

# Global Equity Strategy

## 10 opportunities

Investment Strategy | Strategy

Our macro assumptions are that 2021 GDP growth will be above trend, the dollar will weaken, there is a very high chance of a vaccine, and inflation expectations will rise quite sharply.

### We see 10 opportunities in global equities:

**European renewables and grids:** Very supportive macro (fall in real rates and stronger euro); c11% FCF yield on maintenance capex. Wind capacity up 15-fold over the next 20 years. Carbon price to \$100 p/ton by 2030. Grids need to be upgraded (RWE, EDP, National Grid).

**Mining** for real asset exposure. A China play when lead indicators of Chinese infrastructure investment remain strong. A potential vaccine play (as IP normalises). Benefits from G7 governments' focus on infrastructure. Not technically disrupted. Copper and platinum are required for EV and renewables. 17% FCF yield on maintenance capex (using spot prices). We highlight Anglo American.

**Construction materials:** US housing is set to grow 20%+ on very low real bond yields. Governments increasingly focus on infrastructure (where the multiplier is 1.7x). Not technically disrupted. We like stocks exposed to insulation (the UK, Germany and France alone have c.\$22.5bn of announcements) – eg TopBuild, and aggregates and cement – CRH and Lafarge.

**Industrial gases:** The move from a six- to a three-player market leads to a quadrupling of its value creation on CS HOLT®, but the P/E relative to growth stocks is unchanged. Above all, 20% of sector revenue is from hydrogen. McKinsey predicts hydrogen is a \$2.5trn market by 2050. Tends to outperform as PMIs fall. Air Liquide and Air Products are Outperform-rated.

**GEM overweight:** GEM currencies are close to 20-year lows against PPP, but the basic balance of payments surplus is at a 16-year high. Equity valuations are close to 16-year lows (sector-adjusted P/E). A weaker dollar and a fall in TIPS is fuel for GEM. Within GEM, we agree with CS APAC strategist Dan Fineman's top pick of Korea.

On GEM, we also highlight **alcoholic beverages:** 55% GEM exposure. Abnormally cheap versus their US peer group and food producers. A potential vaccine play. Typically amongst the least disrupted of the consumer staples. We highlight Pernod and Heineken.

**China tech:** We think China has all the ingredients of a bubble that has yet to really start and will likely spill over into H shares. China tech P/E relatives are at 15-year lows while earnings revisions remain very strong. Alibaba is Outperform-rated.

**Gold:** We can see a multiyear scenario in which gold rises to \$2,500 per oz.

**P&C:** P/E relatives are at levels which have seen outperformance on all occasions. A typical approach is to buy one to two months after a natural disaster. Clear signs of a 10%+ premium increase as trapped capital exceeds capital raising. A potential vaccine play. Zurich and Lancashire are Outperform-rated.

**Defence:** Defence spending will likely grow above GDP globally in an increasingly tri-polar world. US valuations at 20-year lows. BAE looks abnormally cheap.

**Telecom equipment:** 5G building is being ramped up, with 5G and superfast broadband seen as a necessity. Around 35% of market share is accounted for by China, which has been increasingly excluded. P/E relatives at 20-year lows. Outperforms include Ericsson.

---

### Research Analysts

**Andrew Garthwaite**

44 20 7883 6477  
andrew.garthwaite@credit-suisse.com

**Robert Griffiths**

44 20 7883 8885  
robert.griffiths@credit-suisse.com

**Nicolas Wylenzek**

44 20 7883 6480  
nicolas.wylenzek@credit-suisse.com

**Mengyuan Yuan**

44 20 7888 0368  
mengyuan.yuan@credit-suisse.com

**Asim Ali**

44 20 7883 2480  
asim.ali@credit-suisse.com

**Timothy O'Sullivan**

44 20 7888 9803  
timothy.osullivan@credit-suisse.com

---

**DISCLOSURE APPENDIX AT THE BACK OF THIS REPORT CONTAINS IMPORTANT DISCLOSURES, ANALYST CERTIFICATIONS, LEGAL ENTITY DISCLOSURE AND THE STATUS OF NON-US ANALYSTS.** US Disclosure: Credit Suisse does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

# Table of Contents

<b>10 opportunities</b>	<b>3</b>
What is the macro backdrop?	3
1. European utilities – with a focus on renewables and grids	7
2. Mining	12
3. Construction materials – insulation, US and UK housing plays and cement/aggregates	19
4. GEM with a strong overweight of Korea (and China) & indirectly via alcoholic beverages	26
5. China tech companies	37
6. Gold	41
7. Industrial gases/Hydrogen	48
8. P&C insurance	52
9. Defence stocks	55
10. Telecom Equipment	59

We show our areas of interest and their key drivers:

**Figure 1: Key drivers and our areas of interest**

Areas of Interest	Real asset plays	Plays on China	COVID recovery plays	Not technically disrupted	Value	Green / Infra / Policy	GEM exposure	Benefits from weaker dollar
European Utilities	/			x	x	x		x
Mining	x	xx	xx	x	x	x	x	x
Construction mats.	x		x	x	x	x		
GEM as a region		x			x		xx	x
Alc. Beverages			xx	x	x		x	x
China tech		xx		x	x			
Gold	x			x				x
Industrial Gases	/			x		xx		
P&C Insurance			xx	x	x			
Defence				x	x			
Telecom Equipment				x	x			

/ - moderate; x - strong; xx - very strong

Source: Credit Suisse research

# 10 opportunities

We briefly summarise our views on the current macro backdrop and discuss 10 of the most interesting opportunities we currently see in the equity market.

## What is the macro backdrop?

**GDP growth slows but is still above trend:** GDP growth decelerates but critically it is still above trend in 2021 as our economists' forecasts show below. Indeed, CS economists and the consensus appear to agree on this (note the only difference is China, but look at [Weekly observations: China leading the pack ... investment implications](#), 8 Oct, for our take).

Figure 2: CS economists' forecasts

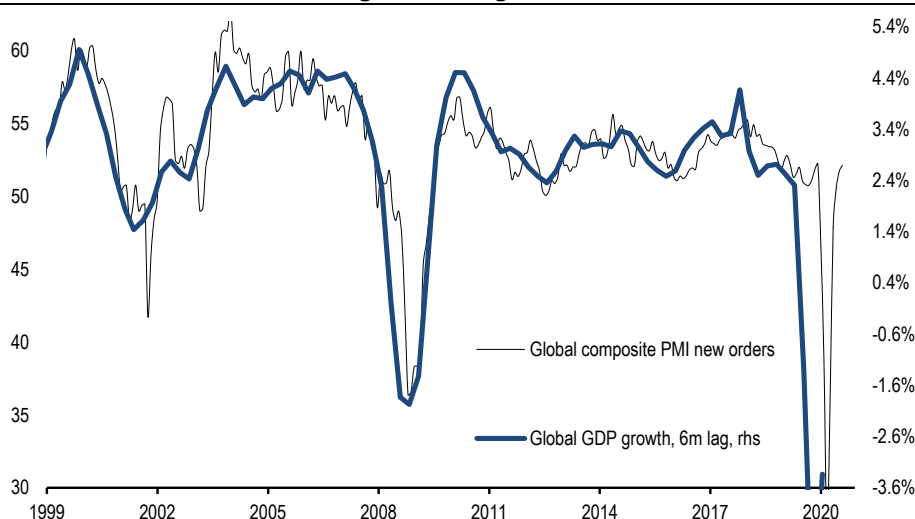
Forecasts	CS Economist				CS deviation from Consensus (pp.)		
	Q/Q ann.		yoy % chg		Q/Q ann.		yoy % chg
	Q3 20	Q4 20	2020	2021	Q4 20	2020	2021
Global	26.2	6.9	-3.7	4.0	na	0.2	-1.2
US	30.5	3.5	-3.9	3.8	1.5*	0.4	0.0
Eurozone	32.4	9.6	-8.0	5.5	0.0	0.1	0.0
China	13.0	8.2	3.3	5.6	0.2	1.2	-2.4
Japan	23.9	2.0	-5.0	1.5	3.0*	0.7	-1.0

\*Japan and US Q/Q consensus numbers are seasonally adjusted

Source: Refinitiv, BLOOMBERG, Credit Suisse research

We expect global PMI new orders to flatten near term (given the local lockdowns in Europe and the sharp tapering of unemployment benefits in the US). Global PMIs are consistent with c2.6% global GDP against our economists' view of 4% GDP growth in 2021 (yoy). Hence, in 2021 we would expect global PMIs to rise above current levels.

Figure 3: Global PMIs tend to lead global GDP growth

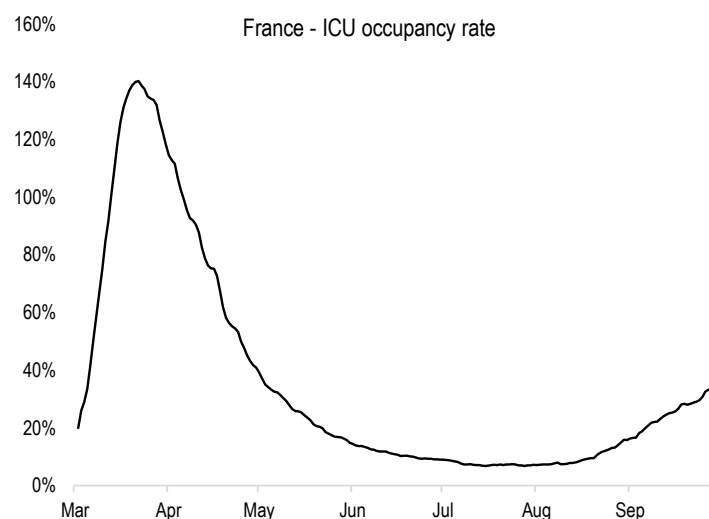


Source: IHS Markit, Refinitiv, Credit Suisse research

We continue to believe that any meaningful rise in unemployment (or slowdown in growth) will be quickly countered by fiscal easing. We have seen furlough schemes be renewed in Germany, France, and Spain. Any unified government in the US would likely lead to significant stimulus (for instance, we think a Biden clean sweep—winning the presidency with majorities in both the Senate and the House—could boost GDP by 1% to 1.5% in the US and inflation by 50bp).

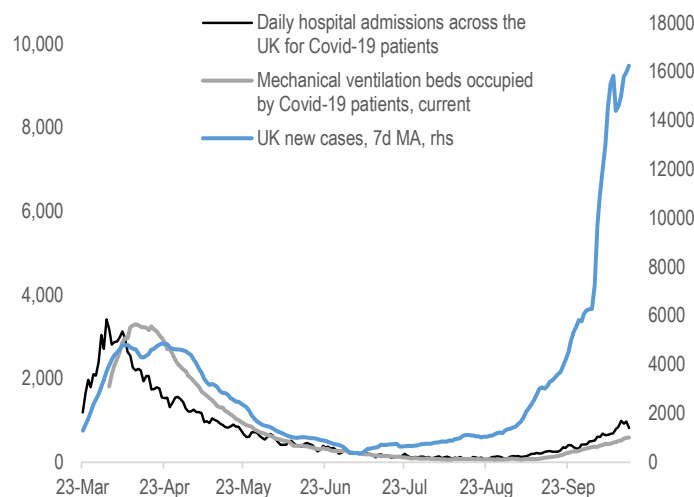
We don't see a widespread second lockdown (see [What to do if we get a vaccine](#), 14 Oct), with politicians in the US increasingly arguing that the welfare cost of a second lockdown is potentially greater than the welfare benefit. Based on the most recent data, the rise in deaths is very small relative to infections. In Europe, we believe that lockdowns are likely to be confined to local regions, risk groups (over 60 or pre-existing conditions) or a two-week circuit breakers that are put in place over school holidays. The crunch point will be when care bed capacity is reached. Currently in France, for example, critical care bed capacity is at 33% compared to 140% in April.

**Figure 4: Critical care bed capacity in France is only at 33%**



Source: Santé Publique France, Credit Suisse research

**Figure 5: In the UK, hospitalisations have risen by much less than confirmed cases this time around**



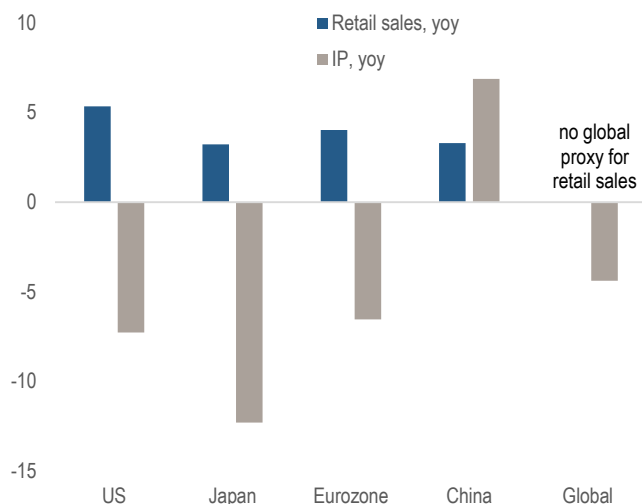
Source: NHS, Credit Suisse research

Around the turn of the year, three of the Phase 3 trials are due to report and our analysts have a blue sky scenario of 300m doses by year-end and 1bn doses incrementally per quarter thereafter.

Thus within a few months we would expect to see a large US stimulus and a vaccine. Both should underpin above trend growth in 2021.

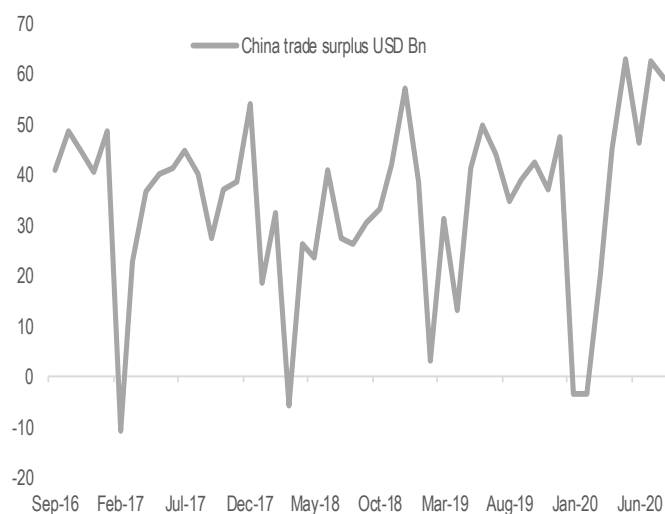
**China continues to surprise:** China has been able to recover much more strongly than forecast (e.g. service sector PMI at an 8-year high) despite having one of the smallest fiscal and monetary stimuluses. It is the only economy where both supply (i.e. IP) has recovered as well as demand (as proxied by retail sales) and very surprisingly its trade surplus is rising. Based on reported data, China has been able to keep its reinfections low. For more details, see [Weekly observations: China leading the pack ... investment implications](#), 8 Oct.

**Figure 6: Both supply growth (production) and demand growth (retail sales) have turned positive in China**



Source: Refinitiv, Credit Suisse research

**Figure 7: China's trade surplus has increased**

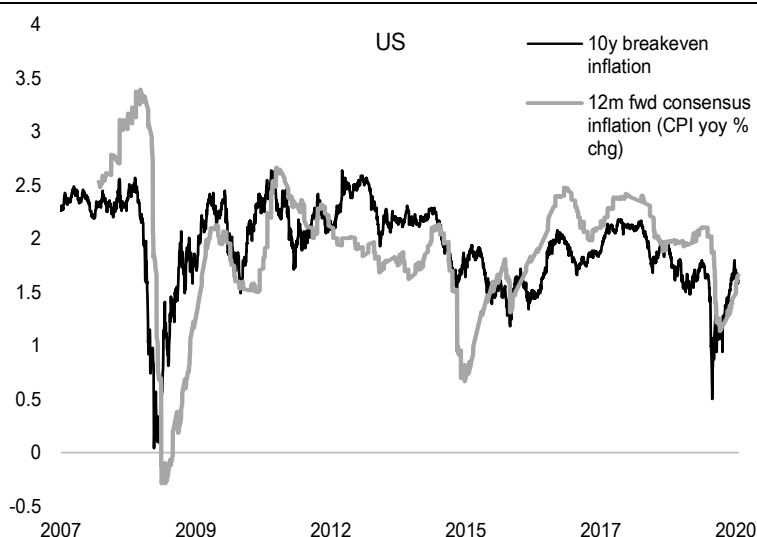


Source: Refinitiv, Credit Suisse research

**Dollar:** We believe it is set to go weaker (see [US dollar: the start of a long-term bear market](#), 12 Aug). We have a 90% conviction we are in a long-term dollar bear market.

**Inflation expectations to rise:** We continue to believe that on a 2 to 10 year view inflation will rise more than expected. We have perhaps seen the trough in consensus views of 12-month forward inflation and this tends to drive inflation expectations. The 10-year breakeven inflation rate is currently c1.7% and our view is that it can rise to c3% over the next 12 to 18 months (see [COVID19: Long term inflationary consequences and what to do](#), 2 July).

**Figure 8: Economists' consensus inflation moves with breakeven inflation**



Source: BLOOMBERG, Refinitiv, Credit Suisse research

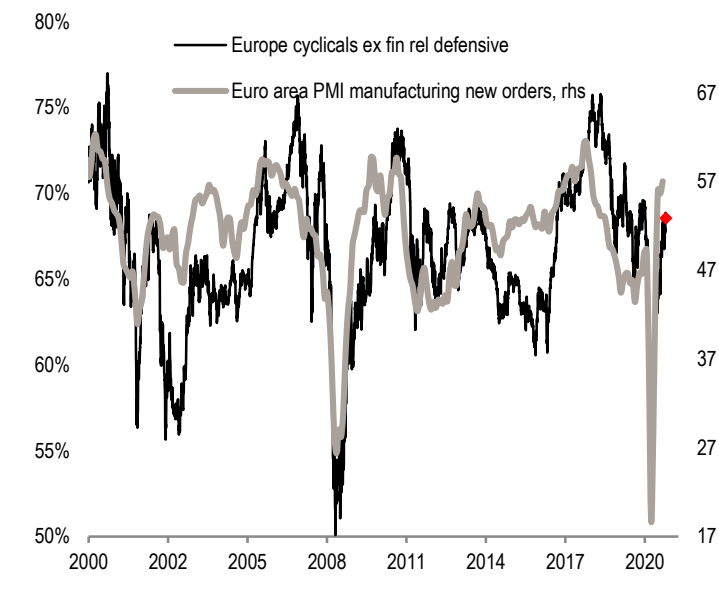
We think the Fed would respond to any meaningful rise in bond yields by announcing yield curve control and hence the 10-year TIPS yield can fall a lot further (since mid-March, we have looked for the TIPS yield to ultimately fall to -2% to -2.5% from -0.95% currently).

**On equities, we remain positive and see these key supports:** Policy, an abnormally high equity risk premium and the start of a bond for equity switch (as investors start to worry that bonds will no longer diversify). Excess liquidity and earnings revisions are also abnormally constructive (see [Equities: The bull market continues](#), 9 Sep, and [Weekly observations: The critical issues for the market near term](#), 28 Sep).

**On cyclical, we are benchmark.**

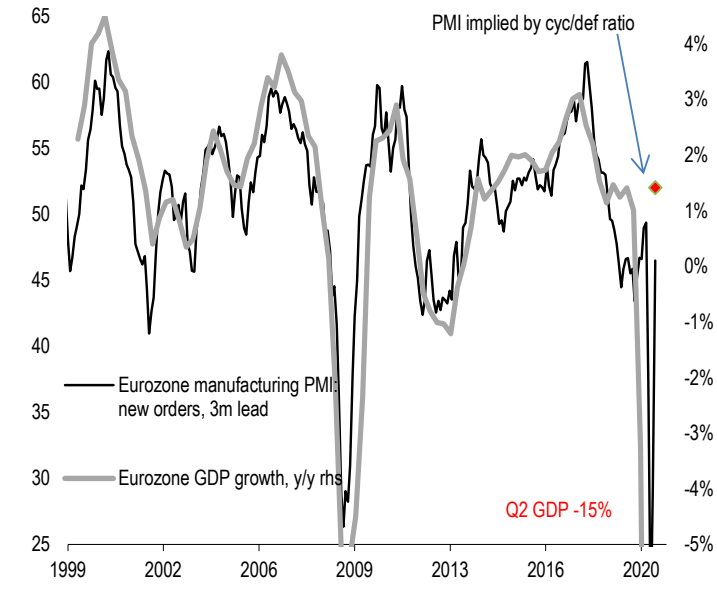
PMIs in Europe slow, but cyclicals are discounting PMI new orders of only 52 which is in line with just c1.3% GDP growth, well below consensus forecasts for next year.

**Figure 9: The cyclicals-to-defensives ratio is discounting PMIs at c52...**



Source: IHS Markit, Refinitiv, Credit Suisse research

**Figure 10: ...which would be consistent with c1.3% GDP growth**



Source: Refinitiv, Credit Suisse research

The key themes remain green-related spending (e.g. hydrogen, renewables, insulation), real asset plays that benefit from the fall in real rates (gold, mining, housebuilders), more domestically focused European stocks (utilities), and China-related plays (mining, China tech). We continue to have a strong bias to themes that are not technically disrupted and that offer value. We would also position for a vaccine in 2021 (mining, alcoholic beverages and P&C).

Thus, we see the following 10 opportunities:

# 1. European utilities – with a focus on renewables and grids

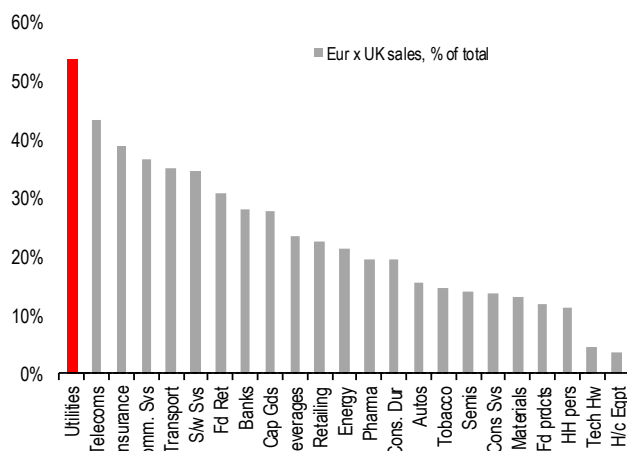
We recently upgraded this sector (see [Utilities to overweight, pharma and energy to underweight](#), 4 Aug).

i. Very strong macro supports

■ Outperforms with a strong euro

European utilities have the highest domestic sales exposure of any sector. The sector tends to outperform as the euro strengthens.

**Figure 11: Domestic sales as a percentage of total sales for European sectors**

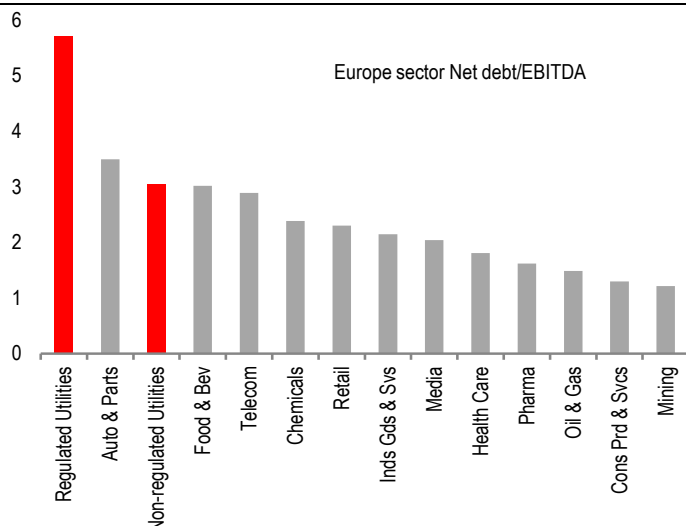


Source: Refinitiv, Credit Suisse research

■ A beneficiary of a fall in real bond yields

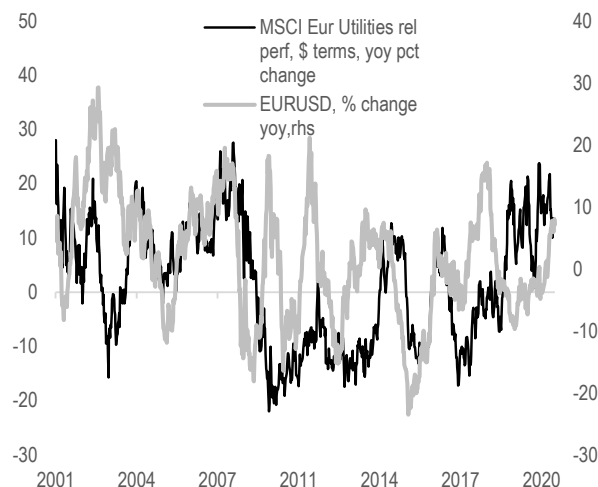
This sector is the most leveraged of any non-financial sector (hence if real bond yields fall, then this sector benefits directly). Also for the renewables, projects are built on IRRs of 6-7% and in the past have then been sold to private equity or specialist funds on IRRs of 3% to 4%. This only works because real rates are so low.

**Figure 13: Utilities have among the highest net debt/EBITDA levels**



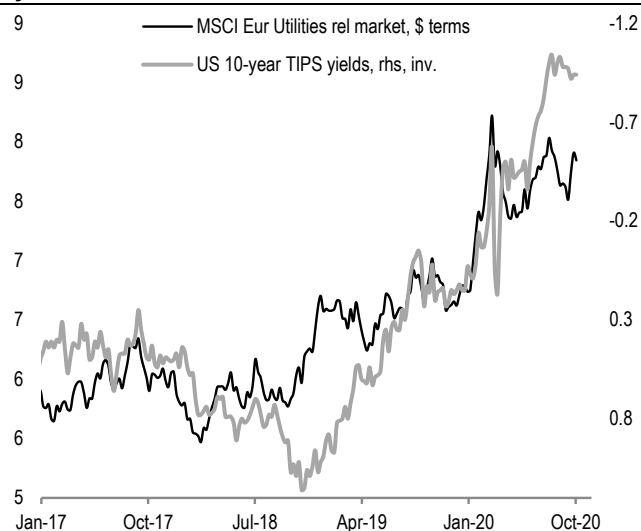
Source: Refinitiv, Credit Suisse research

**Figure 12: European utilities' relative performance versus EURUSD performance**



Source: Refinitiv, Credit Suisse research

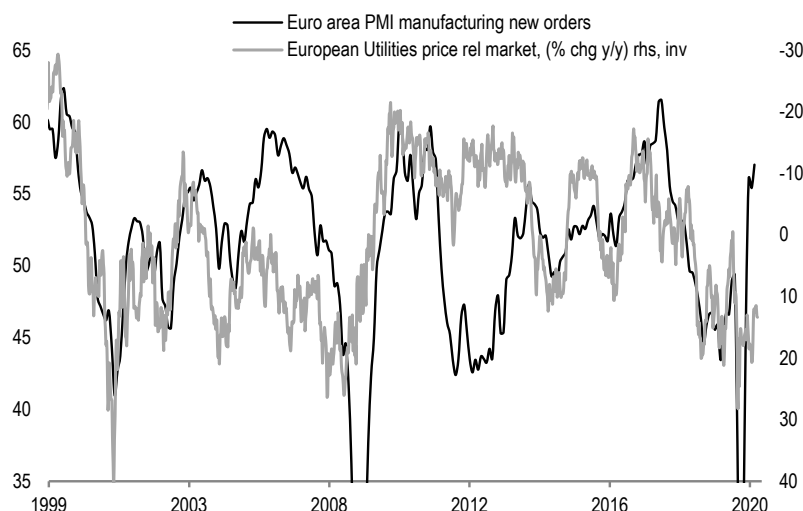
**Figure 14: Thus European utilities typically outperform as the TIPS yield falls**



Source: Refinitiv, Credit Suisse research

- The sector tends to do better when PMIs peak, as they probably have in Europe.

**Figure 15: Utilities tend to perform better after PMIs peak**



Source: IHS Markit, Refinitiv, Credit Suisse research

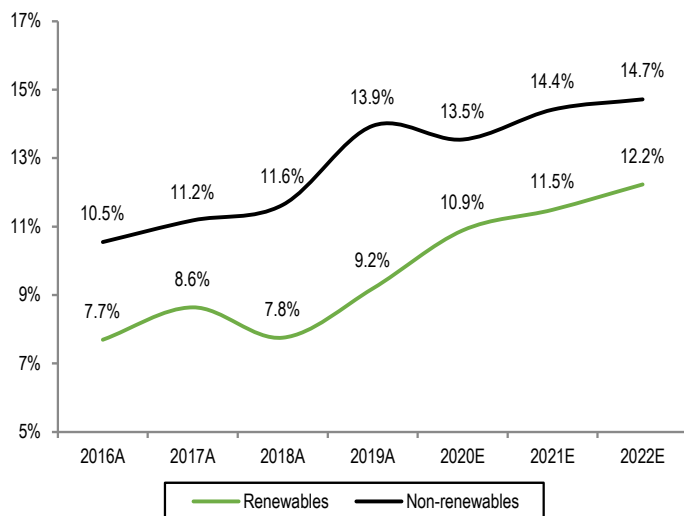
ii. A high multiplier on infrastructure projects

Governments might even realise that the multiplier on utility investment is very high. The ONS modelled (see [Infrastructure as a stimulus](#)) the highest multiplier for electric and gas supply investments at 2.7x, compared to the normal multiplier of 1.7x. This implies governments might allow more investment in renewables and we have for example already seen Prime Minister Boris Johnson pledge a threefold increase in UK wind capacity by 2030.

iii. A deep value sector on FCF and P/E

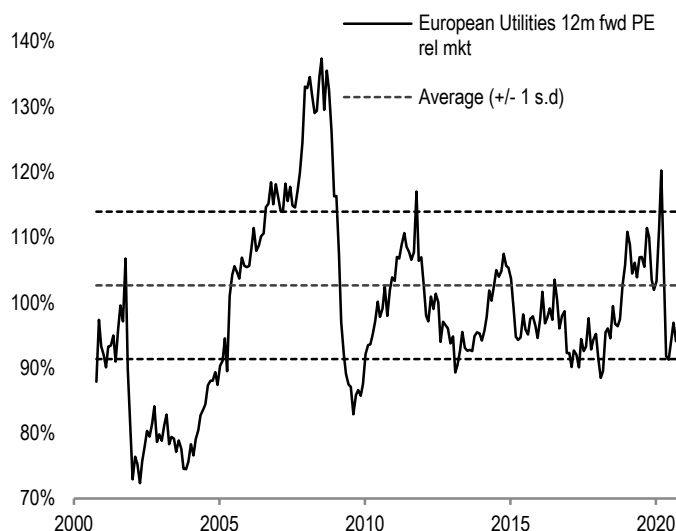
On maintenance capex, the FCF yield for renewables is c11%. The P/E relative remains close to 10-year lows (at levels where it outperforms 80% of the time over the next 3 and 12 months on backtests).

**Figure 16: Utilities FCF yield (post maintenance capex) – Renewables vs Non-renewables focused Utilities**



Source: Credit Suisse Utilities team

**Figure 17: Attractive on 12m fwd PE relative to the market**



Source: Refinitiv, Credit Suisse research



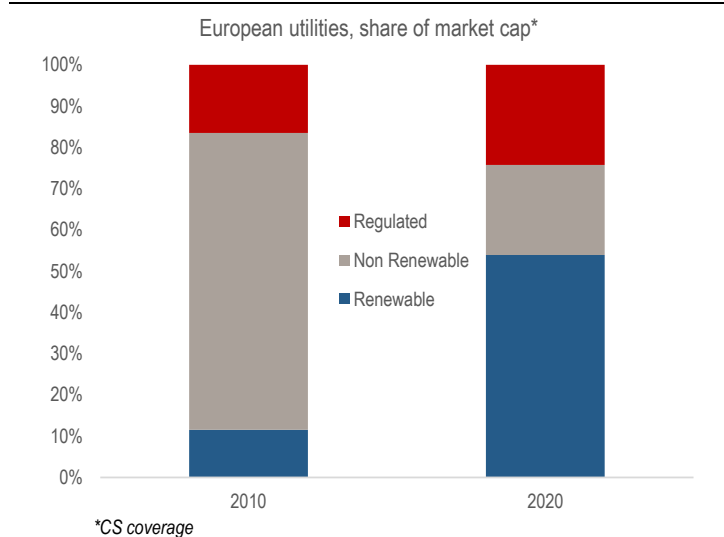
- iv. A sector that has now transitioned towards growth via rising carbon prices and falling price of wind.

We now have only c20% of market cap that is fossil fuels, 50% renewables, and the remaining being regulated networks.

The two key drivers of growth are the rise in the carbon price and the growth in wind generation.

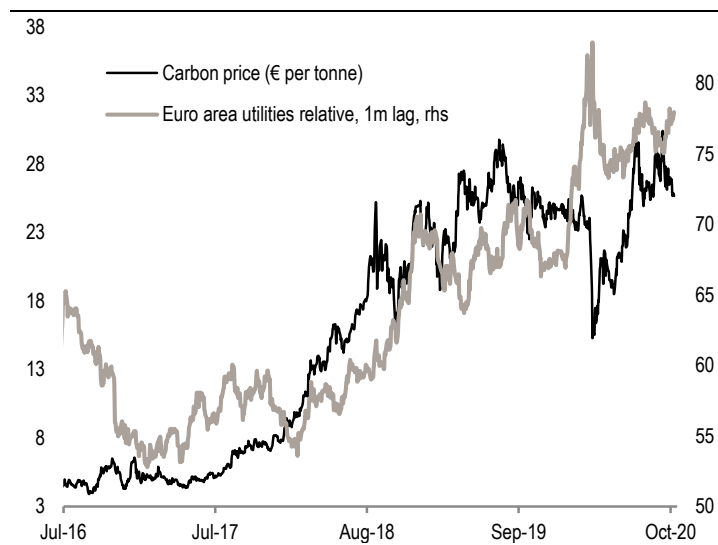
**Carbon prices:** The rise in renewables makes the carbon price even more important. We can see that the sector has been driven by the price of carbon. The IEA forecasts the carbon price has to go to \$75 to \$100 per tonne by 2030 to limit the rise in global temperatures to 2°C (the Paris Agreement); BP similarly recently increased its 2030 carbon price assumption to \$100 per tonne from \$40 per tonne (seeing \$250 per tonne by 2050).

**Figure 18: Market cap of utilities by renewable focus vs non-renewable focused companies**



Source: Refinitiv, Credit Suisse research

**Figure 19: Utilities have followed the carbon price**

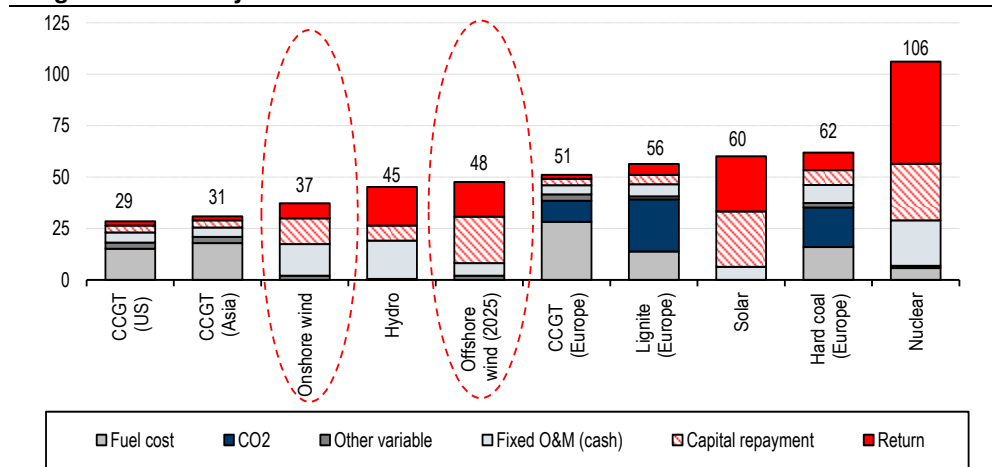


Source: BLOOMBERG, Refinitiv, Credit Suisse research

**The rise in wind:** Offshore wind is now on a par with CCGT without subsidies. Recently, NextEra announced that by 2025 wind would cost \$20-\$30 per MWh, with storage (FT, 2 Oct).

For this reason, the IEA expects wind capacity to rise 15-fold over 20 years (attracting \$1tn investment), with the levelised cost of wind falling by close to another 60% by 2040 and thus becoming even more economical.

**Figure 20: The fully loaded cost of offshore wind is below CCGT in Europe, with the marginal cost clearly much lower**



Source: Credit Suisse Utilities team

### We have many more countries committing to a greater reduction in carbon emissions:

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. New York State already intends to get 70% of its electricity from renewable sources by 2030, eliminating carbon emissions from power production by 2040; Democratic presidential candidate Joe Biden's plan is even more aggressive, calling for emission-free power production by 2035. Meanwhile, China has committed to be zero carbon emitting by 2060. We believe wind energy is an easy win to achieve these goals.

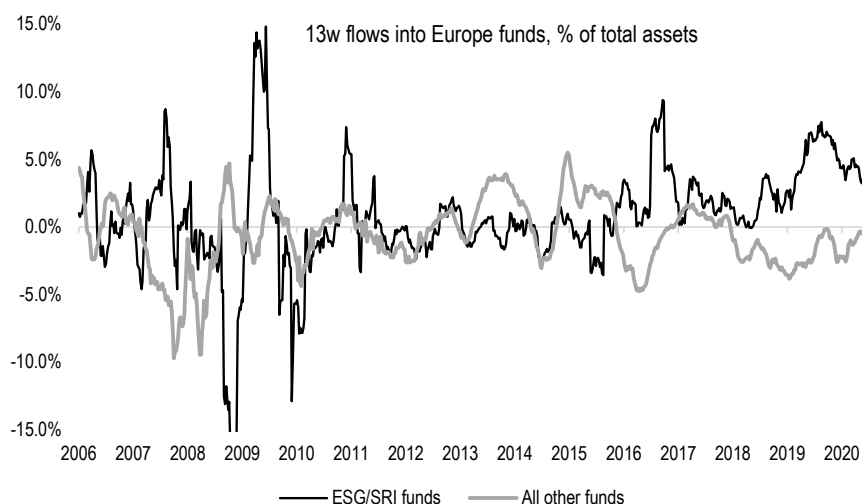
- v. More stable long term earnings.

Going forward, we will also see the merchant power price no longer being set by coal or gas and governments may well have to set contract for difference (CRD) to stop extreme volatility.

- vi. ESG flows

Net flows into ESG funds have remained very strong in Europe, especially in contrast to net flows into all other funds, providing strong support for the renewables names.

**Figure 21: Net flows into ESG funds have remained consistently strong**



Source: Refinitiv, Credit Suisse research

### We would have a particular focus on grids

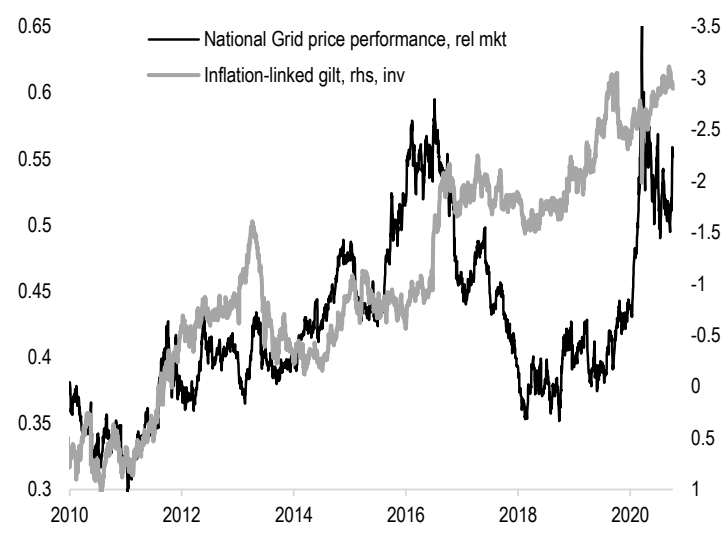
To us, regulated utilities are very attractive if the RAB is growing and if they are allowed an RoE above their CoE. In this regard, we focus on grids.

There are four big advantages for grids, in our view.

- i. They are not sensitive to the price of power (which can be cyclical).
- ii. It is very clear that the expansion of renewables is going to require a big expansion in grid capacity (with much more disparate sources of power) and the need to install systems capable of handling more power flows (e.g. for heating and transport, as well as existing electricity demand). Our utilities team believe that this will increase RAB growth by c5% a year.
- iii. As above, investment in grids has a very high multiplier of 2.7x.
- iv. In the case of the UK and Italy, there is a CPI link which is particularly useful if, as we believe, there is an inflation risk in the long term.

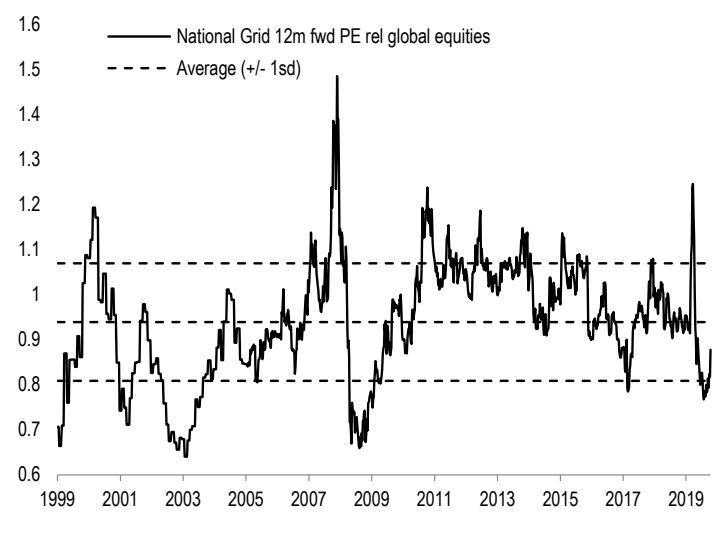
In the case of the UK, National Grid in theory should have performed better given the fall in the index-linked bond yield (which is the real cost of debt). Our analysts believe it will likely get an allowed real rate of return of RPI +2.2%. Recent intervention by the Competition and Market Authority in the case of four private sector water companies suggested that, if anything, this allowed real rate of return will rise (it was the first time ever that the CMA raised by the real rate of return allowed by the regulator). The premium to RAB is just 18% compared to nearly 50% for US equivalents.

**Figure 22: National Grid in theory should have performed better given the fall in the index-linked gilt yield**



Source: Refinitiv, Credit Suisse research

**Figure 23: National Grid is cheap on PE relatives**



Source: Refinitiv, Credit Suisse research

Our utilities team highlights its RWE (80% renewables by 2022, FCF yield on maintenance capex of 9%), and EdP (60% renewables, FCF yield on maintenance capex of 12.1%) as top picks. It also points to Snam (the leading player in the use of hydrogen to supplement gas heating) and ENEL.

**Figure 24: Outperform-rated European Utilities**

Name	-----P/E (12m fwd) -----			----- P/B -----		2019e, %		HOLT	2019e Momentum, %		Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
	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		
E On N	14.1	80%	-13%	2.8	-66%	-0.6	4.9	-33.1	-1.4	7.9	2.1	Outperform
Edp Energias De Portugal	18.8	107%	13%	1.8	23%	6.0	4.3	31.3	-1.8	-1.9	2.2	Outperform
Enel	14.2	81%	-7%	2.5	63%	5.4	4.8	49.1	0.2	-1.0	2.2	Outperform
Fortum	12.9	73%	-40%	1.3	-22%	na	5.9	55.6	-5.4	3.6	2.9	Outperform
Rwe	17.6	100%	12%	1.2	-42%	-0.7	2.5	163.4	1.1	-1.4	2.1	Outperform
Snam	12.7	72%	-26%	2.3	-11%	4.8	5.7	-14.2	-1.2	-0.1	2.2	Outperform
National Grid	16.9	96%	-10%	1.5	-38%	-4.4	5.3	-0.5	-12.0	-3.5	2.0	Outperform

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

## 2. Mining

Mining, especially copper, appears to fit our current investment criteria:

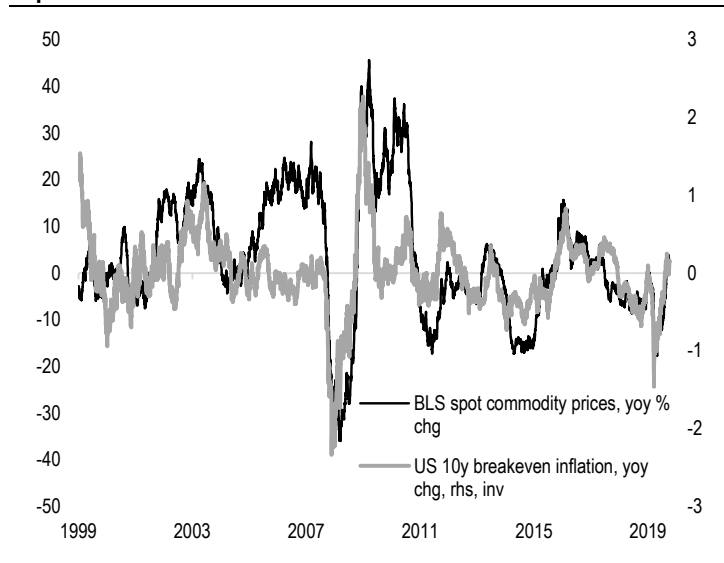
i. A real asset

Commodity prices clearly rise with inflation expectations, hence mining acts as an inflation hedge.

ii. Weaker dollar

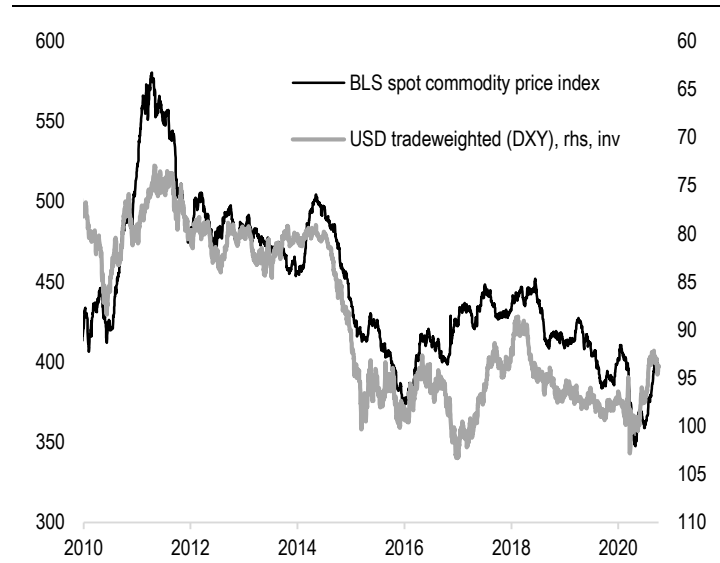
Industrial commodities are clearly a winner from dollar weakness (because less than 10% of copper demand comes from the US). Furthermore, a weaker dollar is good for global growth with around 62% of FX reserves in dollars.

**Figure 25: Commodity prices clearly move with inflation expectations**



Source: Refinitiv, Credit Suisse research

**Figure 26: Commodities clearly benefit from dollar weakness**



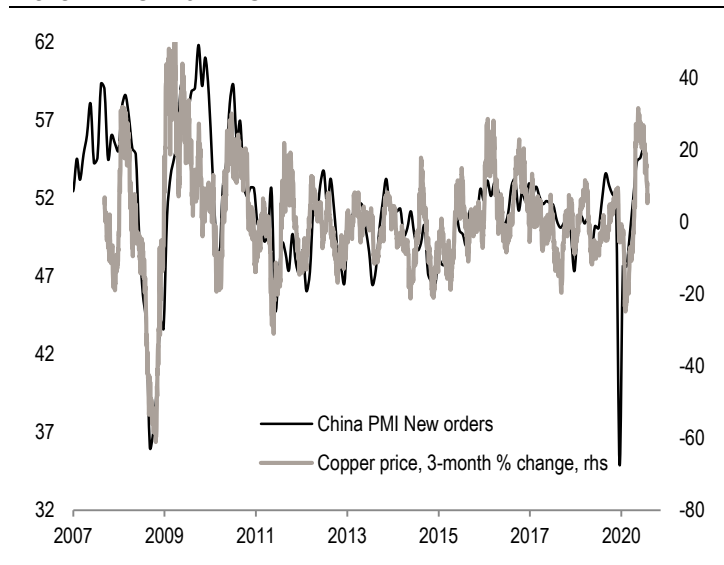
Source: Refinitiv, Credit Suisse research

iii. Drivers of demand should remain robust or accelerate:

There are three drivers of industrial commodity demand.

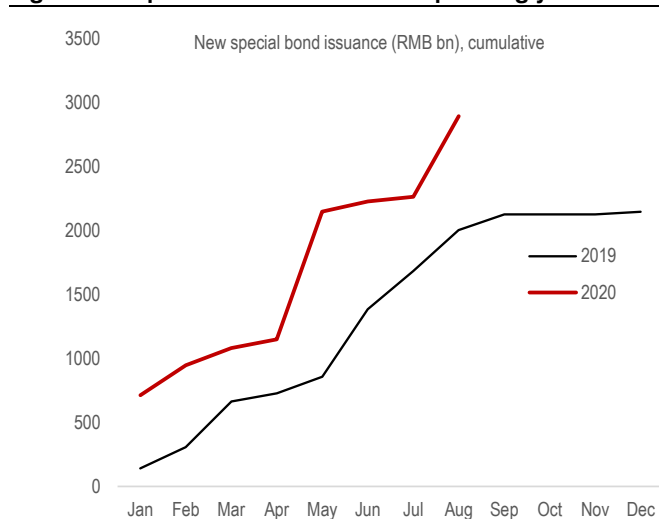
### ■ China GDP growth and infrastructure

The current level of China PMIs is consistent with a strong rise in copper prices. China is focusing on infrastructure-led growth with both infrastructure and real estate FAI up strongly year on year.

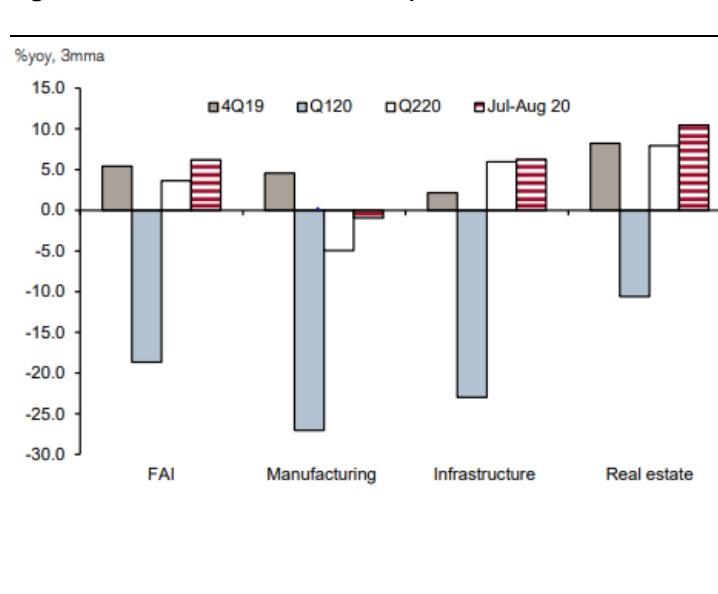
**Figure 27: The 3 month rate of change in copper tends to move with China PMIs**

Source: IHS Markit, Refinitiv, Credit Suisse research

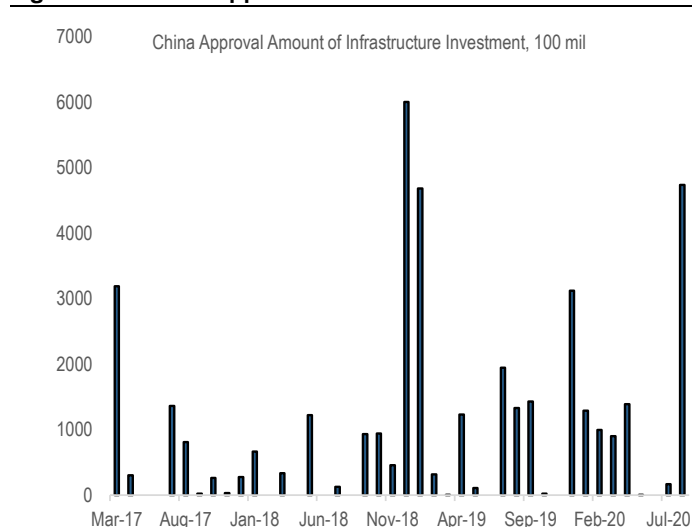
Some of the lead indicators of infrastructure are up strongly (special bond issuance and project approvals)

**Figure 29: Special bond issuance is up strongly...**

Source: Refinitiv, Credit Suisse research

**Figure 28: Growth rates of FAI components**

Source: Credit Suisse China Economics research

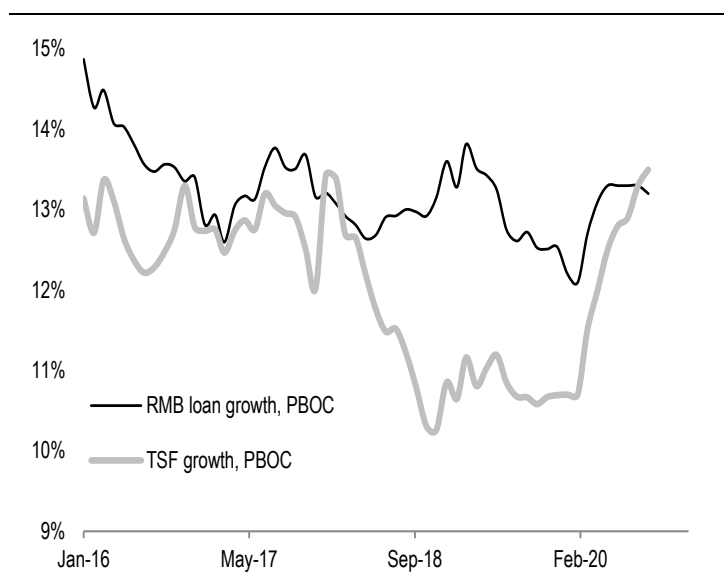
**Figure 30: ...as is approval amount of infrastructure investment**

Source: Bloomberg, Credit Suisse research

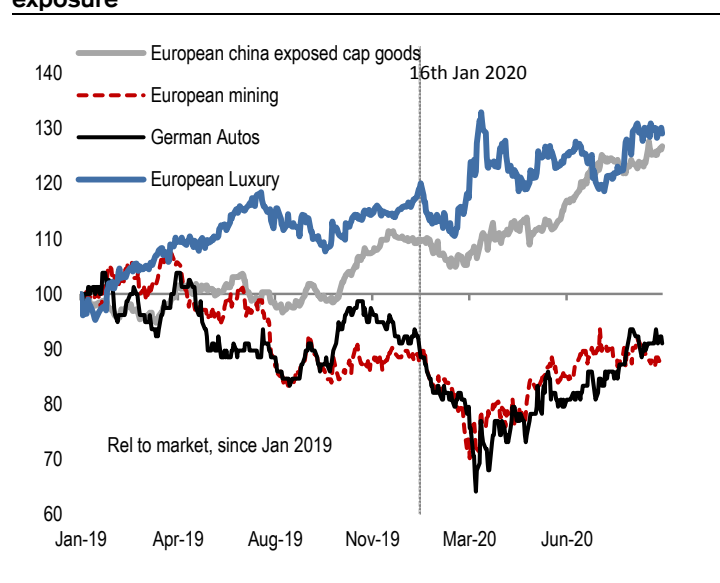
Indeed, the most recent money supply numbers surprised positively with TSF growth still accelerating.

As we highlight in the GEM section, China has seen a normalization in IP (up 5.6% yoy) and services (service PMI is at an eight-year high). This is despite a much lower fiscal and monetary boost than elsewhere (see [China leading the pack... investment implications](#), 6 Oct). Moreover, surprisingly, China's trade surplus has increased (as export market share has risen). Hence there is no external constraint to growth.

Mining has lagged behind other China-related exposed sectors YTD.

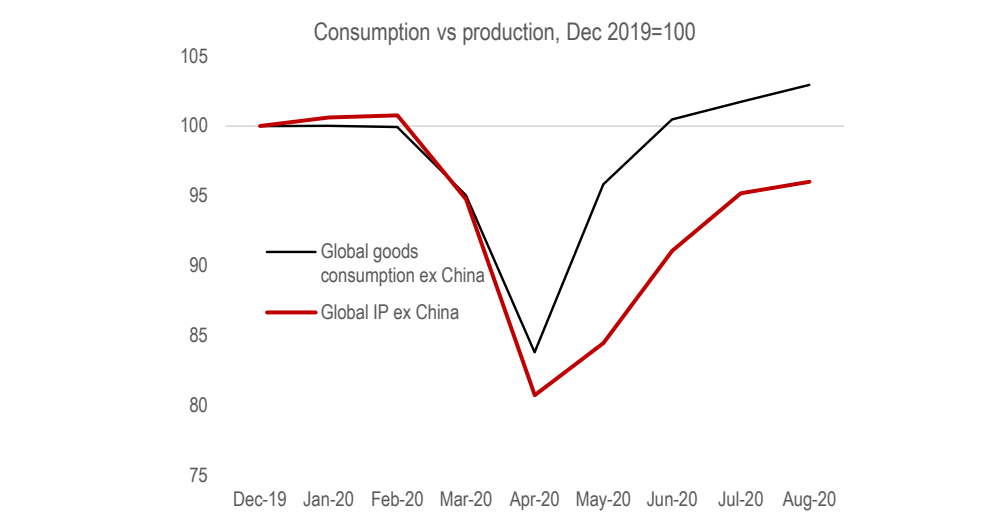
**Figure 31: TSF growth continue to pick up in China**

Source: Refinitiv, Credit Suisse research

**Figure 32: Mining has lagged behind other China-related exposure**

Source: Refinitiv, Credit Suisse research

- Global IP has lagged behind global retail sales and we believe the two have to meet (for supply to meet demand; otherwise we would expect rampant inflation). Thus we would recommend being overweight industrial cyclicals.

**Figure 33: Global IP has lagged behind global retail sales**

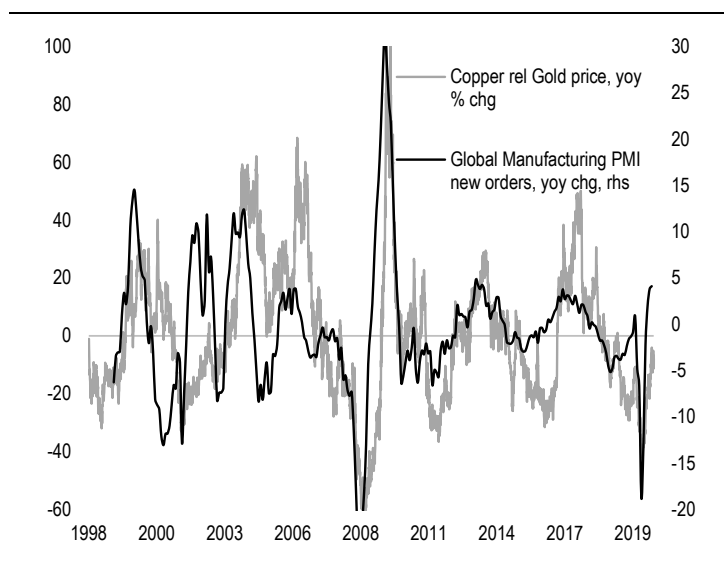
Source: Credit Suisse Global Economics research

#### ■ Global infrastructure

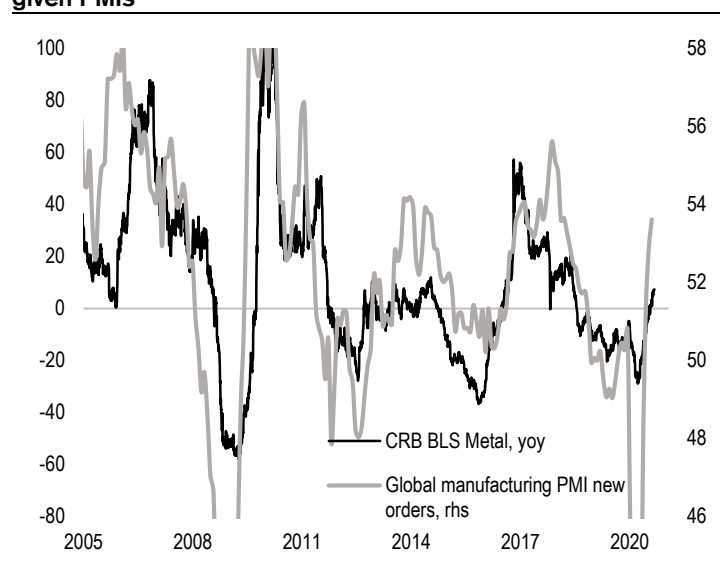
Globally, we are seeing governments resort to infrastructure investment (largely green related). This tends to be commodity intensive. Please see the construction materials section of the pack for details on infrastructure investment.

#### iv. Industrial commodities have lagged PMIs.

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 34: Copper outperforms gold as PMIs rise**

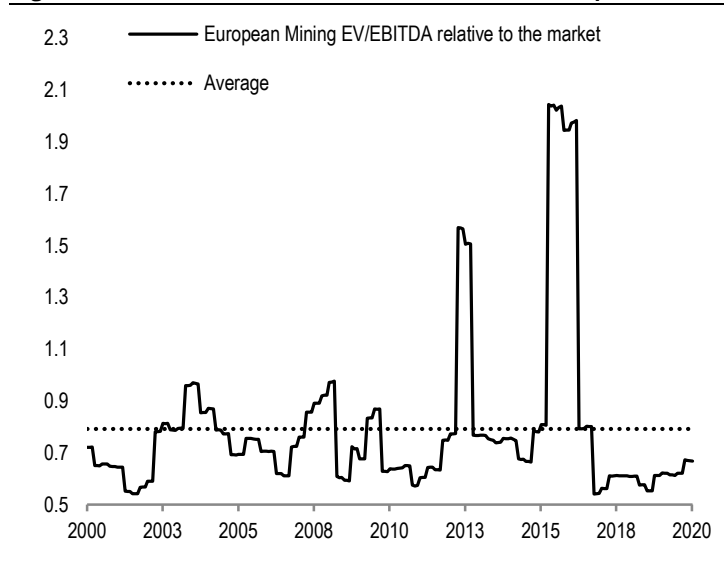
Source: IHS Markit, Refinitiv, Credit Suisse research

**Figure 35: Industrial commodities should have done better given PMIs**

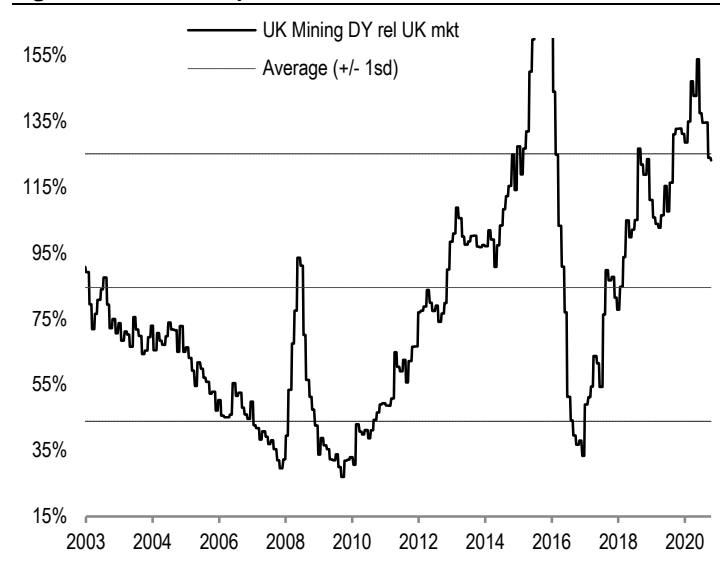
Source: IHS Markit, Refinitiv, Credit Suisse research

v. Valuation still clearly cheap

Valuations on a whole range of different measures look abnormally cheap. We see below the EV/EBITDA 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.

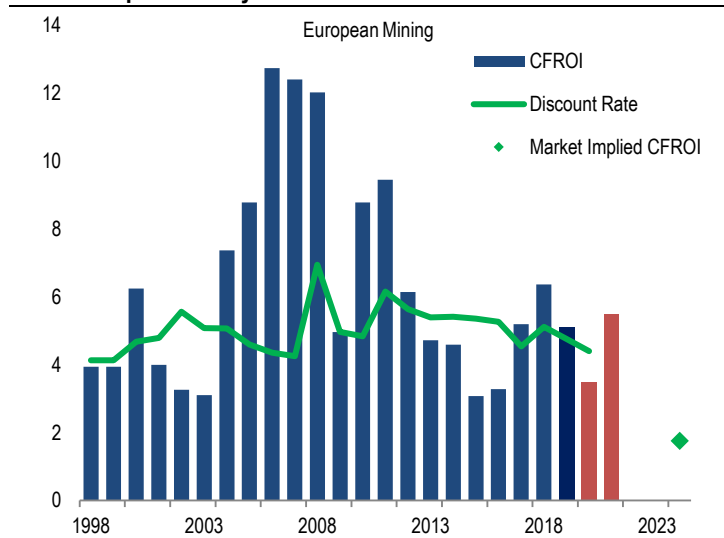
**Figure 36: The EV/EBITDA of the sector remains depressed**

Source: Refinitiv, Credit Suisse research

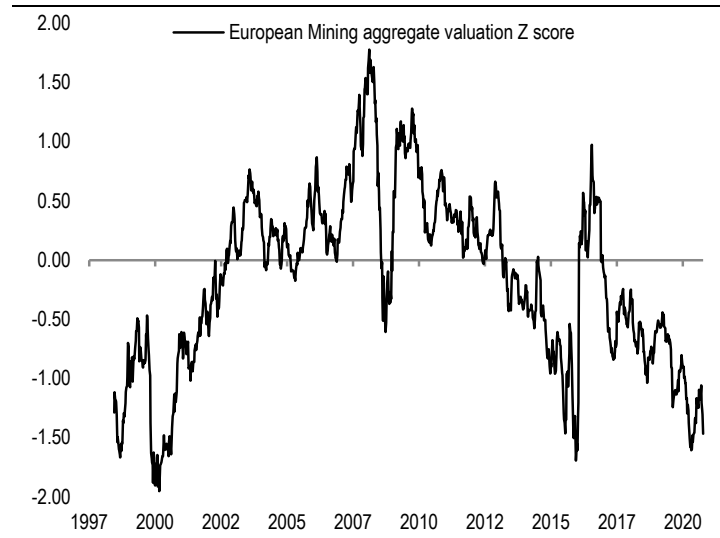
**Figure 37: It is cheap on DY relative to the market**

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 38: The market appears to be discounting a significant decline in profitability for the sector**

Source: Credit Suisse HOLT, Credit Suisse research

**Figure 39: 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 17% for 2021. If iron ore prices fall to \$50/t and copper to \$2/lb, FCF yields remain at 7% for 2021.

**Figure 40: 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%	8.2%	7.5%	10.8%	12.5%	8.3%	2.5%	7.5%	(0.9%)
Rio Tinto	12.7%	10.8%	12.2%	12.6%	17.7%	9.7%	3.4%	8.8%	(1.0%)
Glencore	11.6%	6.2%	18.2%	5.9%	19.7%	7.8%	12.5%	8.7%	8.6%
Anglo American	8.2%	4.9%	13.5%	5.3%	18.0%	3.1%	8.5%	2.3%	5.0%
<b>Average</b>	<b>11.0%</b>	<b>7.5%</b>	<b>12.9%</b>	<b>8.6%</b>	<b>17.0%</b>	<b>7.2%</b>	<b>6.7%</b>	<b>6.8%</b>	<b>2.9%</b>
<b>Median</b>	<b>11.5%</b>	<b>7.2%</b>	<b>12.9%</b>	<b>8.3%</b>	<b>17.8%</b>	<b>8.1%</b>	<b>5.9%</b>	<b>8.1%</b>	<b>2.1%</b>
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

## vi. A non-disrupted play

We find that copper benefits from disruption. Copper is needed in cars, for the grid transmission mechanism to recharge cars, and in wind and solar power generation (wind and solar require 14x more copper per unit than fossil fuels). 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.

Furthermore, 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 to electric vehicles.

The iron ore market remains a cartel where the low cost capacity is quoted. There is also little alternative to iron ore.

Even in the 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, while coal is highly disrupted and not perceived as ESG-friendly, we would highlight that it does trade on a FCF yield of near 25% for pure US coal plays.

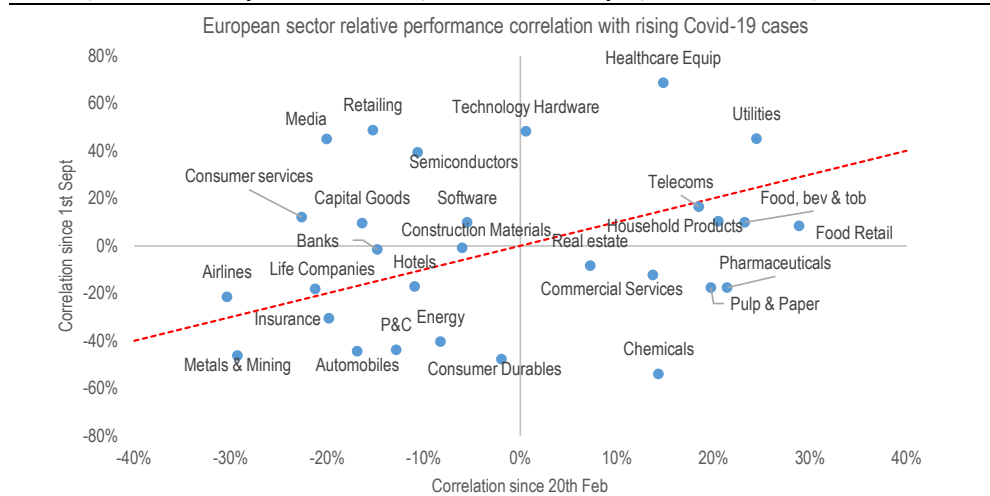
We continue to dislike steel (essentially taking cartelized inputs and selling to monopsonies).



## vii. A vaccine play

As highlighted in [What to do if we get a vaccine](#), 14 Oct, mining has also been one of the most sensitive sectors to the impact from the COVID-19 pandemic as we can see on the scatter of correlation with number of infections below.

**Figure 41: European sector relative performance correlation with rising COVID-19 cases (since market peak on 20 Feb) and since 1 Sept (on vertical axis)**



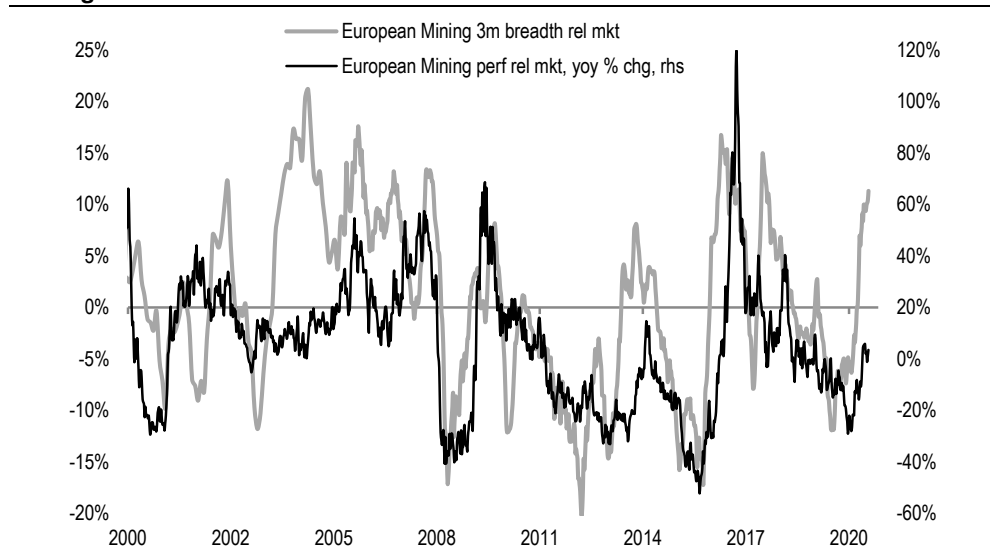
Source: Refinitiv, Credit Suisse research

We believe that, as we go into 2021, investors will start to focus on those sectors which should perform better if there is a vaccine (as highlighted by our pharma team which sees a blue sky scenario of 300m doses by year end and 1bn a quarter incrementally by end 2021).

## viii. Strong earnings revisions

Relative earnings revisions of European mining have been very strong, but price performance has not reflected this.

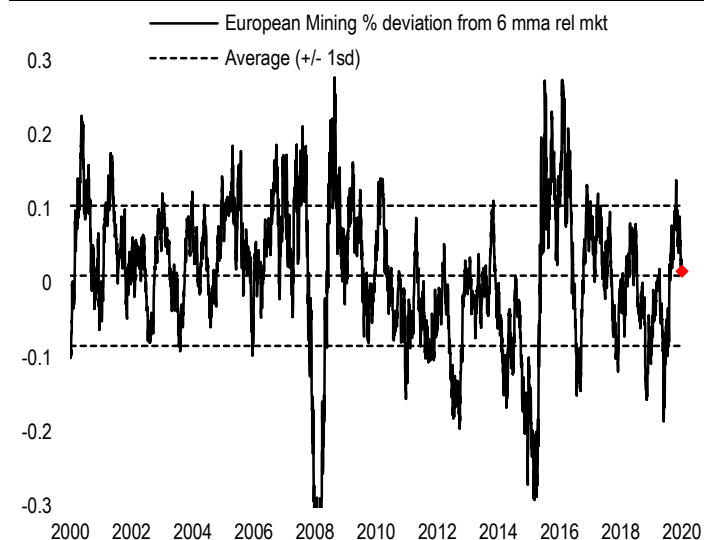
**Figure 42: Relative performance of European mining has not reflected its strong earnings revisions**



Source: Refinitiv, Credit Suisse research

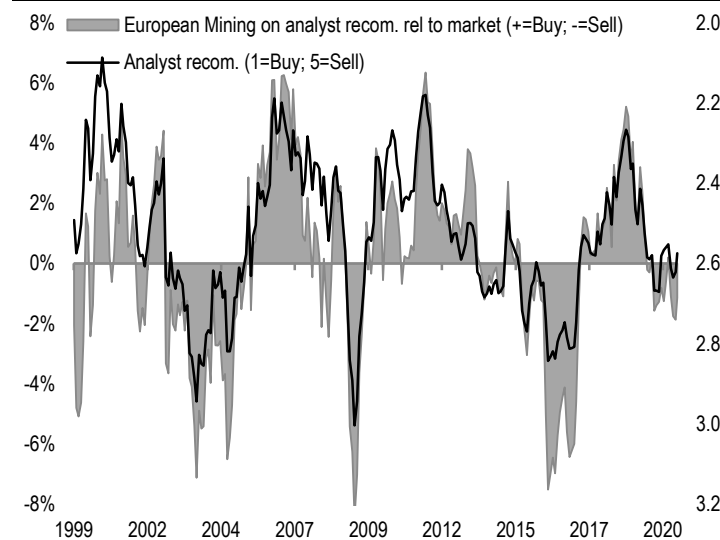
The sector is neutral on price momentum and on sell-side net recommendations.

**Figure 43: The sector is neutral on relative price momentum...**



Source: Refinitiv, Credit Suisse research

**Figure 44: ... and sell-side net recommendations**



Source: Refinitiv, Credit Suisse research

Below we show global mining names that are rated Outperform by CS analysts. Our European Mining analysts' top pick is Anglo American. This stock has nearly half of its exposure from copper and precious metals (including platinum) and trades on 3x EBITDA on spot commodity prices once we adjust for the value of its cross holdings.

**Figure 45: Global mining names that are Outperform-rated by CS analysts**

Name	-----P/E (12m fwd)-----			----- P/B -----		2020e, %		HOLT	2020e Momentum, %		Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
	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		
Anglo American	9.1	64%	-35%	0.9	-26%	4.4	3.5	151.2	17.9	13.6	2.3	Outperform
Bhp Group	11.1	78%	-35%	1.6	-19%	9.9	6.9	83.8	36.7	11.7	2.3	Outperform
South32	15.5	109%	-17%	0.7	-36%	na	1.8	178.2	8.1	5.7	2.1	Outperform
Teck Resources Subordinate	10.9	77%	-41%	0.5	-49%	-13.5	1.1	150.1	28.7	-0.2	2.1	Outperform
Vedanta	12.8	90%	28%	1.3	-11%	8.6	9.6	158.4	57.8	-0.7	1.7	Outperform
First Quantum Mrls.	27.2	192%	17%	0.7	-53%	8.7	0.1	-25.9	nm	3.1	2.0	Outperform
Hindustan Zinc	13.1	na	0%	2.2	-18%	4.5	6.5	84.9	0.9	-2.0	1.9	Outperform
Hudbay Minerals	-92.5	nm	na	0.6	-38%	-11.9	0.3	-59.6	nm	5.0	2.3	Outperform
Mmg	33.2	234%	34%	2.0	-19%	42.2	0.0	-55.8	nm	-6.5	2.5	Outperform
New Century Resources	4.4	31%	-89%	2.6	-92%	89.1	-4.2	-411.2	nm	-9.3	2.0	Outperform
Western Areas	16.5	116%	-29%	1.1	-58%	-15.2	1.1	116.4	-23.3	-2.2	2.4	Outperform
Iluka Resources	14.4	101%	-35%	5.3	32%	na	0.3	83.3	-15.4	-10.3	2.5	Outperform
Ferrexpo	3.9	28%	-51%	1.0	-52%	74.3	10.8	251.4	88.2	21.0	3.1	Outperform
Vale On Adr 1:1	5.2	36%	-74%	1.3	-12%	16.3	5.2	na	36.2	12.5	1.9	Outperform

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

### 3. Construction materials – insulation, US and UK housing plays and cement/aggregates

We have believed for quite some time that the only obvious policy response to a recession was fiscal QE. This is because in a recession real rates normally have to fall 5% and clearly this will not be possible this time around. Thus 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 *de facto* done by the central banks.

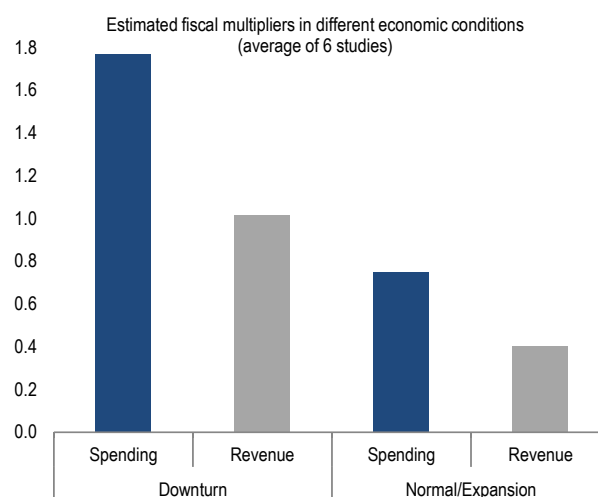
It is interesting to see the change in advice from the IMF. Its recent fiscal monitor argues “governments need to scale up public investment to ensure successful reopening, boost growth, and prepare economies for the future”, with low rates making borrowing to invest desirable. On the other hand, in 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.”

**Figure 46: Into a recession, the average cut in the real fed funds rate has been 4-5%, 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

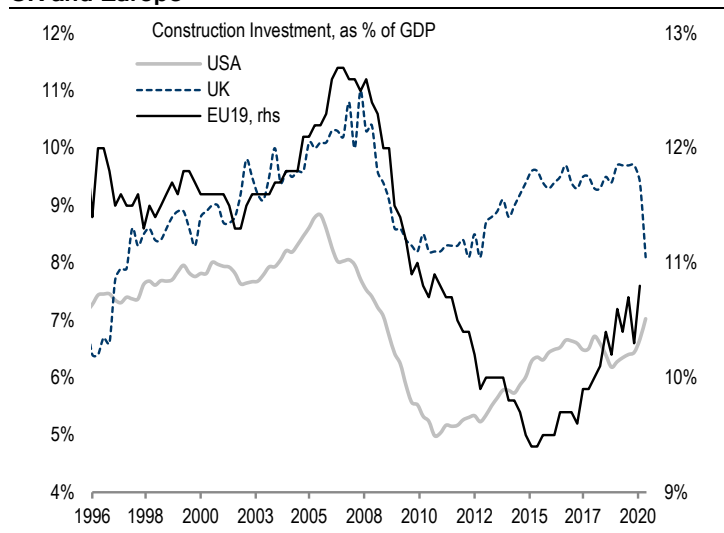
**Figure 47: The multiplier for fiscal spending is much greater than it is for tax cuts, particularly in a downturn**



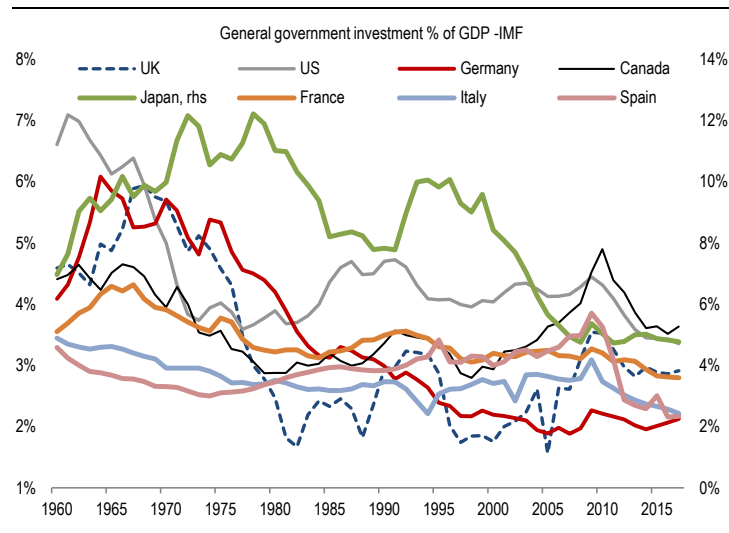
Source: IMF, Credit Suisse research

We can see that 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.

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 48: Construction as % of GDP is below average in the UK and Europe**

Source: Refinitiv, Credit Suisse research

**Figure 49: Public infrastructure spending has been declining**

Source: IMF, Credit Suisse research

This 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 Greens are currently the second largest party in Germany on the Politico poll of polls voting intention, and are gaining vote share in France, with the EELV (Europe Ecologie Les Verts) winning mayoralty in several major cities, including Lyon, Marseille and Strasbourg.

We show below a summary of some of the recently unveiled infrastructure plans across DM.

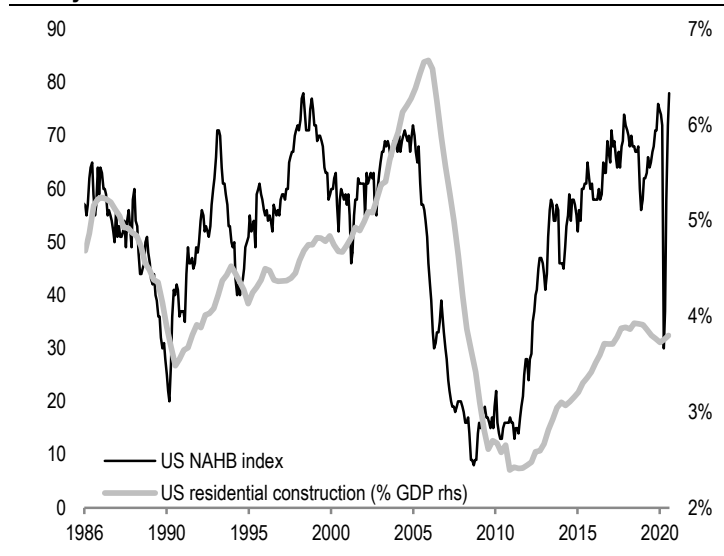
**Figure 50: Infrastructure projects across DM**

	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 Proposal from Biden for investment in clean energy in transportation, electricity, and building sectors	2025
US	2 tn	9.3%	EC and EIB mobilised €500bn by mid-2020, 6 months early; next stage is the InvestEU Programme, to mobilise an additional €650bn	2024
EU	1.35 tn	7.4%	€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	2027
Germany	175 bn + 60 bn	5.8%	€30bn of €100bn investment plan allocated to green initiatives including building renovation, transport, and hydrogen investment	2023
France	35 bn	1.4%	Three year Canada Infrastructure Bank plan announced 1 Oct 2020	2022
Canada	7.5 bn	0.4%		2023

Source: Refinitiv, Credit Suisse research

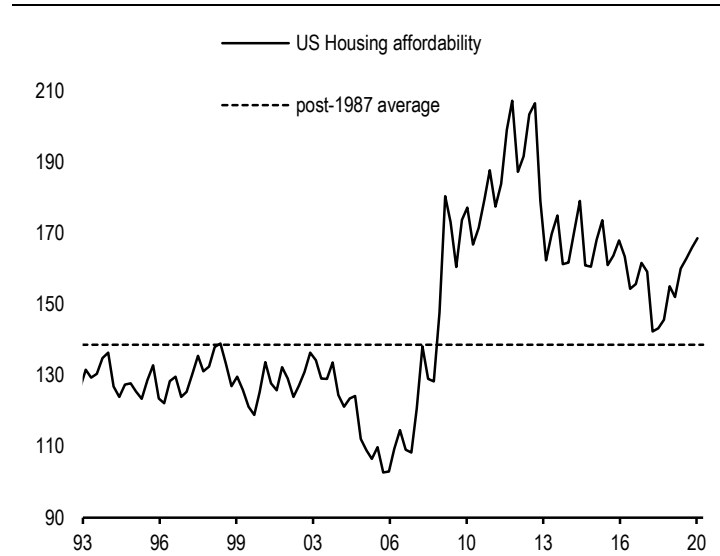
Around 40% of construction activity comes from real estate. In the US, housing as % of GDP is still abnormally low at a time of high housing affordability.

**Figure 51: Housing as % of GDP is low compared to the NAHB survey**



Source: Refinitiv, Credit Suisse research

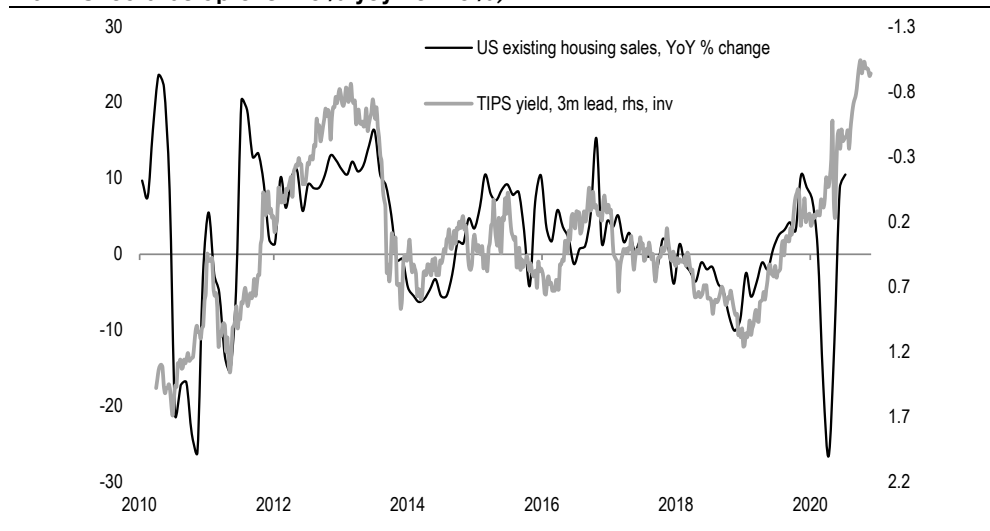
**Figure 52: Housing affordability in the US remains attractive**



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.

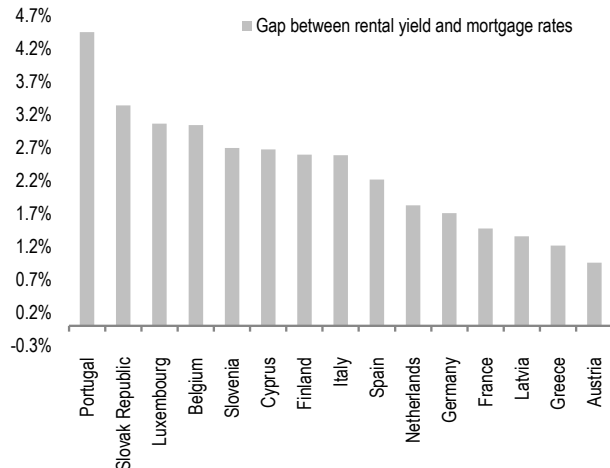
**Figure 53: If real bond yields fall, housing sales typically rise further (history indicates that it should be up over 20% yoy not 10%)**



Source: Refinitiv, Credit Suisse research

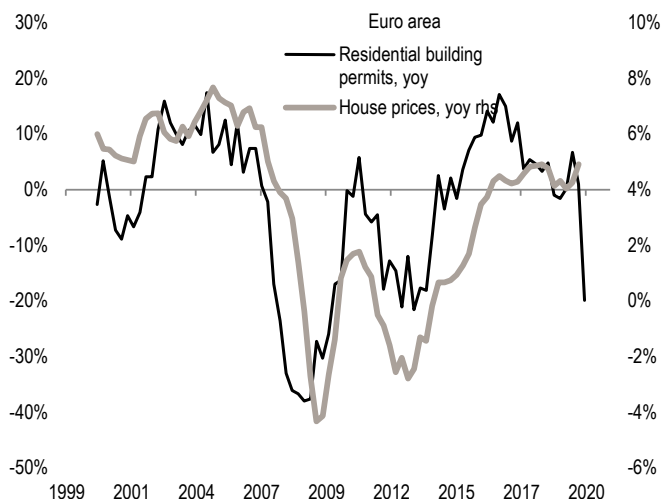
In Europe, in every country, it is much cheaper to buy than rent, which should also encourage residential activity. In the UK, for example, there is also a strong commitment by the government to have a c30% rise in housing starts to 300K homes a year.

**Figure 54: In most European countries the rental yield is comfortably above the mortgage rate**



Source: Refinitiv, Credit Suisse research

**Figure 55: As house prices rise, building activity accelerates**



Source: Refinitiv, Credit Suisse research

Where do we invest?

1. Insulation.

The rationale behind insulation:

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

A high number of pledges; we have seen a large number of announcements that favour insulation. In the UK, PM Johnson pledged to spend £8bn on insulation (with his advisor Dominic Cummings having the specific aim of spending £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 spending on insulation in its €100bn coronavirus recovery plan (3 Sep, FT). In the US, Biden plans to upgrade 4 million buildings and weatherize (eg, adding 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. As per his official campaign vision on clean energy, he will also seek to 'spur the construction' of 1.5 million sustainable homes.

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

We show below those companies which 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. We would note that the US names seem to be more deeply undervalued than the European names in this space.

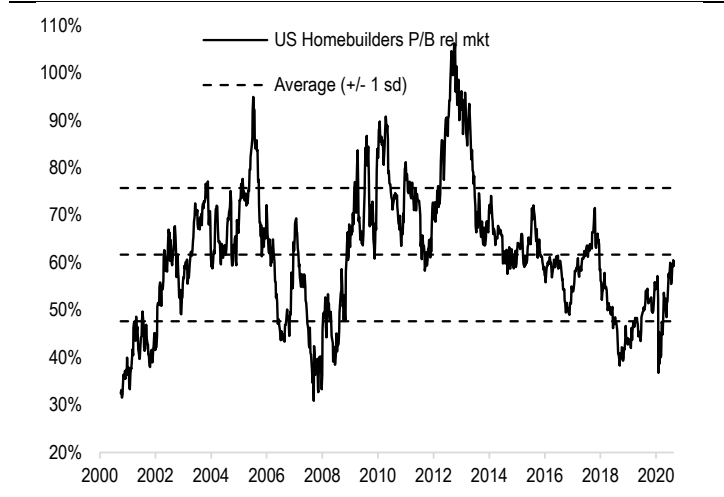
**Figure 56: Insulation/energy efficiency names**

Name	-----P/E (12m fwd) -----			----- P/B -----		2020e, %		HOLT	2020e Momentum, %		Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
	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		
Schneider Electric	23.1	116%	13%	2.8	26%	4.5	2.3	9.7	-2.9	-2.8	2.3	Outperform
Rockwool International B	31.5	158%	18%	3.8	49%	na	1.0	-4.7	14.2	2.6	3.2	Not Covered
Kingspan Group	36.6	184%	36%	6.7	92%	2.8	0.4	-10.4	22.4	9.2	2.9	Not Covered
Sig	-8.9	nm	na	0.6	-69%	-12.3	1.5	-130.2	nm	1.8	3.0	Not Covered
Legrand	23.1	116%	-11%	3.7	-4%	6.6	1.8	-21.8	0.9	0.3	3.0	Underperform
Halma	42.9	176%	35%	8.2	42%	2.2	0.7	-40.1	-5.4	-2.2	2.9	Outperform
Owens Corning	16.1	81%	-17%	1.8	9%	6.9	1.1	22.6	50.3	6.7	2.4	Neutral
Topbuild	24.3	99%	7%	5.4	118%	4.8	0.0	-2.5	45.8	11.6	2.0	Outperform
Installed Building Prds.	23.2	95%	-10%	14.3	68%	3.5	0.0	134.5	48.1	10.9	2.3	Outperform

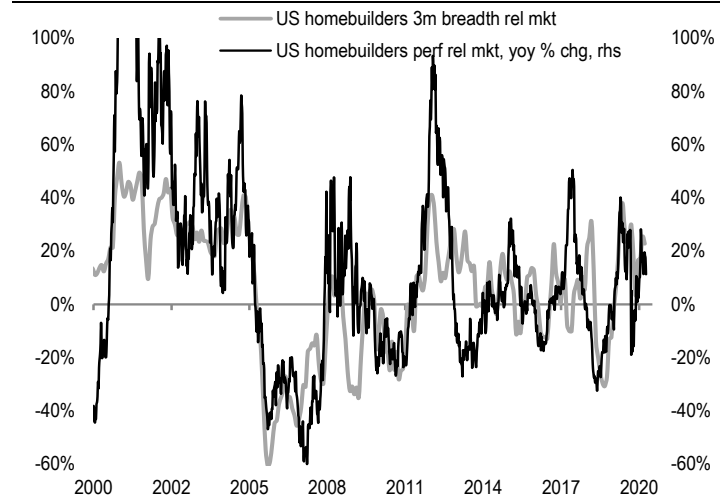
Source: Refinitiv, MSCI, IBES, Credit Suisse HOLT, Credit Suisse research

## 2. US housing-related companies.

We can see that the P/B relative of homebuilders is mid-range and relative earnings revisions remain strong.

**Figure 57: US homebuilders' 12m fwd PB relative**

Source: Refinitiv, Credit Suisse research

**Figure 58: Relative earnings revisions remain strong**

Source: Refinitiv, Credit Suisse research

In the US, our housing analysts' national buyer traffic index hit its highest level on record (going back to 2005) in August; historically, this has had a strong correlation with homebuilders' order growth. Our analysts cited relocation and urban flight as a strong factor driving home sales.

If we are right on inflation on a 2- to 10-year view (see [COVID19: Long term inflationary consequences and what to do](#), 2 Jul), then US housing could become a particularly valuable store of value.

We highlight below our preferred US housing companies. Around 85% of Ferguson revenues are from the US and half from housing. Around a fifth of CRH revenue is from housing.

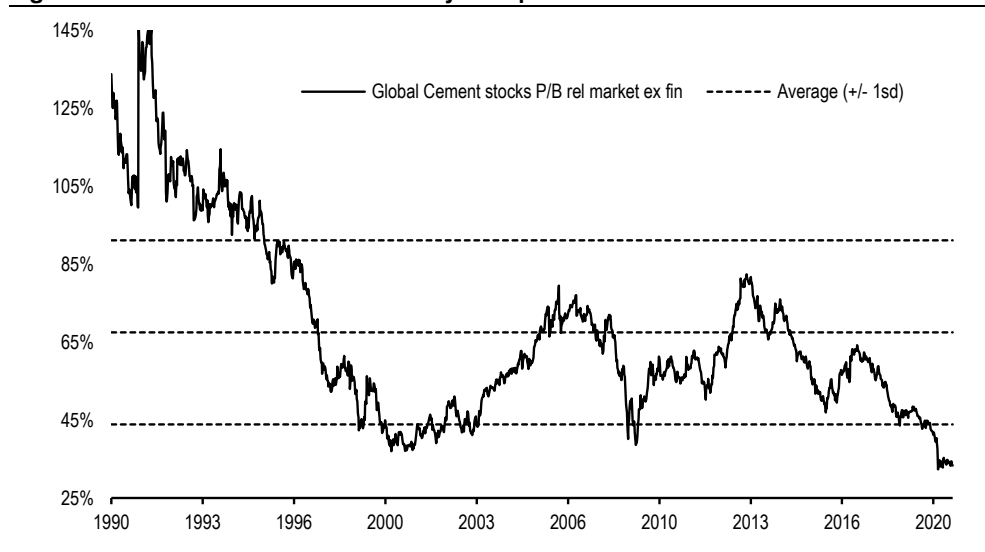
**Figure 59: Exposure to the US housing market**

Name	-----P/E (12m fwd) -----			----- P/B -----		2020e, %		HOLT	2020e Momentum, %		Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
	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		
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 research

**We would also highlight cement**

The sector is extremely cheap and clearly would benefit from the rise in infrastructure spending.

**Figure 60: The cement stocks look very cheap on a P/B relative**

Source: Refinitiv, Credit Suisse research

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) and this will greatly benefit the more domestic producers who are significantly more carbon efficient. There is also no obvious substitute for cement. Lafarge has an FCF yield of 9.2% for 2020E (on consensus) and looks extremely cheap on HOLT.

To some extent, aggregates fall into this camp – e.g. CRH (32% aggregates, 15% cement; with 20% of total revenues from US housing).



**Figure 61: European construction companies with exposure to cement/aggregates**

Name	-----P/E (12m fwd) -----			----- P/B -----		2020e, %		HOLT	2020e Momentum, %		Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
	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		
Kingspan Group	36.6	184%	36%	6.7	92%	2.8	0.4	-10.4	22.4	9.2	2.9	Not Covered
Schneider Electric	23.1	116%	13%	2.8	26%	4.5	2.3	9.7	-2.9	-2.8	2.3	Outperform
Saint Gobain	13.5	68%	-22%	1.0	-23%	6.0	2.9	17.6	-12.3	2.6	2.3	Not Covered
Lafargeholcim	13.7	83%	-34%	0.9	-33%	9.2	4.6	55.7	12.8	2.5	1.8	Outperform
Bouygues	12.7	64%	-31%	1.1	-26%	12.7	5.8	90.5	-23.4	-1.8	2.4	Outperform
Crh	15.6	95%	-31%	na	na	4.7	2.5	42.7	17.2	3.3	2.0	Outperform
Ferguson	20.0	100%	-1%	3.4	2%	3.8	1.9	23.1	20.9	6.1	2.6	Neutral
Akzo Nobel	22.3	98%	7%	2.9	12%	4.1	2.0	1.1	13.3	0.3	2.1	Outperform
Heidelbergcement	9.4	57%	-43%	0.7	-34%	10.6	2.2	49.9	31.8	1.7	2.3	Neutral

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

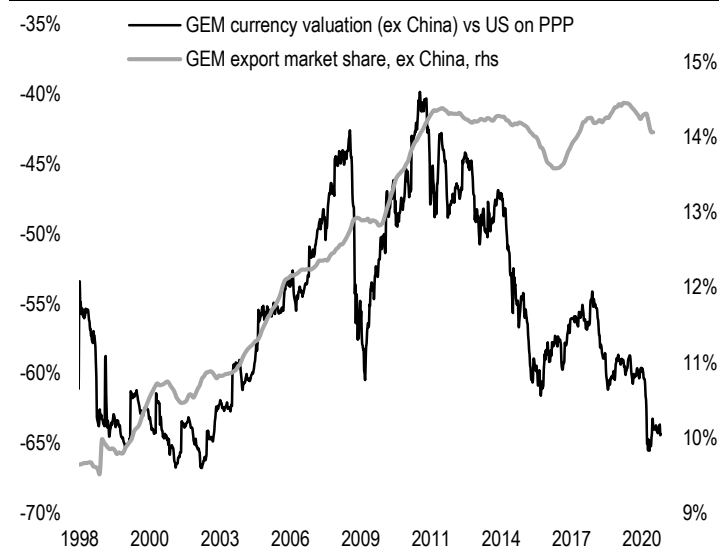
## 4. GEM with a strong overweight of Korea (and China) & indirectly via alcoholic beverages

We have consistently highlighted that GEM is our largest overweight this year.

### i. GEM currencies remain cheap

We find GEM currencies still far too cheap when compared against export market share or the basic balance of payment surplus.

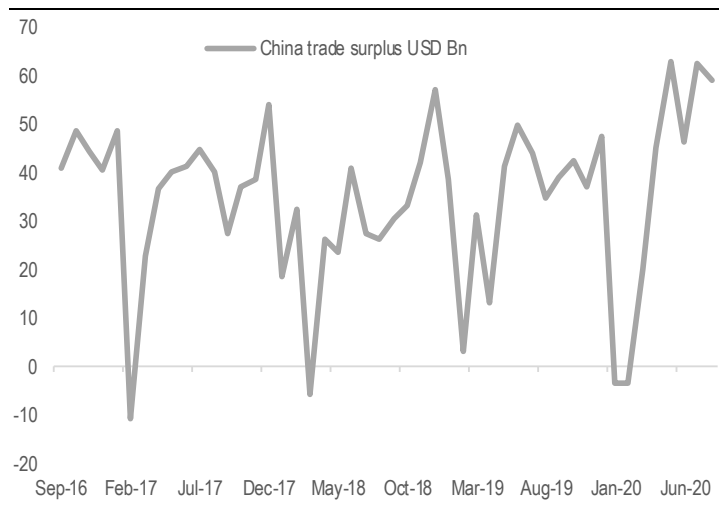
**Figure 62: GEM currencies are, in aggregate (GDP weighted), around 30pp cheap when compared to their global export market share**



Source: Refinitiv, Credit Suisse research

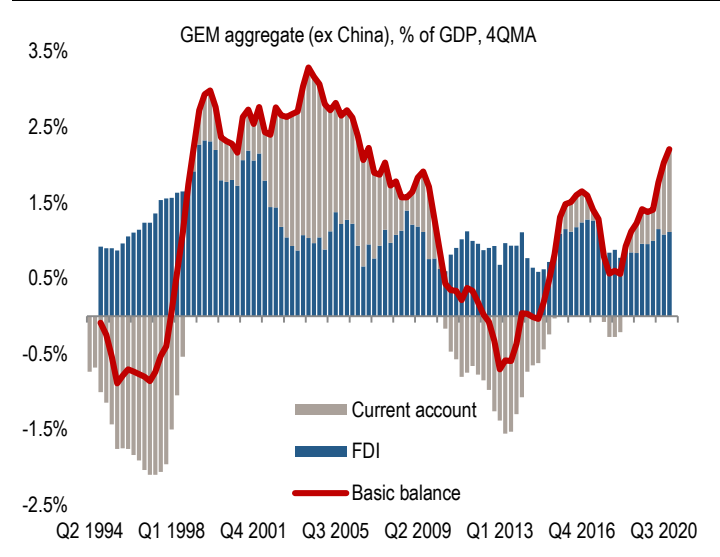
This at a time when the RmB looks likely to appreciate against the dollar. China has increased its market share and its trade surplus allowing the RmB to be cheap against its export market share at a time when portfolio inflows are likely to accelerate (with foreigners underweight China and FTSE Russell including Chinese bonds in their global portfolio).

**Figure 64: Trade surplus has increased**



Source: Refinitiv, Credit Suisse research

**Figure 63: GEM countries (ex-China) have a basic balance of payments surplus**



Source: Refinitiv, Credit Suisse research

**Figure 65: Chinese bond yields are c.240bp above US treasuries attracting capital inflows**



Source: Refinitiv, Credit Suisse research

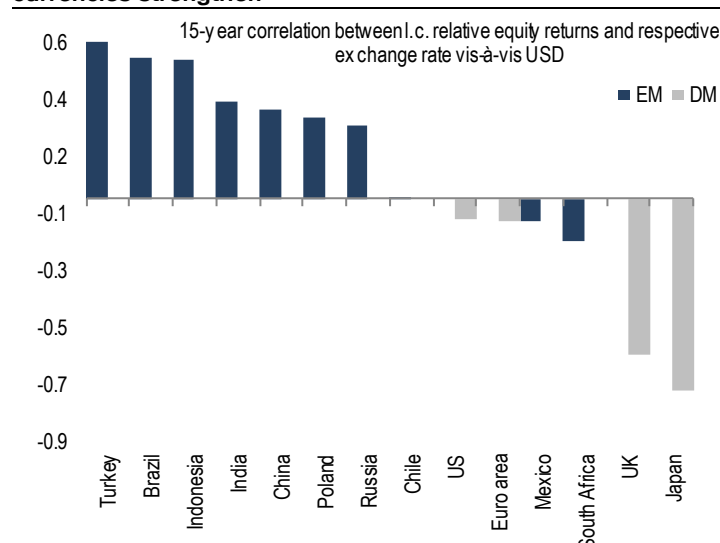
Currency strength is the key with \$5.4trn of external debt and a stronger currency tending to lead to a fall in inflation and rates (and many GEM currencies still have high real rates) and currency strength tends to lead to a rise in FX reserves (as central banks try to cap currency strength). This eventually ends up being unsterilized which increases money supply which then tends to support asset prices and in turn equities. We can see below that the rise in FX reserves should have led to more outperformance.

**Figure 66: GEM relative performance vs change in FX reserves**



Source: Refinitiv, Credit Suisse research

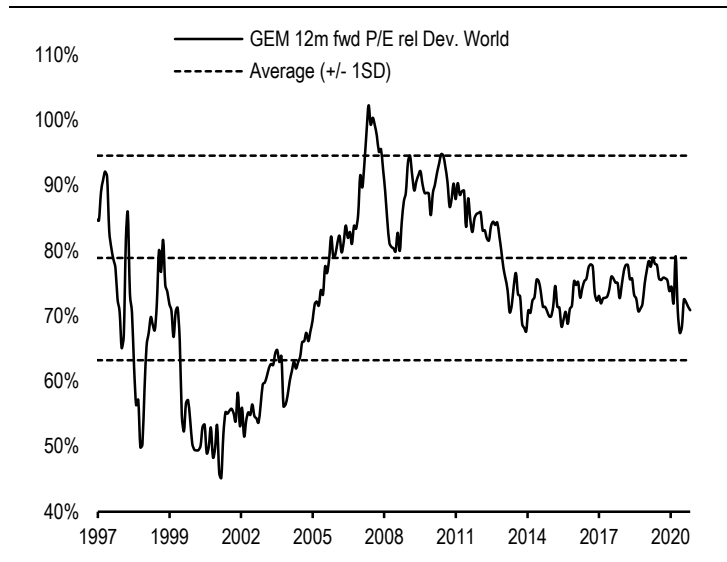
**Figure 67: Most emerging markets outperform as their currencies strengthen**



Source: Refinitiv, Credit Suisse research

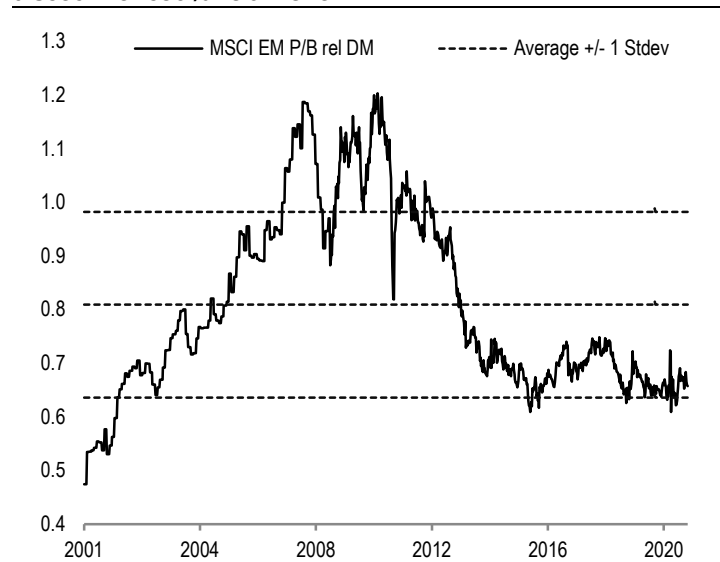
- ii. Valuations are still compelling if we look at sector adjusted P/E and P/B relative to DM

**Figure 68: GEM equities sector adjusted P/E relative to DM**



Source: Refinitiv, Credit Suisse research

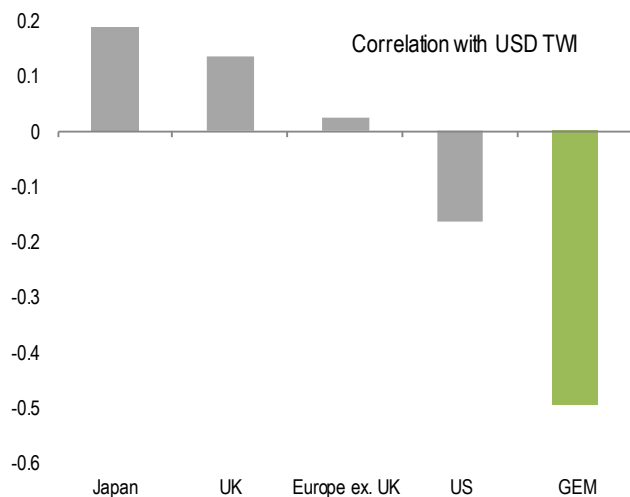
**Figure 69: The P/B of emerging markets is trading at a discount of c36% relative to DM**



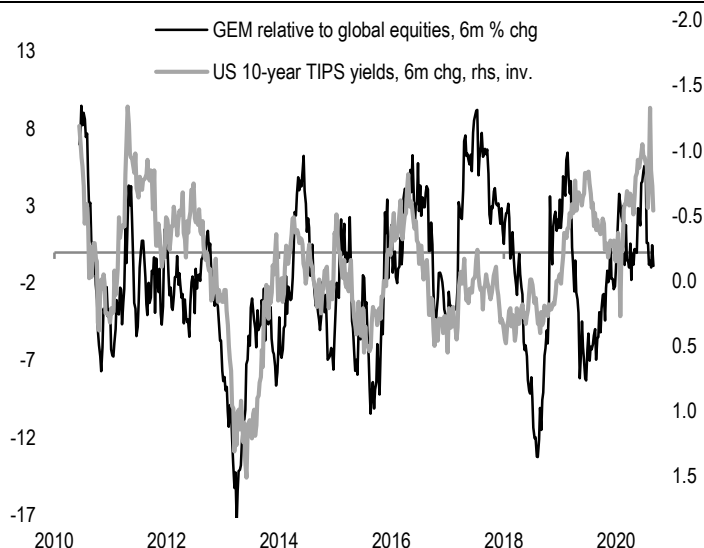
Source: Refinitiv, Credit Suisse research

## iii. Clear macro supports for GEM

A weaker dollar and a fall in the TIPS yields are both structural supports for GEM

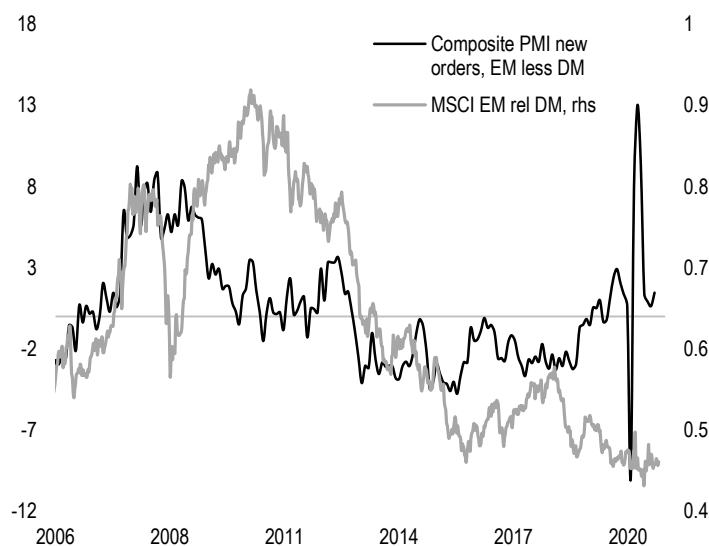
**Figure 70: GEM performs the best with a weakening dollar...**

Source: Refinitiv, Credit Suisse research

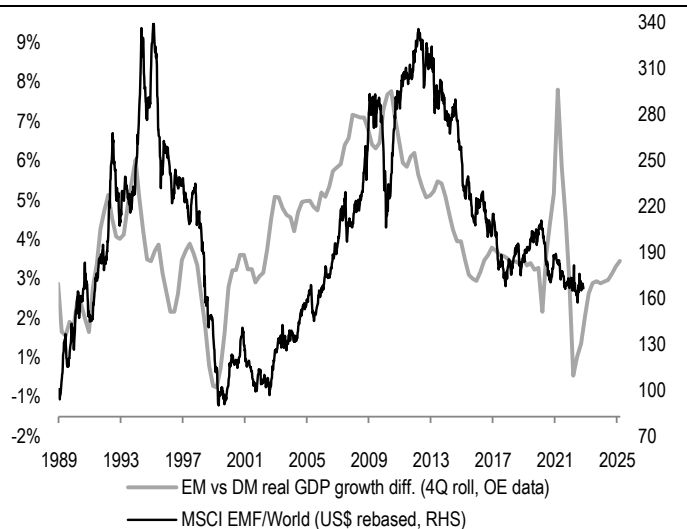
**Figure 71: ... and benefits from a fall in the TIPS yield**

Source: Refinitiv, Credit Suisse research

## iv. Economic momentum is stronger in EM than DM and is supportive of outperformance.

**Figure 72: PMI differentials are supportive for EM performance relative to DM**

Source: IHS Markit, Refinitiv, Credit Suisse research

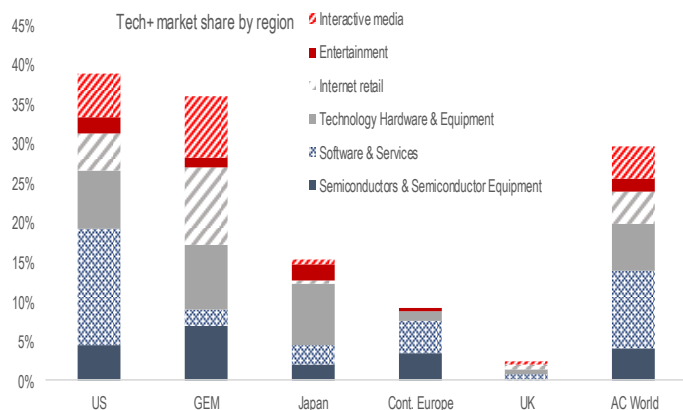
**Figure 73: Growth differential against performance**

Source: Refinitiv, Credit Suisse research

- v. GEM have changed significantly. Their tech+ exposure is now similar to the US and their commodity exposure has collapsed.

This means that if there is a tech+ bubble, GEM in theory should outperform but if there is a move into value, we also believe that GEM would outperform.

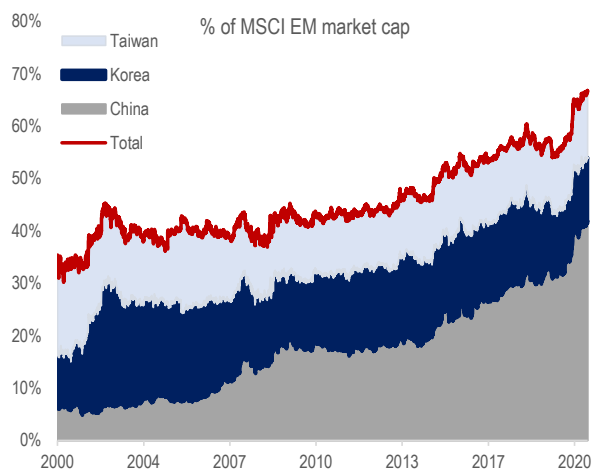
**Figure 74: Tech+ market share by region**



Source: Refinitiv, Credit Suisse research

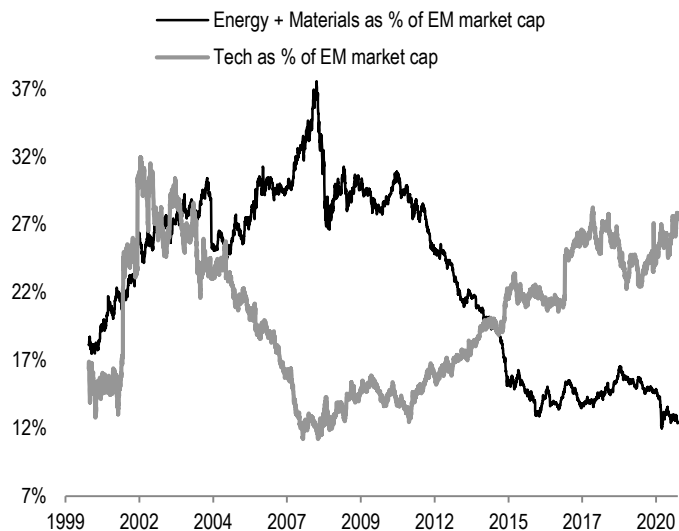
Moreover, two-thirds of market cap comes from three regions that have been able to control the virus.

**Figure 76: China, Korea and Taiwan account for nearly two-thirds of EM**



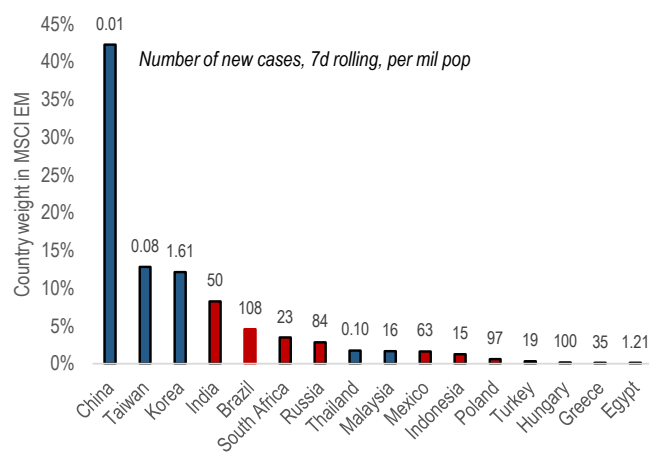
Source: Refinitiv, Credit Suisse research

**Figure 75: Tech exposure is 60% greater resources exposure**



Source: Refinitiv, Credit Suisse research

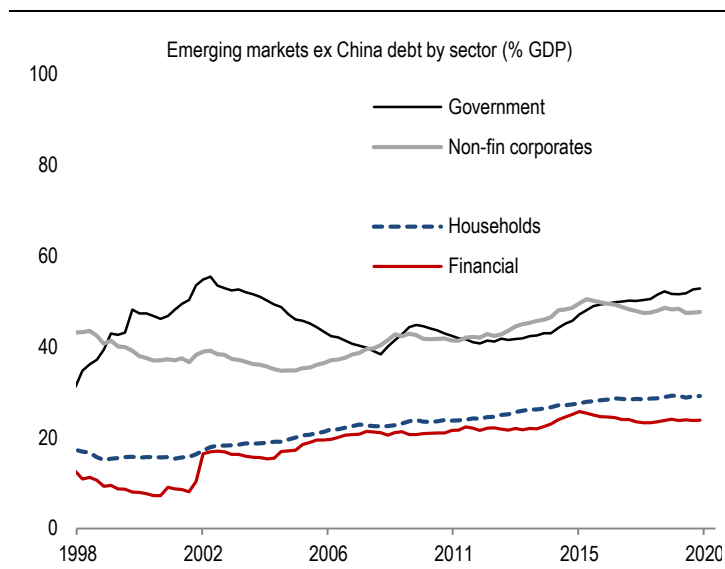
**Figure 77: Majority of the EM market cap have COVID-19 under control measured by number of new cases**



Source: Refinitiv, Credit Suisse research

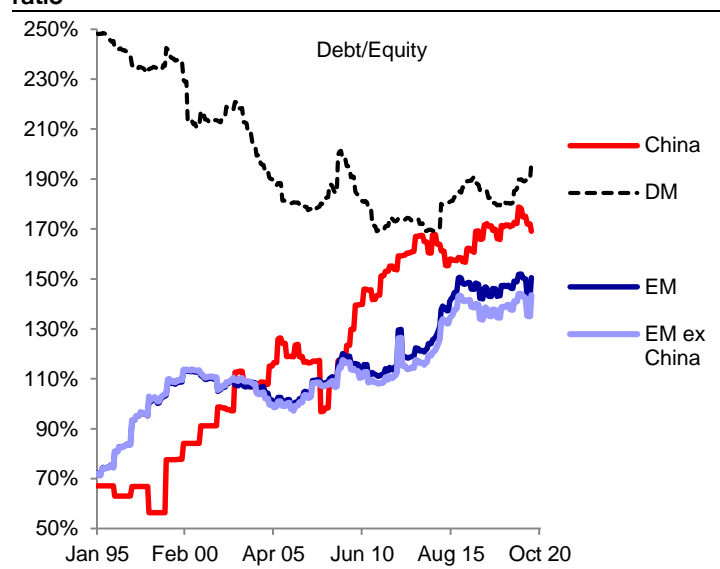
By and large, GEM balance sheet risk has been exaggerated, in our view. Excluding China, GEM leverage has not increased significantly.

**Figure 78: Ex-China debt as % of GDP stayed low**



Source: Refinitiv, Credit Suisse research

**Figure 79: EM (with and without China) vs DM debt to equity ratio**

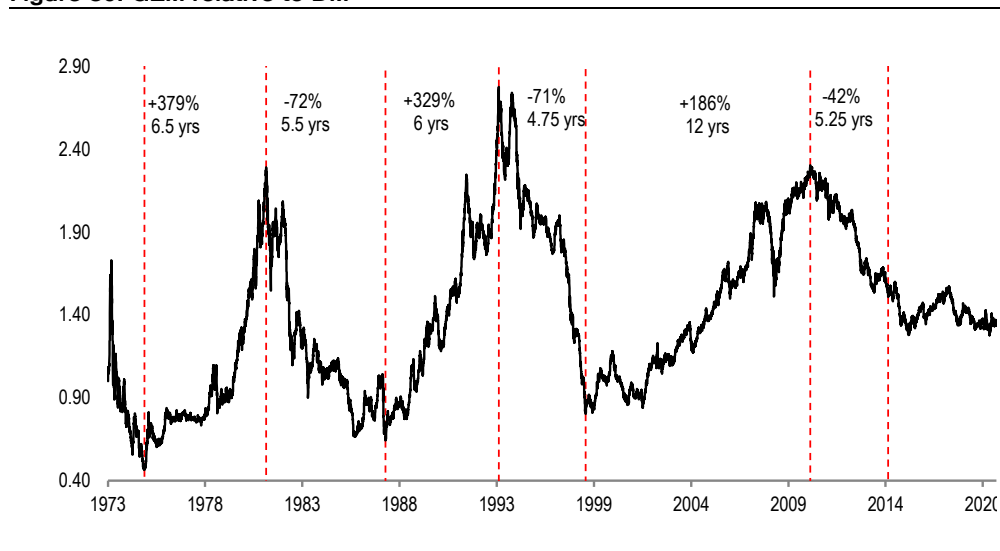


Source: Refinitiv, Credit Suisse research

China's increase in leverage has been notable. The credit bubble has coincided with a real estate bubble and overinvestment, but we believe that China does not face deleveraging until one of the following three events occur: i) house prices fall 20% or more; ii) there is a current account deficit and net external debt; or iii) there is deflation as a result of over-investment. See [Weekly observations: China leading the pack ... investment implications](#), 6 Oct, for details.

We think GEM are starting a five-year period of outperformance.

**Figure 80: GEM relative to DM**



Source: Refinitiv, Credit Suisse research

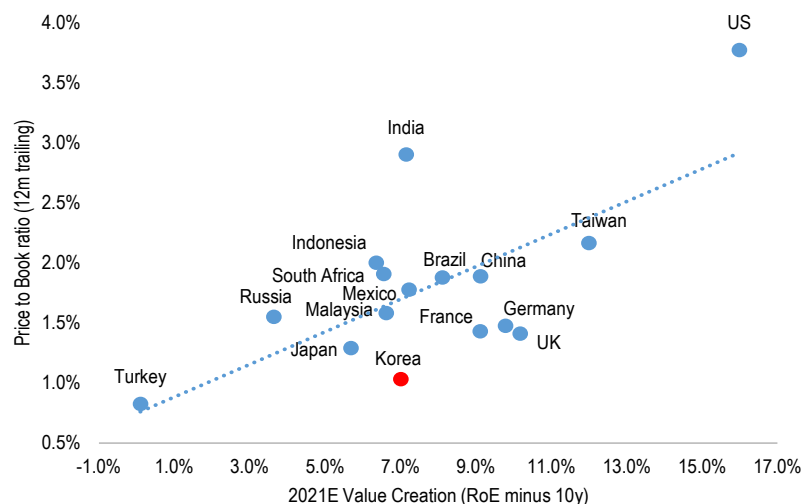
## Korea

We maintain our overweight of Korea, which is also CS APAC strategist Dan Fineman's top pick within the region (see [Korea remains our top pick](#), 13 Oct), where he sees the market as under-rewarding its EPS recovery, broader macro tailwinds (currency, sector composition), and believes it is able to structurally re-rate as the payout ratio improves.

### i. Extreme value creation

We look at value creation (RoE minus 10-year bond yield) versus the P/B above; we can also see that Korea has de-rated to be close to its GFC lows on P/B relative to the rest of GEM.

**Figure 81: Value creation against economic value**

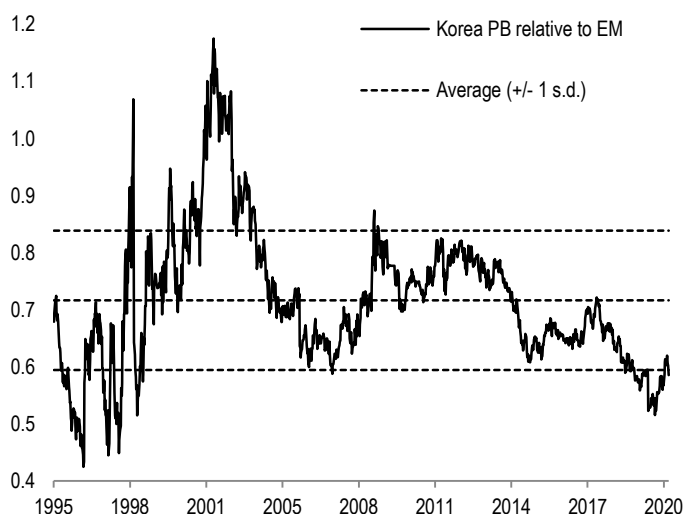


Source: Refinitiv, Credit Suisse research

### ii. Positioning

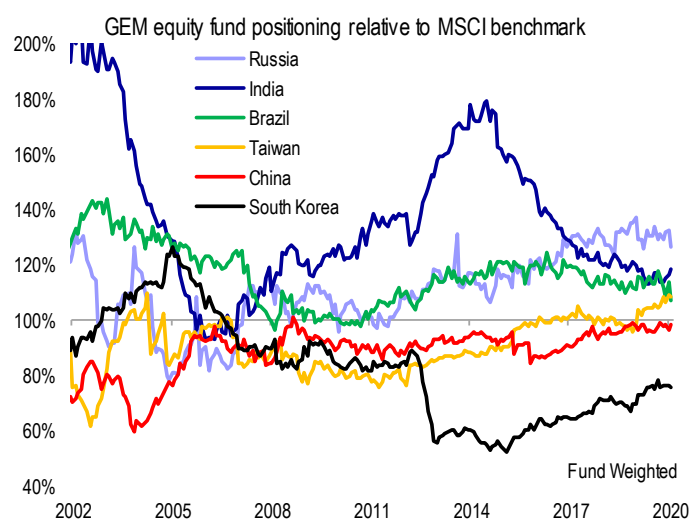
Korea remains the consensus short among GEM funds.

**Figure 82: Korea has de-rated to be at its lows on GFC PB lows**



Source: Refinitiv, Credit Suisse research

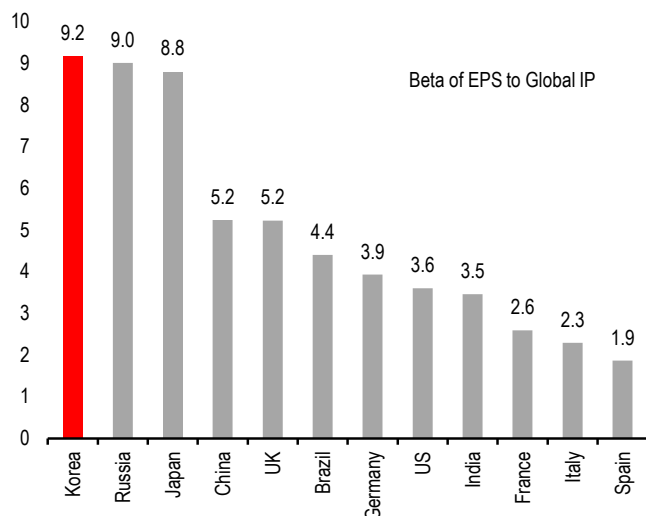
**Figure 83: Korea remains the consensus short among GEM funds**



Source: Refinitiv, Credit Suisse research

- iii. Korea is very sensitive to global IP, which remains depressed despite the pick-up in global PMIs.

**Figure 84: Korean EPS is unusually sensitive to global IP...**



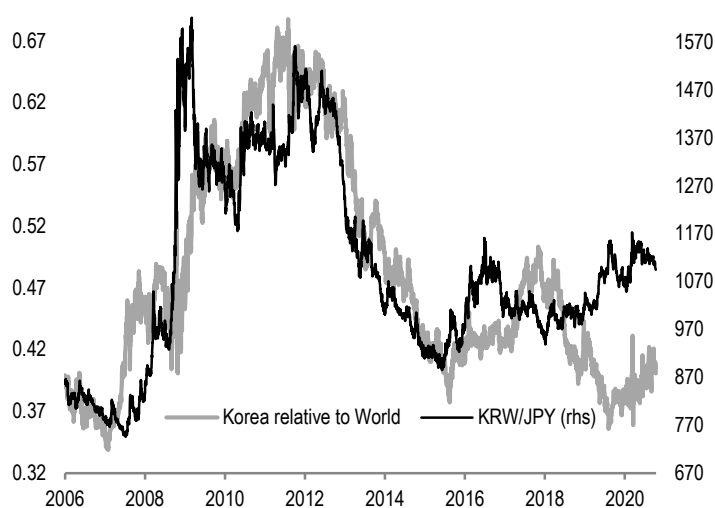
Source: Refinitiv, Credit Suisse research

Korea should perform well in the event of a Biden victory (which could boost US nominal GDP by c1.5%, see our [US election outlook](#), 2 Oct).

- iv. Korea is the big winner from a weaker dollar.

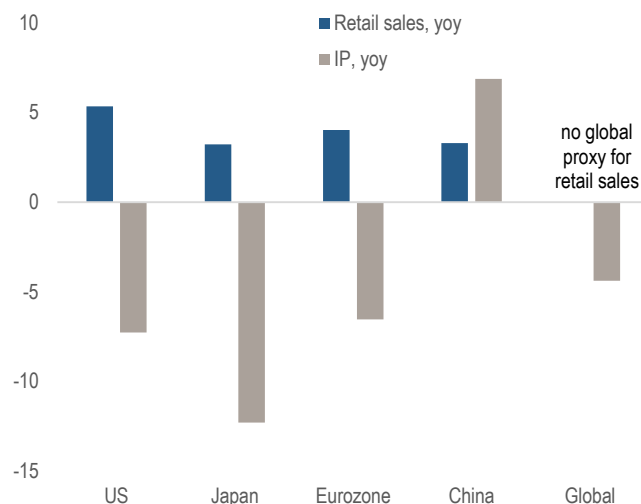
We see this through the Yen appreciating against the Won, helping Korea outperform. We continue to see dollar weakness going forward. CS Korea strategist Park Jeehoon (see [Value to continue to catch up](#), 18 Aug) also highlights that the falling dollar encourages greater participation from foreign buyers.

**Figure 86: The won/yen vs Korea price relative**



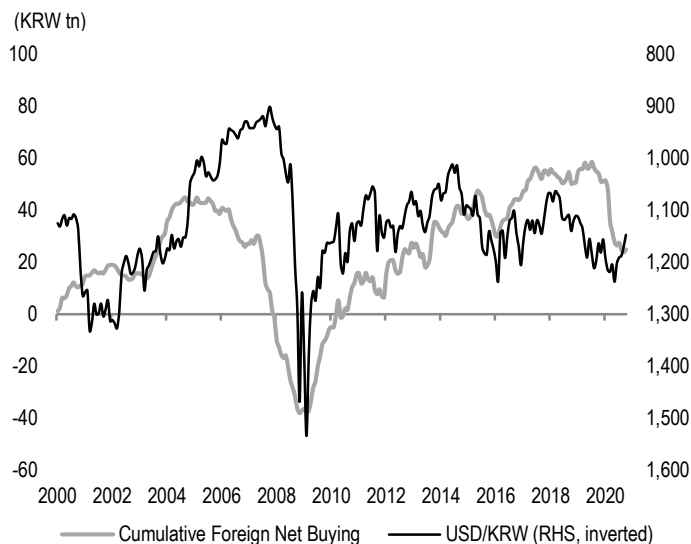
Source: Refinitiv, Credit Suisse research

**Figure 85: ... and global IP remains very depressed**



Source: Refinitiv, Credit Suisse research

**Figure 87: Foreign investors have started to buy**



Source: the BLOOMBERG PROFESSIONAL™ service, WISEfn, Credit Suisse research



CS APAC strategist Dan Fineman also highlights that Korea is most strongly correlated with the ADXY basket of Asian currency pairs with the USD which rises with dollar weakness (see [Korea remains our top pick](#), 13 Oct).

v. Earnings revisions

Korea ranks near the top of our EM earnings scorecard.

**Figure 88: EM earnings scorecard**

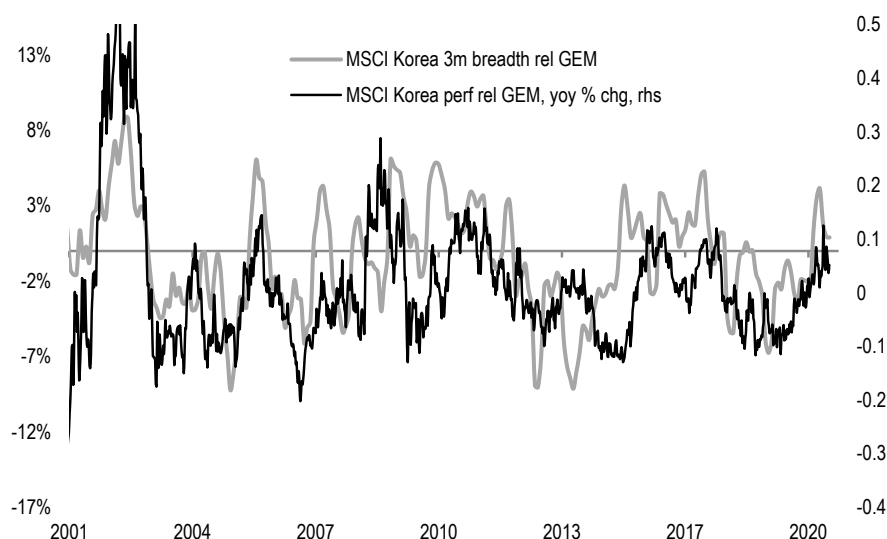
Emerging Markets Earnings Scorecard					
Country	3m chg in 12m fwd EPS		3m Earnings Revisions		Overall Z-Score
Weight	50%	Z-score	50%	Z-Score	
Brazil	25.34	2.18	0.15	0.89	1.54
India	9.27	0.15	0.24	1.78	0.97
Korea	7.47	-0.08	0.06	0.04	-0.02
South Africa	9.37	0.16	0.00	-0.52	-0.18
Russia	-6.05	-1.79	0.19	1.33	-0.23
Malaysia	13.08	0.63	-0.08	-1.29	-0.33
Mexico	7.21	-0.11	-0.01	-0.60	-0.36
Turkey	7.55	-0.07	-0.02	-0.71	-0.39
China	4.17	-0.50	0.01	-0.41	-0.45
Indonesia	3.54	-0.58	0.00	-0.52	-0.55

*Regions with higher net upgrades (number of upgrades - number of downgrades)/(number of upgrades + number of downgrades) and higher revisions to EPS are ranked at the top*

Source: Refinitiv, Credit Suisse research

Earnings revisions remain strong, which has historically corresponded to outperformance over the other GEM (and Korea has only modestly outperformed thus far).

**Figure 89: Korea earnings revisions**

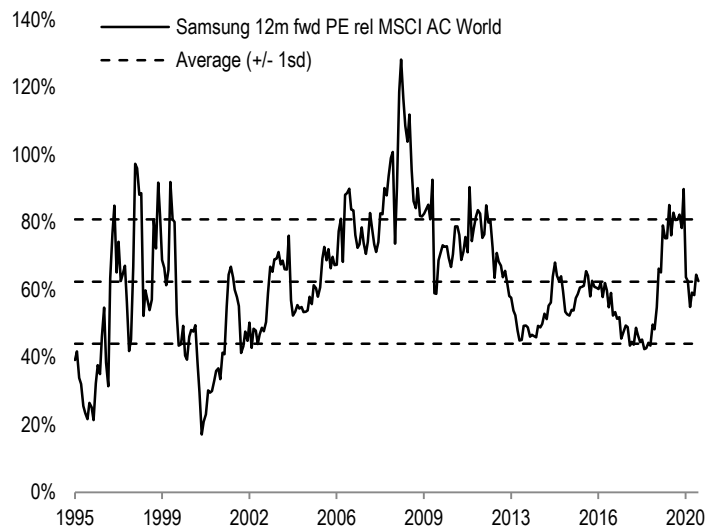


Source: Refinitiv, Credit Suisse research

- vi. Korea is overexposed to DRAM which has lagged behind other parts of the tech cycle and our analysts favour exposure to this area.

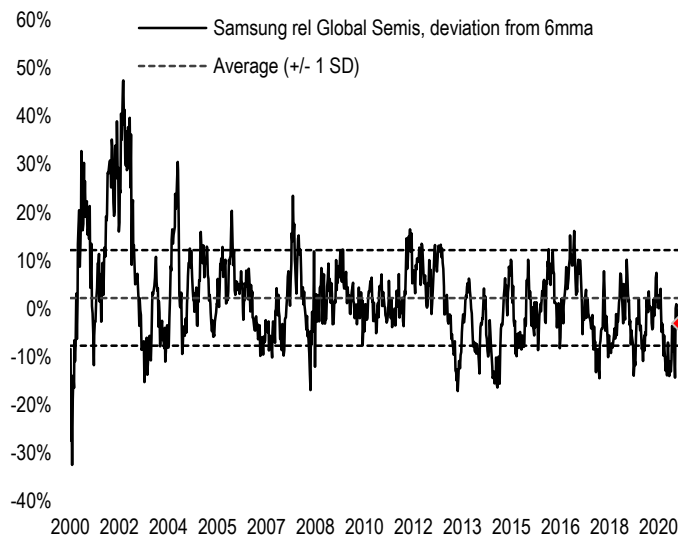
We particularly like Samsung Electronics (c38% of Korean market cap). It controls c44% of the DRAM market (which is now a three-player market) and 21% of the global smartphone market. Its FCF yield is c6.9% for 2021E and it distributes about 40% of its free cash flow. It also has exposure to telecom equipment and foundries. Our Samsung analyst, Keon Han, sees DRAM makers enjoying a structural improvement in productivity, and costs in the handset and consumer electronics businesses have fallen as a result of the shift to online purchases.

**Figure 90: Samsung's 12-month fwd PE has de-rated relative to global markets**



Source: Refinitiv, Credit Suisse research

**Figure 91: Samsung is oversold relative to global semis**



Source: Refinitiv, Credit Suisse research

We also like LG Chem, now the world's leading battery maker (c.25% of market share in 1H20). We see significant barriers to entry to the market; both commercial barriers (engineer know-how, sizeable order book and initial investment to achieve breakeven point) and relationship barriers (drivers' safety, OEM brand image, track record, and quality stability) help to maintain its market position even though the technological barrier is low given that, in theory, any company could produce a similar product.

The battery market is estimated to be \$150bn by 2030 (by our South Korean energy analyst), at a 25% share, the stock would trade on 1x 2030 battery revenue (at a current market cap of c\$40bn).

## Alcoholic Beverages

We believe investors should also consider the indirect plays such as alcoholic beverages; on average 55% of sales from GEM.

This exposure appears particularly cheap if we put the emerging market earnings on the same multiple as that of the quoted subsidiaries. We then find that the developed market exposure trades on single digit multiples as shown below for 3 of the 4 major names.

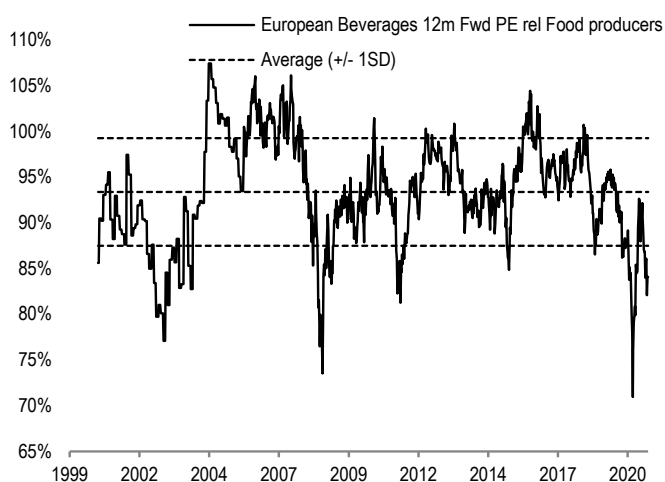
**Figure 92: Listed names versus their EM subsidiaries**

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		23.87			1.43
	United Spirits (India)	42.5%	47.61	180%	9.79	2.12
	Sichuan Swellfun (China)		38.23			2.59
ABI	ABI (Belgium)		19.88			1.19
	AMBEV (Brazil)	65.0%	20.95	157%	-1.32	1.70
	Budweiser APAC		41.63			2.57
Heineken	Heineken (Netherlands)		24.90			1.49
	Heineken Malaysia		23.22			1.46
	United Breweries (India)	55.0%	66.42	170%	3.72	2.95
	China Resources Beer (China)		37.02			2.51
Carlsberg	Carlsberg (Denmark)	52.0%	21.13	113%	18.24	1.27
	Carlsberg Malaysia		23.80			1.49

Source: Refinitiv, Credit Suisse research

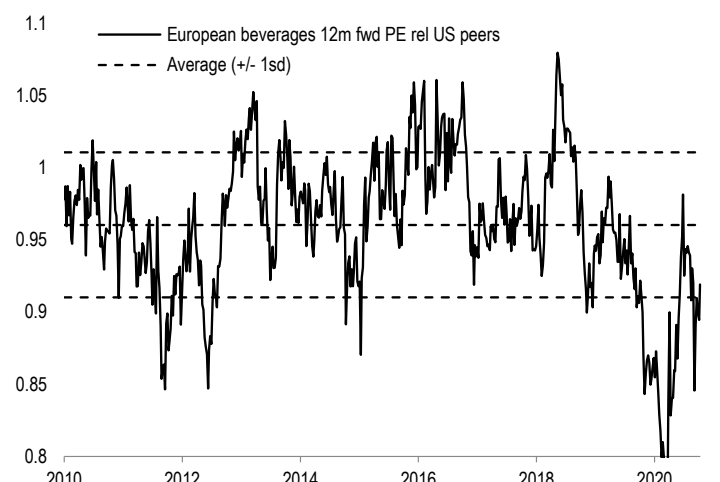
We can see that beverages have become abnormally cheap versus food producers, and are now also abnormally cheap relative to their US peers.

**Figure 93: European beverages 12m fwd PE relative to food producers...**



Source: Refinitiv, Credit Suisse research

**Figure 94: ... and relative to US peers**

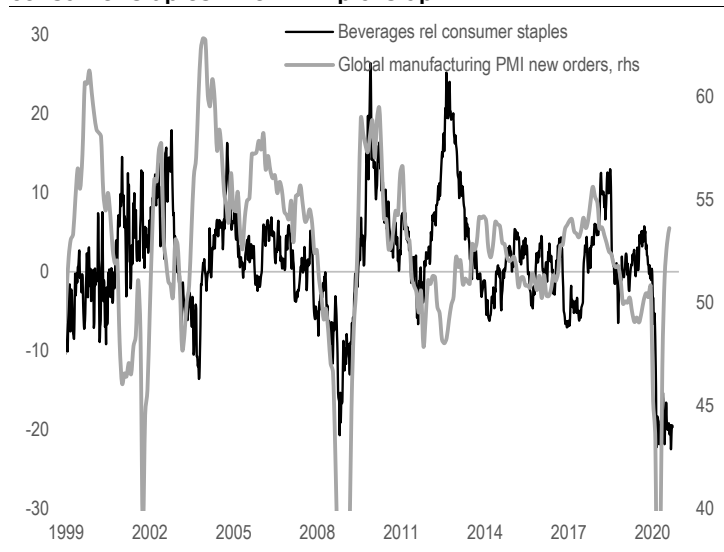


Source: Refinitiv, Credit Suisse research

We highlight that spirits and beer have the added advantage of being potential beneficiaries once a vaccine against COVID-19 has been released (50% of sales for Diageo comes from drinking on-trade and, for spirits, duty free can be an important source of revenues).

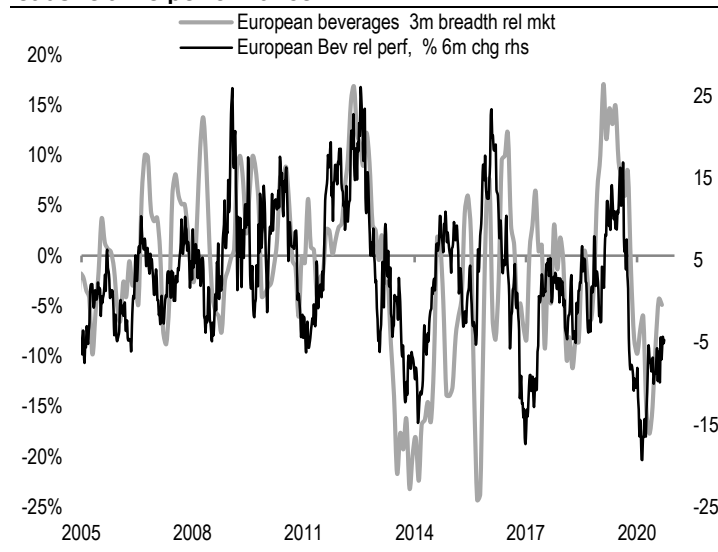
Normally a rise in PMIs see spirits/beers outperforms other consumer staples; this has not happened this time around, owing to the limited opening of bars.

**Figure 95: Beverages tends to outperform the rest of the consumer staples when PMI picks up**



Source: IHS Markit, Refinitiv, Credit Suisse research

**Figure 96: European beverages relative earnings revisions leads relative performance**



Source: Refinitiv, Credit Suisse research

We structurally like the spirits. In our opinion, they have several big advantages:

- Ageing creates a barrier to entry, a disciplined supply, and underpins the value of the corporate (our beverages analyst Sanjeet Aujla sees strategic inventory representing 58% and 38% of gross investment base for Remy and Pernod respectively).
- 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.
- Beer companies own the distribution system in emerging markets, where regulations can be particularly demanding (this means that they face much less competition in GEM than is the case for food producers. It is hard for craft brands to get scale in GEM because they lack this distribution system).
- The penetration rate of Western spirits in China is very low (just c3%).
- It might be the case that if Biden wins the election, he would 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).

We highlight below the Outperform- and Neutral-rated alcoholic beverages names.

**Figure 97: European Outperform- and Neutral-rated alcoholic beverages names**

Name	-----P/E (12m fwd)-----			----- P/B -----		2020e, %		HOLT	2020e Momentum, %			Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
	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		
Anheuser-Busch Inbev	20.4	88%	-24%	1.5	-58%	4.1	2.0	-55.5	3.7	4.2	2.0	2.3	Neutral
Carlsberg B	21.0	91%	-10%	3.0	31%	4.5	2.3	-24.1	4.1	4.6	-2.4	2.0	Outperform
Diageo	23.7	103%	-10%	9.3	14%	3.5	2.5	-44.8	-8.8	-9.9	-5.6	2.4	Neutral
Heineken	24.9	108%	0%	2.9	-17%	2.7	1.4	-22.5	-28.0	-31.4	-4.3	2.7	Outperform
Pernod-Ricard	24.9	108%	-4%	2.6	2%	4.1	1.9	-25.3	-6.6	-7.3	-7.8	2.5	Outperform

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

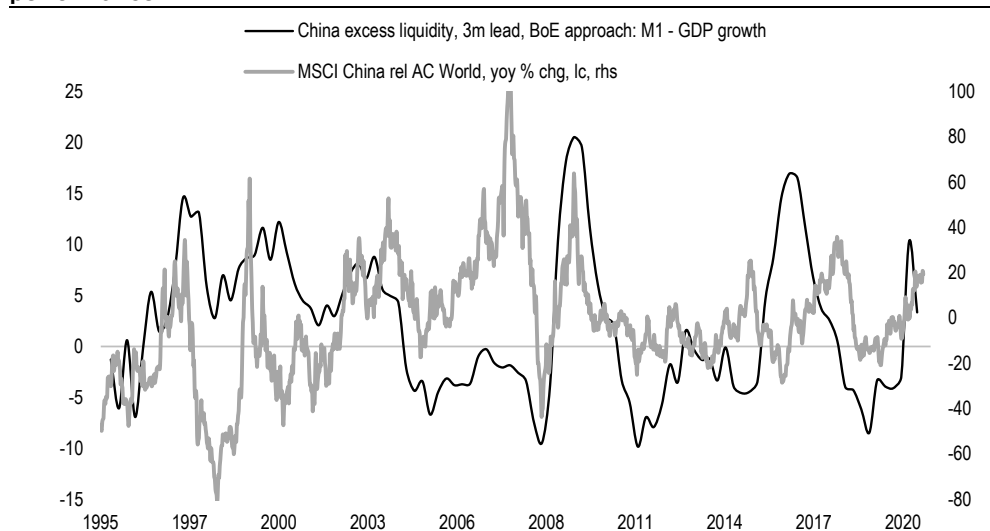
## 5. China tech companies

We see a strong likelihood of a bubble in Shanghai A which would potentially spill over to the rest of China equities. We list the reasons for a potential bubble below (though we note that so far this bubble has hardly started).

### Excess liquidity is highly supportive

Excess liquidity (M1 growth over nominal GDP growth) is still supportive of equities

**Figure 98: Excess liquidity is improving (M1/nominal GDP), and this historically helps performance**



Source: Refinitiv, Credit Suisse research

### Captive funds flow helps forms a China bubble that has not yet started

As highlighted in the GEM section, we think that the RmB appreciates. This effectively limits capital flight. With a saving ratio of 38%, the choice is which domestic asset to invest your money: real estate, bonds or equities. We see strong evidence that the real estate market is slowing (property turnover implies flat house prices and there has been some tightening on lending condition). Thus the choice is potentially narrowed to bonds or equities. When equities have been this cheap against corporate bonds, they have outperformed 83% of the time on a three-month view.

**Figure 99: Domestic equities look cheap against corporate bonds**



Source: Refinitiv, Credit Suisse research

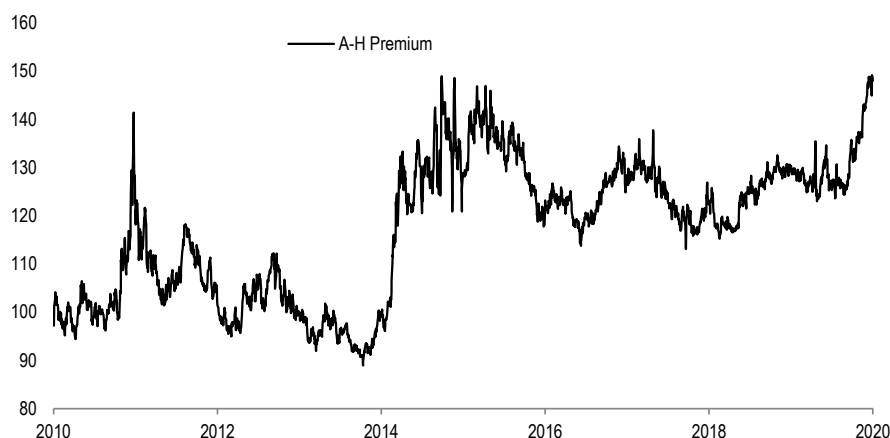
**Figure 100: Historically, Shanghai A has tended to do well after the gap has hit current levels**

Rel Performance (ac world, in lc terms) after	3m	6m
Dec-08	41.5%	51.6%
Jul-10	0.6%	-0.9%
Aug-12	-1.4%	3.9%
Jul-13	2.9%	-6.5%
Jun-14	9.3%	30.7%
Jun-16	1.6%	1.6%
Average	9.1%	13.4%
% of times positive	83.3%	66.7%

Source: Refinitiv, Credit Suisse research

We think the extreme A/H premium and the opening up of the North/South and South/North connect should allow the increase in A-share valuation to feed through to other parts of MSCI China.

**Figure 101: A-H premium is back to a 10-year high**

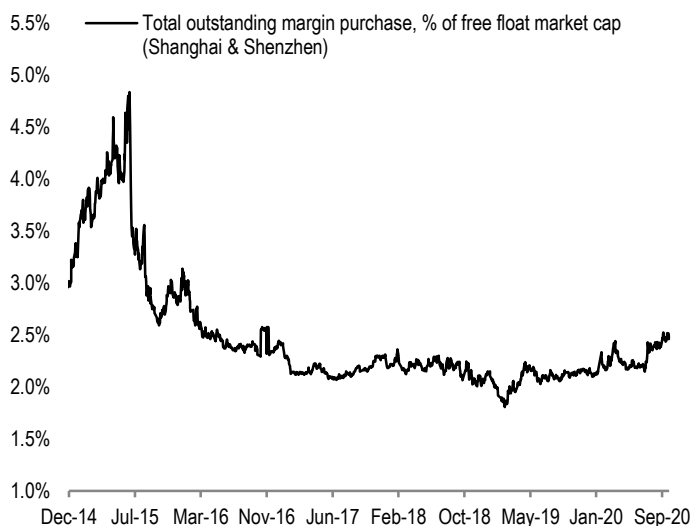


Source: Refinitiv, Credit Suisse research

### Speculation and valuations not yet excessive

The bubble has barely started if we look at buying on margin or the P/E relative.

**Figure 102: Outstanding margin purchase as % of free float market cap is not extreme**



Source: Refinitiv, Credit Suisse research

**Figure 103: Shanghai A is not expensive on 12-month forward PE relative to World AC**



Source: Refinitiv, Credit Suisse research

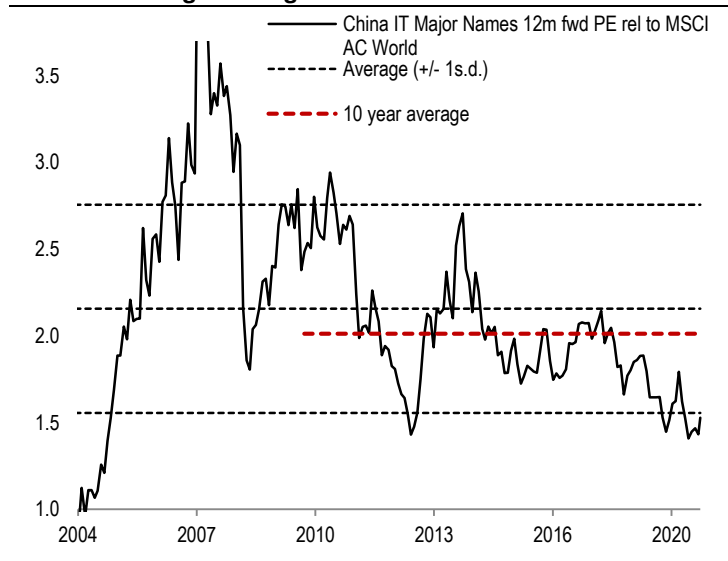
### Foreign positioning

As shown in the GEM section, foreigners are mildly underweight China. While still relatively small, outside capital is playing an increasing role in the A-share market in response to the recent capital market opening and reform measures. Year-to-date, we have seen \$23bn northbound net inflow and the northbound free float stake has increased from less than 2% in 2017 to 9% currently.

## China tech companies

We find that the major China tech companies are trading abnormally cheap against the global markets while earnings revisions are significantly better relative to the world.

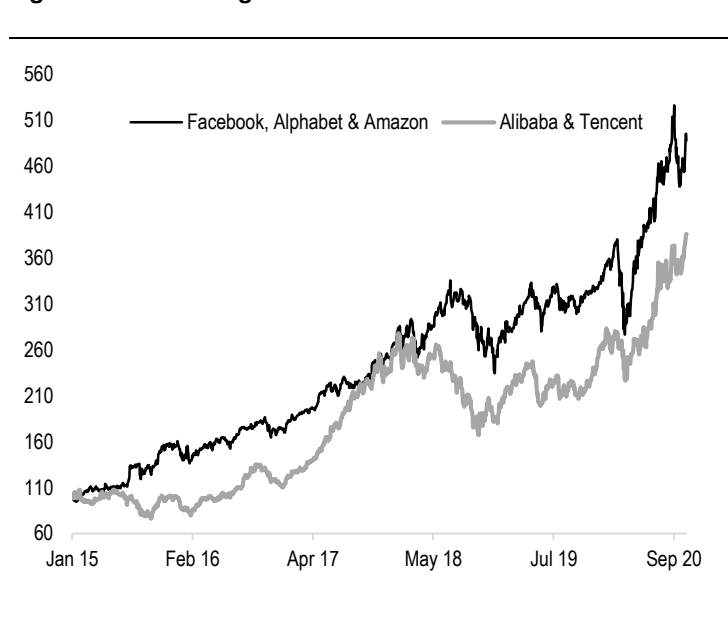
**Figure 104: On 12m fwd PE, China tech is trading below its historical average rel to global markets**



Source: Refinitiv, Credit Suisse research

We can see the valuation of China tech below compared to their US peers.

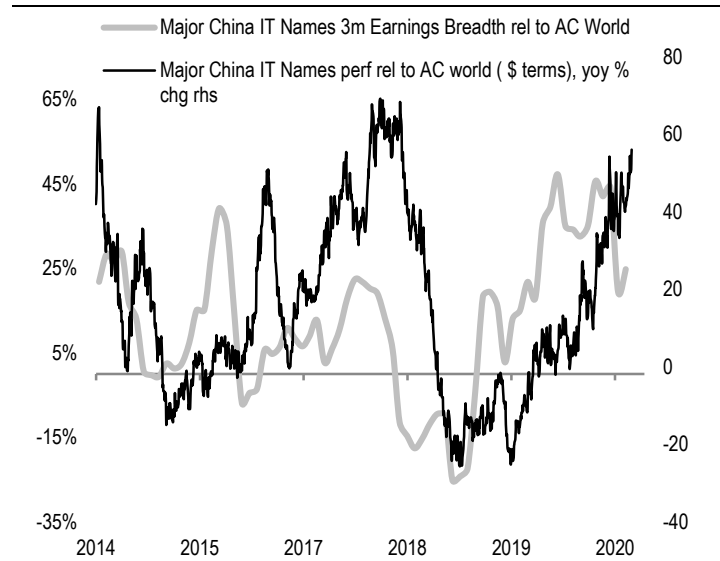
**Figure 106: China big tech vs US tech**



Source: Refinitiv, Credit Suisse research

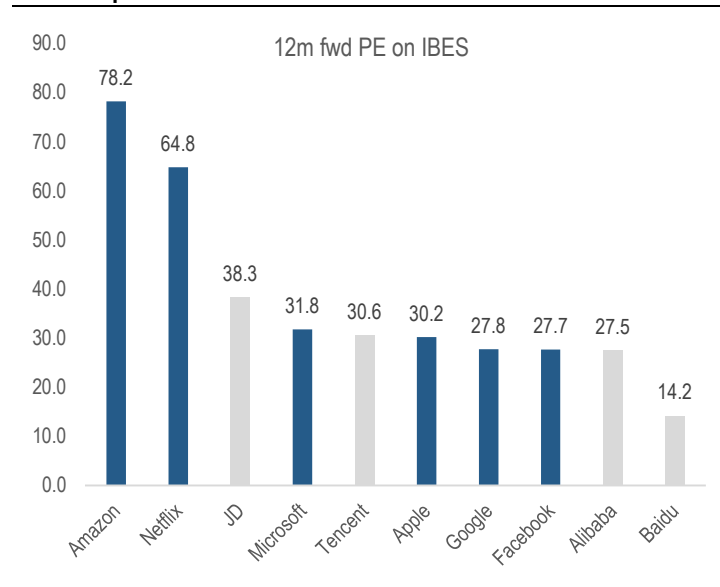
Overall, the regulatory environment has been more benign than that in the US. We think that lower regulatory or tax risk relative to their US peers means that, if anything, they should trade on a premium not a discount. In addition, we believe these tech companies stand to benefit from the government's policy to build 'new infrastructure' and more R&D investment (in areas such as AI). (See [China Economics Quarterly 4Q20: Five-year plan expectations](#), 5 Oct, for our economists' view on government priorities).

**Figure 105: Earnings revision of China tech are strong relative to the market**



Source: Refinitiv, Credit Suisse research

**Figure 107: China tech trade at lower valuations compare to their US peers**



Source: Refinitiv, Credit Suisse research

Below we show the internet companies favoured by our China strategists.

**Figure 108: China internet companies our strategists like**

Name	-----P/E (12m fwd) -----			----- P/B -----		2020e, %		HOLT	2020e Momentum, %		Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
	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		
Alibaba Group Holding ADR	27.3	74%	-23%	7.3	-1%	na	0.0	na	6.1	1.7	1.6	Outperform
Jd Com ADR 1:2	37.1	100%	-59%	9.5	27%	4.1	0.0	24.1	14.6	2.9	1.7	Outperform
Tencent Holdings	30.6	na	-22%	10.1	-5%	2.4	0.3	62.5	1.9	0.8	1.7	Outperform
Bilibili ADR 1:1	-63.6	na	na	13.5	76%	na	0.0	-80.8	nm	2.4	1.8	Outperform

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



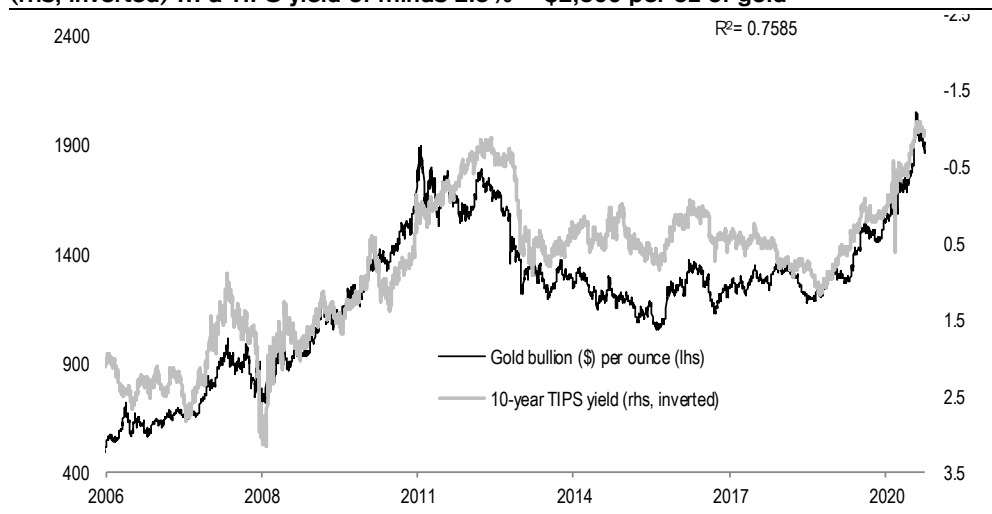
## 6. Gold

We continue to focus on the gold price.

- i. The US 10-year TIPS yield is the key driver of the gold price

We recently revised our TIPS yield target from minus 2% to minus 2.5% (see [Gold: a pause but still plenty of upside](#), 13 Aug), which would push the gold price up to \$2,500/oz. Indeed, the recent correction in gold occurred as the TIPS yield rose by 10bps.

**Figure 109: Gold tends to track the inverse of real yields as proxied by the TIPS yield (rhs, inverted) ... a TIPS yield of minus 2.5% = \$2,500 per oz of gold**

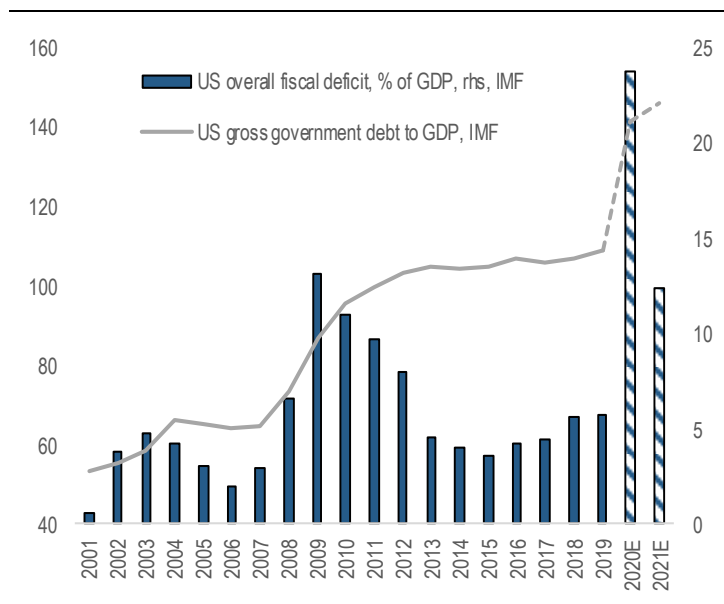


Source: Refinitiv, Credit Suisse research

There are only three solutions to excess government leverage (with gross government debt to GDP on IMF forecasts at the end 2022 of 135% and a budget deficit of 6.5% in the US, even after a strong recovery in fiscal revenues):

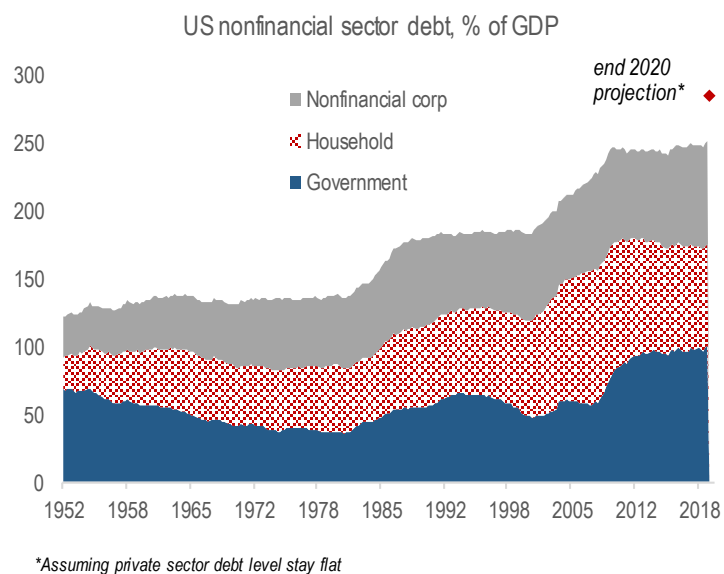
- *Default* (good for gold) or convert the central bank holding of government debt into a zero coupon irredeemable (good for gold).
- *Austerity* (bad for gold) via tightening fiscal policy by an amount required to stabilise government debt to GDP. This was the favoured policy post GFC. The problem today is that on current TIPS yield, it would require fiscal tightening of 5.8% of GDP which would then lead to acute deflation, another hit on growth and leave unemployment at politically and socially unacceptable levels which would ultimately require a strong fiscal response.
- *Inflate the debt away* (very good for gold). We see no significant appetite for major fiscal tightening (for example recent policy in the US clearly shows this). This is partly because we have a new generation of politicians who are used to low bond yields (aided by the promise of central banks to keep on buying). There is also the intellectual cover of Modern Monetary Theory (i.e. print and spend until inflation rises). Even the IMF as highlighted earlier is arguing that governments should spend especially on productivity-enhancing capital projects. We think fiscal policy remains loose until unemployment returns to politically acceptable levels. Moreover, this time around for reasons we discuss in our piece [COVID19: Long term inflationary consequences and what to do](#), 2 Jul, we think that many disinflationary factors of the last decade are diminishing (i.e. globalization, falling oil price) while there is more legislation to raise minimum wages (Biden minimum wage of \$15/hour would cause a 5% rise in US wage costs; see [US election outlook](#), 2 Oct). We believe that we will get more inflation, the Fed will cap bonds yields (not least because, with an average maturity of IG debt being c8 years and average maturity of mortgages over 10 years, a rise in bond yields would represent a tightening of policy). This in turn would drive real rates down. We could eventually see inflation rise to c3%, the Fed cap bond yields around current levels and TIPS yield fall to -2% to -2.5%.

- At this level, only moderate fiscal tightening is needed to stabilize government debt to GDP. This would in theory enable the US to exit this crisis on a stable government debt to GDP and low unemployment.

**Figure 110: US government debt and budget deficit**

Source: IMF, Refinitiv, Credit Suisse research

Outside of public debt, non-government debt to GDP ratio is also at an extreme level, suggesting that inflating away the debt will likely be the answer.

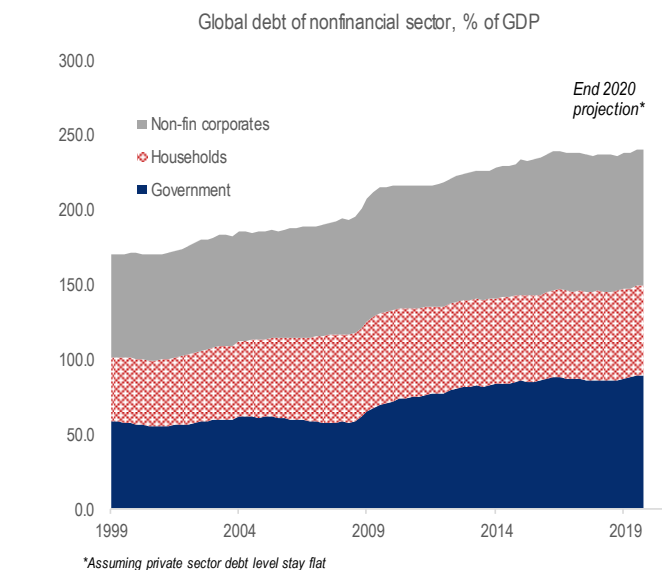
**Figure 112: US leverage is close to an all-time high...**

Source: Refinitiv, Credit Suisse research

**Figure 111: Fiscal tightening (as % of GDP) and real bond yield required to stabilize government debt to GDP on the basis of 2021 primary budget deficit and trend GDP growth**

To stabilise debt to GDP at 2021 level under different rates scenario (govt debt/GDP=146%, deficit/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, IMF, Credit Suisse research

**Figure 113: ...as is global leverage**

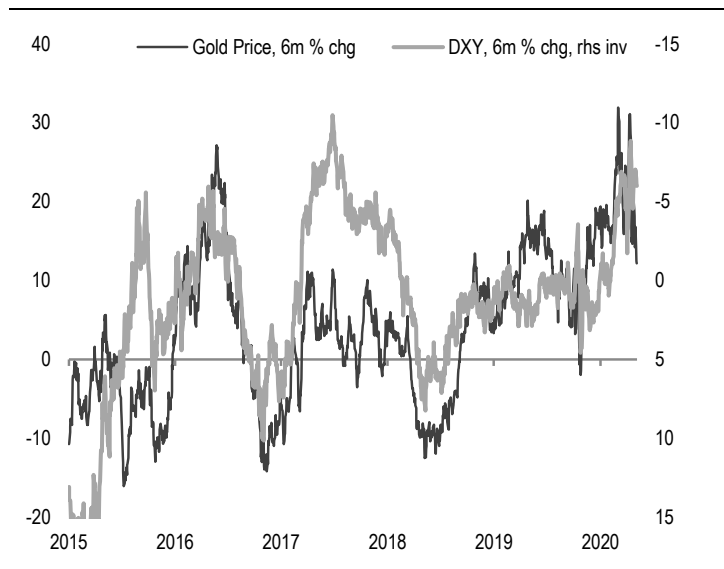
Source: Refinitiv, Credit Suisse research

## ii. Dollar weakness

We think the dollar is entering a structural bear market (See [US dollar: the start of a long-term bear market, relative impacts](#), 12 Aug). With 95% of gold retail demand being non-US, this supports gold prices. Below, we can see a 5% fall in the DXY tends to be associated to a 10% rise in the gold price.

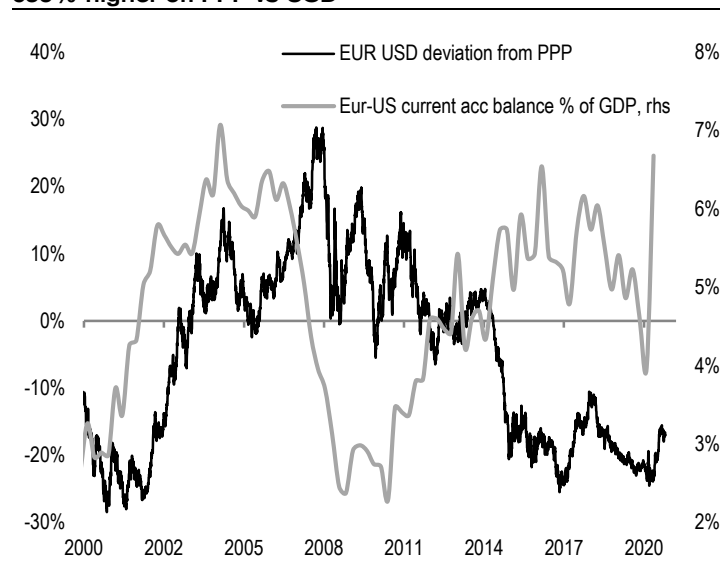
We can see that the last time the European current account surplus was this high against the US, the euro was c.30% higher.

**Figure 114: Gold and dollar move inversely with each other**



Source: Refinitiv, Credit Suisse research

**Figure 115: The Eurozone current account surplus significantly above that of the US and this implies that the euro should be c35% higher on PPP vs USD**

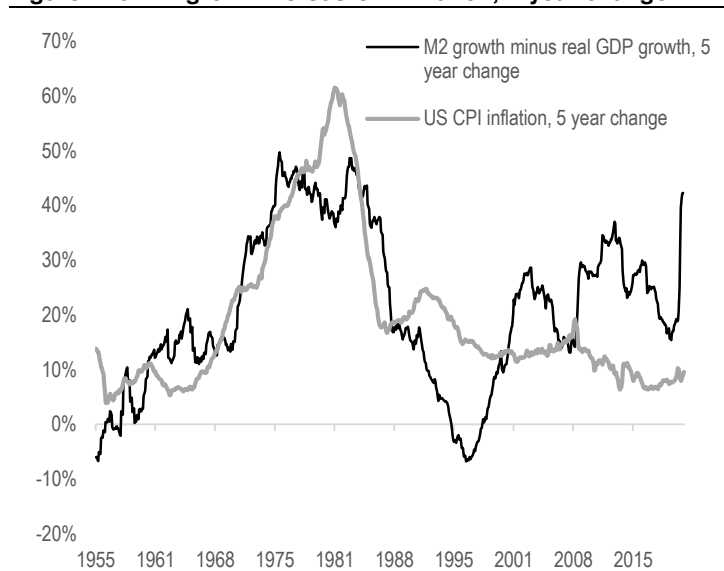


Source: Refinitiv, Credit Suisse research

## iii. Money supply implies a higher gold price (and more inflation).

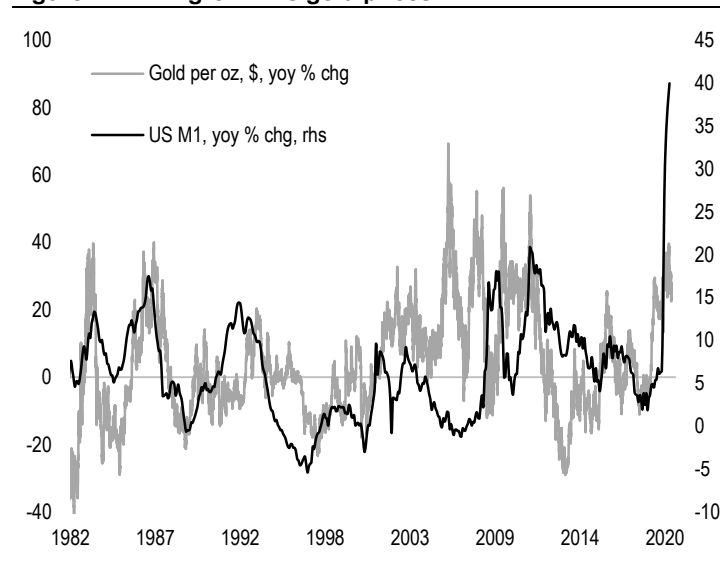
Excess liquidity leads inflation by four years and higher money supply also implies a higher gold price.

**Figure 116: M2 growth versus CPI Inflation, 4-year change**



Source: Refinitiv, Credit Suisse research

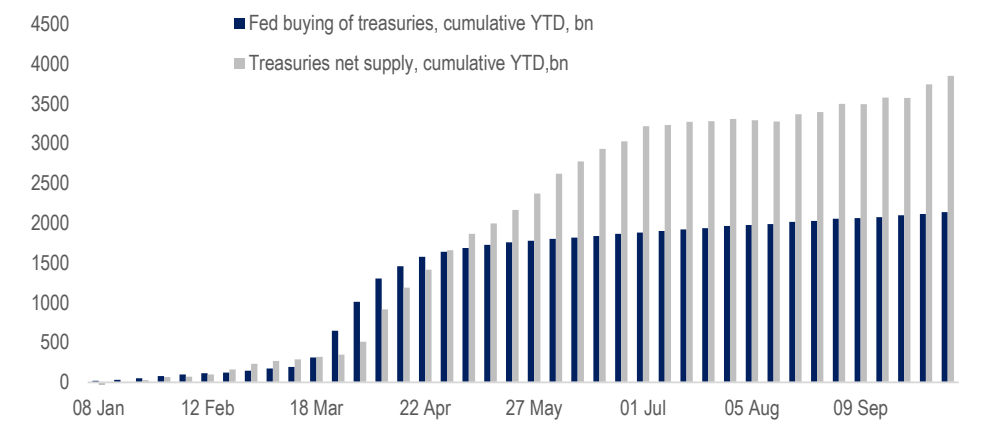
**Figure 117: M1 growth vs gold prices**



Source: Refinitiv, Credit Suisse research

We have seen a temporarily stabilization in the Fed balance sheet since June but we think that this will expand (with the Fed funding only 43% of net Treasury issuance since April) and in turn that helps gold prices.

**Figure 118: The Fed has funded only 43% of net Treasury issuance since April**



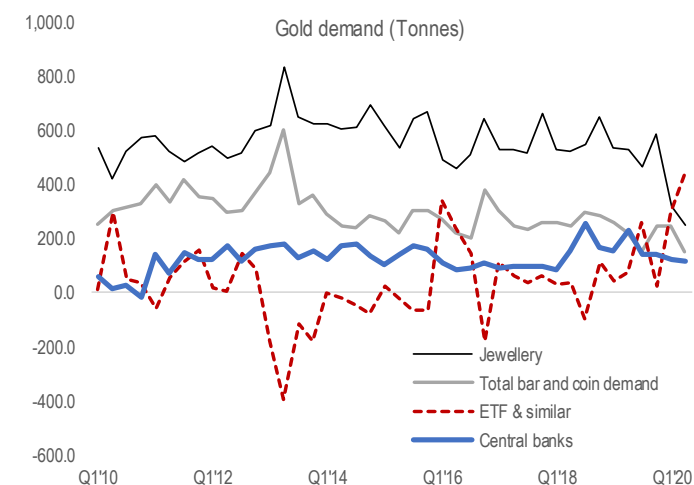
Source: Refinitiv, Credit Suisse research

iv. Other supports

We can also see a number of other supports for gold:

- So far, the two biggest components of fundamental gold demand, jewellery and central bank buying, have been very weak (down 46% and down 39% respectively in 1H 2020).

**Figure 119: Gold demand for jewellery, from central banks, coins and bars, and ETFs. Gold rose strongly despite central banks demand and jewellery demand recovery**

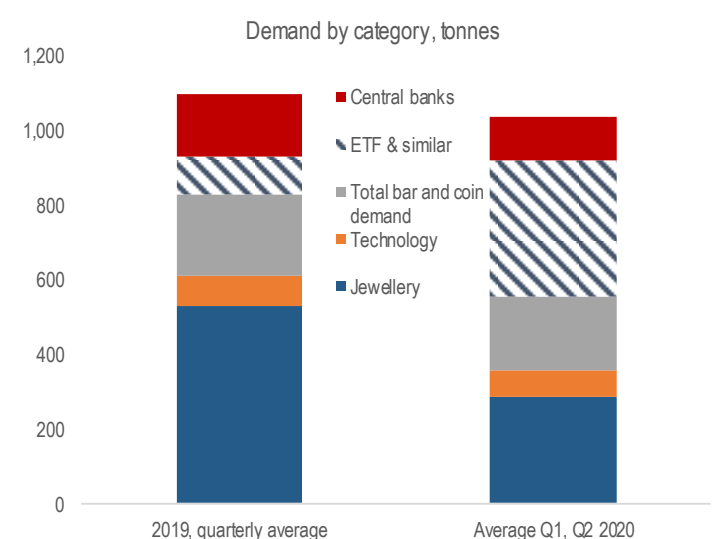


Source: World Gold Council

We think both jewellery demand and central bank demand for gold will increase sharply and see no slowdown in investment demand and hence the gold price should rise further.

Jewellery demand accounted for 48% of gold demand in 2019 and is down by 46% in the first half of the year from last year's level. Jewellery demand is cyclical and thus should pick up as the economy recovers.

**Figure 120: Two of the biggest sources of demand for gold in 2019, i.e. jewellery and central banks, are down significantly in the first half of the year**



Source: World Gold Council

Central banks' buying was down 39.5% in 1H20 compared to the same period last year and they accounted for 15% of 2019 demand. Indeed in August, net selling of gold by central bank was about 12.3 tonnes.

We believe that central banks will emerge as major buyers. This is partly because there is no such thing as a safe currency with all developed market central banks printing money and with 17 GEM central banks now allowed to engage in QE. Hence, some central banks will likely invest more of their FX reserves in gold. This is especially the case as several central banks have very low holdings of gold (the central banks of China, Brazil, India all have less than 10% of their reserves in gold, in contrast to the central banks of Germany, France and the US who have more than 60% of their reserves in gold).

If all major central banks had a minimum of 10% of their reserves in gold that would cause aggregate gold demand to rise by 150%. If they raise their gold holdings to a minimum of 20% of their reserves, that would increase the demand by fourfold.

**Figure 121: Central banks could create very sizeable additional gold demand**

	World official gold holdings as of Aug 2020		Assuming an increase to 10% of reserves, total tonnes	Additional demand, tonnes
	Tonnes	% of reserves		
US	8133	79%	-	-
Germany	3364	76%	-	-
Italy	2452	71%	-	-
France	2436	65%	-	-
Spain	282	21%	-	-
Russia	2300	23%	-	-
UK	310	10%	-	-
Switzerland	1040	6%	1607	567
India	658	8%	877	219
Japan	765	3%	2427	1662
China	1948	3%	5706	3758
Brazil	67	1%	613	546
<b>Total additional demand, tonnes</b>				<b>6751</b>
<b>Total additional demand, multiple of 2019 yearly demand</b>				<b>1.54x</b>

Source: World Gold Council, Credit Suisse research

So we can have a situation when central bank demand, jewellery demand and investors' demand all increase.

A separate asset class: we think that gold can become a separate asset class (only 6 out of the 10 Swiss private banks already have precious metals allocation according to Swiss paper Neue Zürcher Zeitung (NZZ, 5 Oct).

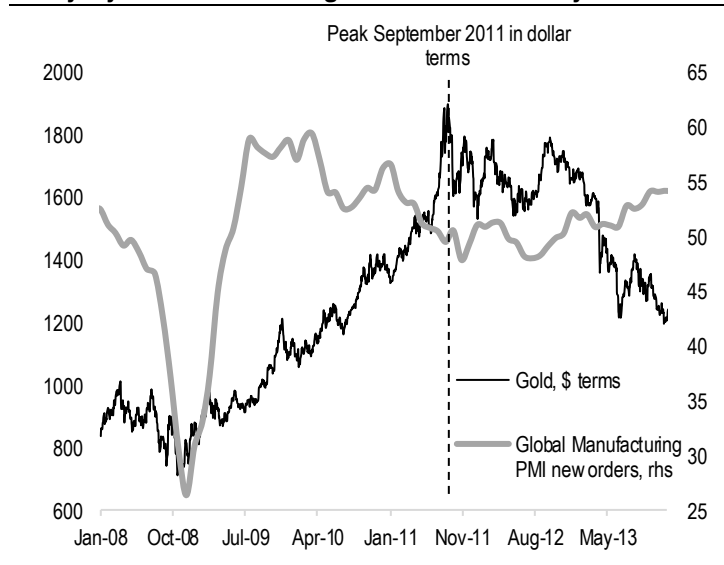
- The best 'inflation hedge' because others are disrupted or politically threatened

Gold looks by far the best of the 'inflation hedges' this time around. The other real assets are equities (but US equities are facing a potential corporate tax hike and minimum wage increases), property (where commercial and retail real estate is abnormally disrupted and there is the threat of a wealth tax) and commodities (but oil is technically disrupted and industrial commodities are to some extent exposed to China leverage which is at extremes). Thus, gold appears to be a more attractive real asset than normal.

- Gold can continue to rise long after a trough in economic activity

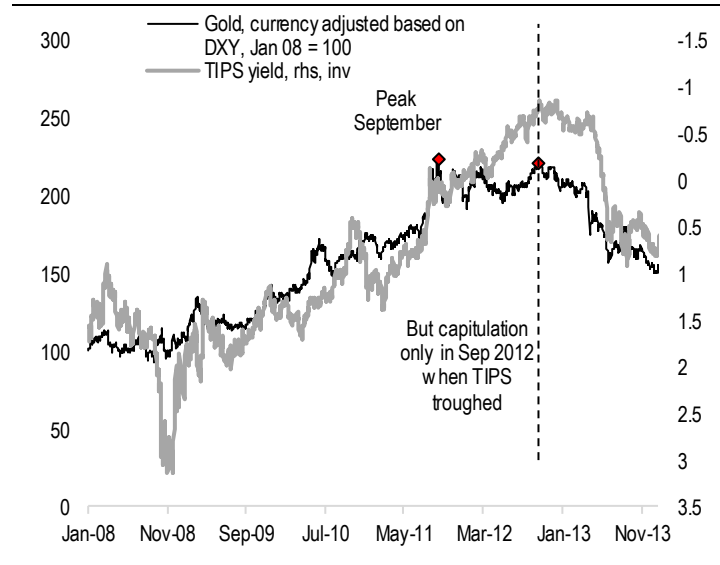
After the GFC, gold peaked in September 2011, nearly three years after the trough in economic activity (global manufacturing PMI new orders troughed in Dec 2008) and 120% higher than it was when activity troughed (gold is currently up c.14% from levels seen during the trough in economic activity in April).

**Figure 122: Gold peaked in dollar terms in September 2011, nearly 3 years after the trough in economic activity...**



Source: Refinitiv, Markit, Credit Suisse research

**Figure 123: ...and peaked in currency adjusted terms 12 months later**

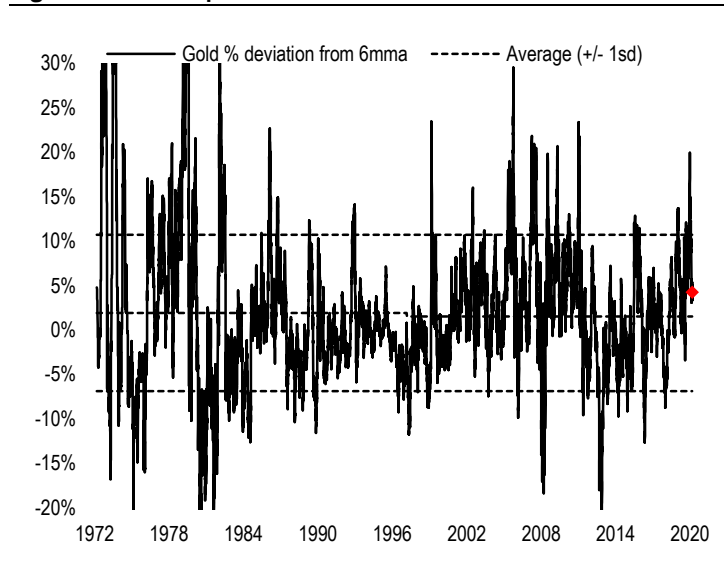


Source: Refinitiv, Credit Suisse research

v. Gold is no longer overbought

Gold is no longer overbought and net speculative positioning is not extreme.

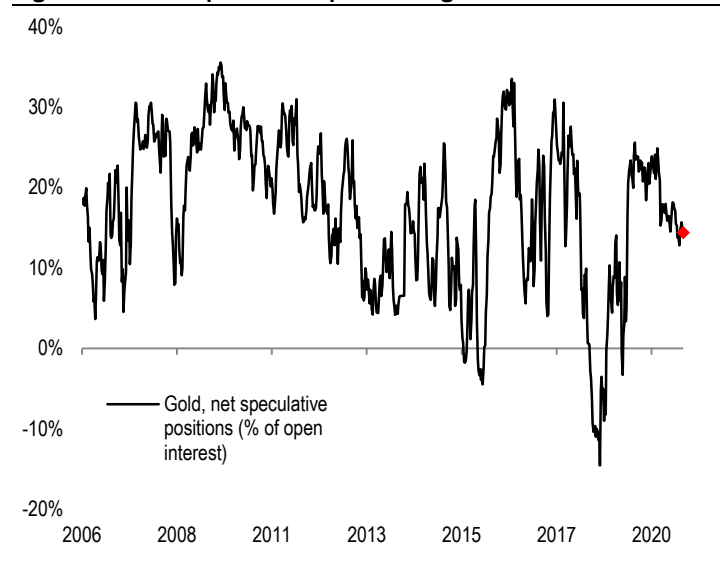
**Figure 124: Gold price momentum**



Source: Refinitiv, Credit Suisse research

vi. Gold stocks remain cheap

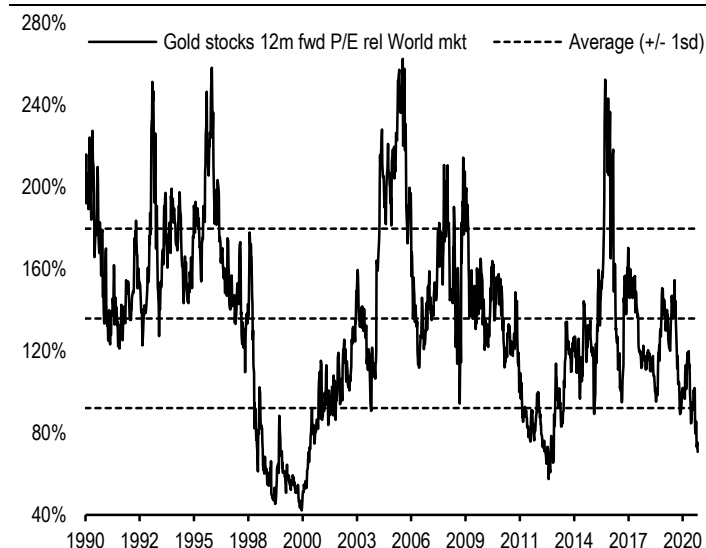
**Figure 125: Net speculative positioning is not extreme**



Source: Refinitiv, Credit Suisse research

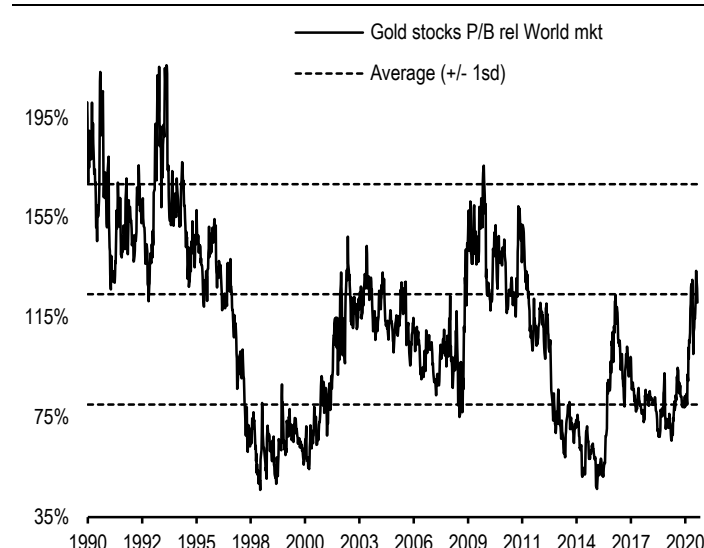
Gold stocks look inexpensive on P/E relative to the market and neutrally valued on P/B relative.

**Figure 126: Gold stocks look cheap on a 12m forward P/E relative basis...**



Source: Refinitiv, Credit Suisse research

**Figure 127: ...and neutral on P/B relative**



Source: Refinitiv, Credit Suisse research

Below we show a screen of Outperform-rated gold stocks. Our analysts' top picks are Newmont, Barrick Gold and Endeavour.

**Figure 128: Outperform-rated gold stocks**

Name	-----P/E (12m fwd) -----			----- P/B -----		2020e, %		HOLT	2020e Momentum, %		Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
	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		
Evolution Mining	18.8	125%	24%	4.0	101%	4.5	2.6	67.8	-12.5	-12.2	3.2	Outperform
Newcrest Mining	16.2	108%	-36%	2.1	13%	2.2	1.2	64.5	44.2	18.0	2.7	Outperform
Newmont	15.9	106%	-40%	2.3	21%	5.7	1.5	91.0	17.9	3.6	2.1	Outperform
Northern Star	14.5	96%	3%	4.9	8%	5.8	1.7	100.9	-24.6	-11.2	2.9	Outperform
Zhaojin Mining Ind. 'H'	18.4	122%	-36%	2.5	-15%	na	1.1	-57.6	21.4	1.6	1.8	Outperform
Zijin Mining Group 'H'	14.3	95%	-20%	2.9	36%	3.9	2.7	na	38.8	11.6	1.8	Outperform
Perseus Mining	11.1	74%	-75%	1.9	8%	na	-0.4	35.3	12.5	-12.5	1.8	Outperform
Regis Resources	8.5	57%	-45%	3.1	-31%	7.3	3.3	291.5	-0.6	2.6	2.7	Outperform
St Barbara	7.9	52%	-58%	1.6	-26%	16.1	2.6	129.2	-6.3	-1.1	2.4	Outperform
Endeavour Mining	7.8	52%	-75%	3.9	136%	10.5	0.2	120.1	38.0	22.9	1.8	Outperform
Agnico-Eagle Mns. (Nys)	25.0	na	-55%	na	na	5.0	1.0	-2.9	24.5	6.5	2.0	Outperform
Barrick Gold (Nys)	20.9	na	-12%	na	na	6.8	1.0	39.9	23.4	7.5	2.0	Outperform
Yamana Gold (Nys)	16.1	na	-56%	na	na	11.3	1.1	76.3	50.0	4.7	2.5	Outperform
Oceanagold Cdi.	7.0	47%	-56%	na	na	14.6	0.2	330.0	-172.5	-8.9	2.2	Outperform
Shandong Gold Mining 'H'	20.3	135%	-36%	3.4	25%	na	1.1	-22.7	6.3	0.1	1.8	Outperform
Zhongjin Gold 'A'	32.1	214%	-53%	2.5	-38%	na	1.2	0.8	47.8	25.1	2.5	Outperform

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

## 7. Industrial gases/Hydrogen

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 has tended to be more capital disciplined than the previous management.

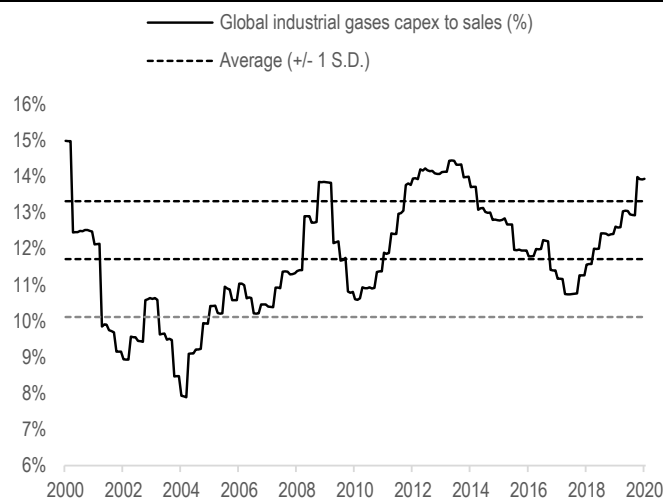
As a result there has been an improvement in merchant prices. Indeed, the highly stable capex to sales ratio is a sign of capital discipline (especially as sales have been depressed by the Covid-19 pandemic).

**Figure 129: Merchant pricing is improving**



Source: Credit Suisse Chemicals team, Credit Suisse research

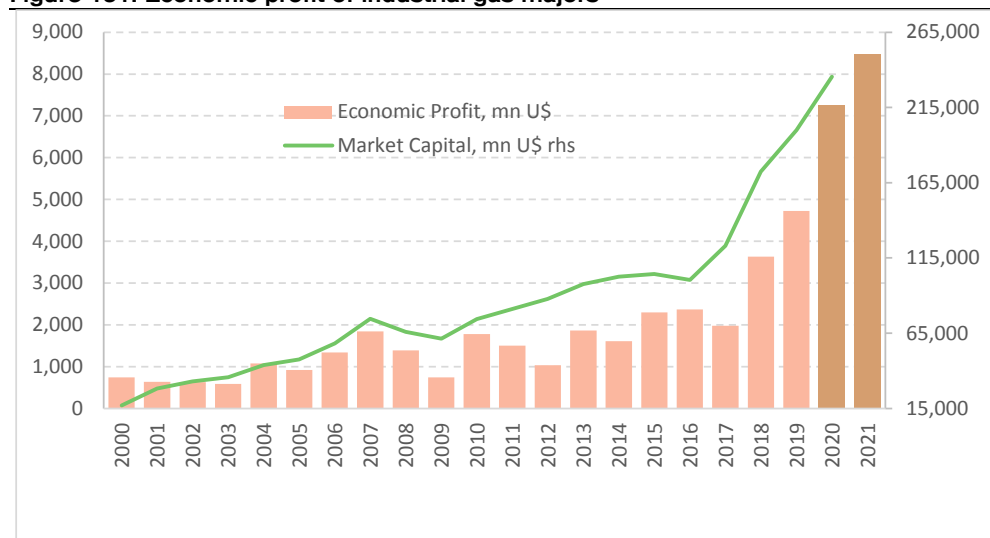
**Figure 130: Industrial gases capex to sales (%)**



Source: Refinitiv, Credit Suisse research

We would also note that over the last few years the amount of economic profit generated by the three major industrial gas companies has accelerated significantly and our HOLT team expect it to have quadrupled by 2021 from its 2017 level.

**Figure 131: Economic profit of industrial gas majors**



Source: Credit Suisse HOLT



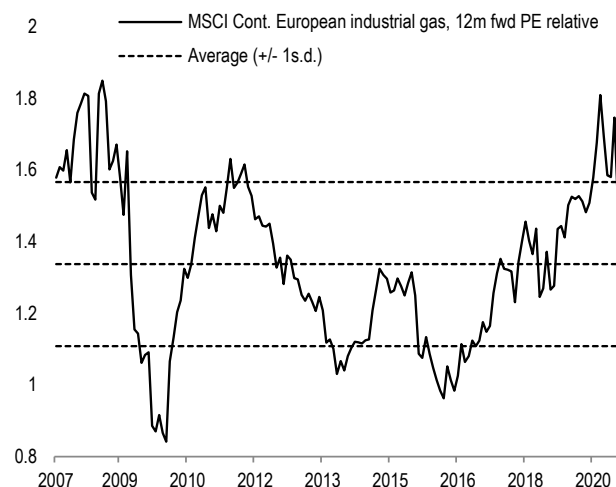
## 2. Diminished competition from China

Our European Chemicals analyst, Chris Counihan, believes the threat from Chinese competitors, which had been a concern, is now significantly diminished and is no longer a frequent discussion point with clients.

## 3. Valuations is only in line with other growth stocks

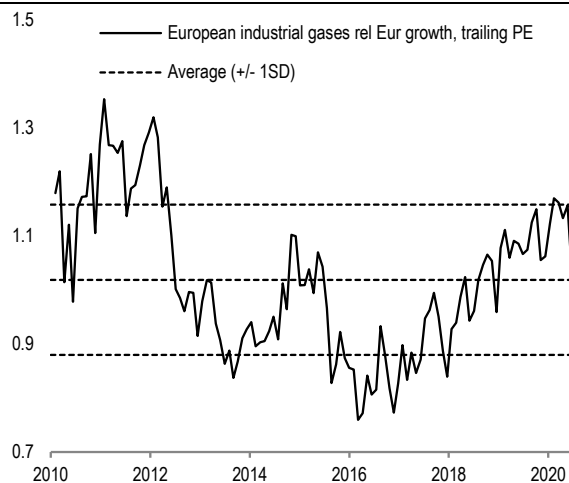
The sector trades roughly in line with other European growth stocks and does seem to reflect its improved industrial structure.

**Figure 132: On 12m fwd P/E relative, European industrial gas names look slightly expensive...**



Source: Refinitiv, Credit Suisse research

**Figure 133: ...although not so expensive relative to growth stocks**



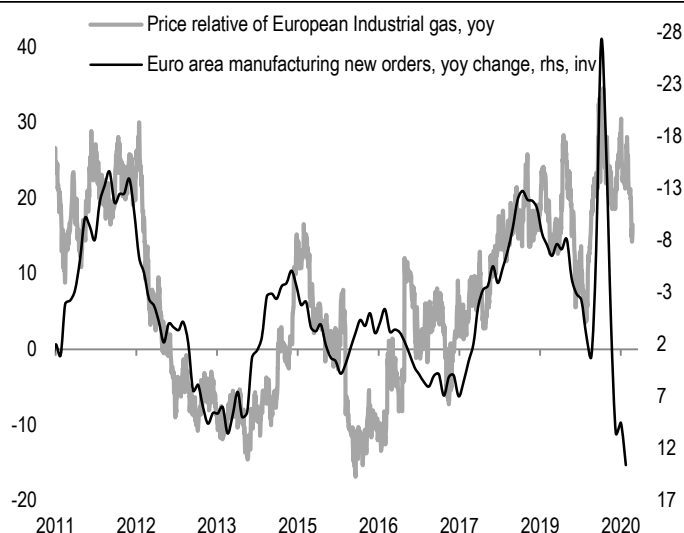
Source: Refinitiv, Credit Suisse research

## 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 outperforms when PMIs fall. We see a small fall in European PMIs.

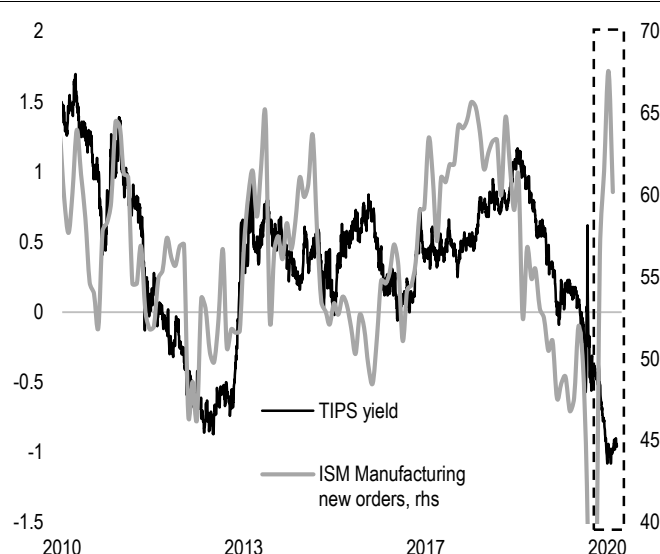
Recently the sector has not underperformed as PMIs rose. This we put down to the outperformance of secular growth because unusually as PMIs rose, bond yields (in the US) fell underpinning secular growth stories.

**Figure 134: Industrial gas performance vs PMI new orders**



Source: Refinitiv, Credit Suisse research

**Figure 135: 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. Recent major announcements were the German and French budgets which put €7bn and €9bn respectively into the development of their hydrogen industries.

According to McKinsey, by 2030, the global hydrogen market will be worth \$0.5trn rising to \$2.5trn by 2050. The market cap of all the industrial gas companies is c\$270bn. Around 20% their total sales are hydrogen; therefore, if we pro rata their exposure according to their sales, c\$50bn of market cap compared to a market size of \$0.5trn in 2030 seems a low price for the major producers of hydrogen.

We highlight below some of the 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), 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. In the McKinsey report commissioned by the European Commission and Hydrogen Europe, it outlined a scenario in which 40% of aircraft could be hydrogen powered by 2050 in an efficient decarbonization 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.
- **Hydrogen for homes:** In 2025, new-build homes in the UK will be banned from using natural gas. 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 decarbonize gas via hydrogen, an investment of €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, aiming for 40GW of green hydrogen by 2030. Siemens believe that gas turbines can be retrofitted for hydrogen.
- **Hydrogen for steel to decarbonise steelmaking:** This accounts for c8% of fossil fuel use by replacing coke with hydrogen. SSAB believes this could be commercial by 2025.
- **Hydrogen cost:** The environmental cost of hydrogen depends on whether the electricity used to produce it is renewable or not (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 (in 2000) the equivalent price of oil to twice 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 EU wants to install 40GW of ‘green hydrogen’ (ie made without fossil fuels) by 2030 with the IEA claiming the cost would fall by c30% by 2030 with hydrogen rising from 2% to 14% of the energy mix by 2050 (see [High Hopes for Hydrogen](#), 19 June 2020).

- **Carbon capture:** Industrial gas companies also specialise in carbon capture. (Currently about 75% of hydrogen used is produced from natural gas using carbon capture so called grey hydrogen.)
- **Ammonia make 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 fertilizer, could be the answer. Ammonia has 50% more hydrogen than hydrogen itself and liquefies at -33 degrees and can be handled easily, similarly to liquefied natural gas (Euractiv, Sept 14 2020).

The screen below shows the major global industrial gas names. Our analysts are Outperform-rated on Air Liquide and Air Products & Chemicals.

**Figure 136: Below we show a screen of global industrial gas names**

Name	-----P/E (12m fwd) -----			----- P/B -----		2020e, %		HOLT	2020e Momentum, %		Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
	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		
Air Liquide	25.1	114%	0%	3.4	6%	3.3	2.0	7.4	-1.3	-2.0	2.1	Outperform
Air Prds. & Chems.	30.1	136%	23%	5.9	42%	1.5	1.7	8.7	-0.3	-0.1	2.3	Outperform
Air Water	10.8	49%	-39%	1.0	-38%	8.9	3.0	-19.1	-10.0	-4.0	2.3	Not Covered
Linde	27.0	122%	-1%	2.5	-56%	3.0	1.7	1.3	4.6	0.9	2.0	Not Covered
Nippon Sanso Holdings	14.8	67%	-31%	1.7	-4%	6.9	1.7	-74.3	-6.8	-0.2	2.3	Not Covered

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

Other companies involved in the hydrogen to energy space include the stocks listed below. We note that a lot of these stocks still have a small market cap. 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 137: Stocks exposed to hydrogen outside of industrial gases**

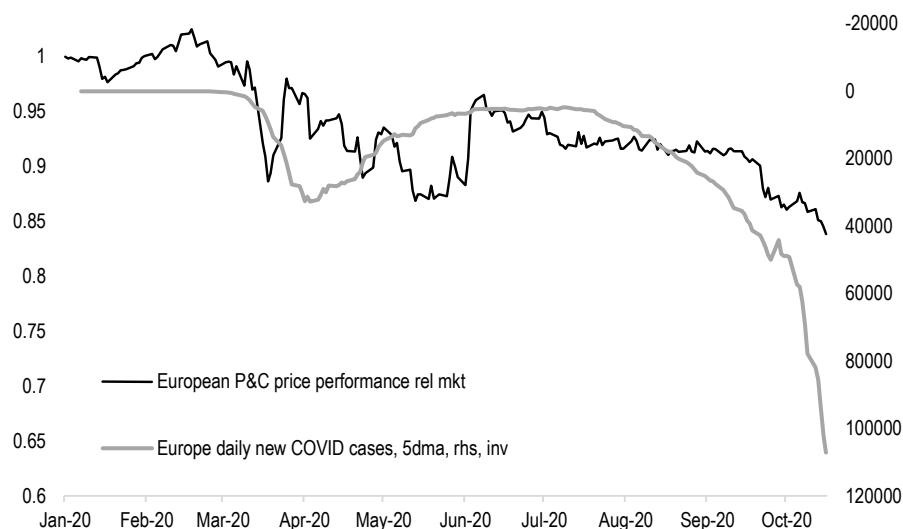
Company	Line of business	Market cap (bn\$)	Ticker	Rating
ITM Power	Hydrogen energy equipment	1.2	ITM.L	Not Covered
Ballard Power systems	Fuel cells	4.6	BLDP.OQ	Not Covered
Powercell	Fuel cell stacks & systems	1.4	PCELL.ST	Not Covered
Bloom Energy	Fuel cells	1.6	BE.N	Not Covered
PlugPower	Fuel cells	5.6	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	Not Covered
McpHy Energy	Hydrogen production and distribution equipment	0.5	MCPHY.PA	Not Covered

Source: Refinitiv, Credit Suisse research

## 8. P&C insurance

We would look to be exposed to P&C insurers. We recommend preparing for a post vaccine world with four major Phase 3 trials meant to report within three months and a blue sky scenario of 300m doses by year end. We can see below that P&C outperforms as daily new virus cases falls. Insurance, as we show earlier, has been one of the most sensitive sectors to the increase in COVID-19 infections. P&C has been mainly impacted by business interruption losses and some names have announced worse than expected virus related losses that heavily impacted the share price (Beazley, for example).

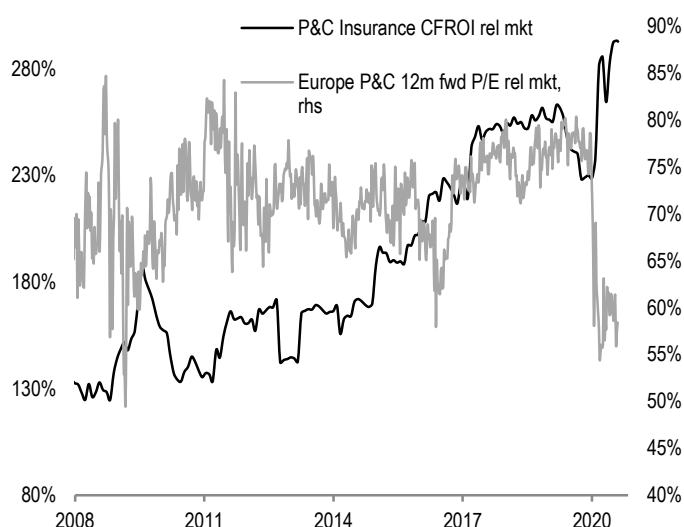
**Figure 138: European P&C has underperformed as daily new virus cases picked up**



Source: Refinitiv, Credit Suisse research

- i. The sector looks abnormally cheap on P/E relatives, despite the CFROI being nearly triple the market.

**Figure 139: 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 140: 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. Loss from COVID-19 pandemic look to have peaked

After previous disasters, P&C companies (relative to the market) troughed on average 1 to 2 months after the disaster, as was the case with hurricanes Wilma, Katrina, Andrew and Hugo.

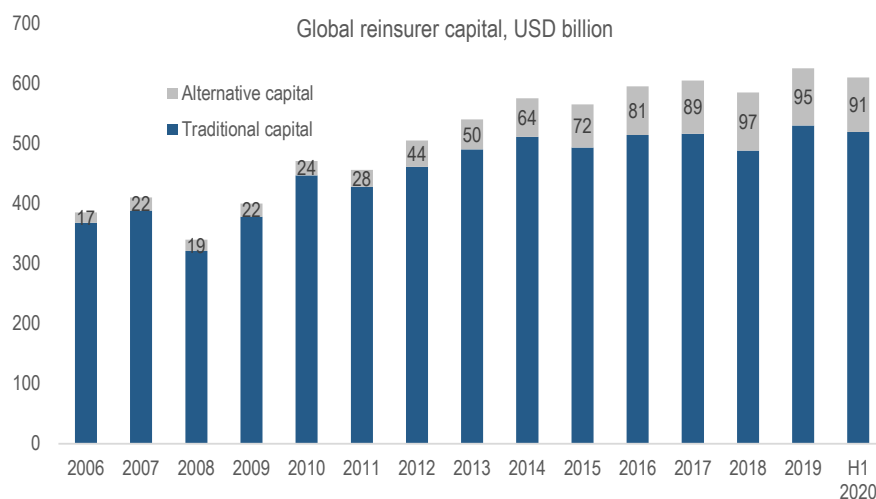
**Figure 141: P&C insurance went on to outperform the market after disasters struck**

	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 \$1.6tn, 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 surprisingly high premium increases (with Beazley hiking premiums by 11% and Hiscox by 13%). One of the reasons for a much more disciplined market is that there is a lot more trapped capital than consensus seems to realise. There is around \$90bn of ILS (and this market peaked at \$97bn).

**Figure 142: Global reinsurer capital**

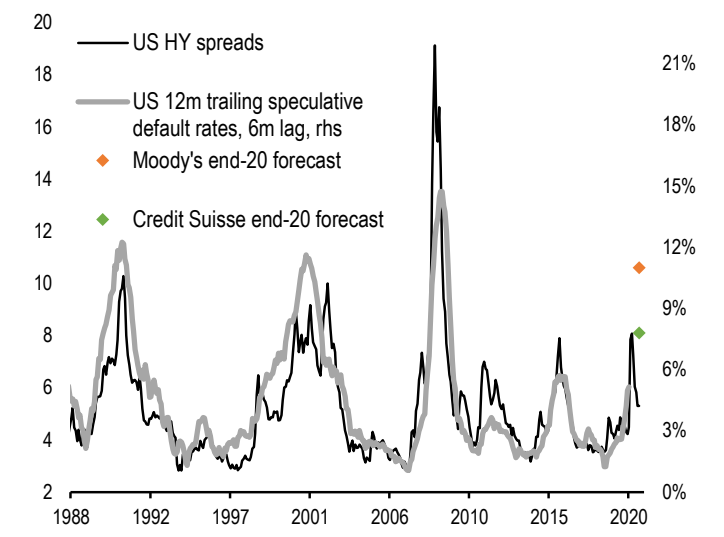


Source: Refinitiv, Credit Suisse research

iii. We believe that this sector is less disrupted than banks (see [What to do with European Financials](#), 24 July); e.g. no open banking, no SIFI, they tend to have stakes in many of the disruptors, and many of the disruptors need their back office.

The main concern is any potential rise in spreads. Credit spreads appear to be discounting a default rate that is too low (half that forecast by Moody's) yet non-life companies are the most resilient to this within the financial space.

**Figure 143: Default rates tend to follow spreads and imply defaults get back to the previous peak of the 1990s' recession**

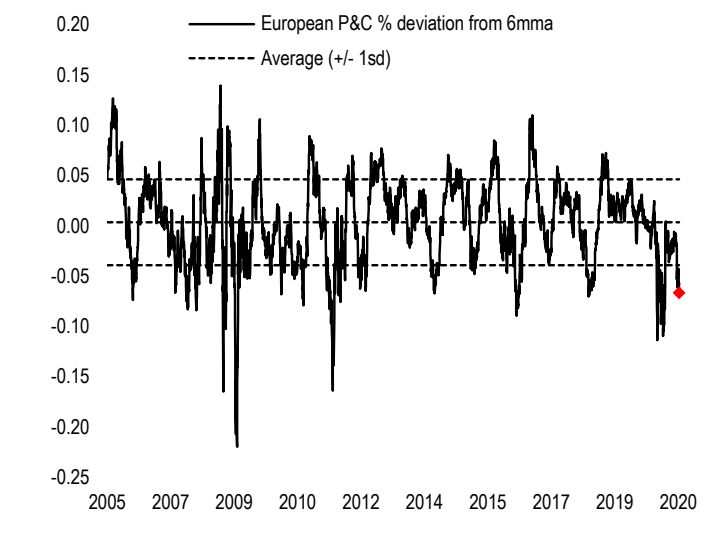


Source: Refinitiv, Credit Suisse research

iv. Momentum

We can see that the sector is abnormally oversold relative to the market, at the same time that relative earnings revisions have turned positive.

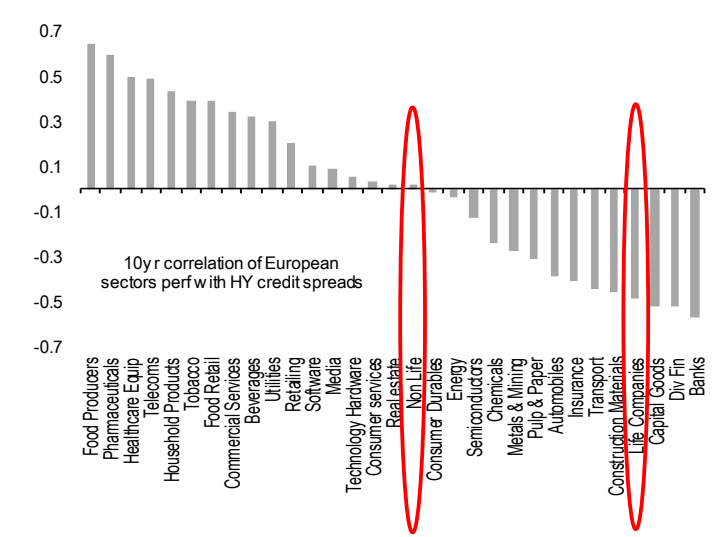
**Figure 145: The sector is close to 1.5 standard deviations oversold...**



Source: Refinitiv, Credit Suisse research

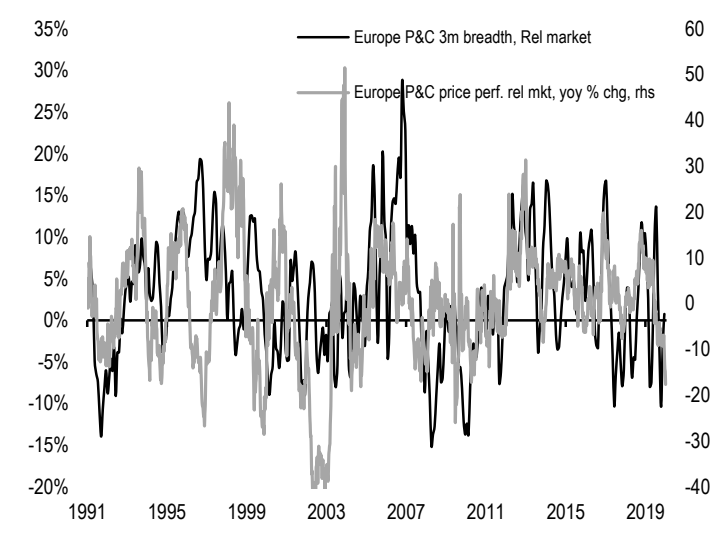
We show below the Outperform-rated P&C names. Our European Insurance team particularly like Lancashire, Direct Line and Zurich.

**Figure 144: P&C companies have a low sensitivity to spreads, unlike banks or life companies**



Source: Refinitiv, Credit Suisse research

**Figure 146: ... and positive earnings revisions have clearly not been reflected in relative performance**



Source: Refinitiv, Credit Suisse research

**Figure 147: Outperform-rated European P&C picks**

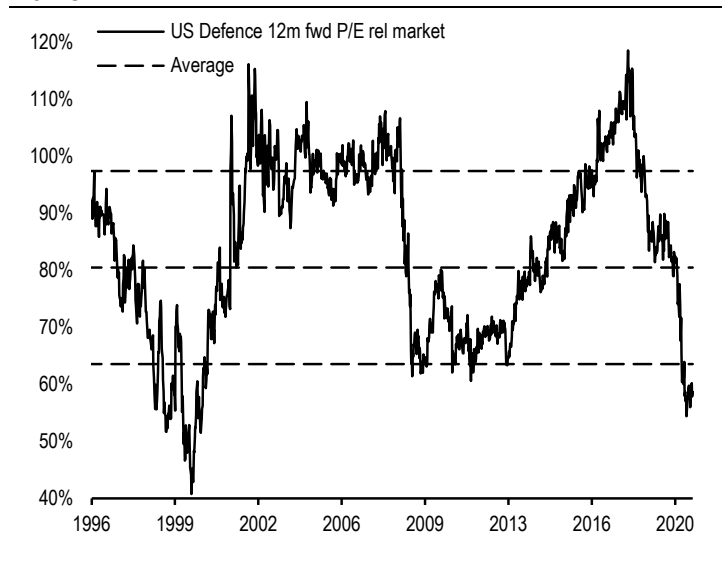
Name	-----P/E (12m fwd) -----			----- P/B -----		2020e, %		HOLT	2020e Momentum, %		Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
	Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY	Price, % change to best	3m EPS	3m Sales		
Zurich Insurance Group	12.7	119%	-13%	1.6	-6%	na	6.1	na	-8.0	4.5	2.4	Outperform
Direct Line In.Group	10.6	99%	-32%	1.5	-35%	na	11.8	-35.3	-1.3	0.1	1.9	Outperform
Gjensidige Forsikring	21.6	203%	0%	3.8	20%	na	4.9	-65.8	20.2	2.4	2.8	Outperform
Rsa Insurance Group	10.1	95%	-34%	0.3	-59%	na	6.2	-25.3	-5.1	-2.6	1.8	Outperform
Axa	6.4	60%	-42%	0.8	-30%	na	8.5	48.8	-17.8	-1.7	2.0	Outperform
Allianz	8.9	84%	-31%	1.2	-18%	na	5.7	13.0	-3.4	-2.7	2.3	Outperform
Hiscox Di	23.9	224%	23%	1.0	-42%	na	0.0	-41.2	nm	-6.3	2.3	Outperform

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

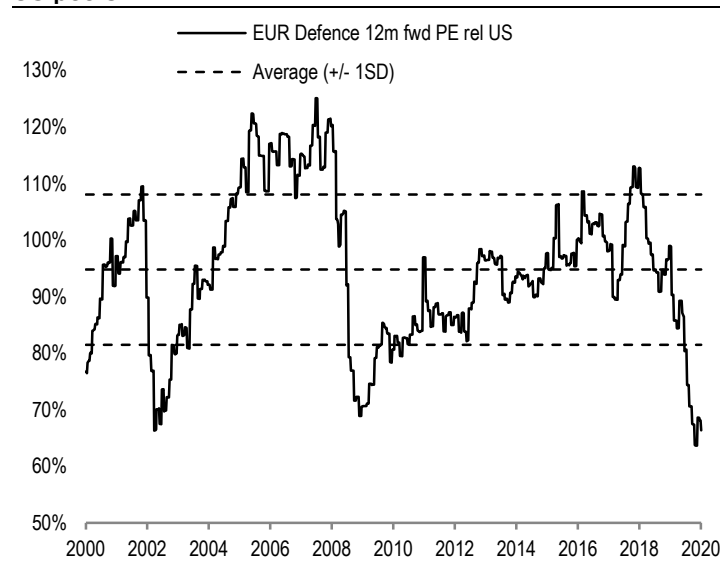
## 9. Defence stocks

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 cheap.

- i. Defence stocks look cheap against the market in the US and the European names are cheap now against the US names.

**Figure 148: US defence looks abnormally cheap relative to the market...**

Source: Refinitiv, Credit Suisse research

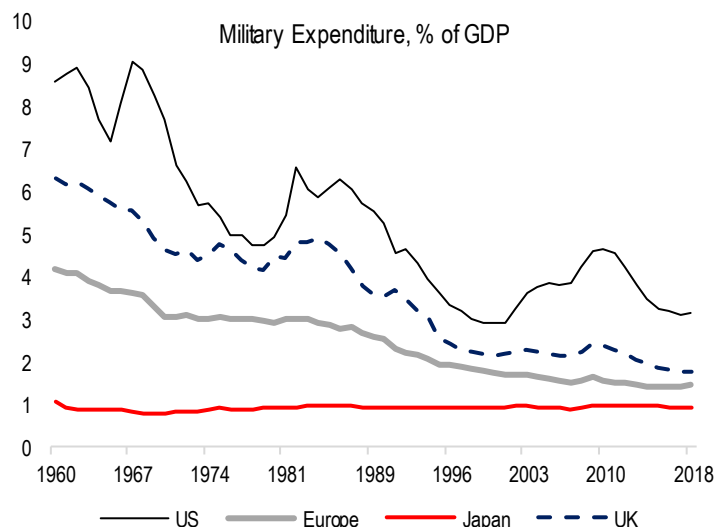
**Figure 149: ... and European defence looks very cheap against US peers**

Source: Refinitiv, Credit Suisse research

- ii. Structural growth

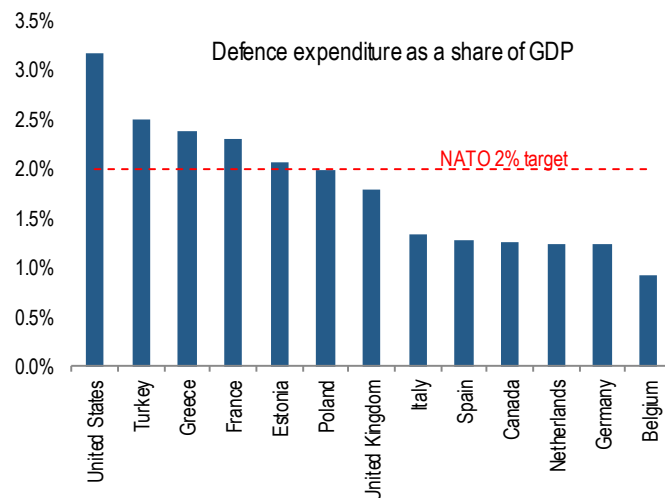
Defence spending as a share of GDP is still very low (40% below its norm in the US, 42% in Europe). Clearly many NATO countries are still spending too little on defence. If all countries were to spend 2% of GDP on defence, then spending would rise by 12%.

**Figure 150: Developed countries' military spending as a % of GDP is near historical lows**



Source: Refinitiv, Credit Suisse research

**Figure 151: Only 6 of NATO's 29 members meet the 2% target, with major economies such as Germany, Canada and Italy significantly underspending**



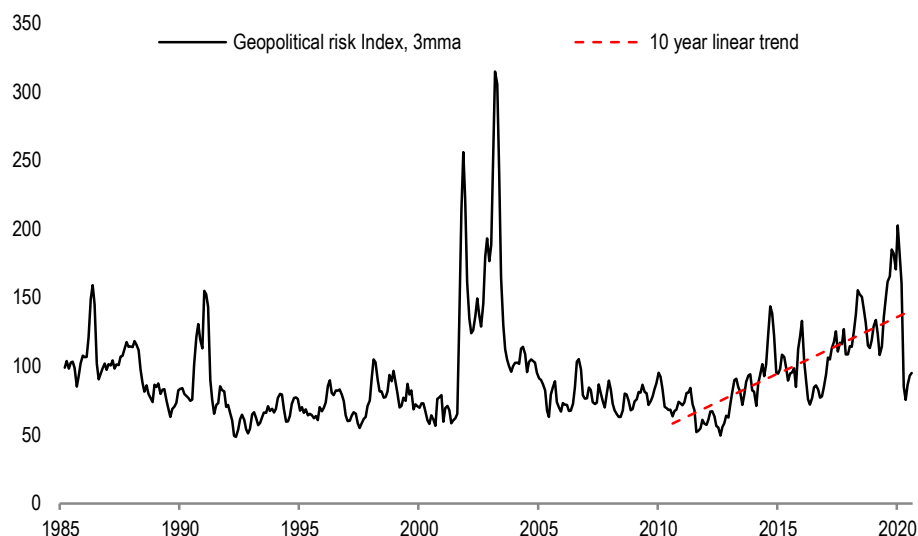
Source: Refinitiv, Credit Suisse research

### iii. The catalyst for higher defence spending

Global geopolitics appear more unsettled in a tri-polar world (US, China, and Europe).

- If the US is perceived as being unpredictable on defence (e.g. President Trump withdrawing from Syria with little notice), then 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. Recently, Trump highlighted that he would cut US troop numbers in Germany by a third.
- 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 last year (FT, 9 Jan). 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).
- 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 news flow).



**Figure 152: 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 a potential Biden presidency

Whereas we would expect Trump to largely continue his policies if re-elected, 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. Biden's 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 in the event of a Biden presidency (see [Specifics Emerge Regarding Biden's Defense Spending Plans](#), 11 Sep).

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).

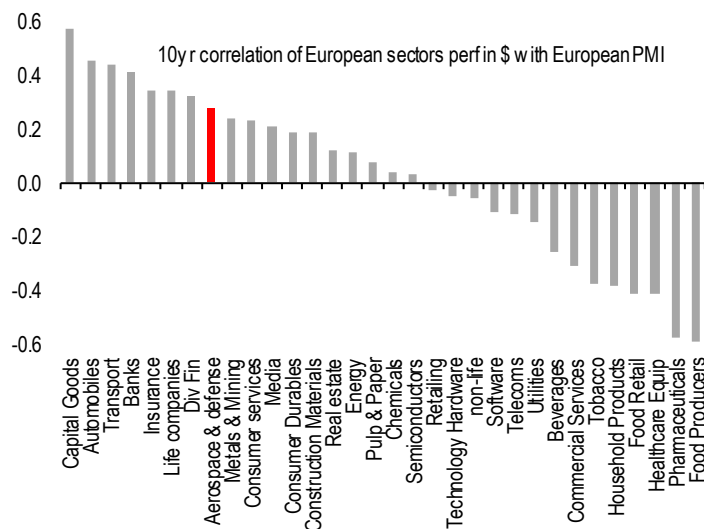
Moreover, Biden has said he will put further pressure on other NATO members to meet their spending requirements and shift the US's focus to Asia (FT, 17 June).

#### v. Defence spending could be considered part of fiscal QE

Whilst the EIB's remit excludes financing ammunition, weapons and military equipment, and infrastructure – it began 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.

vi. Defence stocks are PMI and bond yield agnostic

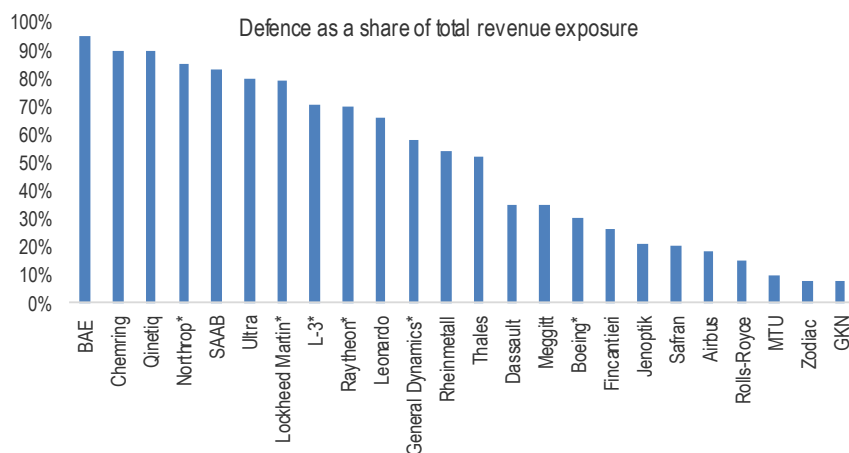
**Figure 153: Defense stocks are PMI agnostic...**



Source: Refinitiv, Credit Suisse research

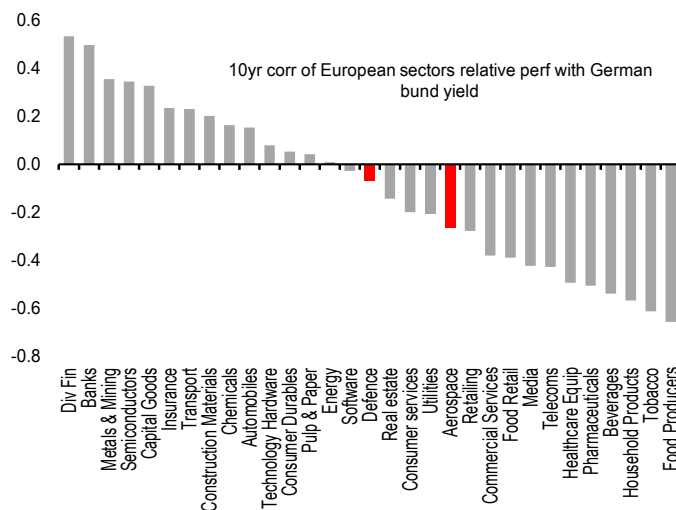
We prefer pure defence plays, such as BAE and Chemring.

**Figure 155: We prefer pure defence plays (2019)**



Source: Refinitiv, Credit Suisse research

**Figure 154: ... and bond yield agnostic**



Source: Refinitiv, Credit Suisse research

We show below the European and US names with exposure to defence spending.

**Figure 156: European and US defence stocks with their revenue exposure to defence**

Name	Defence as a share of total revenue (%)	-----P/E (12m fwd) -----			----- P/B -----		2020e, %		HOLT Price, % change to best	2020e Momentum, %		Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
		Abs	rel to Industry	rel to mkt % above/below average	Abs	rel to mkt % above/below average	FCY	DY		3m EPS	3m Sales		
Bae Systems	95%	10.6	53%	-30%	3.0	-38%	3.4	4.6	7.4	-5.3	1.0	2.0	Outperform
Chemring Group	90%	17.5	88%	0%	2.3	19%	2.4	1.5	-4.5	4.0	1.1	2.0	Not Covered
Qinetiq Group	90%	14.4	73%	-24%	1.8	-43%	5.1	3.3	35.4	-2.3	1.6	2.6	Neutral
Northrop Grumman	85%	12.8	65%	-36%	6.0	11%	6.4	1.8	62.2	1.5	0.8	1.9	Outperform
Saab B	83%	15.0	76%	-29%	1.8	-18%	3.7	1.8	31.2	12.2	1.4	1.5	Not Covered
Ultra Electronics Hdg.	80%	16.2	82%	-15%	3.5	-16%	4.4	3.0	2.6	2.7	1.5	2.5	Outperform
Lockheed Martin	79%	14.8	75%	-31%	34.6	-14%	6.0	2.6	90.5	0.1	1.7	2.1	Neutral
Leonardo	66%	5.5	28%	-59%	0.6	-59%	-1.8	2.6	-4.4	-7.4	4.5	1.9	Not Covered
General Dynamics	58%	12.2	62%	-36%	3.1	-25%	6.3	3.0	55.1	-1.8	-1.3	2.4	Neutral
Rheinmetall	54%	14.3	72%	-13%	1.6	-19%	3.4	2.1	56.6	-92.8	-0.3	1.7	Not Covered
Thales	52%	12.3	62%	-35%	2.6	-19%	3.4	2.0	114.0	-12.6	-2.0	2.3	Neutral
Dassault Aviation	35%	12.0	61%	-53%	1.4	-45%	-7.1	1.8	157.5	-28.0	-0.6	2.1	Outperform
Meggitt	35%	13.6	69%	-23%	1.0	-48%	4.1	0.6	-11.7	-17.8	-3.0	2.5	Underperform
Boeing	30%	312.3	1571%	969%	-10.9	na	-19.1	1.1	-52.7	nm	-10.7	2.8	Neutral
Fincantieri	26%	15.1	76%	-46%	0.9	-35%	nm	0.4	-95.0	-320.0	-6.2	3.2	Not Covered
Safran	20%	24.4	123%	5%	3.0	-23%	3.0	0.9	-2.0	-22.8	-10.7	2.6	Neutral
Airbus	18%	27.8	140%	20%	8.7	7%	-20.8	0.5	-5.9	-80.6	-4.5	2.3	Outperform
Rolls-Royce Holdings	15%	-8.3	nm	na	-1.3	na	-51.5	0.0	-135.6	nm	-7.7	3.2	Underperform
Bodycote	10%	16.8	85%	-16%	1.8	-23%	8.7	2.5	51.4	-8.6	-2.1	2.5	Outperform
Mtu Aero Engines Hldg.	10%	24.4	123%	12%	3.5	-12%	1.5	0.8	-16.9	-9.1	10.2	3.1	Not Covered

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

## 10. Telecom Equipment

We like this sector for the following reasons:

### A beneficiary from increased spending

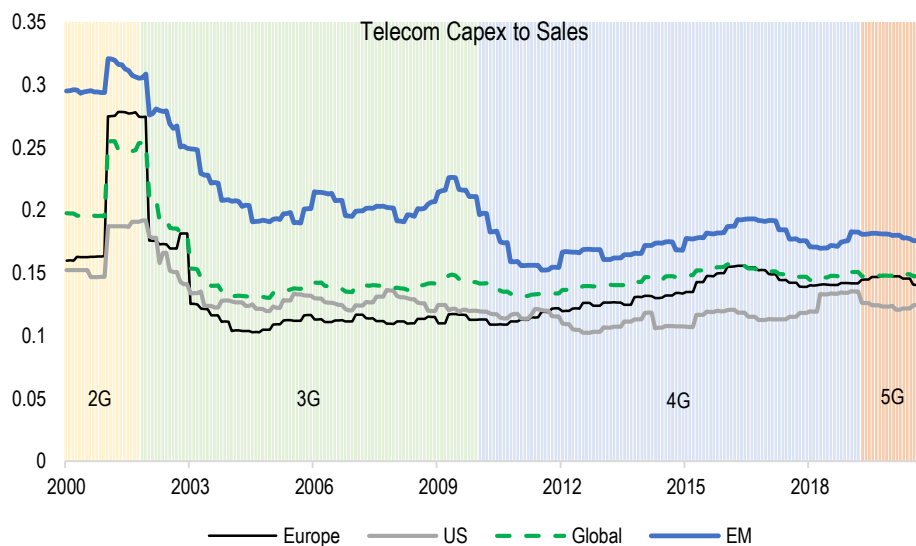
The COVID-19 pandemic and accompanying lockdowns imposed around the world have highlighted that the ability to work from home has become critical to economic activity. For example, Jonathan Dingel and Brent Neiman of the University of Chicago's Becker Friedman institute estimate that 37% of jobs in the US can be done from home (June 2020). Moreover, there is a very strong social benefit angle. High-speed connections mean that children at home can be educated and entertained.

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); for example in the UK Ofcom allowed Openreach to recover investment costs across the wholesale prices of a wider range of services, reducing the risk of its investment, in addition to providing public funding to reach rural areas for complete coverage (see [January Press Release](#)).

So far, IDC highlight only 13% of phones shipped in 1H 2020 were 5G enabled. Apple have only just launched their 5G iPhone 12. Our analysts believe that actual and effective 5G coverage is only c5% to 10% in most parts of Europe.

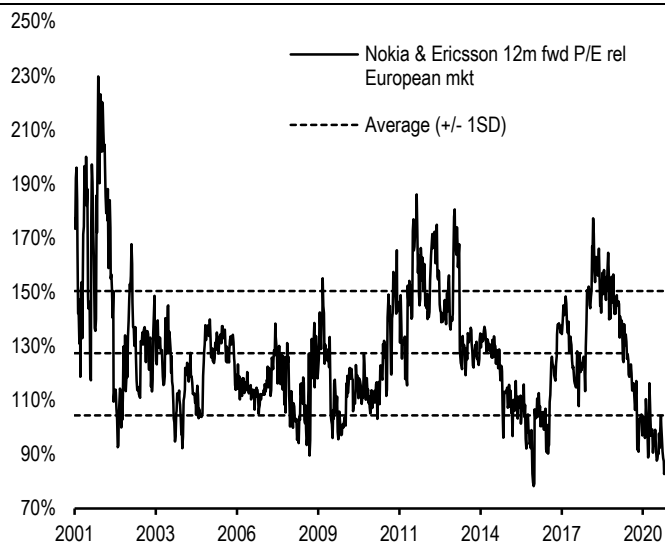
Credit Suisse analysts forecasts 1%/4%/2% growth globally in wireless capex for 2020/21/22 respectively with a slower but longer 5G cycle ahead (see, [5G - Slower but longer growth ahead, still early days](#)). China and the US are expected to lead the growth this year followed by other markets from mid to late 2021. We can see that the capex to sales for telecoms operators globally is depressed versus their historical norm.

**Figure 157: Capex to sales for telecom equipment and telecoms**

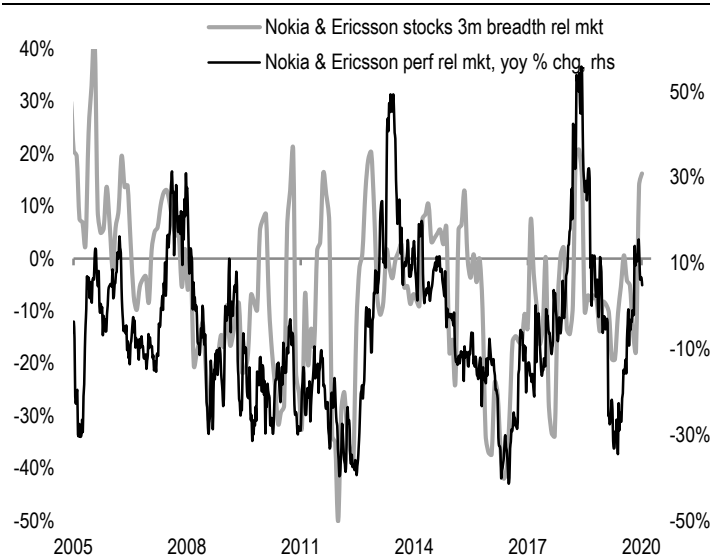
Source: Refinitiv, Credit Suisse research

**Valuations remain attractive**

We find the forward PE of the telecom equipment names is attractive relative to the market and relative earnings revisions are very strong.

**Figure 158: Telecom equipment companies look cheap on 12m fwd P/E relative to the market**

Source: Refinitiv, Credit Suisse research

**Figure 159: 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 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 rates 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 Sep) and remains cheap, in our opinion.

We show the 5G and fibre exposed names below:

**Figure 160: Below we show a screen of telecom equipment companies exposed to 5G and fibre**

Name	-----P/E (12m fwd) -----			----- P/B -----		2020e, %		HOLT	2020e Momentum, %		Consensus recommendation (1=Buy; 5=Sell)	Credit Suisse rating
	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		
Exposed to 5G												
Ericsson B	16.9	69%	-30%	3.9	50%	4.1	1.6	85.5	3.1	-1.0	2.1	Outperform
Xilinx	40.5	186%	36%	12.7	87%	3.0	1.3	-28.5	-3.0	5.7	2.6	Outperform
Intel	11.3	52%	-33%	2.9	-4%	7.6	2.5	154.4	1.2	1.7	3.0	Outperform
Analog Devices	22.5	103%	-11%	3.9	2%	4.3	1.9	-28.4	11.8	4.8	1.9	Outperform
Keysight Technologies	19.4	79%	-12%	6.6	25%	na	0.0	141.0	12.5	4.0	1.7	Outperform
Anritsu	21.8	90%	-28%	3.6	43%	5.5	1.3	-6.7	7.5	0.7	2.0	Outperform
Exposed to Fibre												
Nokia	12.2	50%	-66%	1.3	-42%	9.1	0.0	126.4	11.4	-1.9	2.1	Neutral
Prysmian	19.1	96%	10%	2.8	-18%	4.3	1.6	-42.7	3.6	-1.7	2.5	Neutral

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

**Companies Mentioned** (Price as of 19-Oct-2020)

**3M** (MMM.N, \$170.97)  
**ACC Limited** (ACC.BO, Rs1562.8)  
**AFC Energy** (AFEN.L, 17.52p)  
**AP Moller Maersk** (MAERSKb.CO, Dkr10670.0)  
**ASOS Plc** (ASOS.L, 4710.0p)  
**Adidas AG** (ADSGn.F, €282.5)  
**Aeroports de Paris** (ADP.PA, €81.1)  
**Air Water** (4088.T, ¥1,464)  
**Alexion Pharmaceuticals Incorporated** (ALXN.OQ, \$124.13)  
**Alibaba Group Holding Limited** (BABA.N, \$307.31)  
**Alibaba Group Holding Limited** (9988.HK, HK\$297.2)  
**Alibaba Pictures** (1060.HK, HK\$1.13)  
**Allianz SE** (ALVG.DE, €163.7)  
**Alphabet** (GOOGL.OQ, \$1567.7)  
**Amazon com Inc.** (AMZN.OQ, \$3272.71)  
**Ambuja Cements** (ABUJ.BO, Rs247.6)  
**Analog Devices Inc.** (ADI.OQ, \$123.64)  
**Anhui Conch Cement Co. Ltd.** (0914.HK, HK\$52.1)  
**Anhui Conch Cement Co. Ltd.** (600585.SS, Rmb54.08)  
**Anritsu** (6754.T, ¥2,524)  
**Anthem, Inc.** (ANTM.N, \$296.87)  
**Apple Inc** (AAPL.OQ, \$119.02)  
**Applied Materials Inc.** (AMAT.OQ, \$63.0)  
**Applus** (APPS.MC, €6.58)  
**Associated British Foods** (ABF.L, 1749.5p)  
**AutoZone, Inc.** (AZO.N, \$1193.38)  
**Automatic Data Processing Inc.** (ADP.OQ, \$148.42)  
**B&M European Retail** (BMEB.L, 509.6p)  
**BBMG Corporation** (2009.HK, HK\$1.51)  
**BBMG Corporation** (601992.SS, Rmb3.1)  
**Ballard Pow Syst** (BLDP.OQ, \$17.89)  
**Barratt Developments** (BDEV.L, 536.8p)  
**Barry Callebaut** (BARN.S, SFr2014.0)  
**Bellway** (BWV.L, 2609.0p)  
**Berkeley Group** (BKGH.L, 4326.0p)  
**Boral** (BLD.AX, A\$4.85)  
**Bouygues** (BOUY.PA, €30.73)  
**Bureau Veritas** (BVI.PA, €19.66)  
**CME Group** (CME.OQ, \$167.99)  
**CRH** (CRH.I, €32.77)  
**Cellnex Telecom** (CLNX.MC, €52.06)  
**Cementos Argos, S.A.** (CCB.CN, peso4560.0)  
**Cemex** (CX.N, \$4.1)  
**Cemex Latam Holdings, S.A.** (CLH.CN, peso2805.0)  
**Chemring** (CHG.L, 250.0p)  
**China National Building Material Co** (3323.HK, HK\$9.86)  
**China Resources Cement Holdings Ltd** (1313.HK, HK\$10.24)  
**Cigna Corporation** (CI.N, \$177.9)  
**Conzzeta** (CONC.S, SFr978.0)  
**Cosmo Pharmaceuticals** (COPN.S, SFr86.2)  
**DKSH Holdings** (DKSH.S, SFr62.95)  
**DSV** (DSV.CO, Dkr1069.0)  
**Deutsche Boerse** (DB1Gn.DE, €146.6)  
**Deutsche Lufthansa** (LHAG.DE, €7.56)  
**Deutsche Post DHL** (DPWGn.DE, €41.27)  
**Discovery Inc.** (DISCA.OQ, \$20.96)  
**Dixons Carphone Plc** (DC.L, 104.2p)  
**EasyJet** (EZJ.L, 470.7p)  
**Electrolux** (ELUXb.ST, Skr209.0)  
**Endeavour Mining** (EDV.TO, C\$35.28)  
**Equinor ASA** (EQNR.OL, Nkr133.85)  
**Ericsson** (ERICb.ST, Skr95.0)  
**Ericsson** (ERIC.OQ, \$10.7)  
**Essity** (ESSITYb.ST, Skr302.3)  
**Eurofins Scient** (EUF.PA, €713.4)  
**F5 Networks, Inc.** (FFIV.OQ, \$132.7)  
**Facebook Inc.** (FB.OQ, \$265.93)  
**Fast Retailing** (9983.T, ¥73,330)  
**FedEx Corporation** (FDX.N, \$283.87)  
**Fincantieri** (FCT.MI, €0.54)  
**Forbo** (FORN.S, SFr1508.0)  
**Fraport** (FRAG.DE, €31.76)  
**Fuelcell Energy** (FCEL.OQ, \$2.33)  
**GKN** (GKN.L^E18)  
**Georg Fischer** (FIN.S, SFr991.5)  
**Greencoat** (GRPG.I, €1.195)  
**HeidelbergCement** (HEIG.DE, €55.2)  
**Hydrogenics** (HYGS.OQ^119)  
**ITM Power** (ITM.L, 274.5p)  
**ITV** (ITV.L, 73.82p)  
**Inditex** (ITX.MC, €23.5)  
**Intel Corp.** (INTC.OQ, \$54.16)  
**International Business Machines** (IBM.N, \$125.93)  
**Intertek** (ITRK.L, 6148.0p)  
**Italgas** (IG.MI, €5.17)  
**JD Sports** (JD.L, 799.6p)  
**James Hardie Industries plc** (JHX.AX, A\$36.19)  
**Jenoptik** (JENGn.DE, €24.96)  
**Johnson & Johnson** (JNJ.N, \$148.1)  
**K+S AG** (SDFGn.DE, €6.54)  
**Keysight Technologies** (KEYS.N, \$104.91)  
**Kingfisher** (KGF.L, 311.2p)  
**Kingspan** (KSP.I, €76.8)  
**Klingelberg** (KLIN.S, SFr15.65)  
**Kuehne + Nagel** (KNIN.S, SFr185.5)  
**L'Oreal** (OREP.PA, €291.4)  
**L3 Technologies** (LLL.N^G19)  
**LafargeHolcim** (LHN.S, SFr43.37)  
**Landis + Gyr** (LANDI.S, SFr52.85)  
**Leonardo** (LDOf.MI, €4.764)  
**Linde Plc.** (LIN.N, \$233.08)  
**Logitech** (LOGN.S, SFr73.3)  
**Lucky Cement Co Ltd** (LUKC.PSX, PRs637.35)  
**MHI** (7011.NG, ¥2,216)  
**MTU Aero Engines** (MTXGn.DE, €153.75)  
**Maersk** (MAERSKa.CO, Dkr9895.0)  
**Marks & Spencer** (MKS.L, 91.16p)  
**McPhy Energy** (MCPHY.PA, €24.5)  
**Microsoft** (MSFT.OQ, \$219.66)  
**Munich Re** (MUVGn.DE, €210.0)  
**Murata Manufacturing** (6981.T, ¥7,310)  
**National Grid** (NG.L, 944.2p)  
**Nel** (NEL.OL, Nkr19.51)  
**Netflix Inc.** (NFLX.OQ, \$530.79)  
**Newmont** (NEM.N, \$62.67)  
**Nexi** (NEXII.MI, €15.49)  
**Next** (NXT.L, 6032.0p)  
**Nike Inc.** (NKE.N, \$128.0)  
**Nikola** (NKLA.OQ, \$19.545)  
**Nokia** (NOKIA.HE, €3.42)  
**Nokia** (NOK.N, \$4.03)  
**Norsk Hydro** (NHV.OL, Nkr26.47)  
**Novartis** (NOVN.S, SFr78.95)  
**Novo Nordisk A/S** (NOVOb.CO, Dkr452.1)  
**Ocado Group** (OCDO.L, 2461.0p)  
**Ontex Group** (ONTEX.BR, €11.41)  
**PSP Swiss Property AG** (PSPN.S, SFr110.3)  
**Pennon Group** (PNN.L, 1027.5p)  
**Persimmon** (PSN.L, 2510.0p)  
**Plug Power** (PLUG.OQ, \$16.27)  
**Powercell Sweden** (PCELL.ST, Skr252.4)  
**Powerhouse** (PHEG.L, 2.825p)  
**ProSieben** (PSMGn.DE, €11.09)  
**Procter & Gamble** (PG.N, \$144.39)  
**Proximus** (PROX.BR, €16.09)  
**Prysmian** (PRY.MI, €26.28)  
**ROHM** (6963.T, ¥8,380)  
**Raytheon Company** (RTN.N^D20)  
**Redrow** (RDW.L, 445.4p)  
**Regis Resources Limited** (RRL.AX, A\$5.1)  
**Renesas Electronics** (6723.T, ¥885)  
**Renewables Ifra** (TRIG.L, 135.0p)  
**Rheinmetall** (RHMg.DE, €73.62)  
**Roche** (ROG.S, SFr312.25)  
**Rockwool Intl** (ROCKb.CO, Dkr2810.0)  
**Royal Mail** (RMG.L, 243.8p)  
**Ryanair** (RYA.I, €11.66)  
**SFS Group** (SFSN.S, SFr91.2)  
**SGS Surveillance** (SGSN.S, SFr2435.0)  
**SIG** (SHI.L, 26.22p)  
**SSE** (SSE.L, 1344.0p)  
**STMicroelectronics NV** (STM.PA, €29.22)  
**Saab** (SAABb.ST, Skr267.7)  
**Saint-Gobain** (SGOB.PA, €36.73)  
**Sandvik** (SAND.ST, Skr174.65)  
**Sanofi** (SASY.PA, €86.03)  
**Semen Indonesia** (SMGR.JK, Rp9,175)  
**Severn Trent** (SVT.L, 2512.0p)  
**Shree Cement Ltd** (SHCM.BO, Rs21096.1)  
**Siam Cement** (SCC.BK, Bt334.0)  
**Sonova Holding** (SOON.S, SFr246.1)  
**St Barbara Mining** (SBM.AX, A\$2.99)  
**Straumann** (STMN.S, SFr985.2)  
**Subsea 7 S.A.** (SUBC.OL, Nkr71.68)  
**Swiss Prime Site AG** (SPSN.S, SFr81.8)  
**Taiyo Nippon Sanso** (4091.T, ¥1,579)  
**Taylor Wimpey** (TW.L, 116.65p)  
**Telstra Corporation** (TLS.AX, A\$2.85)  
**Tencent Holdings** (0700.HK, HK\$561.5)  
**Tokyo Electron** (8035.T, ¥29,055)  
**TopBuild** (BLD.N, \$186.47)  
**Ultratech Cement Ltd** (ULTC.BO, Rs4516.4)  
**Universal Health Services** (UHS.N, \$112.89)  
**Verizon Communications** (VZ.N, \$58.05)

**Visa Inc.** (V.N, \$200.26)  
**Vistry Group** (VTYV.L, 582.5p)  
**Wagners Holding Company Ltd** (WGN.AX, A\$1.43)  
**Walmart Inc.** (WMT.N, \$144.71)  
**Xebec** (XBC.V, C\$5.22)  
**Xilinx** (XLNX.OQ, \$118.02)  
**Yara International ASA** (YAR.OL, Nkr345.3)

**Zhaojin Mining** (1818.HK, HK\$9.85)  
**Zijin Mining** (2899.HK, HK\$5.51)  
**Zijin Mining** (601899.SS, Rmb6.68)  
**Zoom Video Communications** (ZM.OQ, \$559.0)  
**dormakaba** (DOKA.S, SFr505.0)  
**eBay Inc.** (EBAY.OQ, \$55.83)

## Disclosure Appendix

### Analyst Certification

Andrew Garthwaite, Robert Griffiths, Nicolas Wylenzek, Mengyuan Yuan, Asim Ali and Timothy O'Sullivan each certify, with respect to the companies or securities that the individual analyzes, that (1) the views expressed in this report accurately reflect his or her personal views about all of the subject companies and securities and (2) no part of his or her compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

### As of December 10, 2012 Analysts' stock rating are defined as follows:

**Outperform (O)** : The stock's total return is expected to outperform the relevant benchmark\* over the next 12 months.

**Neutral (N)** : The stock's total return is expected to be in line with the relevant benchmark\* over the next 12 months.

**Underperform (U)** : The stock's total return is expected to underperform the relevant benchmark\* over the next 12 months.

*\*Relevant benchmark by region: As of 10th December 2012, Japanese ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. As of 2nd October 2012, U.S. and Canadian as well as European (excluding Turkey) ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. For Latin America, Turkey and Asia (excluding Japan and Australia), stock ratings are based on a stock's total return relative to the average total return of the relevant country or regional benchmark (India - S&P BSE Sensex Index); prior to 2nd October 2012 U.S. and Canadian ratings were based on (1) a stock's absolute total return potential to its current share price and (2) the relative attractiveness of a stock's total return potential within an analyst's coverage universe. For Australian and New Zealand stocks, the expected total return (ETR) calculation includes 12-month rolling dividend yield. An Outperform rating is assigned where an ETR is greater than or equal to 7.5%; Underperform where an ETR less than or equal to 5%. A Neutral may be assigned where the ETR is between -5% and 15%. The overlapping rating range allows analysts to assign a rating that puts ETR in the context of associated risks. Prior to 18 May 2015, ETR ranges for Outperform and Underperform ratings did not overlap with Neutral thresholds between 15% and 7.5%, which was in operation from 7 July 2011.*

**Restricted (R)** : In certain circumstances, Credit Suisse policy and/or applicable law and regulations preclude certain types of communications, including an investment recommendation, during the course of Credit Suisse's engagement in an investment banking transaction and in certain other circumstances.

**Not Rated (NR)** : Credit Suisse Equity Research does not have an investment rating or view on the stock or any other securities related to the company at this time.

**Not Covered (NC)** : Credit Suisse Equity Research does not provide ongoing coverage of the company or offer an investment rating or investment view on the equity security of the company or related products.

**Volatility Indicator [V]** : A stock is defined as volatile if the stock price has moved up or down by 20% or more in a month in at least 8 of the past 24 months or the analyst expects significant volatility going forward.

Analysts' sector weightings are distinct from analysts' stock ratings and are based on the analyst's expectations for the fundamentals and/or valuation of the sector\* relative to the group's historic fundamentals and/or valuation:

**Overweight** : The analyst's expectation for the sector's fundamentals and/or valuation is favorable over the next 12 months.

**Market Weight** : The analyst's expectation for the sector's fundamentals and/or valuation is neutral over the next 12 months.

**Underweight** : The analyst's expectation for the sector's fundamentals and/or valuation is cautious over the next 12 months.

*\*An analyst's coverage sector consists of all companies covered by the analyst within the relevant sector. An analyst may cover multiple sectors.*

Credit Suisse's distribution of stock ratings (and banking clients) is:

### Global Ratings Distribution

Rating	Versus universe (%)	Of which banking clients (%)
Outperform/Buy*	50%	(33% banking clients)
Neutral/Hold*	36%	(28% banking clients)
Underperform/Sell*	12%	(20% banking clients)
Restricted	1%	

Please click [here](#) to view the MAR quarterly recommendations and investment services report for fundamental research recommendations.

*\*For purposes of the NYSE and FINRA ratings distribution disclosure requirements, our stock ratings of Outperform, Neutral, and Underperform most closely correspond to Buy, Hold, and Sell, respectively; however, the meanings are not the same, as our stock ratings are determined on a relative basis. (Please refer to definitions above.) An investor's decision to buy or sell a security should be based on investment objectives, current holdings, and other individual factors.*

### Important Global Disclosures

Credit Suisse's research reports are made available to clients through our proprietary research portal on CS PLUS. Credit Suisse research products may also be made available through third-party vendors or alternate electronic means as a convenience. Certain research products are only made available through CS PLUS. The services provided by Credit Suisse's analysts to clients may depend on a specific client's preferences regarding the frequency and manner of receiving communications, the client's risk profile and investment, the size and scope of the



overall client relationship with the Firm, as well as legal and regulatory constraints. To access all of Credit Suisse's research that you are entitled to receive in the most timely manner, please contact your sales representative or go to <https://plus.credit-suisse.com>.

Credit Suisse's policy is to update research reports as it deems appropriate, based on developments with the subject company, the sector or the market that may have a material impact on the research views or opinions stated herein.

Credit Suisse's policy is only to publish investment research that is impartial, independent, clear, fair and not misleading. For more detail please refer to Credit Suisse's Policies for Managing Conflicts of Interest in connection with Investment Research: <https://www.credit-suisse.com/sites/disclaimers-ib/en/managing-conflicts.html>.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

Credit Suisse has decided not to enter into business relationships with companies that Credit Suisse has determined to be involved in the development, manufacture, or acquisition of anti-personnel mines and cluster munitions. For Credit Suisse's position on the issue, please see <https://www.credit-suisse.com/media/assets/corporate/docs/about-us/responsibility/banking/policy-summaries-en.pdf>.

The analyst(s) responsible for preparing this research report received compensation that is based upon various factors including Credit Suisse's total revenues, a portion of which are generated by Credit Suisse's investment banking activities

*See the Companies Mentioned section for full company names*

Credit Suisse currently has, or had within the past 12 months, the following as investment banking client(s): PSMGn.DE, 1818.HK, IBM.N, DISCA.OQ, CME.OQ, LOGN.S, EZJ.L, KEYS.N, MMM.N, DPWGn.DE, SSE.L, SOON.S, NOVN.S, BABA.N, ABF.L, EUFI.PA, SGSN.S, ZM.OQ, SPSN.S, WMT.N, NG.L, DB1Gn.DE, CRH.I, ITV.L, TW.L, KGF.L, VZ.N, ANTM.N, LHAG.DE, ROG.S, EQNR.OL, FB.OQ, ALXN.OQ, EBAY.OQ, NEXII.MI, BARN.S, NEM.N, AMZN.OQ, INTC.OQ, KNIN.S, 0700.HK, 2899.HK, ITRK.L, CI.N, PSPN.S, GOOGL.OQ, LUKC.PSX, LHN.S, FIN.S, BDEV.L, BMEB.L, MSFT.OQ, 601899.SS, AAPL.OQ, ADI.OQ, ABUJ.BO, ACC.BO, GKN.L^E18, FCT.MI, LIN.N, GKN.L^E18, 9988.HK, GKN.L^E18, GKN.L^E18

Credit Suisse provided investment banking services to the subject company (PSMGn.DE, 1818.HK, IBM.N, DISCA.OQ, CME.OQ, LOGN.S, EZJ.L, KEYS.N, MMM.N, DPWGn.DE, SSE.L, SOON.S, NOVN.S, BABA.N, ABF.L, EUFI.PA, SGSN.S, ZM.OQ, SPSN.S, WMT.N, NG.L, DB1Gn.DE, CRH.I, ITV.L, TW.L, KGF.L, VZ.N, ANTM.N, LHAG.DE, ROG.S, EQNR.OL, FB.OQ, ALXN.OQ, EBAY.OQ, NEXII.MI, BARN.S, NEM.N, AMZN.OQ, INTC.OQ, KNIN.S, 0700.HK, 2899.HK, ITRK.L, CI.N, PSPN.S, GOOGL.OQ, LUKC.PSX, LHN.S, FIN.S, BDEV.L, BMEB.L, MSFT.OQ, 601899.SS, AAPL.OQ, ADI.OQ, ABUJ.BO, ACC.BO, GKN.L^E18, FCT.MI, LIN.N, GKN.L^E18, 9988.HK, GKN.L^E18, GKN.L^E18) within the past 12 months.

Within the last 12 months, Credit Suisse has received compensation for non-investment banking services or products from the following issuer(s): MUVGn.DE, SMGR.JK, IBM.N, DISCA.OQ, CME.OQ, KEYS.N, MMM.N, ADP.OQ, DPWGn.DE, ADP.PA, BABA.N, BOUY.PA, WMT.N, NG.L, DB1Gn.DE, ITV.L, VZ.N, ALVG.DE, ANTM.N, LHAG.DE, ROG.S, EQNR.OL, EBAY.OQ, NEXII.MI, NEM.N, AMZN.OQ, INTC.OQ, 0700.HK, PROX.BR, CI.N, GOOGL.OQ, LHN.S, NOKIA.HE, MSFT.OQ, NOK.N, AAPL.OQ, ADI.OQ, RMG.L, FCT.MI, 9988.HK

Credit Suisse has managed or co-managed a public offering of securities for the subject company (1818.HK, IBM.N, DISCA.OQ, EZJ.L, SOON.S, NOVN.S, BABA.N, EUFI.PA, SGSN.S, NG.L, TW.L, VZ.N, ANTM.N, EBAY.OQ, BARN.S, NEM.N, 0700.HK, CI.N, PSPN.S, GOOGL.OQ, LHN.S, FIN.S, ADI.OQ, ABUJ.BO, ACC.BO, LIN.N, 9988.HK) within the past 12 months.

Within the past 12 months, Credit Suisse has received compensation for investment banking services from the following issuer(s): PSMGn.DE, IBM.N, DISCA.OQ, CME.OQ, LOGN.S, EZJ.L, KEYS.N, MMM.N, DPWGn.DE, SSE.L, SOON.S, NOVN.S, BABA.N, ABF.L, EUFI.PA, SGSN.S, ZM.OQ, SPSN.S, WMT.N, NG.L, CRH.I, ITV.L, TW.L, KGF.L, VZ.N, ANTM.N, LHAG.DE, ROG.S, FB.OQ, ALXN.OQ, EBAY.OQ, NEXII.MI, BARN.S, NEM.N, AMZN.OQ, INTC.OQ, KNIN.S, 0700.HK, 2899.HK, ITRK.L, CI.N, PSPN.S, GOOGL.OQ, LUKC.PSX, LHN.S, FIN.S, MSFT.OQ, 601899.SS, AAPL.OQ, ADI.OQ, ABUJ.BO, ACC.BO, LIN.N, 9988.HK

Credit Suisse expects to receive or intends to seek investment banking related compensation from the subject company (CX.N, 1818.HK, APPS.MC, CLNX.MC, CONC.S, IBM.N, CLH.CN, DISCA.OQ, CME.OQ, KEYS.N, MMM.N, NOVOb.CO, DPWGn.DE, SSE.L, ADP.PA, SOON.S, STMN.S, DOKA.S, AMAT.OQ, ERICb.ST, NOVN.S, IG.MI, BABA.N, BOUY.PA, ABF.L, ASOS.L, SVT.L, XLNX.OQ, PRY.MI, SGSN.S, SPSN.S, WMT.N, NG.L, STM.PA, DB1Gn.DE, CRH.I, BLD.AX, ITV.L, TLS.AX, TW.L, KGF.L, LANDI.S, VZ.N, 1313.HK, ALVG.DE, EDV.TO, ANTM.N, SASY.PA, LHAG.DE, ROG.S, BKGH.L, EQNR.OL, FB.OQ, EBAY.OQ, NEXII.MI, BARN.S, NEM.N, AMZN.OQ, INTC.OQ, KNIN.S, 0700.HK, 2899.HK, CCB.CN, CI.N, GOOGL.OQ, LHN.S, MSFT.OQ, ERIC.OQ, 601899.SS, AAPL.OQ, ADI.OQ, ABUJ.BO, ACC.BO, GKN.L^E18, FCT.MI, LIN.N, GKN.L^E18, 9988.HK, GKN.L^E18, GKN.L^E18) within the next 3 months.

Credit Suisse currently has, or had within the past 12 months, the following issuer(s) as client(s), and the services provided were non-investment-banking, securities-related: MUVGn.DE, SMGR.JK, IBM.N, DISCA.OQ, CME.OQ, MMM.N, ADP.OQ, DPWGn.DE, ADP.PA, BABA.N, BOUY.PA, DB1Gn.DE, ITV.L, VZ.N, ALVG.DE, ANTM.N, LHAG.DE, EQNR.OL, EBAY.OQ, NEXII.MI, NEM.N, INTC.OQ, 0700.HK, PROX.BR, CI.N, GOOGL.OQ, LHN.S, NOKIA.HE, MSFT.OQ, NOK.N, AAPL.OQ, RMG.L, FCT.MI, 9988.HK

Credit Suisse currently has, or had within the past 12 months, the following issuer(s) as client(s), and the services provided were non-investment-banking, non securities-related: MUVGn.DE, SMGR.JK, IBM.N, DISCA.OQ, CME.OQ, KEYS.N, MMM.N, DPWGn.DE, ADP.PA, BABA.N, WMT.N, NG.L, ITV.L, VZ.N, ALVG.DE, LHAG.DE, ROG.S, EQNR.OL, EBAY.OQ, NEM.N, AMZN.OQ, INTC.OQ, PROX.BR, GOOGL.OQ, ADI.OQ, RMG.L, FCT.MI, 9988.HK

Credit Suisse acts as a market maker in the shares, depositary receipts, interests or units issued by, and/or any warrants or options on these shares, depositary receipts, interests or units of the following subject issuer(s): 1818.HK, 2009.HK, 0914.HK, 1313.HK, 0700.HK, 3323.HK, 2899.HK, 9988.HK.

Credit Suisse or a member of the Credit Suisse Group is a market maker or liquidity provider in the securities of the following subject issuer(s): MMM.N, ACC.BO, MAERSKb.CO, ASOS.L, ADSGn.F, ADP.PA, ALXN.OQ, BABA.N, 9988.HK, ALVG.DE, GOOGL.OQ, AMZN.OQ, ABUJ.BO, ADI.OQ, 0914.HK, 600585.SS, 6754.T, ANTM.N, AAPL.OQ, AMAT.OQ, APPS.MC, ABF.L, AZO.N, ADP.OQ, BMEB.L, 2009.HK, 601992.SS, BDEV.L, BARN.S, BWY.L, BKGH.L, BLD.AX, BOUY.PA, BVI.PA, CME.OQ, CRH.I, CLNX.MC, CCB.CN, CX.N, CLH.CN, 3323.HK, 1313.HK, CI.N, CONC.S, COPN.S, DKSH.S, DSV.CO, DB1Gn.DE, LHAG.DE, DPWGn.DE, DISCA.OQ, EZJ.L,



ELUXb.ST, EDV.TO, EQNR.OL, ERICb.ST, ERIC.OO, ESSITYb.ST, EUFI.PA, FFIV.OO, FB.OO, 9983.T, FDX.N, FCT.MI, FORN.S, FRAG.DE, GKN.L^E18, GKN.L^E18, GKN.L^E18, GKN.L^E18, FIN.S, HEIG.DE, ITV.L, ITX.MC, INTC.OO, IBM.N, ITRK.L, IG.MI, JD.L, JHX.AX, JNJ.N, SDFGn.DE, KEYS.N, KGF.L, KLIN.S, KNIN.S, OREP.PA, LHN.S, LANDI.S, LIN.N, LOGN.S, LUKC.PSX, MKS.L, MSFT.OO, MUVGn.DE, 6981.T, NG.L, NFLX.OO, NEM.N, NEXII.MI, NXT.L, NKE.N, NOKIA.HE, NOK.N, NHY.OL, NOVN.S, NOVOb.CO, OCDO.L, ONTEX.BR, PSPN.S, PNN.L, PSN.L, PSMGn.DE, PG.N, PROX.BR, PRY.MI, 6963.T, RDW.L, RRL.AX, 6723.T, ROG.S, RMG.L, RYA.I, SFSN.S, SGSN.S, SSE.L, STM.PA, SAND.ST, SASY.PA, SMGR.JK, SVT.L, SHCM.BO, SCC.BK, SOON.S, SBM.AX, STMN.S, SUBC.OL, SPSN.S, 4091.T, TW.L, TLS.AX, 0700.HK, 8035.T, ULTC.BO, UHS.N, VZ.N, V.N, VTYV.L, WGN.AX, WMT.N, XLNX.OO, YAR.OL, 1818.HK, 2899.HK, 601899.SS, ZM.OO, DOKA.S, EBAY.OO

A member of the Credit Suisse Group is party to an agreement with, or may have provided services set out in sections A and B of Annex I of Directive 2014/65/EU of the European Parliament and Council ("MiFID Services") to, the subject issuer (PSMGn.DE, 1818.HK, IBM.N, DISCA.OO, CME.OO, LOGN.S, EZJ.L, KEYS.N, MMM.N, DPWGn.DE, SSE.L, SOON.S, NOVN.S, BABA.N, ABF.L, EUFI.PA, SGSN.S, ZM.OO, SPSN.S, WMT.N, NG.L, DB1Gn.DE, CRH.I, ITV.L, TW.L, KGF.L, VZ.N, ANTM.N, LHAG.DE, ROG.S, EQNR.OL, FB.OO, ALXN.OO, EBAY.OO, NEXII.MI, BARN.S, NEM.N, AMZN.OO, INTC.OO, KNIN.S, 0700.HK, 2899.HK, ITRK.L, CI.N, PSPN.S, GOOGL.OO, LUKC.PSX, LHN.S, FIN.S, BDEV.L, BMEB.L, MSFT.OO, 601899.SS, AAPL.OO, ADI.OO, ABUJ.BO, ACC.BO, GKN.L^E18, FCT.MI, LIN.N, GKN.L^E18, 9988.HK, GKN.L^E18, GKN.L^E18) within the past 12 months.

Credit Suisse may have interest in (SMGR.JK)

As of the date of this report, Credit Suisse beneficially own 1% or more of a class of common equity securities of (MUVGn.DE, PSMGn.DE, FFIV.OO, APPS.MC, CONC.S, LOGN.S, SSE.L, SOON.S, STMN.S, DOKA.S, NOVN.S, PSN.L, DKSH.S, SVT.L, PNN.L, SGSN.S, SPSN.S, NG.L, KGF.L, 8035.T, LANDI.S, ALVG.DE, FORN.S, LHAG.DE, BKGH.L, EBAY.OO, BARN.S, KNIN.S, ITRK.L, PSPN.S, KLIN.S, LHN.S, FIN.S, SFSN.S).

Shortly prior to publication, Credit Suisse beneficially owned between 5% and 10% of the equity and related equity derivatives of (COPN.S).

Credit Suisse beneficially holds >0.5% long position of the total issued share capital of the subject company (PSMGn.DE, 9983.T, 9988.HK).

Credit Suisse beneficially holds >0.5% short position of the total issued share capital of the subject company (ABF.L).

Credit Suisse is acting as agent to Logitech (LOGN.S) on the announced share buy-back program.

This document does not constitute or form part of any offer, solicitation or invitation to subscribe for or purchase any securities nor shall it or any part of it form the basis of or be relied upon in connection with any contract or commitment whatsoever. Any update regarding the valuation, view or forecast on Alibaba Group Holding Limited in this document does not take into consideration the information regarding Ant Group Limited. Any valuation or forecast on Ant Group Limited is not updated in this document Credit Suisse is acting as Compliance Advisor to the Hong Kong listing of Alibaba (BABA.N)

Credit Suisse is acting as agent to SGS SA (SGSN.S) on the announced share buy-back program.

Credit Suisse Securities (USA) LLC is acting as financial advisor to Verizon (VZ.N) on the announced pending acquisition of Tracfone from America Movil (AMX.N).

Spouse of employee, Joy Hu Lan-Ya, is a Senior Officer of Tencent Holdings Ltd.

Credit Suisse is acting as financial advisor to New York Life Insurance Co on the announced pending acquisition of Cigna's (CI.N) group life and disability insurance business.

This document does not constitute or form part of any offer, solicitation or invitation to subscribe for or purchase any securities nor shall it or any part of it form the basis of or be relied upon in connection with any contract or commitment whatsoever. Any update regarding the valuation, view or forecast on Alibaba Group Holding Limited in this document does not take into consideration the information regarding Ant Group Limited. Any valuation or forecast on Ant Group Limited is not updated in this document. Credit Suisse is acting as Compliance Advisor to the Hong Kong listing of Alibaba (9988.HK)

For date and time of production, dissemination and history of recommendation for the subject company(ies) featured in this report, disseminated within the past 12 months, please refer to the link: <https://rave.credit-suisse.com/disclosures/view/report?i=558209&v=-1zpgdzrjep2o4acsav7xyv5tn>.

### Important Regional Disclosures

Singapore recipients should contact Credit Suisse AG, Singapore Branch for any matters arising from, or in connection with, this research report. The analyst(s) involved in the preparation of this report may participate in events hosted by the subject company, including site visits. Credit Suisse does not accept or permit analysts to accept payment or reimbursement for travel expenses associated with these events.

For Credit Suisse Securities (Canada), Inc.'s policies and procedures regarding the dissemination of equity research, please visit <https://www.credit-suisse.com/sites/disclaimers-ib/en/canada-research-policy.html>.

Credit Suisse International (Credit Suisse) acts as broker to (EZJ.L, SSE.L, ABF.L, ITV.L, TW.L, KGF.L, BDEV.L).

true An analyst involved in the preparation of this report received third party benefits in connection with this research report from the subject company (KNIN.S)

Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment.

Please visit <https://www.credit-suisse.com/in/en/legal/research-disclosure.html> for additional disclosures required under the Securities And Exchange Board of India (Research Analysts) Regulations, 2014

For Thai listed companies mentioned in this report, the independent 2019 Corporate Governance Report survey results published by the Thai Institute of Directors Association are being disclosed pursuant to the policy of the Office of the Securities and Exchange Commission: Siam Cement (Excellent)

Credit Suisse Equity Research may make decisions about new and ongoing listed company coverage, including initiation, assumption or termination of coverage, based on various factors including: market capitalisation, trading volume, relevance to our institutional investor-clients,

availability of information allowing formation and maintenance of a reasonable investment view, internal resourcing and availability of suitable analysts, or other factors of a regulatory nature as may be encountered from time to time.

In the preparation of Credit Suisse's research reports, Credit Suisse may have had assistance from the company (including but not limited to discussions with management of the company and visits to certain sites of the company).

As at the date of this report, Credit Suisse has financial interests that aggregate to an amount equal to or more than 1% of the market capitalization of (1818.HK, 2009.HK, 0914.HK, 3323.HK, 9988.HK).

This research report is authored by:

**Credit Suisse International** Andrew Garthwaite ; Robert Griffiths ; Nicolas Wylenzek ; Mengyuan Yuan ; Asim Ali ; Timothy O'Sullivan

To the extent this is a report authored in whole or in part by a non-U.S. analyst and is made available in the U.S., the following are important disclosures regarding any non-U.S. analyst contributors: The non-U.S. research analysts listed below (if any) are not registered/qualified as research analysts with FINRA. The non-U.S. research analysts listed below may not be associated persons of CSSU and therefore may not be subject to the FINRA 2241 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

**Credit Suisse International** Andrew Garthwaite ; Robert Griffiths ; Nicolas Wylenzek ; Mengyuan Yuan ; Asim Ali ; Timothy O'Sullivan

### Important MSCI Disclosures

The MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, re-disseminated or used to create and financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates.

The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of Morgan Stanley Capital International Inc. and Standard & Poor's. GICS is a service mark of MSCI and S&P and has been licensed for use by Credit Suisse.

### Important Credit Suisse HOLT Disclosures

The HOLT methodology does not assign ratings or a target price to a security. It is an analytical tool that involves use of a set of proprietary quantitative algorithms and warranted value calculations, collectively called the HOLT valuation model, that are consistently applied to all the companies included in its database. Third-party data (including consensus earnings estimates) are systematically translated into a number of default variables and incorporated into the algorithms available in the HOLT valuation model. The source financial statement, pricing, and earnings data provided by outside data vendors are subject to quality control and may also be adjusted to more closely measure the underlying economics of firm performance. These adjustments provide consistency when analyzing a single company across time, or analyzing multiple companies across industries or national borders. The default scenario that is produced by the HOLT valuation model establishes a warranted price for a security, and as the third-party data are updated, the warranted price may also change. The default variables may also be adjusted to produce alternative warranted prices, any of which could occur. The warranted price is an algorithmic output applied systematically across all companies based on historical levels and volatility of returns. Additional information about the HOLT methodology is available on request.

CFROI, CFROE, HOLT, HOLT Lens, HOLTfolio, "Clarity is Confidence" and "Powered by HOLT" are trademarks or registered trademarks of Credit Suisse Group AG or its affiliates in the United States and other countries.

HOLT is a corporate performance and valuation advisory service of Credit Suisse.

© 2020 Credit Suisse Group AG and its subsidiaries and affiliates. All rights reserved.

Important disclosures regarding companies that are the subject of this report are available by calling +1 (877) 291-2683. The same important disclosures, with the exception of valuation methodology and risk discussions, are also available on Credit Suisse's disclosure website at <https://rave.credit-suisse.com/disclosures>. For valuation methodology and risks associated with any recommendation, price target, or rating referenced in this report, please refer to the disclosures section of the most recent report regarding the subject company.

This report is produced by subsidiaries and affiliates of Credit Suisse operating under its Global Markets Division. For more information on our structure, please use the following link: <https://www.credit-suisse.com/who-we-are>. This report may contain material that is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject Credit Suisse or its affiliates ("CS") to any registration or licensing requirement within such jurisdiction. All material presented in this report, unless specifically indicated otherwise, is under copyright to CS. None of the material, nor its content, nor any copy of it, may be altered in any way, transmitted to, copied or distributed to any other party, without the prior express written permission of CS. All trademarks, service marks and logos used in this report are trademarks or service marks or registered trademarks or service marks of CS or its affiliates. The information, tools and material presented in this report are provided to you for information purposes only and are not to be used or considered as an offer or the solicitation of an offer to sell or to buy or subscribe for securities or other financial instruments. CS may not have taken any steps to ensure that the securities referred to in this report are suitable for any particular investor. CS will not treat recipients of this report as its customers by virtue of their receiving this report. The investments and services contained or referred to in this report may not be suitable for you and it is recommended that you consult an independent investment advisor if you are in doubt about such investments or investment services. Nothing in this report constitutes investment, legal, accounting or tax advice, or a representation that any investment or strategy is suitable or appropriate to your individual circumstances, or otherwise constitutes a personal recommendation to you. Please note in particular that the bases and levels of taxation may change. Information and opinions presented in this report have been obtained or derived from sources believed by CS to be reliable, but CS makes no representation as to their accuracy or completeness. CS accepts no liability for loss arising from the use of the material presented in this report, except that this exclusion of liability does not apply to the extent that such liability arises under specific statutes or regulations applicable to CS. This report is not to be relied upon in substitution for the exercise of independent judgment. CS may have issued, and may in the future issue, other communications that are inconsistent with, and reach different conclusions from, the information presented in this report. Those communications reflect the different assumptions, views and analytical methods of the analysts who prepared them and CS is under no obligation to ensure that such other communications are brought to the attention of any recipient of this report. Some investments referred to in this report will be offered solely by a single entity and in the case of some investments solely by CS, or an associate of CS or CS may be the only market maker in such investments. Past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied, is made regarding future performance. Information, opinions and estimates contained in this report reflect a judgment at its original date of publication by CS and are subject to change without notice. The price, value of and income from any of the securities or financial instruments mentioned in this report can fall as well as rise. The value of securities and financial instruments is subject to exchange rate fluctuation that may have a positive or adverse effect on the price or income of such securities or financial instruments. Investors in securities such as ADRs, the values of which are influenced by currency volatility, effectively assume this risk. Structured securities are complex instruments, typically involve a high degree of risk and are intended for sale only to sophisticated investors who are capable of understanding and assuming the risks involved. The market value of any structured security may be affected by changes in economic, financial and political factors (including, but not limited to, spot and forward interest and exchange rates), time to maturity, market conditions and volatility, and the credit quality of any issuer or reference issuer. Any investor interested in purchasing a structured product should conduct their own investigation and analysis of the product and consult with their own professional advisers as to the risks involved in making such a purchase. Some investments discussed in this report may have a high level of volatility. High volatility investments may experience sudden and large falls in their value causing losses when that investment is realised. Those losses may equal your original investment. Indeed, in the case of some investments the potential losses may exceed the amount of initial investment and, in such circumstances, you may be required to pay more money to support those losses. Income yields from investments may fluctuate and, in consequence, initial capital paid to make the investment may be used as part of that income yield. Some investments may not be readily realisable and it may be difficult to sell or realise those investments, similarly it may prove difficult for you to obtain reliable information about the value, or risks, to which such an investment is exposed. This report may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the report refers to website material of CS, CS has not reviewed any such site and takes no responsibility for the content contained therein. Such address or hyperlink (including addresses or hyperlinks to CS's own website material) is provided solely for your convenience and information and the content of any such website does not in any way form part of this document. Accessing such website or following such link through this report or CS's website shall be at your own risk.

This report is issued and distributed in **European Union (except Germany and Spain)**: by Credit Suisse Securities (Europe) Limited, One Cabot Square, London E14 4QJ, England, which is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority; **Spain**: Credit Suisse Securities, Sociedad de Valores, S.A. ("CSSSV") regulated by the Comisión Nacional del Mercado de Valores; **Germany**: Credit Suisse (Deutschland) Aktiengesellschaft regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht ("BaFin"); **United States**: Credit Suisse Securities (USA) LLC; **Canada**: Credit Suisse Securities (Canada), Inc.; **Switzerland**: Credit Suisse AG; **Brazil**: Banco de Investimentos Credit Suisse (Brasil) S.A. or its affiliates; **Mexico**: Banco Credit Suisse (México), S.A., Institución de Banca Múltiple, Grupo Financiero Credit Suisse (México) and Casa de Bolsa Credit Suisse (México), S.A. de C.V., Grupo Financiero Credit Suisse (México) ("Credit Suisse Mexico"); This document has been prepared for information purposes only and is exclusively distributed in Mexico to Institutional Investors. Credit Suisse Mexico is not responsible for any onward distribution of this report to non-institutional investors by any third party. The authors of this report have not received payment or compensation from any entity or company other than from the relevant Credit Suisse Group company employing them; **Japan**: by Credit Suisse Securities (Japan) Limited, Financial Instruments Firm, Director-General of Kanto Local Finance Bureau (Kinsisho) No. 66, a member of Japan Securities Dealers Association, The Financial Futures Association of Japan, Japan Investment Advisers Association, Type II Financial Instruments Firms Association; **Hong Kong**: Credit Suisse (Hong Kong) Limited; **Australia**: Credit Suisse Equities (Australia) Limited; **Thailand**: Credit Suisse Securities (Thailand) Limited, regulated by the Office of the Securities and Exchange Commission, Thailand, having registered address at 990 Abdulrahman Place, 27th Floor, Unit 2701, Rama IV Road, Silom, Bangkok, Bangkok10500, Thailand, Tel. +66 2614 6000; **Malaysia**: Credit Suisse Securities (Malaysia) Sdn Bhd; **Singapore**: Credit Suisse AG, Singapore Branch; **India**: Credit Suisse Securities (India) Private Limited (CIN no.U67120MH1996PTC104392) regulated by the Securities and Exchange Board of India as Research Analyst (registration no. INH 000001030) and as Stock Broker (registration no. INZ000248233), having registered address at 9th Floor, Ceejay House, Dr.A.B. Road, Worli, Mumbai - 18, India, T- +91-22 6777 3777; **South Korea**: Credit Suisse Securities (Europe) Limited, Seoul Branch; **Taiwan**: Credit Suisse AG Taipei Securities Branch; **Indonesia**: PT Credit Suisse Sekuritas Indonesia; **Philippines**: Credit Suisse Securities (Philippines) Inc., and elsewhere in the world by the relevant authorised affiliate of the above.

#### Additional Regional Disclaimers

**Australia**: Credit Suisse Securities (Europe) Limited ("CSSEL") and Credit Suisse International ("CSI") are authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority ("FCA") and the Prudential Regulation Authority under UK laws, which differ from Australian Laws. CSSEL and CSI do not hold an Australian Financial Services Licence ("AFSL") and are exempt from the requirement to hold an AFSL under the Corporations Act (Cth) 2001 ("Corporations Act") in respect of the financial services provided to Australian wholesale clients (within the meaning of section 761G of the Corporations Act) (hereinafter referred to as "Financial Services"). This material is not for distribution to retail clients and is directed exclusively at Credit Suisse's professional clients and eligible counterparties as defined by the FCA, and wholesale clients as defined under section 761G of the Corporations Act. Credit Suisse (Hong Kong) Limited ("CSHK") is licensed and regulated by the Securities and Futures Commission of Hong Kong under the laws of Hong Kong, which differ from Australian laws. CSHK does not hold an AFSL and is exempt from the requirement to hold an AFSL under the Corporations Act in respect of providing Financial Services. Investment banking services in the United States are provided by Credit Suisse Securities (USA) LLC, an affiliate of Credit Suisse Group. CSSU is regulated by the United States Securities and Exchange Commission under United States laws, which differ from Australian laws. CSSU does not hold an AFSL and is exempt from the requirement to hold an AFSL under the Corporations Act in respect of providing Financial Services. Credit Suisse Asset Management LLC (CSAM) is authorised by the Securities and Exchange Commission under US laws, which differ from Australian laws. CSAM does not hold an AFSL and is exempt from the requirement to hold an AFSL under the Corporations Act in respect of providing Financial Services. This material is provided solely to Institutional Accounts (as defined in the FINRA rules) who are Eligible Contract Participants (as defined in the US Commodity Exchange Act). Credit Suisse Equities (Australia) Limited (ABN 35 068 232 708) ("CSEAL") is an AFSL holder in Australia (AFSL 237237).

**Malaysia**: Research provided to residents of Malaysia is authorised by the Head of Research for Credit Suisse Securities (Malaysia) Sdn Bhd, to whom they should direct any queries on +603 2723 2020.

**Singapore**: This report has been prepared and issued for distribution in Singapore to institutional investors, accredited investors and expert investors (each as defined under the Financial Advisers Regulations) only, and is also distributed by Credit Suisse AG, Singapore Branch to overseas investors (as defined under the Financial Advisers Regulations). Credit Suisse AG, Singapore Branch may distribute reports produced by its foreign entities or affiliates pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Singapore recipients should contact Credit Suisse AG, Singapore Branch at +65-6212-2000 for matters arising from, or in connection with, this report. By virtue of your status as an institutional investor, accredited investor, expert investor or overseas investor, Credit Suisse AG, Singapore Branch is exempted from complying with certain compliance requirements under the Financial Advisers Act, Chapter 110 of Singapore (the "FAA"), the Financial Advisers Regulations and the relevant Notices and Guidelines issued thereunder, in respect of any financial advisory service which Credit Suisse AG, Singapore Branch may provide to you.

**EU**: This report has been produced by subsidiaries and affiliates of Credit Suisse operating under its Global Markets Division

In jurisdictions where CS is not already registered or licensed to trade in securities, transactions will only be effected in accordance with applicable securities legislation, which will vary from jurisdiction to jurisdiction and may require that the trade be made in accordance with applicable exemptions from registration or licensing requirements.

This material is issued and distributed in the U.S. by CSSU, a member of NYSE, FINRA, SIPC and the NFA, and CSSU accepts responsibility for its contents. Clients should contact analysts and execute transactions through a Credit Suisse subsidiary or affiliate in their home jurisdiction unless governing law permits otherwise.

CS may provide various services to US municipal entities or obligated persons ("municipalities"), including suggesting individual transactions or trades and entering into such transactions. Any services CS provides to municipalities are not viewed as "advice" within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. CS is providing any such services and related information solely on an arm's length basis and not as an advisor or fiduciary to the municipality. In connection with the provision of the any such services, there is no agreement, direct or indirect, between any municipality (including the officials, management, employees or agents thereof) and CS for CS to provide advice to the municipality. Municipalities should consult with their financial, accounting and legal advisors regarding any such services provided by CS. In addition, CS is not acting for direct or indirect compensation to solicit the municipality on behalf of an unaffiliated broker, dealer, municipal securities dealer, municipal advisor, or investment adviser for the purpose of obtaining or retaining an engagement by the municipality for or in connection with Municipal Financial Products, the issuance of municipal securities, or of an investment adviser to provide investment advisory services to or on behalf of the municipality. If this report is being distributed by a financial institution other than Credit Suisse AG, or its affiliates, that financial institution is solely responsible for distribution. Clients of that institution should contact that institution to effect a transaction in the securities mentioned in this report or require further information. This report does not constitute investment advice by Credit Suisse to the clients of the distributing financial institution, and neither Credit Suisse AG, its affiliates, and their respective officers, directors and employees accept any liability whatsoever for any direct or consequential loss arising from their use of this report or its content. No information or communication provided herein or otherwise is intended to be, or should be construed as, a recommendation within the meaning of the US Department of Labor's final regulation defining "investment advice" for purposes of the Employee Retirement Income Security Act of 1974, as amended and Section 4975 of the Internal Revenue Code of 1986, as amended, and the information provided herein is intended to be general information, and should not be construed as, providing investment advice (impartial or otherwise).

Copyright © 2020 CREDIT SUISSE AG and/or its affiliates. All rights reserved.

When you purchase non-listed Japanese fixed income securities (Japanese government bonds, Japanese municipal bonds, Japanese government guaranteed bonds, Japanese corporate bonds) from CS as a seller, you will be requested to pay the purchase price only.