipping.

Online advertisers: overweight

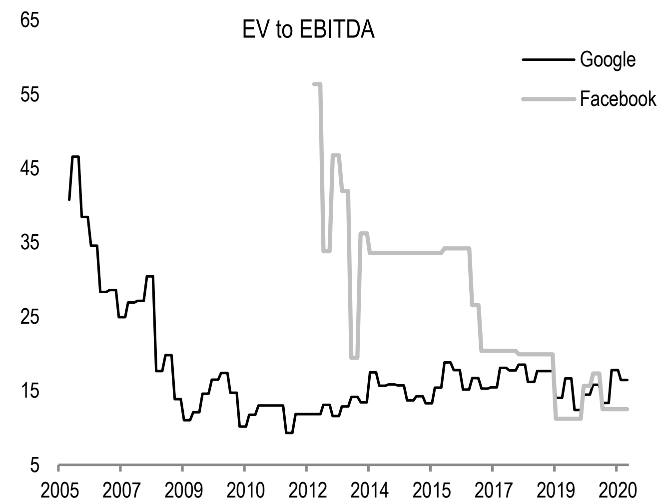
We would note that that the valuation of Alphabet and Facebook has come down significantly and the stocks are no longer expensive relative to the market on EV/EBITDA and 12m forward P/E.

Figure 565: Facebook and Google 12-month fwd PE rel S&P500



Source: Refinitiv, Credit Suisse research

Figure 566: Facebook and google EV to EBITDA



Source: Refinitiv, Credit Suisse research

In addition, their FCF yield (adj. for SBC) is only just below that of the market for 2021.

Figure 567: Alphabet and Facebook are not expensive relative to the market

Companies/Market	EV/EBITDA		PE		FCF Yield	
	2020	2021	2020	2021	2020	2021
Alphabet	15.3	12.8	35.3	29.8	2.5%	3.4%
Facebook	16.7	14.6	30.8	27.4	2.9%	3.5%
US	15.6	13.6	26.8	22.4	3.1%	3.8%

Source: Credit Suisse research

In our opinion, advertising is clearly likely to benefit from a cyclical recovery, with some areas of consumer staples cutting ad spend significantly during the pandemic (e.g. Brown Foreman cut its ad spend by 33%).

The question remains whether we will see a continued migration to online. Around 83% of Alphabet's revenue still comes from advertising. 53% of ad spend is online in the US. We note with interest that throughout the pandemic, L'Oréal shifted its advertising and marketing spending online, taking it to about 70% of the total from 50%before the pandemic (FT, 15 June).

We acknowledge that Facebook and Alphabet are at the center of regulatory attention. Biden has indicated he might revoke Section 230 of the Communications Decency Act (which holds that no provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider). Clearly there are other regulatory risks (The EU Digital Services Act as highlighted already, the FTC's antitrust case against Facebook and the DoJ investigation into Google paying to have its app pre-installed).

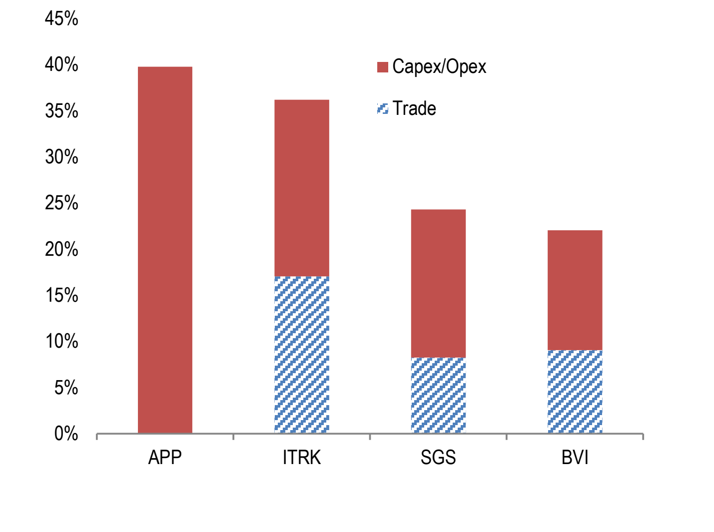
However, we think these issues are generally well understood by the market and note these stocks also have optionality on new growth opportunities, e.g. India or Libra for Facebook or WayMo for Google.

Testing companies: small overweight

We have a small overweight for the following reasons:

- About a third of their exposure is from commodities which we think rise a little.
- There is a strong short term bounce back in global trade as shown below.

Figure 568: Proportion of revenue from oil & gas for major testing companies



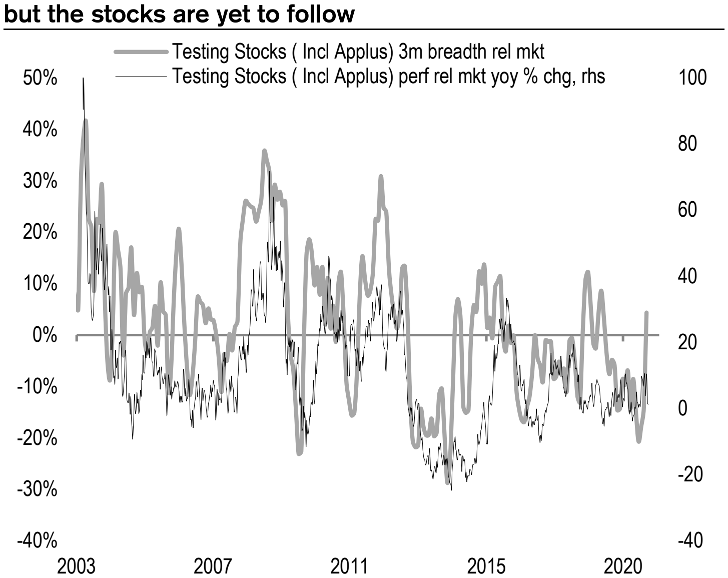
Source: Refinitiv, Credit Suisse research

Figure 569: Growth of global trade volume should pick up as global IP recovers

Source: Refinitiv, Credit Suisse research

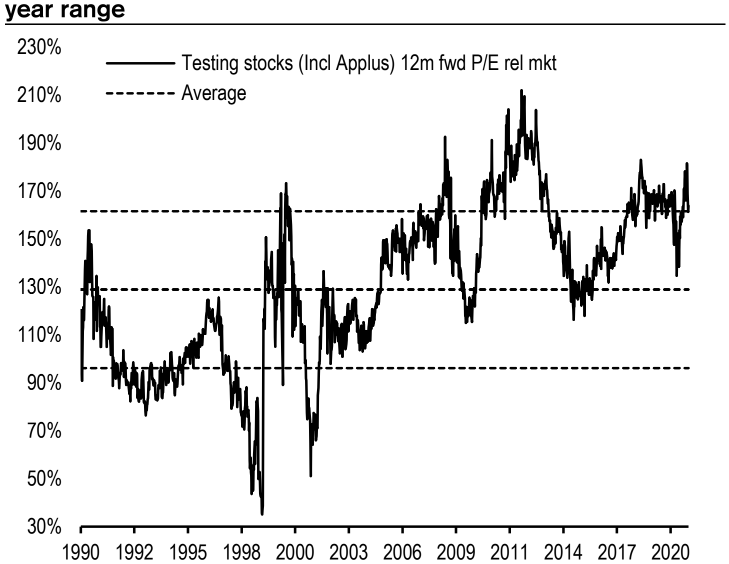
- The more complex supply chains and sourcing become, the more important testing companies become.
- Testing companies can also turn themselves into testing for environmental criteria (i.e. to make sure that recycled products are being used and authenticate the green claims that producers make).
- Relative earnings revisions have turned strongly positive and performance has yet to follow; valuations on 12m fwd PE remain within their 10 year range.

Figure 570: Earnings revisions of testing stocks have improved, but the stocks are yet to follow



Source: Refinitiv, Credit Suisse research

Figure 571: Testing companies are in the middle of their 10-year range



Source: Refinitiv, Credit Suisse research

We show below a screen of the Testing stocks under coverage; our analysts prefer Bureau Veritas based on valuation.

Figure 572: The testing stocks under coverage

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Bureau Veritas	26.5	92%	-5%	7.9	-22%	4.1	2.0	-50.4	-3.5	0.7	2.2	Outperform
Intertek Group	29.9	104%	-1%	9.6	-13%	2.6	1.8	-12.5	-0.8	-0.4	3.1	Outperform
Sgs 'N'	30.5	106%	-6%	12.7	13%	3.4	3.0	-23.3	4.4	-0.1	2.9	Neutral
Applus Servicios	14.6	51%	-24%	1.6	-38%	8.5	0.8	-65.1	1.5	-1.0	1.8	Outperform
Eurofins Scien.	24.9	84%	-32%	6.1	-31%	4.4	0.5	10.9	16.2	4.8	2.4	Outperform

Source: IBES, MSCI, Refinitiv, HOLT, Credit Suisse research

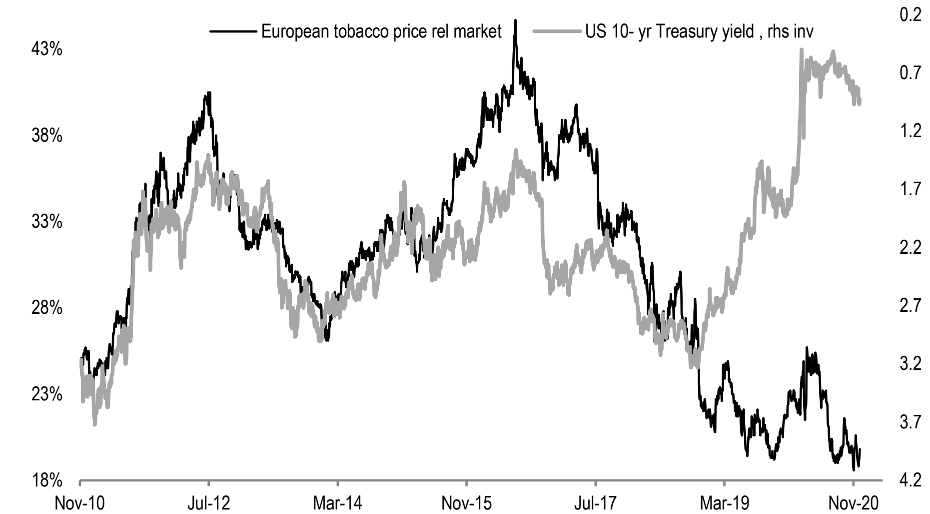
Tobacco: small overweight

We stay a small overweight of tobacco despite it: i) not fitting into our macro view; ii) being ESG challenged; and iii) being disrupted.

This is mainly for valuation reasons.

- It is a sector that 'forgot' the bond-proxy status it used to have.

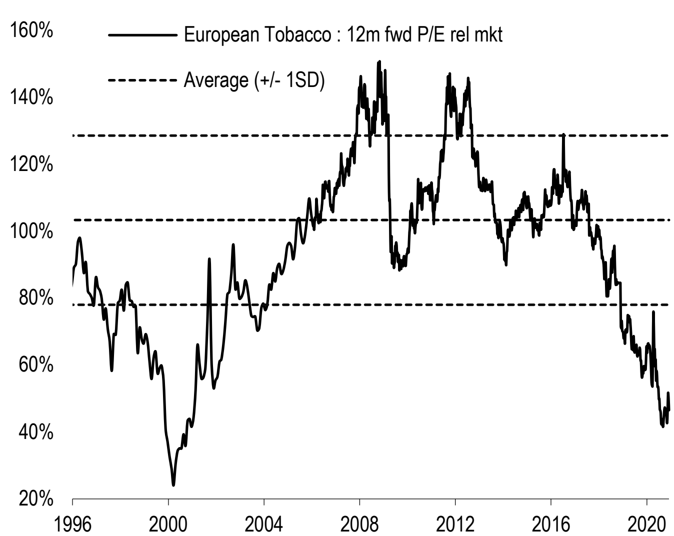
Figure 573: Tobacco has completely ignored its bond-proxy status



Source: Refinitiv, Credit Suisse research

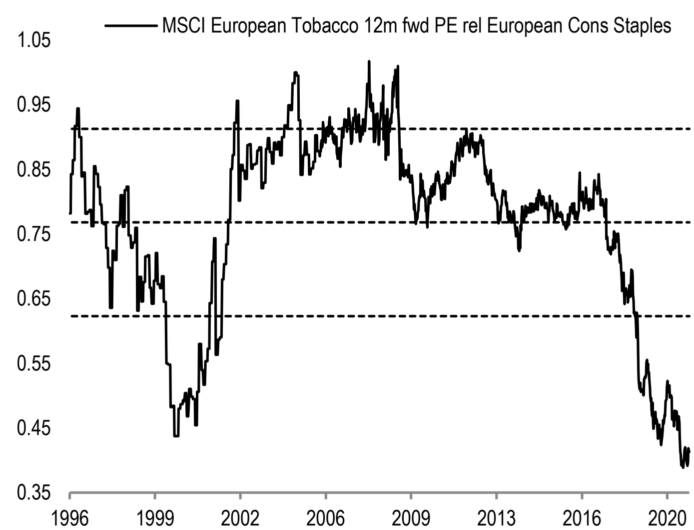
- The sector has become extremely cheap relative to the rest of the staples and the market.

Figure 574: The sector trades below the market on 12m fwd P/E and now at multi-year relative lows



Source: Refinitiv, Credit Suisse research

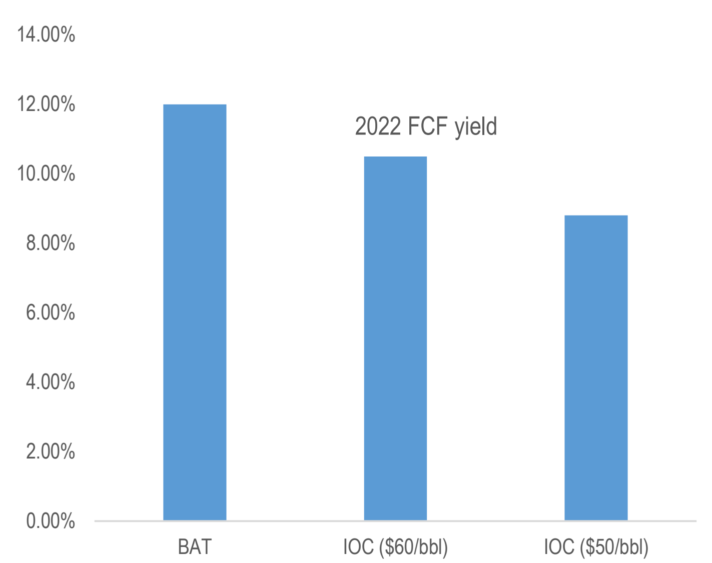
Figure 575: The P/E of tobacco relative to consumer staples looks very cheap now



Source: Refinitiv, Credit Suisse research

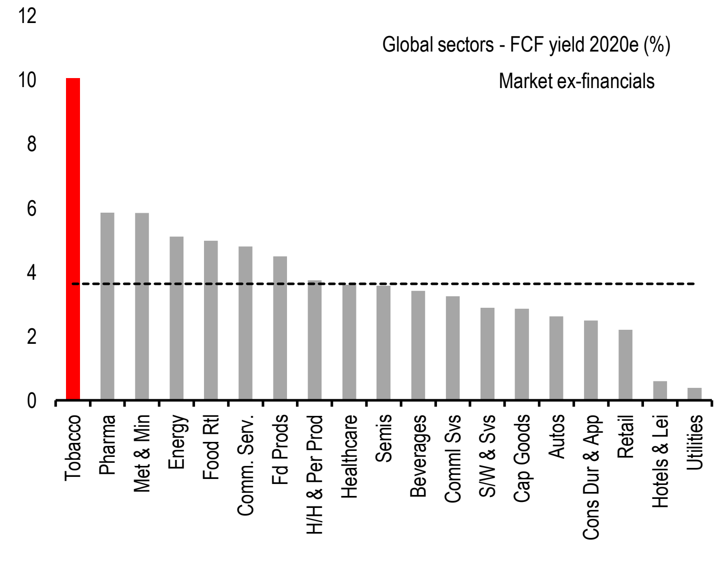
- The FCF yield is higher than other highly disrupted and ESG-challenged sectors, such as oil (where the FCF yield is 10% on a $60pb oil price using 2022 numbers compared with 12% for BAT).

Figure 576: BAT offer attractive free cash flow yields even compared with other disrupted sectors such as IOCs



Source: Credit Suisse estimates

Figure 577: 2020 Global L2 sector FCF yield

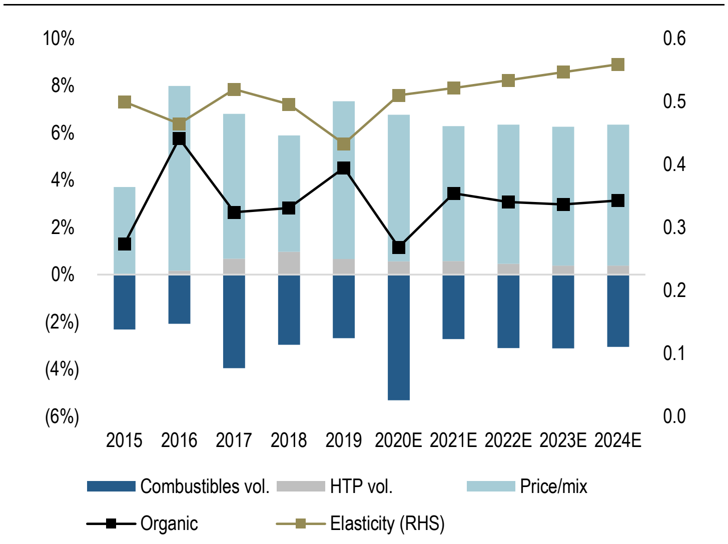


Source: Refinitiv, Credit Suisse research

Revenue and earnings revisions

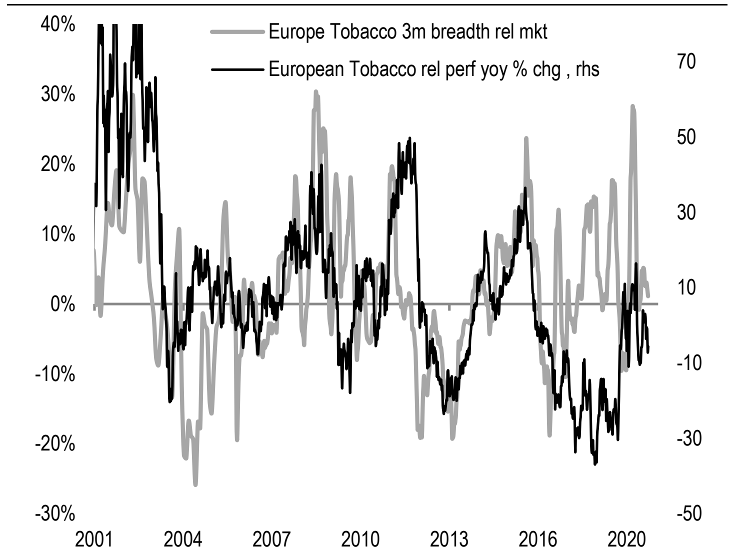
Extraordinarily, both revenue trends and earnings revisions have been reasonable, but the sector performance has decoupled from these in the recent years.

Figure 578: Revenue trends have been and are expected to remain stable



Source: Credit Suisse European Consumer Staples Research

Figure 579: Price performance versus earnings revisions relative to the market



Source: Refinitiv, Credit Suisse research

Structural advantage = by far the highest CFROI of any sector

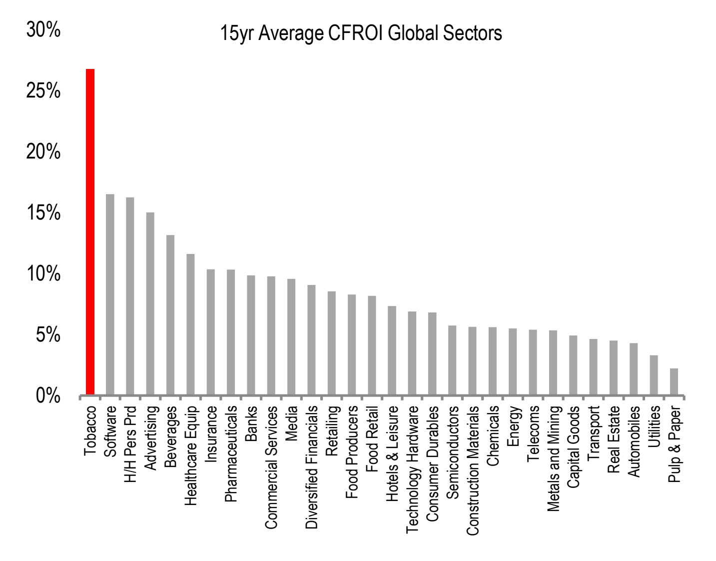
The sector also has some clear advantages: 97% of premium brands controlled by the top four companies, low Amazon risk (consumers want brands) and barriers to entry from advertising bans. As a result, it is in a position to sustain its high profitability (the sector has the highest CFROI of any sector).

The key issue is ESG and disruption

On disruption as above, we would highlight that earnings trends and overall revenue growth have been little altered in spite of the disruption and we believe some of the disruptive risks are exaggerated:

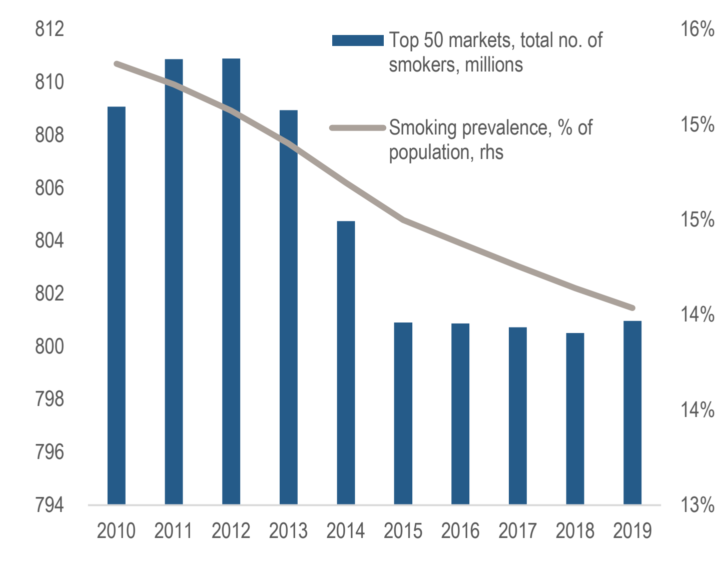
- **Fewer smokers:** Smoking prevalence appears to continue to fall, although the pace of decline appears not to have accelerated.

Figure 580: Tobacco companies have high profitability



Source: Credit Suisse HOLT

Figure 581: Total number of smokers in the top 50 markets have stabilised



Source: Credit Suisse European Consumer Staples research

- **Alternative products:** The problem with alternative products is that they were not initially owned by the traditional brands and they increased the price elasticity of demand.

  But the positive news for the brands is that the threat has diminished. Altria had to take a big writedown in its value of JUUL (to $4.2bn from the $12.8bn it paid in 2019; WSJ, 30 Jan) as the alternative products have been banned or more heavily regulated for health reasons.

  Moreover, CS analysts believe that conventional brands can compete effectively against e-cigarettes. To some extent, Big Tobacco has bought many of the disruptors (e.g. Altria now owns a 35% stake in JUUL, BAT owns Vuse).

  It does seem somewhat illogical to us that incumbents underperform as the next-generation products take off, then underperform again when some forms of the next-generation product have regulatory issues. More logically, we believe, the more issues there are with next-generation products, the more the brand value of the incumbents should benefit.

Overall, CS analysts expect substitution to drag volume down by c.90bps p.a., but as shown earlier, this could be compensated by price/mix.

- **The price elasticity of demand** in about 10% of global markets (e.g. Norway, France, Australia, the UK and Ireland) is now close to 1 (because tobacco prices have risen so much). At the same time, it is below 1 in around 90% of global markets – the price of a cigarette in the US and Japan is still around one-half and two-thirds lower, respectively, than in the UK.

CS analysts expect price revenue-weighted price elasticity for the global top 50 markets to remain well below 1x (at about 0.5x for 2022E), although increasing slightly across most markets; they explore these issues in more detail in Credit Suisse Global Tobacco Model, 13 Oct).

We show tobacco stocks under CS coverage below. BAT and Imperial are rated Outperform.

Figure 582: Tobacco stocks under coverage

Name	Net Debt to EBITDA 2020e	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2019e, % FCY	DY	HOLT Price, % change to best	2019e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
British American	3.36	7.90	78%	-60%	1.0	-88%	11.2	7.8	73.0	0.9	0.1	2.1	Outperform
Imperial Brands	2.73	5.87	58%	-62%	2.8	-52%	14.3	9.4	119.3	-4.9	-0.1	2.1	Outperform
Philip Morris Intl.	1.84	14.3	142%	-39%	-10.9	na	6.6	5.9	41.4	1.1	0.4	2.1	Neutral
Swedish Match	1.67	19.0	189%	-23%	-17.2	na	3.9	2.3	-21.0	3.2	1.6	2.2	Neutral

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse estimates

Benchmark

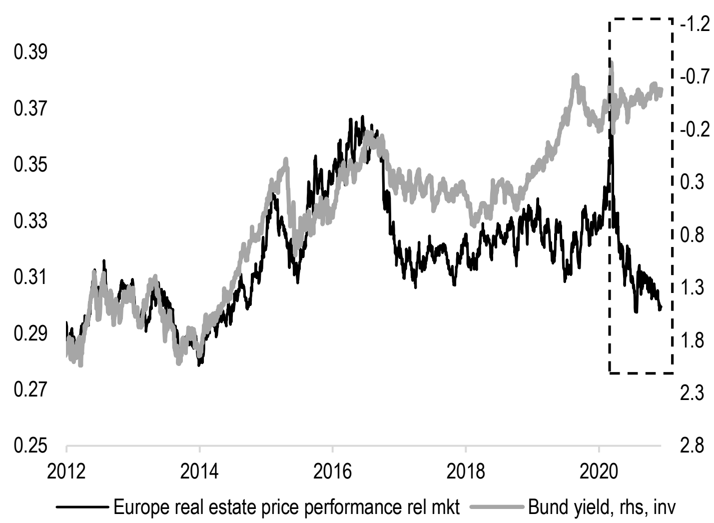
Real estate: benchmark but remain an overweight of German REITs

We simply make four observations on the overall real estate sector.

First, we think that office REITs and retail REITS remain very highly disrupted. The buy signal in our mind is when the stock market is discounting prices that are low enough to enable conversions of office or retail buildings into residential. We do not yet have enough visibility on this.

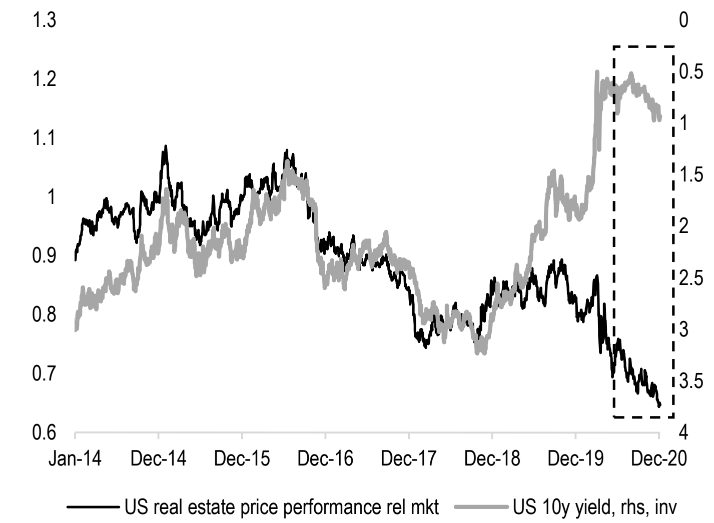
Second, there is a record gap between the fall in bond yields and the performance of real estate stocks (largely owing to the technical disruption and the work from home impact of the virus).

Figure 583: Real estate ordinarily outperforms with the fall in yields in Europe…



Source: Refinitiv, Credit Suisse research

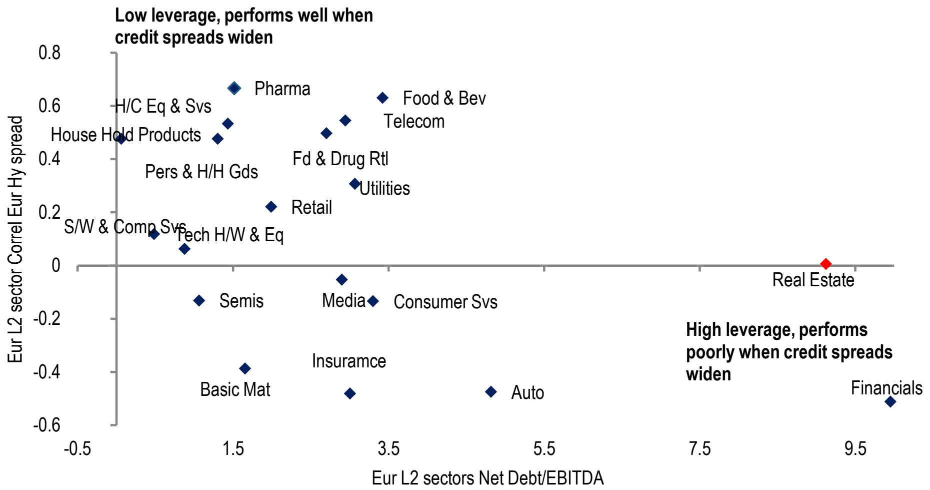
Figure 584: … and in the US



Source: Refinitiv, Credit Suisse research

Third, real estate is a sector with abnormally highly leverage and thus has historically outperformed when the cost of debt falls, but this was certainly not the case this time (because of disruption).

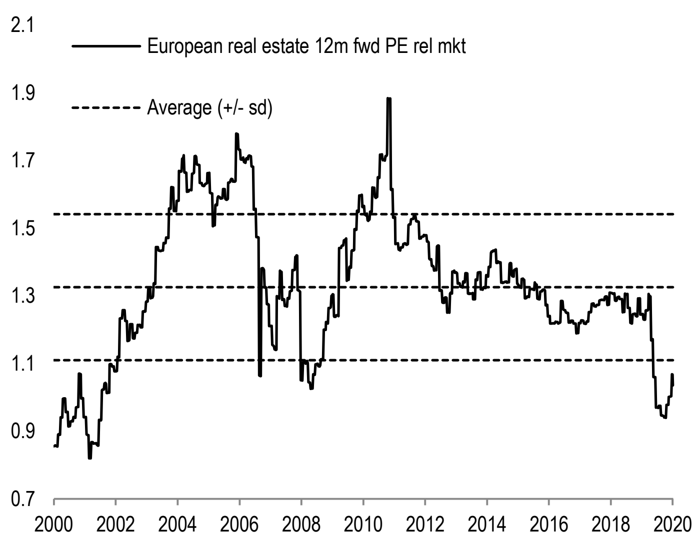
Figure 585: Real estate has abnormally high leverage and should benefit from a fall in spreads



Source: Refinitiv, Credit Suisse research

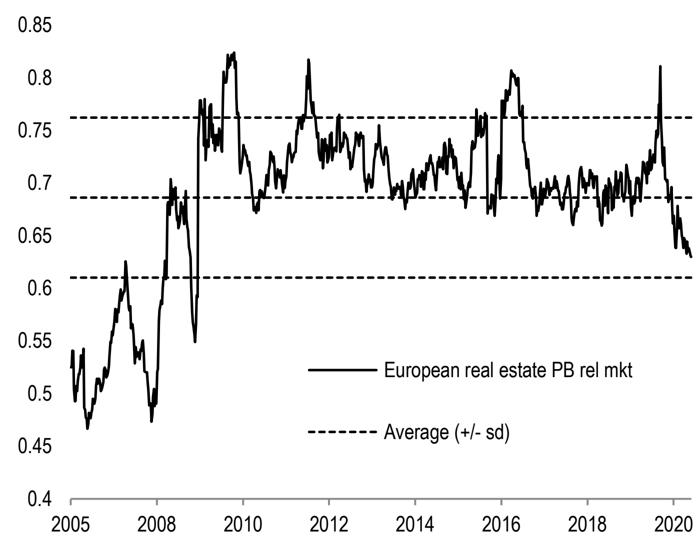
Fourth, valuations on 12m fwd PE relative to the market remain as cheap as they were at the peak of the GFC.

Figure 586: European real estate remains as cheap as its GFC trough on 12m fwd PE relative to the market…



Source: Refinitiv, Credit Suisse research

Figure 587: … whilst remaining reasonable on P/B relatives



Source: Refinitiv, Credit Suisse research

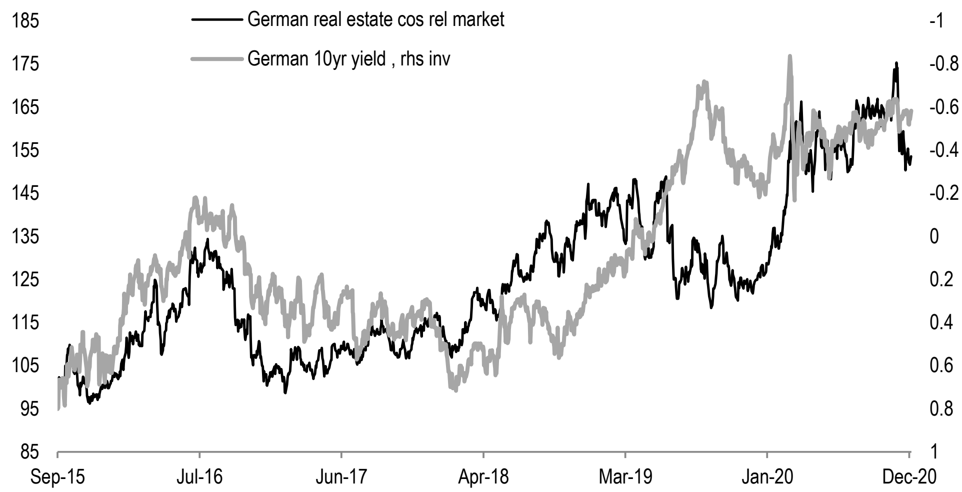
Given the issues of technical disruption, we are benchmark the sector but choose to be overweight our preferred area of German residential real estate. Moreover, to gain exposure to our optimism on house prices and the underestimation of housing starts, we are overweight UK and US homebuilders and some of the associated construction materials plays, which we outline in more detail in the construction section.

German residential real estate…maintain overweight

We have been overweight German residential real estate for the past 12 years.

We can see that these stocks tend to underperform if the Bund yield rises, but the fit has been pretty poor recently (and the sector is pricing in a Bund yield of c-30bp).

Figure 588: German residential real estate relative to the market versus the 10-year German Bund yield



Source: Refinitiv, Credit Suisse research

What we still like about German REITs

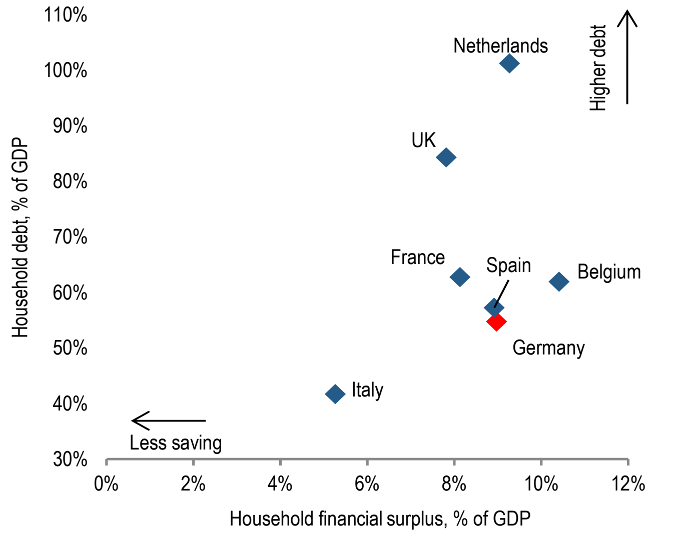
1. **The need for a hedge against low real yields**

We believe inflation expectations will rise, and real estate is one of the most sensitive sectors to rising inflation (we outline in more detail in the inflation section of this note why we think inflation is going to rise).

We believe that inflation will rise more than interest rates, and thus that real rates will fall. We see German inflation rising to 1.4% in 2021, and this will leave real rates near -2% (assuming little change in bund yields). This will likely force individuals into buying real assets (as an inflation hedge), and German investors are very underweight inflation hedges. In Germany, where household surplus is at 9% of GDP and household leverage is just c55% of GDP, people need a home for their cash when real rates are -1.9%, and German pension fund holdings of equities (an inflation hedge) are just 11%. Home ownership in Germany is just 45% compared to 65% in the US and thus, in theory, could rise considerably. In fact, the Bundesbank found in January 2020 that Germany has the second lowest share of home ownership among all OECD countries.

To some extent, this is a macro manifestation of German's huge current account surplus of 7.8% of GDP. Germany is now spending via the biggest easing of fiscal policy in the past 50 years and this in turn threatens to eventually raise inflation.

Figure 589: German households have a high savings ratio, and private sector leverage is low



Source: Refinitiv, Credit Suisse research

Figure 590: Germany's current account surplus

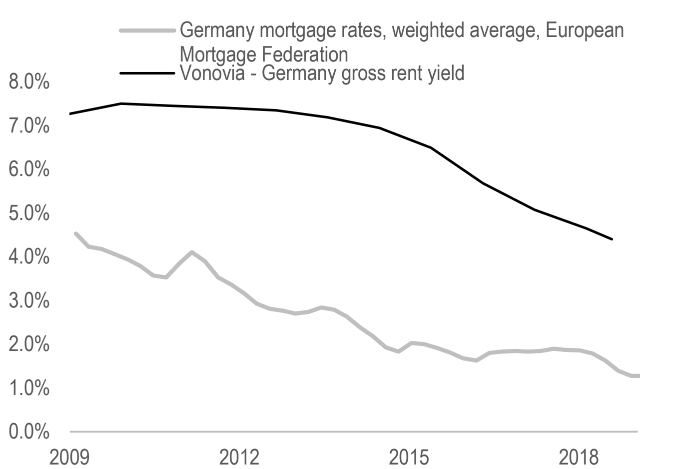
Source: Refinitiv, Credit Suisse research

To some extent, rising domestic asset prices are a reflection of having a currency that is undervalued in a fixed exchange rate mechanism (in much the same way as Hong Kong property has tended to rise in periods of a sharp easing of US monetary policy).

2. **Upside to real estate prices**

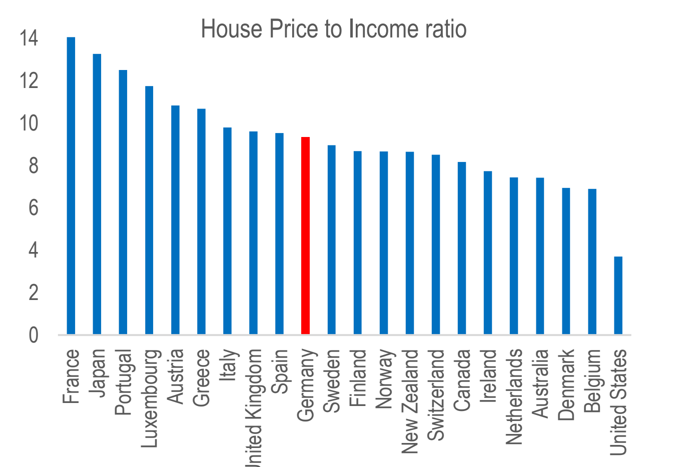
The key valuation support is a rental yield of around 3.3% in Berlin, rising to 4.4% if a market rate is allowed, compared with a negative German 10-year Bund yield, and a mortgage rate of often less than 1.4%. At 3.3% it is still nearly 65% cheaper in total funding costs to buy than rent. The house price to wage ratio in Germany is only at average levels, leaving space for house prices to rise.

Figure 591: German mortgage rates have been lower than rental yields



Source: Refinitiv, Credit Suisse research

Figure 592: Price to wage ratio at average levels



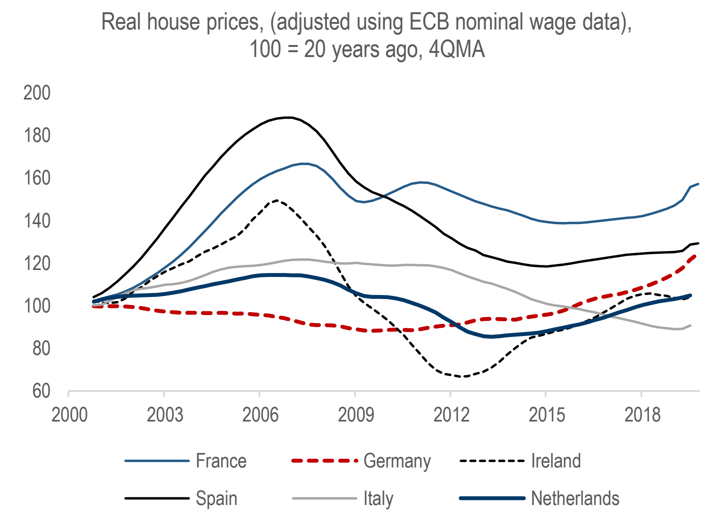
Source: Refinitiv, Credit Suisse research

- Real house prices in Germany (adjusted for wages) have not risen sharply and continue to lag other European countries.
- The German market seems to be undersupplied.

Figure 593: The German residential housing market seems undersupplied

Source: Refinitiv, Credit Suisse research

Figure 594: Real Germany house prices have lagged other European countries



Source: Refinitiv, Credit Suisse research

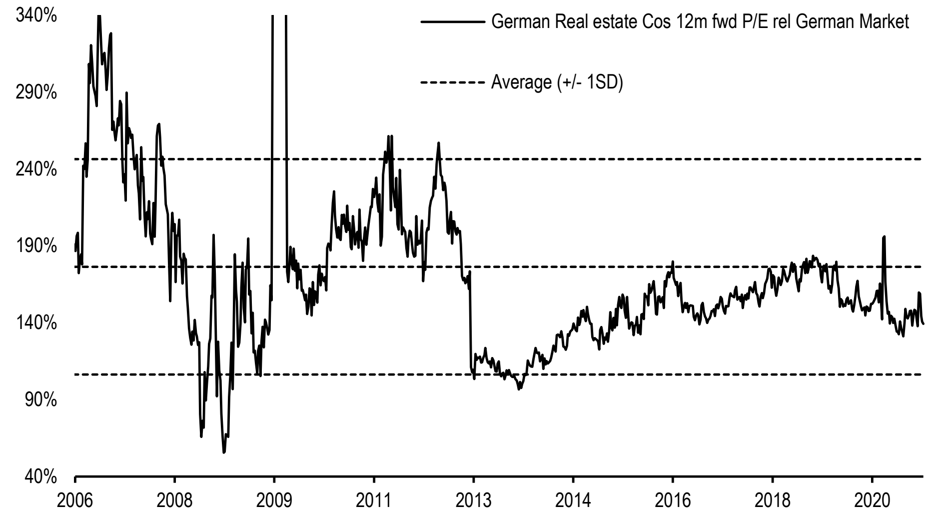
- A way to gain exposure to long-term wealth creations: the Bundesbank found a nearly 90% home ownership rate for the richest three deciles (see Bundesbank, Jan 14th) – thus as people get richer over time home ownership rises.
- German residential real estate is not technically disrupted, in our view. Indeed, modern technologies could aid easier building techniques.
- There is optionality on a European break-up.

If the euro were to ever break up, then German-based assets would likely appreciate, primarily driven by the implicit undervaluation of the Deutschemark vis-à-vis other European currencies.

- PE relatives are quite cheap.

Another way to gain exposure to the German housing market is through Instone Real Estate Group, recently initiated on with an Outperform rating by Credit Suisse's analyst (see Instone Real Estate Group: A value (home) opportunity - Initiating at Outperform, 09 December). She notes that Instone is a leading developer of residential real estate nationwide, predominantly in Germany's largest cities, and the attractive characteristics of the German housing market (undersupply of homes in key cities for Instone and an extremely stable housing market over the longer term).

Figure 595: German real estate is cheap on 12m P/E relative to German market



Source: Refinitiv, Credit Suisse research

What are the risks to our call?

One of the main risks is that real estate historically underperforms into a strong cyclical recovery and we are benchmark cyclicals; however, we view German REITs as part of our hedge.

The other risk has been the greater focus on rent controls as for example those imposed in Berlin. Even here, this only applies to old property (built prior to 2014) and from 2022, under current rules, rents can rise in line with inflation.

Figure 596: German Real Estate companies

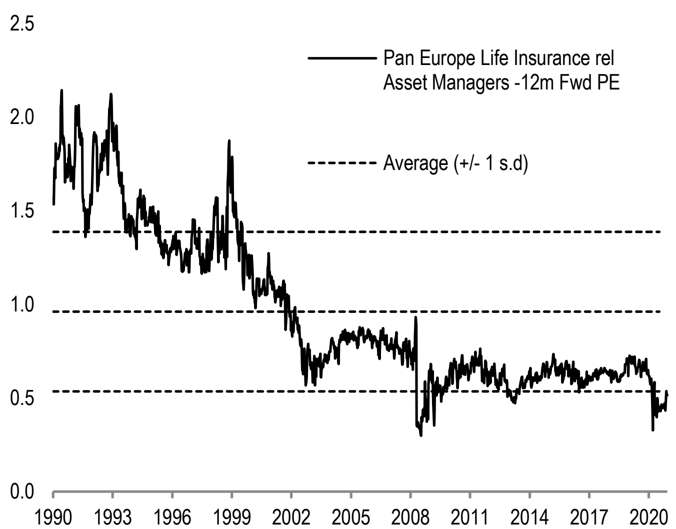
	-----P/E (12m fwd) ------			------ P/B -------		2017e, %		HOLT	2017e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Deutsche Wohnen Br.Shs.	27.2	na	-17%	1.2	-18%	3.7	2.3	16.5	-0.9	-2.3	2.3	Not Covered
Vonovia	21.7	na	-22%	1.6	-1%	0.3	3.0	-9.9	-8.0	-2.0	2.1	Not Covered
Adler Group	18.4	na	-41%	0.5	-56%	na	2.8	24.9	19.5	62.9	2.5	Not Covered
Grand City Properties	16.6	na	-7%	0.9	-35%	8.5	4.3	-2.1	-1.3	0.8	2.2	Not Covered
Leg Immobilien	21.2	na	-14%	1.4	-17%	-3.3	3.2	2.7	-1.0	-0.9	2.1	Not Covered
Instone Real Estate Group	11.2	na	-43%	2.6	-24%	0.6	1.1	-27.9	-43.8	-15.6	1.5	Outperform

Source: IBES, MSCI, Refinitiv, HOLT, Credit Suisse research

Life companies: benchmark

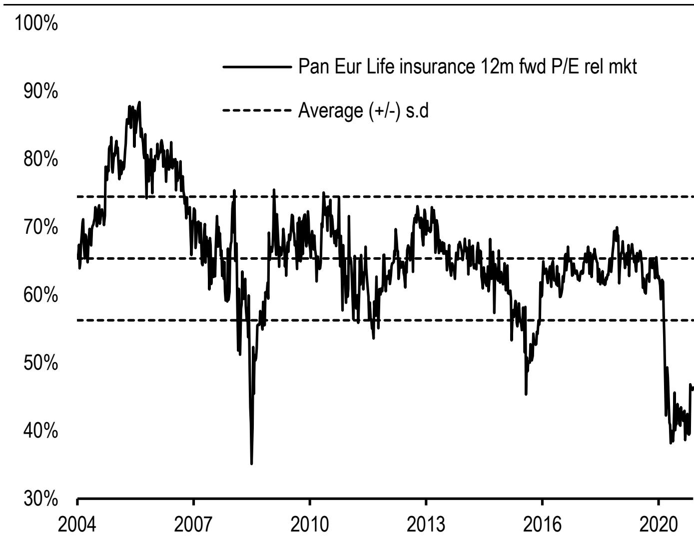
Life companies have de-rated very substantially versus both the market and asset managers (we view many life companies as asset managers).

Figure 597: Life companies look cheap relative to asset managers…



Source: Refinitiv, Credit Suisse research

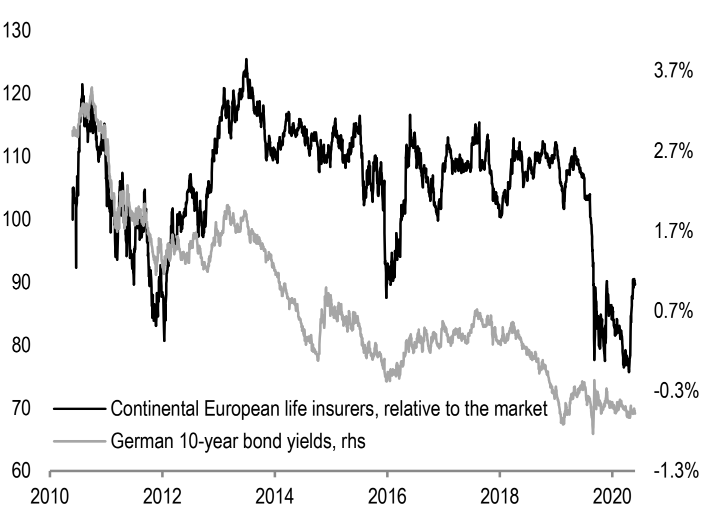
Figure 598: … and relative to the market



Source: Refinitiv, Credit Suisse research

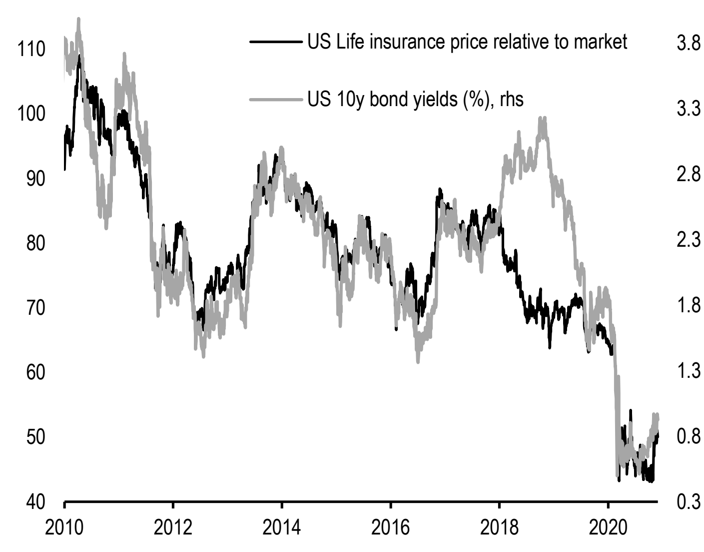
Moreover, life companies have partly recoupled with bond yields after years of decoupling.

Figure 599: Life companies have partly recoupled with bond yields in Europe…



Source: Refinitiv, Credit Suisse research

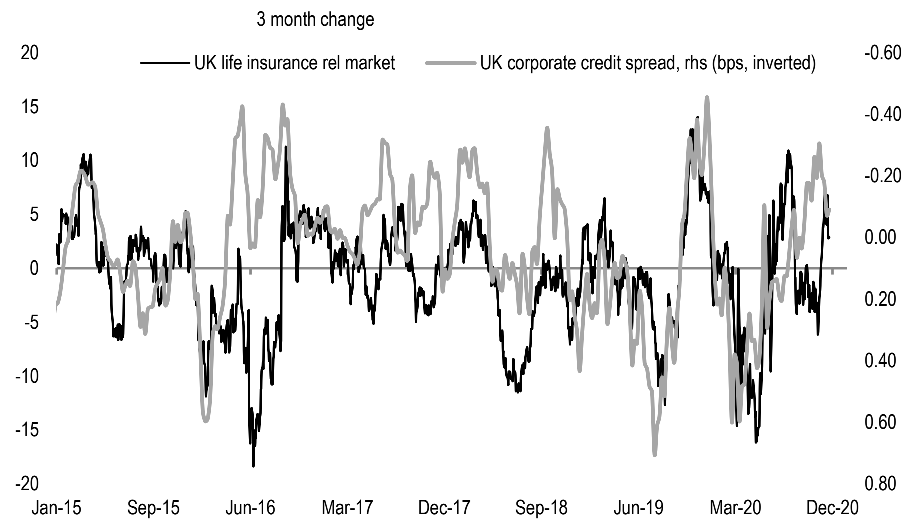
Figure 600: …and more so in the US



Source: Refinitiv, Credit Suisse research

Nevertheless, life companies continue to be very leveraged plays on credit, which as above appears quite optimistic. As we show in the P&C section, life companies are the most sensitive sector to spreads after banks (especially Pru, L&G and Just Group). We would rather gain exposure to a recovery via banks than life companies.

Figure 601: A narrowing of spreads is good for life companies



Source: Refinitiv, Credit Suisse research

Underweight

Global autos: reduce to small underweight

We find this sector very complex owing to its significant disruption and therefore move to a small underweight, given our preference for sectors that are: cheap, not technically disrupted, real asset plays and industrial cyclicals, as set out earlier in this report.

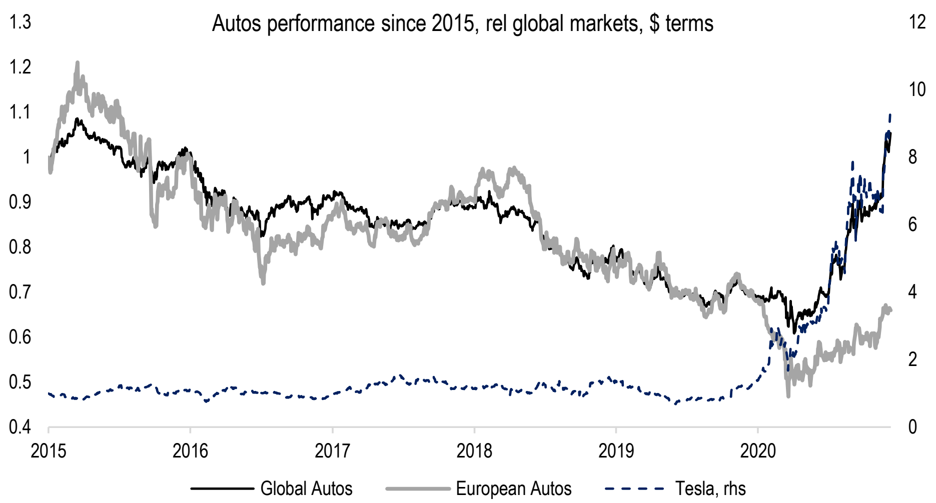
We see the following challenges ahead:

i. **New entrants mean that price relative is at a five-year high, but we note huge disruption**

The outperformance of the disruptors (e.g. Tesla) has meant that on a global basis, autos are close to a five-year price relative high and P/E relatives are at an eight-year high (as shown in more detail below).

We would recommend being underweight a sector where there is huge disruption as we get new entrants into EV and Autonomous Driving from within the auto sector and elsewhere (e.g. WayMo). The new entrants do not have legacy costs.

Figure 602: Autos performance relative to global markets since 2015



Source: Refinitiv, Credit Suisse research

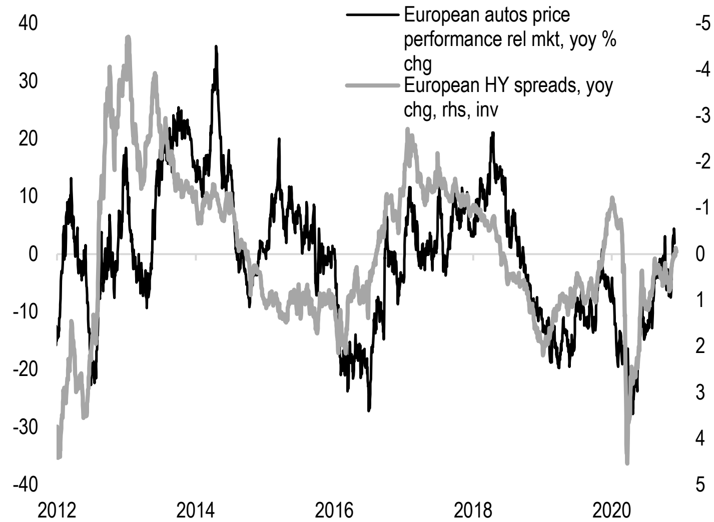
ii. **Already benefitted from the fall in spreads**

Auto companies in some instances are effectively 'banks on wheels' via their financing divisions. These areas tend to be strongly helped by the fall in credit spreads as shown below. We think that the bulk of the fall in credit spreads is behind us.

iii. **Potential disruption to second-hand car values**

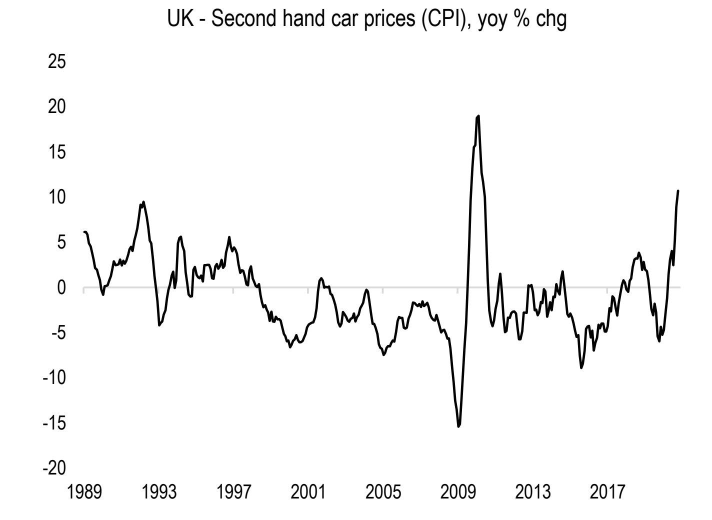
Second-hand car prices have been very strong in the UK (10.7% year-on-year). Our concern is the increased regulation on the use of diesel and the phasing out of combustion engines (for example in the UK, the government plans to ban all new combustion engines and hybrids by 2030, having had a target of 2040 in January 2020). At some point, we believe this could lead to a sharp fall in residual values.

Figure 603: European autos have outperformed as credit spreads narrowed



Source: Refinitiv, Credit Suisse research

Figure 604: UK second-hand car prices are running hot



Source: Refinitiv, Credit Suisse research

iv. Domestic competitors in China

Around 40% of the profits of the German auto companies come from China and there is clearly rising domestic competition. Chinese competition is especially high in EV, where the 'Energy Saving and New Energy Vehicle Technology Roadmap' as well as the 14th Party Congress aimed to localise as much production as possible. Data collected by the CS CQi (China Quantitative Insights) team indicate three rising Chinese NEV firms, NIO, Li Auto, and XPeng, plus BYD's Han model appear to have potential to compete with Tesla in China. Feedback from sales centres tracked by CQi show government procurement and the 'bringing-NEVs-to-the-countryside' program could be key catalysts for year-end sales. The high price of cars in China relative to those in Europe is unlikely to be maintained.

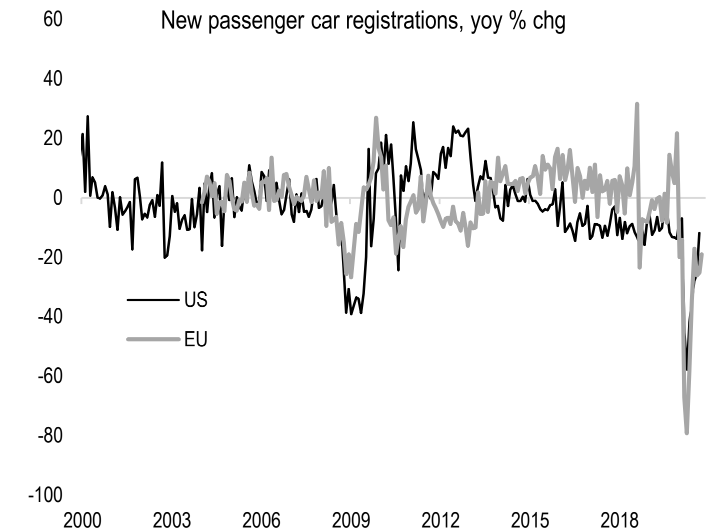
v. Car sales in China have actually held up well

Car sales in China are up c12% yoy, whereas in Europe and the US new passenger car registrations are running at -19% and -12% respectively; with IHS Markit forecasting a significantly smaller bounceback for China than in the US and Europe in 2021.

Figure 605: Chinese car sales, year on year

Source: Refinitiv, Credit Suisse research

Figure 606: New passenger car registrations are still depressed in Europe and the US

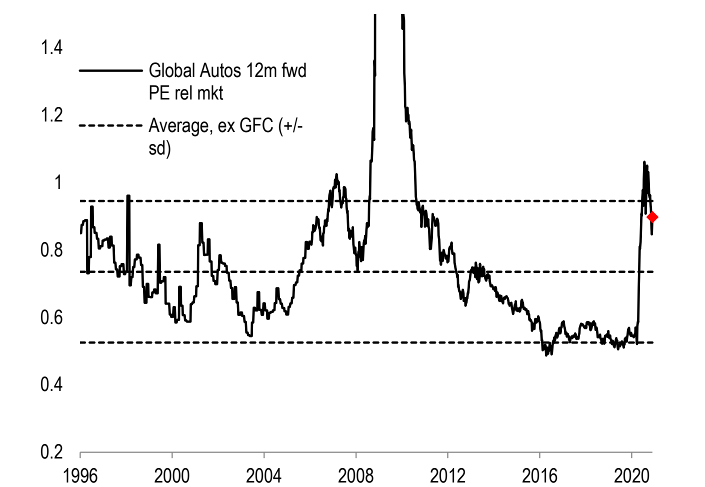


Source: Refinitiv, Credit Suisse research

vi. **Valuation**

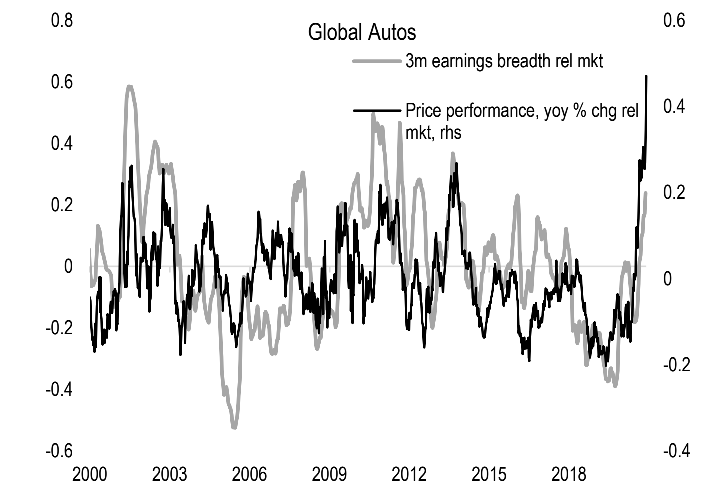
Looking at the sector as a whole globally (Tesla included) it clearly does not appear cheap; admittedly a bulk of its recent performance has been driven by Tesla. Furthermore, the sector has far outperformed relative earnings revisions, which they tend to follow.

Figure 607: Global autos are clearly on the top end of their range on 12m fwd PE relative to the market



Source: Refinitiv, Credit Suisse research

Figure 608: Global autos have far outperformed relative earnings revisions, which they usually follow



Source: Refinitiv, Credit Suisse research

We show below the global automobile stocks under our coverage rated Neutral and Underperform (as well as the large European names not currently under CS coverage).

Figure 609: We show below the global automobile stocks under coverage rated Neutral and Underperform, as well as the large cap European names not under coverage

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Astra International	13.3	72%	-31%	1.6	-58%	8.9	3.3	81.8	-12.0	-4.2	2.1	Neutral
Baic Motor 'H'	4.8	26%	-51%	0.4	-70%	na	5.8	283.6	-9.3	1.5	2.7	Neutral
Bajaj Auto	19.4	105%	-16%	4.4	-34%	4.1	2.0	59.0	0.4	0.7	2.3	Neutral
Bmw	9.7	53%	-21%	0.8	-45%	2.0	2.1	220.7	34.6	4.4	2.4	Not Covered
Brilliance China Automotive	3.2	17%	-77%	0.9	-73%	na	4.6	56.9	12.9	-3.6	2.0	Neutral
Daimler	10.6	57%	-13%	1.0	-32%	-4.4	1.5	190.4	111.4	3.0	2.3	Not Covered
Fiat Chrysler Autos.	6.6	36%	-16%	0.9	-21%	-26.2	0.0	96.1	nm	2.2	2.2	Not Covered
Ford Motor	9.6	52%	-38%	1.2	-67%	na	1.6	167.6	nm	3.5	2.8	Neutral
Hero Motocorp	19.6	106%	-13%	4.4	-47%	4.4	2.2	52.2	3.5	5.5	2.4	Underperform
Isuzu Motors	13.6	74%	-1%	0.8	-55%	na	1.5	75.4	-26.0	2.9	2.4	Neutral
Mazda Motor	-23.5	nm	na	0.4	-74%	na	-0.3	159.9	nm	-0.1	3.4	Underperform
Mitsubishi Motors	-2.8	nm	na	0.4	-98%	na	-0.3	324.8	nm	-7.7	3.3	Neutral
Nissan Motor	-16.4	nm	na	0.5	-52%	na	-0.2	425.1	nm	-2.4	3.1	Neutral
Peugeot	6.6	36%	-80%	1.0	-5%	3.6	2.1	218.2	33.5	2.1	2.4	Not Covered
Renault	-55.2	nm	na	0.3	-61%	-34.2	0.0	335.9	nm	-0.2	3.0	Not Covered
Tata Motors	78.0	423%	309%	1.1	-57%	-16.8	0.0	-100.5	nm	0.3	2.5	Neutral
Tesla	159.2	863%	18%	81.9	234%	0.6	0.0	-64.4	20.1	4.2	2.7	Neutral
Volkswagen	7.2	39%	-30%	0.7	-32%	na	2.4	na	4.3	1.2	1.5	Not Covered
Yamaha Motor	13.4	72%	-8%	1.1	-38%	na	1.2	47.4	-12.9	-0.6	2.5	Neutral

Source: IBES, MSCI, Refinitiv, HOLT, Credit Suisse research

European big cap pharma: underweight

We still see compelling reasons to keep European big cap pharma at an underweight. There are several key areas of concern: macro, politics, pricing, disruption and positioning.

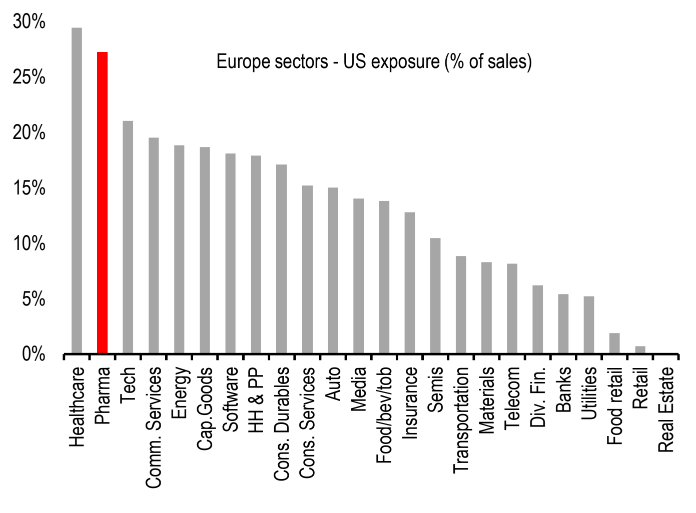
1. **Macro headwinds**

The macro headwinds for pharma include: (i) it is the biggest dollar earner; (ii) it is typically the worst performing sector when inflation expectations rise; (iii) the inflation-adjusted cost of corporate debt is likely to fall, which penalises sectors with low leverage; (iv) pharma is also pricing in a much lower PMI (and we think PMIs will rise from here in 2021).

- **Biggest dollar earner**

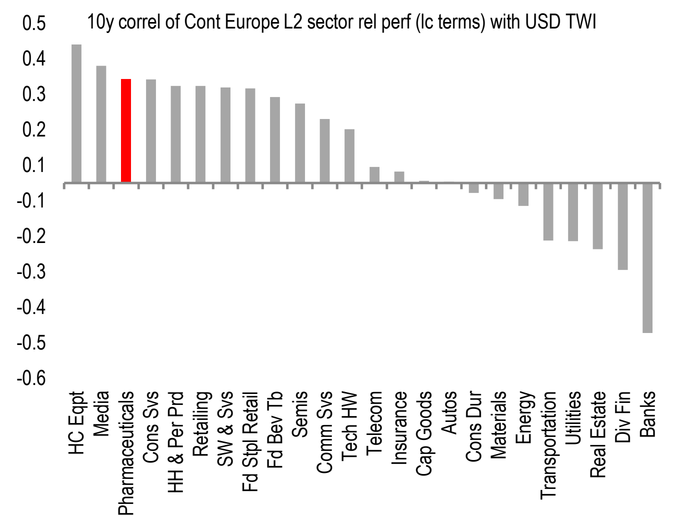
The sector has one of the largest exposures to the US and historically has been one of the hardest-hit European sectors from a weaker dollar.

Figure 610: European Pharma gets 27% of sales from the US…



Source: Refinitiv, Credit Suisse research

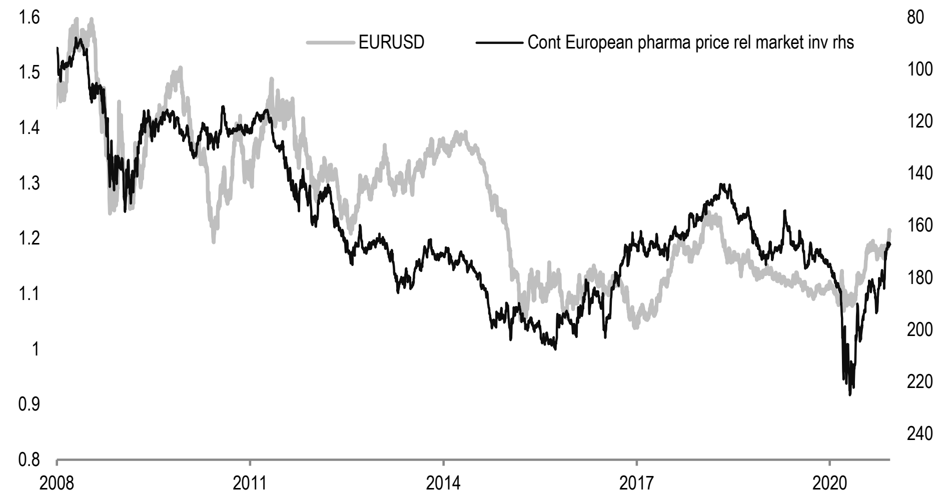
Figure 611: … and is one of the sectors hit hardest by a weaker dollar…



Source: Refinitiv, Credit Suisse research

The sector's price relative has been correlated with the EUR/USD.

Figure 612: … and European Pharma's price relative has recoupled with the dollar

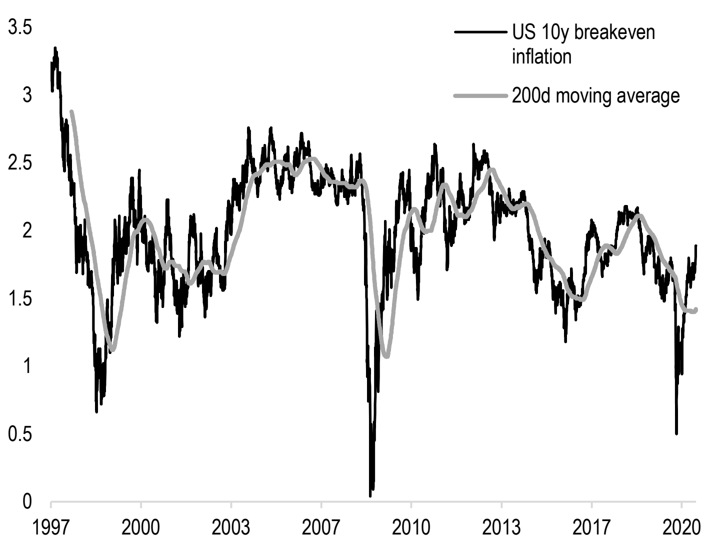


Source: Refinitiv, Credit Suisse research

■ Worst performing sector when inflation expectations rise

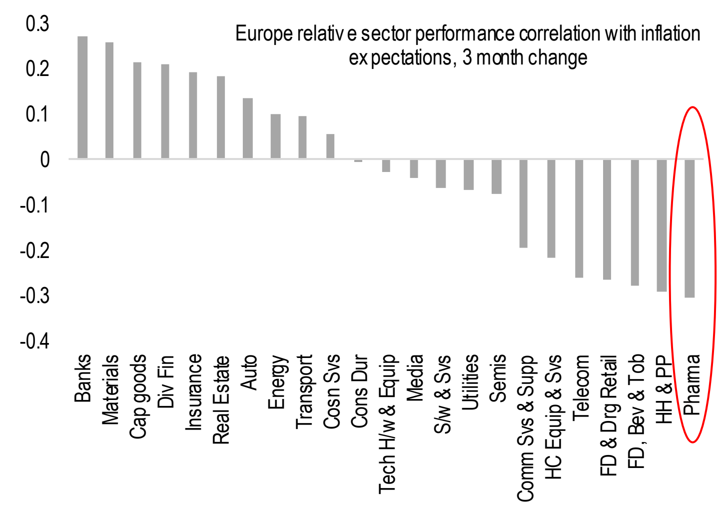
We can see that inflation expectations have just broken to the highest level since early 2019. We continue to see the 10-year breakeven inflation rate in the US rising to 3% by the end of 2022.

Figure 613: Inflation expectations have risen to c1.9%



Source: Refinitiv, Credit Suisse research

Figure 614: Pharma has been the most negatively correlated sector with inflation expectations

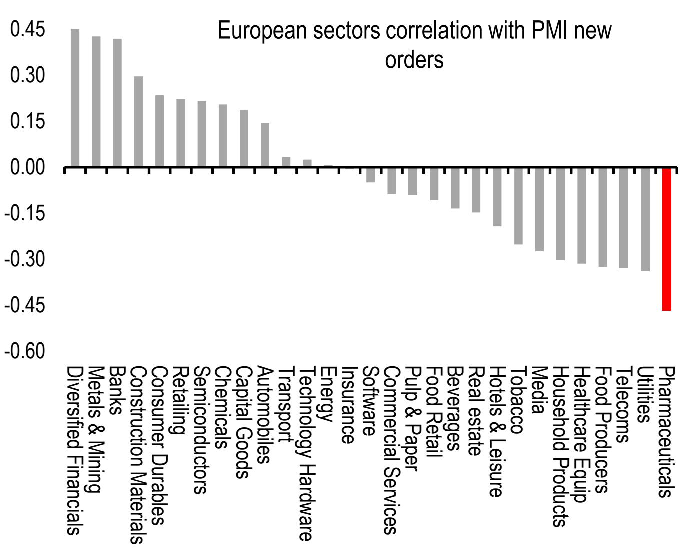


Source: Refinitiv, Credit Suisse research

■ Discounting much lower PMIs

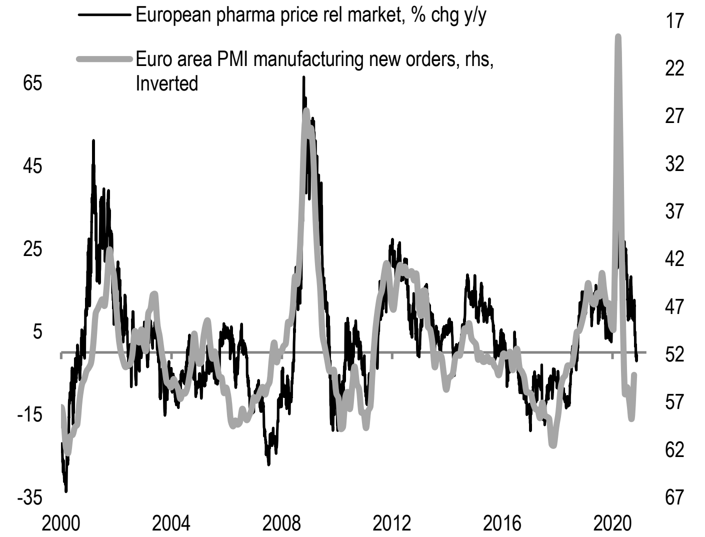
Pharma historically has been the worst performing sector when PMI new orders rise. We think PMIs in Q1 21 will rise well above current levels. Pharma appears to be pricing in PMI new orders of around 52 (which would be consistent with c1.2% GDP growth in Europe compared with our economists' view of 4.6% GDP growth in 2021).

Figure 615: Pharmaceuticals has one of the highest negative correlations with PMI new orders



Source: Refinitiv, Credit Suisse research

Figure 616: European Pharma is pricing in PMIs of c52

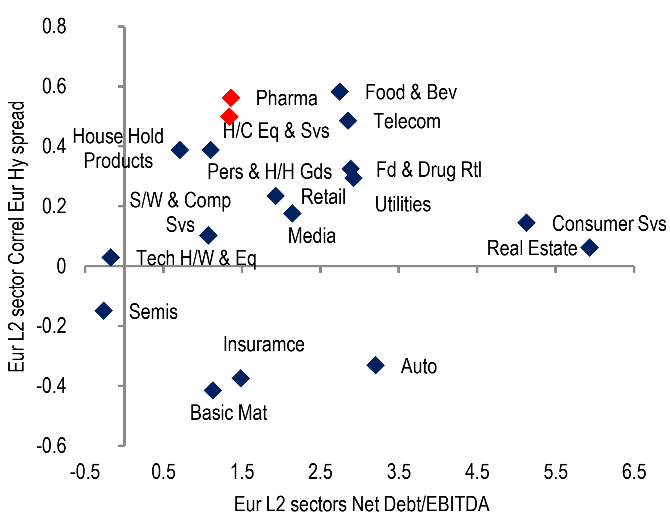


Source: Refinitiv, Markit, Credit Suisse research

■ **Cost of debt**

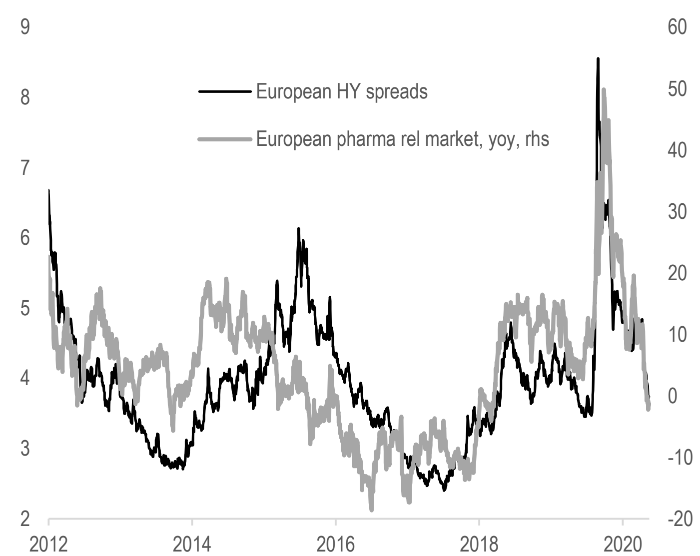
We can see that, owing to its low leverage, pharma has been one of the best performing sectors when credit spreads rise. From here, we see central banks limiting a major rise in spreads, and above all central banks limiting the rise in bond yields.

Figure 617: Pharma is a less levered defensive sector and outperforms when credit spreads rise



Source: Refinitiv, Credit Suisse research

Figure 618: Pharma does well when credit spreads rise



Source: Refinitiv, Credit Suisse research

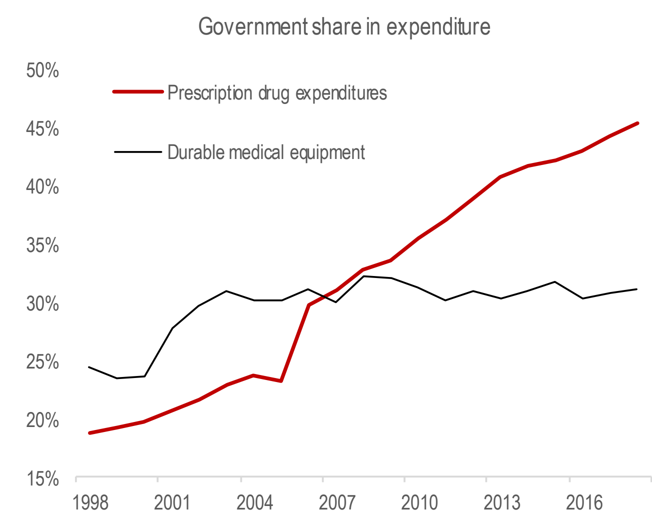
But, importantly, we believe that the real cost of debt will fall (owing to the rise in inflation expectations) and this will penalise less leveraged sectors.

2. Political pressures are likely to rise

We believe that, in general, the political heat on pharma is likely to rise because:

- Healthcare has come to the forefront of the political discussion as a result of the COVID-19 pandemic and we see residual risks from the remaining weeks of the Trump presidency as well as from the incoming Biden presidency.
- US branded drug prices are c50% above their global peers (a November HHS report suggested a 53% premium for the 50 largest hospital-based drugs over average OECD prices). If drug prices fell to European levels, our European Pharmaceuticals team would see this taking about at least 30% off EPS for the European drug companies.
- The US government now accounts for c45% of total drug purchases, and whatever the US government negotiates is likely to be replicated by the private sector over time.
- The US fiscal deficit by end-20 is estimated by the IMF to be c19% of GDP (with total state and government debt in 2020 coming in at 131% of GDP for 2020) and, according to the CBO, the biggest contributor to the projected government outlays is healthcare, with annual costs rising by nearly $1trn between 2021 and 2030.

Figure 619: The government accounts for 45% of drug spending in the US



Source: Centers for Medicare & Medicaid Services (CMS)

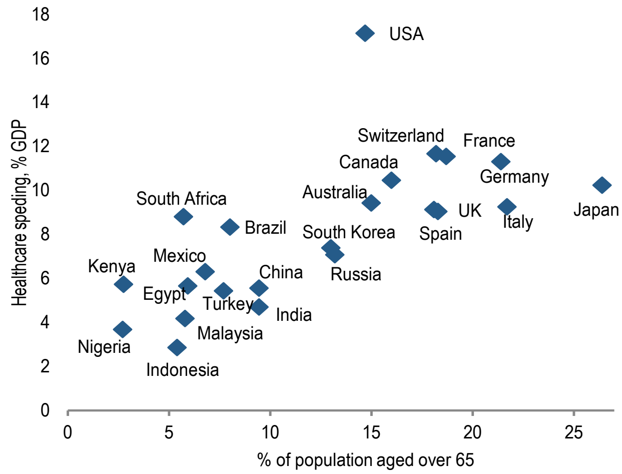
Figure 620: Major healthcare programmes account for the single largest increased government outlay over the next 10 years

CBO Projection, % of GDP	Outlays 2021	Projected Annualised Average 2026-2030	Change (pp)
Social Security	5.4	5.8	0.4
Major Health Care Programs	6.1	6.6	0.5
Other Mandatory Spending	3.7	2.4	-1.3
Discretionary Spending	7.6	5.9	-1.7
Net Interest	1.4	1.6	0.2

Source: Congressional Budget Office, US

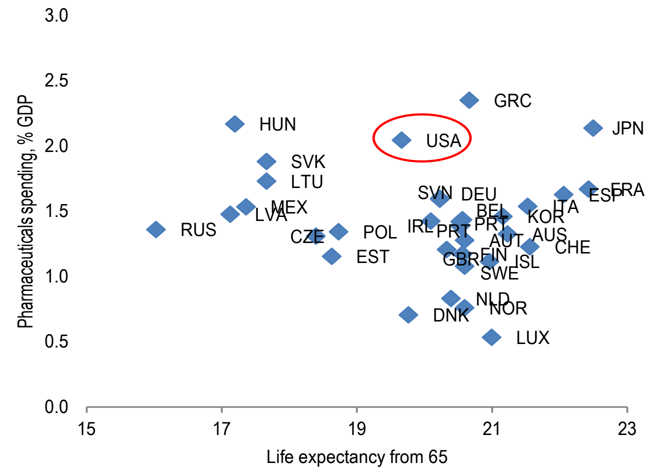
- If we look at healthcare spend relative to life expectancy or relative to age of the population, it is clear that in terms of outcomes, the US gets poor value for money from healthcare.

Figure 621: US healthcare spending as a proportion of GDP is much higher than in any other major country



Source: Refinitiv, Credit Suisse research

Figure 622: Drug spending as a share of GDP versus life expectancy for the US is very high



Source: Refinitiv, Credit Suisse research

Residual risk from the Trump Administration

We recently saw President Trump publish Final Rules to execute prior Executive Orders to lower prescription drug pricing (see our European Pharma team's report for details; Food for Thought: President Trump releases two Executive Orders on Healthcare reform; MFN more aggressive than expected, 23 Nov). The key is the Most Favoured Nation (MFN) order, requiring the HHS to begin a 7-year demonstration project starting from 1 January 2021 (before Biden's inauguration) that looks to lower the prices on the 50 top selling Medicare Part B drugs to reference International prices. HHS estimates a -16% impact on ASP (average selling prices) in 2021, rising to -65% by 2024 (covering $33bn of spending on 2020 costs). This is unsurprisingly being challenged in the US courts by two industry trade bodies. Our analysts see Roche and Ipsen as the most affected names in Europe, and Regeneron in the US.

Risk from the Biden Administration

Single-payer healthcare could potentially present a significant challenge for pharma companies, as illustrated by the fact that pharma companies paid $80bn in 2009 to avoid this (under the Obama healthcare reforms).

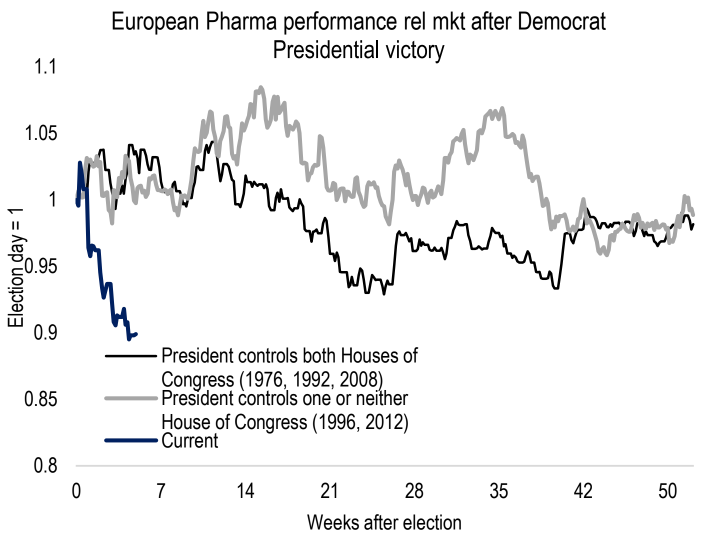
President-elect Biden has argued for expanding the Affordable Care Act, including providing an additional public option for insurance. Prior to the election, he proposed a German-style data-driven drug pricing system to negotiate ceiling prices for all payers; although the net impact on pricing is still unclear at this stage, this will be incrementally negative for pricing, albeit softer than President Trump's international pricing model. He also supports importing drugs more cheaply and imposing tax penalties on price hikes above general inflation. Our pharma team has assessed the impact of the Biden presidency on global biopharma (see Decision 2020: A Biden win and an unknown Senate- implications for Biopharma, 9 November).

Whilst a split Congress would clearly limit the ability of Biden to reform healthcare, we would not rule out the possibility of President-elect Biden taking the same route as President Trump. As explained above, he could use presidential executive action via MFN and HHS to reduce drug prices de facto that Medicare pays, which would then spread throughout the system.

We assume a c30% chance of the Democrats winning control of the Senate on January 5th (Georgia Senate runoffs), which would likely lead to even more aggressive reform.

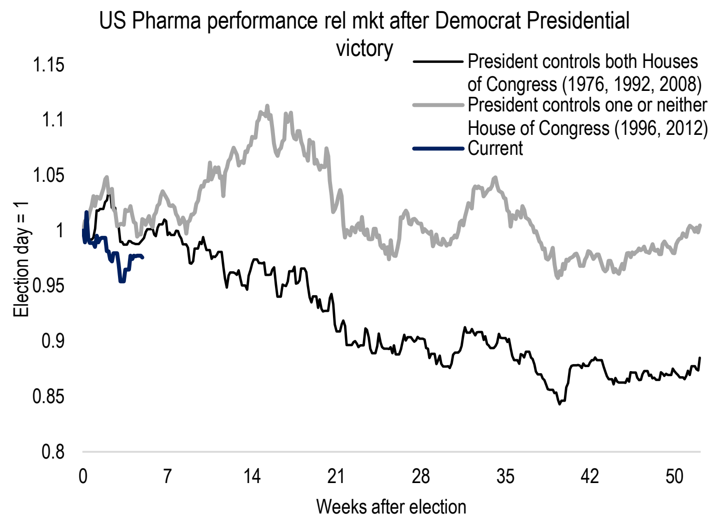
We can see below historical performance of the European and US pharma sectors after Democratic victories in past Presidential elections, split by whether they have had control of both Houses, over the past 50 years.

Figure 623: European pharma tends to underperform under the Democrats



Source: Refinitiv, Credit Suisse research

Figure 624: US Pharma underperforms when the Democratic President controls both houses



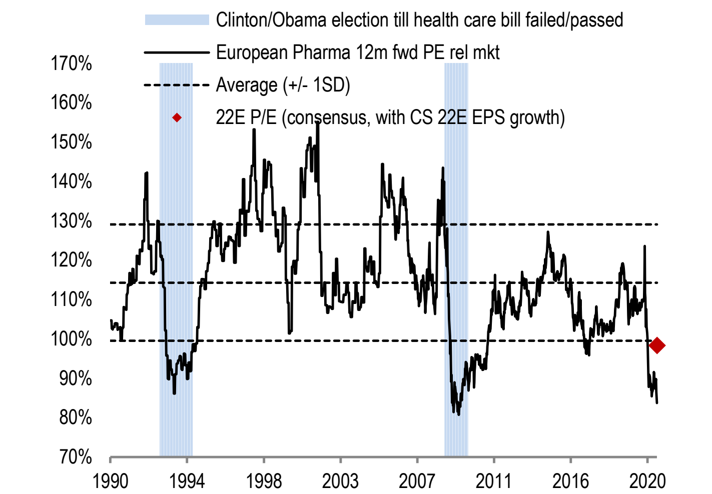
Source: Refinitiv, Credit Suisse research

3. Valuations can stay cheap for a long time if political pressure persists

In times of political pressure (e.g. a Democratic clear sweep of Congress) we can see the sector has de-rated significantly and then stayed very cheap for a long time. The sector appears to have de-rated this time, but this is largely because of the cyclically depressed nature of earnings. If we adjust for trend earnings in the market, we find pharma looks only neutrally valued (in line with the market).

The last two occasions there was a concerted attack on pharma it stayed cheap for 20 and 10 months, respectively, and traded on discounts of up to 20%.

Figure 625: The sector is very sensitive to political risk and stays cheap for a long time (it is not as cheap if we adjust for 2022 earnings)



Source: Refinitiv, Credit Suisse research

Figure 626: Historically, it stays cheap for 10 to 20 months

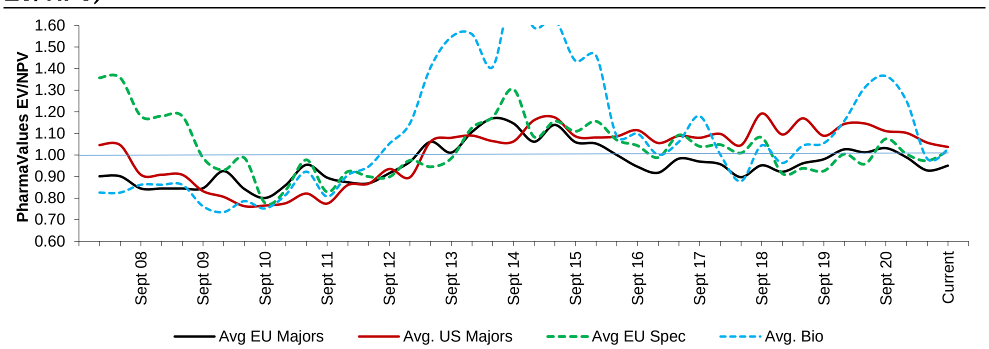
Start of derating	Start of rerating	Magnitude of derating, % change in rel PE	Length of time (in mth)	Rel PE at trough
Nov-92	Jul-94	-31%	20	86.1%
Dec-08	Oct-09	-33%	10	83.5%

Start of current derating	Magnitude of current derating	Rel PE
Apr-20	-19%	86%

Source: Refinitiv, Credit Suisse research

Our European pharma team looks at EV/NPV, calculating net present value product-by-product for the companies under coverage (using a constant discount rate of 10%). On this basis, the pharma sector appears neutrally valued.

Figure 627: On EV/NPV basis, European majors are only neutrally valued (0.95 EV/NPV)

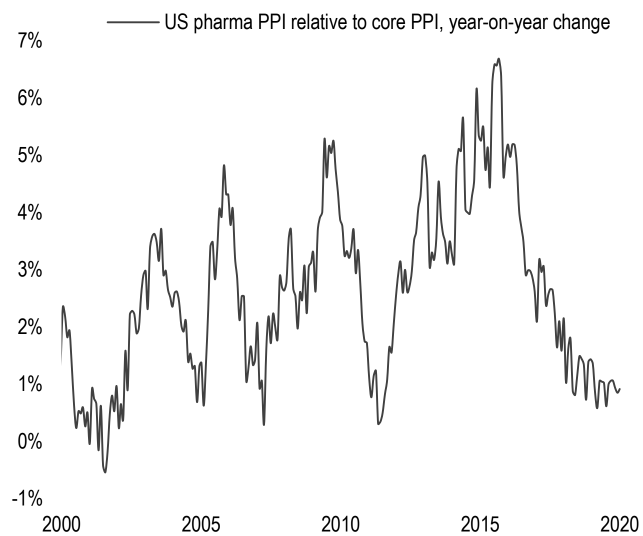


Source: Credit Suisse European Pharma research

4. Pricing under pressure even now

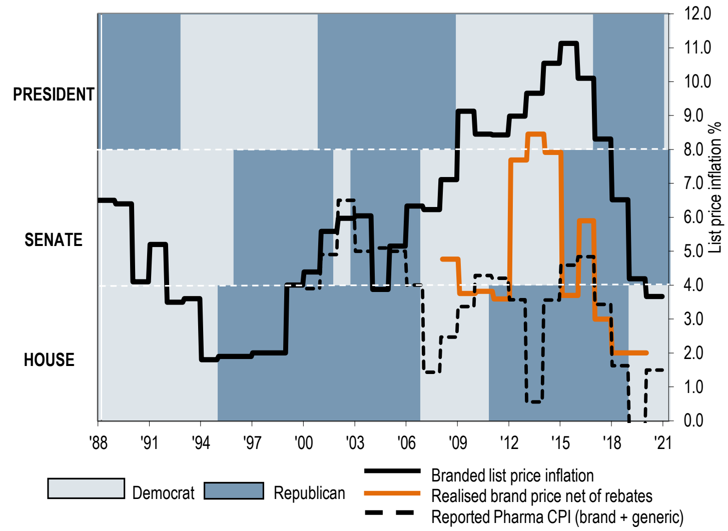
Pricing had already fallen prior to the COVID-19 crisis, as proxied by the difference between pharma PPI relative to core PPI. Net drug pricing is up by only 2%.

Figure 628: Pharma price increases have dropped relative to general inflation in the US



Source: Refinitiv, Credit Suisse research

Figure 629: Net drug prices are up only 2% – the lowest increase on record



Source: Credit Suisse European Pharma research

5. More disruption

This sector might be more disrupted in the long term than initially appears to be the case.

- **Only 25% of revenues come from unique products**, raising the question of whether high prices are sustainable in the long term (as per our European Pharmaceuticals team's PharmaValues database).
- **Shorter period of uniqueness:** Our pharma team highlights that big data has also been used to assist in drug development and has helped 'level the playing field' in allowing for fast followers to develop drugs, which has left fewer blockbusters able to benefit from long competition-free periods.
- **Move to value-based contracts diminishing the value of blockbusters:** It is quite possible that with the falling price of DNA testing, individuals could be tested to see if their DNA is suitable for a drug and charged only if the drug is deemed suitable to help cure or ease their ailment (Google's Deepmind, which has access to 1.6m medical records, has estimated that up to 25% of patients get no benefit from a top-selling drug (FT, 21 February 2019)).
- **Biosimilars:** The hope is that the tail for biologics is much longer than for simple molecule drugs (typical tablets). The CS PharmaValues database suggests that in 2020, 26% of branded drug sales were biologics (excluding vaccines), with roughly half of those being complex biologics that may over time see greater erosion from competition (traditionally more difficult to replicate but technological advances are making it progressively easier). Recent US experience continues to support slower erosion, with only c35% erosion in the first year after generic entry for a range of Roche drugs, where we would expect to see >90% erosion for simple molecules. The risk is that erosion accelerates in the US as doctors become more comfortable with using them, and we worry that big data, fast data makes replication of biologics easier. In Europe erosion has been stronger. We note that the patent expiries for biologics pick up from 2023.

- **A threat to long-term annuity-style treatments:** Our Pharma team highlights that curative treatments such as gene therapy, which are on the cusp of commercialisation, could affect companies enjoying annuity-type revenues currently in categories such as haemophilia.

6. COVID-19: how has it affected the pharma sector?

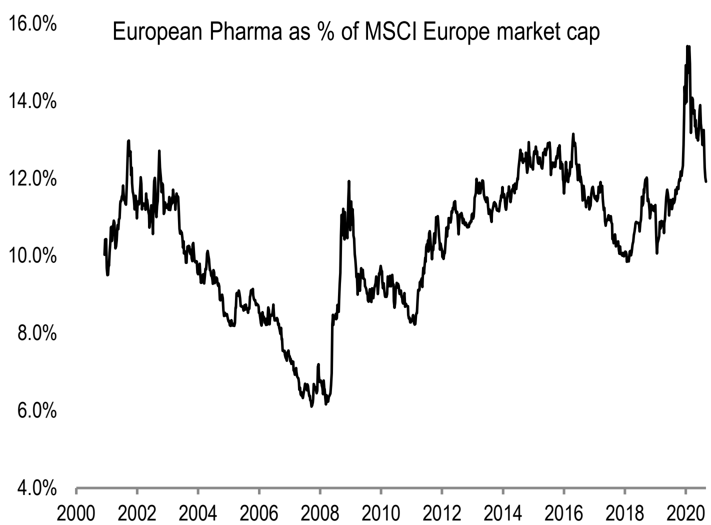
A dichotomy

In some instances, big cap pharma prices have been supported by progress on a vaccine for COVID-19, but many of the major big cap pharma companies intend to make little money out of the discovery and production of a vaccine (e.g. J&J and Astra). Moreover, in some instances, there is concern that the impact of COVID-19 may negatively affect earnings as patients are putting off going to doctors and hospitals and scheduling treatments (for example, AZN has recently joined an awareness campaign highlighting a 46% drop in new diagnosis of cancer patients in the US in 1H2020). The cost of the COVID-19 vaccines also increases the political scrutiny of drug prices.

7. Positioning

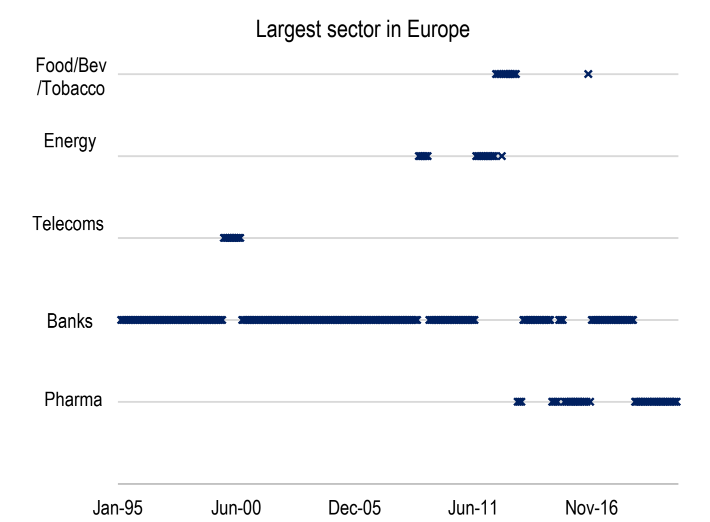
Pharma has become the biggest sector in Europe by market cap, accounting for c12% of MSCI Europe.

Figure 630: Pharma accounts for c12% of MSCI Europe



Source: Refinitiv, Credit Suisse research

Figure 631: Biggest sector in Europe over time

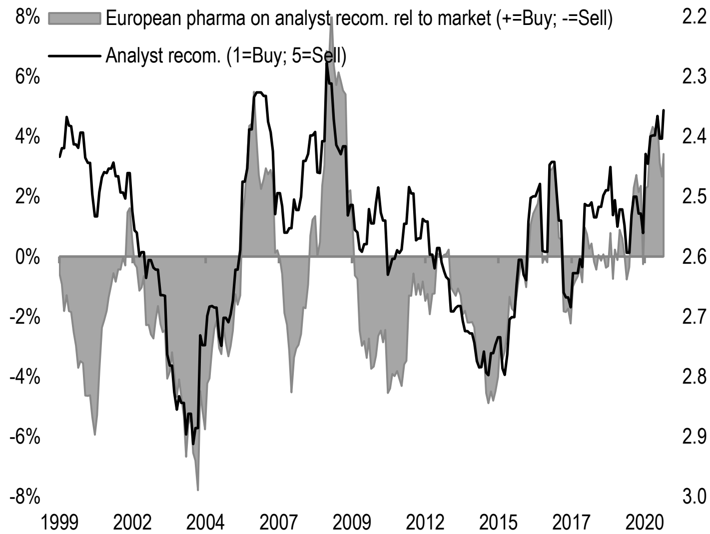


Source: Refinitiv, Credit Suisse research

Net analyst buy recommendations are very high. Indeed, on two out of the past three occasions when they have been this high, the sector has gone on to underperform.

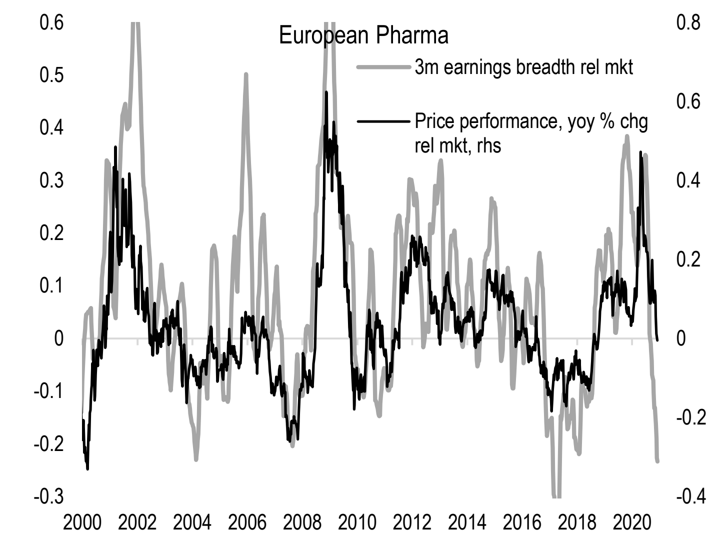
On the other hand, relative earnings revisions have turned very negative and performance has yet to fully reflect this.

Figure 632: Net analyst buy recommendations for European pharma are very high, and historically this has been a problem for the sector 2 times out of 3 times on a 12-month view



Source: Refinitiv, Credit Suisse research

Figure 633: Relative earnings revisions have turned very negative and performance only begun to follow



Source: Refinitiv, Credit Suisse research

What is the risk to the call?

The risk to our underweight is simply macro, or tech being in a bubble that bursts. It is clear that if there is a big macro shock (whether because of corporate stress or insufficient policy support), then pharma stands to benefit, and if tech ends up in a bubble and bursts, then the rest of the market outperforms (as was the case post the TMT bubble).

The other risk is that the pharma sector might be on the cusp of a golden age of discovery using AI and Big Data. Deepmind, for example, used the AlphaFold AI program to provide accurate results about the structure of proteins within days, potentially shortening the development times for novel medicines.

We see below the Underperform-rated European pharma names.

Figure 634: Underperform-rated European pharma names

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
H Lundbeck	20.0	133%	-57%	2.7	-36%	na	1.3	29.6	-12.9	-0.6	2.7	Underperform
Orion B	26.7	179%	-6%	7.2	-12%	na	3.7	10.6	8.2	0.8	3.4	Underperform
Recordati Indua.Chimica	22.3	149%	-13%	7.5	25%	2.7	2.3	14.9	-4.3	-2.7	2.8	Underperform

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse research

We also show European pharma names that our analysts rate Outperform.

Figure 635: Outperform-rated European pharma names

Name	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Astrazeneca	21.7	145%	1%	7.3	34%	3.5	2.6	-26.4	0.3	-0.5	2.1	Outperform
Merck Kgaa	20.2	135%	-1%	3.4	7%	4.5	1.0	29.8	11.3	0.3	2.2	Outperform
Novo Nordisk 'B'	21.1	141%	-28%	17.0	-9%	4.4	2.2	22.5	1.7	-0.4	2.7	Outperform
Sanofi	13.3	89%	-25%	1.8	-16%	8.0	3.8	76.6	-1.6	-1.4	2.0	Outperform
Vifor Pharma	26.7	178%	-30%	2.6	-33%	2.9	1.6	-6.0	7.0	-6.4	2.5	Outperform
Cassiopea Spa	-13.1	nm	na	112.5	173%	na	0.0	-72.9	nm	-100.0	1.7	Outperform
Cosmo Pharmaceuticals	-117.7	nm	na	2.9	-48%	na	0.0	-36.9	nm	0.4	1.7	Outperform

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse research

Consumer staples: underweight overall with two exceptions – alcoholic beverages and tobacco

There are nine main reasons why we are underweight consumer staples excluding alcoholic beverages and tobacco (food producers, food retailing, beauty and household products make up c.70% of the market cap of the consumer staples globally and in Europe).

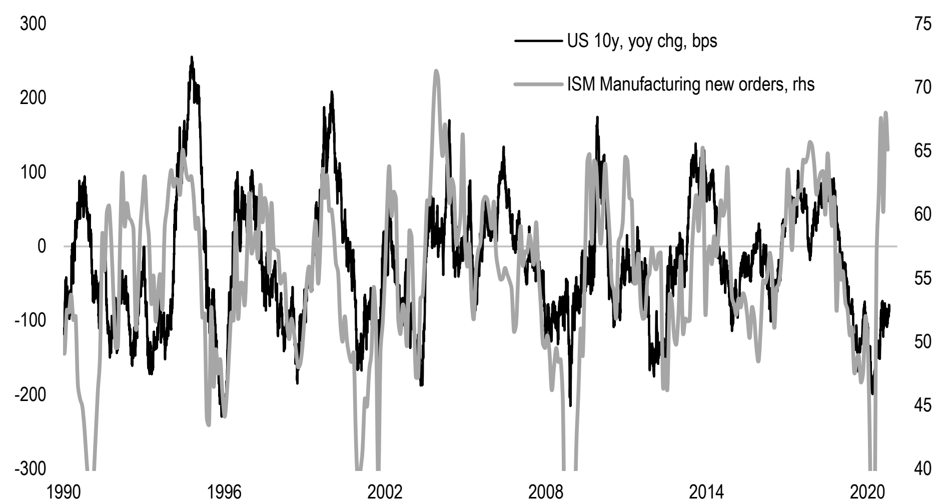
1. **We prefer industrial exposure over consumer goods exposure**

We want to be more focused on the investment and corporate discretionary spending than consumer goods in 2021 for reasons discussed in our Special Theme at the front of this report.

2. **A small rise in yields likely in 2021**

There has been a near-record decoupling between the ISM and the US bond yields. We do not expect a large rise in yields but see much more upside than downside risk (we think the Fed will cap bond yields at c1.2-1.5%).

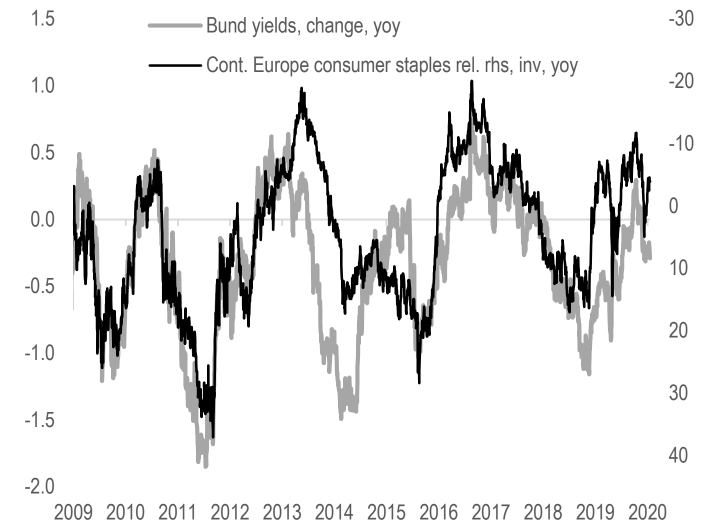
Figure 636: There has been a record decoupling between ISM and US bond yields



Source: Refinitiv, Credit Suisse research

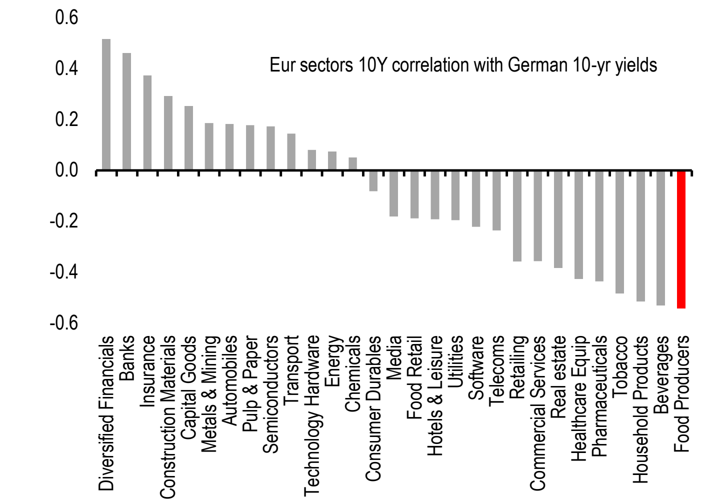
Consumer staples tend to underperform if bond yields rise, especially food producers.

Figure 637: Consumer staples relative performance move very closely with bond yields



Source: Refinitiv, Credit Suisse research

Figure 638: Food producers are the most negatively correlated sector with Bund yields

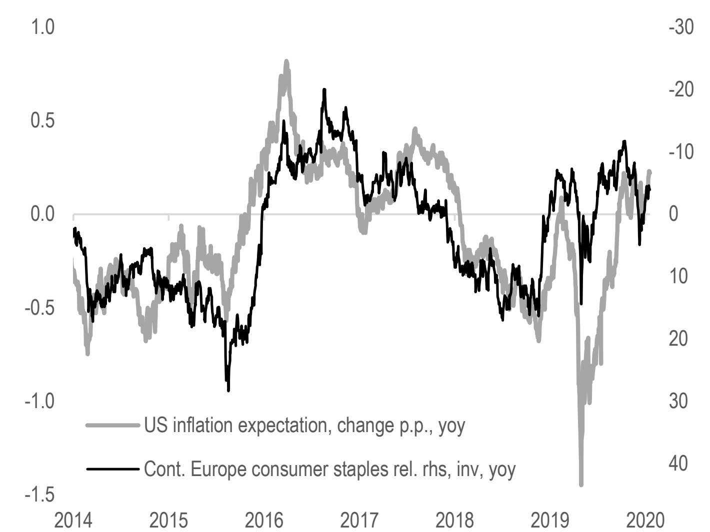


Source: Refinitiv, Credit Suisse research

3. A rise in inflation expectations

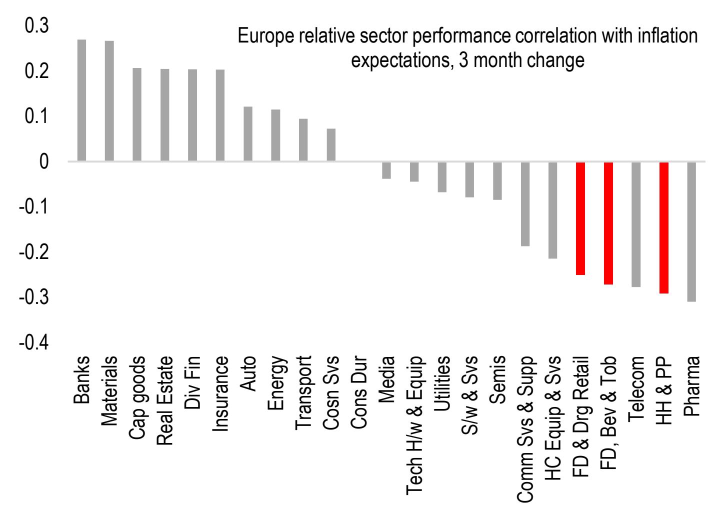
We have a high-conviction view that US inflation expectations will rise to c3% from 1.8% currently (see the front section of this report). Consumer staples tend to be some of the worst performing sectors if inflation expectations rise.

Figure 639: Consumer staples underperform if inflation expectations rise…



Source: Refinitiv, Credit Suisse research

Figure 640: …and are the most negatively correlated sector with inflation expectations



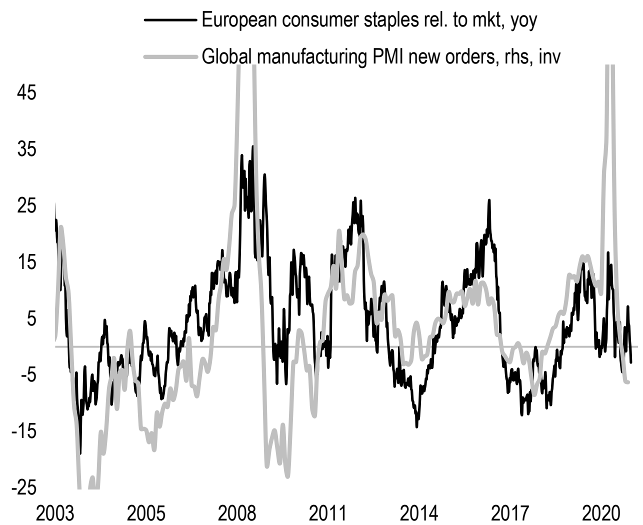
Source: Refinitiv, Credit Suisse research

4. Still pricing in only tepid GDP growth in 2021

Consumer staples, among the most defensive of sectors, are pricing in a fall in PMIs (i.e. to 54), as shown in the figure below. We believe this is too pessimistic when we expect PMIs to rise to

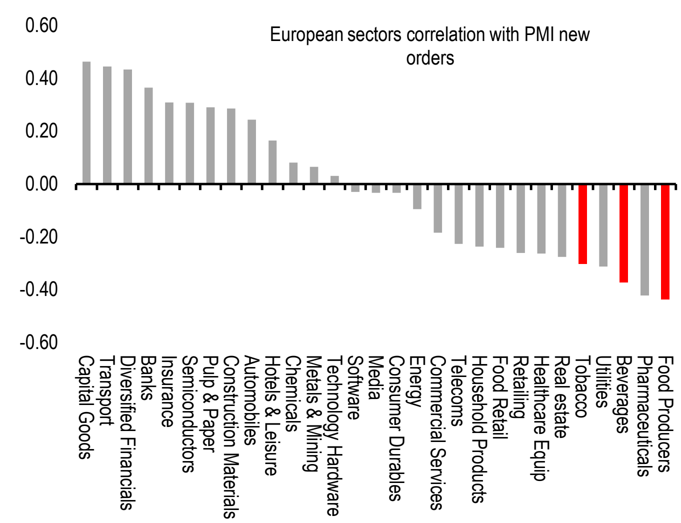
60 in 1H 2021. A PMI of 54 would equate to c2.8% global GDP growth compared to our economists' expectations of 4.2% in 2021.

Figure 641: Consumer staples are negatively correlated with PMIs



Source: Refinitiv, Markit, Credit Suisse research

Figure 642: Consumer staples have the highest negative correlation with European PMIs

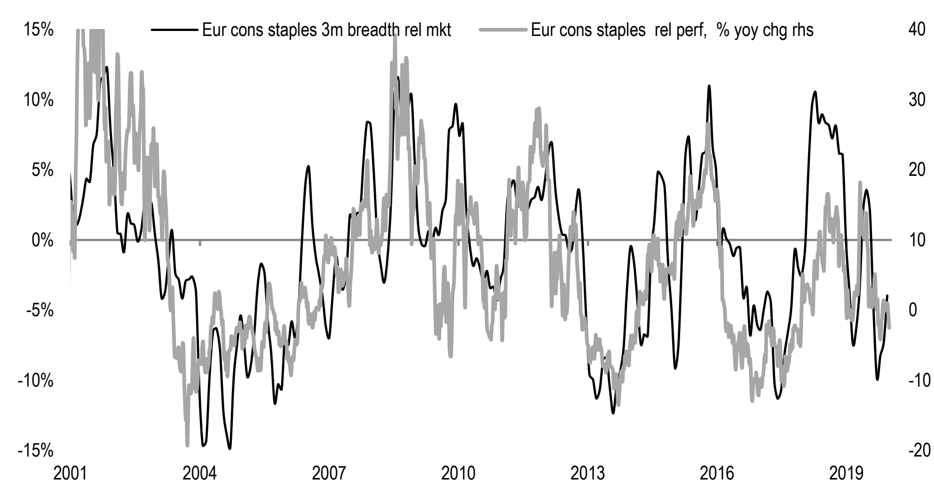


Source: Refinitiv, Credit Suisse research

5. Poor relative earnings revisions

Relative earnings revisions for consumer staples are poor and performance has followed this.

Figure 643: Earnings revisions versus performance

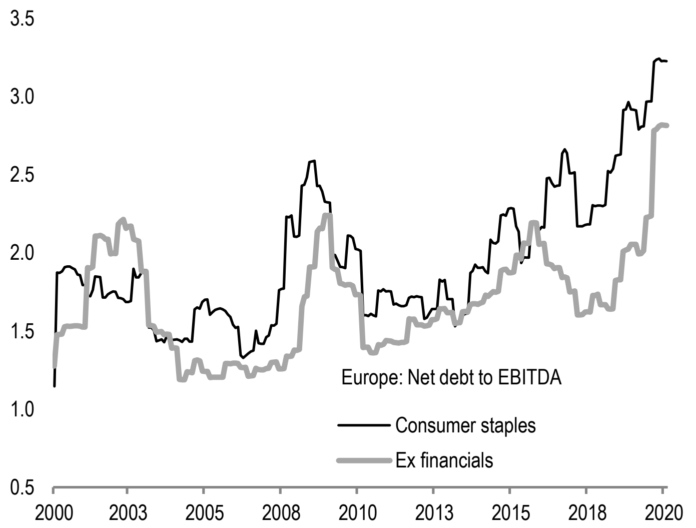


Source: Refinitiv, Credit Suisse research

6. High leverage

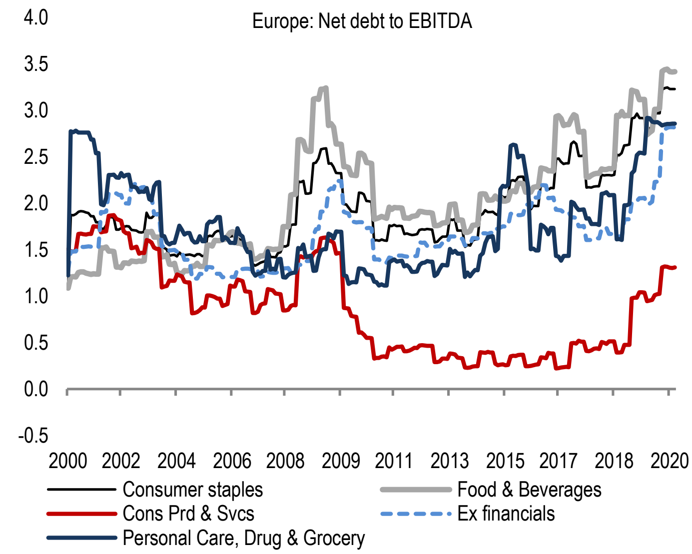
Consumer staples have high leverage, therefore would be vulnerable if the cost of high-yield debt were to rise.

Figure 644: Consumer staples have leverage above the market…



Source: Refinitiv, Credit Suisse research

Figure 645: …especially in the case of food, beverages and tobacco



Source: Refinitiv, Credit Suisse research

7. A disrupted sector

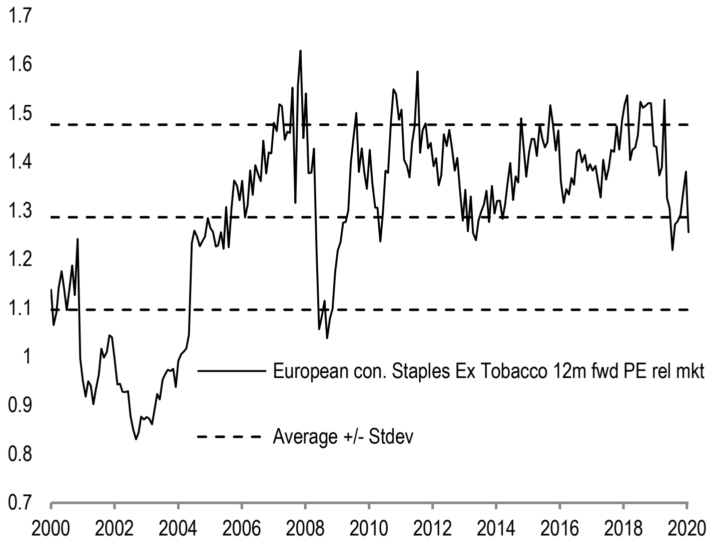
Overall, we think many areas of consumer staples are abnormally disrupted, especially when it comes to non-conspicuous brands:

- **Low barriers to entry:** New brands have lower barriers to entry than in the past because shop space is effectively infinite thanks to internet retailers.
- **Millennials shifting consumption patterns to 'craft' products:** There is a clear preference among Millennials for food products that are considered more natural and healthy, as well as craft beverages. This risk is most pronounced for food producers and beer names, in our view. The risk is that craft products are not owned by the incumbents.
- **Amazon and virtual assistants for non-conspicuous products:** Amazon appears likely to become a trusted provider of household products, particularly when ordered by Alexa, reducing brand visibility (e.g. requests such as "Alexa, order some AA batteries" could become increasingly likely to be fulfilled with Amazon own-brand goods).
- **Loss of branding power for non-conspicuous brands:** Low-end brands have less powerful brand images, as social media becomes an increasingly important branding tool (e.g. Dollar Shave Club, Harry's, and to some extent meal kit providers such as HelloFresh and Blue Apron). The proliferation of media outlets means that it is now much harder to reinforce a non-aspirational brand.
- **Price points:** Consumer staples have been able to exploit geographical variation in price points. More uniform pricing points – a consequence of online retail increasing price visibility – would limit the ability of staples companies to earn super-normal profits.
- **Limited scope for further M&A:** We see limited scope for further deals in tobacco and beer as most of the potential consolidation has already been seen, therefore the majority of cost synergies have already been achieved. Large amounts of pre-existing leverage, as mentioned before, also inhibit M&A activity as a result of compromised balance sheets.
- **Competition from local brands in EM:** According to Bain and Kantar's 2019 China Shopper Report, 76% of growth in China came from local brands. Local brands have proven to be more flexible and quicker to adapt to local tastes.

8. The sector is only neutrally valued

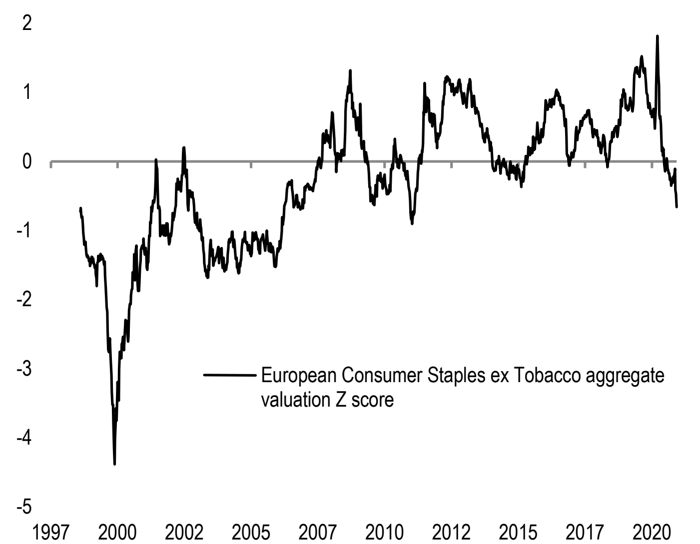
On both 12-month forward P/E relative and our aggregate valuation score, European consumer staples sector (ex tobacco) are only neutrally valued and the middle of our valuation scorecard, although we acknowledge this is at the bottom end of their 10-year range.

Figure 646: European staples ex tobacco are neutral on a 12m fwd PE relative…



Source: Refinitiv, Credit Suisse research

Figure 647: …and on aggregate z-score

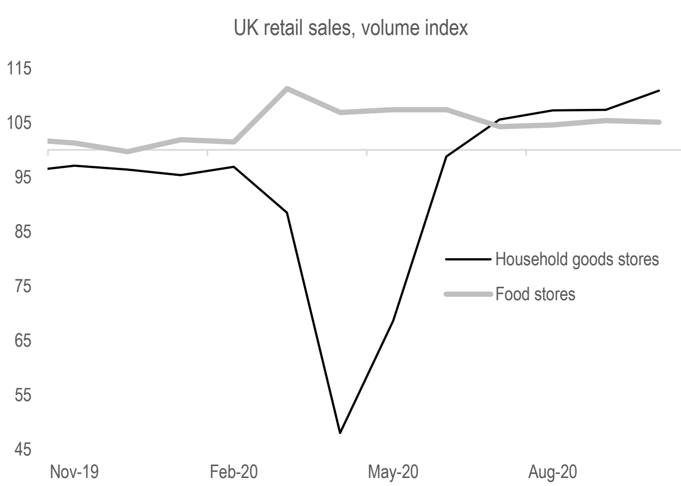


Source: Refinitiv, Credit Suisse research

9. Demand was in some areas bought forward by the virus

In some areas demand was bought forward by the COVID-19 pandemic, e.g. household products. This was particularly the case if products could be bought on line or were in demand for health reasons (e.g. hygiene-related area such as disinfectant).

Figure 648: Household goods sales are more than 10% above pre-crisis level



Source: Refinitiv, Credit Suisse research

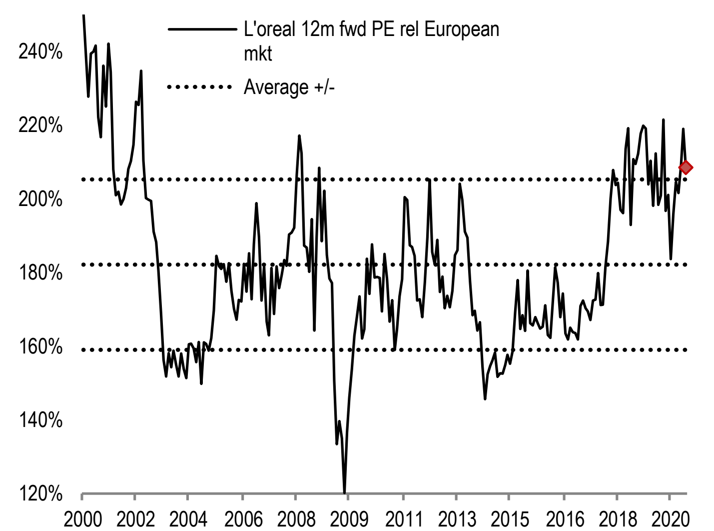
If we look at the sectors most correlated with infection rates (i.e. outperformed as infections rose in the February to September periods), the consumer staples sector benefitted the most from infections and thus suffer more from a vaccine.

Beauty products: underweight

We like the secular dynamics of beauty. We note the obvious long-term supports: i) ageing demographics as older consumers spend up to four times more on beauty products; and ii) the desire to be more 'camera ready' in a social-media age—vanity tends to be structural growth. Companies in the sector also tend to have strong balance sheets. But we choose to be underweight as part of our strategy of being underweight growth stocks in Europe (see the Style section).

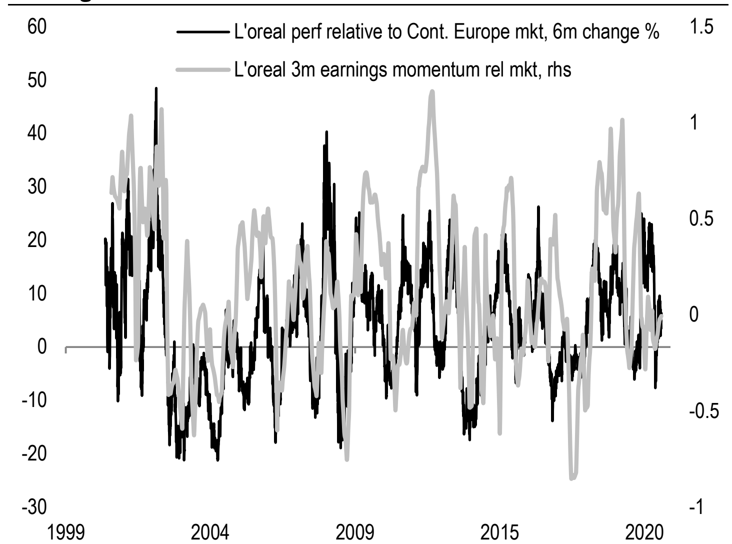
L'Oréal looks close to being as expensive as it has ever been in recent years against the market on 12-month forward earnings and relative earnings revisions are weak.

Figure 649: L'Oreal looks expensive relative to European market on 12-month forward PE



Source: Refinitiv, Credit Suisse research

Figure 650: Relative performance has closely followed relative earnings revisions



Source: Refinitiv, Credit Suisse research

Moreover, L'Oréal has been driven mainly by beauty and China (which accounts for about 12% of sales but nearly half of its growth). Incrementally, the level of China surprise will probably be small (Chinese GDP growth is already up 5% yoy). Moreover, about half of China's retail sales are now online (according to CS analysts' estimates), which has helped L'Oréal reach consumers in lowest-tier cities and remote areas and accelerated share gains. However, this is potentially a one-off benefit as higher penetration rates are reached and unlikely to be repeated.

L'Oréal is also likely to see more competition from online space. As the CS Consumer Goods team points out, its digital success has encouraged its competitors such as Beiersdorf, Henkel and Shiseido to step up their digital investment as well.

Figure 651: European personal products companies

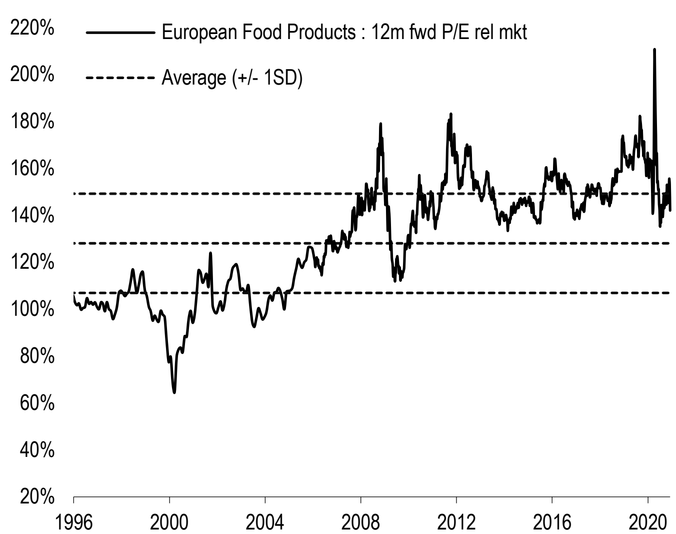
	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2019e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
L'Oreal	38.6	156%	10%	5.8	21%	2.1	1.3	-28.8	-0.6	-1.4	2.7	Underperform
Unilever (Uk)	18.7	76%	-29%	44.1	61%	5.0	3.4	7.9	3.4	1.6	2.4	Outperform
Beiersdorf	29.3	118%	-21%	3.4	-32%	2.7	0.8	18.2	-4.1	-2.0	3.2	Underperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

Food producers: underweight

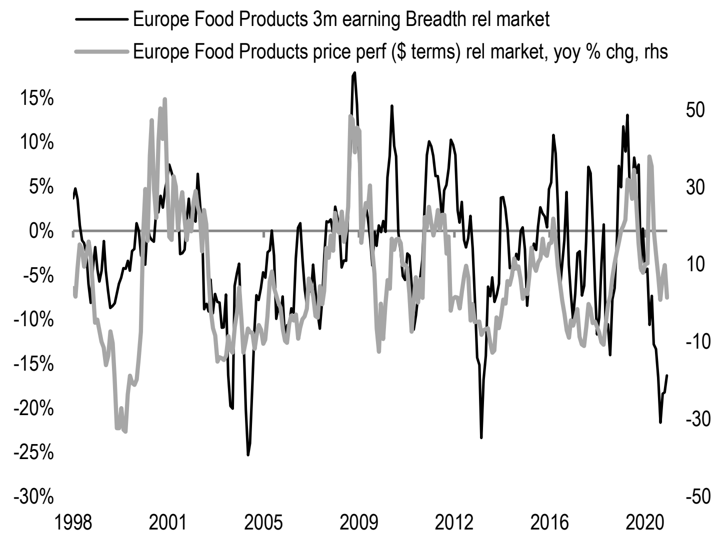
We remain underweight food producers for the same macroeconomic reasons as above. We do not find the sector cheap, and earnings revisions imply much worse performance than the market.

Figure 652: European food producers' P/E relative to the market…



Source: Refinitiv, Credit Suisse research

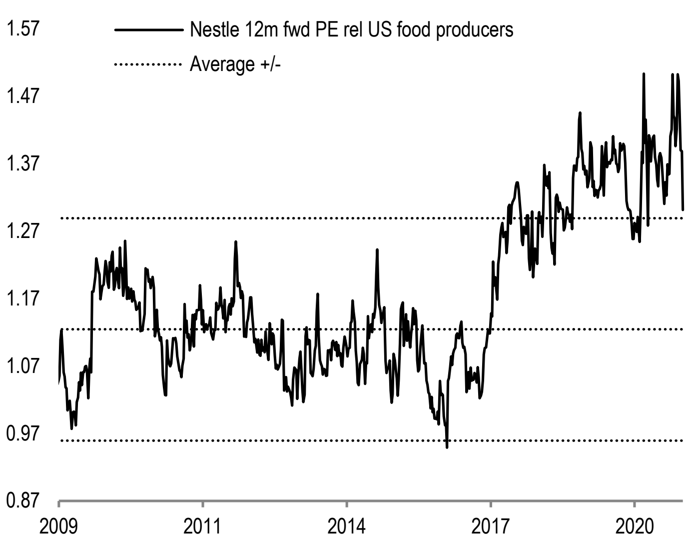
Figure 653: Relative performance versus relative earnings revisions



Source: Refinitiv, Credit Suisse research

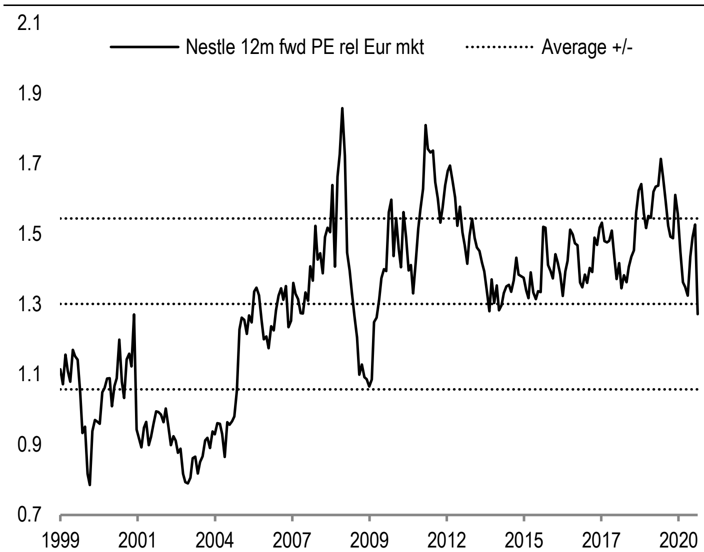
Nestle appears to be abnormally expensive relative to its US peers as on 12m forward PE. We believe that there has been something of a now 'unwarranted' Swiss premium.

Figure 654: Nestle looks expensive relative to the US peers on 12 month forward PE …



Source: Refinitiv, Credit Suisse research

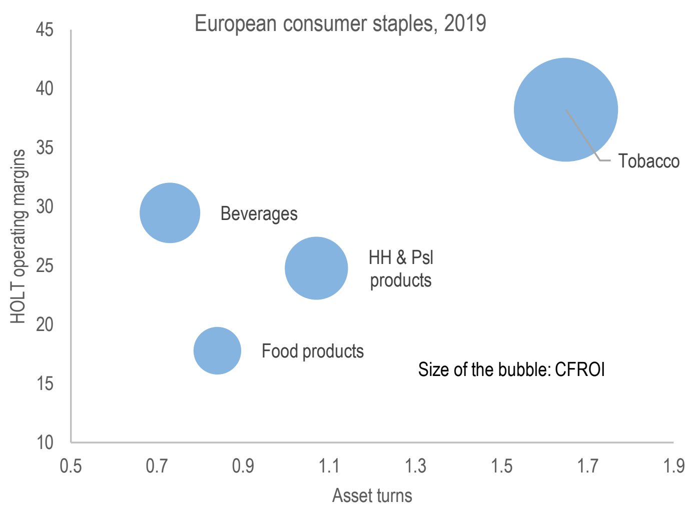
Figure 655: …and neutral relative to the European market



Source: Refinitiv, Credit Suisse research

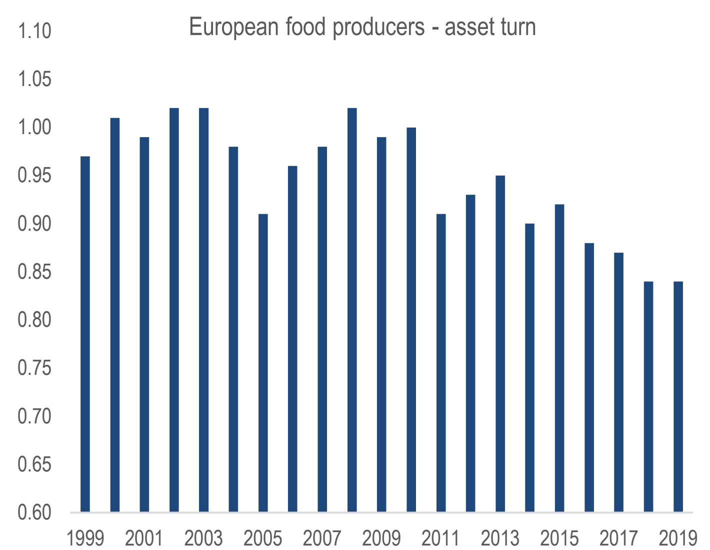
This subsector has suffered from the worst combination of falling asset turns – typically a sign of a weak business model – and the lowest margins and CFROI among the subsectors.

Figure 656: Operating margins against asset turns



Source: Credit Suisse HOLT

Figure 657: Asset turns under pressure



Source: Credit Suisse HOLT

We show below the European food producers that are rated Neutral or Underperform by CS analysts.

Figure 658: Neutral- and Underperform-rated food producers

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Choc.Lindt &Spruengli Par	43.1	207%	6%	0.4	-6%	na	1.4	-32.7	-5.6	-1.5	3.0	Neutral
Nestle 'N'	22.1	106%	-20%	5.5	11%	3.8	2.8	10.0	-0.4	-0.5	2.1	Neutral
Aryzta	-22.1	nm	na	0.5	-70%	12.7	0.0	-181.1	nm	-2.2	2.6	Underperform
Bell 'R'	13.4	64%	-22%	1.2	-33%	na	2.3	55.2	0.2	0.0	3.4	Underperform
Emmi Ag	22.8	109%	-11%	2.7	9%	4.1	1.6	14.7	1.7	-0.1	2.6	Neutral
Orior	17.4	83%	-7%	6.2	63%	7.8	3.2	5.3	-8.7	0.0	2.8	Neutral
Tate & Lyle	11.9	57%	-38%	2.2	-36%	8.2	4.5	91.1	11.2	-2.5	2.6	Neutral
Hochdorf N	-66.0	nm	na	3.1	-80%	na	na	-65.1	-512.0	-27.5	4.0	Underperform

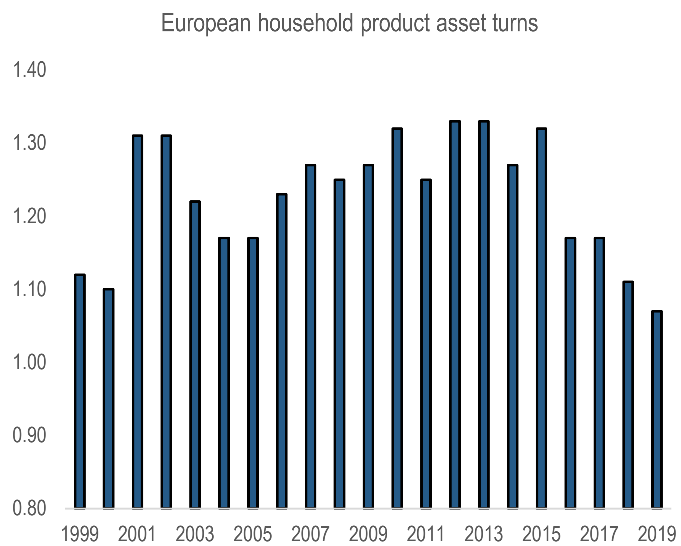
Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

Household products: underweight

We remain underweight because:

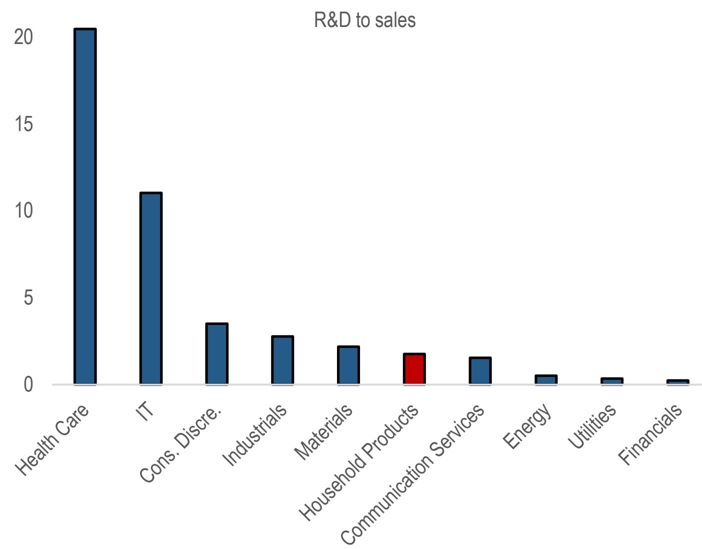
- As shown earlier, the subsector has the greatest risk of demand being bought forward (in areas related to hygiene) and it is one of the most positively correlated to infection rates.
- We are most concerned that household product embody our concept of a non-conspicuous brand.
- We believe a proxy on a vulnerable business models is falling asset turns and abnormally low R&D to sales. Household products have both of these (R&D to sales ratio is about 2% last year for Reckitt Benckiser).

Figure 659: Asset turns for household products have been falling – a sign of a business model in trouble



Source: Credit Suisse HOLT

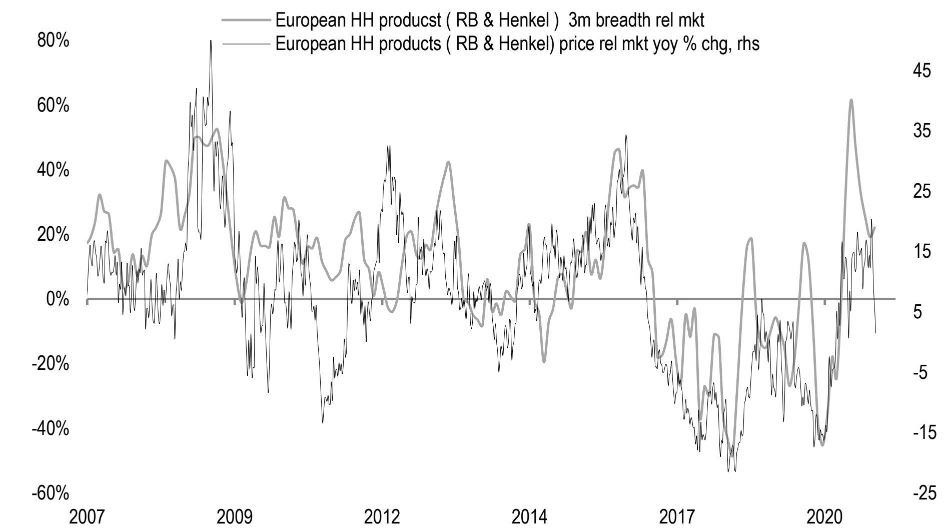
Figure 660: R&D-to-sales for household products is low



Source: Credit Suisse HOLT

- Earnings revisions are starting to roll over quite sharply.

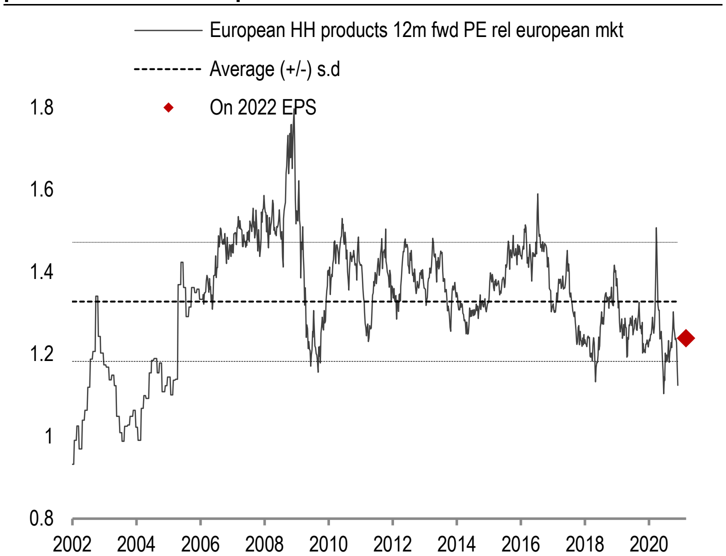
Figure 661: Earnings revisions relative to European market against relative performance



Source: Refinitiv, Credit Suisse research

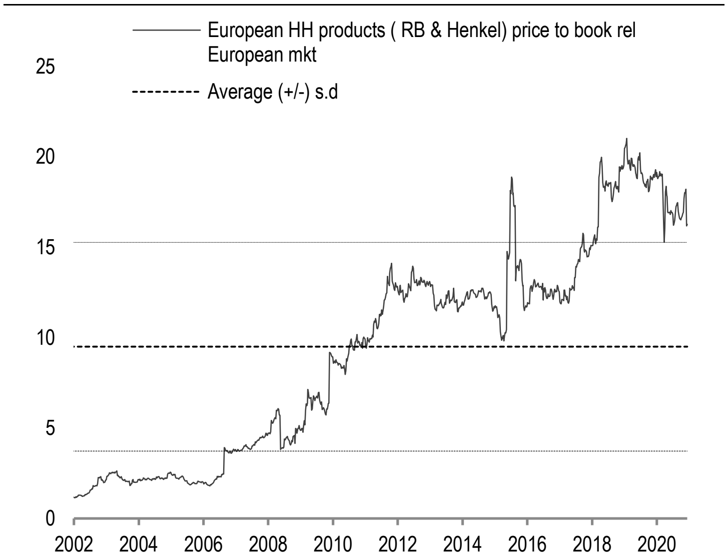
The support is that valuations appear to be cheap. This is largely because cyclical earnings are very depressed. We see two ways around this: i) to look ahead to 2022 or 2023 EPS, by which time cyclical earnings are likely to be more mid-cycle (and on this measure the sector is less cheap) and ii) to look at measures of normalised earnings (such as book value).

Figure 662: On 12m forward P/E relative, European household products looks cheap…



Source: Refinitiv, Credit Suisse research

Figure 663: …but on PB relative to market, it looks expensive



Source: Refinitiv, Credit Suisse research

CS analysts have Outperform ratings on both Reckitt Benckiser and Essity.

Figure 664: European household product companies

Name	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Reckitt Benckiser Group	20.1	81%	-24%	4.9	-20%	5.1	2.7	-51.9	2.9	1.9	2.2	Outperform
Henkel	17.7	71%	-20%	1.8	-40%	na	2.2	na	4.5	-2.1	3.5	Not Covered
Essity B	15.7	63%	-37%	3.4	-28%	6.9	2.6	24.0	-4.3	-3.1	2.4	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

Food retailing: move to underweight

We move to underweight this sector because of the following concerns:

COVID-19 pandemic

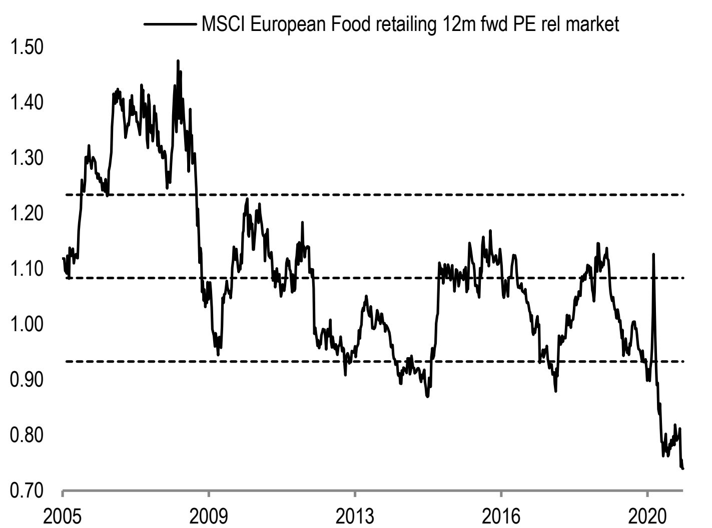
Food retailing benefited from people working from home during pandemic lockdowns. As shown in the consumer staples overview section, retail sales in UK food stores have not fallen at all (in the UK are up 5% YTD) and correlation to infections rates has been very high.

Moreover, consumers to some extent bought products online from established vendors (with Amazon having a low penetration in food retailing). Moreover, if they went shopping, they preferred the stores with wide aisles for safety reasons (and these tended to be owned by the larger brands—Tesco as opposed to discount retailers where aisles are closer together).

Valuation

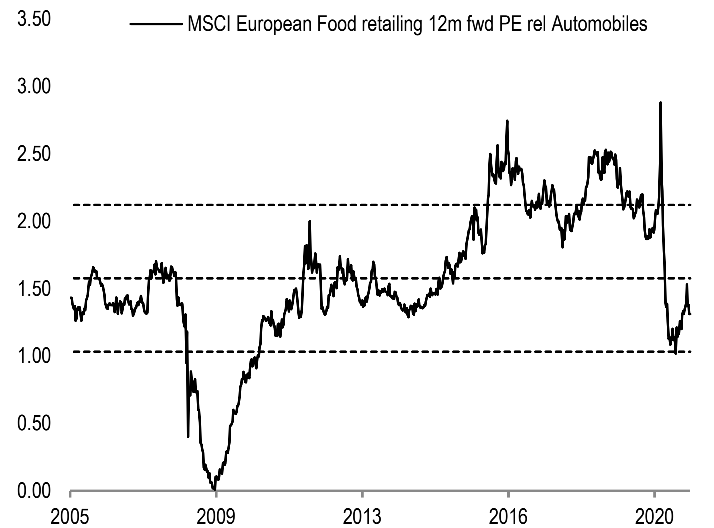
Although it might look cheap relative to its own history on P/E relatives, food retailing is not cheap relative to other technically disrupted sectors, such as European autos.

Figure 665: Although food retailing look cheap relative to history…



Source: Refinitiv, Credit Suisse research

Figure 666: …it looks less cheap relative to other disrupted markets such as autos



Source: Refinitiv, Credit Suisse research

Macro

Food retailing also suffers from abnormally from rising PMIs (as shown elsewhere) because it tends to be a non-cyclical sector.

Disrupted

We believe the sector is structurally disrupted by:

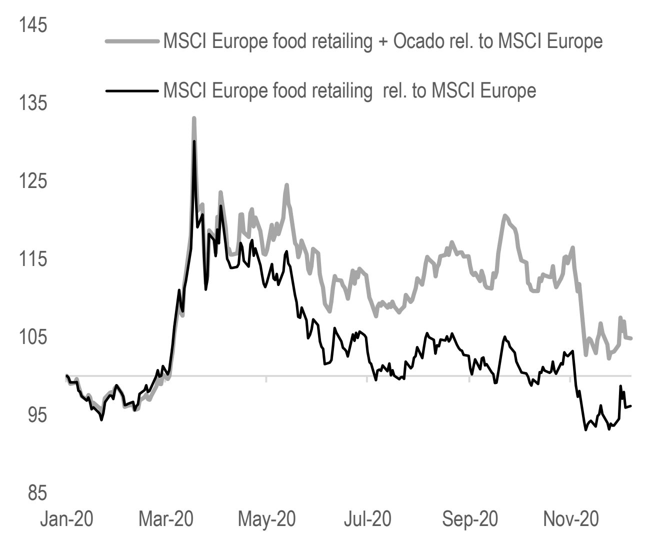
- The ongoing growth of Lidl and Aldi, which still have a 12% price advantage and in countries such as the Netherlands, have an 18% market share compared with only 14% in the UK.
- The threat of Amazon in fresh-food delivery and other online food groceries. Only about 10% of food is online according to our analysts and this could rise.

- The market cap of Ocado is now 23% of that of the rest of the sector combined; putting both the disrupted and disruptors together suggests that the sector has outperformed by 4% this year.
- The ongoing exposure of legacy operators to falling high street real estate values.
- The threat that Waitrose (unquoted) becomes a more effective competitor, having had to find alternative online distributor to Ocado.

See UK Food retail: Who's who in times of disruption, 27 Feb, for our analysts' view on this topic.

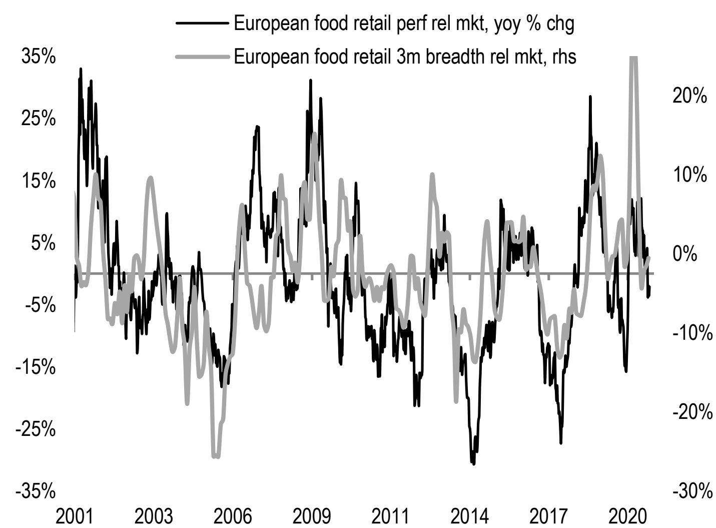
Relative earnings revisions have rolled over, though relative price performance has reflected this.

Figure 667: Food retailing + Ocado together has slightly outperformed



Source: Refinitiv, Credit Suisse research

Figure 668: Relative earnings revisions of food retailers against its performance



Source: Refinitiv, Credit Suisse research

Below we show a screen of European food retailers under Credit Suisse coverage.

Figure 669: European food retailers under CS coverage

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Koninklijke Ahold Delhaize	11.7	56%	-33%	1.8	-25%	9.8	4.0	35.3	8.3	1.9	2.3	Neutral
Morrison(Wm)Spmkts.	12.2	59%	-38%	0.9	-40%	1.6	5.8	65.9	-7.1	0.5	2.6	Outperform
Sainsbury J	11.0	53%	-33%	0.7	-44%	15.9	6.6	93.2	1.1	1.5	2.5	Outperform
Tesco	13.8	66%	-32%	1.7	-39%	7.0	3.4	43.0	-1.4	-0.1	2.3	Neutral

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

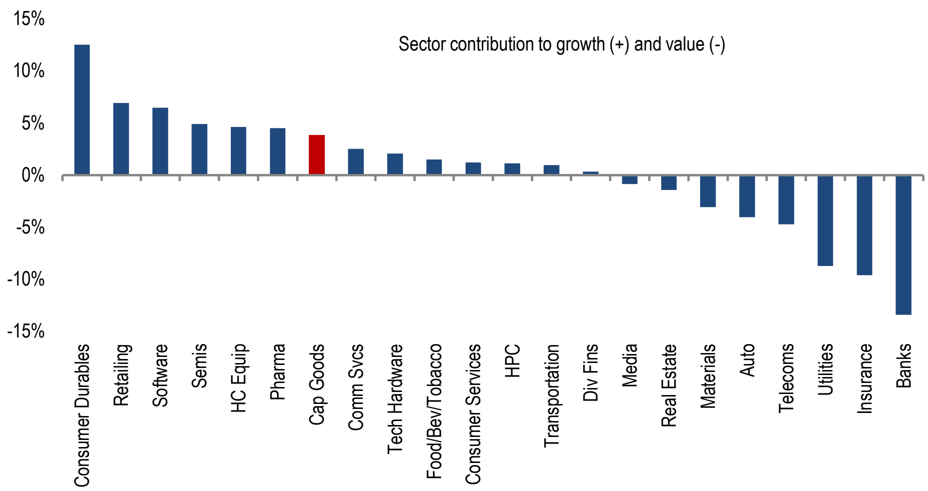
Capital goods: underweight, but some subsectors are attractive

Capital goods are one of the largest industry groups in Europe, accounting for 11.4% of the Stoxx Europe 600. Despite wanting to be overweight industrial cyclicals and being benchmark cyclicals overall, we have the following concerns with this sector:

1. Over half of the sector's market cap is categorised as growth

There are a number of ways of categorising growth and value stocks, but to use one of the simplest and most widely followed approaches (that of MSCI), around 51% of the European cap goods sector's market cap is categorised as growth and 42% as value (the remainder sits in the 'both' category). Cap goods are the largest non-tech cyclical contributor to the European growth index.

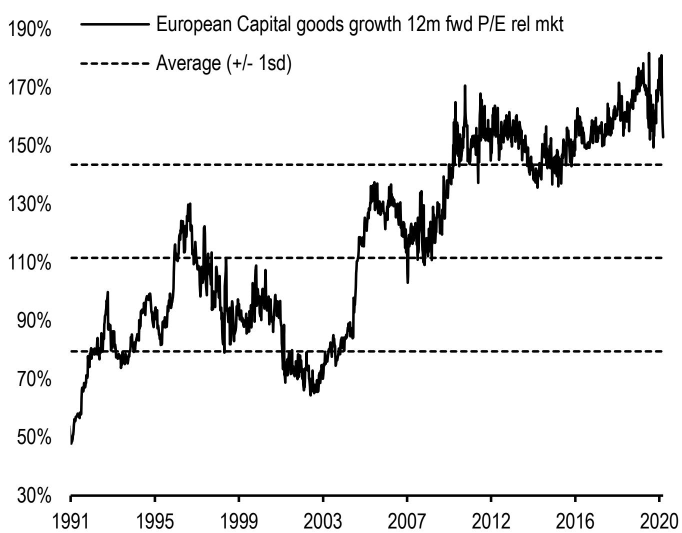
Figure 670: Cap goods are the largest non-tech cyclical contributor to the European growth index



Source: Refinitiv, Credit Suisse research

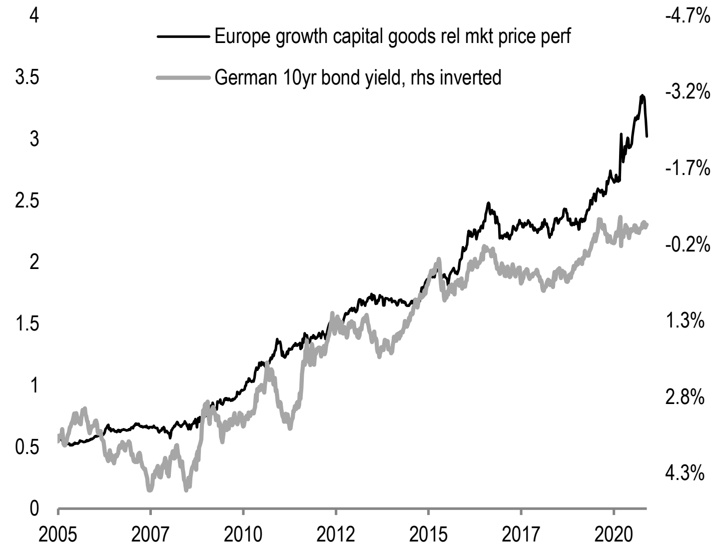
As we discuss in the style section of this outlook, we remain underweight growth in Europe (a position we have had since mid-May). The 'growth' capital goods companies have tended to be something of a bond proxy, and thus although the sector is cyclical in terms of its revenues, it has performed more like the more defensive growth elements of the market. Indeed, the growth capital goods names seem to be discounting a further fall in the Bund yield.

Figure 671: The growth element of the sector remains expensive…



Source: Refinitiv, Credit Suisse research

Figure 672: …and tend to be quite Bund-sensitive

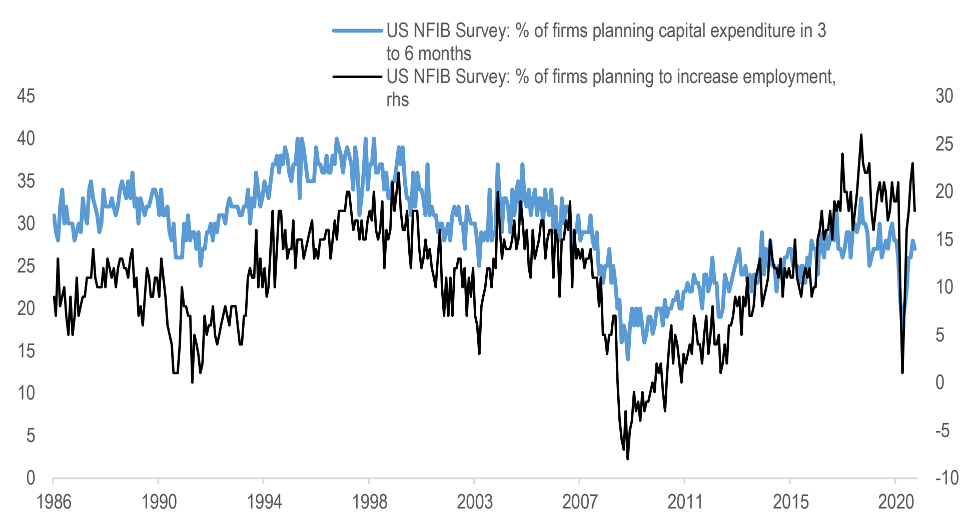


Source: Refinitiv, Credit Suisse research

2. Corporates seem to be focusing more on opex/employment than capex

While we see some potential for capex to pick up, we think there is less upside here than seen in the aftermath of the 2008-09 financial crisis. The NFIB survey suggests firms are more focused on opex spend – such as employment – rather than capex. This is why we have an overweight of employment agencies, for example.

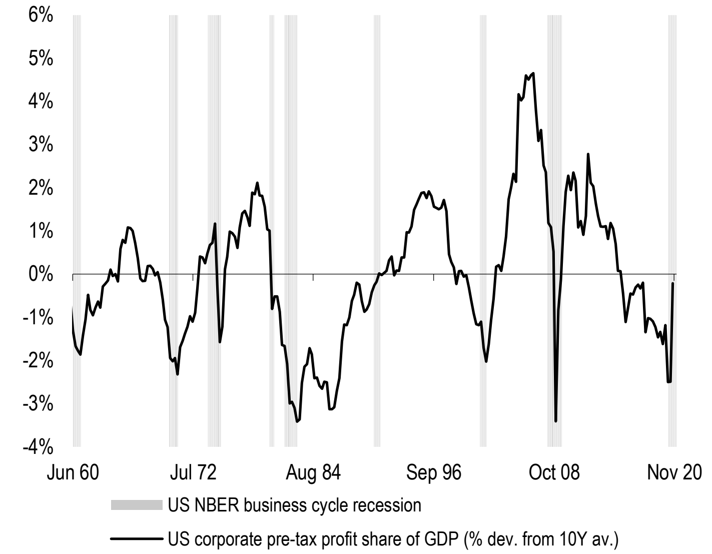
Figure 673: The NFIB survey suggests corporates are more focused on opex than capex



Source: Refinitiv, Credit Suisse research

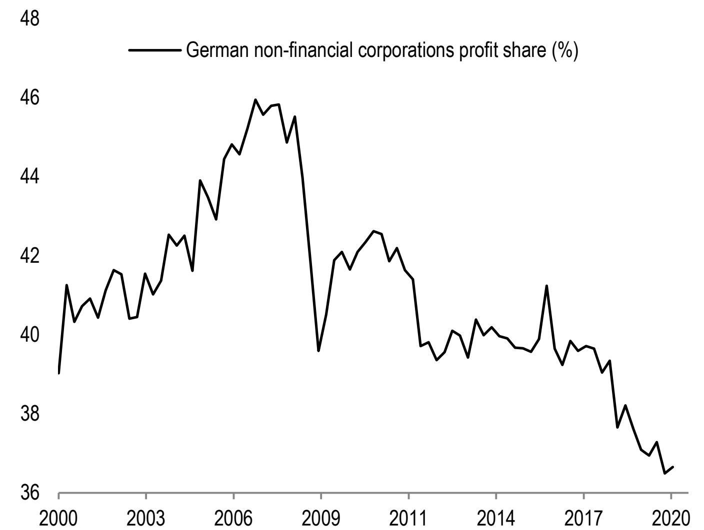
This may be because there has been a structural squeeze on profits, as we can see if we look at the profit share of GDP in both the US and Germany even before the pandemic struck.

Figure 674: US pre-tax profit share of GDP, deviation from 10y average



Source: Refinitiv, Credit Suisse research

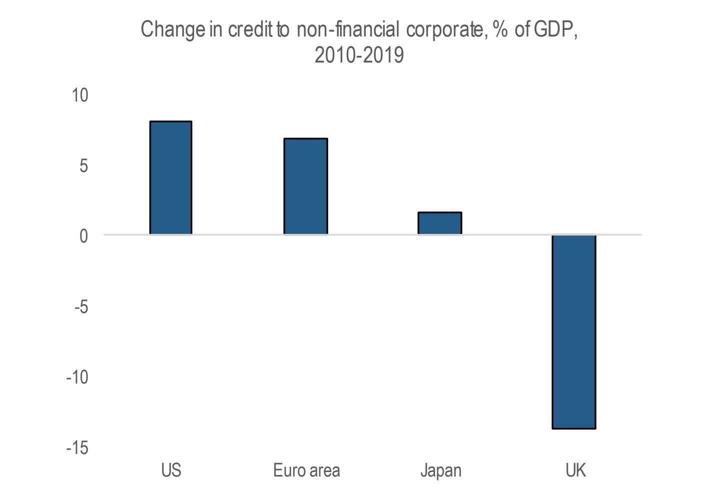
Figure 675: German non-financial corporates' profit share



Source: Refinitiv, Credit Suisse research

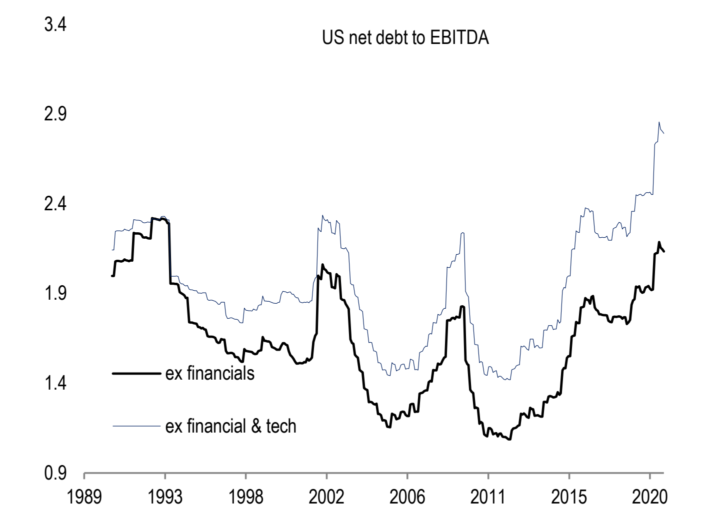
Moreover, this time around corporate leverage is extreme. This makes corporates more prone to cut debt rather than spend on longer-cycle investments.

Figure 676: Corporate leverage has increased in the past decade



Source: Refinitiv, Credit Suisse research

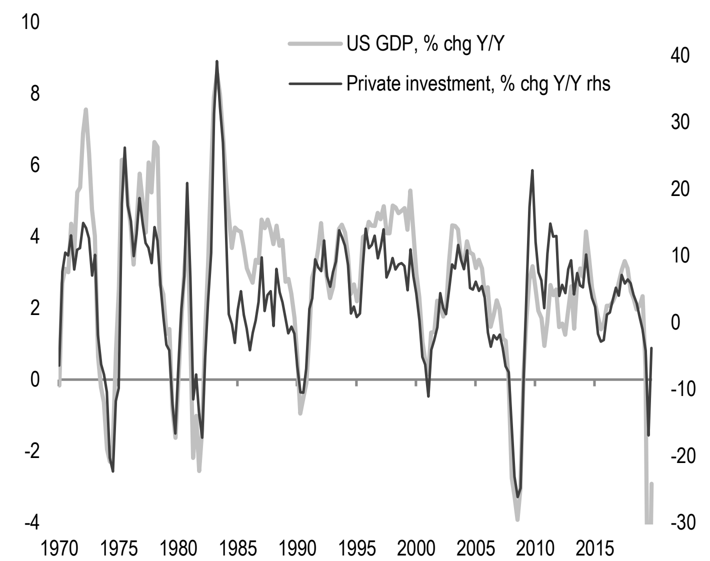
Figure 677: Net debt to EBITDA is very high



Source: Refinitiv, Credit Suisse research

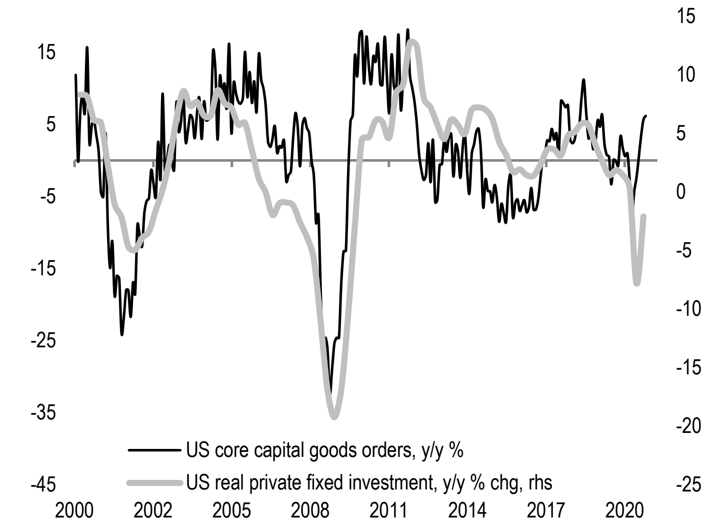
Thus, while a rebound in GDP above 2% will lead to a pick-up in capex, we think capex will lag IP growth this time around.

Figure 678: Historically, GDP growth above 2% has been consistent with capex picking up



Source: Refinitiv, Credit Suisse research

Figure 679: Core capital goods orders are consistent with an uptick in investment



Source: Refinitiv, Credit Suisse research

Over the past 15 years, in those quarters when US capex growth has been above 2% on a year on year basis, European cap goods have outperformed 56% of the time. We do not see this as a sufficiently strong macro support given the other concerns listed below.

3. The sector has already discounting a very strong recovery in IFO

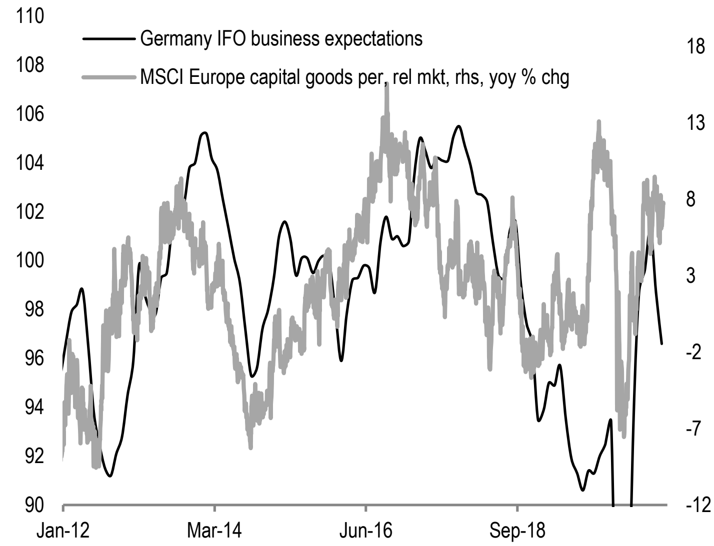
We find that the capital goods sector in Europe has been more correlated with IFO than any other variable, such as European or Global PMIs. We can see that a very strong recovery in IFO is being discounted already.

Figure 680: IFO has been the macro driver most correlated with the capital goods sector…

Correlation with Eur Cap Goods since 2010				
IFO	Europe PMI	Global PMI	US ISM	China PMI
0.818	0.524	0.244	0.542	0.073

Source: Refinitiv, Credit Suisse research

Figure 681: …with capital goods tending to outperform when IFO rises

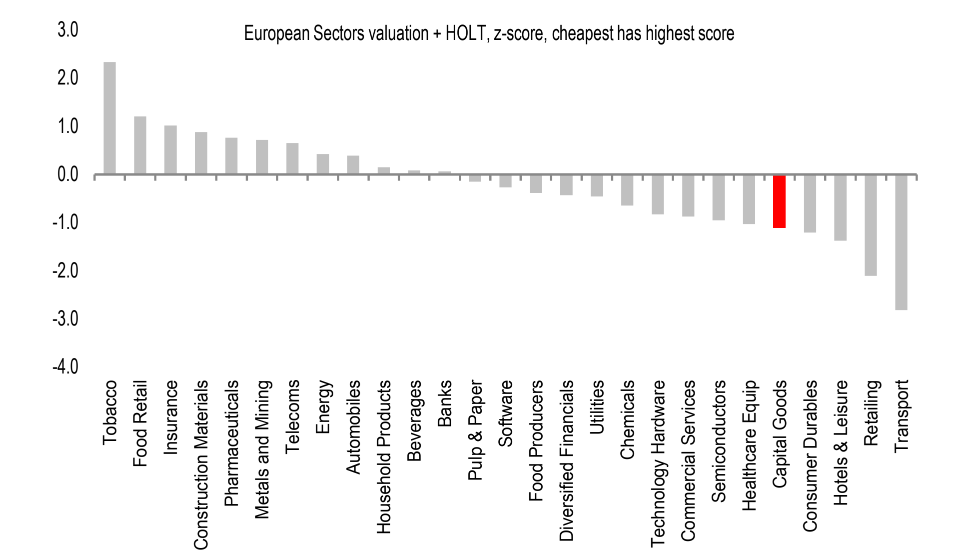


Source: Refinitiv, Credit Suisse research

4. Valuations are extreme

Capital goods comes out on our aggregate scorecard as the fourth most expensive major sector (ranking at least 1.5std expensive on every major variable: price to earnings, price to book and HOLT).

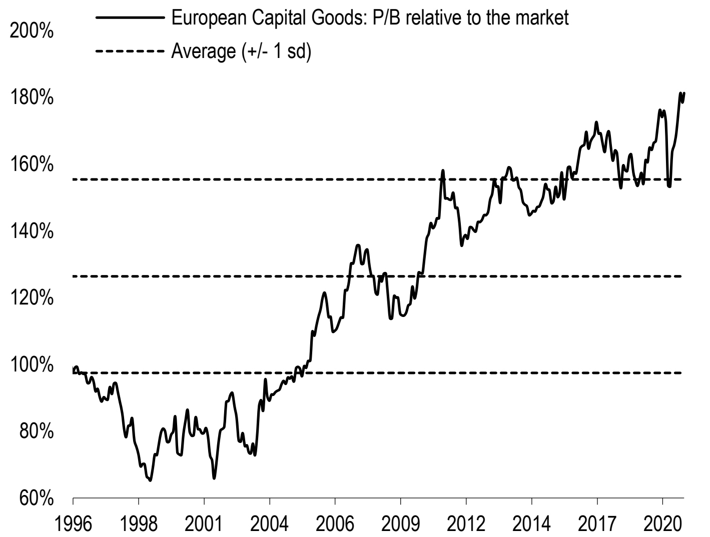
Figure 682: Capital goods is one of the most expensive European sectors on our composite approach



Source: Refinitiv, Credit Suisse research

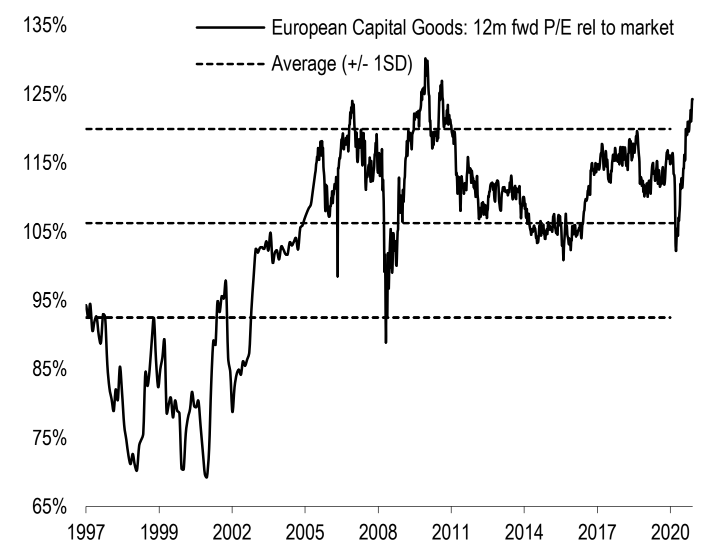
We can see this visually if we look at both earnings- and book-based valuations.

Figure 683: The P/B relative of the sector is extended…



Source: Refinitiv, Credit Suisse research

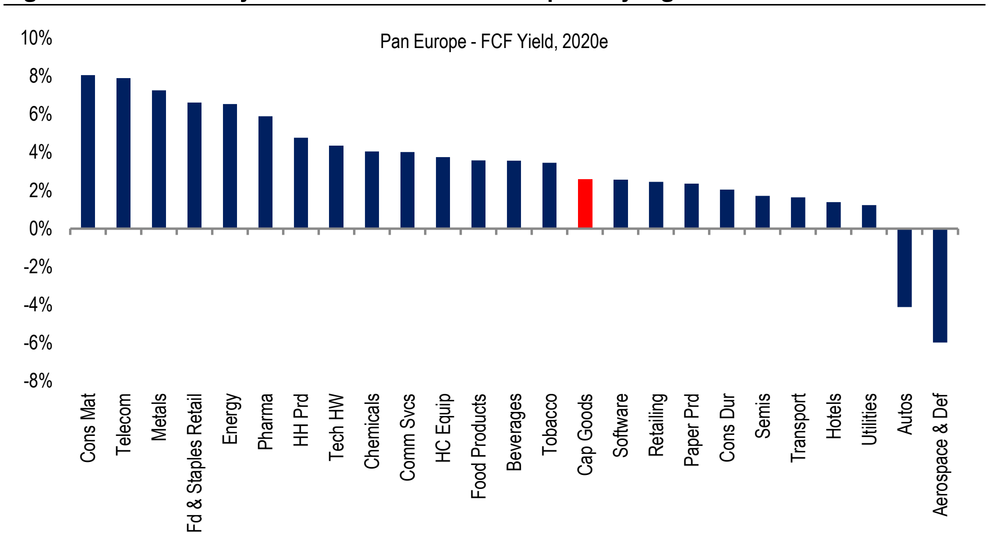
Figure 684: …as is the P/E relative



Source: Refinitiv, Credit Suisse research

The sector has become more asset-light (thus limiting the use of book), but even a focus on cash flow makes the sector look relatively expensive compared with other cyclical areas such as mining, chemicals or tech hardware.

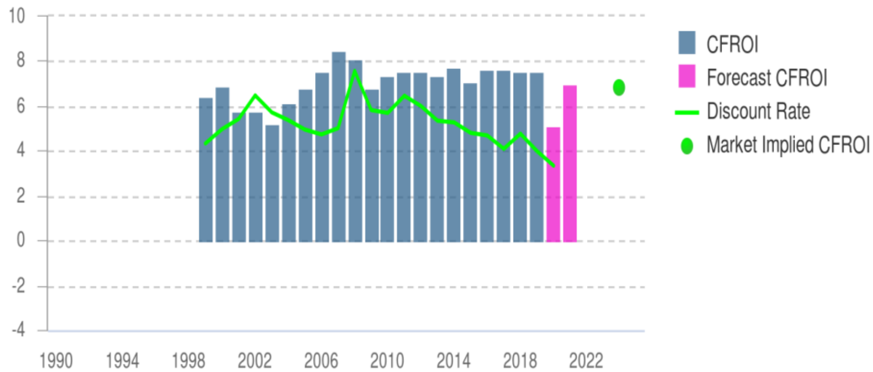
Figure 685: The FCF yield of the sector is not especially high



Source: Refinitiv, Credit Suisse research

CFROI has not improved in recent years, and is discounted to remain at the current fairly elevated level.

Figure 686: CFROI has not been improving, and is implied by the market to remain at an elevated level

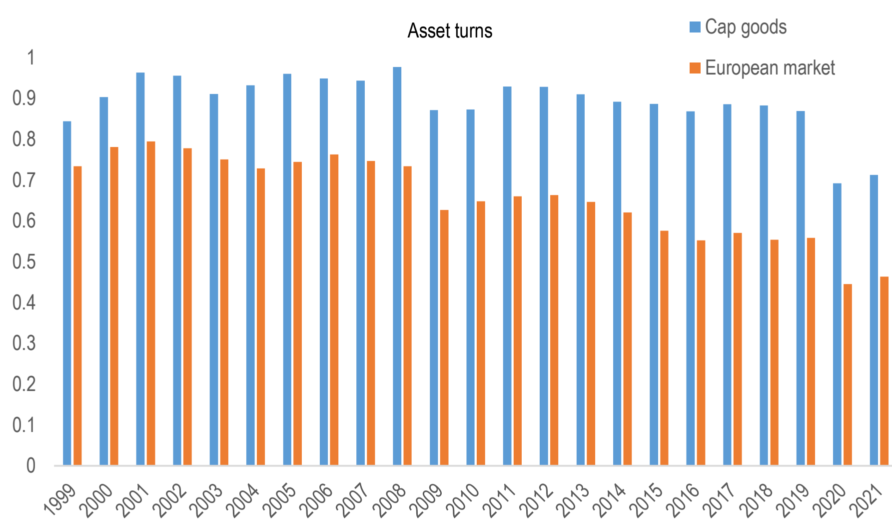


Source: Refinitiv, Credit Suisse HOLT

5. HOLT does not suggest a significant improvement in business models

We think two of the signals of a structural improvement in a sector are a large rise in CFROI and a sharp rise in asset turns. As the first chart below highlights, asset turns have generally been on the decline in the cap goods sector.

Figure 687: Asset turns have been declining in the cap goods sector, in line with the broader market

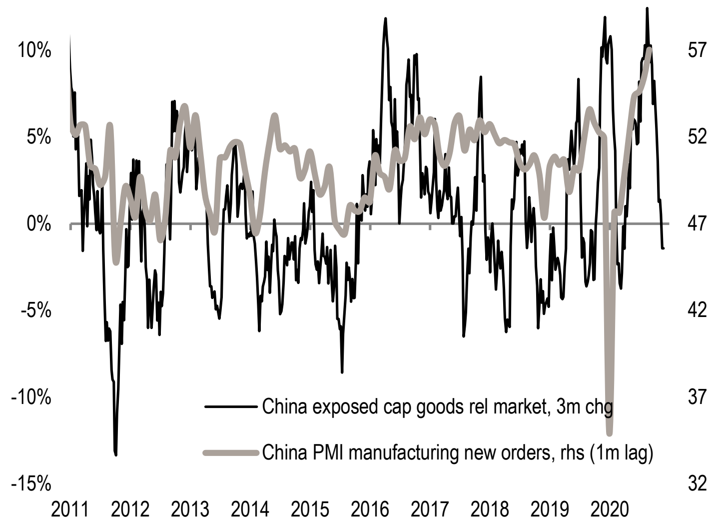


Source: Credit Suisse HOLT, Credit Suisse research

6. Some areas have already reflected the resilience of China PMIs

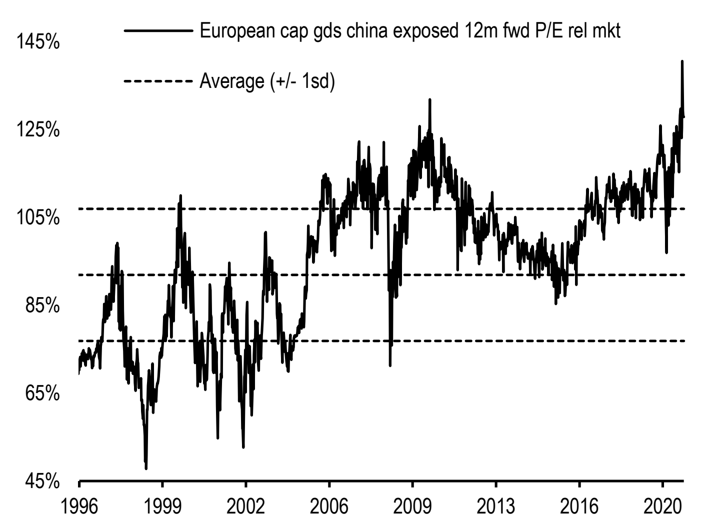
We can see that the China-related capital goods names have already outperformed very strongly (moving in line with luxury) and have fully reflected the strength of China PMIs. As a result, they appear expensive relative to the market.

Figure 688: The China-exposed names have fully reflected the strength in PMIs…



Source: Refinitiv, Credit Suisse research

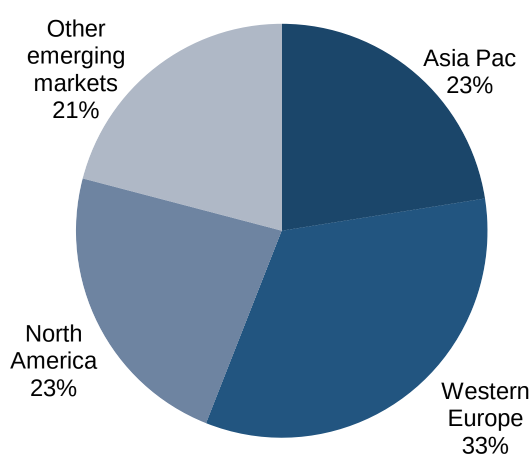
Figure 689: …and are expensive as a group



Source: Refinitiv, Credit Suisse research

Around 23% of total sector revenues come from Asia Pacific overall, as we can see below.

Figure 690: APAC accounts for around 23% of the sector's revenue



Source: Refinitiv, Credit Suisse research

We show China-exposed names below.

Figure 691: China-exposed capital goods in Europe

Name	Perf. rel Europe (%)	Rel YTD perf	Revenue exposure to China %	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Alstom	15%	22%	na	19.8	92%	3%	3.3	27%	0.3	1.1	22.8	20.8	0.5	2.1	Outperform
Kuka	25%	16%	na	-60.5	nm	na	1.4	-63%	na	0.4	-3.7	nm	na	4.0	Not Covered
Kone 'B'	43%	29%	26%	33.0	152%	5%	10.9	8%	2.8	2.6	-31.2	6.0	1.9	3.5	Outperform
Schindler 'P'	16%	8%	16%	29.7	137%	-6%	6.8	-13%	2.8	1.7	na	4.4	1.3	2.6	Outperform
Skf B	28%	19%	15%	15.7	72%	-14%	2.7	-27%	10.5	2.2	34.5	1.2	0.7	2.8	Underperform
Schneider Electric	26%	36%	13%	22.8	106%	9%	2.9	22%	4.3	2.3	11.2	5.0	2.1	2.3	Outperform
Siemens	30%	14%	9%	18.7	86%	12%	2.5	-10%	6.8	3.0	54.9	-14.6	-6.8	2.0	Outperform
Alfa Laval	-1%	-2%	12%	19.8	91%	-19%	3.3	-26%	5.4	2.4	24.4	0.0	-2.2	2.5	Neutral
Abb Ltd N	10%	9%	15%	23.5	109%	3%	3.9	-3%	2.7	3.1	-22.4	-4.6	2.4	2.9	Not Rated
Philips Eltn.Koninklijke	11%	8%	13%	21.2	98%	0%	3.1	16%	4.3	2.0	-6.3	3.5	-1.1	2.0	Neutral
Sandvik	21%	12%	7%	19.4	90%	-9%	3.9	-8%	5.9	2.1	11.2	6.1	-1.3	2.2	Outperform
Atlas Copco A	36%	23%	13%	31.3	144%	44%	10.0	25%	2.9	1.6	-6.9	1.3	0.6	3.3	Neutral
Konecranes	6%	11%	26%	13.5	62%	-36%	1.8	-50%	1.9	4.0	-4.3	20.8	1.3	2.1	Outperform

Source: MSCI, IBES, Credit Suisse HOLT, Refinitiv, Credit Suisse estimates

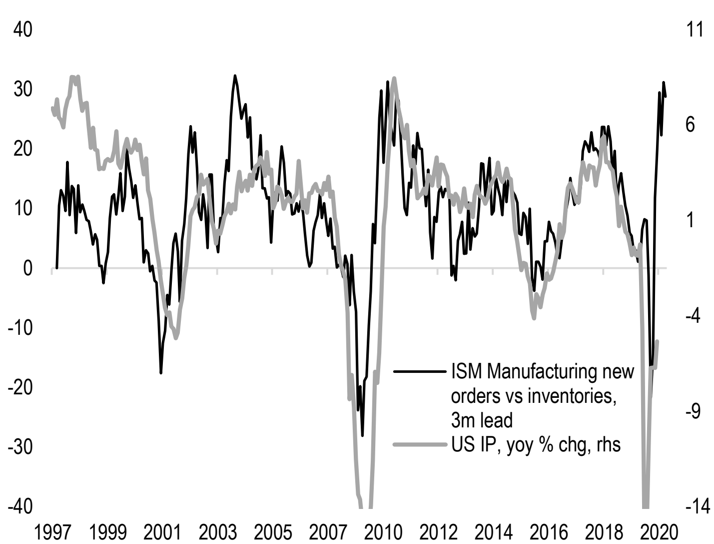
What to focus on?

We are more interested in the IP recovery than the capex recovery.

1. **A recovery in industrial activity and hence short-cycle areas**

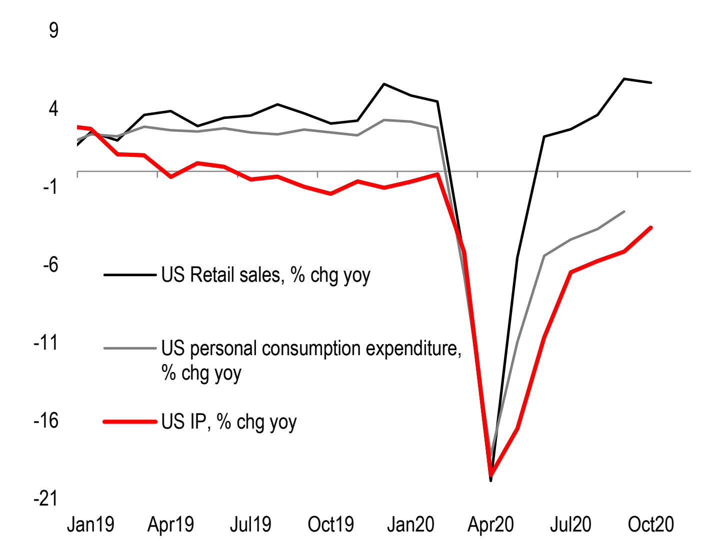
Classic cycle indicators, such as ISM manufacturing new orders less inventories, point to the potential for 2021 to be a year of industrial bounce-back. This indicator is now at its highest level since the third quarter of 2009 owing to a particularly large decline in inventories. A similar level was reached at the end of 2003, another early cycle moment. This points to a rapid bounce-back in IP.

Figure 692: ISM new orders to inventories are at their highest level since 2009



Source: Refinitiv, Credit Suisse research

Figure 693: Retail sales have been stronger than IP

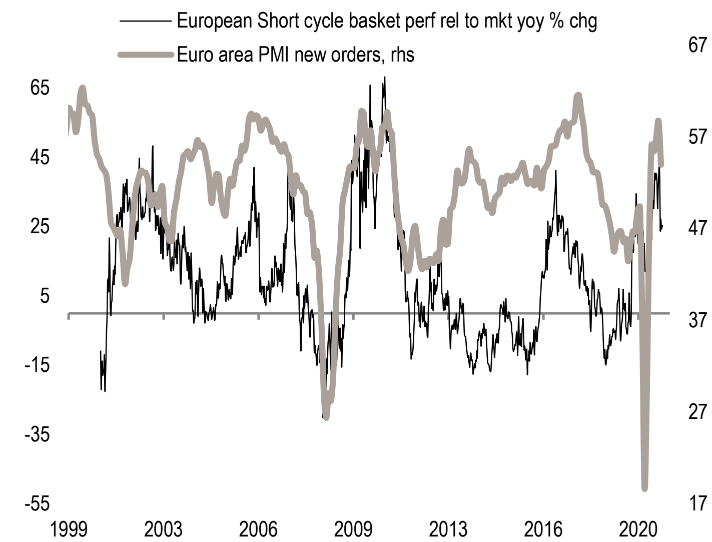


Source: Refinitiv, Credit Suisse research

This gives some upside to the short-cycle areas

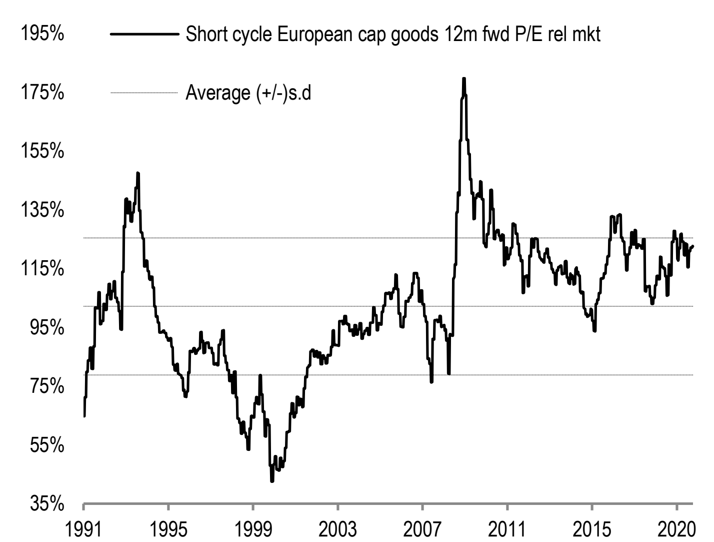
The short-cycle names essentially represent the 'value' component of the capital goods sector, and thus trade more closely with PMIs than the growth elements of the sector. The charts below are calculated using SKF, IMI, Sandvik, Atlas Copco and Spectris. They perhaps have more upside if PMIs do indeed rise to the lows 60s in 2021 as we expect.

Figure 694: The short-cycle names move with European PMIs



Source: Refinitiv, Credit Suisse research

Figure 695: The group is less extended from a valuation perspective than other subgroups



Source: Refinitiv, Credit Suisse research

The problem as we see it is that the short-cycle areas are only a relatively small share of the sector's market cap. Of the short-cycle names, CS has an Outperform on Sandvik.

Figure 696: Short-cycle cap goods names

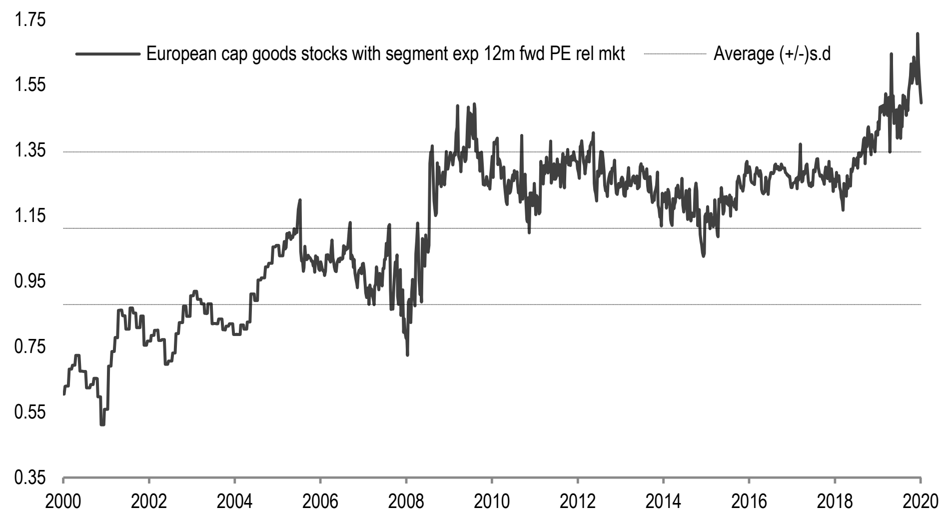
	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Skf B	15.7	72%	-14%	2.7	-27%	10.5	2.2	34.5	1.2	0.7	2.8	Underperform
Imi	15.8	73%	-20%	3.9	-32%	10.0	2.0	24.2	10.8	2.1	2.3	Neutral
Sandvik	19.4	90%	-9%	3.9	-8%	5.9	2.1	11.2	6.1	-1.3	2.2	Outperform
Atlas Copco A	31.3	144%	44%	10.0	25%	2.9	1.6	-6.9	1.3	0.6	3.3	Neutral
Spectris	22.1	88%	3%	2.5	-24%	4.1	2.4	-11.6	-1.5	1.8	2.8	Not Covered

Source: MSCI, IBES, Credit Suisse HOLT, Refinitiv, Credit Suisse estimates

Construction

Nearly half the index plays into our positive view on the construction cycle (as we discuss in the section of this report on construction materials), with construction exposure accounting for about 10% of the sector's market cap.

Figure 697: The construction-exposed cap goods do trade at a premium



Source: Refinitiv, Credit Suisse research

Clearly, we want to focus on the more cyclical (i.e. value) construction names rather than the growth names. This would imply Assa, Schneider, Nexans and Prysmian. We particularly like the structural story of needing to upgrade cables and grids.

Figure 698: European capital goods names with construction exposure

						-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Segment Exposure	% of revenue coming from construction	Sales Exposure to US	Sales Exposure to Pan Europe	eCAP award	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Assa Abloy B	Security systems	100	36%	41%	X	22.2	102%	-19%	3.8	-19%	4.1	1.9	7.3	8.5	-0.5	2.3	Outperform
Halma	Building & Infrastructure safety components	25	35%	38%	X	38.6	154%	18%	7.5	21%	2.4	0.7	-28.6	1.1	-1.0	2.9	Outperform
Schindler 'P'	Elevators & Escalators	100	25%	39%	X	29.7	137%	-6%	6.8	-13%	2.8	1.7	na	4.4	1.3	2.6	Outperform
Nexans	Power grids/ cables	40	12%	64%	-	16.4	76%	-17%	1.9	32%	2.8	0.6	35.1	-15.5	-2.7	2.3	Outperform
Kone 'B'	Elevators & Escalators	100	20%	41%	X	33.0	152%	5%	10.9	8%	2.8	2.6	-31.2	6.0	1.9	3.5	Outperform
Prysmian	Power grids/ cables	47	15%	67%	-	20.1	93%	13%	3.0	-18%	4.1	1.5	-39.4	-0.3	-1.0	2.3	Neutral
Geberit 'R'	Sanitary systems	100	3%	91%	X	29.4	136%	-9%	10.0	4%	3.3	2.2	-28.1	5.6	2.8	3.2	Neutral
Schneider Electric	Low Voltage systems for buildings	80	27%	27%	X	22.8	106%	9%	2.9	22%	4.3	2.3	11.2	5.0	2.1	2.3	Outperform
Atlas Copco A	Compressors, power tools	14	22%	35%	X	31.3	144%	44%	10.0	25%	2.9	1.6	-6.9	1.3	0.6	3.3	Neutral

Source: MSCI, IBES, Credit Suisse HOLT, Refinitiv, Credit Suisse estimates

Automation

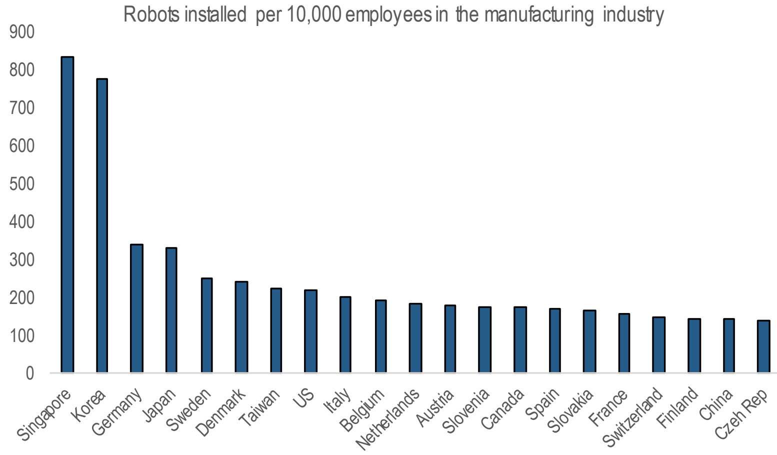
The automation story remains intact, in our view, and if anything, the drivers of the theme are only strengthening into 2021. In particular we would highlight:

i. Higher minimum wages (as discussed in the inflation section);

ii. Improving technology (30% of tasks in 60% of occupations are potentially replicable by machines, according to an Oxford University study);

iii. There is still huge scope for a rise in robotics penetration, were it to rise in the US and Europe to the levels seen in Korea or Singapore.

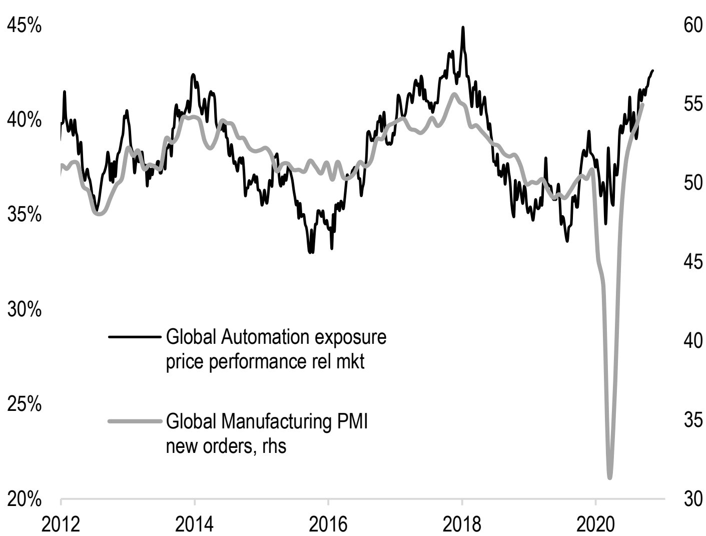
Figure 699: There continues to be significant support for the automation theme if robotics penetration in the US or Europe were to rise to levels seen in Korea and Singapore



Source: Refinitiv, Credit Suisse research

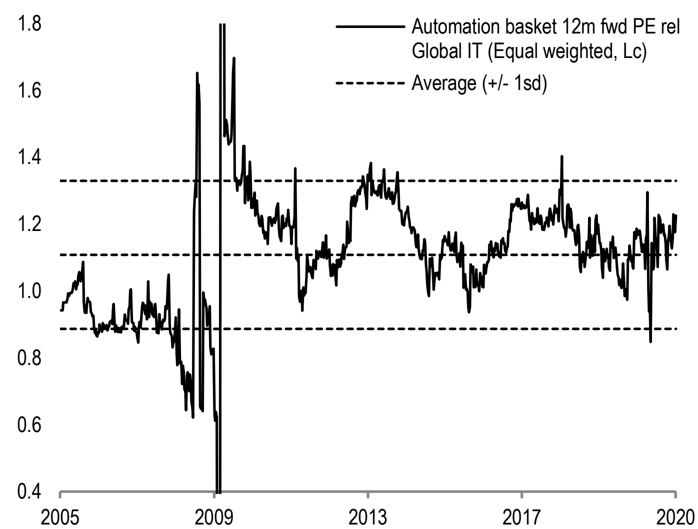
Automation can truly be considered cyclical growth: the sector tends to move with global PMIs, as shown in the first chart below, and yet is not extended from a valuation perspective versus the global tech sector.

Figure 700: Automation tends to move with PMIs…



Source: Refinitiv, Credit Suisse research

Figure 701: …but isn't especially extended from a valuation perspective



Source: Refinitiv, Credit Suisse research

Below we show the stocks that feature in our global automation screen. Unfortunately, there are not many European names in this area. It is an area where Japanese names show up particularly strongly, and was part of the reason for our more positive view on Japan in the regional part of our first Outlook published on 20 November 2020.

Figure 702: Global automation screen

Name	Exposure to automation	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Emerson Electric	-	22.5	104%	-7%	5.7	2%	4.9	2.4	28.1	2.1	1.0	2.5	Outperform
Rockwell Automation	-	28.2	130%	8%	28.0	69%	2.9	1.7	-23.9	13.7	2.7	2.8	Neutral
Abb Ltd N		23.5	109%	3%	3.9	-3%	2.7	3.1	-22.4	-4.6	2.4	2.9	Not Rated
Eaton	-	24.1	112%	22%	3.1	20%	5.2	2.5	-1.9	6.3	3.1	2.1	Outperform
Pentair	-	19.2	89%	13%	4.4	31%	5.5	1.5	5.4	10.6	5.6	2.6	Not Covered
Keyence	100%	58.1	231%	45%	7.2	57%	2.2	0.3	-44.4	-2.7	-2.6	2.2	Outperform
Fanuc	100%	51.6	238%	37%	3.7	2%	na	0.8	-34.5	17.8	5.2	2.3	Neutral
Yaskawa Electric	90%	51.0	236%	67%	5.7	56%	1.3	0.5	-46.3	16.0	-0.8	2.7	Neutral
Hexagon B	50%	29.4	117%	8%	4.1	19%	2.4	0.9	-11.5	1.7	1.4	2.6	Not Covered
Siemens	25%	18.7	86%	12%	2.5	-10%	6.8	3.0	54.9	-14.6	-6.8	2.0	Outperform
Schneider Electric	20%	22.8	106%	9%	2.9	22%	4.3	2.3	11.2	5.0	2.1	2.3	Outperform
Flowserve	-	20.8	96%	-16%	2.6	-43%	5.0	2.2	-14.5	7.7	-6.0	2.9	Outperform

Source: MSCI, IBES, Credit Suisse HOLT, Refinitiv, Credit Suisse estimates

Energy efficiency

As we discuss in the thematic section of this outlook, the push by governments to decarbonise and green the housing and capital stock is only growing. President-elect Biden, for example, has pledged to weatherize 2 million homes over four years with a view to reducing the carbon footprint of the US housing stock by 50% by 2035. The companies below offer attractive exposure to this theme (Schneider - via its energy management and industrial automation businesses); cables (necessary as grids infrastructure is upgraded) and Atlas Copco.

Figure 703: Energy efficiency names

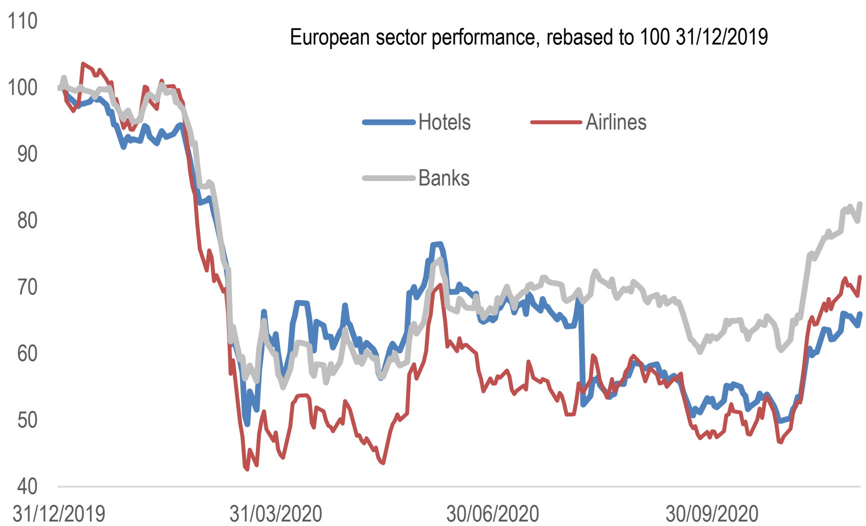
Name	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Schneider Electric	22.8	106%	9%	2.9	22%	4.3	2.3	11.2	5.0	2.1	2.3	Outperform
Nexans	16.4	76%	-17%	1.9	32%	2.8	0.6	35.1	-15.5	-2.7	2.3	Outperform
Prysmian	20.1	93%	13%	3.0	-18%	4.1	1.5	-39.4	-0.3	-1.0	2.3	Neutral
Atlas Copco A	31.3	144%	44%	10.0	25%	2.9	1.6	-6.9	1.3	0.6	3.3	Neutral

Source: MSCI, IBES, Credit Suisse HOLT, Refinitiv, Credit Suisse estimates

Hotels: underweight

Hotels have essentially tracked airlines higher from their September lows, slightly lagging the rally seen in other cyclical areas such as banks. Despite this, we opt to remain underweight as we see superior cyclical opportunities elsewhere at a time when we are also seeking to marginally reduce our cyclical exposure.

Figure 704: Hotels have marginally lagged other cyclical areas such as airlines and banks



Source: Refinitiv, Credit Suisse

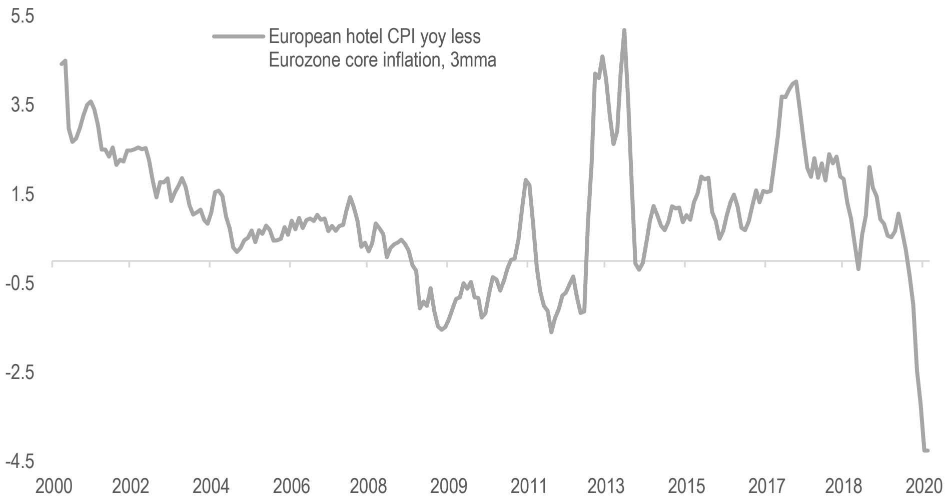
1. **Pricing power tends to build only late cycle**

Hotels pricing tends to be strongest when room capacity utilisation hits high levels. In the short term, the price elasticity of rooms is very low (as it takes time to build capacity). But it takes time for capacity utilization to recover, especially with capacity via online rental portals being pro-cyclical.

It took around four years after the GFC for hotel CPI to climb above euro area core CPI inflation. Pricing power only picked up as unemployment fell to lows.

While there is scope for personal travel to recover more quickly than in 2009, corporate travel, which as noted below is more important, could face a more permanent downshift.

Figure 705: Pricing power tends to pick up deep into the cycle



Source: Refinitiv, Credit Suisse

2. Disruption in various forms

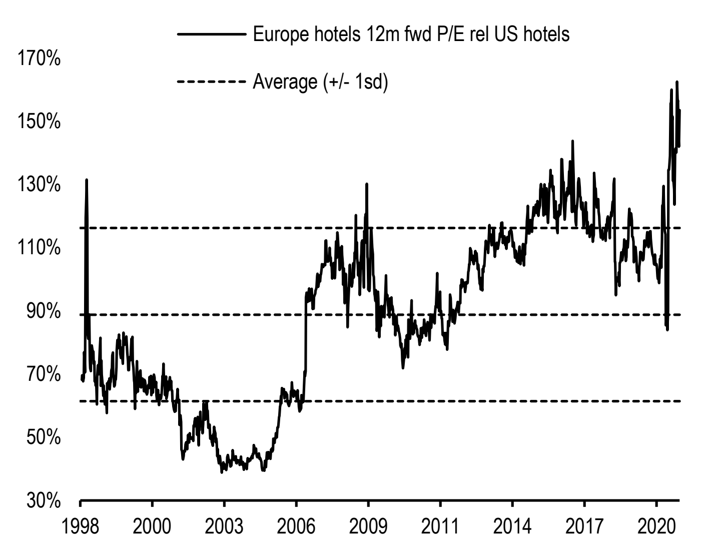
We believe this is a sector suffering from disruption in the following areas:

- Online rental portals (which have started to move into the corporate market): As our European Travel & Leisure analyst Leo Carrington notes, the online rental portals essentially provide pro-cyclical supply on short notice, limiting the profit potential into an upswing for branded hotels;
- Online travel agencies: OTAs provide a platform for price discovery and charge commissions for bookings made, and thus in turn threaten hotel margins. We also note the potential for disruption from new entrants such as Oyo (a Softbank-funded start-up that has gained traction in India and China and is now spreading globally and is focused on the budget segment);
- A franchise system incentivises the brand holder to maximise the number of hotel rooms and room revenue per room (RevPAR); however, incentives on hotel profitability are not aligned;
- We think there is some permanent disruption to business travel. Clearly it will be easier to hold the occasional meeting on Zoom than meet in person. Around 60% of total Revpar is corporate; our analyst Leo Carrington looked into the issue in detail in his piece, *Beyond the Pandemic: Sizing corporate travel recovery prospects.*

3. Valuations are not especially attractive

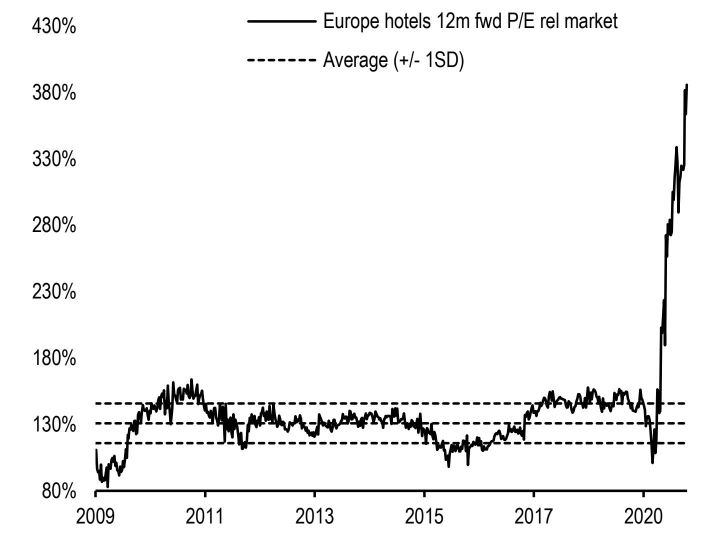
European hotels continue to look abnormally expensive against their US peers, as shown in the first chart below. This is particularly the case for IHG, which derives 70% of its revenue from the US. Less surprisingly, the sector is very expensive against the market on a 12-month forward basis as investors have applied a recovery multiple.

Figure 706: European hotels are expensive versus US peers…



Source: Refinitiv, Credit Suisse research

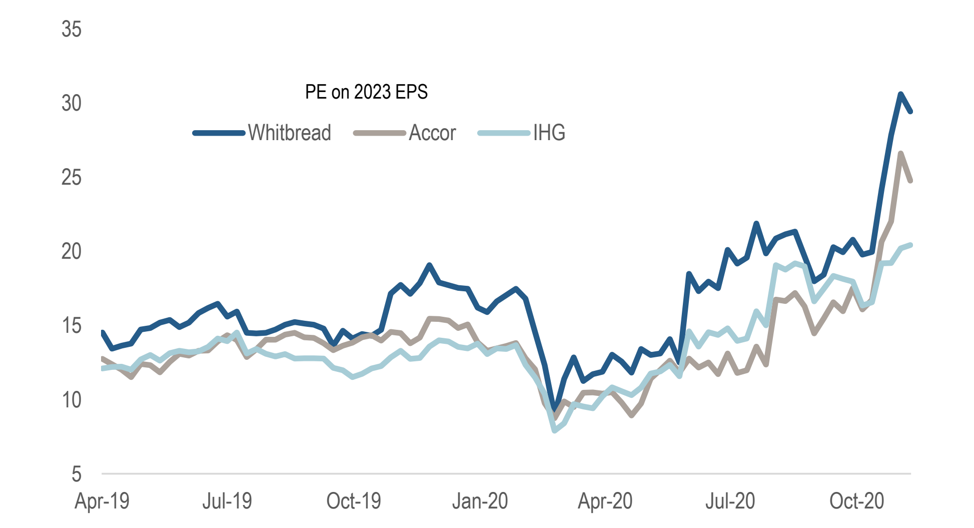
Figure 707: …and versus the European market



Source: Refinitiv, Credit Suisse research

So where do we look on normalised earnings? Even if we look at 2023 earnings, we find P/E ratios very high, as shown in the chart below.

Figure 708: PE on 2023 earnings are extended



Source: Refinitiv, Credit Suisse research

Looking back to 2019 EPS as a proxy for recovery potential, we can see that multiples are still quite high on last year's earnings, unlike many of the other acutely pandemic-hit sectors.

Figure 709: Hotels are also on a high multiple of last year's earnings relative to other recovery sectors or on 2023 earnings

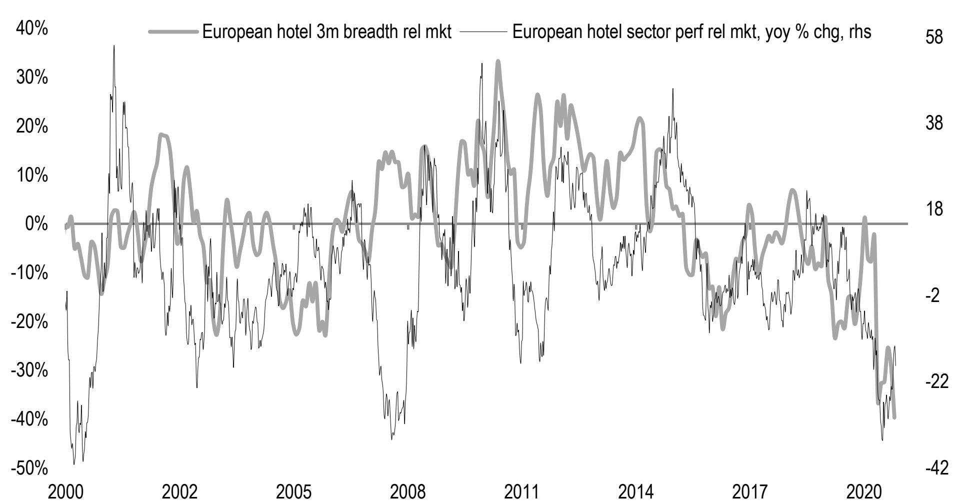
European T&L	Upside to Jan 1st 2020 price	MV, $ bn	PE on 2019 EPS	PE on 2023 EPS
Wizz Air	-18.6%	5.53	7.5	12.5
Ryanair	-9.8%	22.23	16.2	11.6
IHG	**6.7%**	**12.03**	**20.1**	**16.2**
Trainline	7.6%	3.06	87.5	43.4
Whitbread*	**24.9%**	**9.08**	**19.4**	**31.2**
Wetherspoons	44.2%	1.87	16.1	17.0
Accor*	**36.9%**	**9.69**	**33.9**	**25.6**
National Express	81.6%	2.14	7.4	9.4
Sodexo*	41.1%	13.43	13.7	15.3
Easyjet	55.3%	5.65	10.4	8.4
Airfrance	88.1%	2.75	5.7	4.2
Lufthansa	59.4%	7.16	3.5	4.4
Carnival	147.0%	3.13	3.5	5.5
Go-Ahead	137.8%	0.54	5.8	7.4
Cineworld	200.1%	1.35	3.7	NA
Stagecoach	133.7%	0.51	3.4	6.5
TUI	126.4%	3.61	7.1	10.7
IAG	143.5%	11.40	2.3	4.5
**CS 2019A EPS*				

Source: Refinitiv, Credit Suisse research

Even against asset value, they are quite expensive. Accor, which has the highest ownership rate, trades on 1.6x IC.

4. Earnings revisions continue to be strongly negative

Figure 710: Earnings momentum remains very poor



Source: Refinitiv, Credit Suisse research

What looks attractive?

The exception to our cautious stance would be Whitbread, which is rated Outperform. It has the lowest exposure to corporate customers (50%) and is less disrupted by intermediaries because 99% of room distribution is direct or via Google. This is because it has 40% market share of the UK budget branded market and 92% of guests are domestic. IHG is much more exposed to the US (70% of revenues) and we are dollar bears. Accor is potentially the most leveraged to the overall cycle owing to its ownership of assets.

Figure 711: European hotels under coverage

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Whitbread	-60.0	nm	na	1.4	-58%	-12.0	0.0	-4.7	nm	-31.0	2.7	Outperform
Accor	-47.9	nm	na	1.5	-50%	-4.0	0.0	-79.5	nm	-18.1	2.6	Underperform
Ictl.Htls.Gp.	48.0	92%	104%	-5.9	na	-1.4	0.0	-86.9	-67.9	-7.4	3.2	Neutral

Source: MSCI, IBES, Credit Suisse HOLT, Refinitiv, Credit Suisse estimates

Retail: underweight

This sector has changed significantly in recent years. Its market cap in Europe used to be dominated by Inditex and H&M, two largely bricks and mortar retailers. Now, these two companies account for just 30% of the European retail index, which is now dominated by internet-related names such as Prosus (the Naspers holding company listed in the Netherlands – 40% of the index), HelloFresh, Ocado, Delivery Hero and JustEat Takeaway. That change in its makeup has been to the benefit of the sector's performance in 2020 (as the second best performing European sector after tech year-to-date), but will, we think, be to its detriment in 2021. Our concerns are:

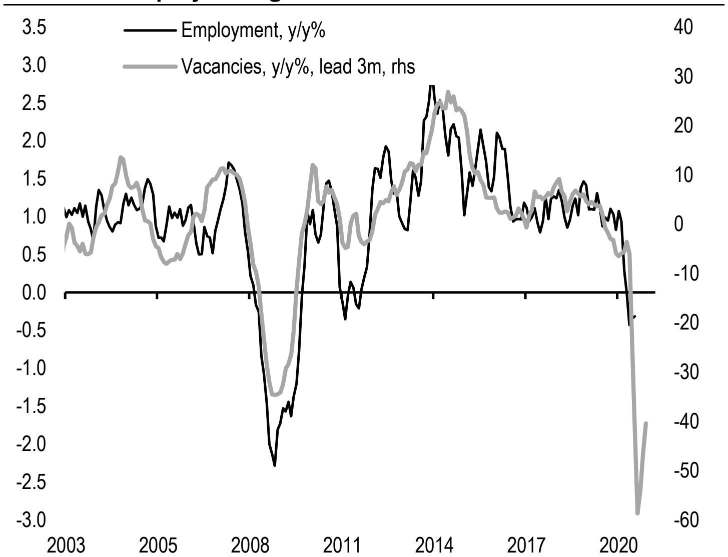
1. **We have a preference for value and industrial cyclicality in 2021, not high multiple consumer exposure**

As pointed out in our thematic section, consumption has held up much better than IP and we want to be overweight industrial cyclicals in 2021. The consumer has been the 'defensive' part of cyclicality because:

- Government policy has boosted unemployment benefits and given consumer tax cuts to preserve consumer income. Indeed, in the US, 2020 is likely to be the year of the strongest personal income growth in 20 years;
- In a recession, inflation falls much more than wages and thus pushes up disposable income. In Europe's case, we can see the boost to real wage growth, with headline inflation falling to -0.3%. This reverses into a recovery.

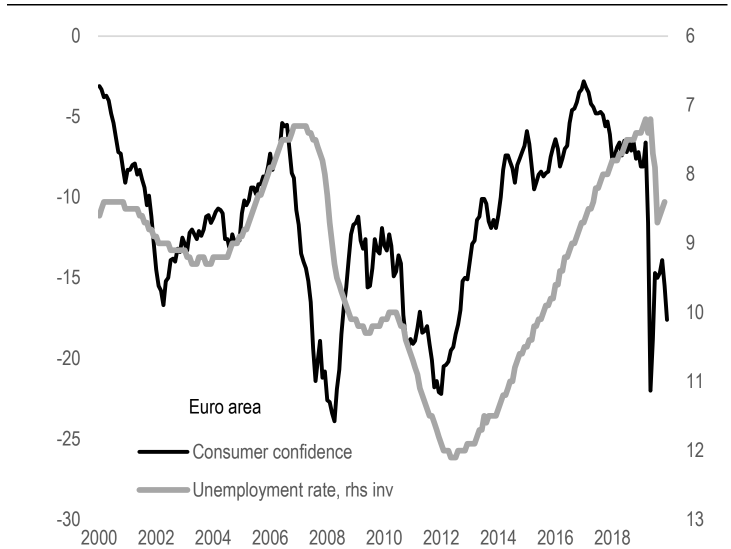
Looking into 2021, the normalization in economic activity that widespread vaccine distribution should bring should also help normalize economic policy, with a likely phasing out of furlough and work support programmes. As furlough schemes end, we would expect to see some rise in unemployment that potentially hits consumer confidence. We can, for example, see in the UK a large gap between vacancy growth and employment growth (with the former normally leading the latter).

Figure 712: Vacancy growth in the UK points to a meaningful decline in employment growth



Source: Refinitiv, Credit Suisse research

Figure 713: Unemployment and consumer confidence in the euro area has correlated over time

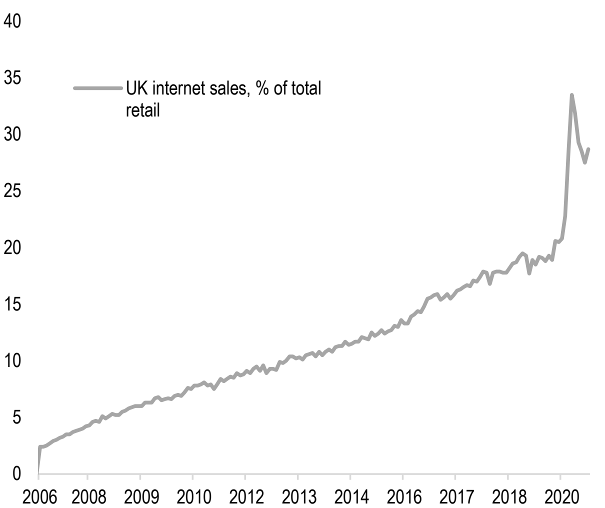


Source: Refinitiv, Credit Suisse research

2. A stay-at-home winner in 2020, but dynamics seem set to reverse in 2021

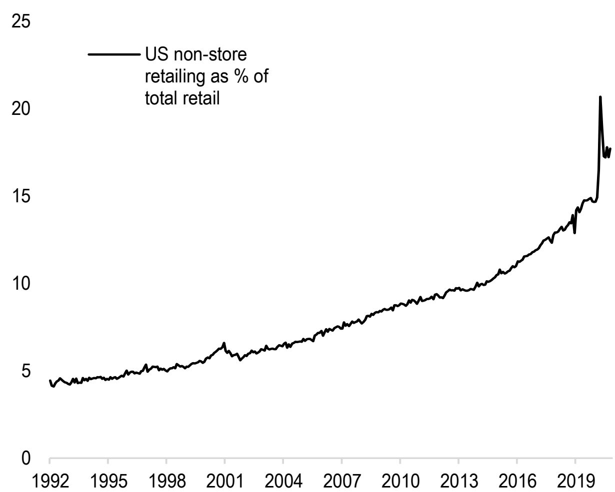
The pure stay-at-home plays (such as food delivery, Prosus, Zalando) account for 65% of the European retail index's market cap. As noted above, this was very much to the sector's advantage in 2020, making it the second best performing sector year-to-date. These dynamics seem set to reverse in 2021 thanks to widespread distribution of the vaccine, at which point sectors that offer services which cannot be delivered to homes or offered remotely, such as holidays, are likely to become attractive. As bricks and mortar retail reopened, the share of retail sales online inevitably fell from its peak.

Figure 714: Already the share of retail sales online are falling from peak in the UK…



Source: Refinitiv, Credit Suisse

Figure 715: …and in the US

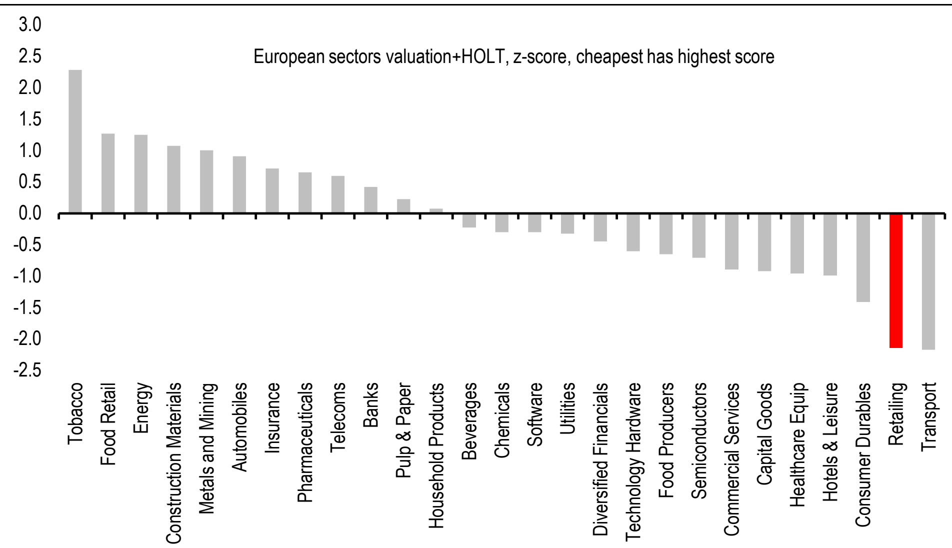


Source: Refinitiv, Credit Suisse

3. Valuations are extended

Retail is the second most expensive sector on our composite valuation scorecard after transport, and third bottom on our composite scorecard (unlike transport, earnings are not cyclically depressed for reasons highlighted above).

Figure 716: Retail is the second most expensive sector on our composite valuation scorecard



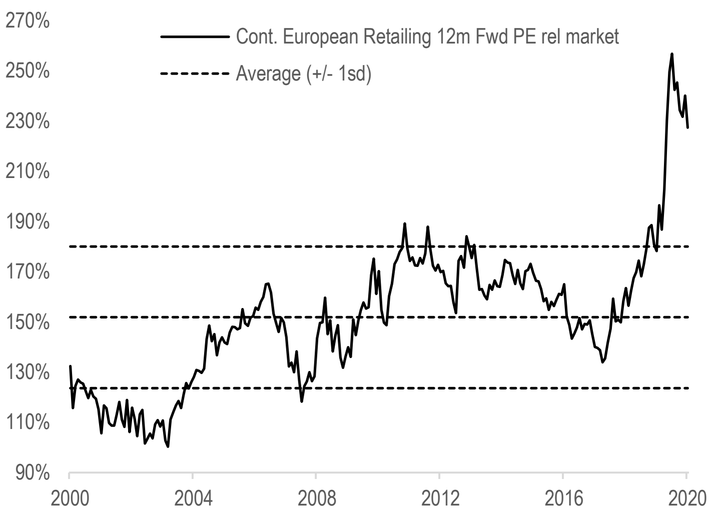
Source: Refinitiv, Credit Suisse

As the chart below highlights, the PE relative of the group is extremely extended.

4. Earnings momentum appears set to turn negative

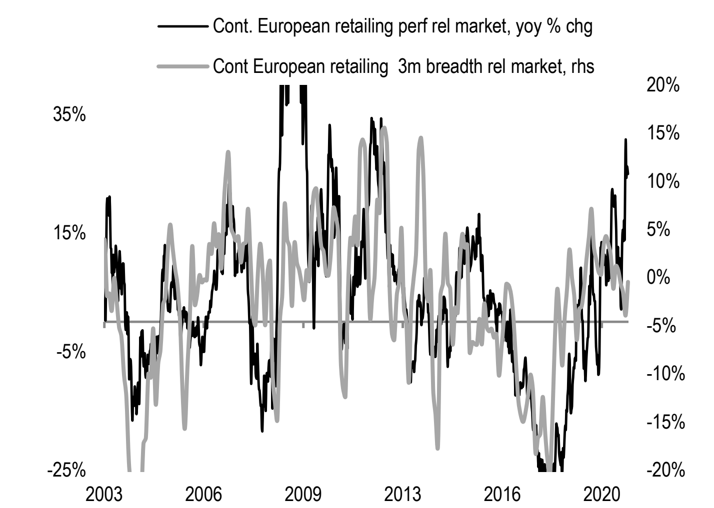
Performance has broadly been tracking earnings momentum, but in recent months there has been a notable disconnect, with earnings momentum likely to turn negative on a relative basis imminently, even while sector performance has remained strong.

Figure 717: The PE relative of European retail is extended



Source: Refinitiv, Credit Suisse

Figure 718: The performance of the sector has overshot earnings momentum, which appears likely to turn negative

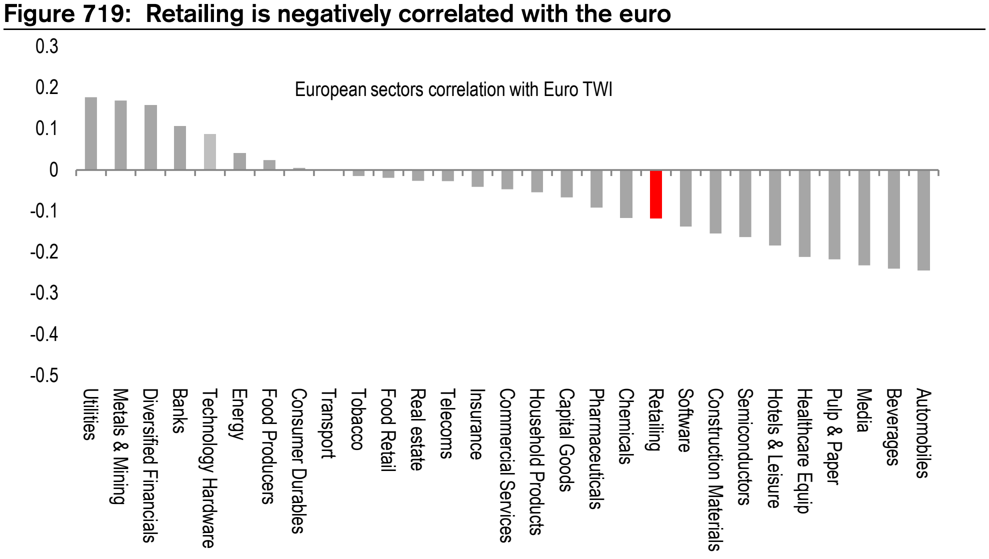


Source: Refinitiv, Credit Suisse

5. A loser from euro strength

Given how much the European sector has evolved away from domestic bricks and mortar to one reliant on Prosus (and thus has abnormally high overseas earnings), so its relationship with the euro has also changed. So while euro strength boosts the real purchasing power of consumers, as the chart below illustrates, European retail is negatively correlated with the euro.

Figure 719: Retailing is negatively correlated with the euro



Source: Markit, Refinitiv, Credit Suisse

We would also highlight that we have been surprised by the degree of regulation risk in China, though we keep to an overweight of China tech (see tech section).

We show the members of the MSCI Europe retailing index below, of which Inditex, H&M, Ocado and Next are Underperform-rated.

Figure 720: Constituents of the MSCI Europe retail index

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Prosus	30.2	82%	-25%	5.7	-2%	na	0.1	7.4	2.2	18.9	1.9	Not Covered
Inditex	29.0	79%	-15%	5.8	-31%	2.6	2.1	-20.6	-15.6	-5.0	2.4	Underperform
Hennes & Mauritz B	27.1	74%	-7%	5.5	-41%	4.0	0.3	-20.9	106.1	-2.3	2.7	Underperform
Ocado Group	-95.3	nm	na	14.7	51%	0.0	0.0	-73.4	nm	9.6	2.8	Underperform
Just Eat Takeawa	97.1	263%	-31%	4.6	-60%	2.0	0.0	176.4	-8.4	10.2	1.8	Not Covered
Next	18.1	49%	-3%	20.5	-23%	5.0	1.1	-19.4	10.5	4.2	2.7	Underperform
Jd Sports Fashion	23.8	65%	19%	6.5	-9%	4.8	0.0	13.8	89.5	16.0	1.9	Outperform
Kingfisher	11.1	30%	-36%	1.0	-30%	13.4	0.1	68.2	41.9	5.0	2.8	Outperform
Hellofresh	31.1	84%	-74%	31.8	92%	4.9	0.0	181.0	32.1	11.6	2.3	Outperform
Delivery Hero	-37.3	nm	na	10.1	45%	-3.3	0.0	-83.9	nm	3.4	1.9	Outperform
Zalando	89.4	243%	-8%	11.7	43%	1.0	0.0	-69.3	48.8	2.2	2.3	Outperform

Source: IBES, MSCI, Refinitiv, HOLT, Credit Suisse research

Asset managers: underweight

We maintain a structural underweight of European asset managers. We acknowledge that normally being overweight equities would suggest being overweight equity fund managers owing to their business model's operational leverage into rising markets. However, we prefer exposure to this theme through private banks (UBS) and cheaper wealth managers (FBK), not fund managers.

We believe the churn in wealth management or private banking tends to be much lower than in asset management because wealth management is much more relationship-driven (just as individuals tend not to change their bank deposit accounts).

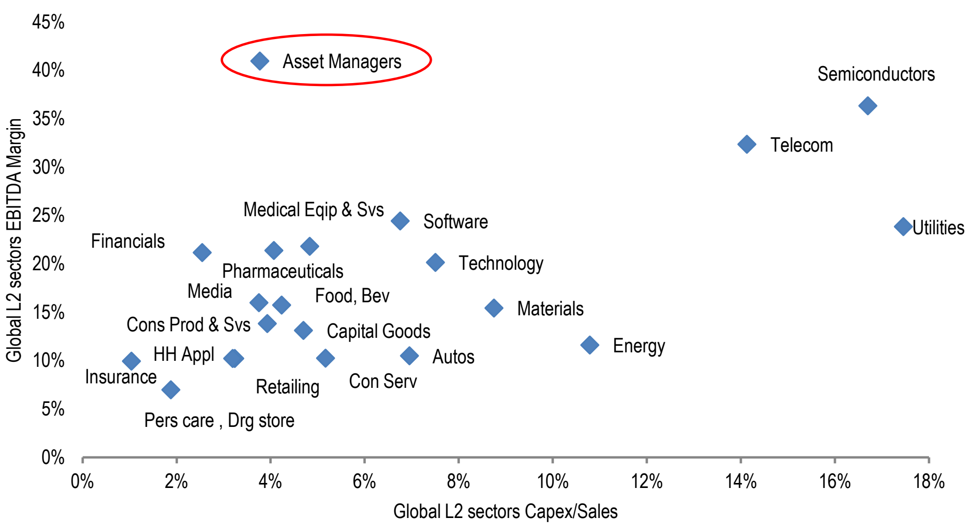
Our concerns remain the following:

1. **Asset managers have very high margins for very low investment**

There is a positive correlation between capital intensity and EBITDA margins, and asset managers are a clear outlier with very high margins for their given level of capex.

This makes the sector vulnerable to new entries as well as disruption from fintech and passive asset management. We discuss many of these issues in the next section.

Figure 721: Asset managers have high margins given their low capital intensity



Source: Refinitiv, Credit Suisse research

2. **There is a large degree of disruption**

The fundamental problem we see is the rise of disruptive technology (i.e. passive investments and ETFs), while at the same time regulators are forcing price visibility (by demanding that high fees are disclosed, reviewed and in some cases reduced, e.g. via the annual Assessment of Value exercise in the UK).

The growth of ETF and passive investments poses a significant challenge to fund managers given that the fees are a fraction of active (0.6-1%+ for active versus 0.1% and less for passive investment). According to our European Diversified Financials equity analysts and Morningstar, passive funds account for 34% of the US fund universe, and 49% of equity funds. In Europe as whole, the figures are 17% of the fund universe and 30% of equity funds.

However, there are also outliers in Europe; e.g. Dutch pension funds began allocating to passive over a decade ago and hold around 70% of their outsourced equity investments on average in index strategies (FT, 11 Nov 2019). Typically, where the US leads, Europe follows; therefore, there is likely to be much more disruption in Europe from passive funds, in our view.

After all, the share of passive in equities essentially doubled over the past 10 years in both the US and Europe.

Figure 722: % of Passive allocation

		Jan-07	Oct-10	Oct-20
Europe	% of Passive overall	4.8%	8.3%	17.3%
	% of Passive in equity	9.3%	15.3%	30.4%
US	% of Passive overall	11.9%	16.0%	34.3%
	% of Passive in equity	18.9%	26.4%	49.4%

Source: Morningstar

We have seen some high-profile examples of big funds moving towards passive investment. In December 2019, California's pension manager for state employees, CalPERS, cut its allocation to external active equity funds from over $33bn to c$5.5bn (Institutional Investor, 17 Dec 2019). There are also signs of US mutual funds turning their funds into ETFs (e.g. after 18 months of legal and regulatory negotiations, Guinness Atkinson is close to completing the first conversion from a mutual fund to an ETF per FT, 24 Nov).

3. Chronic underperformance of active

Active fund managers have struggled to beat their respective benchmarks over the past decade and 2020 has so far proved no different. S&P's SPIVA research shows that the widely held belief that market volatility would be positive for active managers relative to passive has so far proved to be untrue in Europe in 2020; they report that the for the first six months of 2020, 42% of active funds in Europe underperformed their benchmarks, with the figure rising to 49% and 87% over a 12-month and 10-year view, respectively (see S&P Global, 7 October).

4. High cost of data

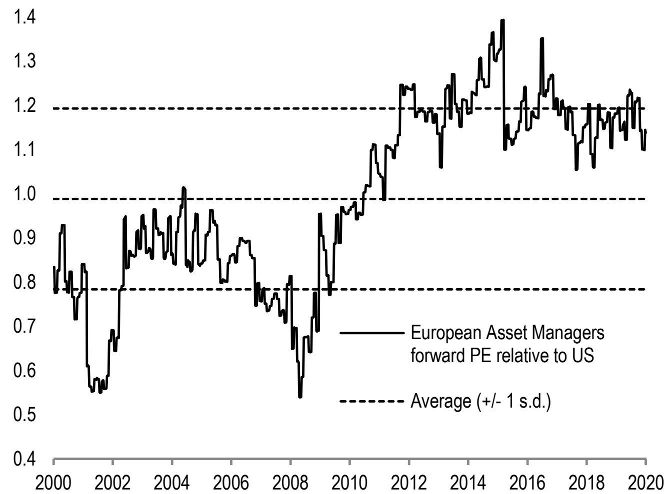
Our diversified financial analysts are positive on the LSE in large part owing to its transformation into an information services / data company through the acquisition of Refinitiv, and the increasing market power these data providers possess.

Demand for and cost of data continues to rise – both as a market imperative to achieve superior fund performance, but also due to regulatory demands – e.g. for increased ESG reporting and analysis. Recent research from Opimas (March 2020) estimates total spending on ESG data was $617m in 2019, and is expected to grow to $1bn in 2021. According to the study, 60% of ESG spending came from Europe, vs. one-third from North America. Asset managers were the heaviest spenders on ESG data, comprising 59% of the market.

5. Stretched valuation

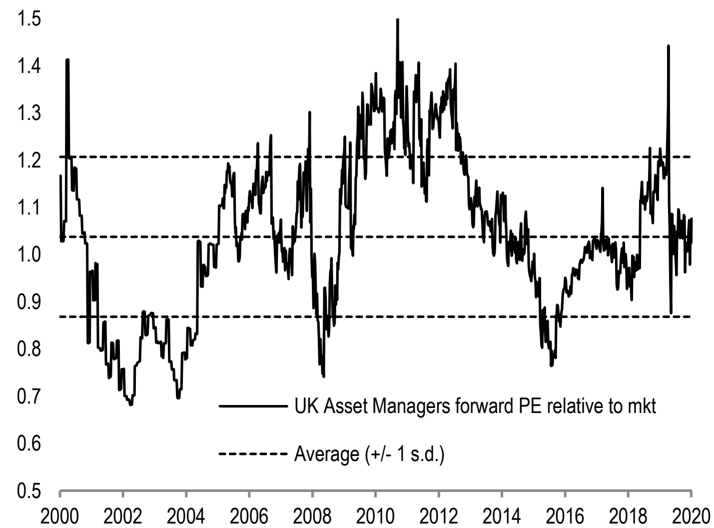
The valuation of European asset managers remains on a 20% market premium and at a premium to their US peers. We believe European asset managers are vulnerable to trading down to similar rating as their US peers as US-style disruption comes to Europe.

Figure 723: European asset managers' P/E relative to their US peers



Source: Refinitiv, Credit Suisse research

Figure 724: UK asset managers' forward P/E relative to market



Source: Refinitiv, Credit Suisse research

6. An equivalence risk maybe for UK-based asset managers

There are up to 47 different potential equivalence regimes and it is very unlikely that all of them will be renewed even with a Brexit deal. There is a risk that rules will be adapted to force asset managers to even open larger-scale operations within the EU which will increase costs.

Below we show Neutral- and Underperform-rated asset managers.

Figure 725: Neutral- and Underperform-rated European asset managers

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Ashmore Group	17.2	102%	-20%	3.3	-30%	6.2	3.9	32.7	-4.7	-5.8	2.9	Underperform
Hargreaves Lansdown	28.4	168%	-29%	12.2	-52%	7.9	3.0	-39.2	10.1	6.6	2.9	Underperform
Jupiter Fund Management	11.8	70%	-37%	2.0	-45%	9.9	6.3	38.8	3.8	2.0	2.8	Neutral
Man Group	10.6	63%	-36%	1.0	-33%	na	5.2	97.3	-1.7	-0.8	2.5	Neutral
Schroders	17.2	102%	-19%	2.5	-23%	na	3.5	18.1	2.6	1.0	3.4	Underperform
Standard Life Aberdeen	17.2	102%	6%	0.7	-56%	na	6.1	19.8	-0.3	0.4	2.8	Underperform

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse estimates

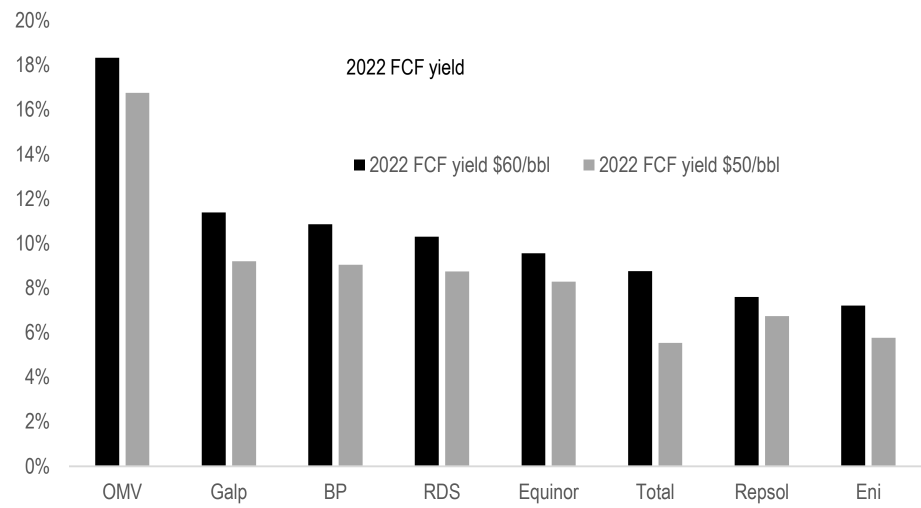
Energy: underweight

We have the following concerns with energy and are underweight structurally.

1. **Valuation on FCF is not attractive**

On our energy team's oil price assumptions ($60/bbl in 2022), the European oil majors offer an average FCF yield of 10.5% (on an IAS-17 basis, which incorporates lease payments). Assuming the oil price stays around its current mark at $50/bbl, the FCF yield is only 8.8%. This could be viewed as FCF on sustaining capex in upstream (the industry will keep raising renewables spending, which will obviously lower the overall FCF yield).

Figure 726: 2022 FCF yield for oil majors (on an IAS-17 basis, which incorporates lease payments)



Source: Credit Suisse estimates

These FCF yields might appear high, but we think this is not attractive enough given the sector's very poor growth outlook and ESG headwinds (discussed below).

We would make the following comments:

- Other disrupted and ESG challenged sectors such as coal and tobacco offer more attractive FCF yields. In regards to coal, Arch, Peabody, Alliance, and Contura offered aggregate consensus FCF yield of c.25% ahead of the crisis, with Arch now offering a consensus FCF yield of 25% for 2021. At the same time BAT has a FCF yield of 12% according to our consumer staples team.
- The mining sector, which is in aggregate far less disrupted and can even be considered a proxy ESG play via copper, has a FCF yield on spot commodity prices of 16.1% in 2022 (using maintenance capex or 10.5% assuming our team's base case on commodity prices).
- The renewable utility sector has a FCF yield of 12.4% on maintenance capital spending.

Figure 727: 2022 FCF yields across different sectors on CS numbers

Source: Credit Suisse estimates

2. Long-term disruptions and ESG require a big valuation discount

While oil majors are clearly cheap in a historical context, we think the sector's headwinds around long-term disruption and ESG justify a clear discount to their norm:

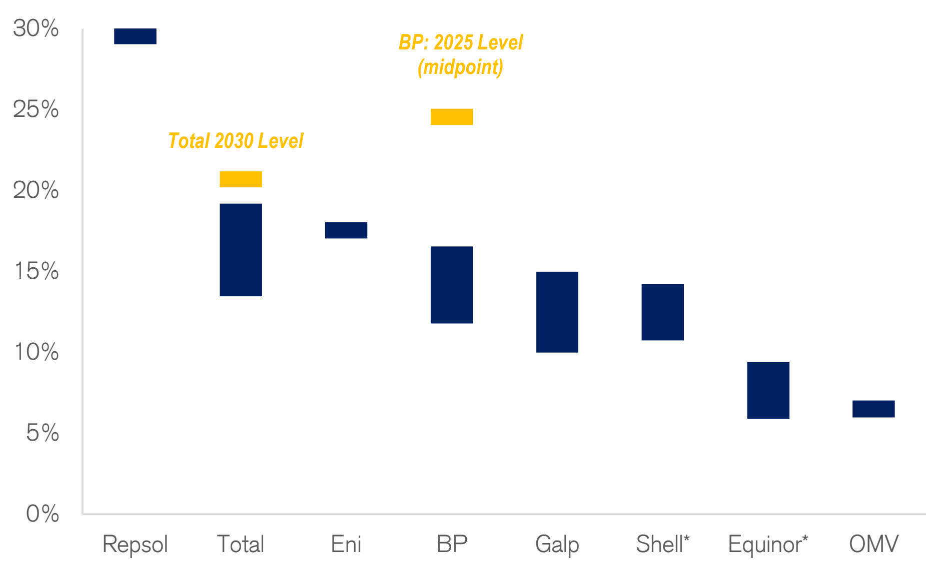
- **Peak oil:** There are many different forecasts on when the world reaches peak oil. However, we would note that the balance of forecasts is coming closer rather than pushing the date of peak oil further out. Under BP's base case oil demand will peak in the early 2020s and under two of their scenarios oil demand has already peaked (two years ago, their outlook had projected demand to peak in the 2030s). IEA says oil demand by 2040 needs to be 67m bd to meet Paris Climate Targets (FT, Mar 13). We would note that a lot of announcements over the COVID crisis have been to accelerate the move away from carbon.
- **Electric Vehicles & hydrogen:** >45% of oil demand is transport-related and the rise of the electric vehicle is the biggest threat to oil demand in the long term. Democrats in the US House of Representatives have proposed a plan that envisions zero emissions from cars by 2035, France plans to ban sales of combustion engines by 2040 and the UK by 2030 (it had been 2040 as recently as February). There is also a risk that a higher price of carbon is put on non-auto-related transport emissions (jet, rail and ships, which together account for c.13% of total oil demand). Hydrogen could be a viable alternative for large forms of transport (e.g. an EU study executed by McKinsey suggests by 2050, 40% of all aircraft could be hydrogen powered, Hydrogen-powered aviation: Preparing for take-off study, 24 June).
- **Plastics recycling:** While road transport accounted for 60% of oil demand growth in the last decade, petrochemicals will account for 60% in the next decade, largely as a result of anticipated rising demand for plastics, notably for packaging material (IEA). However, the recycling rate of plastics is also likely to grow. Single-use plastic straws and stirrers will be banned in the EU from 2021 and EU countries have raised their target for plastic recycling from 40% in 2015 to 55% by 2030. Furthermore, EU leaders have agreed to impose a tax on non-recycled plastic waste at €0.80 per kg, in effect from 1 January 2021. If demand for plastics falls as a result of reduced usage and an increased recycling rate (globally the recycling rate is c.20%), that could decrease oil demand from petrochemicals by more than 20% in 2040 according to the IEA (FT, 17 Feb).
- **ESG:** The risk we see is that with the continuing shift to ESG, certain funds might exclude oil investments for environmental reasons. The Norwegian government has recommended that Norges Bank should reduce its holding in oil and gas stocks (FT, 8 Mar 2019).

- We think for the reasons highlighted below it will be a long time before IOCs start to be considered as renewables.

3. Renewables are still only a small part of their business

- In a way, the rapid and successful change by Orsted or RWE from fossil fuels to renewables has perhaps led some market participants to be overly optimistic about the speed of change
- European Majors are scaling up investments in low-carbon businesses, including the integrated value chain in electricity and hydrogen. However, if we look at the percentage of capex or production that is renewables, it is still very low. This is especially the case in the US, where CVX and XOM are spending less than 3% of capex on renewables. In fact, XOM is still committed to the future of fossil fuels. Exxon's CEO Darren Wood believes that the needs of society will drive more energy use in the years ahead — and an ongoing need for the products Exxon produces. (FT, 28 October). In Europe, the numbers are slightly higher, but most energy companies are also spending less than 10% of capex on their energy transition. BP intends to have a third of its capex in 'low carbon electricity and energy' by 2030. Moreover, the share of renewables in the installed base is still in the low-single digits across the board.
- We also note that RDS, for example, is planning to reduce the average greenhouse gases emitted for each unit of energy sold by 30% by 2035 and by 65% by 2050 (including all the emissions from the lifecycle of each of its energy products). While this is notable, it does not necessarily mean that the business is carbon-friendly.
- Moreover, changing a business to be low-carbon-emitting carries with it a risk of overpaying for renewable assets. We saw for example in 2008 Exxon pay $43bn for XTO at the peak of the natural gas cycle, highlighting the risks in oil companies diversifying.

Figure 728: Share of short-/medium-term capex spent on transition

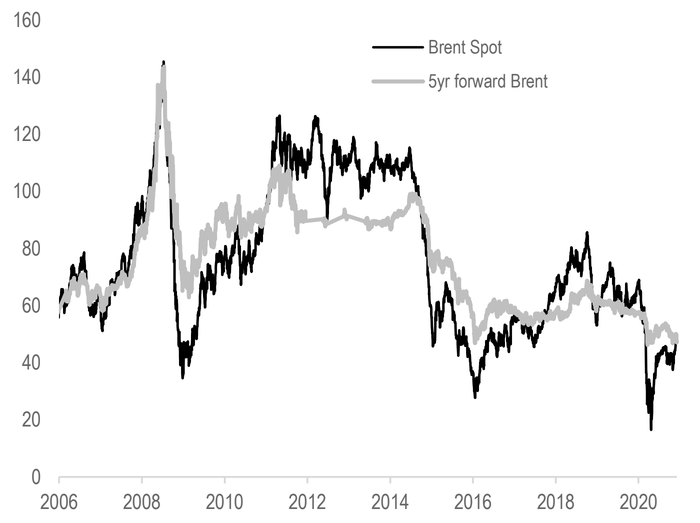


Source: Company data, Credit Suisse estimates. * Equinor shown on a cash basis (50% of gross). Shell levels assumed 45-55% of 'growth' capex is on marketing.

4. It is hard to make a strong bullish case in the long term for the oil price

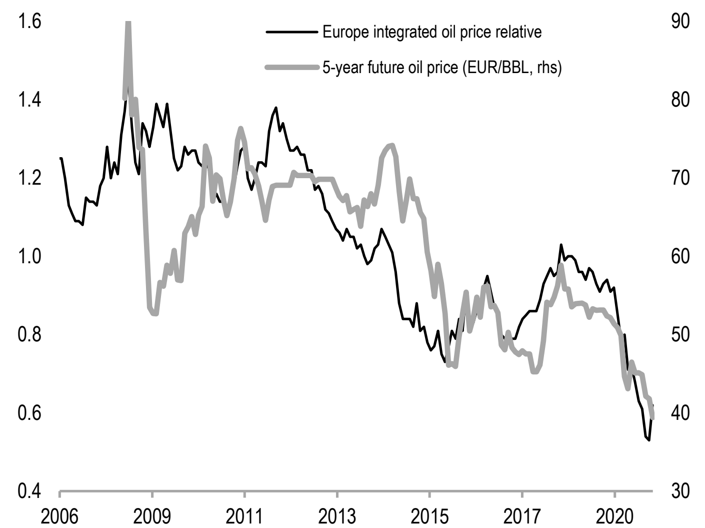
The spot price has recoupled with the five-year forward price, which is the key driver of the energy sector's performance. At the moment, the sector is discounting the current level of the five-year forward price ($48/bbl or €42/bbl).

Figure 729: Spot and five-year forward price have recoupled



Source: Refinitiv, Credit Suisse research

Figure 730: The oil sector tends to follow the five-year forward



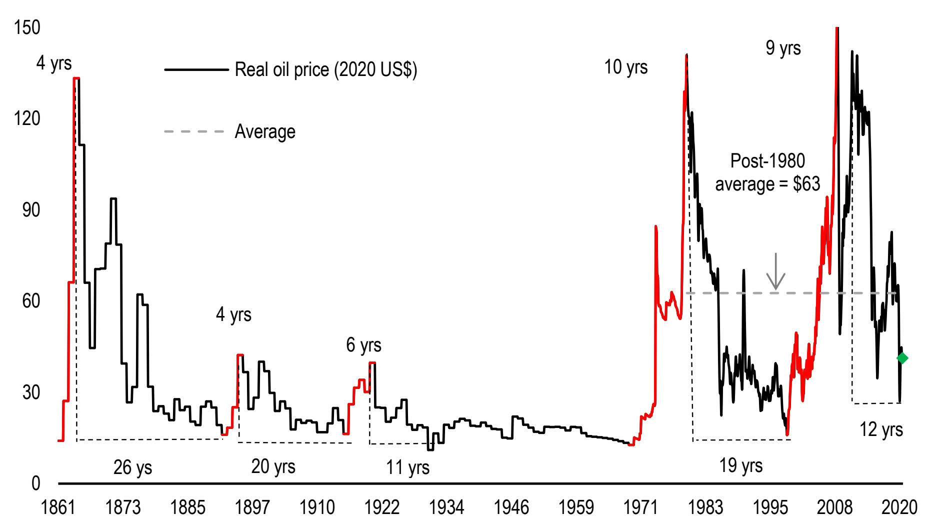
Source: Refinitiv, Credit Suisse research

Our energy team's view on oil is for a long-term oil price of $60pb. This would imply some upside.

Normally, the oil price has moved in 11- to 28-year bear markets and 4- to 11-year bull markets. The recent bear market has already lasted for 12 years.

Over the past 40 years, the oil price has averaged $63pb in today's USD. Both of these points suggest statistical upside to the price of oil.

Figure 731: Long-term real oil price

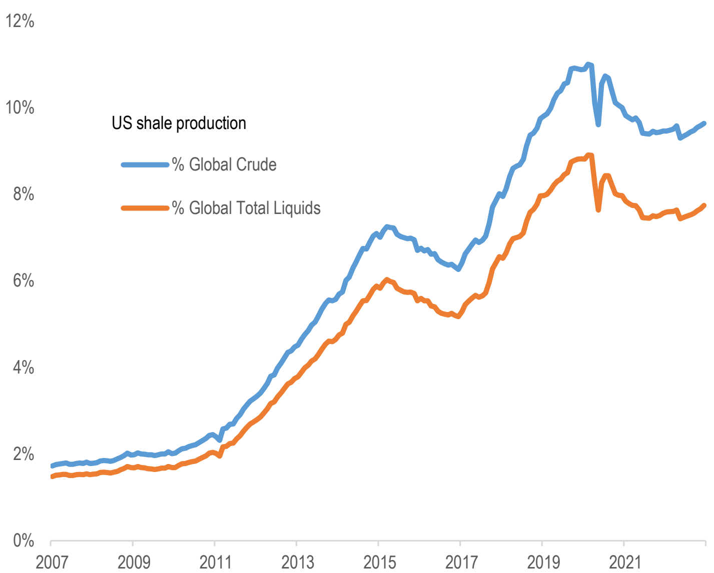


Source: Refinitiv, Credit Suisse research

Nevertheless, we have several concerns that prevent us from taking a positive view of significant upside to the long term oil price:

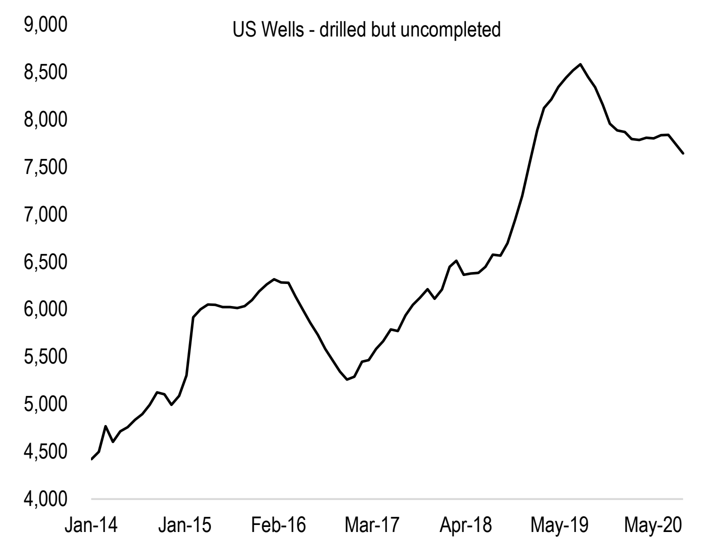
- **Peak oil:** As discussed above, we think we are likely to see peak oil demand this decade.
- **Shale provides a ceiling for the oil price:** Shale has been the 'new' speedy swing producer (10% of global crude production). This is due to the following characteristics:
  - Shale has an 18-month 'manufacturing' process and thus can be switched on relatively quickly. This is especially the case this time around, as many wells were left close to completion when the oil price fell in Q1 (currently c.7,600 drilled but incomplete wells). The recent pick-up in US oil production is a good example of this. US oil companies were able to increase production by 1.2m barrels a day since May, which is a 12% increase in total US production (after falling c.21% in the first five months of 2020). The Baker Hughes rig count is up 31% from its recent low. Overall, our oil team only sees an 8% fall in shale production this year.
  - During bear markets in the oil price, the shale cost curve tends to fall, as wages come under pressure, corporates focus on efficiency and only the best wells are drilled. We would not be surprised if the breakeven fell to $45 (from $50).

Figure 732: US shale production is c.10% of global crude production



Source: US energy research team

Figure 733: DUCs in the US have recently fallen but are still very elevated

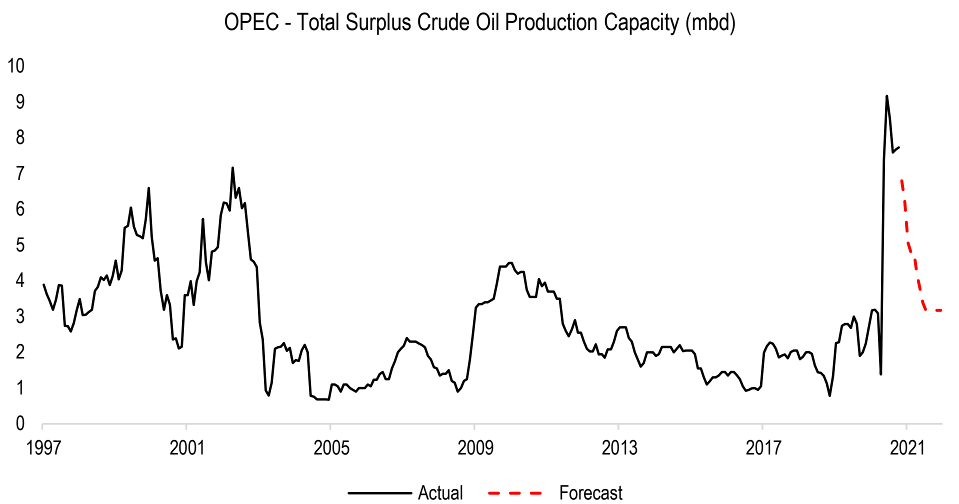


Source: EIA

- **Peak oil demand results in a change in OPEC behavior.** Historically, OPEC has acted rationally in economic terms, believing that at a low level of oil price it's more valuable to 'store' oil in the ground (believing that oil will rebound) than produce it. We think it is now potentially in OPEC's interest to increase production whenever the oil price allows it to minimize the risk of stranded assets (especially given the very poor fiscal positions of many OPEC countries post the pandemic). As the global economy recovers throughout 2021, we will have more clarity of OPEC's intentions.
- On the back of the COVID outbreak, OPEC+ members agreed to record cuts of 9.7m barrels per day (around 10% of global supply), a target that was eased by 2m barrels per day during the summer's economic recovery. During the December OPEC+ agreed to allow a further increase in production of 1.9mbd starting in January 2021.
- Given President Trump's relatively favourable relationship with Russia and Saudi Arabia, we think President-elect Biden might find it more difficult to co-ordinate a Trump-style OPEC+ deal with Russia and Saudi Arabia.

- **The quoted sector (ex Saudi Aramco) accounts for only about of quarter of global production.** This means as their capex falls, it could be offset by the National Oil Companies which are more focused on producing oil rather than shareholder returns. Moreover, the NOCs tend to be the low-cost producers. In some instances, the weakness of their currencies (e.g., the rouble) over the past couple of years has helped with this.
- **Uncertainty around production from Iran:** In the case of Iran, Biden's presidency could lead to a less contentious relationship between the US and Iran. In theory, better relations with Iran could release c0.8mbd quickly and longer term 1.8mbd. This would for example more than offset the banning of drilling for oil on US federal land.

Figure 734: OPEC total surplus production capacity

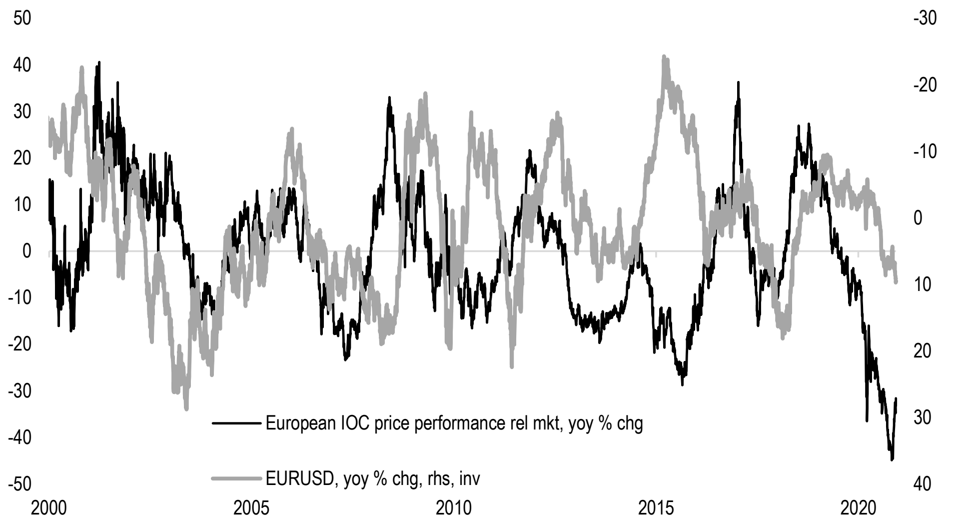


Source: IEA, Credit Suisse research

5. A sector that suffers from a strong euro

With oil being dollar-denominated, the European oil sector tends to underperform when the euro appreciates. As we argue in our macro outlook (see 2021 Research Outlook: Equities, Regions and Macro), we expect the euro to appreciate against the dollar. We acknowledge that normally a weaker dollar is good for global growth and commodity prices.

Figure 735: European IOCs underperform with a stronger euro



Source: Refinitiv, Credit Suisse research

Supports for the oil sector

1. **A bigger near-term spike**

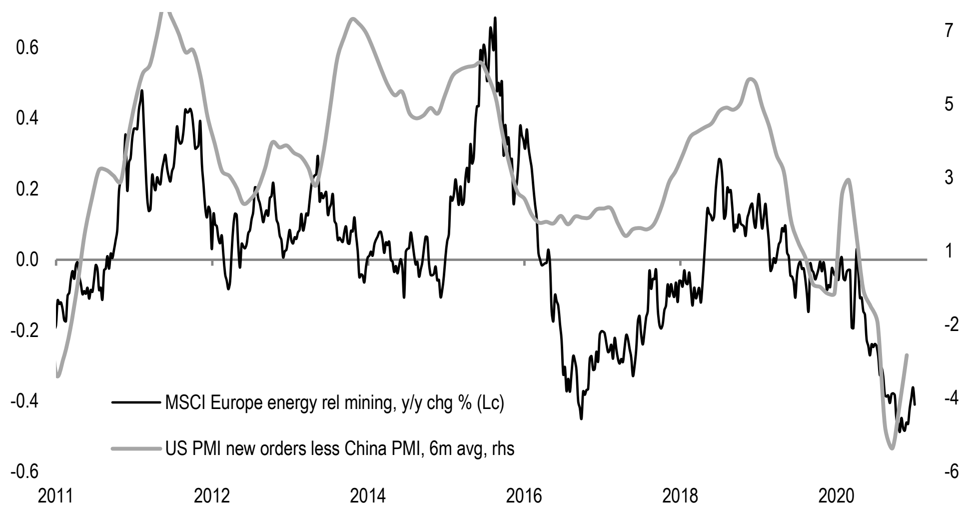
We could end up with a sharp spike in the oil price caused by four drivers:

- A sharp decline in oil capex could lead to a temporary shortage in supply as the economy recovers. Capex by listed oil companies is down 44% from peak, and companies such as BP want to reduce its oil and gas production by 40% by 2030. On the back of this, our energy team believes there will be supply deficit in the mid-2020s (see Rosneft Oil).
- A well-disciplined OPEC combined with a V-shaped recovery creates a spike up in the oil price.
- Indeed, one of the impacts of the market greatly increasing the cost of equity for oil companies is to discourage new investment and force lower carbon emissions via a much higher oil price. Again, as above, we think this is only a driver for the quoted companies far less so for the NOC.

2. **Oil as a US play**

We view oil as a US play (20% of demand is oil), while mining is a China play (40% of mining demand is from China). Thus, oil versus mining tends to reflect the ratio of US PMIs versus China PMIs. We think throughout 2021 US PMI is likely to recover slightly relative to Chinese PMIs.

Figure 736: A rise in US PMIs relative to those of China tends to be constructive for energy over mining



Source: Refinitiv, Markit, Credit Suisse research

3. Shale probably provides a floor to $40pb oil

The fact that shale has been cash-negative for 10 out of the last 11 years has caused investors to demand cash not volume and in some instances CEO compensation has focused on that. According to the CEO of a large shale producer, at $40pb, US shale production would fall 4mbd from peak levels (FT, 23 October).

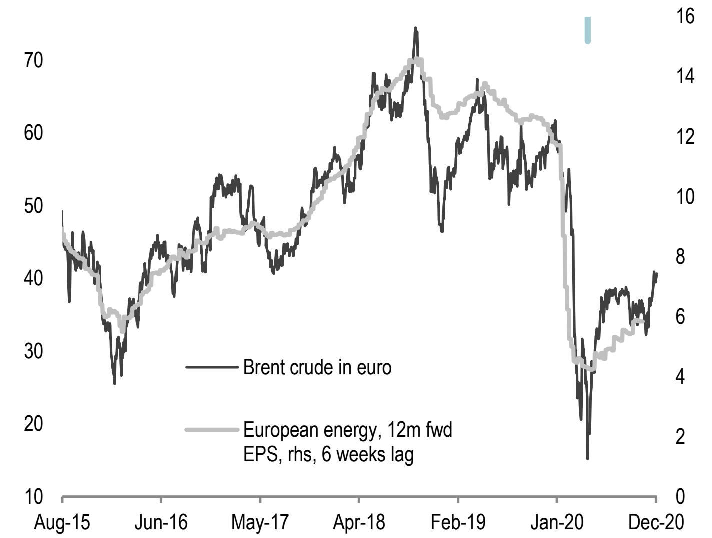
4. The oil sector is an inflation hedge

As we argued in our recent outlook (see 2021 Research Outlook: Equities, Regions and Macro), we expect inflation expectations to pick up sharply. The oil sector normally outperforms when inflation rises. However, this is more because the rise in the oil price has historically caused inflation to rise rather than the other way around.

5. Earnings revisions should be supportive

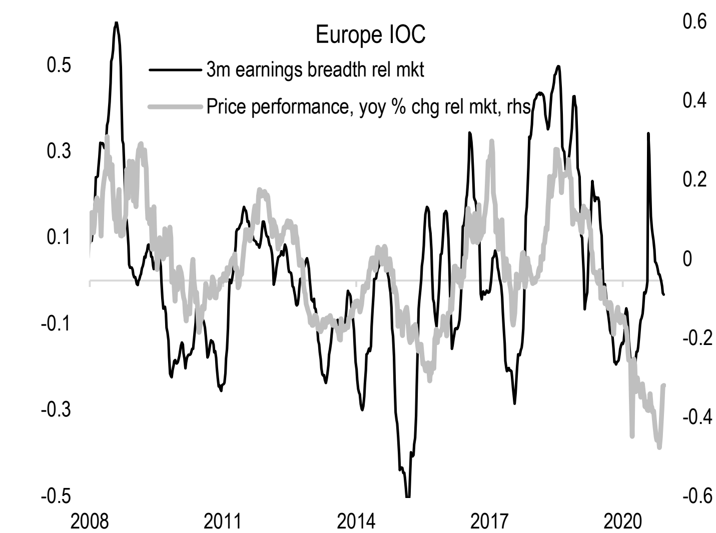
The current oil price would imply a small improvement in forward earnings. More importantly, the performance of the sector tends to follow earnings revisions, but has not yet reacted to the improvement in earnings revisions.

Figure 737: Historically, earnings have followed the oil price with a lag of six weeks



Source: Refinitiv, Credit Suisse research

Figure 738: Typically, integrated oil stocks follow relative revisions

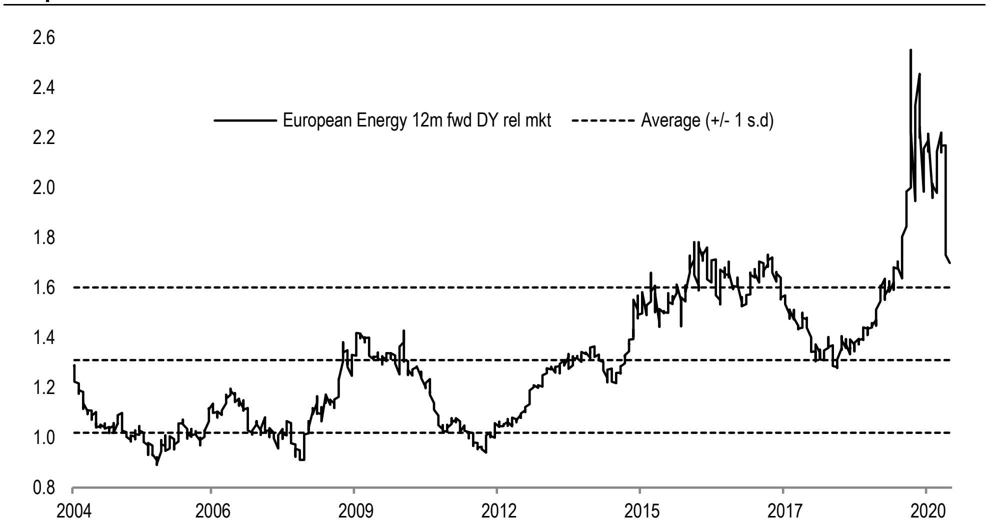


Source: Refinitiv, Credit Suisse research

6. Still an attractive dividend play

Even after this year's unprecedented cuts, the dividend yield of the European energy sector remains 70% higher than that of the market (5.1% vs 3%). Moreover, given the recent rise in the oil price, the dividend is now more sustainable. Nevertheless, we think that the appropriate valuation measure is FCF yield, as stated above.

Figure 739: Energy is still looking extremely cheap on forward dividend yield relatives, despite the cuts announced so far



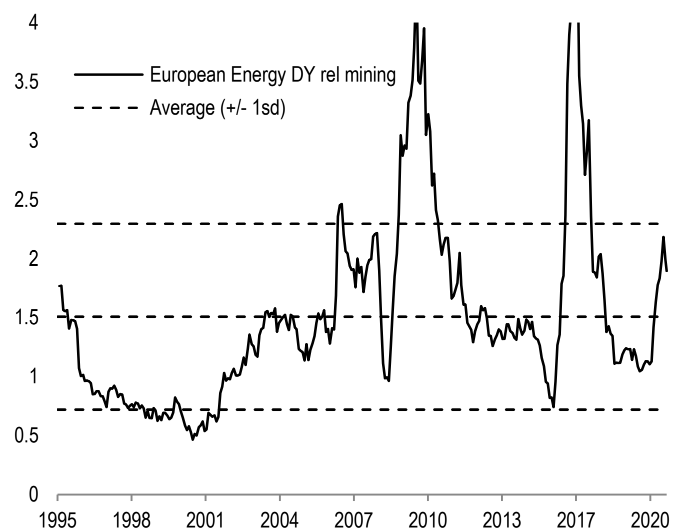
Source: Refinitiv, Credit Suisse research

At the moment, our preferred real asset and commodity theme in the commodity space is mining. We find that mining has the following advantages relative to oil:

- The low-cost capacity is the quoted capacity (unlike oil, where the low-cost capacity is typically the national oil companies).

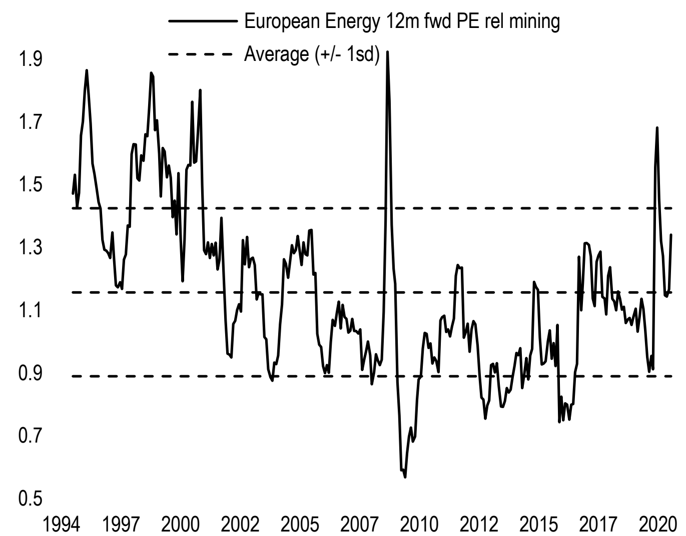
- In many areas, capacity is abnormally concentrated.
- Mining is not disrupted (for example, renewables and EV use a lot more copper than fossil fuels and combustion engines, respectively).
- The reserve life of mining is much longer than for oil.
- As discussed above, mining's FCF yields are much higher (16% on spot price, 10.6% on Credit Suisse's base case prices for 2022 using maintenance capital spending). If we use spot prices and growth capex, then the FCF yield in 2021 is 10.7% post working capital adjustment (though lower if we use our team base case).
- We view mining as a play on capex and IP. Our economists expect global IP growth in 2021 to recover to 8% yoy on average for 1H 2021 (after an average -3.3% in 2020) and capex to grow by 14% in China (after being flat YTD).
- The valuation of mining relative to oil is close to its norm.

Figure 740: European mining is neutrally valued on a DY relative to energy…



Source: Refinitiv, Credit Suisse research

Figure 741: … and looks attractive on P/E



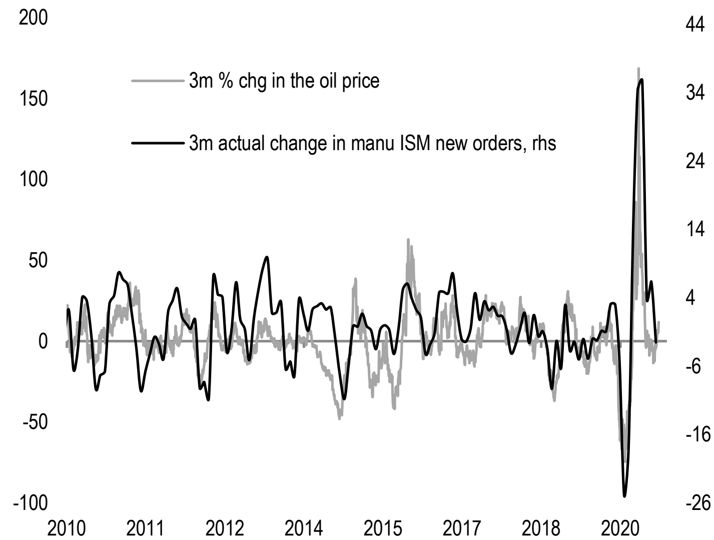
Source: Refinitiv, Credit Suisse research

Tacticals are neutral

We believe the two key tactical indicators for the oil price are in aggregate neutral:

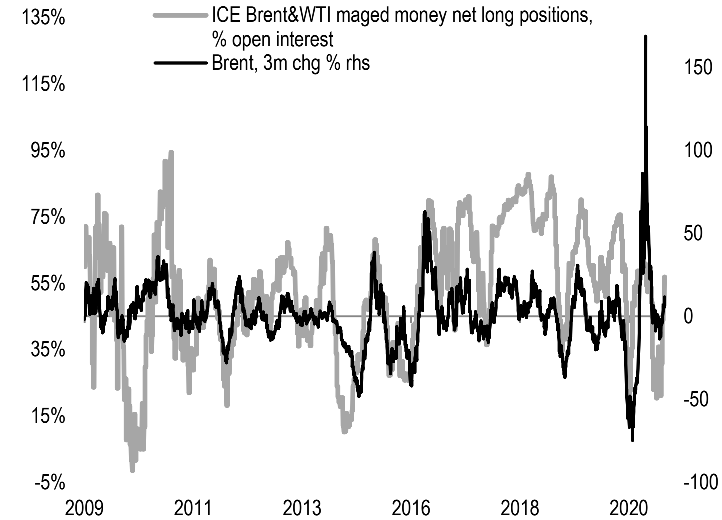
- **ISM is bearish for the oil price:** The oil price has fully reflected the rise in ISM new orders and as we argue in our recent macro outlook (see 2021 Research Outlook: Equities, Regions and Macro), we expect ISM new orders to fall from their elevated level of 65.
- **Speculative positions are neutral:** Speculative positions suggest investors are overall short oil. As the economy recovers throughout 2021, speculative positions should pick up, which would help the oil price.

Figure 742: Three-month change in oil price against three-month change in ISM



Source: Refinitiv, Credit Suisse research

Figure 743: Speculative positioning and the oil price tend to move together



Source: Refinitiv, Credit Suisse research

The screen below shows Underperform- and Neutral-rated integrateds in the US and Europe.

Figure 744: Underperform- and Neutral-rated US/European integrateds

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Exxon Mobil	33.9	138%	32%	0.9	-64%	0.6	8.4	104.7	nm	-0.4	3.0	Neutral
Total	17.3	71%	18%	0.9	-40%	2.6	6.6	60.8	-5.7	-1.9	1.8	Neutral
Eni	23.0	94%	4%	0.7	-50%	3.5	4.6	204.6	nm	-1.4	2.7	Underperform
Occidental Ptl.	-9.4	nm	na	0.7	-74%	na	8.2	-90.6	nm	-5.4	3.1	Underperform
Repsol Ypf	11.6	47%	-17%	0.5	-46%	8.1	9.5	165.4	-38.0	-6.1	2.2	Underperform

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse research

Luxury: underweight

This reflects five main concerns:

- A move away from the consumer

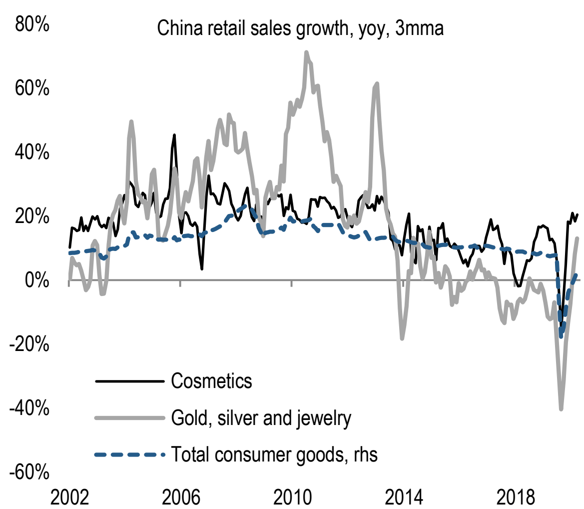
Taking a very 'big picture' view, as highlighted in the thematic section, we would focus on industrial and not consumer cyclicals (because consumption in DM is above pre-virus levels and IP is below).

- A move away from China exposure

Top-down, China GDP is up 5% yoy, while the rest of the world has lagged. We would seek exposure to the rest of the world as the distribution of COVID-19 vaccines starts to allow global GDP to normalise.

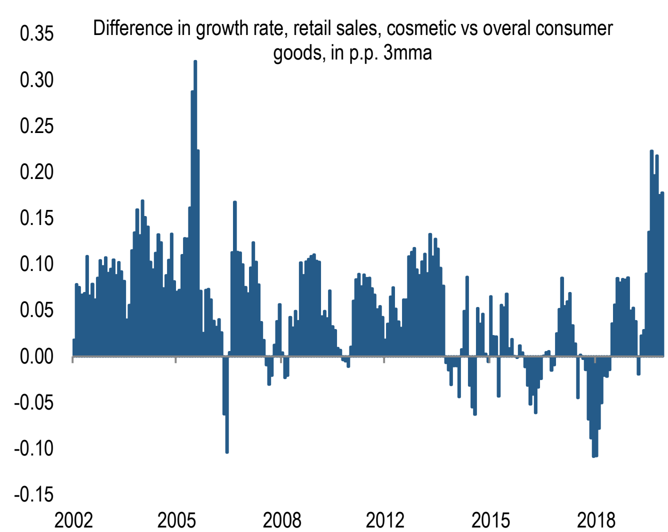
Luxury has clearly been driven by China. China now accounts for around 50% of incremental demand (and about a third of sales). If we look at a proxy of luxury spending in China, cosmetics sales are up 21% yoy, gold jewelry demand is up 13% yoy, and the gap between sales in these categories and overall retail sales is near a record high.

Figure 745: Sales of cosmetics and gold and jewelry was up strongly compared with total retail sales in China



Source: Refinitiv, Credit Suisse research

Figure 746: Sales growth for cosmetics products has outpaced overall retail sales growth



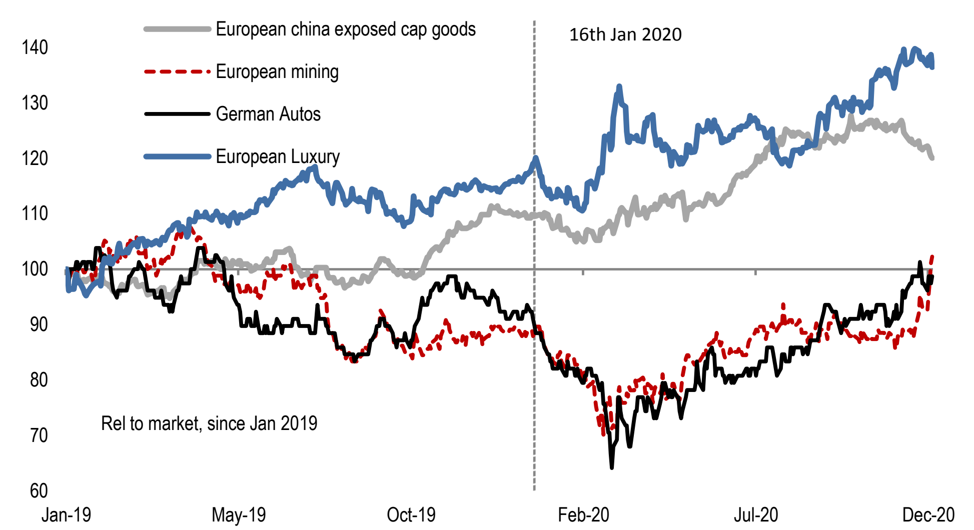
Source: Refinitiv, Credit Suisse research

To some extent, Asian demand for luxury could have been pulled forward with a switch from overseas travel to luxury. Hence in South Korea this year, demand for cars costing more than $135k has risen by a third (FT, 28 November) implying stay-at-home conspicuous consumption.

1. Luxury has been the best performing China exposure YTD

Of the China-exposed sectors, we prefer mining.

Figure 747: Luxury has outperformed all other China exposure YTD



Source: Refinitiv, Credit Suisse research

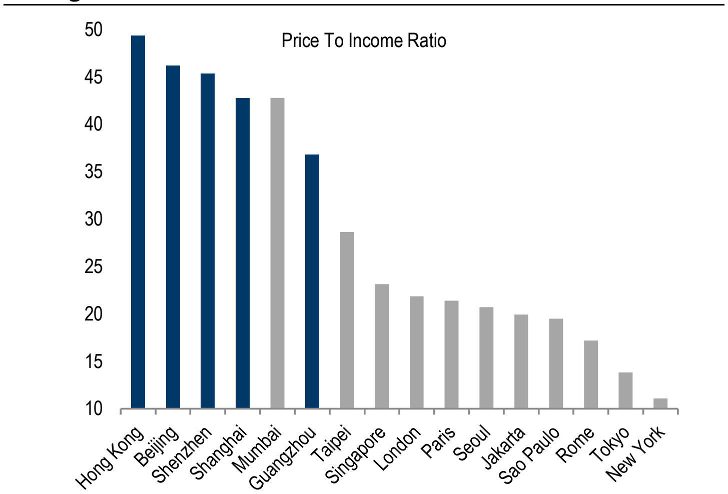
2. Bigger structural problems start to emerge

- Increasing concern over Chinese housing trends

This is very important because housing accounts for around half of household wealth and thus if house prices stop rising, we think high-end Chinese luxury consumption could come under pressure (which, as above, is around a third of luxury demand).

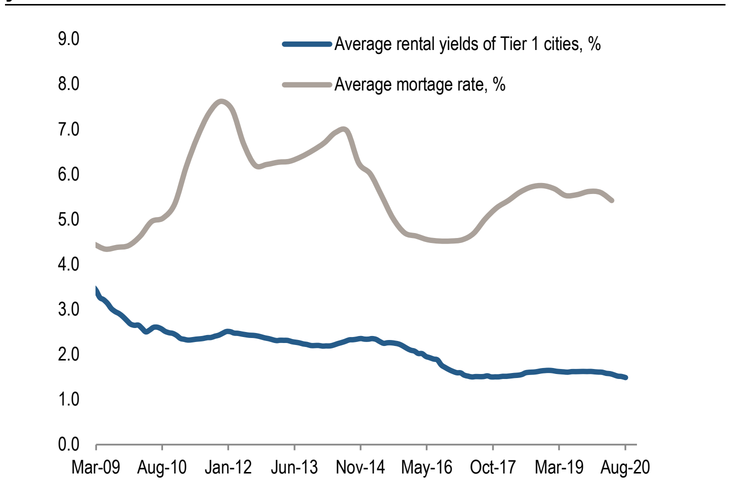
Structurally, housing looks vulnerable in China because of the extreme house price to wage ratio and it is much more expensive to buy than rent (i.e. mortgage rates are above average rental yields).

Figure 748: House prices in China's major cities are amongst the highest in the world



Source: Refinitiv, Credit Suisse research

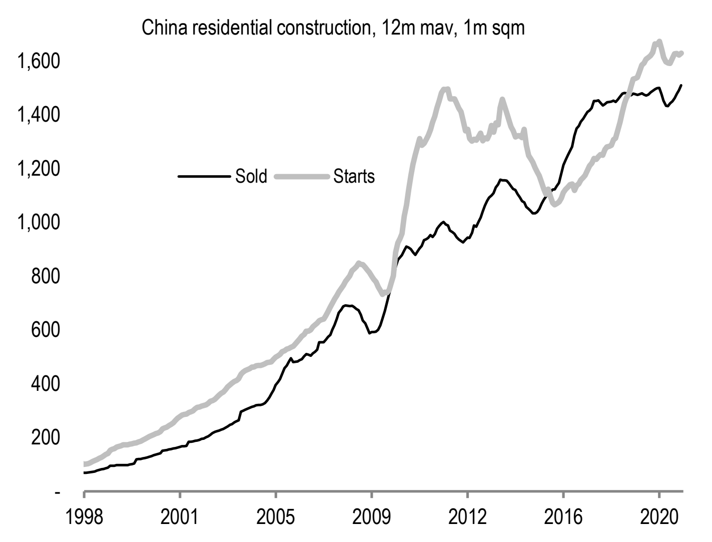
Figure 749: Average mortgage rate is above average rental yield



Source: Refinitiv, Credit Suisse research

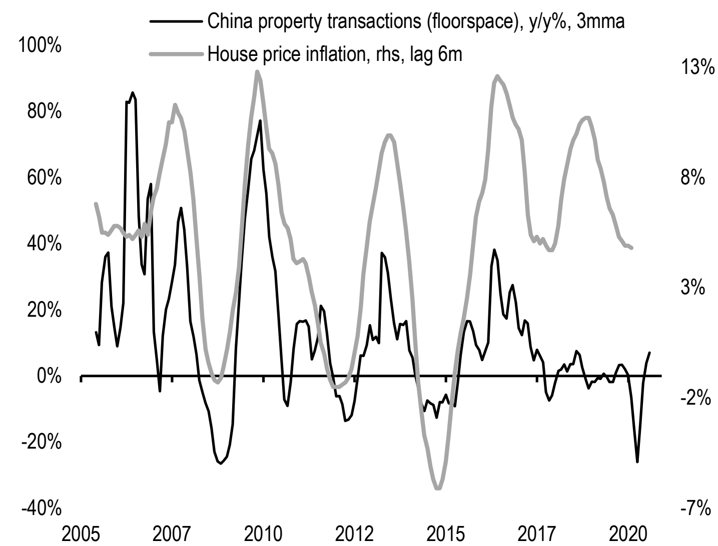
We can see that housing starts are now above houses sold and that property transactions are slowing.

Figure 750: Housing starts are now above houses sold



Source: Refinitiv, Credit Suisse research

Figure 751: Property transactions versus house price inflation imply house prices should fall



Source: Refinitiv, Credit Suisse research

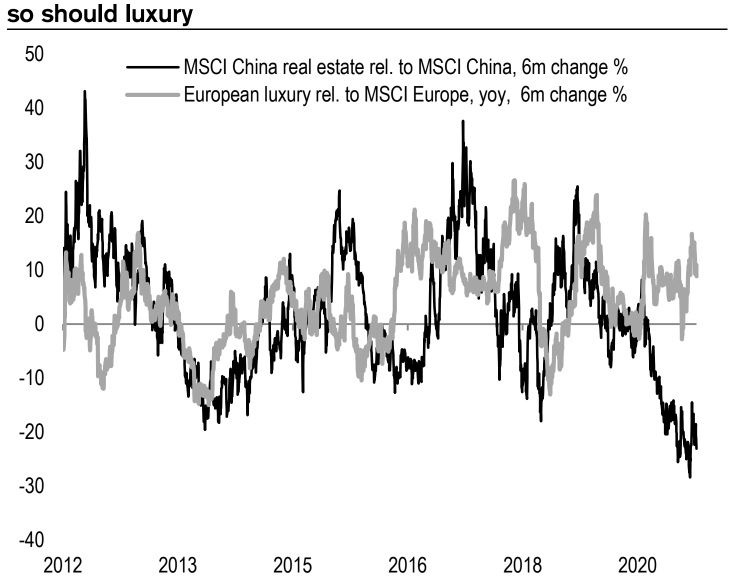
These factors could potentially put downward pressure on house prices. A survey conducted by CQi shows the selling prices of the developers they surveyed fell MoM in lower tier cities in October.

These early warning signs reveal themselves as property developers starting to underperform. Historically when they have underperformed, this has tended to put pressure on luxury stocks.

Figure 752: Property developers have been underperforming (reflecting weak transactions)

Source: Refinitiv, Credit Suisse research

Figure 753: If property developers come under pressure, then so should luxury



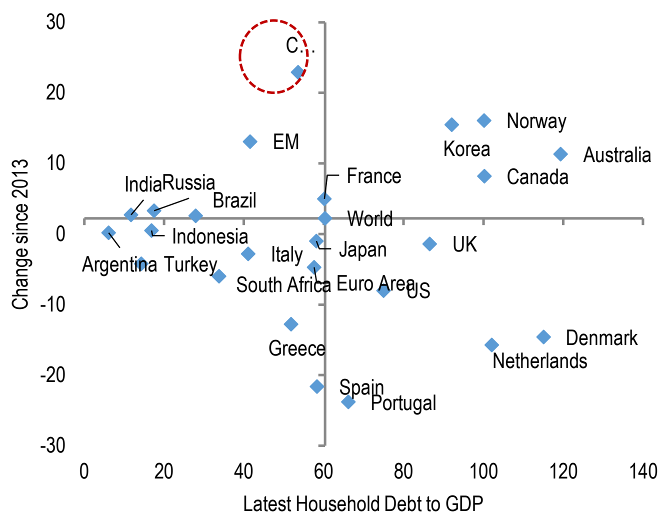
Source: Refinitiv, Credit Suisse research

■

■ The overleveraging of the Chinese consumer

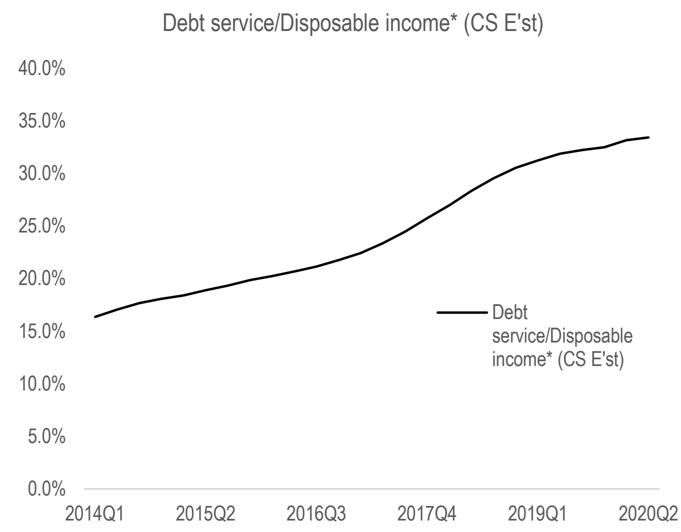
Household debt to GDP is still quite low compared with DM (but high for EM standards), but the increase in this ratio has been higher than any other country in the past seven years. Debt service to disposable income ratio has now reached 33%.

Figure 754: China has seen the largest increase in household debt to GDP since 2013



Source: Refinitiv, Credit Suisse research

Figure 755: Debt service to disposable income ratio has increased rapidly



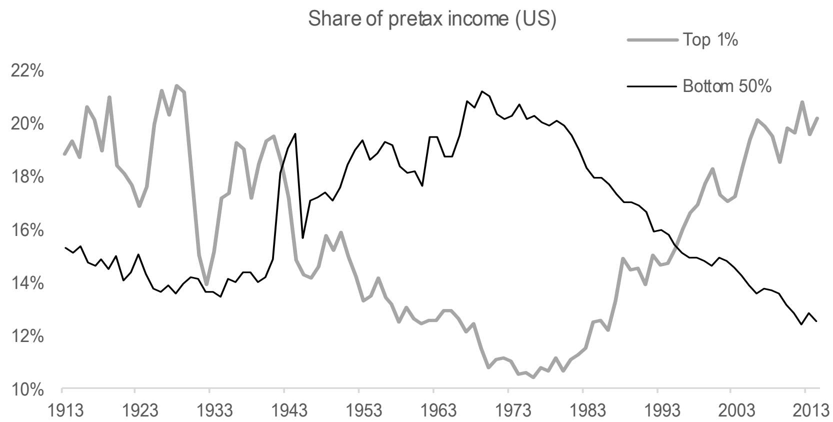
Source: Credit Suisse China Economics research

■ We believe that structurally, global wealth and income inequality has become too high.

Together with the huge debt burden incurred during the pandemic, it is likely there will be more wealth tax and income tax increases. We see a 30% probability of the Democrats gaining a majority in the Senate after the special election on 5 January, and 80% of the Biden-proposed tax increases fall on the wealthiest 1%. Indeed, Biden has vowed not to raise income taxes on people who earn less than $400K a year. In response to the fiscal impact of the COVID-19 crisis, Spain has been the first major country to raise personal income and wealth taxes on the rich (e.g. 2p.p. increase for employment income exceeding €300,000).

We believe a wealth tax (possibly via housing) is likely in much of the developed world.

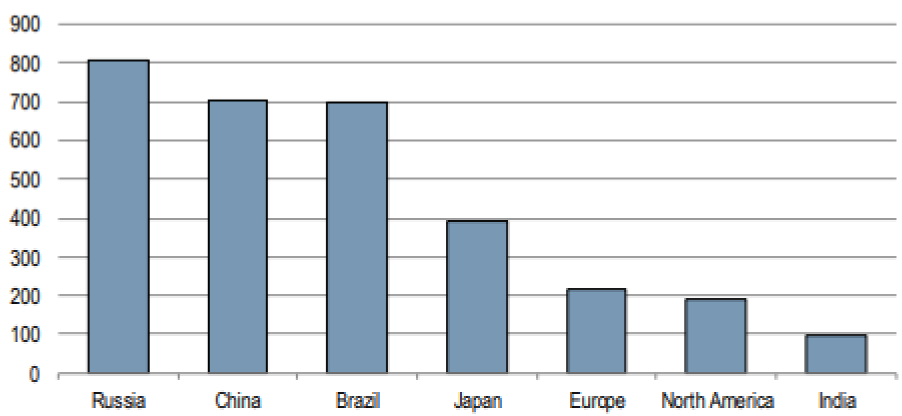
Figure 756: Top 1% vs. bottom 50% national income shares in the US and Western Europe



Source: Refinitiv, Credit Suisse research

- Luxury market already well-penetrated globally
- Luxury sales relative to wealth is already very high among key emerging markets. For example, Chinese consumers spend 2x more on luxury than Japanese consumers on this measure. Our analysts think luxury sales penetration will stay structurally low in the US and India.
- To some extent, as societies industrialised quickly, we think the aspiring middle class searched for status symbols, but a lot of this move now seems to be behind us.

Figure 757: Luxury sales by nationalities per millions of dollars of wealth

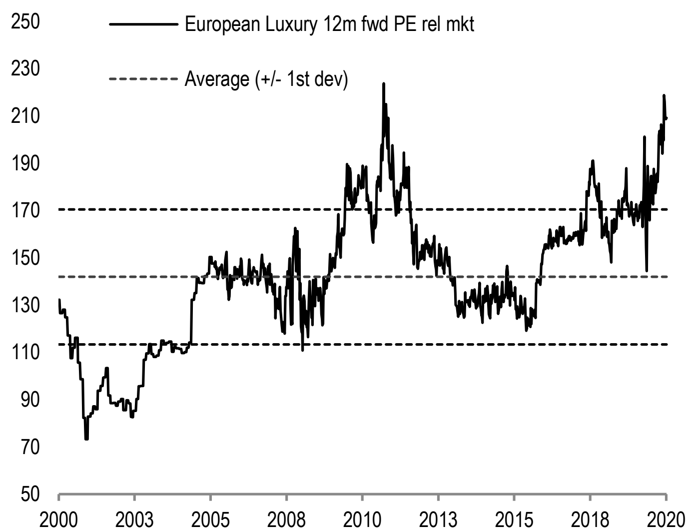


Source: Credit Suisse European Luxury Goods research

3. Valuations

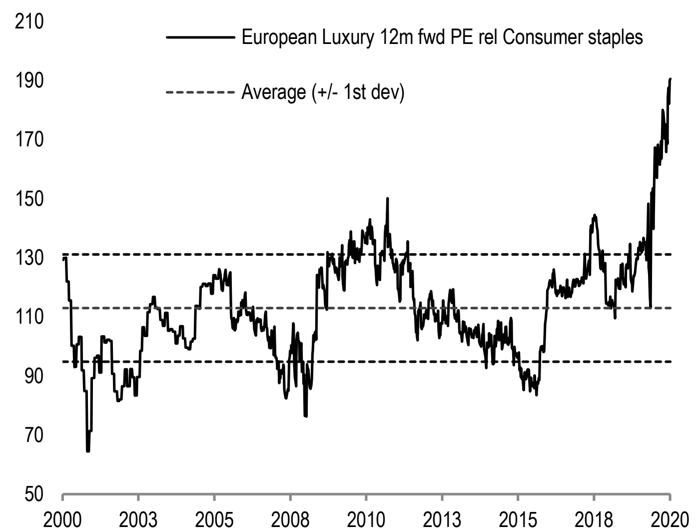
On 12-month forward P/E, European luxury names have become expensive relative to both the markets and consumer staples names (another branded sector).

Figure 758: Luxury goods 12m forward P/E relative to the market



Source: Refinitiv, Credit Suisse research

Figure 759: Compared to other consumer branded sectors, luxury is also looking expensive now

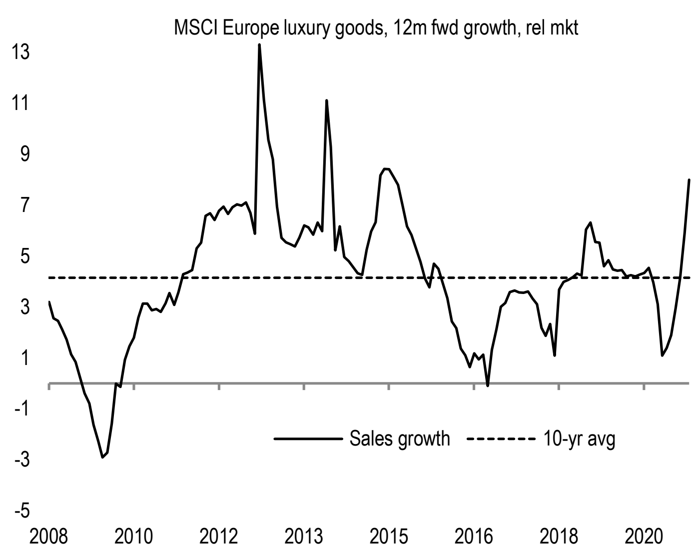


Source: Refinitiv, Credit Suisse research

4. High revenue assumptions

The consensus estimate for 12m forward sales growth is at 13%, 8 p.p. above the market, significantly higher than its historical average.

Figure 760: Revenue growth estimates for the luxury sector relative to the market are above their 10-year average



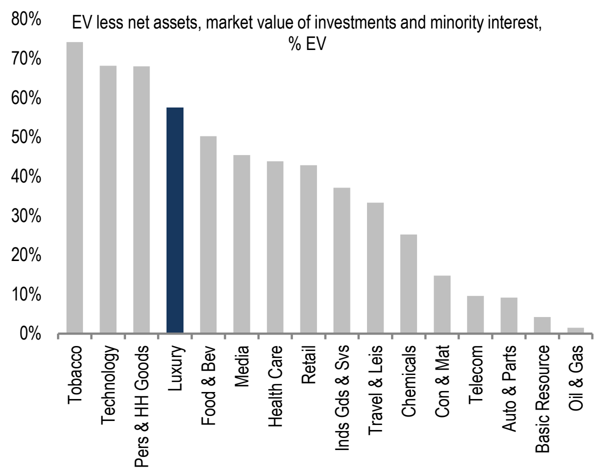
Source: Refinitiv, Credit Suisse research

The risk

Many of the strategic aspects of luxury are attractive

- European luxury is one of the few sectors in the region facing little technological disruption, and typically it has low leverage. We believe the key to business models being insulated from disruption is asset life or conspicuous brand value, with luxury scoring well on both.
- We try to proxy brand value by looking at enterprise value less (inflation-adjusted) net asset market value of investments and minority interests as a share of EV, which shows the luxury sector is able to generate significant value with relatively low levels of investment. Moreover, luxury brands have a key element of emotion and status, and thus are much harder to disintermediate vs. non-conspicuous brands. For example, Patek Philippe is one of only a few brands to have existed for over 150 years and has partly been a store of value (prices have risen more than inflation). In some instances, there are meaningful production constraints, giving significant pricing power to the producer.

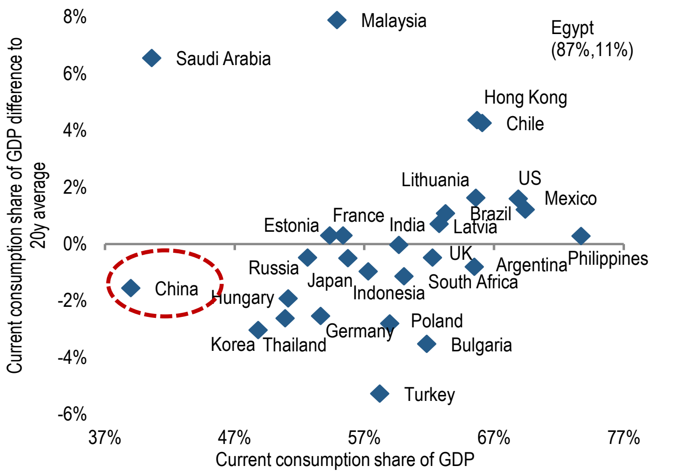
Figure 761: The luxury sector has high brand value



Source: Refinitiv, Credit Suisse research

- In the long term, Chinese growth has to be consumer-led given the very low consumer share of GDP in China compared with global peers. This fits the general concept of i) the savings ratio of c40% is likely to fall over time because of changing demographics and more provisions of state social security; ii) the high job offer to applicant ratio putting more pressure on wages and iii) the on-going shift of China's population to urban areas (the urbanisation rate is expected to increase to 70% by 2030 from 60% currently, and urban wages are c2.7x rural wages)

Figure 762: Consumption share of GDP in China is still very low



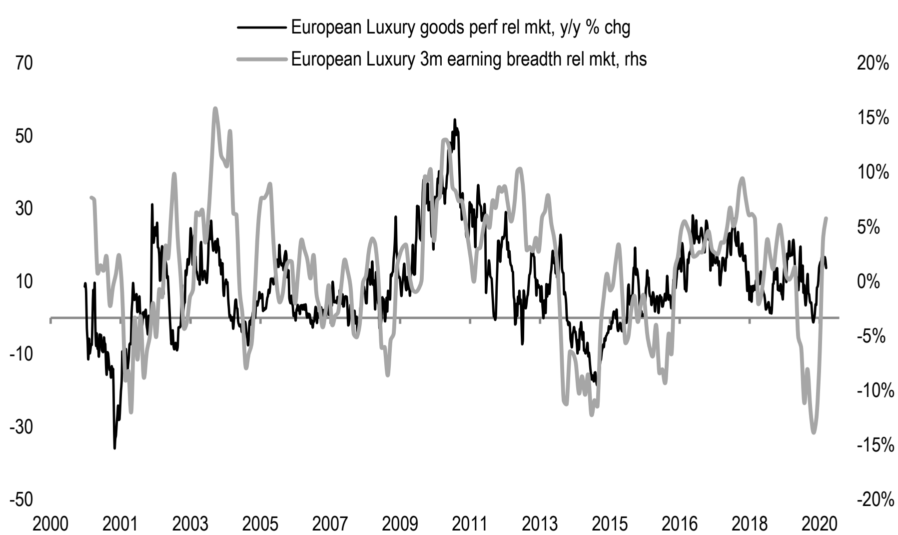
Source: Refinitiv, Credit Suisse research

Figure 763: Ratio of job vacancy vs job seekers remains high

Source: Refinitiv, Credit Suisse research

Earnings revisions have recovered sharply

Figure 764: Relative earnings revisions have recovered, but this has been reflected in the price



Source: Refinitiv, Credit Suisse research

Below we show European luxury names under CS coverage.

Figure 765: European luxury names under CS coverage

Name	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Lvmh	36.7	148%	33%	6.8	52%	1.5	0.9	-24.0	-4.9	-2.3	2.4	Outperform
Kering	26.4	107%	19%	7.4	88%	2.4	1.2	1.6	-6.9	-1.6	2.1	Outperform
The Swatch Group	26.1	106%	7%	1.0	-60%	0.6	1.7	73.4	-12.3	-2.4	2.8	Outperform
Richemont N	34.2	138%	23%	2.2	-35%	3.2	1.4	-21.3	3.7	-0.7	2.7	Neutral

Source: Refinitiv, IBES, MSCI, Credit Suisse HOLT, Credit Suisse research

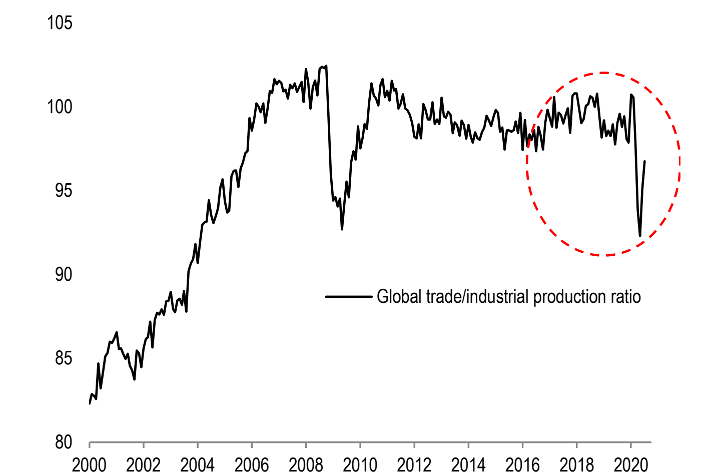
Freight forwarders: underweight; but overweight shipping

We see three problems:

i. Global trade growth is structurally on a flat/downward trend (even prior to COVID-19) relative to GDP

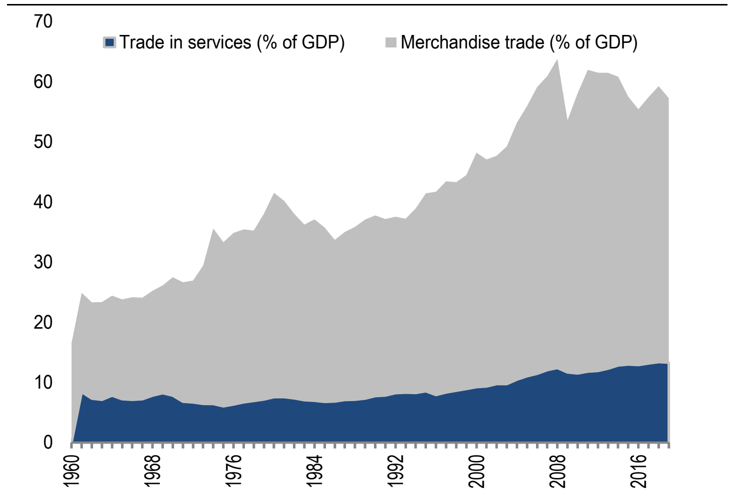
The trade intensity of GDP was on a downward trend prior to COVID-19 as shown below. Trade is growing only in line with global GDP compared with its historical norm of 1.5-2x global GDP. This is attributable to the saturation, with global trade 63% of GDP and nearly 100% of global IP. It is much harder to trade services than manufactured products (which is why c80% of global trade is in goods).

Figure 766: The trade intensity of industrial output has fallen steadily since 2010



Source: Refinitiv, Credit Suisse research

Figure 767: Global trade peaked at 63% of GDP



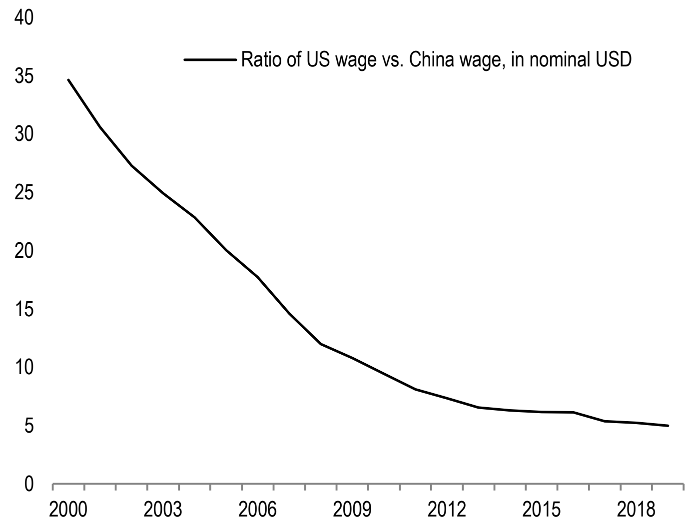
Source: Refinitiv, Credit Suisse research

Moreover, there is less incentive to outsource as wages in GEM have risen and there are labour shortages in China (the job offer-to-applicants ratio in China remains elevated, implying a labour shortage). New technologies are also emerging that make it more profitable to manufacture locally (e.g. 3D printing). Meanwhile, the threat of higher tariffs has been encouraging the localisation of production at the margin.

Figure 768: The job offer-to-applicant ratio in China remains elevated

Source: Refinitiv, Credit Suisse research

Figure 769: The ratio of US wages to China has declined sharply over the past decade



Source: Refinitiv, Credit Suisse research

Any short term bounceback in global trade we would recommend gaining exposure to through the testing companies (see testing companies section).

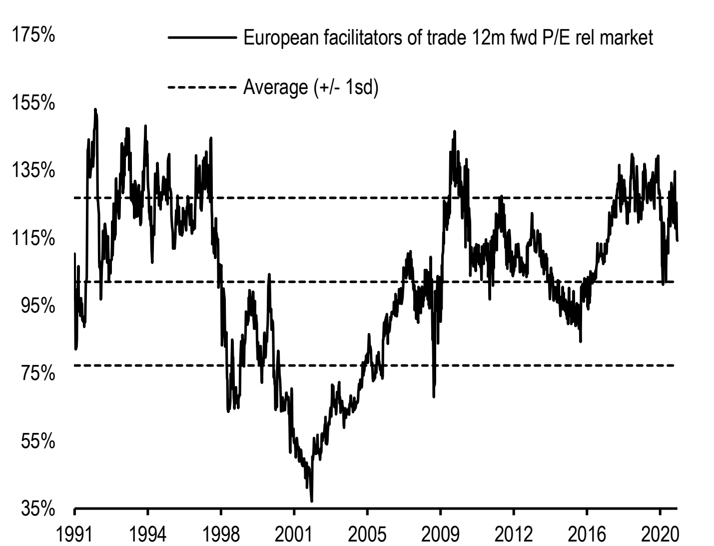
ii. Technical disruption to freight forwarding

There are some signs of disruption when it comes to freight forwarding as the business's high ROIC and good cash flow generation are attracting new entrants. Flexport, for example, a startup backed by Softbank, is trying to digitise an industry that is in many cases still based on email, phone calls and spreadsheets. In 2018, Flexport became the Lloyds List freight forwarder of the year. At the other end, Google's Asset Tracking platform is integrated with its Maps API, facilitating dynamic product routing, further opening up the market to smaller innovators. Amazon has also been trying to build up its third-party distribution system (Amazon Logistics), which led to FedEx terminating its contract with Amazon; Amazon later blocked sellers on its site from using FedEx for a few months.

iii. Very high valuations

We see valuations slightly extended on forward PE relatives and extremely extended on P/B relatives.

Figure 770: The facilitators of trade 12m fwd PE relative to the market…



Source: Refinitiv, Credit Suisse research

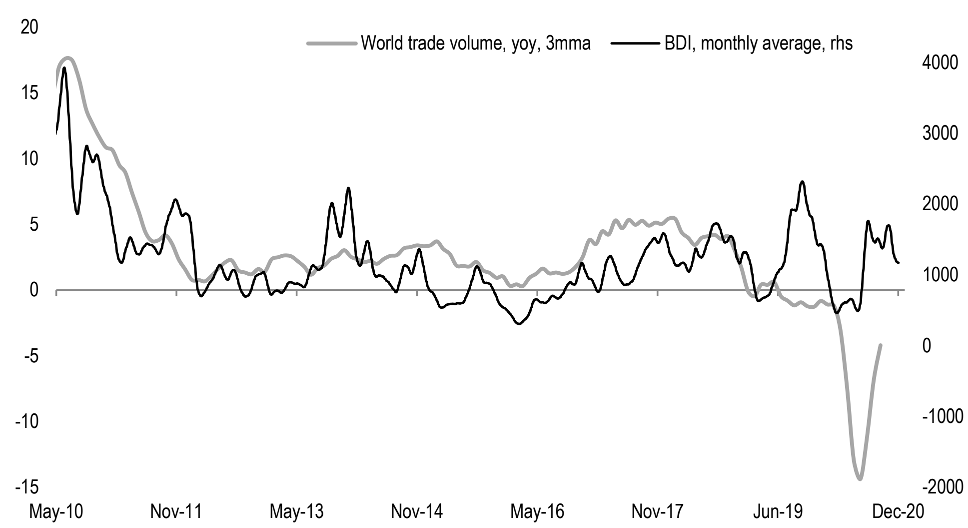
Figure 771: … and P/B relative to the market

Source: Refinitiv, Credit Suisse research

There is one very clear exception, in our view, and that is Moller Maersk.

We can see that the Baltic Freight index has decoupled from world trade volumes. This shows the benefits of consolidation and improved industry discipline.

Figure 772: The Baltic Dry Index has been much more resilient than world trade volumes



Source: Refinitiv, Credit Suisse research

McKinsey has pointed out that this sector has destroyed $100bn of shareholder value in the past 20 years (8 Sep, FT). This started to change when Hanjin Shipping went bankrupt in 2017 (the first major bankruptcy in 20 years). The three major alliances now control 85% of global trade, whereas it used to be 29%, according to the OECD International Transport Forum. The EU Commission has allowed a carve-out of the anti-trust rules up to 2024. The net result is that new orders for container ships is now just 10% of global fleet whereas it used to be 50% in 2008.

With growing evidence that the nature of liner market competition is changing (and limited appetite for container market share battles across the sector), our analysts find the advancement of Maersk's strategy of pursuing non-container revenues compelling. Thus even as it has re-rated, it still trades on just 1.3x EV/IC and has an FCF yield of c9% on 21E CS estimates (see FCF story to remain compelling into 2021, 23 Nov). We think this looks like a super cycle.

Figure 773: European facilitators of trade

Name	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
A P Moller Maersk B	20.1	66%	-3%	1.4	8%	10.1	1.7	20.1	142.9	2.7	2.2	Outperform
Deutsche Post	15.1	50%	-19%	3.5	4%	3.4	3.0	0.9	19.4	3.5	1.9	Neutral
Dsv Panalpina	28.7	95%	5%	4.6	-17%	2.6	0.3	-1.4	10.0	1.8	2.2	Outperform
Kuehne Und Nagel	28.5	94%	-7%	10.0	13%	4.8	2.0	0.5	15.8	2.6	3.2	Underperform
Royal Mail	16.7	55%	-33%	na	na	0.7	-0.5	43.3	nm	10.2	2.9	Neutral

Source: IBES, MSCI, Refinitiv, HOLT, Credit Suisse research

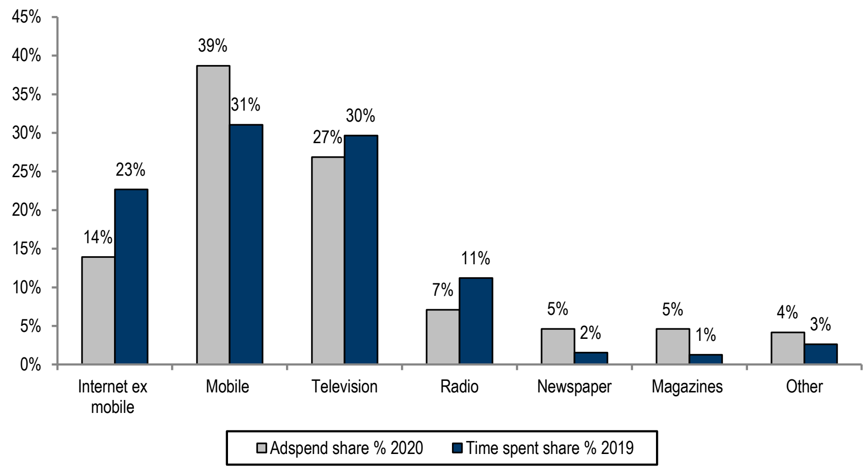
Media: underweight

We remain underweight non-content media.

Our primary concerns are structural:

- **TV over-earns.** TV continues to receive 27% of the ad spend in 2020 (compared with 32% in 2019, when it took up 30% of time spend). We see an ad spend share of 25% by the end of 2022 give the structural issues we highlight below.

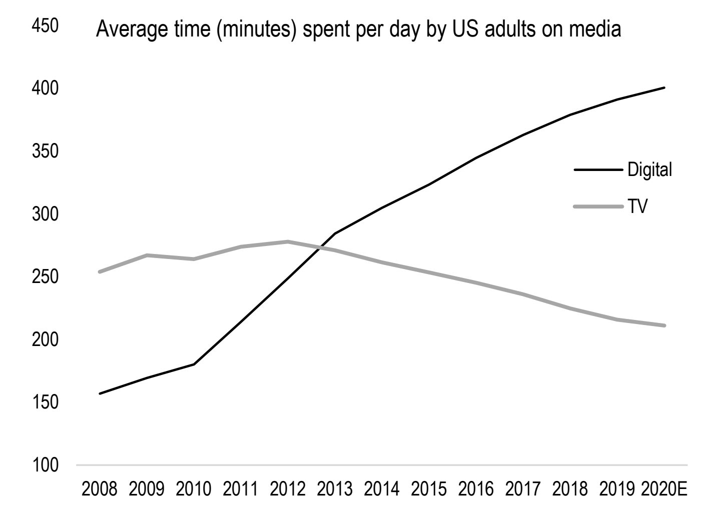
Figure 774 : Time spend vs ad spend in the US



Source: Zenith Media, eMarketer, Credit Suisse research

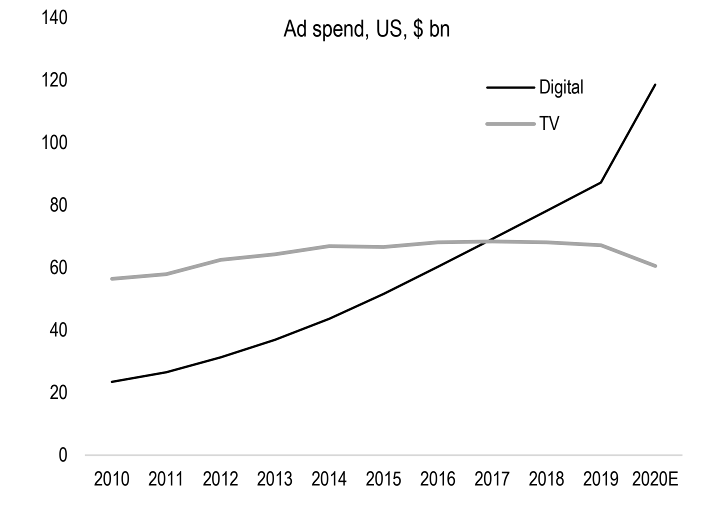
- **There has been a decline in time spent watching television:** In the UK, for example, time spent watching TV fell by 20.6% between 2011 and 2019. Even over the course of lockdowns (when time spend picked up as people looked to live TV for news on the coronavirus), viewership fell back below 2017 levels from May onwards.
- More worryingly, there is a clear demographic divergence in viewership habits, stacked against TV, with adults over the age of 65 still viewing over 300 minutes per day of TV, but under-24 year olds viewing less than 100 minutes per day (and declining). In the US, TV viewership has fallen by 24% since 2012 and since 2019 time spent on mobile devices (which has increased by 166% over this period) has overtaken time spent watching TV.
- **Coronavirus hastening the disruption:** WARC projects global TV ad spend to fall by 16% in 2020, with only a small rebound of 1.1% in 2021. This comes despite the overall downturn for the ad industry being smaller than during the GFC (-10.2% this year compared with -12.7% in 2009), with the shift to digital over the coronavirus crisis causing social media and video ad spend to rise by 9.3% and 7.9%, respectively, in 2020.

Figure 775: Average time spent by US adults on Media



Source: eMarketer, Credit Suisse research

Figure 776: Advertising spend in the US



Source: Zenith Media, Credit Suisse research

- **TV spend is becoming less targeted** (and therefore less directly effective per dollar) in contrast to the other platforms (particularly online).
- **The rise of social media content:** this rise in social media content again takes time away from TV viewership. In the UK, Ofcom (August 2019) found that although BBC One and ITV remained the two most watched channels on average per day, YouTube is now third on the list.
- **Netflix, Apple, and Amazon have all moved into content:** Netflix spent over $15bn, with Amazon, Apple, and Disney spending $6bn, $6bn and $2.5bn on streaming content alone in 2019, which is likely to further reduce TV viewership as more consumers make the jump to streaming.

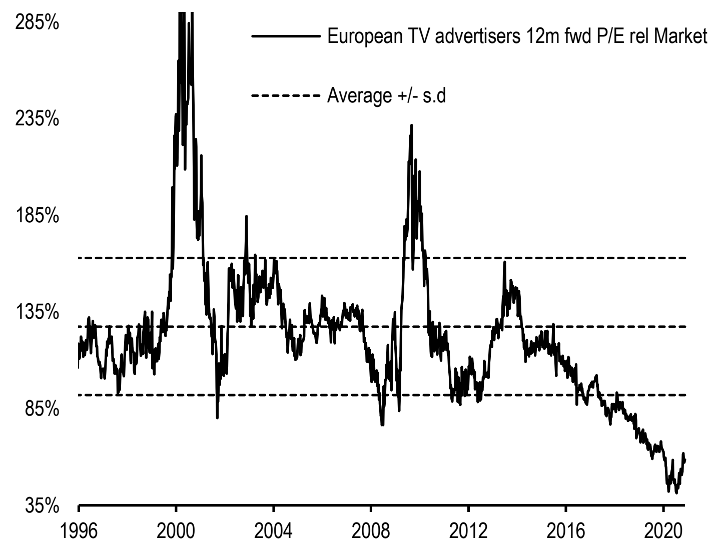
The issue we see is that Amazon and Netflix have significantly lower costs of capital, can cross-subsidise, and have more scale; therefore being able to outspend their European peers on content. Netflix will have over 200m subscribers globally by year-end (our US Media team expects this to grow to 250m by 2022) and Amazon Prime has c.100m subscribers in the US alone. Their large user bases allow them to have a much larger programming scale than regionally-focused broadcasters.

According to Forbes, the average content spend per hour at Netflix is higher than that for ITV at peak times and the cost per episode of Netflix's most expensive shows is up to five times that of ITV's (FT, 30 November 2019).

- **Disruption in live TV:** Many of the most viewed programmes in the US are sports-related, and the disruptors are starting to move into this field (for example, Amazon has the rights to 20 Premiership games at key times). This could leave the broadcasters in a downward spiral – losing audiences and unable to afford the content needed to win them back.
- **Diseconomies of scale from the nature of ad spend content companies:** Ad spending is discretionary in a downturn, and ad-reliant companies have to cut content while subscription-based models can increase the quality of their content.

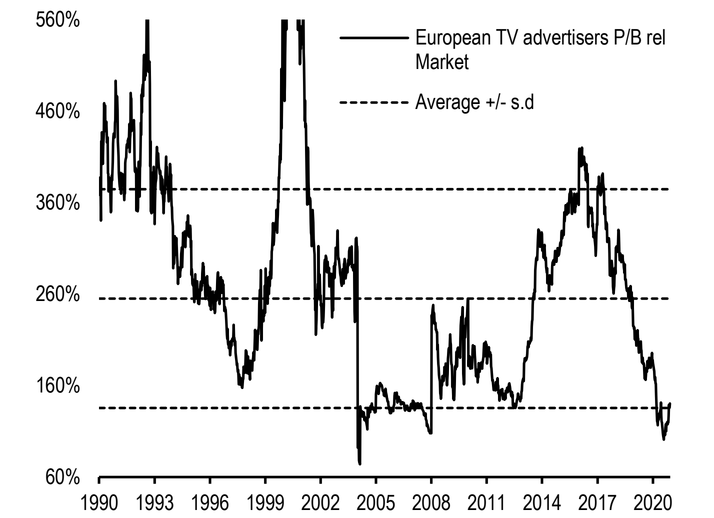
We do not believe valuation sufficiently compensates for the structural problems in this subsector.

Figure 777: European TV advertisers have been consistently de-rating since 2013 on 12m fwd PE…



Source: Refinitiv, Credit Suisse research

Figure 778: … with a similar story on PB relatives



Source: Refinitiv, Credit Suisse research

We show below the TV advertisers with their exposure to content as a share of EBITDA. ITV, with 31% content is rated Outperform.

Figure 779: European TV advertisers, with their exposure to content as a share of EBITDA

		-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Content, % of EBITDA	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Mediaset Espana	<10%	8.7	66%	-65%	1.5	-54%	6.1	5.2	170.0	11.3	0.8	2.1	Not Covered
Atresmedia Corp	<10%	8.7	66%	-61%	1.6	-67%	10.8	2.1	30.6	7.0	0.1	2.7	Not Covered
Itv	31%	9.9	75%	-39%	4.8	-47%	7.4	1.2	4.6	10.1	-1.1	2.5	Outperform
Prosiebensat 1	-	9.8	74%	-43%	2.7	-66%	4.7	3.5	-61.0	-0.9	3.5	2.2	Underperform
Tf1 (Tv.Fse.1)	17%	12.0	91%	-44%	0.9	-46%	6.3	3.7	146.6	29.5	0.7	2.5	Not Covered

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

Ad agencies

Normally, this would be the part of the cycle when we would expect to be overweight (our European analysts see earnings upside over the next six months). It is clear than many FMCG companies made large cuts to their advertising and promotion spend (Brown-Forman for example cut A&P 33% year-on-year on a reported basis in the second quarter).

The problem we continue to have is that we see the ad spend at the margin going to Google/Facebook, consultants or other forms of social media. The consultants (e.g. Accenture) are also moving into this space (selling CRM-related technology that aims to maximise returns on marketing investments). Their global scale cannot be matched by the agencies.

Additionally, if we look at the valuations of Google and Facebook against the ad agencies on 2023 earnings (consensus), digital media is not that expensive (Facebook is on 19x 2023 earnings). Google and Facebook continue to have huge optionality (e.g. WayMo, Google Pay etc. or the Facebook Libra or its India exposure etc.).

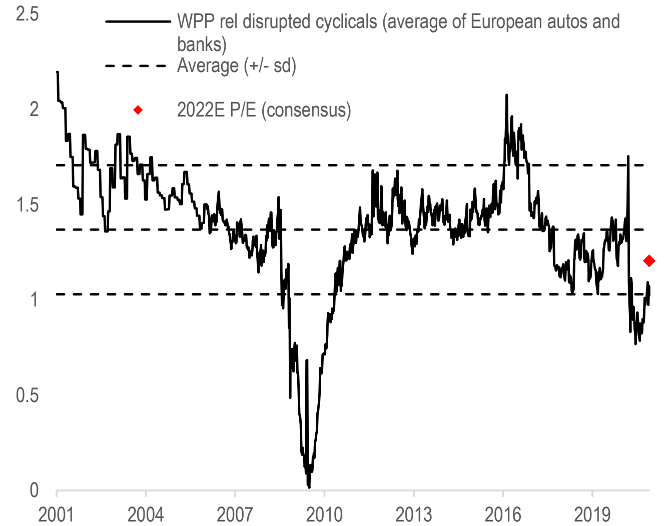
If we compare WPP to other cyclical highly disrupted areas (e.g. autos or banks), it does not look that cheap. We use 2022 P/E to normalise the cycle (using IBES consensus numbers).

Figure 780: The ad agencies against Facebook and Google

	P/E (consensus earnings)		EV/EBITDA (CS estimates)	
	12m fwd	2023	2020	2022
WPP	10.8	9.5	6.9	5.4
Publicis Gr.	9.1	9.7	6.5	5.2
Facebook	27.6	18.6	18.9	12.9
Google	29.7	21.3	25.1	19.8

Source: Refinitiv, Credit Suisse research

Figure 781: WPP does not look that cheap against other disrupted cyclicals on 22E P/E



Source: Refinitiv, Credit Suisse research

We show below the European ad agencies:

Figure 782: European ad agencies

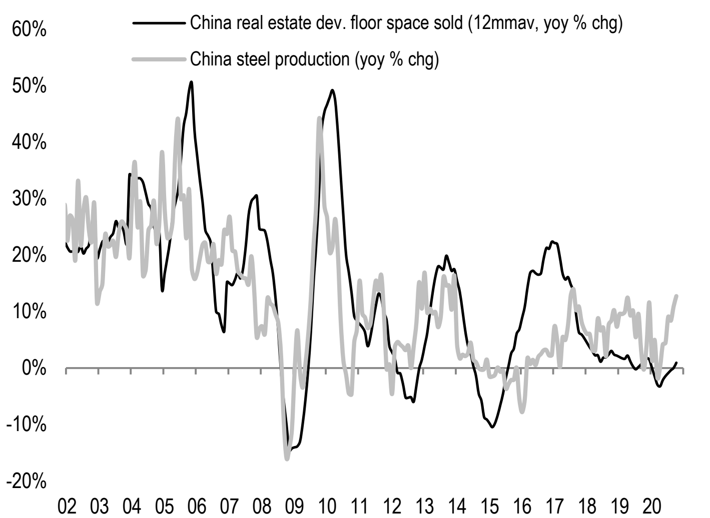
	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Wpp	11.2	na	-34%	1.2	-48%	4.0	3.5	-6.4	2.1	1.4	2.7	Underperform
Publicis Groupe	9.2	na	-48%	1.3	-49%	9.3	4.0	-14.6	1.0	0.0	2.5	Neutral
S4 Cap.Ord.Shs.	54.1	na	41%	na	na	na	0.0	-6.8	3.6	4.3	1.7	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

Steel: underweight

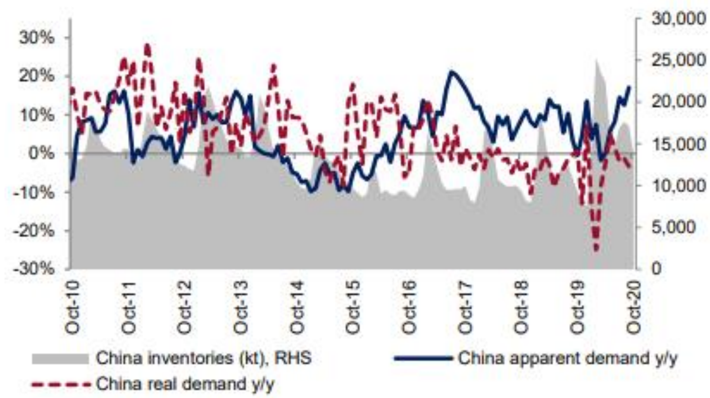
We have not liked steel relative to iron ores because steel in effect takes cartelised inputs and sells to monopsonies. Chinese production is rising relative to demand.

Figure 783: China steel production relative to demand proxy (real estate floor space yoy)



Source: Refinitiv, Credit Suisse research

Figure 784: China steel inventories are middling



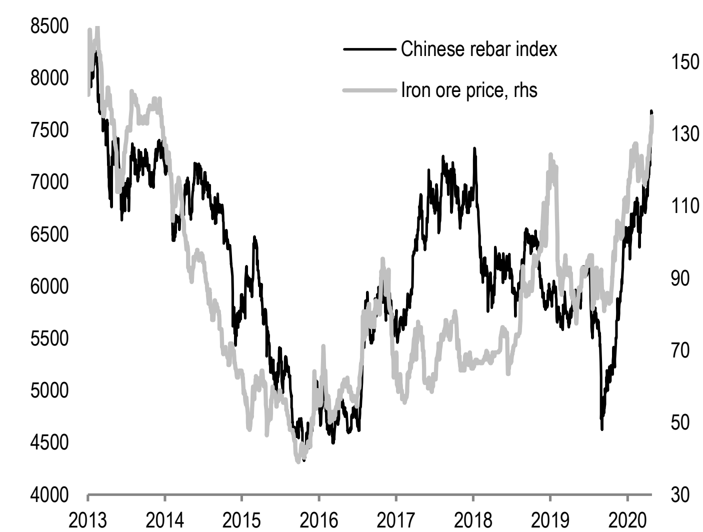
Source: Credit Suisse European Metals and Mining research

Further, steel is not that cheap relative to mining when we look at the P/B relatives and very often iron ore and rebar prices move in the same direction; we prefer iron ore.

Figure 785: P/B of steel relative to mining

Source: Refinitiv, Credit Suisse research

Figure 786: Iron ore price versus steel price



Source: Refinitiv, Credit Suisse research

Stocks

Below we show global mining names that are rated Outperform by CS analysts. CS European Mining analysts' preferred names are Anglo American (nearly half of its exposure is to copper and precious metals including platinum, and trades on 3.3x EBITDA on spot commodity prices once we adjust for the value of its cross holdings) and Norilsk (exposure to palladium with an attractive valuation). The Australian names might be vulnerable to deteriorating relations with China (which might in turn benefit the Brazilian names for iron ore for example).

Figure 787: Global mining names that are Outperform-rated by CS analysts

	-----P/E (12m fwd) ------			------ P/B -------		2020e, %		HOLT	2020e Momentum, %			
Name	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
Anglo American	11.1	76%	-24%	1.2	-8%	1.1	2.5	109.4	18.0	4.3	2.1	Outperform
Bhp Group	13.9	95%	-32%	3.0	-2%	8.9	5.1	45.2	31.1	15.4	1.9	Outperform
South32	18.1	124%	-8%	0.9	-25%	na	1.3	153.4	61.8	5.2	2.1	Outperform
Teck Resources Subordinate	11.0	76%	-43%	0.6	-41%	-7.1	0.9	106.7	5.1	1.1	2.1	Outperform
Igo	20.0	137%	-17%	1.6	-16%	7.4	2.1	63.1	16.5	2.9	2.5	Outperform
Hudbay Minerals	120.2	825%	179%	1.0	-5%	-9.2	0.3	-46.4	nm	6.5	2.2	Outperform
Merdeka Copper Gold	29.2	200%	59%	6.4	54%	0.0	0.0	11.4	nm	-20.1	2.3	Outperform
Western Areas	51.5	353%	107%	1.3	-54%	-12.8	0.6	21.0	-86.9	-14.5	2.2	Outperform
Mmg	17.9	123%	-32%	3.3	24%	25.4	0.0	-57.3	nm	-0.4	2.4	Outperform
New Century Resources	3.9	27%	-90%	4.0	-85%	51.1	2.3	-134.5	nm	-6.0	2.0	Outperform
Pilbara Minerals	-137.9	nm	na	4.4	23%	na	0.0	-66.1	nm	-7.9	3.3	Outperform
Syrah Resources	-13.8	nm	na	0.8	-81%	na	0.0	-6.4	nm	-18.0	2.8	Outperform
Yunnan Chihong Zinc &	29.1	199%	-39%	1.6	-59%	12.0	0.9	-15.5	59.0	3.9	2.5	Outperform
Mmc Norilsk Nickel (Lon)	7.3	50%	-38%	na	na	8.5	8.6	-7.5	-10.9	4.0	2.0	Outperform

Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse estimates

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Our 21 top picks for 2021

Figure 788: Top 21 picks for 2021

Name	-----P/E (12m fwd) ------ Abs	rel to Industry	rel to mkt % above/below average	------ P/B ------- Abs	rel to mkt % above/below average	2020e, % FCY	DY	HOLT Price, % change to best	2020e Momentum, % 3m EPS	3m Sales	Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
A P Moller Maersk B	21.4	76%	5%	1.4	11%	9.8	1.6	17.3	144.4	2.8	2.3	Outperform
Alphabet A	29.2	na	2%	6.1	24%	3.1	0.0	131.7	16.6	3.3	1.8	Outperform
Anglo American	10.2	74%	-29%	1.2	-10%	1.1	2.8	118.0	19.1	4.8	2.1	Outperform
Axis Bank	17.6	145%	-6%	2.0	-24%	na	0.6	107.6	9.9	6.2	1.8	Outperform
Constellation Brands 'A'	20.6	87%	-21%	3.2	-17%	4.3	1.5	30.0	6.9	7.2	2.2	Outperform
Crh (Dub)	14.4	96%	-36%	na	na	8.0	2.6	53.2	14.2	3.6	2.1	Outperform
Cummins	16.3	77%	-10%	4.4	6%	4.9	2.4	38.9	19.0	7.0	2.6	Outperform
Ericsson B	16.4	66%	-32%	4.0	44%	4.7	1.7	86.1	8.0	-1.1	2.0	Outperform
Global Payments	24.3	72%	-3%	2.1	-55%	3.3	0.4	41.6	0.7	0.3	1.8	Outperform
Heineken	26.8	113%	7%	3.2	-12%	2.0	1.1	-25.6	-11.3	-0.9	2.5	Outperform
Iqvia Holdings	21.8	74%	-20%	5.4	-79%	2.5	0.0	-50.9	2.4	1.4	1.8	Outperform
Keyence	57.7	233%	47%	7.2	58%	2.2	0.3	-44.6	-2.6	-2.5	2.2	Outperform
Lafargeholcim	13.6	91%	-34%	1.0	-32%	9.1	4.3	51.9	10.5	0.4	1.7	Outperform
Lloyds Banking Group	10.7	89%	-17%	0.5	-56%	na	0.9	3.6	2.6	-1.6	2.4	Outperform
Micron Technology	15.6	69%	-37%	2.0	6%	-0.4	0.0	177.6	-38.6	-2.5	2.0	Outperform
Oracle	13.4	40%	-28%	15.4	120%	6.1	1.6	9.7	7.7	1.7	2.5	Outperform
Prosus	30.1	84%	-23%	5.7	-1%	na	0.1	7.9	2.2	20.3	1.9	Outperform
Rwe	16.9	98%	7%	1.2	-46%	0.8	2.6	173.9	-3.3	6.8	2.1	Outperform
Samsung Electronics	13.7	55%	13%	2.0	16%	5.6	2.1	141.5	13.1	2.5	1.8	Outperform
Smurfit Kappa Group	15.2	88%	12%	3.0	22%	5.6	3.6	16.2	6.3	-0.3	2.1	Outperform
Vodafone Group	15.9	123%	-42%	0.4	-57%	8.1	6.3	40.7	6.9	-0.3	1.9	Outperform

Source: IBES, MSCI, Refinitiv, Credit Suisse HOLT, Credit Suisse research

Sector scorecards

European scorecards

Our individual scorecards rank sectors based on valuations, projected performance using our proposed macro scenario, earnings momentum, price momentum, positioning and fundamentals. In our composite scorecard, all of these factors are combined into one overall score. We emphasise that these scorecards do not represent our weightings, but constitute only one part of our overall weightings analysis.

Composite: On our composite scorecard, Construction Materials, Tobacco and Metals & Mining rank at the top, while Retailing, Transport and Hotels & Leisure rank at the bottom.

Figure 789: European sector composite scorecard

Pan-European Sectors	Z-scores						
	Valuation + HOLT	Macro	Earnings momentum	Price momentum	Positioning	Fundamental	Total
Weight	*40%*	*20%*	*12%*	*4%*	*4%*	*20%*	*100%*
Construction Materials	0.90	1.31	1.40	-0.6	0.51	0.08	0.80
Tobacco	2.30	-0.91	-0.13	1.0	-0.93	-0.23	0.68
Metals and Mining	0.53	1.28	0.92	-1.4	0.51	-0.25	0.49
H/H Pers Prd	0.97	-1.04	-0.58	2.2	1.11	1.15	0.47
Automobiles	0.58	0.97	2.60	-1.7	-1.38	-0.85	0.45
Insurance	1.14	0.44	-0.25	-0.9	-1.94	0.12	0.43
Pharmaceuticals	1.26	-1.53	-0.68	2.0	-1.52	0.77	0.28
Food Retail	1.55	-1.99	-0.29	1.7	0.25	-0.25	0.22
Diversified Financials	0.00	1.04	0.27	-0.5	0.30	-0.30	0.17
Energy	0.47	0.43	0.16	-1.5	-0.45	-0.52	0.11
Software	-0.04	0.25	-1.53	2.3	0.47	0.70	0.10
Banks	-0.15	1.35	0.69	-2.6	-0.33	-0.52	0.07
Food Producers	0.52	-1.49	-1.44	2.5	-0.93	0.49	-0.10
Chemicals	-0.55	0.37	-0.24	1.4	0.51	-0.12	-0.12
Telecoms	0.79	-1.37	-0.56	0.0	-0.88	-0.35	-0.13
Commercial Services	-0.77	-0.25	0.15	1.6	-0.02	0.57	-0.16
Utilities	-0.29	-0.21	-0.35	0.7	-0.11	0.03	-0.17
Semiconductors	-0.99	0.42	0.62	-1.1	-0.43	0.60	-0.18
Capital Goods	-1.50	1.55	0.07	-1.1	0.73	0.37	-0.22
Beverages	-0.34	-0.43	0.51	-0.6	-0.93	-0.16	-0.26
Pulp & Paper	-0.30	-0.20	-0.11	-0.6	0.51	-0.49	-0.27
Consumer Durables	-1.39	0.47	0.77	-1.1	0.26	0.49	-0.31
Healthcare Equip	-0.64	-0.87	-0.55	1.7	-0.28	0.26	-0.39
Technology Hardware	-0.56	-0.58	-0.54	0.0	-0.37	-0.37	-0.50
Retailing	-2.02	-0.33	0.88	0.0	-1.14	-0.11	-0.83
Transport	-2.78	1.25	0.26	-0.8	1.91	-0.63	-0.91
Hotels & Leisure	-1.86	0.12	-1.84	-3.1	1.49	-0.47	-1.10

A high z-score indicates a positive for each indicator

Source: Refinitiv, Credit Suisse HOLT, Credit Suisse research

Valuations: This scorecard is based on P/E relatives, P/B relatives and dividend yield relatives as well as HOLT valuation metrics (economic P/E and implied CFROI against its 10-year average). We calculate the z-score for each of these components. For P/E, P/B and dividend yield, this calculation is based on values dating back to 1995. For the HOLT measures, we use a 10-year average and then calculate an equally weighted average of the economic P/E and the implied CFROI relative to the sector norm to calculate the overall HOLT score.

Based on this methodology, Tobacco, Food Retail and Pharma look the cheapest, and Hotels & Leisure, Retailing and Transport look the most expensive.

Figure 790: European sector valuation scorecard

Pan Europe Sectors	12m fwd P/E			P/B			Div yield			Eco PE	CFROI	HOLT score	Total Z-Score
	Absolute	Relative	z-score	Absolute	Relative	z-score	Absolute	Relative	z-score	z-score	z-score	z-score	
Tobacco	7.9	45%	2.5	1.2	62%	1.4	7.7%	313%	3.0	na	na	na	2.3
Food Retail	12.9	74%	2.3	1.6	85%	1.5	3.7%	152%	3.0	-1.79	0.76	-0.5	1.6
Pharmaceuticals	15.8	91%	1.8	4.1	217%	0.1	3.4%	138%	2.8	-1.29	1.97	0.3	1.3
Insurance	10.3	59%	1.0	1.1	60%	0.7	4.5%	183%	2.5	0.14	0.57	0.4	1.1
Household Products	21.7	125%	1.7	5.1	271%	-0.7	2.5%	102%	3.0	-2.58	2.23	-0.2	1.0
Construction Materials	13.6	78%	1.3	1.2	65%	0.7	2.8%	116%	1.2	-0.65	1.52	0.4	0.9
Telecoms	13.9	80%	0.1	1.4	72%	1.3	4.8%	194%	1.7	-1.42	1.62	0.1	0.8
Automobiles	10.6	61%	0.1	1.0	53%	1.0	1.8%	76%	-0.2	-2.15	4.81	1.3	0.6
Metals and Mining	12.3	71%	0.7	1.7	93%	0.0	3.4%	140%	1.1	-1.04	1.58	0.3	0.5
Food Producers	24.2	139%	-0.2	4.7	252%	-1.3	2.6%	108%	2.9	-2.27	3.69	0.7	0.5
Energy	16.5	95%	-0.5	1.0	55%	1.7	6.2%	253%	2.7	-6.96	2.83	-2.1	0.5
Diversified Financials	15.6	90%	-0.6	1.1	59%	0.7	2.4%	99%	0.1	-0.61	0.16	-0.2	0.0
Software	26.9	154%	0.1	5.3	280%	0.1	1.0%	39%	0.1	-3.19	2.30	-0.4	0.0
Banks	11.2	64%	1.2	0.6	30%	1.7	0.4%	16%	-3.0	-2.25	1.23	-0.5	-0.2
Utilities	17.0	98%	0.1	2.0	108%	-1.2	3.8%	155%	0.5	-2.38	1.19	-0.6	-0.3
Pulp & Paper	18.8	108%	-0.3	1.6	87%	-1.1	2.5%	103%	-0.8	-2.16	4.32	1.1	-0.3
Beverages	23.9	137%	-0.5	3.8	204%	-0.9	2.0%	83%	0.2	-1.09	0.68	-0.2	-0.3
Chemicals	23.7	136%	-1.7	3.0	158%	-1.2	2.4%	100%	0.7	-4.25	4.15	0.0	-0.5
Technology Hardware	20.6	118%	0.6	3.0	158%	-0.6	0.9%	36%	-1.6	-2.59	1.23	-0.7	-0.6
Healthcare Equip	24.2	139%	0.3	3.2	168%	0.4	0.7%	30%	-0.8	-3.40	-1.66	-2.5	-0.6
Commercial Services	23.8	136%	-0.9	7.8	414%	-1.9	1.8%	73%	0.1	-3.07	2.26	-0.4	-0.8
Semiconductors	33.5	192%	0.0	8.1	432%	-3.0	0.7%	28%	0.4	-1.16	-1.61	-1.4	-1.0
Consumer Durables	29.0	167%	-2.0	4.0	213%	-1.4	1.0%	39%	-1.7	-4.49	3.72	-0.4	-1.4
Capital Goods	22.2	127%	-2.0	3.5	185%	-1.9	1.6%	66%	-1.5	-3.81	2.54	-0.6	-1.5
Hotels & Leisure	38.0	218%	-3.0	3.4	179%	-0.4	0.5%	19%	-3.0	-7.53	5.38	-1.1	-1.9
Retailing	37.5	216%	-3.0	4.9	258%	-1.4	0.3%	13%	-3.0	-3.68	2.40	-0.6	-2.0
Transport	28.4	163%	-2.6	2.9	155%	-2.7	1.3%	55%	-2.1	-7.42	-0.03	-3.7	-2.8

A high z-score indicates the sector is cheap on all metrics

Source: Refinitiv, Credit Suisse HOLT, Credit Suisse research

Fundamental scorecard: Our fundamental scorecard assesses profitability, EPS and sales growth, leverage and measures of credit quality (CDS spreads and rating).

Household & Personal Products, Pharma and Software rank at the top on fundamentals, whereas Energy, Transport and Autos rank at the bottom.

Figure 791: Fundamental scorecard

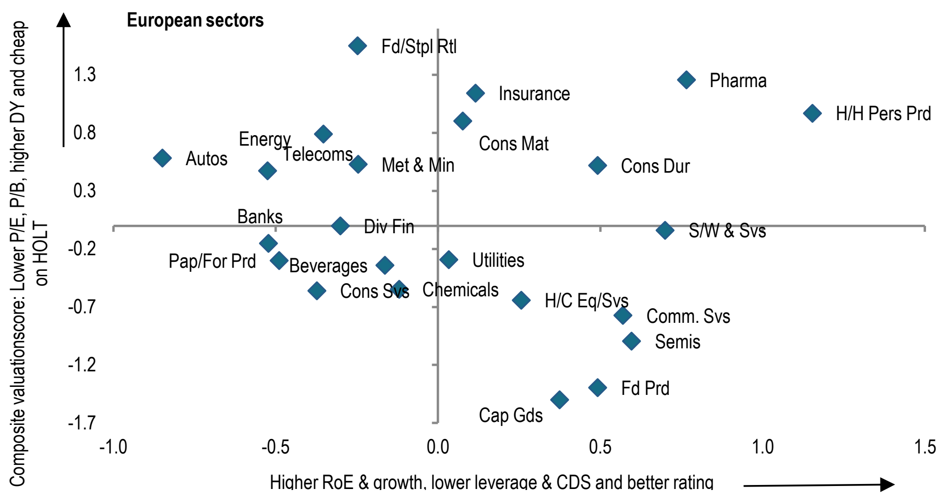
	---------- Level ----------									
European sectors	12m fwd ROE	5y Average ROE	12m fwd ROE/ 10y stdev	Sales growth	2020e Sales growth / 10y stdev	EPS growth	Credit rating	CDS Spreads	Net debt to EBITDA	Weighted z score
Weightings	17%		17%	10%	10%	10%	10%	10%	10%	
H/H Pers Prd	21%	22%	9.1	18%	0.0	6%	3.1	22	1.4	1.2
Pharma	24%	23%	11.8	4%	0.5	7%	2.6	68	1.7	0.8
S/W & Svs	16%	18%	9.3	8%	-0.3	9%	3.4	35	1.3	0.7
Semis	20%	17%	5.2	13%	0.5	21%	4.0	60	0.6	0.6
Comm. Svs	28%	32%	7.4	2%	-0.7	8%	4.0	50	2.1	0.6
Cons Dur	12%	15%	9.4	9%	-1.6	11%	3.0	59	1.0	0.5
Fd Prd	18%	17%	11.9	-6%	-0.4	6%	3.5	56	1.8	0.5
Cap Gds	13%	16%	16.5	2%	-3.9	7%	3.4	48	2.4	0.4
H/C Eq/Svs	11%	13%	7.8	10%	0.1	10%	4.0	41	2.4	0.3
Insurance	10%	10%	10.0	1%	-0.8	5%	2.8	45	nm	0.1
Cons Mat	8%	7%	5.9	1%	-0.5	21%	3.6	54	2.0	0.1
Utilities	10%	11%	12.7	-2%	1.5	4%	3.9	68	3.2	0.0
Retailing	11%	17%	3.7	4%	-0.2	8%	4.0	60	0.5	-0.1
Chemicals	11%	14%	6.0	-2%	-0.5	6%	3.6	54	2.0	-0.1
Beverages	13%	15%	6.8	2%	-1.1	5%	3.5	56	5.8	-0.2
Tobacco	15%	32%	0.7	4%	0.0	10%	4.0	56	3.8	-0.2
Met & Min	12%	11%	3.4	-1%	-0.7	8%	3.6	54	1.4	-0.2
Fd/Stpl Rtl	10%	10%	4.2	0%	0.0	14%	4.0	66	2.6	-0.2
Div Fin	7%	7%	4.8	-7%	-0.1	6%	3.1	38	nm	-0.3
Telecoms	9%	10%	2.9	-2%	0.4	9%	4.0	47	3.2	-0.4
Tech H/w	13%	10%	2.9	-4%	0.0	6%	4.4	64	-0.1	-0.4
Cons Svs	8%	18%	5.2	-1%	-1.0	8%	4.0	38	7.6	-0.5
Pap/For Prd	8%	13%	2.5	3%	-0.8	-1%	3.6	54	0.9	-0.5
Banks	5%	7%	5.8	-1%	-1.1	1%	3.1	56	nm	-0.5
Energy	6%	8%	1.6	-5%	-1.3	5%	2.4	36	5.5	-0.5
Transpt	9%	13%	5.1	1%	-1.1	10%	4.1	80	4.3	-0.6
Autos	8%	11%	3.3	5%	-2.3	7%	3.9	80	5.1	-0.8

Higher z score indicates higher RoE & growth, lower leverage and CDS and better rating

Source: Refinitiv, Credit Suisse research

Valuation versus fundamentals: Pharma, Household and Personal Products, and Consumer Durables offer the best combination of valuation against fundamentals (RoE, EPS, sales growth, balance sheet quality), whereas Consumer Services, Beverages, and Paper & Forestry Products offer the worst.

Figure 792: Fundamentals versus valuation



Source: Refinitiv, Credit Suisse estimates

Macro: Our macro scorecard evaluates each sector's exposure to various macroeconomic factors and then ranks them by their estimated relative performance under our projected macro scenario. Our base case is for a fall in ISM new orders in the US (which are in the top 1% of their range) but a rise in European PMIs (which we think will rise to the 60s), rising equity markets and bond yields, a modest rise in core inflation in Europe and an ongoing fall in the dollar against the euro.

Based on these assumptions, Capital Goods, Banks and Construction Materials should do well, while Food Producers, Pharma and Food Retail will likely struggle.

Figure 793: European sector macro scorecard

European Sectors - Macro Scorecard	Beta	10Y correlation with: ISM	EU PMI	BY	Core CPI	USD	Z-score
Scenario: 1 =up, 0 = no change, -1 = Down	0.1	-0.1	0.1	0.1	0.1	-0.2	
Capital Goods	1.34	0.54	0.66	0.31	-0.09	-0.40	1.55
Banks	1.38	0.28	0.34	0.49	-0.15	-0.29	1.35
Construction Materials	1.50	0.19	0.34	0.31	-0.12	-0.24	1.31
Metals & Mining	1.38	0.38	0.21	0.19	-0.05	-0.40	1.28
Transport	1.33	0.39	0.52	0.19	-0.16	-0.37	1.25
Diversified Financials	1.25	0.28	0.32	0.57	-0.11	-0.16	1.04
Automobiles	1.48	0.29	0.39	0.30	-0.25	-0.23	0.97
Consumer Durables	1.19	0.13	0.09	-0.04	0.05	-0.09	0.47
Insurance	1.21	0.22	0.31	0.36	-0.27	-0.11	0.44
Energy	1.17	0.03	-0.12	0.04	0.07	-0.07	0.43
Semiconductors	1.40	0.24	0.28	0.18	-0.12	-0.01	0.42
Chemicals	1.03	0.10	0.08	0.10	-0.05	-0.12	0.37
Software	1.12	0.01	0.10	-0.15	0.23	0.12	0.25
Hotels & Leisure	1.15	0.09	0.28	-0.17	-0.01	0.03	0.12
Pulp & Paper	1.12	0.01	0.05	0.25	-0.22	0.10	-0.20
Utilities	0.75	-0.16	-0.23	-0.25	0.06	-0.05	-0.21
Commercial Services	0.85	-0.27	-0.27	-0.39	0.23	0.10	-0.25
Retailing	1.01	0.00	0.10	-0.31	0.22	0.26	-0.33
Beverages	0.89	-0.19	-0.19	-0.55	0.22	0.13	-0.43
Technology Hardware	0.72	0.07	-0.01	0.03	-0.07	0.08	-0.58
Healthcare Equip	0.89	-0.28	-0.31	-0.46	0.33	0.41	-0.87
Tobacco	0.80	-0.32	-0.43	-0.45	0.11	0.20	-0.91
Household Products	0.59	-0.38	-0.34	-0.53	0.24	0.30	-1.04
Telecoms	0.60	-0.33	-0.26	-0.21	-0.05	0.36	-1.37
Food Producers	0.45	-0.52	-0.52	-0.56	0.16	0.35	-1.49
Pharmaceuticals	0.52	-0.53	-0.58	-0.42	0.17	0.44	-1.53
Food Retail	0.34	-0.39	-0.45	-0.18	-0.18	0.37	-1.99

For all measures, a high z score is considered as positive

Source: Refinitiv, Credit Suisse research

Earnings momentum: Our earnings momentum scorecard looks at the change in each sector's 12-month forward EPS and earnings breadth (which is calculated as the sum of weekly upward revisions less the sum of weekly downward revisions divided by the total number of revisions).

Autos, Construction Materials and Metals & Mining rank highest, and Food Producers, Software and Consumer Services rank lowest.

Price momentum: Price momentum is the percentage deviation of the sector's relative performance from its six-month moving average relative to the market, with the most oversold sectors ranking highest. However, for the aggregate scorecard we consider only extreme values (i.e. when sectors are extremely overbought or oversold).

Food Producers, Software and Household Products look particularly oversold, while Autos, Banks and Hotels & Leisure look overbought.

Figure 794: European sector earnings momentum scorecard

Pan Europe sectors	Change in 12m fwd EPS		Earnings breadth		Total Z-score
	1-month	3-month	1-month	3-month	
Automobiles	9%	29%	31%	17%	2.60
Construction Materials	3%	8%	23%	18%	1.40
Metals and Mining	0%	21%	5%	11%	0.92
Retailing	4%	10%	7%	9%	0.88
Consumer Durables	2%	6%	14%	8%	0.77
Banks	3%	7%	12%	3%	0.69
Semiconductors	0%	2%	18%	10%	0.62
Beverages	-1%	-1%	22%	9%	0.51
Diversified Financials	-2%	5%	9%	5%	0.27
Transport	1%	14%	-2%	0%	0.26
Energy	3%	7%	-2%	-4%	0.16
Commercial Services	0%	0%	9%	3%	0.15
Capital Goods	-2%	0%	7%	5%	0.07
Pulp & Paper	-2%	0%	4%	3%	-0.11
Tobacco	-2%	-3%	7%	3%	-0.13
Chemicals	-1%	2%	-1%	-1%	-0.24
Insurance	-1%	0%	-2%	-1%	-0.25
Food Retail	-1%	0%	-1%	-1%	-0.29
Utilities	-2%	-2%	0%	0%	-0.35
Technology Hardware	-7%	-4%	10%	2%	-0.54
Healthcare Equip	-3%	-1%	-5%	-3%	-0.55
Telecoms	-2%	-4%	-2%	-4%	-0.56
Household Products	-2%	-3%	-3%	-4%	-0.58
Pharmaceuticals	-3%	-4%	-4%	-3%	-0.68
Food Producers	-4%	-4%	-22%	-14%	-1.44
Software	-5%	-12%	-18%	-10%	-1.53
Cons Svcs	-4%	-17%	-20%	-17%	-1.84

Breadth is calculated as sum of weekly revisions up less sum of weekly revisions down divided by sum of weekly total estimates, over the period under consideration

Source: Refinitiv, Credit Suisse research

Figure 795: European sector price momentum scorecard

Pan Eur sectors	Price momentum	
	Relative	z-score
Food Producers	-11.7%	2.45
Software	-10.9%	2.34
Household Products	-9.6%	2.25
Pharmaceuticals	-10.4%	1.95
Healthcare Equip	-6.2%	1.70
Food Retail	-9.4%	1.67
Commercial Services	-5.6%	1.58
Chemicals	-3.7%	1.38
Tobacco	-6.3%	1.02
Utilities	-2.7%	0.69
Telecoms	-2.6%	0.35
Technology Hardware	-3.6%	0.32
Retailing	1.9%	-0.28
Diversified Financials	2.4%	-0.53
Pulp & Paper	4.1%	-0.56
Construction Materials	3.0%	-0.58
Beverages	3.8%	-0.59
Transport	4.0%	-0.82
Insurance	3.2%	-0.89
Capital Goods	4.7%	-1.09
Semiconductors	10.8%	-1.10
Consumer Durables	6.6%	-1.12
Metals and Mining	14.8%	-1.40
Energy	7.8%	-1.46
Automobiles	11.9%	-1.66
Banks	14.8%	-2.58
Hotels & Leisure	13.8%	-3.11

Price momentum is the % deviation from 6m moving average, relative to the market. Most oversold sector ranked as best.

Source: Refinitiv, Credit Suisse research

Positioning: For our positioning scorecard, we look at net consensus buy recommendations by sell-side analysts. The more positive the recommendations relative to the market, the lower the score. The sector's z-score for each component is calculated against the sector's own long-term average (since 1995).

Transportation, Hotels & Leisure and Household Personal Products rank at the top of our positioning scorecard, whereas Autos, Pharma and Insurance rank at the bottom.

Figure 796: European sector positioning scorecard

Pan Europe Sectors	Sell-side analysts consensus recomm. rel to market		Total score
	Current, pp	Z-Score	
Transportation	-6.9%	1.91	1.91
Hotels & Leisure	-2.6%	1.49	1.49
H/H Pers Prd	-6.3%	1.11	1.11
Capital Goods	-0.9%	0.73	0.73
Materials	-1.6%	0.51	0.51
Software & Svs	1.3%	0.47	0.47
Div Fins	-0.6%	0.30	0.30
Cons Dur	0.8%	0.26	0.26
Food Retailers	-5.5%	0.25	0.25
Coml Svs	-1.2%	-0.02	-0.02
Utilities	-0.9%	-0.11	-0.11
Healthcare	0.3%	-0.28	-0.28
Banks	-0.6%	-0.33	-0.33
Tech & HW	3.4%	-0.37	-0.37
Semis	8.0%	-0.43	-0.43
Oil & Gas	4.4%	-0.45	-0.45
Telecom	2.8%	-0.88	-0.88
Food & Bev	1.3%	-0.93	-0.93
Retail	4.5%	-1.14	-1.14
Automobiles	5.2%	-1.38	-1.38
Pharma	3.4%	-1.52	-1.52
Insurance	2.5%	-1.94	-1.94

Most un-loved (bearish sell-side positioning) sectors are ranked as best.

Source: Refinitiv, Credit Suisse estimates

Regression model: We show below our four-factor regression model, deriving fair price performance for the sectors (relative to the market) based on the Bund yield, PMIs, the euro (trade-weighted), and the oil price.

We can see the most upside for Tobacco and Energy, and the most downside for Semis and Tech Hardware. Some sectors are better defined by these four factors than others (e.g. Software and Banks with an R^2 greater than 80%; whereas others such as Hotels and Insurance are poorly defined by these macro factors).

Figure 797: European sectors regression model

European PMI, Bund yield, Euro TWI, Oil ($)		
European Sectors	Upside/Downside	R2
Tobacco	52.3%	0.67
Energy	42.0%	0.61
Beverages	18.2%	0.40
Software & Services	17.3%	0.81
Hotels	15.2%	0.39
HPC	12.6%	0.79
Real Estate	11.1%	0.52
Banks	9.9%	0.89
Food Products	9.0%	0.91
Media	8.3%	0.80
Telecommunication Services	5.4%	0.86
Construction Materials	4.8%	0.65
Insurance	3.2%	0.15
Healthcare Equipment & Services	2.1%	0.43
Paper & Forest Products	-2.0%	0.65
Capital Goods	-2.5%	0.82
Food & Staples Retailing	-3.0%	0.59
Comm. Svc	-3.3%	0.87
Transportation	-7.1%	0.63
Pharmaceuticals & Biotechnology	-8.2%	0.81
Metals & Mining	-8.9%	0.70
Chemicals	-10.1%	0.68
Utilities	-11.6%	0.72
Consumer Durables & Apparel	-12.2%	0.84
Luxury	-13.3%	0.86
Automobiles & Components	-15.2%	0.84
Diversified Financials	-19.1%	0.67
Retailing	-28.0%	0.88
Semis	-28.2%	0.77
Technology Hardware & Equipment	-39.3%	0.60

Source: Markit, Refinitiv, Credit Suisse research

Companies Mentioned *(Price as of 15-Dec-2020)*

1&1 Drillisch (DRIG.DE, €20.18)
3M (MMM.N, $173.08)
ABB (ABBN.S, SFr24.01)
ADO Properties (ADJ.DE, €27.72)
AFC Energy (AFEN.L, 37.5p)
AP Moller Maersk (MAERSKb.CO, Dkr13705.0)
ASE Industrial Holdings (3711.TW, NT$77.6)
ASM International (ASMI.AS, €166.15)
ASML Holding N.V. (ASML.AS, €382.35)
AT&T (T.N, $30.55)
AXA (AXAF.PA, €19.93)
Abbott Laboratories (ABT.N, $106.79)
Accenture Plc (ACN.N, $243.75)
Accor (ACCP.PA, €29.99)
Acerinox (ACX.MC, €9.054)
Activision Blizzard, Inc (ATVI.OQ, $85.94)
Acuity Brands (AYI.N, $112.41)
Adecco Group (ADEN.S, SFr57.9)
Adobe Systems Inc. (ADBE.OQ, $486.42)
Advantest (6857.T, ¥7,420)
Aena (AENA.MC, €138.3)
Agnico Eagle (AEM.PH, $68.82)
Ahold Delhaize (AD.AS, €23.42)
Air France-KLM (AIRF.PA, €4.942)
Air Liquide (AIRP.PA, €133.7)
Air Products & Chemicals (APD.N, $265.4)
Air Water (4088.T, ¥1,845)
Airbus SE (AIR.PA, €91.37)
AkzoNobel (AKZO.AS, €86.66)
Alfa Laval (ALFA.ST, Skr227.1)
Alibaba Group Holding Limited (BABA.N, $256.03)
Alibaba Group Holding Limited (9988.HK, HK$246.0)
Allianz SE (ALVG.DE, €193.84)
Alphabet (GOOGL.OQ, $1752.26)
Alstom (ALSO.PA, €45.87)
Altice Europe (ATCA.AS, €4.323)
Altria Group, Inc. (MO.N, $42.9)
AmBev (ABEV3.SA, R$15.32)
Amazon com Inc. (AMZN.OQ, $3156.97)
Amedisys (AMED.OQ, $269.97)
Amkor Technology Inc. (AMKR.OQ, $14.975)
Analog Devices Inc. (ADI.OQ, $142.33)
Anglo American Plc (AAL.L, 2449.0p)
Anheuser-Busch InBev (ABI.BR, €57.93)
Anritsu (6754.T, ¥2,348)
Apple Inc (AAPL.OQ, $121.78)
Applied Materials Inc. (AMAT.OQ, $88.5)
Applus (APPS.MC, €8.52)
Arch Coal, Inc. (ARCH.N, $47.22)
Ares Commercial Real Estate Corp (ACRE.N, $11.95)
Aryzta (ARYN.S, SFr0.688)
Ashmore Group (ASHM.L, 421.6p)
Assa Abloy (ASSAb.ST, Skr207.8)
AssetMark (AMK, $23.58)
AstraZeneca (AZN.L, 7505.0p)
Atlas Copco (ATCOa.ST, Skr428.3)
Atresmedia (A3M.MC, €3.05)
Autoliv (ALV.PH, $90.81)
Automatic Data Processing Inc. (ADP.OQ, $173.15)
Axis Bank Limited (AXBK.BO, Rs606.9)
BAE Systems (BAES.L, 502.0p)
BBVA (BBVA.MC, €4.099)
BHP Group Limited (BHP.AX, A$41.78)
BHP Group Limited (BHPB.L, 1952.2p)
BJ's Wholesale (BJ.N, $37.2)
BMW (BMWG.DE, €73.86)
BNP Paribas (BNPP.PA, €45.235)
BP (BP.L, 270.75p)
BT Group (BT.L, 137.25p)
Bajaj Auto (BAJA.NS, Rs3271.65)
Baker Hughes Inc. (BKR.N, $21.68)
Ballard Pow Syst (BLDP.OQ, $18.44)
Barclays (BARC.L, 144.7p)
Barratt Developments (BDEV.L, 621.2p)
Barrick Gold Corp (GOLD.N, $22.44)
Baxter International, Inc (BAX.N, $78.83)
Beazley (BEZG.L, 354.0p)
Beiersdorf (BEIG.DE, €92.06)
Bell (BELL.S, SFr245.0)
Bellway (BWY.L, 2857.0p)
Berkeley Group (BKGH.L, 4405.0p)
Bilibili (BILI.OQ, $78.2)
Bloom Energy (BE.N, $24.34)
Blue Apron Hldg (APRN.N, $6.32)
Bodycote Plc (BOY.L, 744.0p)
Boeing (BA.N, $228.62)
Bouygues (BOUY.PA, €34.36)

Brenntag (BNRGn.DE, €63.68)
Brilliance China Automotive Holdings Limited (1114.HK, HK$6.34)
British American Tobacco (BATS.L, 2838.0p)
Broadcom Ltd (AVGO.OQ, $411.8)
Budweiser Brewing Company APAC Limited (1876.HK, HK$26.6)
Bureau Veritas (BVI.PA, €22.62)
CACI International, Inc. (CACI.N, $241.95)
CRH (CRH.I, €32.92)
CRH (CRH.L, 2969.0p)
CYBG (VMUK.L, 134.6p)
Cactus, Inc. (WHD.N, $26.62)
CaixaBank (CABK.MC, €2.305)
Canon (7751.T, ¥2,050)
Capgemini (CAPP.PA, €114.15)
Carlsberg (CARLb.CO, Dkr947.4)
Carlsberg Brewery Malaysia Bhd (CBMS.KL, RM23.96)
Carnival (CCL.L, 1360.5p)
Cassiopea (SKIN.S, SFr44.8)
Caterpillar Inc. (CAT.N, $178.05)
Cell Impact (CIb.ST, Skr28.4)
Cellnex Telecom (CLNX.MC, €50.34)
Change Healthcare (CHNG.OQ, $18.0)
Chart Industries, Inc. (GTLS.OQ, $114.46)
Check Point Software (CHKP.OQ, $122.52)
Chemring (CHG.L, 300.0p)
Chevron Corporation (CVX.N, $89.44)
China Resources Beer (Holdings) Company Limited (0291.HK, HK$66.35)
ChipMOS Technologies Inc. (8150.TW, NT$34.65)
Chipbond (6147.TWO, NT$65.3)
Chubb Limited (CB.N, $150.86)
Cimarex Energy Co. (XEC.N, $38.48)
Cineworld Grp (CINE.L, 63.22p)
Citigroup Inc. (C.N, $58.74)
Cobham (COB.L^A20)
Cobham (COB.L^A20)
Cobham (COB.L^A20)
Coca-Cola HBC (CCH.L, 2348.0p)
Cognizant Technology Solutions Corp. (CTSH.OQ, $79.19)
Colgate-Palmolive Company (CL.N, $84.19)
Comet (COTNE.S, SFr172.0)
Compagnie Financiere Richemont SA (CFR.S, SFr79.06)
Constellation Brands (STZ.N, $207.0)
Continental (CONG.DE, €113.2)
Contura Energy (CTRA.K, $57.09457)
Cosmo Pharmaceuticals (COPN.S, SFr82.5)
Credit Agricole SA (CAGR.PA, €10.675)
CrowdStrike, Inc. (CRWD.OQ, $173.8)
Cummins Inc. (CMI.N, $216.41)
D.R. Horton (DHI.N, $70.4)
DCC (DCC.L, 5416.0p)
DISCO (6146.T, ¥34,400)
DNB (DNB.OL, Nkr161.8)
DSV (DSV.CO, Dkr982.4)
Daimler (DAIGn.DE, €57.98)
Dana, Inc. (DAN.N, $19.05)
Danaher Corporation (DHR.N, $221.1)
Danone (DANO.PA, €52.5)
Daqo New Energy (DQ.TH, $48.28)
Dassault Aviation (AVMD.PA, €906.5)
Dassault Systemes (DAST.PA, €157.15)
Delivery Hero (DHER.DE, €112.0)
Delta Air Lines, Inc. (DAL.N, $40.69)
Deutsche Boerse (DB1Gn.DE, €139.55)
Deutsche Lufthansa (LHAG.DE, €9.786)
Deutsche Post DHL (DPWGn.DE, €39.43)
Deutsche Telekom (DTEGn.F, €14.835)
Deutsche Wohnen (DWNG.DE, €42.59)
Diageo (DGE.L, 2939.0p)
Dialog Semiconductor (DLGS.DE, €41.62)
Direct Line Group (DLGD.L, 297.0p)
E.ON (EONGn.DE, €8.884)
EDP (EDP.LS, €4.747)
ENI (ENI.MI, €8.752)
EasyJet (EZJ.L, 825.8p)
Eaton Corporation (ETN.N, $113.84)
Eiffage (FOUG.PA, €80.84)
Elementis (ELM.L, 115.5p)
Elisa (ELISA.HE, €44.16)
Emerson Electric (EMR.N, $80.41)
Emmi (EMMN.S, SFr878.5)
Endeavour Mining (EDV.TO, C$28.85)
Endesa (ELE.MC, €22.28)
Enel (ENEI.MI, €8.045)
Equinor ASA (EQNR.OL, Nkr146.4)
Ericsson (ERICb.ST, Skr100.55)
Ericsson (ERIC.OQ, $11.71)
Erste Group (ERST.VI, €25.04)
Essity (ESSITYb.ST, Skr266.2)

Eurofins Scient (EUFI.PA, €66.3)
Euronext NV (ENX.PA, €87.0)
Evolution Mining Limited (EVN.AX, A$4.78)
ExxonMobil Corporation (XOM.N, $42.22)
FB Financial (FBK.N, $34.04)
Facebook Inc. (FB.OQ, $274.19)
Fanuc (6954.T, ¥26,150)
FedEx Corporation (FDX.N, $285.54)
Ferguson PLC (FERG.L, 8688.0p)
Ferrotec (6890.T, ¥1,510)
Ferrovial SA (FER.MC, €23.22)
Fiat Chrysler Automobiles N.V. (FCHA.MI, €14.126)
Fincantieri (FCT.MI, €0.62)
Flowserve Corp. (FLS.N, $36.77)
Foot Locker, Inc. (FL.N, $40.99)
Forbo (FORN.S, SFr1490.0)
Formosa SUMCO (3532.TW, NT$136.5)
Fortinet, Inc. (FTNT.OQ, $130.69)
Frontier Developments PLC (FDEV.L, 2820.0p)
Fuelcell Energy (FCEL.OQ, $7.7)
GCL-Poly Energy Holdings Ltd (3800.HK, HK$1.28)
GKN (GKN.L^E18)
GKN (GKN.L^E18)
GKN (GKN.L^E18)
Galp Energia (GALP.LS, €8.884)
Geberit (GEBN.S, SFr527.0)
General Dynamics Corporation (GD.N, $153.34)
General Electric (GE.N, $10.83)
Georg Fischer (FIN.S, SFr1122.0)
Gjensidige Fors (GJES.OL, Nkr185.8)
Glencore (GLEN.L, 240.4p)
Global Payments (GPN.N, $191.88)
Globus Medical, Inc. (GMED.N, $61.99)
Go-Ahead Group (GOG.L, 923.5p)
Goldman Sachs Group, Inc. (GS.N, $237.79)
Graftech International Ltd. (EAF.N, $9.65)
Grand City Properties (GYC.DE, €20.04)
HSBC (HSBA.L, 402.65p)
Halma (HLMA.L, 2370.0p)
Hannover Rueck (HNRGn.F, €132.3)
Hargreaves Lansdown (HRGV.L, 1448.5p)
Hays (HAYS.L, 140.3p)
HeidelbergCemnt (HEIG.F, €58.6)
Heineken (HEIN.AS, €89.72)
Heineken Malaysia Bhd (HEIN.KL, RM22.88)
HelloFresh (HFGG.DE, €61.2)
Henkel AG (HNKG_p.DE, €89.08)
Henkel AG (HNKG.DE, €78.4)
Hennes & Mauritz (HMb.ST, Skr177.7)
Hero MotoCorp (HROM.NS, Rs3112.35)
Hexagon AB (HEXAb.ST, Skr699.4)
Hiscox (HSX.L, 996.0p)
Hochdorf (HOCN.S, SFr63.7)
Holmen (HOLMb.ST, Skr386.2)
Home Depot (HD.N, $265.58)
Hudbay Minerals Inc. (HBM.TO, C$8.13)
Hydrogenics (HYGS.OQ^I19)
Hydrogenics (HYGS.OQ^I19)
Hydrogenics (HYGS.OQ^I19)
IBP (IBP.N, $94.71)
IGO Limited (IGO.AX, A$6.2)
IMI (IMI.L, 1190.0p)
ING Group N.V. (INGA.AS, €8.1)
INWIT (INWT.MI, €9.84)
IQVIA Holdings, Inc. (IQV.N, $167.3)
ITM Power (ITM.L, 389.0p)
ITV (ITV.L, 104.5p)
Iliad (ILD.PA, €170.2)
Imperial Brands (IMB.L, 1559.5p)
Inditex (ITX.MC, €26.77)
Infineon Technologies AG (IFXGn.DE, €30.215)
Intel Corp. (INTC.OQ, $50.47)
Intercontinental (IHG.L, 4720.0p)
Intercontinental Exchange (ICE.N, $107.71)
International Airlines Group (ICAG.L, 157.65p)
International Paper Co. (IP.N, $48.01)
Intertek (ITRK.L, 5776.0p)
Intesa Sanpaolo (ISP.MI, €1.975)
Ipsen (IPN.PA, €68.85)
Isuzu Motors (7202.T, ¥1,054)
Italgas (IG.MI, €5.08)
J D Wetherspoon (JDW.L, 1070.0p)
JCET (600584.SS, Rmb41.03)
JD Sports (JD.L, 814.6p)
JD.com (JD.OQ, $79.96)
JD.com (9618.HK, HK$306.4)
Jenoptik (JENGn.DE, €24.74)
Johnson & Johnson (JNJ.N, $149.07)

Julius Baer (BAER.S, SFr49.82)
Jupiter Fund Management (JUP.L, 269.0p)
Just Group PLC (JUSTJ.L, 63.0p)
KB Home (KBH.N, $33.77)
KBC Group N.V. (KBC.BR, €60.66)
KBR Inc. (KBR.N, $27.97)
KLA Corporation (KLAC.OQ, $260.13)
KPN (KPN.AS, €2.405)
Kering (PRTP.PA, €569.7)
Keyence (6861.T, ¥51,700)
Keysight Technologies (KEYS.N, $123.72)
Kingfisher (KGF.L, 270.4p)
Kingspan (KSP.I, €68.5)
Kone Corporation (KNEBV.HE, €67.66)
Konecranes (KCRA.HE, €27.94)
Kuehne + Nagel (KNIN.S, SFr198.1)
Kuka (KU2G.DE, €37.8)
L'Oreal (OREP.PA, €302.5)
L3 Technologies (LLL.N^G19)
L3 Technologies (LLL.N^G19)
L3 Technologies (LLL.N^G19)
LEG Immobilien (LEGn.DE, €120.92)
LVMH (LVMH.PA, €507.2)
LafargeHolcim (LHN.S, SFr46.87)
Lam Research Corp. (LRCX.OQ, $491.87)
Lancashire (LRE.L, 716.0p)
Legal & General (LGEN.L, 253.8p)
Legrand SA (LEGD.PA, €71.18)
Lennar (LEN.N, $74.68)
Leonardo (LDOF.MI, €6.03)
Li Auto (LI.OQ, $31.33)
Linde Plc. (LIN.N, $247.6)
Lindt & Sprungli (LISP.S, SFr8210.0)
Lloyds Banking Group (LLOY.L, 36.65p)
Lockheed Martin Corporation (LMT.N, $357.66)
London Stock Exchange (LSE.L, 8842.0p)
Lowe's (LOW.N, $160.09)
Lundbeck (LUN.CO, Dkr200.7)
MGIC Investment Corporation (MTG.N, $12.05)
MMG Limited (1208.HK, HK$3.13)
MTU Aero Engines (MTXGn.DE, €207.5)
Maersk (MAERSKa.CO, Dkr12850.0)
Man Group (EMG.L, 130.0p)
ManpowerGroup Inc. (MAN.N, $88.86)
Maxim Integrated Products (MXIM.OQ, $85.31)
Mazda Motor (7261.T, ¥679)
McCormick & Company (MKC.N, $93.28)
McDonald's Corporation (MCD.N, $211.92)
McPhy Energy (MCPHY.PA, €31.65)
Mediaset Espana (TL5.MC, €4.124)
Medtronic Plc (MDT.N, $111.97)
Meggitt (MGGT.L, 441.7p)
Merck KGaA (MRCG.DE, €134.2)
Merdeka Copper (MDKA.JK, Rp2,000)
Meritage Homes (MTH.N, $85.0)
Meyer Burger (MBTN.S, SFr0.3444)
Michelin (MICP.PA, €107.75)
Micron Technology Inc. (MU.OQ, $71.54)
Microsoft (MSFT.OQ, $214.2)
Mitsubishi Motors (7211.T, ¥208)
Moderna (MRNA.OQ, $155.07)
Mondi (MNDI.L, 1816.0p)
NOS (NOS.LS, €2.986)
NVIDIA Corporation (NVDA.OQ, $532.35)
NXP Semiconductors N.V. (NXPI.OQ, $158.46)
Nanya Technology (2408.TW, NT$84.1)
NatWest Group (NWG.L, 161.3p)
National Exps (NEX.L, 245.8p)
National Grid (NG.L, 867.4p)
Natixis (CNAT.PA, €2.662)
Nel (NEL.OL, Nkr24.56)
Nestle (NESN.S, SFr99.62)
Netflix Inc. (NFLX.OQ, $522.42)
New Century Resources (NCZ.AX, A$0.225)
New Residential (NRZ.N, $9.39)
Newcrest Mining (NCM.AX, A$26.67)
Newmont (NEM.N, $57.56)
Nexans (NEXS.PA, €57.35)
Next (NXT.L, 6754.0p)
Nikola (NKLA.OQ, $16.41)
Nikon (7731.T, ¥686)
Nintendo (7974.T, ¥61,620)
Nio Inc (NIO.N, $40.98)
Nissan Motor (7201.T, ¥567)
Nokia (NOKIA.HE, €3.3315)
Nokia (NOK.N, $4.0)
Nokian Tyres (TYRES.HE, €30.35)
Nordea (NDASE.ST, Skr72.76)

Norilsk Nickel (NKELyq.L, $31.97)
Northern Star Resources Ltd (NST.AX, A$11.71)
Northrop Grumman Corporation (NOC.N, $298.0)
NortonLifeLock Inc (NLOK.OQ, $19.87)
Norwegian Finans (NOFI.OL, Nkr70.2)
Novartis (NOVN.S, SFr79.68)
Novatek Microelectronics Corp Ltd (3034.TW, NT$312.5)
Novo Nordisk A/S (NOVOb.CO, Dkr424.15)
OMV (OMVV.VI, €32.34)
Ocado Group (OCDO.L, 2232.0p)
Occidental Petroleum Corporation (OXY.N, $19.17)
OceanaGold Corporation (OGC.AX, A$2.27)
Oracle Corporation (ORCL.N, $60.76)
Orange (ORAN.PA, €9.784)
Orange Belgium (OBEL.BR, €21.8)
Orion (ORNBV.HE, €37.22)
Orior (ORON.S, SFr74.3)
Owens Corning (OC.N, $72.65)
PRA Health Sciences, Inc. (PRAH.OQ, $115.26)
PSA Peugeot Citroen (PEUP.PA, €21.57)
Page Group (PAGE.L, 437.4p)
Palo Alto Networks, Inc. (PANW.N, $314.28)
Parade Technologies (4966.TWO, NT$1145.0)
Peabody Energy (BTU.N, $2.07)
PennyMac Financial Services (PFSI.N, $59.68)
Pentair Plc (PNR.N, $51.36)
PepsiCo (PEP.OQ, $144.23)
Pernod-Ricard (PERP.PA, €157.9)
Perseus Mining (PRU.AX, A$1.14)
Persimmon (PSN.L, 2654.0p)
Pfizer (PFE.N, $39.21)
Philip Morris International (PM.N, $84.4)
Philips (PHG.AS, €43.355)
Pilbara Minerals Ltd (PLS.AX, A$0.875)
Ping Identity (PING.N, $27.15)
Plug Power (PLUG.OQ, $25.7)
Powercell Sweden (PCELL.ST, Skr289.2)
Powerhouse (PHEG.L, 2.9p)
Powertech Technology (6239.TW, NT$96.1)
ProSieben (PSMGn.DE, €13.56)
Prosus (PRX.AS, €91.1)
Proximus (PROX.BR, €17.2)
Prudential Plc (PRU.L, 1325.0p)
Prudential Plc (2378.HK, HK$134.3)
Prysmian (PRY.MI, €27.8)
Publicis Groupe SA (PUBP.PA, €41.94)
PulteGroup (PHM.N, $42.12)
QUALCOMM Inc. (QCOM.OQ, $146.29)
QinetiQ (QQ.L, 298.0p)
REVOLVE Group, Inc (RVLV.N, $24.29)
ROHM (6963.T, ¥9,600)
RSA Insurance Group plc (RSA.L, 676.6p)
RWE (RWEG.DE, €33.29)
Radiant Opto-Electronics (6176.TW, NT$113.0)
Randstad (RAND.AS, €53.92)
Raytheon Company (RTN.N^D20)
Raytheon Company (RTN.N^D20)
Raytheon Company (RTN.N^D20)
Raytheon Technologies (RTX.N, $70.8)
Realtek Semiconductor (2379.TW, NT$389.0)
Reckitt Benckiser (RB.L, 6408.0p)
Recordati (RECI.MI, €43.44)
Redrow (RDW.L, 521.5p)
Regeneron Pharmaceuticals, Inc. (REGN.OQ, $500.38)
Regis Resources Limited (RRL.AX, A$3.69)
Remy Cointreau (RCOP.PA, €147.3)
Renault (RENA.PA, €36.795)
Renesas Electronics (6723.T, ¥1,057)
Repsol (REP.MC, €8.746)
Rheinmetall (RHMG.DE, €83.28)
Rio Tinto (RIO.L, 5603.0p)
Rio Tinto (RIO.AX, A$112.42)
Robert Walters (RWA.L, 457.0p)
Roche (ROG.S, SFr303.15)
Rockwell Automation (ROK.N, $242.99)
Rockwool Intl (ROCKb.CO, Dkr2148.0)
Rolls-Royce (RR.L, 115.3p)
Rosneft Oil (ROSNq.L, $6.094)
Royal Dutch Shell plc (RDSa.L, 1366.4p)
Royal Mail (RMG.L, 346.1p)
Ryanair (RYA.I, €15.6)
S4 Capital (SFOR.L, 499.0p)
SAP SE (SAPG.DE, €100.68)
SCA (SCAb.ST, Skr141.8)
SCSF (600779.SS, Rmb75.69)
SFS Group (SFSN.S, SFr103.7)
SGS Surveillance (SGSN.S, SFr2612.0)
SIG (SHI.L, 31.62p)

SKF (SKFb.ST, Skr219.3)
SLM Corp (SLM.OQ, $11.97)
SSAB (SSABa.ST, Skr29.51)
STMicroelectronics NV (STM.PA, €30.19)
SThree (STEMS.L, 300.5p)
Saab (SAABb.ST, Skr244.8)
Safran (SAF.PA, €118.35)
Sainsbury (SBRY.L, 228.9p)
Saint-Gobain (SGOB.PA, €38.81)
Samsung Electronics (005930.KS, W73,800)
Sandvik (SAND.ST, Skr203.9)
Sanofi (SASY.PA, €76.23)
Santander (SAN.MC, €2.7045)
Schindler-Holding AG (SCHP.S, SFr241.8)
Schneider Electric (SCHN.PA, €116.1)
Schroders (SDR.L, 3256.0p)
Sea Limited (SE.N, $190.26)
Securitas (SECUb.ST, Skr136.6)
Semiconductor Manufacturing International Corp. (0981.HK, HK$21.25)
Senior (SNR.L, 79.75p)
Seoul Semiconductor Co Ltd (046890.KQ, W20,300)
Shandong Gold (1787.HK, HK$17.28)
Shandong Gold (600547.SS, Rmb23.83)
Sherwin-Williams Company (SHW.N, $718.85)
Shiseido (4911.T, ¥7,345)
Siemens (SIEGn.DE, €114.68)
Skandinaviska Enskilda Banken (SEBa.ST, Skr86.34)
Smiths Group (SMIN.L, 1571.5p)
Smurfit Kappa (SKG.I, €38.46)
Snam (SRG.MI, €4.496)
Societe Generale (SOGN.PA, €17.316)
Sodexo (EXHO.PA, €72.66)
SoftBank Group (9984.T, ¥7,999)
SoftwareONE (SWON.S, SFr24.85)
South 32 (S32.AX, A$2.56)
Spectris (SXS.L, 2820.0p)
Splunk, Inc. (SPLK.OQ, $159.38)
St Barbara Mining (SBM.AX, A$2.45)
Stagecoach Grp (SGC.L, 77.05p)
StanChart (STAN.L, 479.8p)
Standard Life Aberdeen (SLA.L, 287.0p)
Stora Enso (STERV.HE, €15.21)
Subsea 7 S.A. (SUBC.OL, Nkr87.28)
Svenska Handelsbanken (SHBa.ST, Skr83.36)
Swatch Group (UHR.S, SFr232.4)
Swedbank (SWEDa.ST, Skr148.36)
Swedish Match (SWMA.ST, Skr634.6)
Swisscom (SCMN.S, SFr470.5)
Symrise (SY1G.DE, €103.65)
Syneos Health (SYNH.OQ, $64.48)
Syrah Resources (SYR.AX, A$0.86)
Sysco Corporation (SYY.N, $73.43)
T. Rowe Price Group (TROW.OQ, $147.86)
TF1 (TFFP.PA, €6.76)
TUI (TUIGn.DE, €4.6)
Taiwan Semiconductor Manufacturing (2330.TW, NT$504.0)
Taiyo Nippon Sanso (4091.T, ¥1,982)
Takeaway.com (TKWY.AS, €86.9)
TalkTalk (TALK.L, 95.9p)
Target Corporation (TGT.N, $170.99)
Tata Motors (TAMO.NS, Rs178.9)
Tate & Lyle (TATE.L, 653.2p)
Taylor Wimpey (TW.L, 160.65p)
Teck Resources Ltd (TECKb.TO, C$22.64)
Tele2 AB (TEL2b.ST, Skr110.0)
Telefonica (TEF.MC, €3.468)
Telefonica Deutschland (O2Dn.DE, €2.238)
Telefonica O2 Czech Republic (SPTT.PR, Kč248.0)
Telenor (TEL.OL, Nkr148.5)
Telia Company (TELIA.ST, Skr34.2)
Tencent Holdings (0700.HK, HK$560.0)
Tesco (TSCO.L, 223.8p)
Tesla Inc (TSLA.OQ, $639.83)
Texas Instruments Inc. (TXN.OQ, $160.12)
Thales (TCFP.PA, €76.88)
The Coca-Cola Company (KO.N, $53.27)
The Hershey Company (HSY.N, $149.14)
The Walt Disney Company (DIS.N, $169.3)
Toll Brothers (TOL.N, $44.78)
TopBuild (BLD.N, $171.77)
Total (TOTF.PA, €36.56)
Toyota Motor (7203.T, ¥7,905)
Trainline (TRNT.L, 471.4p)
Twitter (TWTR.N, $52.02)
Two Harbors Investment (TWO.N, $6.52)
UBS Group AG (UBSG.S, SFr12.575)
ULTA Beauty, Inc. (ULTA.OQ, $265.79)
UPM-Kymmene (UPM.HE, €30.08)

Ultra Electronics (ULE.L, 2062.0p)
Unicredit (CRDI.MI, €7.89)
Unilever (ULVR.L, 4302.0p)
United Brew (UBBW.NS, Rs1158.55)
United Internet (UTDI.DE, €33.8)
United Microelectronics (2303.TW, NT$44.0)
United Spirit (UNSP.NS, Rs594.3)
United Therapeutics Corp. (UTHR.OQ, $143.14)
Universal Health Services (UHS.N, $134.56)
VF Corporation (VFC.N, $85.75)
VINCI (SGEF.PA, €85.46)
Vifor (VIFN.S, SFr132.0)
Vodafone Group (VOD.L, 130.0p)
Vonovia (VNAn.DE, €57.32)
Vopak (VOPA.AS, €42.92)
WM Morrison Supermarkets (MRW.L, 178.95p)
WPP (WPP.L, 785.8p)
Walmart Inc. (WMT.N, $145.65)
Western Areas (WSA.AX, A$2.49)
Whitbread (WTB.L, 3153.0p)
Will Semi (603501.SS, Rmb228.5)
Wirecard (WDIG.DE, €0.451)
Wizz Air Hldgs (WIZZ.L, 4532.0p)
XPeng Inc (XPEV.N, $47.17)
Xebec (XBC.V, C$7.39)
Xerox (XRX.N, $22.74)
Yamaha Motor (7272.T, ¥2,127)
Yamana Gold (AUY.N, $5.26)
Yaskawa Electric (6506.T, ¥4,755)
Yunnan Chihong Zinc & Germanium Co.,ltd. (600497.SS, Rmb4.29)
Zalando (ZALG.DE, €82.52)
Zhaojin Mining (1818.HK, HK$8.63)
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Zijin Mining (2899.HK, HK$7.16)
Zijin Mining (601899.SS, Rmb8.33)
Zoom Video Communications (ZM.OQ, $395.99)
Zscaler (ZS.OQ, $183.45)
eBay Inc. (EBAY.OQ, $49.57)
eHealth (EHTH.OQ, $70.71)
Ørsted (ORSTED.CO, Dkr1065.0)

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