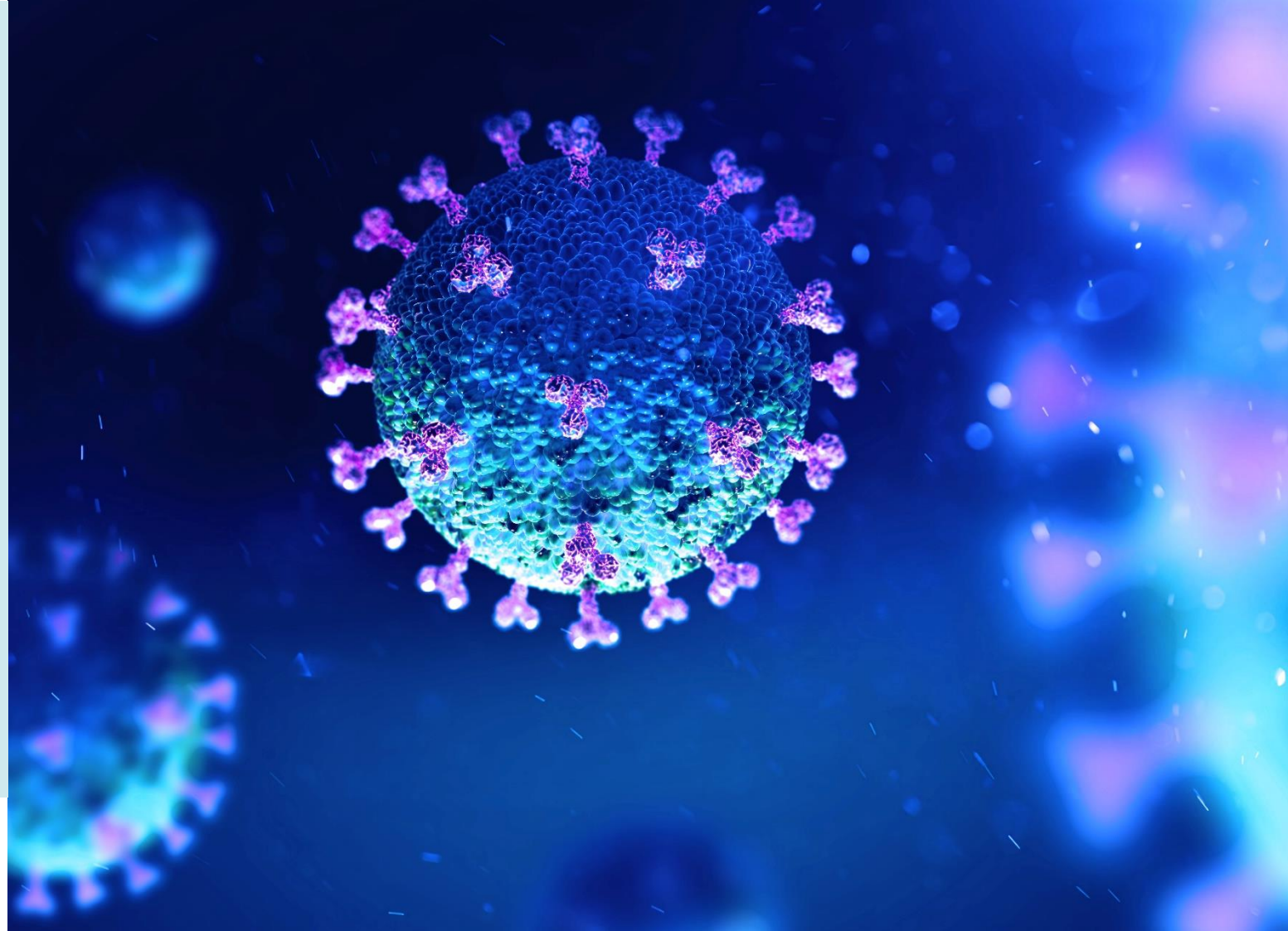


COVID-19: QUARANTINED ECONOMICS

Economic, Capital Markets
and Industry Research

Global Economic Outlook

as of March 2020



PRE COVID-19: WALL OF FRAGILITIES



FRAGMENTATION

- February 14: US section 301 tariffs of 15% imposed on 01/09/2019 (subset of USD300bn) cut in half.
- Average US tariffs on imports from China remain elevated at 19.3%.



ECONOMIC FLATLINE

- No full-fledged global recession
- Soft landing of the economy: after +3.1% in 2018, +2.5% in 2019, +2.4% in 2020E (expected before COVID-19)



EUROPEAN HOTSPOTS

- The UK formally left the EU on 31 January 2020, but there is still a lot to talk about and months of negotiations to come. Expect a longer transition
- Weak governing coalitions



USA 2020 ELECTION

- Additional volatility, in the U.S., on the back of the campaign: trade policies, financial vulnerabilities, the fragile emerging markets and high valuations will create more volatility.



PROTESTS

- From Hong Kong to Santiago de Chile



OVERVALUATION

- Overvalued equity markets
- Increasing risks for corporates in U.S., Eurozone & China (SOEs)
- Neo-asset managers



ZERONOMICS

- End of period forecasts: Bund -0.6% 2019, -0.1% 2020. 10-year U.S: 1.6% 2019, 1.9% 2020 – before COVID-19



CASH PILES

- Companies have hoarded cash
- High savings rate among households
- Low unemployment rate and steady increase of salaries



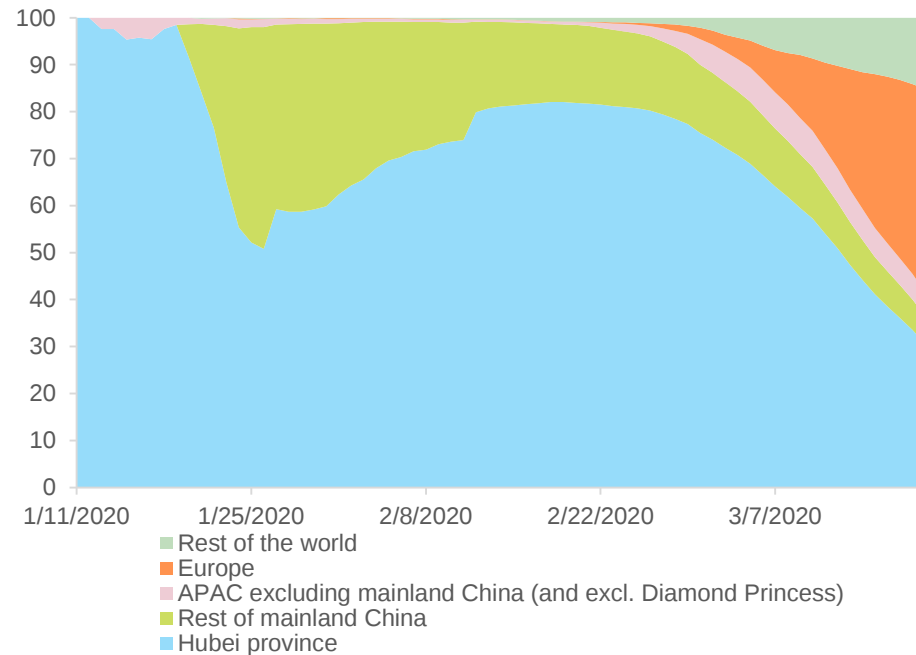
Central Banks

- Central banks allowed a stabilization of the protectionist shock
- Low inflation was favorable to consumption

POCKETS OF RESILIENCE

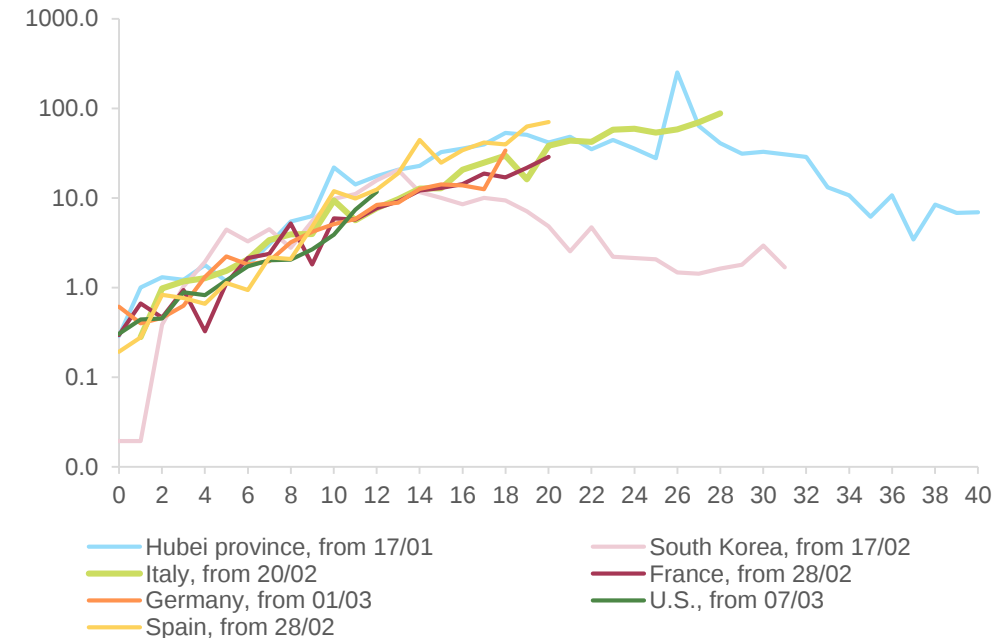
COVID-19 PANDEMIC COULD LAST TILL MIDYEAR

Distribution of confirmed cases of COVID-19 (% , data up to 19 March 2020)



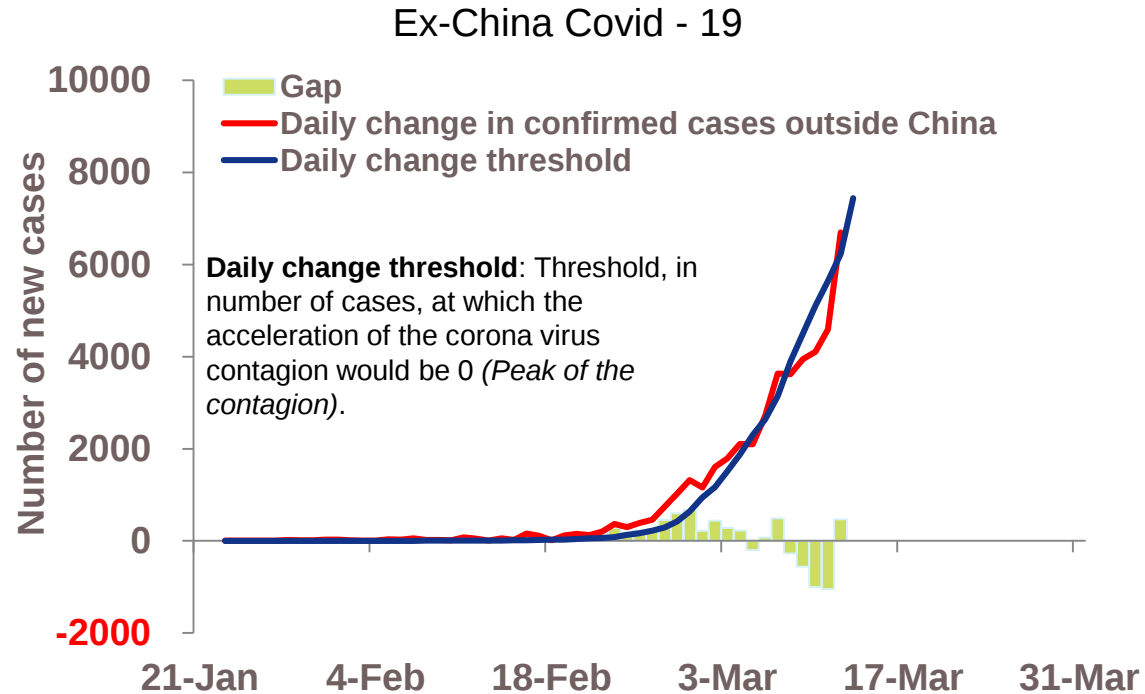
Until 26 February, more than 95% of confirmed cases of COVID-19 were in mainland China. The distribution has since spread to the rest of the world, with c.43% of cases located in Europe, as of 19 March.

Daily change in number of confirmed cases per 1mln people (data up to 19 March 2020)

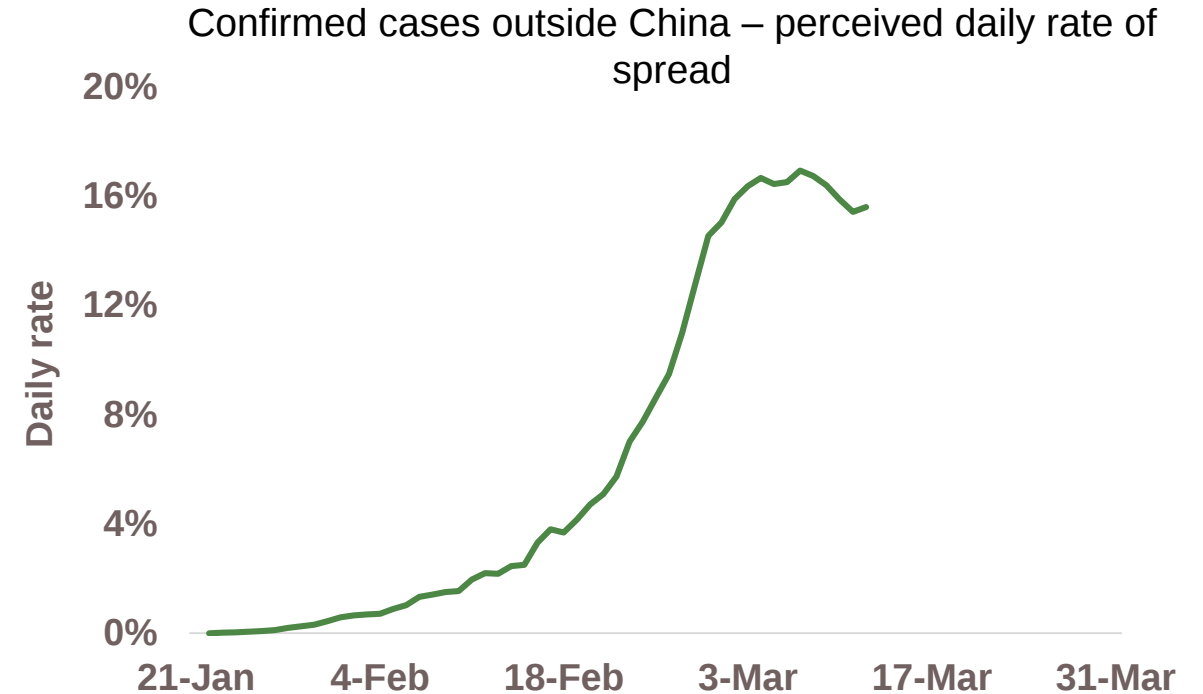


The spread of the epidemic in China took 26 days to recede (on 18 February), after confinement measures were put in place. They have started to be gradually lifted from mid-March. Italy, France, Germany and the U.S. are trailing the Hubei province by nearly two months.

NOTHING TO FEAR ... BUT FEAR ITSELF



The challenge facing capital markets today is not one of pricing risk (known unknowns). It is instead one of pricing uncertainty (unknown unknowns): no one knows what cannot happen, but the likelihood of a bad outcome is perceived to rise, as the number of confirmed cases outside China is not showing any sign of slowing down.



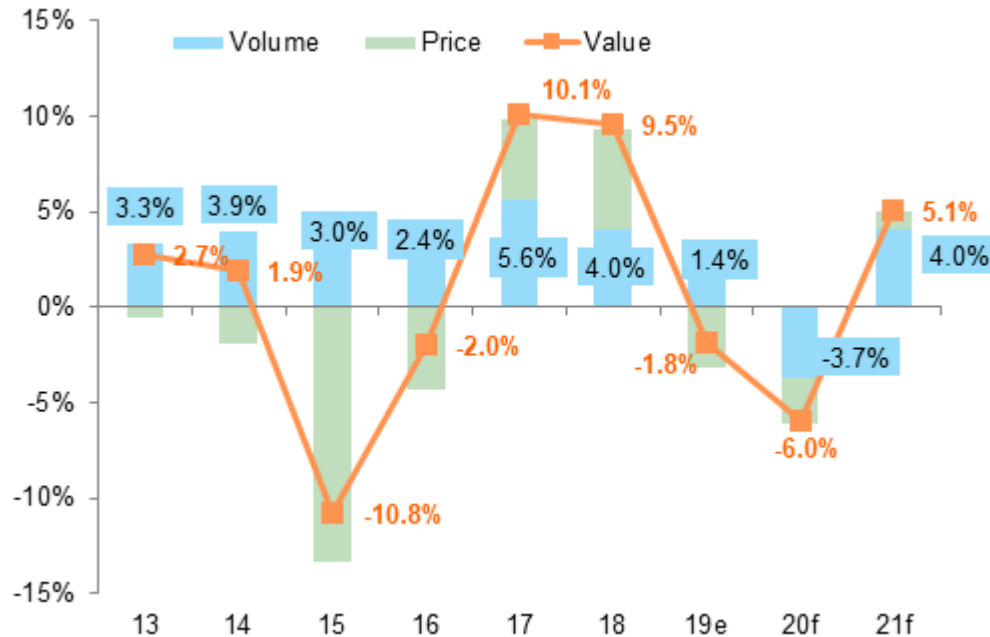
In this context, capital markets cannot afford to wait for hard economic data to confirm their fears. Yet, the likelihood that developed countries can effectively contain and then stop the epidemic, both physically and economically, is certainly not zero. Most likely, it is even higher than the likelihood of the adverse outcome. When the perceived rate of spreading reverses, this may be the trigger for a market recovery.

Source: W.H.O. daily situation reports, AZ Research

PASS-THROUGH 1: GLOBAL TRADE INTO RECESSION



Global Trade growth in volume and value (% , y/y)



Sources: IHS Markit, Euler Hermes, Allianz Research

We expect two quarters of recession in trade in goods and services (Q1 and Q2) which will bring the annual figure to -3.7% in 2020. In value terms, plummeting commodity prices will weigh on prices.

Cost for global trade for one month of confinement (USDbn)

	Goods 20% shock	Travel No travel during one month	Transport services A 50% shock due to the closure of borders & containment measures	Total
EU 28	104.1	34.8	16.1	155
China	72.0	24.0	8.0	104
US	42.8	11.1	4.2	58
Total per month	219	70	28	317
Total per quarter	436	282	54	772

* For goods and transport services 1 month of lockdown, 1 month of 70% back to normal activity and 1 month of 80% back to normal activity

For travel we take full impact for three months

Sources: ITC, Euler Hermes

We estimate that one month of confinement in the EU, China and the US would lead to USD317bn of export losses at the global scale. Over a quarter, taking into account a progressive come back to normal levels of activity, the losses would reach more than USD700bn

CLOSURE OF BORDERS IS A KEY RISK FOR SUPPLY CHAINS IN GERMANY, ITALY AND FRANCE



Western Europe sector vulnerabilities to imports from Eastern Europe

	Belgium	France	Germany	Italy	Netherlands	Spain
Agrifood	0.22%	0.41%	1.11%	1.00%	0.45%	0.51%
Automotive	0.60%	1.37%	2.82%	0.99%	0.73%	1.14%
Chemicals	0.13%	0.46%	1.02%	0.52%	0.37%	0.43%
Commodities	0.40%	0.04%	0.17%	0.34%	0.22%	0.07%
Construction	0.48%	0.84%	2.25%	1.84%	0.69%	0.61%
Electronics	0.19%	0.42%	0.88%	0.60%	0.25%	0.41%
Energy	0.01%	0.02%	0.22%	0.15%	0.14%	0.08%
Household Equipment	0.73%	0.84%	1.98%	1.18%	0.72%	0.85%
Machinery & Equipment	0.49%	0.67%	2.43%	0.73%	0.55%	0.74%
Metals	0.23%	0.36%	1.23%	0.71%	0.40%	0.35%
Paper	0.16%	0.41%	1.65%	0.68%	0.53%	0.43%
Pharmaceuticals	0.08%	0.24%	0.50%	0.20%	0.29%	0.31%
Textile	0.18%	0.31%	0.78%	1.07%	0.24%	0.18%
Transport Equipment	0.23%	0.18%	0.73%	0.54%	0.45%	0.18%
Total (incl. Others)	0.26%	0.56%	1.39%	0.74%	0.43%	0.52%

Sources : ITC, Euler Hermes, Allianz Research

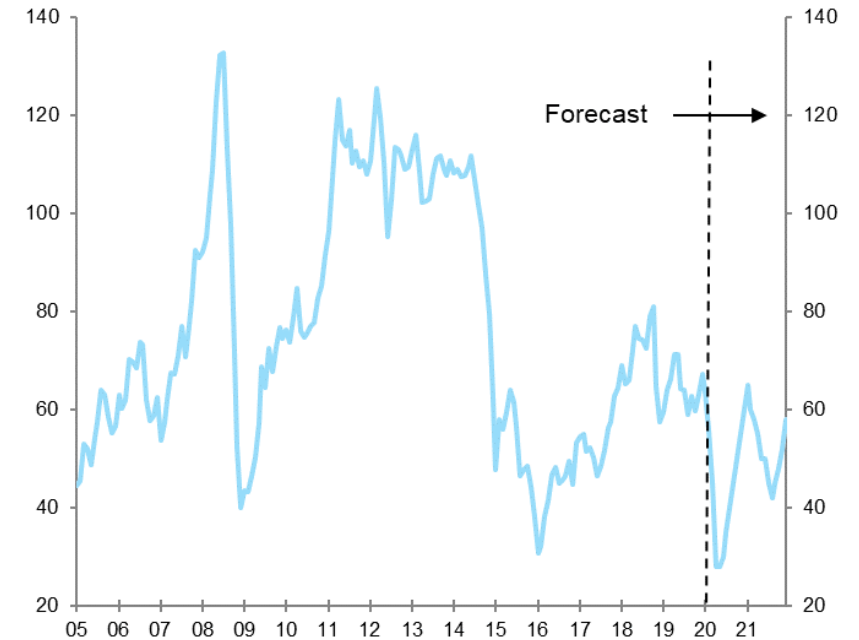
Germany appears as the most dependent to imports from Eastern Europe (most notably in the agri-food, construction and machinery and equipment sectors). **Germany** is followed by **Italy** (with the highest dependency in construction, household equipment, textile) and **France** (with automotive, construction and household equipment). Sectors the most at risk of supply chain disruption are the automotive, construction and household equipment sectors. It appears that the chemicals, electronics, pharmaceuticals and transport equipment are the most resilient due to low levels of importations from Eastern Europe. When looking at the risk of insolvencies due to sourcing issues, in the top 5 sectors/countries most at risk, four sectors are in Germany: construction, paper, automotive and household equipment. The construction sector in France is the fifth sector.

PASS-THROUGH 2: FINANCIAL SHOCK (AS OF 19.03.20)



	19.03.2020	Year-to-date	ΔWeekly	19.03.2020 - 20.02.2020	19.03.2020 - 20.01.2020
Sovereign Yields (10y)	%	bps			
US	1.13	-78	28	-40	-71
Eurozone	-0.17	2	57	28	5
Germany	-0.17	2	57	28	5
France	42	12	-16	20	17
Italy	199	37	-49	63	41
Spain	109	43	-12	41	42
United Kingdom	0.72	-10	46	15	7
Japan	0.10	13	16	15	10
Emerging Markets (\$)	673	372	173	363	380
Corporate Credit - Investment Grade	bps	bps			
US	351	250	129	247	252
Europe	227	133	55	138	135
Corporate Credit - High Yield	bps	bps			
US	982	622	240	620	644
Europe	839	531	210	539	539
Foreign Exchange	level	%			
USD EUR	1.07	-4.7	-3.4	-0.9	-3.4
JPY USD	110.09	1.4	4.2	-1.8	-0.1
GBP EUR	0.92	8.3	4.2	9.8	8.0
Equities	level	%			
US	2409	-25.4	-2.9	-28.6	-27.6
Eurozone	2454	-34.5	-3.6	-35.8	-35.4
Germany	8610	-35.0	-6.0	-37.0	-36.4
France	3856	-35.5	-4.7	-36.4	-36.6
Italy	15467	-34.2	3.8	-38.3	-35.6
Spain	6396	-33.0	0.1	-35.6	-33.8
United Kingdom	5152	-31.7	-1.6	-30.7	-32.7
Japan	16553	-30.0	-10.8	-29.5	-31.3
Emerging Markets (\$)	766	-31.2	-13.2	-30.0	-33.1
World (\$)	1694	-28.2	-4.6	-30.0	-29.8
Equity Volatility	level	absolute change			
US	72.0	58.2	-3.5	56.4	59.9
Eurozone	78.4	64.4	6.8	64.3	67.1
Commodities	level	%			
Oil Brent (\$ per barrel)	26.9	-59.4	-17.8	-54.7	-58.7
Gold (\$ per ounce)	1475.0	-3.0	-6.1	-9.0	-5.5

Brent Crude price forecast



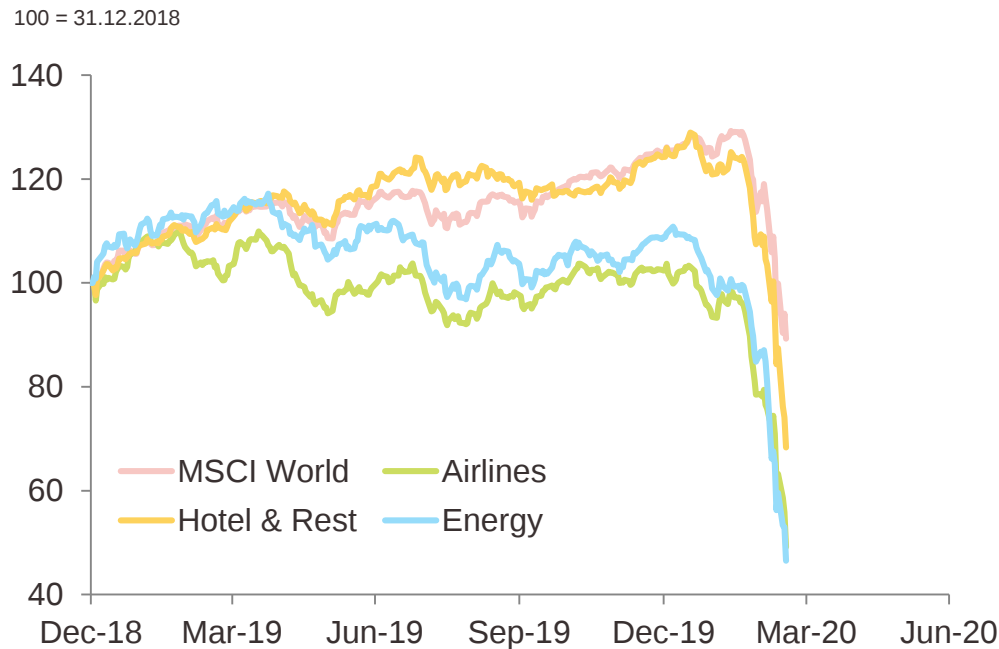
Source: Bloomberg, Euler Hermes, Allianz Research

We have revised down our 2020 oil price forecast to USD 41/bbl avg (Q2 average to USD 28/bbl) on the grounds of further demand forecast reduction globally on prolonged lockdowns lasting well into if not the entire Q2.

GLOBAL MONETARY AND FINANCIAL CONDITIONS: A HUGE TIGHTENING



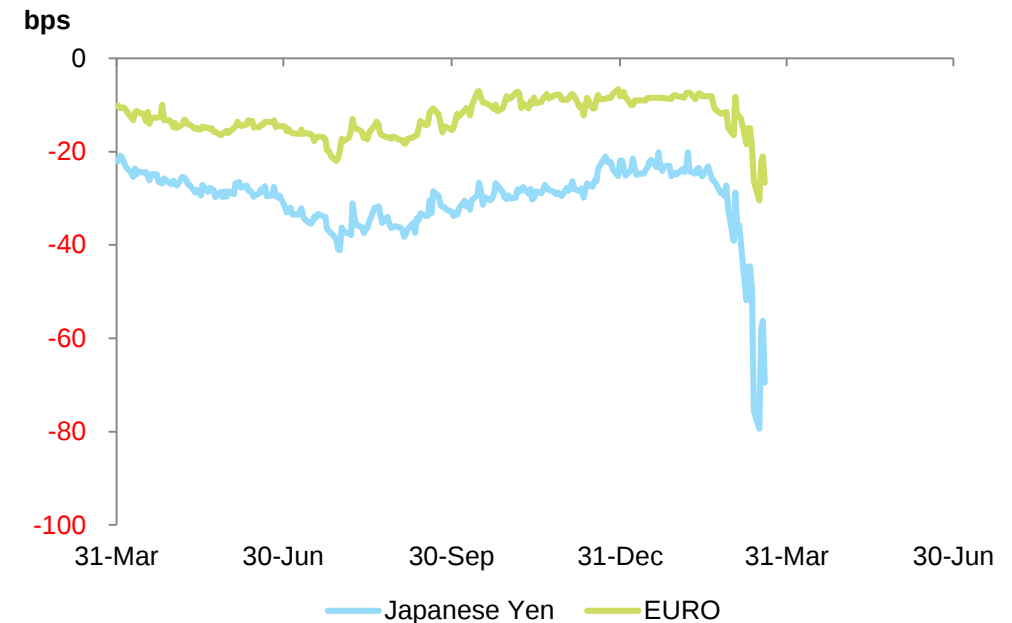
Global Equity Indices



Sources: Refinitiv, Allianz Research

The sharp correction of global equity prices also mirrors much stronger difficulties in issuing capital and financing any investment plan. The most exposed sectors to the current shock indeed under-perform and are likely to face obstacles in funding their activity

Major cross currency bases vs USD

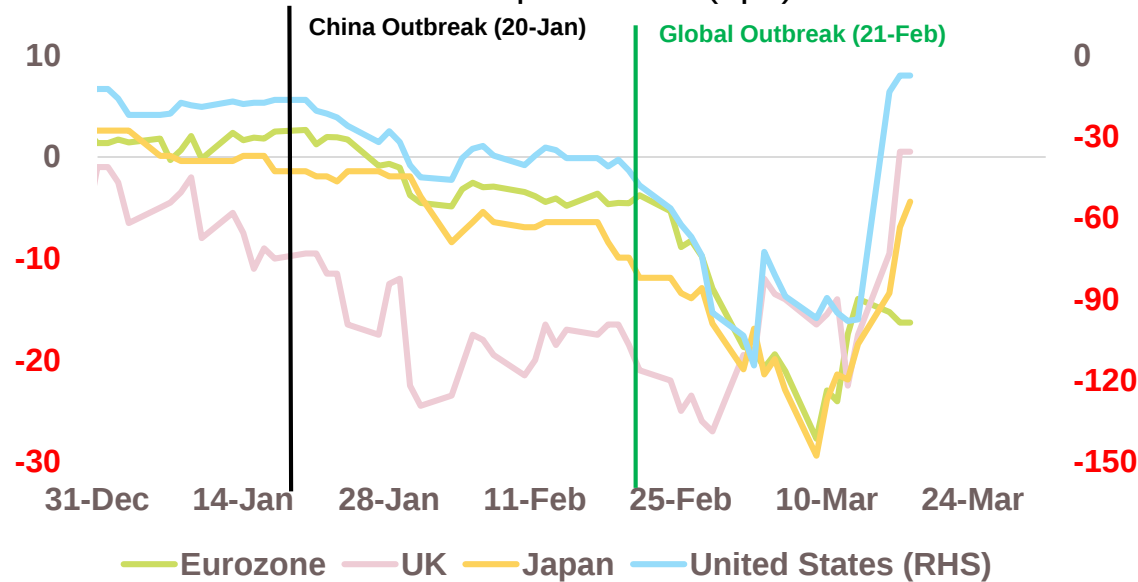


Sources: Bruegel, IHS Markit, Allianz Research

The strong appreciation of the Dollar, beside a significant widening of credit spreads, represents another contributor to a tightening of monetary and financial conditions, especially for emerging economies. It will be difficult to issue debt or refinance in the coming weeks

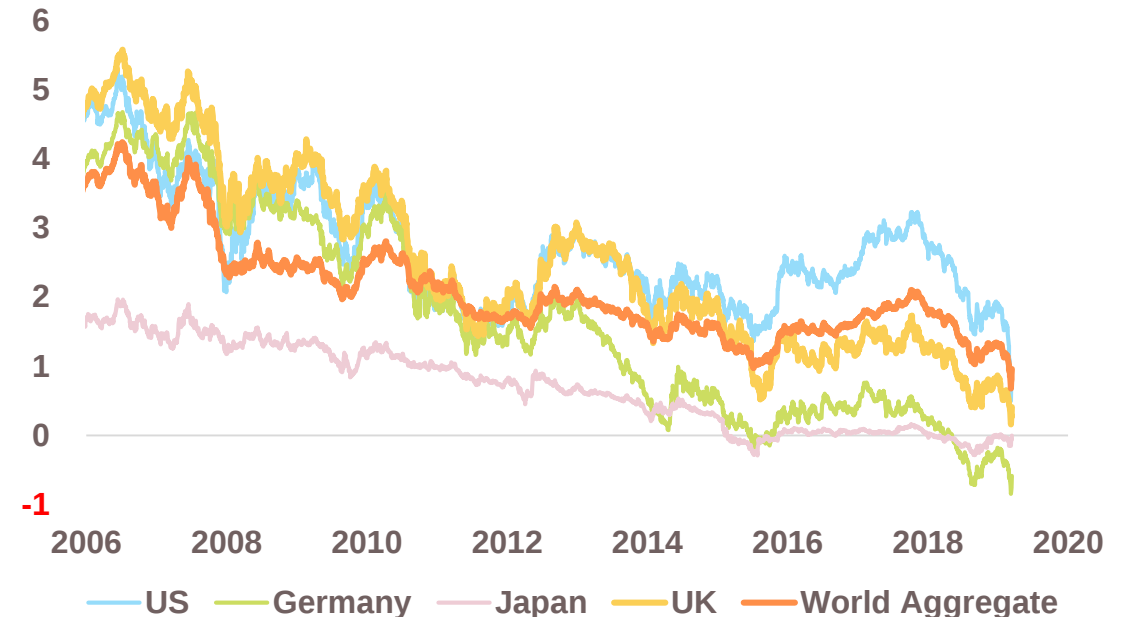
MONEY MARKETS: PRICING A GLOBAL RECESSION

12m ahead market-based monetary policy change expectations (bps)



As the Covid19 pandemic advances, money markets have increasingly priced in a sharp economic slowdown paired with an extremely dovish monetary policy stance. This situation became obvious after the US Fed cut 150bps from pre-Covid19 values. Similarly, EUR money markets are currently positioned for a 20bps cut even after the ECB recently decided to leave rates unchanged.

Global 10y Sovereign Markets (%)

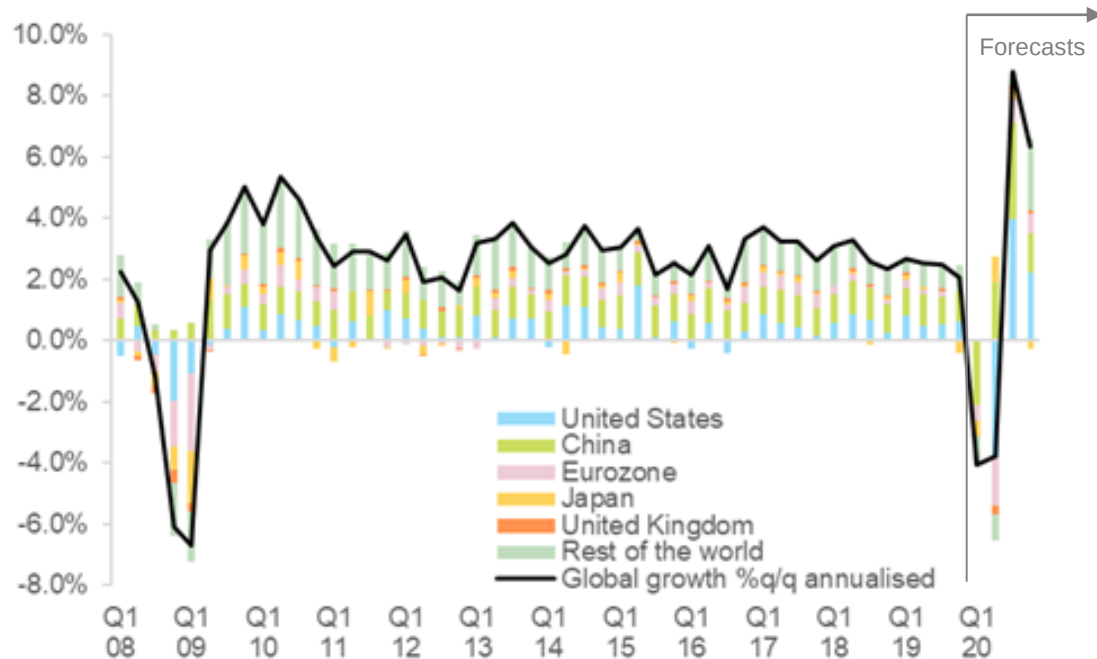


The current money market situation is far from optimistic as the ultra-low yields in short-term maturities are exerting an exogenous downside pressure on the long-end of the curve. At this point in time, it is fair to assume that recent market movements have significantly detached long-term yields from their fundamental determinants (Potential growth, long-term inflation, etc.).

Source: Refinitiv, AZ Research

PASS-THROUGH 3: SECLUSION RECESSION FOLLOWED BY U-SHAPE RECOVERY

Global real global GDP growth, q/q annualized



Sources: Euler Hermes, Allianz Research

We expect the supply and demand shocks, especially through confinement to push the global economy into recession in H1 2020 with the U.S. and the Eurozone being in recession. We expect a U shape recovery thereafter.

Real global GDP growth, annual, %

	2017	2018	2019	2020	2021
World GDP growth	3.3	3.1	2.5	0.8	3.0
United States	2.4	2.9	2.3	0.5	2.7
Latin America	0.9	1.0	0.0	-1.2	1.6
Brazil	1.1	1.3	1.1	-0.7	1.6
United Kingdom	1.8	1.3	1.4	-0.7	1.2
Eurozone members	2.7	1.9	1.2	-1.8	2.1
Germany	2.8	1.5	0.6	-1.8	2.2
France	2.4	1.7	1.3	-1.3	2.2
Italy	1.7	0.7	0.3	-3.5	1.7
Spain	2.9	2.4	2.0	-0.8	2.0
Russia	1.6	2.3	1.3	1.2	1.8
Turkey	7.5	2.8	0.9	2.5	4.0
Asia	5.4	4.9	4.4	3.0	4.4
China	6.9	6.7	6.1	4.0	5.8
Japan	2.2	0.3	0.7	-0.5	1.0
India	7.3	6.2	5.0	5.5	5.8
Middle East	1.2	1.1	0.6	0.2	2.3
Saudi Arabia	-0.7	2.4	0.2	1.2	2.0
Africa	3.1	2.7	1.9	0.8	2.4
South Africa	1.4	0.8	0.3	-0.5	0.7

* Weights in global GDP at market price, 2019

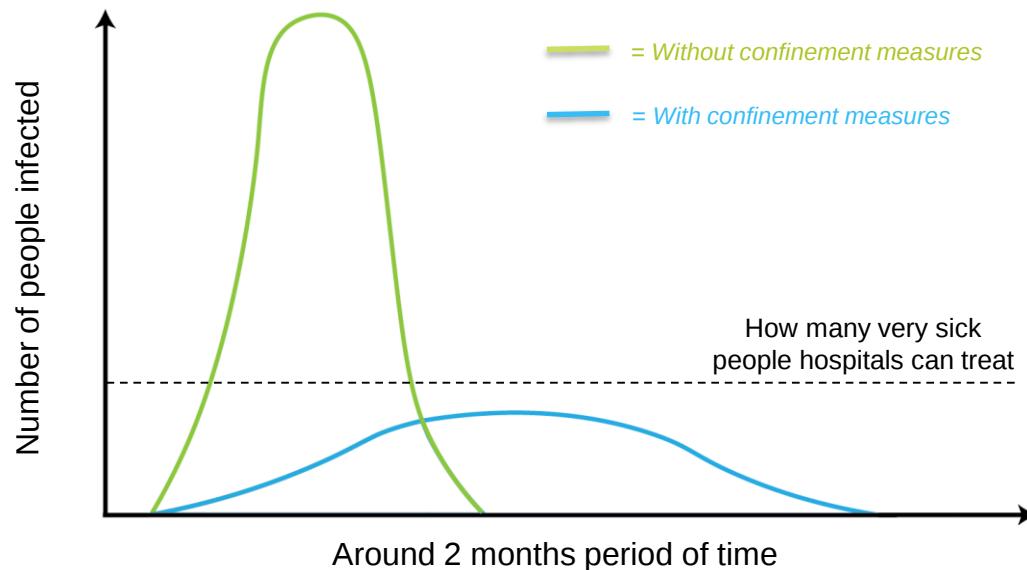
NB: The revisions refer to the changes in our forecasts since the last quarter
Fiscal year for India

Sources: Euler Hermes, Allianz Research

NB: the forecasts for the Eurozone take into account 1 month lockdown

POLICY TRADE-OFF: HEALTH VS. ECONOMIC COSTS

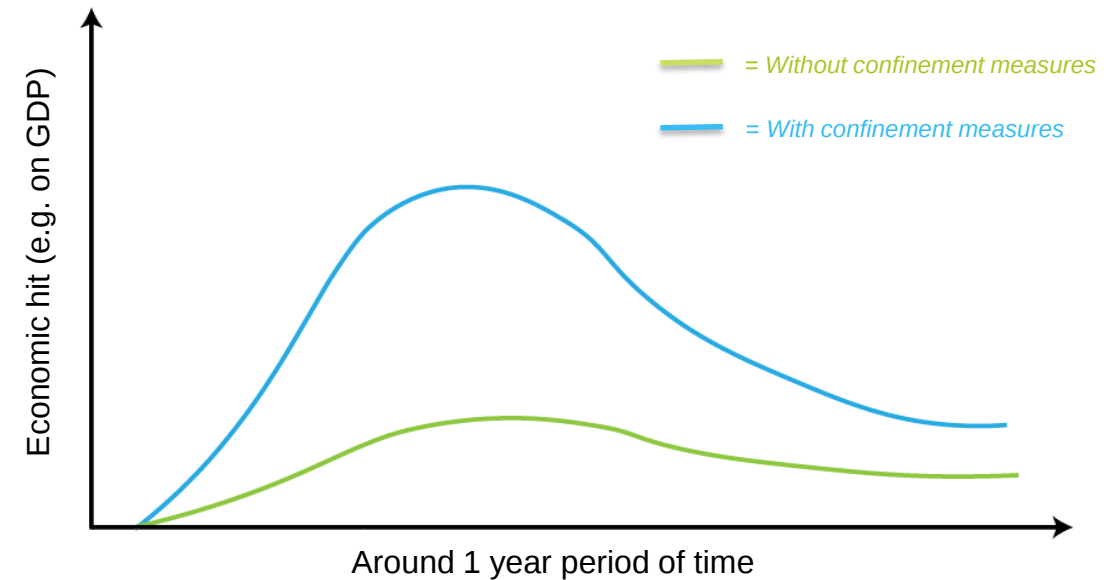
Contagion in different confinement scenarios



Sources: Euler Hermes, Allianz Research

Drastic confinement measures should help flatten the infection curve, which alleviates the pressure on medical systems. Very strict rules in East Asian countries seem to have proved efficient to control the COVID-19 outbreaks.

Economic hit in different confinement scenarios



Sources: Euler Hermes, Allianz Research

Confinement measures are very costly for economic activity, but probably necessary to contain the health and human costs of the epidemic.

POLICY BAZOOKAS: WAR ECONOMICS



Central Banks: Whatever it takes to “Bring it on”

ECB	FED	PBOC
- Bold & generous TLTRO terms with average rate below MRO plus an interim TLTRO round for immediate liquidity - EUR120bn QE envelope till end-2020 on top of monthly EUR20bn QE pace - temporary capital & operational relief to banks - PEPP EUR750bn plus informal drop in the 33% issuer limit	- 150bp rate cut - Restart of QE to the tune of USD700bn - USD1.5tn of supplementary liquidity injections in the repo market to backstop liquidity in the Treasury market - three-month credit in U.S. dollars on a regular basis and at a rate cheaper than usual arranged among G6 central banks - Instalment of commercial paper funding facility - Further increase in QE purchase - Liquidity swaps with major central banks - Money Market Mutual Fund Liquidity Facility	- 10bp cut to the policy rate (Loan Prime Rate) - Liquidity injection through open market operations: RMB1.7tn in early February. - Liquidity injection through medium-term lending: RMB300bn in total over February and March. - Liquidity injection through reserve requirement ratio cut: RMB550bn, with cut between 50-200bp depending on banks. - Credit support: RMB350bn provided by policy banks, RMB300bn earmarked loans from PBOC to banks.

Total fiscal stimulus and policies aimed at corporates

	EU	Germany	France	Italy	Spain	USA
<i>Total stimulus</i>	€37bn	€150bn (5% of GDP)	€45bn (2% of GDP)	€25bn (1.4% of GDP) + further €20bn likely	€17bn (1.4% of GDP)	\$1trn (4.5% of GDP)
<i>State loans & guarantees</i>	€28bn in loans to SMEs via the EIB, further ESM-backed loan facility discussed	€550bn in loans via KfW & unlimited if needed, €50bn for self-employed, export guarantees (€153bn)	€300bn in guarantees, unlimited if needed, €2 solidarity fund for the self-employed	€5bn (further increase under discussion)	€100bn, €400m credit line for tourism sector	\$250bn in SME loans
<i>Tax deferrals</i>		Easing rules to defer taxes, reduce prepayments, suspension of penalties and late-payments	€35 for one month tax deferral plus help with loan rescheduling, tax rebates	Tax suspension	€14bn in tax relief for SMEs and self-employed	income tax holidays for 2020
<i>Looser regulation</i>	Looser EU state aid, fiscal rules & banking regulation	Looser insolvency laws				Looser banking regulation
<i>Equity stakes / nationalizations</i>		TUI has reached out for state support	Support announced for Renault & PSA	Nationalization of Alitalia		\$50bn for airlines

LABOR MARKET: 65 MILLION PEOPLE POTENTIALLY IN NEED OF JOB SUPPORT AT EU LEVEL

Monthly new bank loans and stock of corporate debt, EUR bn



Sources: ECB, BIS, Euler Hermes, Allianz Research

Public guarantees in the Eurozone of EUR1000bn (EUR500bn in Germany, EUR300bn in France, EUR100bn in Spain) will help avoid company bankruptcy for 3 to 4 months.

Employment at risk and cost for public finances

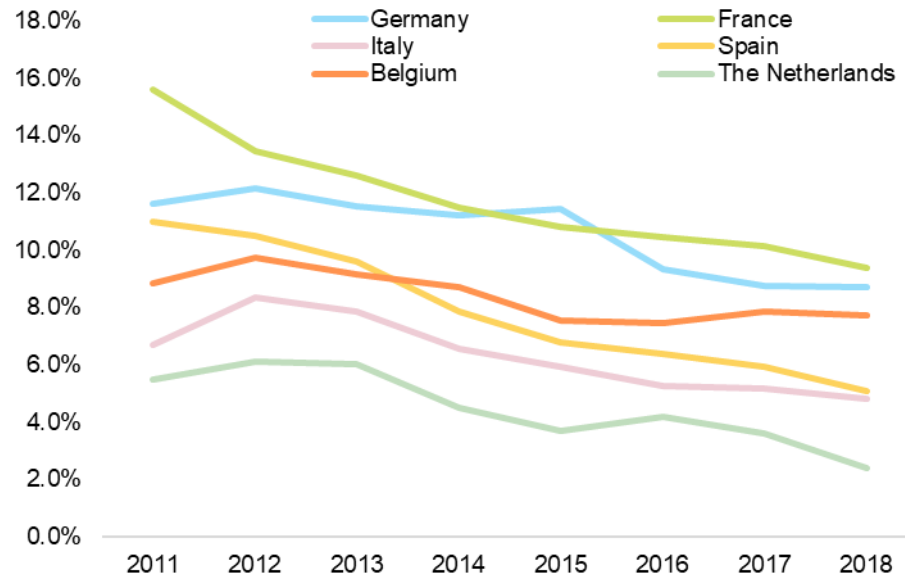
Cost of Kurzarbeit at 70% subsidy	Compensation (incl. employer social contributions, EUR bn) at risk	Full time-jobs at risk in Million
EU 27	140	65
Eurozone	122	49
Germany	40	12
France	25	7
Italy	16	8
Spain	12	9

Sources: Eurostat, Euler Hermes, Allianz Research

A lockdown is estimated to shutdown 30% of the economy and hence put jobs at risk given the temporary pause of activity. We estimate that 65 million people could be in need for partial unemployment benefits which would cost EUR140bn, or 0.9% of GDP

FIRMS AT RISK IN CORE EUROZONE: 13,000 WITH AN AVERAGE TURNOVER OF EUR40MN AT RISK

Share of SME & MidCaps at risk, % of total



Sources: Euler Hermes

We find that more than 13,000 SMEs & MidCaps (7% of total) in the six biggest Eurozone countries are at risk of going bust after persistent low profitability and turnover growth. We find that more than EUR500bn of turnover (or 4% of Eurozone GDP) could be at risk.

The share of SME & MidCaps at risk, % of total – top 5 sectors

Germany		France		Italy	
Construction	15%	Services	20%	Construction	16%
Metals	11%	Construction	19%	Agrifood	11%
Agrifood	11%	Retail	12%	Services	11%
Machinery	10%	Automotive	8%	Retail	9%
Services	10%	Agrifood	8%	Machinery	9%

Spain		Belgium		The Netherlands	
Agrifood	18%	Construction	20%	Services	26%
Construction	16%	Services	15%	Construction	12%
Services	15%	Agrifood	10%	Agrifood	11%
Transport	9%	Retail	9%	Automotive	9%
Automotive	6%	Transport	9%	Machinery	9%

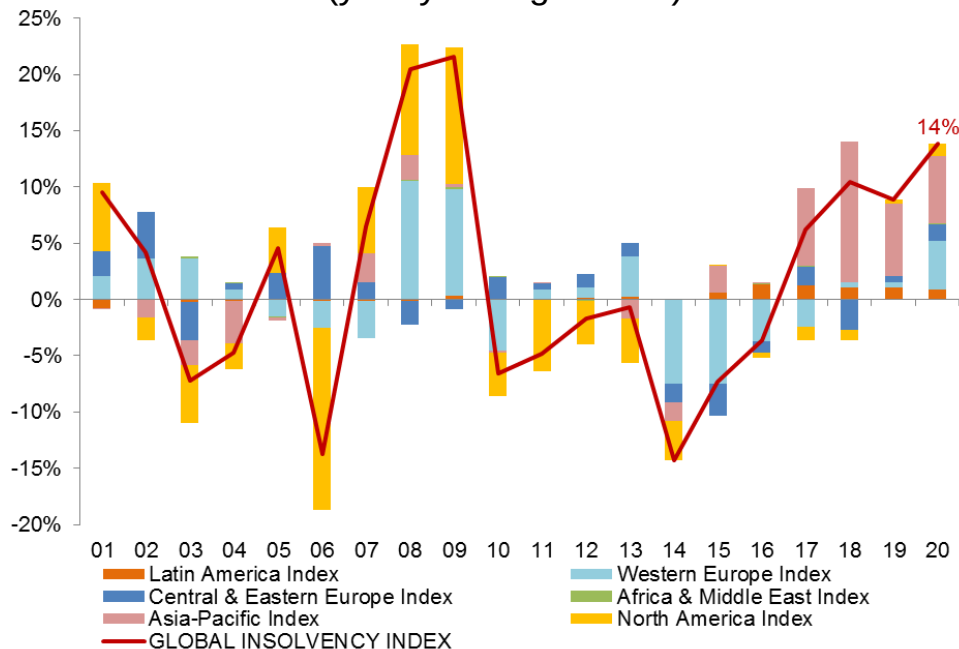
Sources: Euler Hermes

Firms at risk were mostly concentrated in three sectors: Construction, Agri-food and Services. The concentration in the top 5 sectors is highest in France (67%) and the Netherlands (67%) followed by Belgium (64%), Spain (63%), Germany (57%) and Italy (56%).

GLOBAL INSOLVENCIES HEADING TO NEW RECORDS SINCE 2008-2009

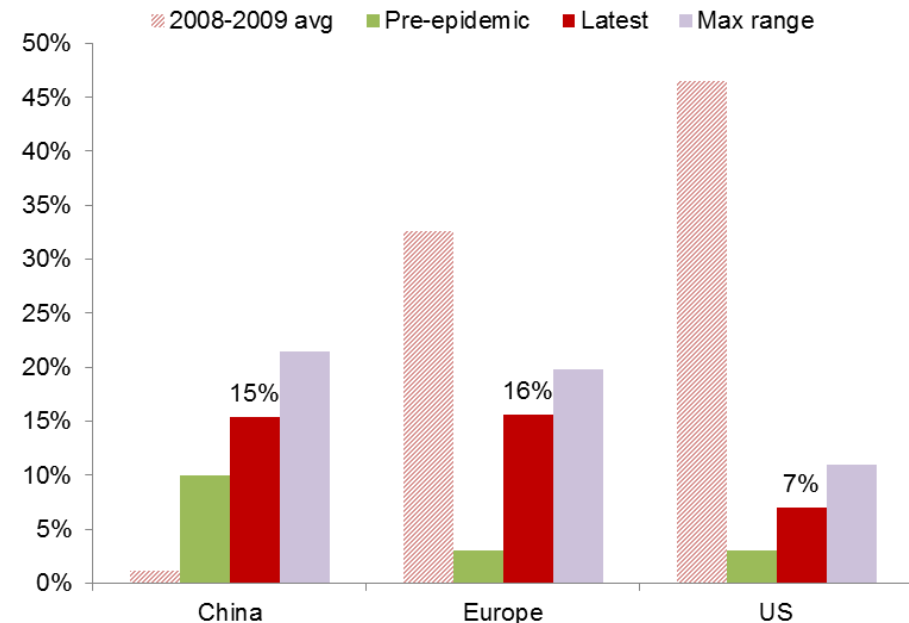


EH Global and Regional Insolvency Indices
(yearly changes in %)



Source: national statistics, Euler Hermes, Allianz Research

2020 re-forecasts – selected key countries and region



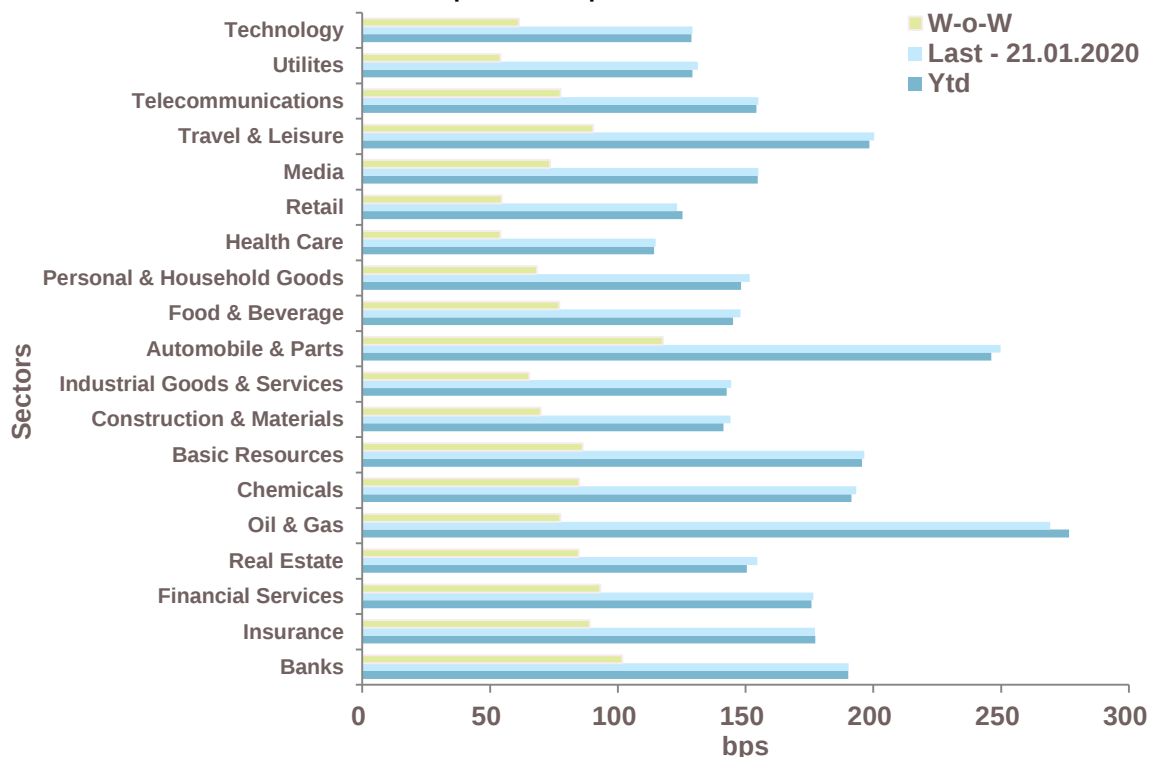
Source: national statistics, Euler Hermes, Allianz Research

Global insolvencies have the potential to increase by +14%, looking at historical sensibility to economic cycle and government interventions to support corporates (tax deferrals, state loans and guarantees, etc..) and to avoid top insolvencies and their domino effect (nationalization) – lowering insolvencies growth by 3 to 5 pp. This 4th consecutive year of rise would result from a +7% increase in the US, a +15% rise in China and a +16% surge in Europe. Final figures still depend on (i) the timing and magnitude of other policy measures yet to announced and (ii) the potential closures of business courts (which would create lags and delays in official registrations of liquidations and restructuring procedures).

CORPORATES: WHAT COULD WRONG?

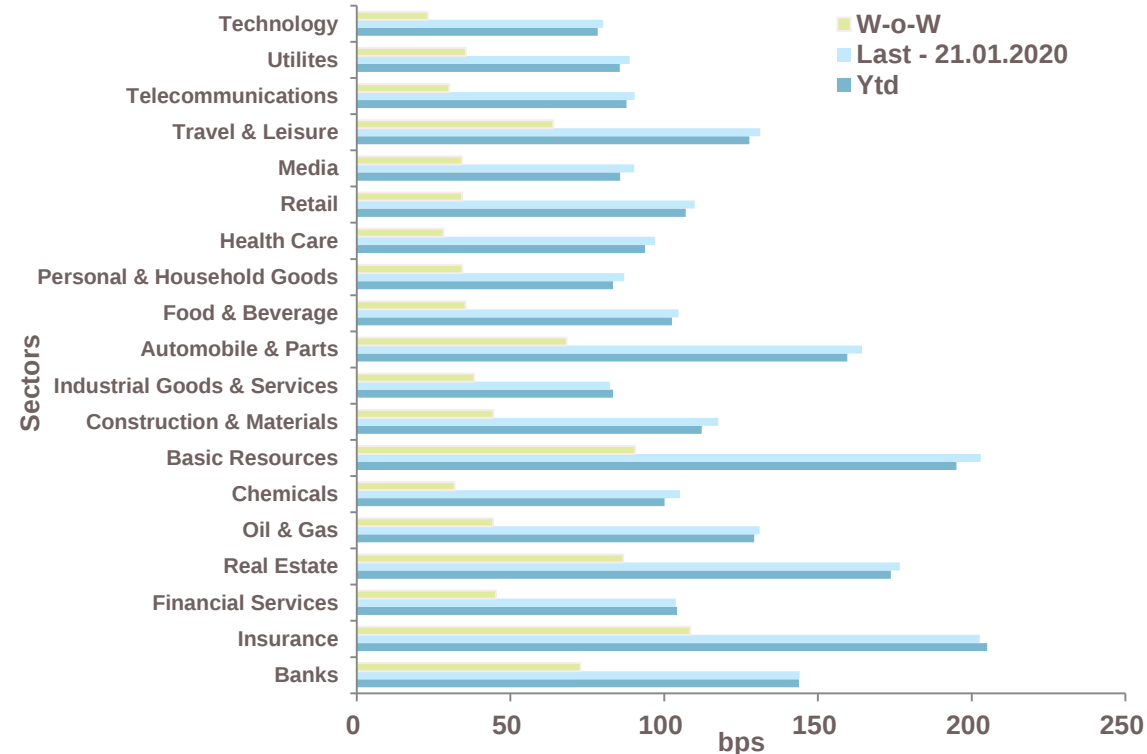


USD Corporate spreads evolution



USD corporate markets have shown little issuer discrimination at the beginning of the coronavirus pandemic episode. However, recent developments, specially within the oil market, have shown some discrimination. The sector most hit by this sector performance divergence have been oil/gas, automobile and travel/leisure.

EUR Corporate spreads evolution



Similarly, EUR corporate markets have shown little sector selectivity during the outbreak of the virus but are diverging as the Covid19 advances. Sectors like Automobile, basic resources and insurance are particularly under pressure within the investment grade universe.

TWO SCENARIOS: U-SHAPED V. PROTRACTED CRISIS

	U Shape Scenario	Protracted Crisis
Covid19 assumptions	Peak in May. Exit by September. Containment lasts three months in Europe and US with full confinement in Europe for an entire month. Border closure lifted by June.	12-18 months sanitary crisis with possible reinfection. Borders stay closed and intermittent domestic confinement prevail.
Scenario in a nutshell	Technical recession in H1 in most of Europe and Asia. Recovery is U-shaped and inflationary. Unprecedented policy mix to mitigate shock and help protect the web.	L-Shaped recovery with debt monetization, systemic equity/credit/ liquidity issues and direct actions by policy makers disrupt market roles for years to come. Hard to restart engines

Macroeconomics	Latest Value	Unit	2020			
			U Shape Scenario	Protracted crisis	MIN (maximum drawdown)	MAX (Inflationary overshoot)
Real GDP *						
Global	2.5	%	0.8	-1.5	-15.0	
EMU	1.2	%	-1.8	-6.0	-11.0	
US	2.3	%	0.5	-3.0	-14.0	
China	6.1	%	4.0	1.5	-12.6	
Other Indicators						
Global trade	1.4	%	-3.7	-10.0		
Global business insolvencies	9.0	%	14.0	25.0		

* Based on a 1 month lockdown. Should the lockdown be prolonged by 1 month, the Eurozone would register a recession of more than -4% for the whole year with Germany at -5.0%, France at -3.1%, Italy at -6.0% and Spain at -3.8%

TWO SCENARIOS: U-SHAPED V. PROTRACTED CRISIS

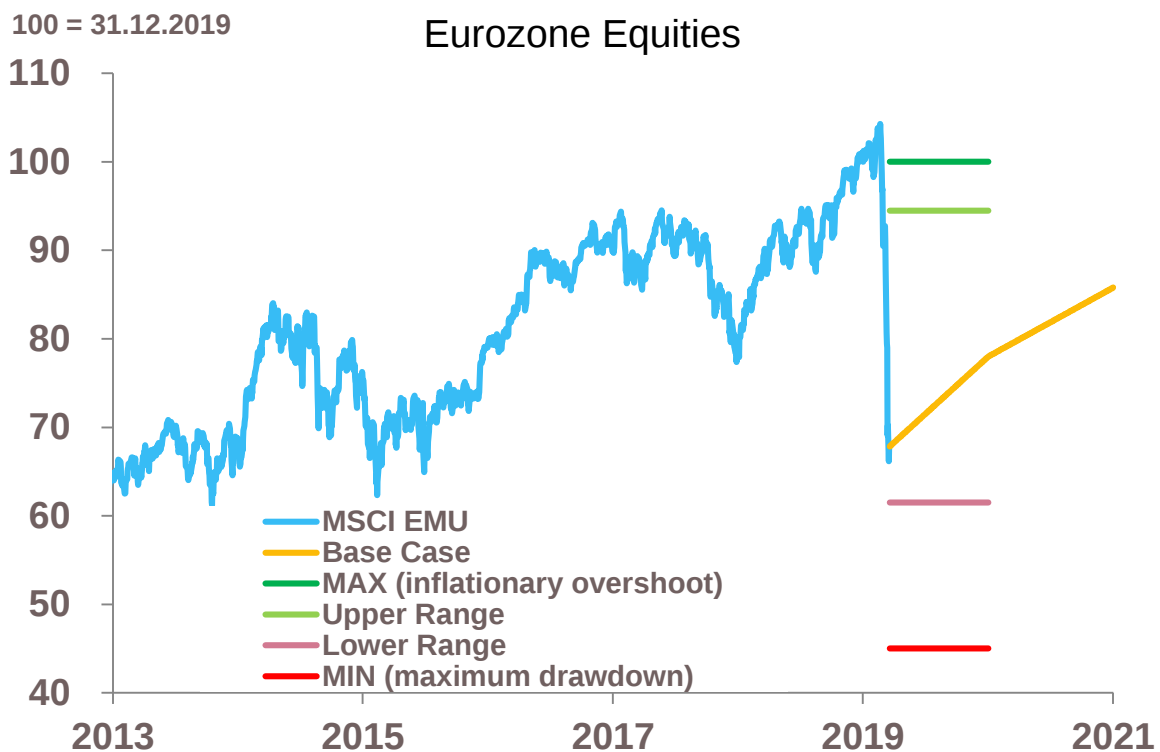
EMU	Latest Value	Unit	2020			
			U Shape Scenario	Protracted crisis	MIN (maximum drawdown)	MAX (Inflationary overshoot)
Eurozone Rates						
10y yield “risk-free” sovereign (Bunds)	-0.2	%	-0.5	-0.9	-1.1	0.1
10y Swap Rate	0.2	%	0.0	-0.4	-0.6	0.6
20y Swap Rate	0.3	%	0.3	-0.2	-0.3	0.9
10y yield BTP (Italy)	1.8	%	1.7	2.7	3.9	1.3
Italy - Germany spread (10y)	199	bps	220	360	500	120
10y yield OAT (France)	0.3	%	0.4	1.0	0.1	0.4
France - Germany spread (10y)	42	bps	90	190	120	30
10y yield Bono (Spain)	0.9	%	0.6	1.2	1.9	0.8
Spain - Germany spread (10y)	109	bps	110	210	300	70
Eurozone Corporate Credit Spreads						
Investment grade credit spreads	227	bps	180	230	300	100
High yield credit spreads	839	bps	750	850	1650	550
Eurozone Equities						
MSCI EMU: total return p.a. (Reference point 31.12.2019 for 2020 forecasts)	-33.5	%	-22	-39	-55	0
Expected Recovery from latest traded value (2021 computed since 31.12.2019)		%	17	-8	-32	50

TWO SCENARIOS: U-SHAPED V. PROTRACTED CRISIS

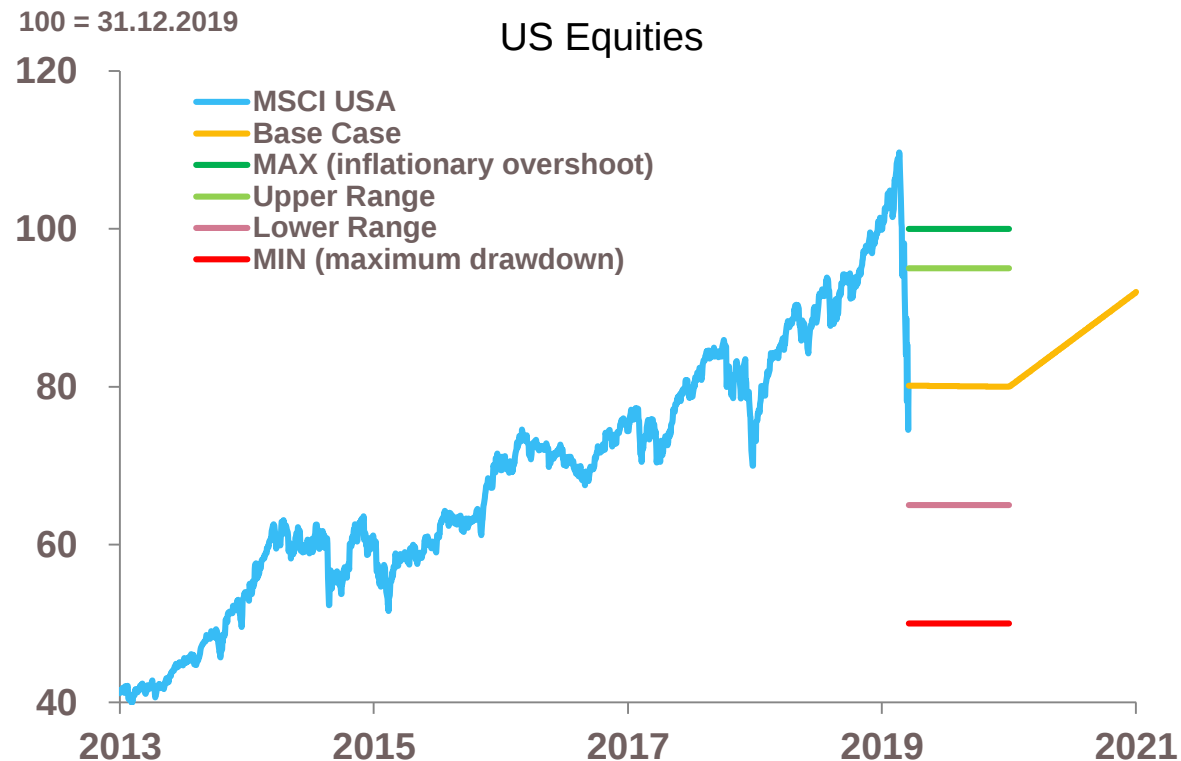
CRISIS

US & EM	Latest Value	Unit	2020			
			U Shape Scenario	Protracted crisis	MIN (maximum drawdown)	MAX (Inflationary overshoot)
US Rates						
10y yield “risk-free” sovereign (Treasuries)	1.1	%	1.0	0.5	0.0	2.0
10y US - 10y Bund Rate Difference	130	bps	150	140	110	190
US Corporate Credit Spreads						
Investment grade credit spreads	351	bps	230	280	450	110
High yield credit spreads	982	bps	800	900	1650	390
US Equities						
MSCI USA: total return p.a. in EUR (Reference point 31.12.2019 for 2020 forecasts)	-21.6	%	-20	-35	-50	0
Expected Recovery from latest traded value (2021 computed since 31.12.2019)		%	2	-17	-36	28
Emerging Markets Rates						
Hard Currency Yield (USD)	7.7	%	5.5	7.0	8.0	4.0
Hard Currency Spread (USD)	673	bps	450	650	800	200
Emerging Markets Equities						
MSCI EM: total return p.a. in EUR (Reference point 31.12.2019 for 2020 forecasts)	-27.7	%	-24	-42	-60	0
Expected Recovery from latest traded value (2021 computed since 31.12.2019)		%	5	-20	-45	38

GLOBAL EQ: UNLIKELY TO RECOVER IN 2020 - 2021

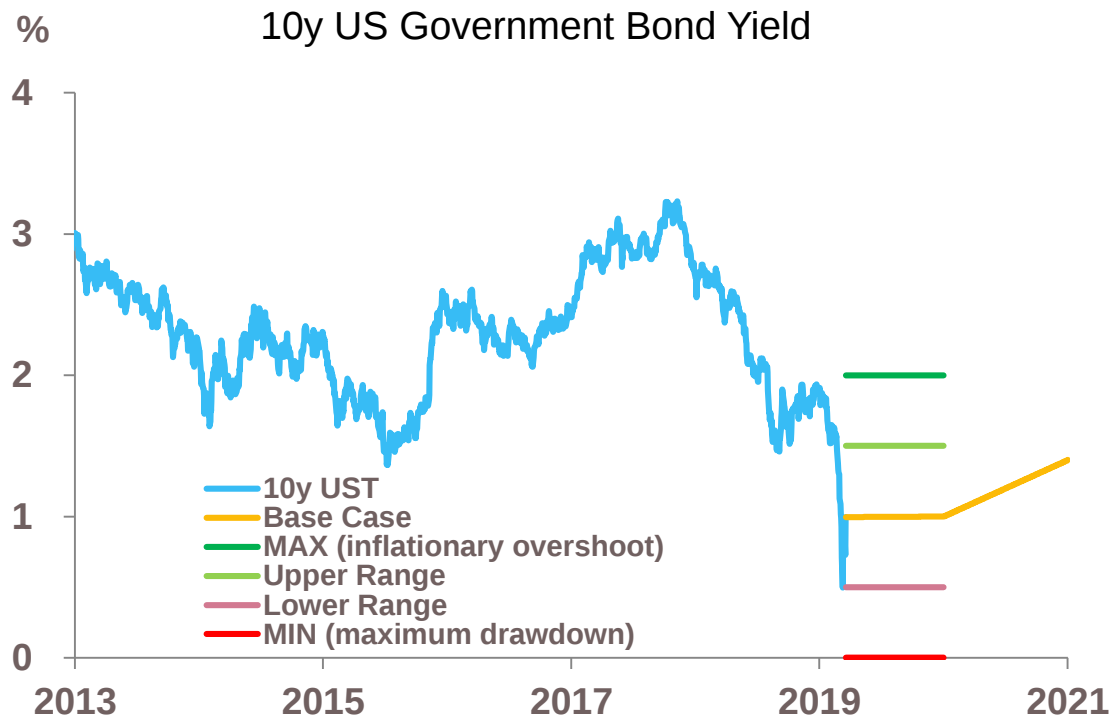


Due to the high equity fundamental overvaluations, specially in the US, at the beginning of the Covid19 episode, we currently do not rule out global equity markets crossing the -40 to -50% loss mark (*from 2020 peak*) for a short period of time to then partially recover some losses towards year-end.

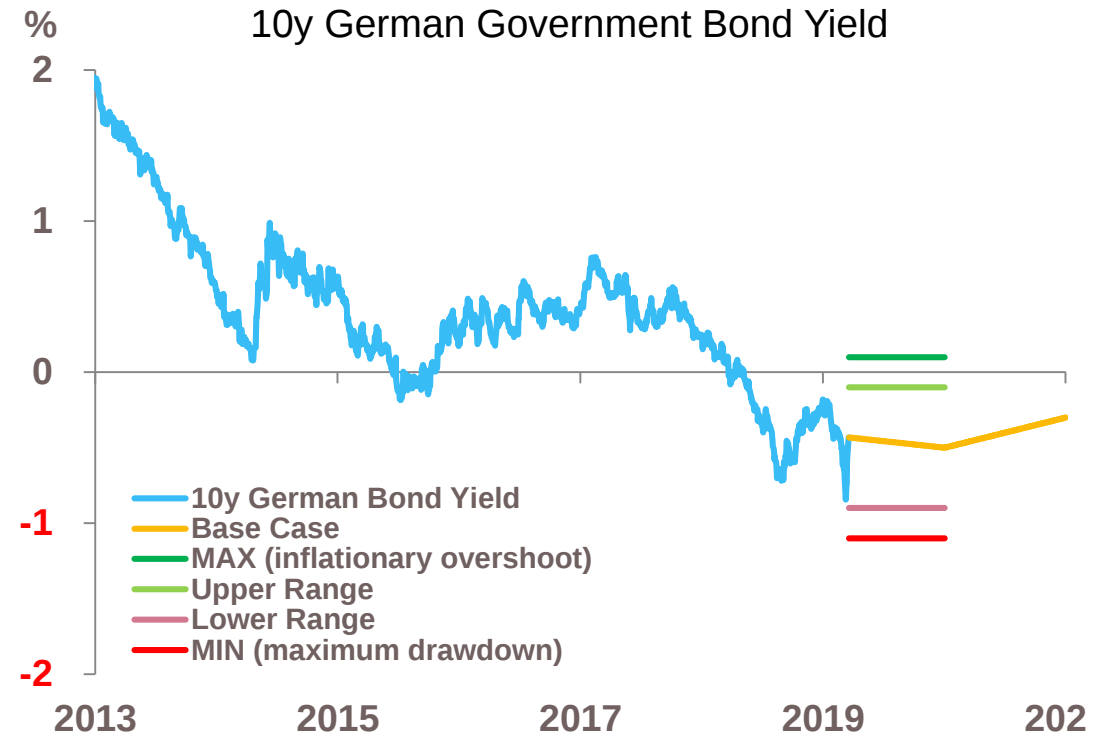


Geographically, markets are expected to express little differentiation translating into an across the globe -20% average yearly performance for 2020. If history is of any guidance, equity markets are expected to start a gradual recovery by Q1 2021 but to fall short from recovering to previous peaks within the year.

GLOBAL BONDS LOWER FOR LONGER

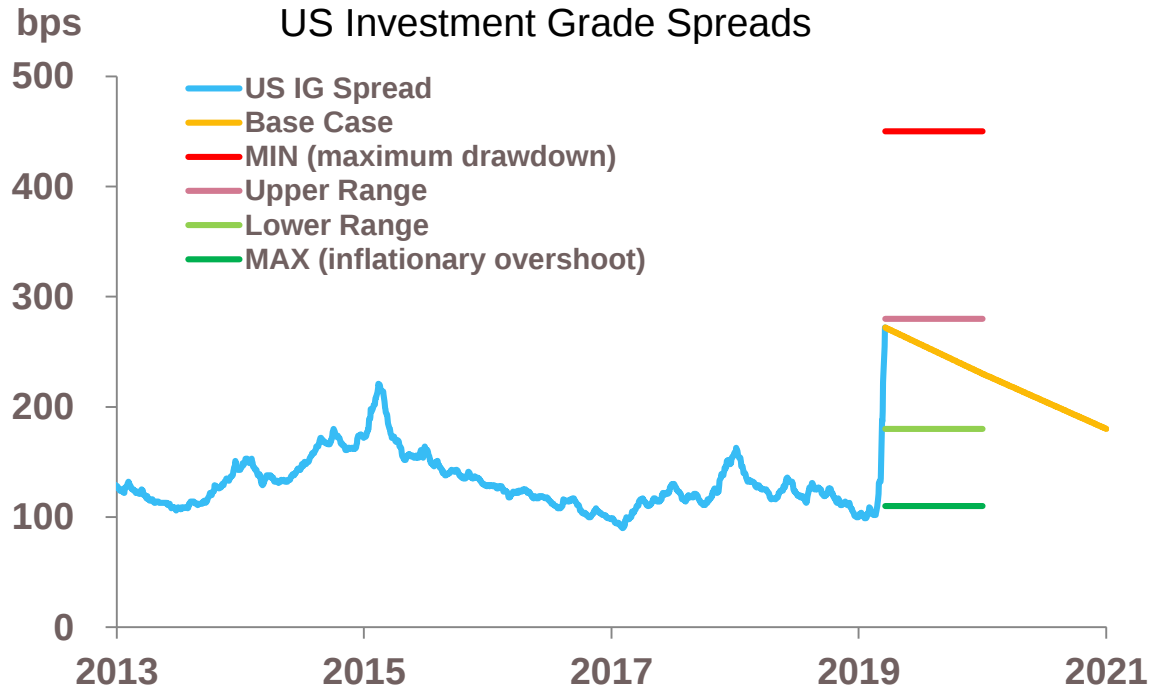


Recently, US long-term sovereign yields have crossed the lower-bound of our fundamental valuation model for a short period of time implying a quick reversal to fundamental level (1%). With that in mind, we expect long-term US yields to slowly converge towards fair value (1%) by year-end acknowledging a non-negligible risk of far lower (0-0.25%) intra-year yields.



Similarly, but not as extreme as in the US case, long-term German government bond yields have been roaming around the lower end of our fundamental valuation model. At this level we do not expect bunds to follow a downward trajectory but it is reasonable to believe yields could visit the -1/-1.1% limit for a short period of time to slowly reverse to fair value (-0.5%) by year end.

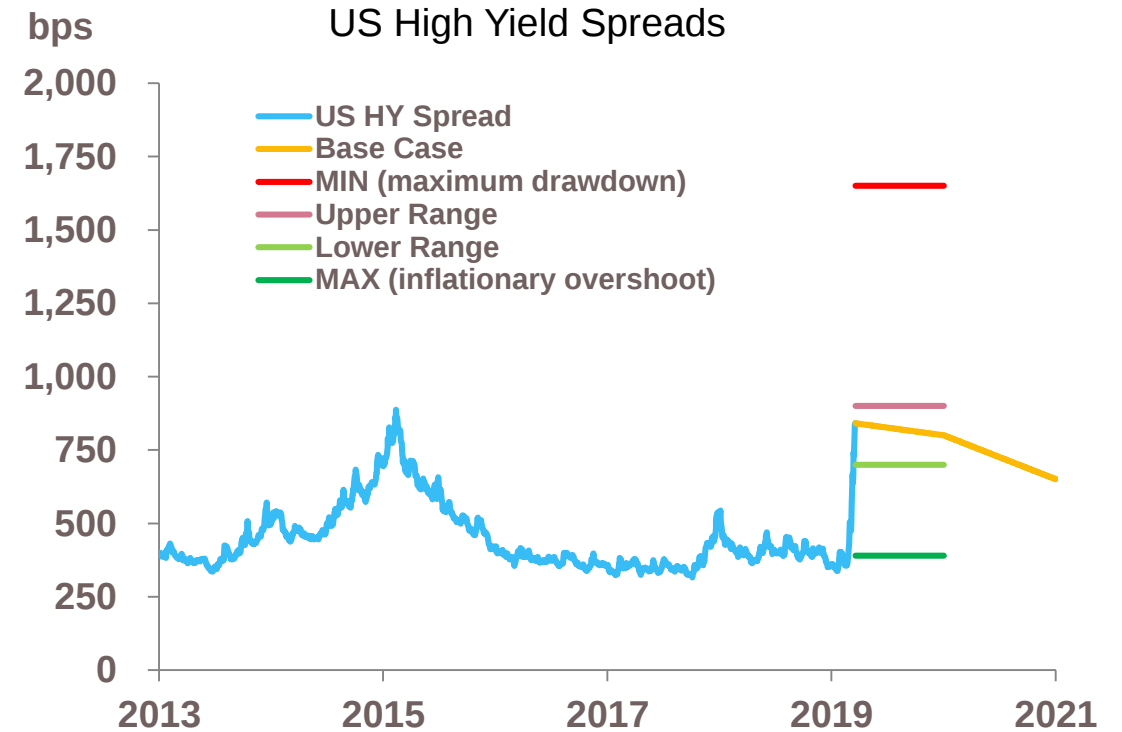
US IG CORPORATE BONDS: NOT YET AT THE TOP!



US corporate spreads have rapidly widened as a consequence of the Covid-19 advancement. At this point in time, and consistently with the current high levels of volatility, it is not unreasonable to believe that US investment grade corporate spreads could reach previous crisis-like levels of 450bps.

*Model inputs: equity volatility and GDP-implied business confidence

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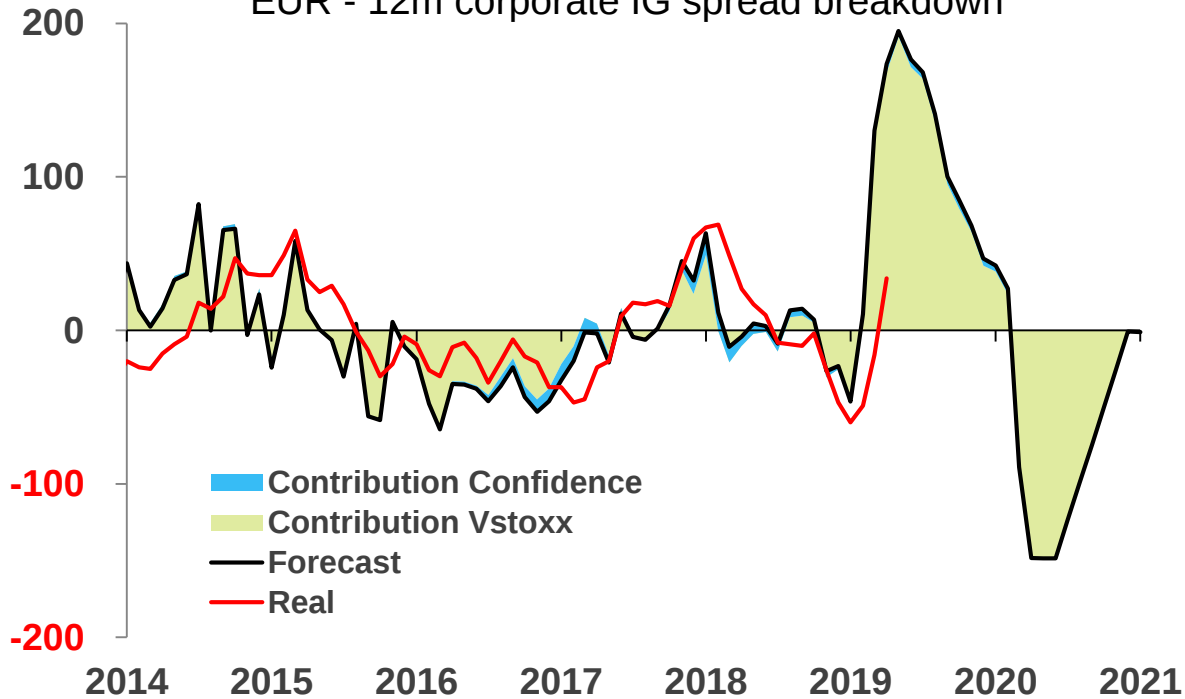


Similar to investment grade, high yield spreads have also widened at a pace consistent with the pricing-in of a full fledged financial crisis. In addition, certain sectors like oil, gas and air transportation have been in the lead of this structural widening and may lead to structural effect in high yield corporate spreads.

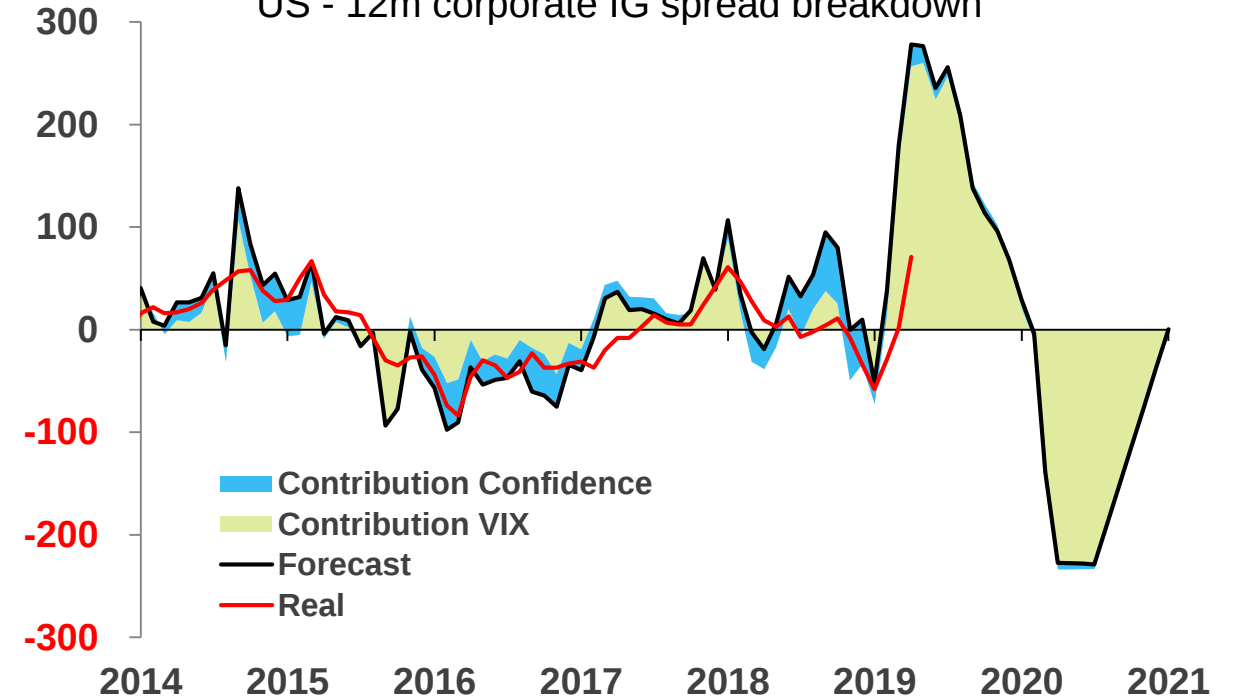
Sources: Refinitiv, AZ Research

CORPORATE CREDIT: VOLATILITY MATTERS

EUR - 12m corporate IG spread breakdown



US - 12m corporate IG spread breakdown

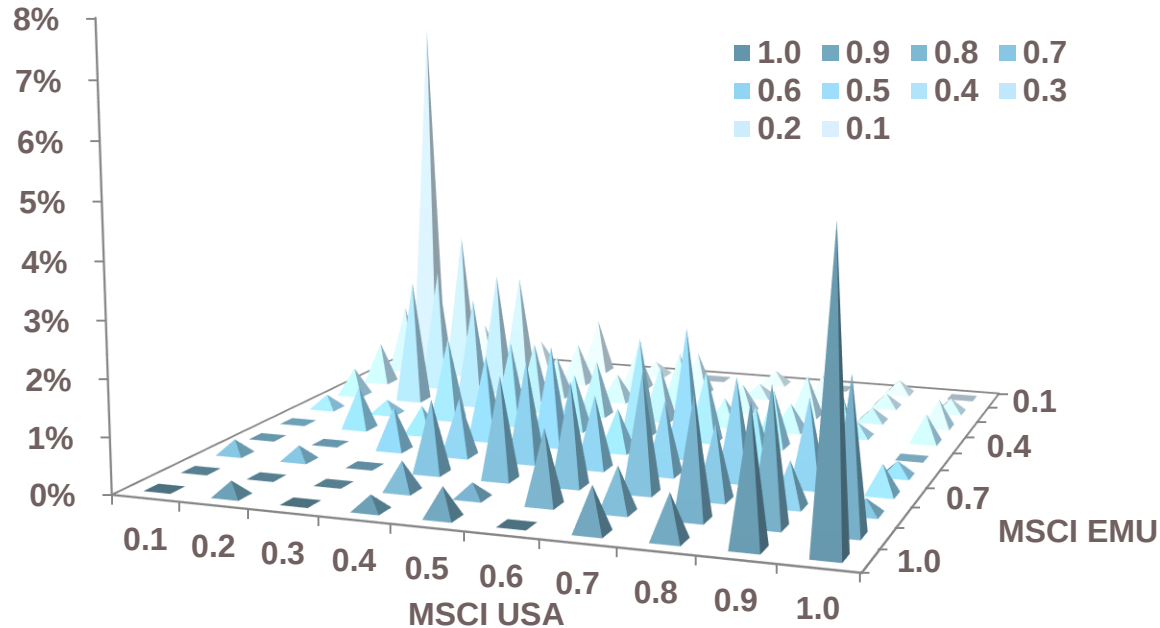


When it comes to the current determinants of corporate spreads movements, the component directly linked with equity volatility remains the sole determinant of the past spread behavior both within the investment grade and high yield spectrum. Because of that, it is a necessary condition for equity volatility to start declining in order to see lower spreads.

Needless to say that at the time equity volatility starts its retracting trend, it is to be expected for the confidence component (linked to GDP) to start exerting a structural widening pressure on spreads preventing those from reversing to previous lows. This will hold true specially in the high yield spread as some issuers may become unwanted casualties of this uncertain period.

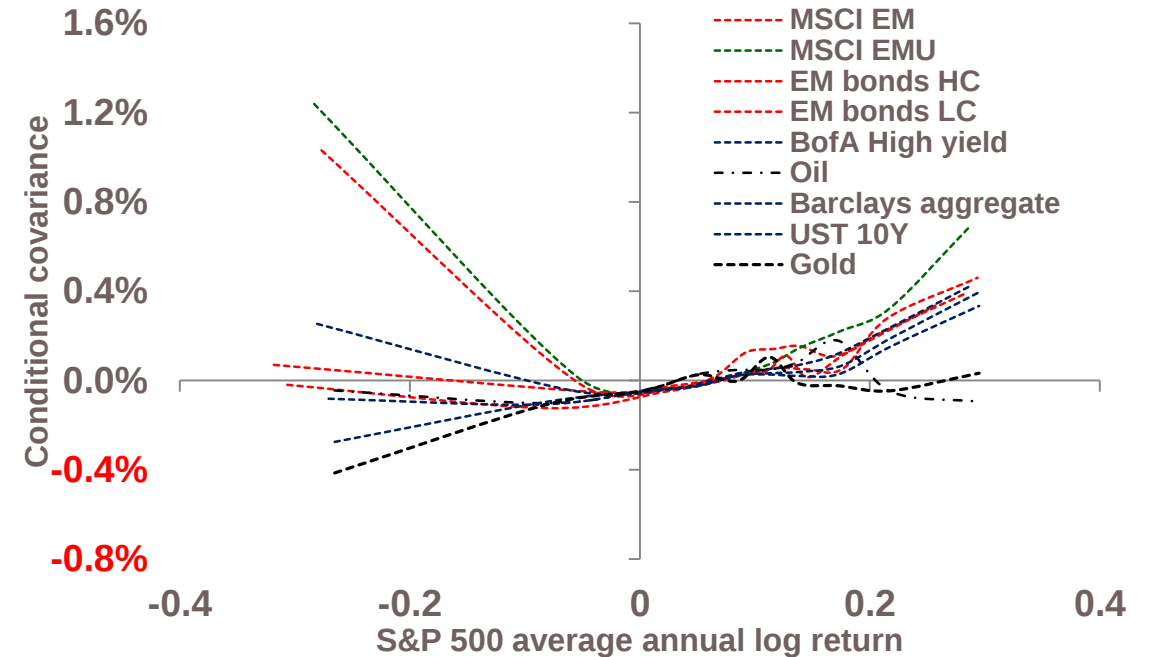
NO DISTINCTION IN BAD TIMES

Equity Covariance



One month out of 10, the S&P500 posts a monthly return lower than -4.7%. The cumulative correction we forecast for the S&P500 in the pause scenario (-30%) implies monthly returns in the 10% worst cases (the first decile). In these 10% worst cases, the S&P500 average monthly return is indeed -8.2%.

Covariance mapping

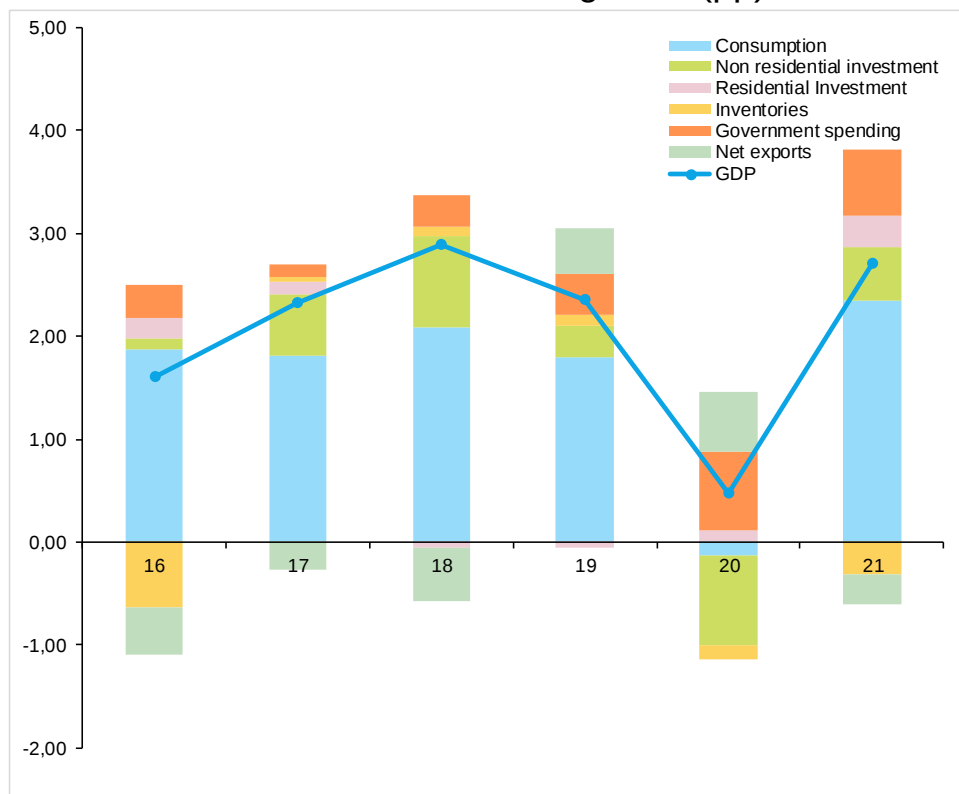


When the S&P 500 posts so low monthly returns, the probability is high that other markets follow it down:

72% of the time, EMU equities returns less than -6.2%,
 55% of the time, US B corporate bonds return less than -1.8%.
 98% of the time, 10y USTs post a *positive* total return, ~0.86%.

US: A U-SHAPE RECOVERY

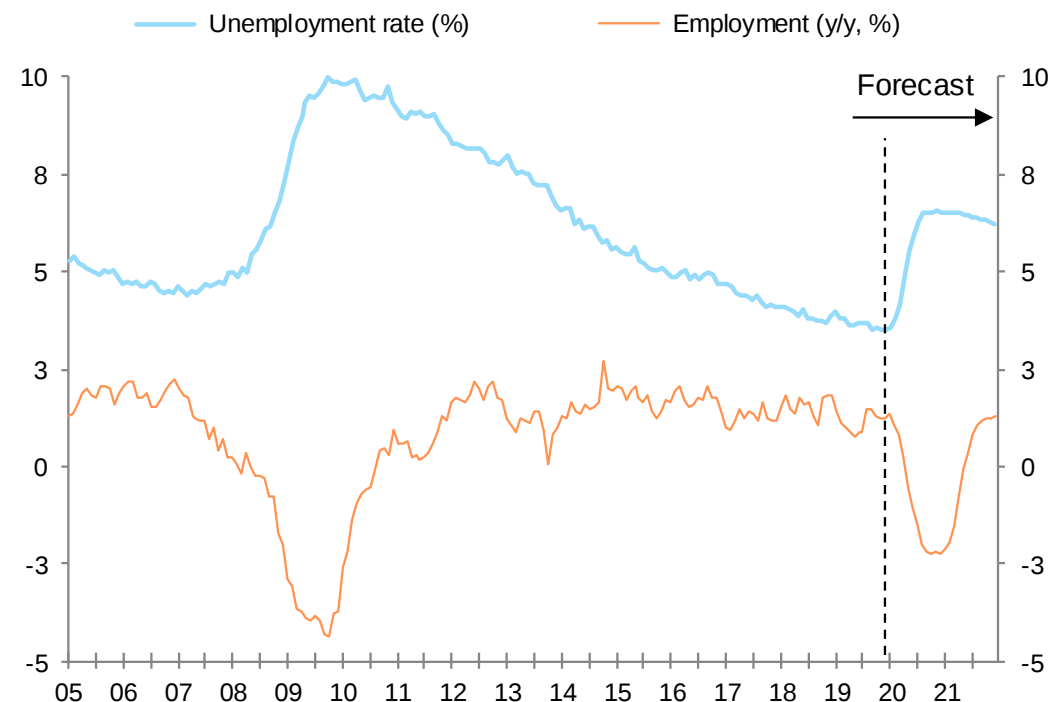
Contribution to US GDP growth (pp)



Sources: IHS Markit, Euler Hermes, Allianz Research

We expect the US economy to significantly contract in Q2 2020 close to -3.8% q/q. US GDP growth should reach 0.5% y/y in 2020 and 2.7% y/y in 2021

US labor market

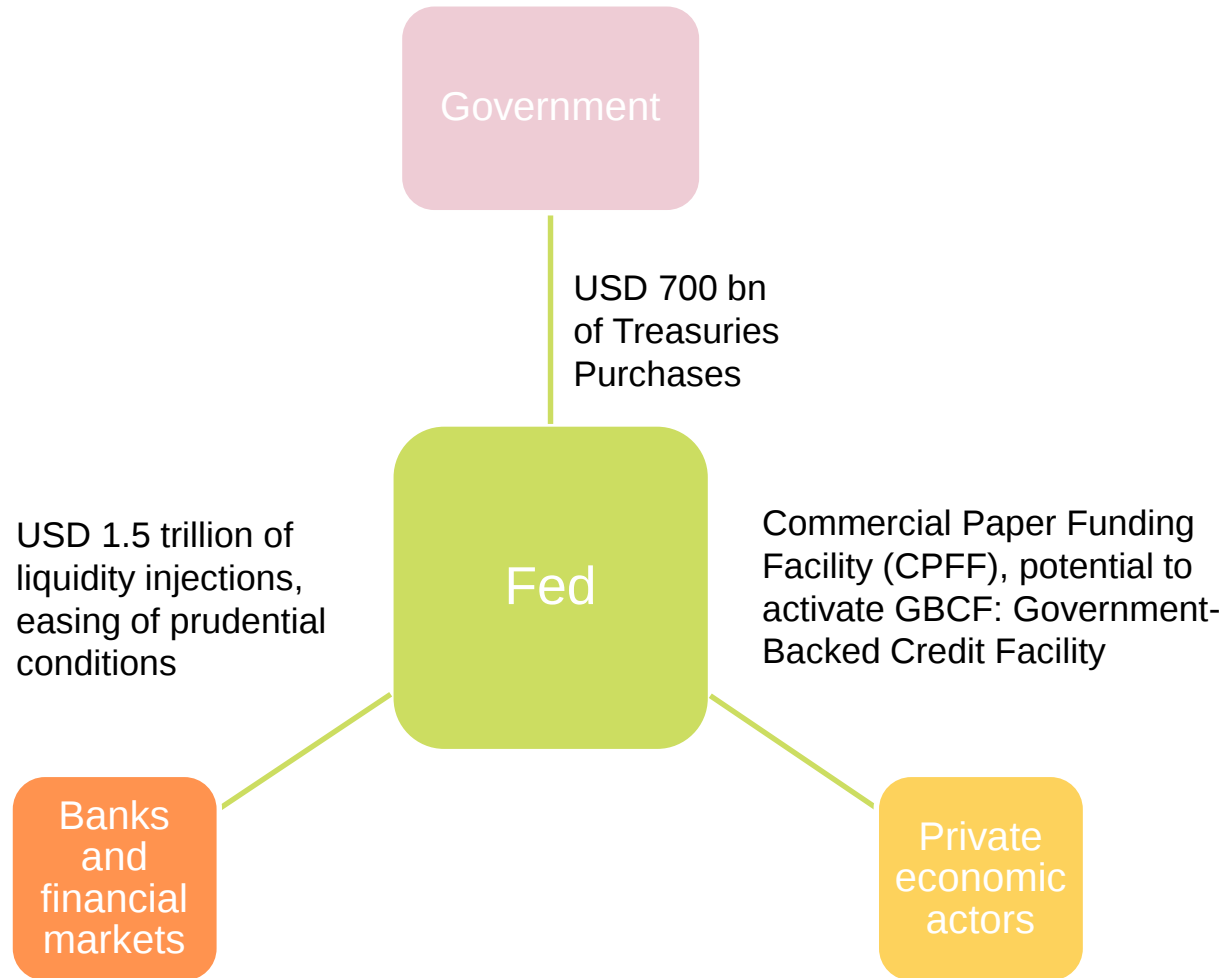


Sources: IHS Markit, Euler Hermes, Allianz Research

The cumulated amount of job losses between February and August could reach 4 millions people. All in all, we expect the US unemployment rate to reach a peak of 6.5% in January 2021

US POLICY: A POWERFUL ARSENAL OF STABILIZATION

New tools of the US monetary policy



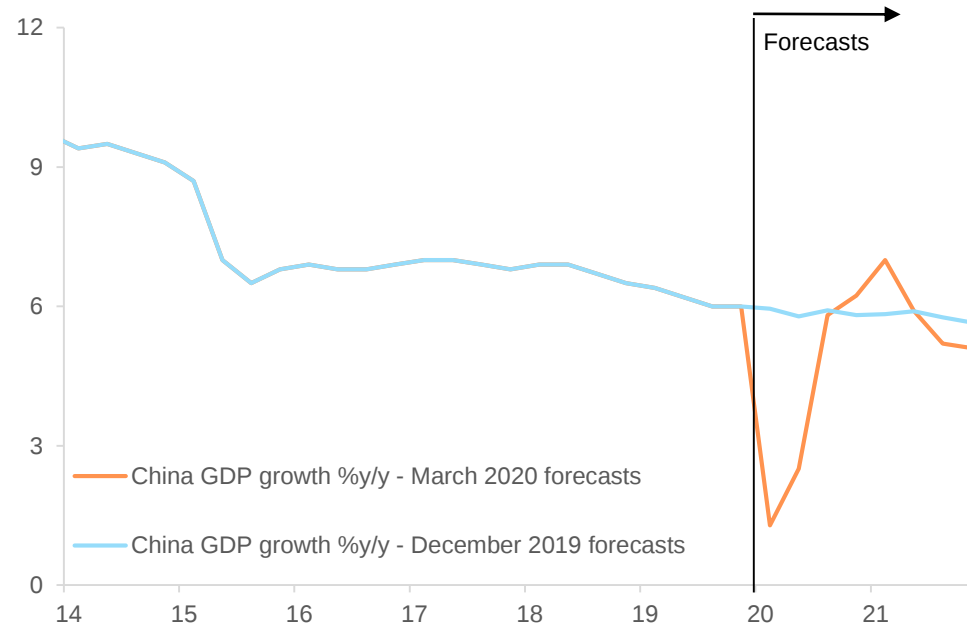
New (proposed) tools of the US fiscal policy (size of multiplier)

- Sending checks to households (High)
- Guaranteeing paid sick leaves (High)
- Giving credit guarantees to companies (Low)
- Allowing income tax holidays for 2020 (Average)
- Developing infrastructure spending (High)
- Increasing healthcare spending (High)
- Authorizing loan forbearance (Average)
- Providing food aid (High)
- The White House is likely to vote a package worth USD 1 trillion (4.5% of GDP). We expect its overall multiplier size to reach 0.9, leading to a positive impact on GDP growth of 1.2 pp between Q2 2020 and Q2 2021

CHINA GDP GROWTH IN 2020 REVISED DOWN TO 4%



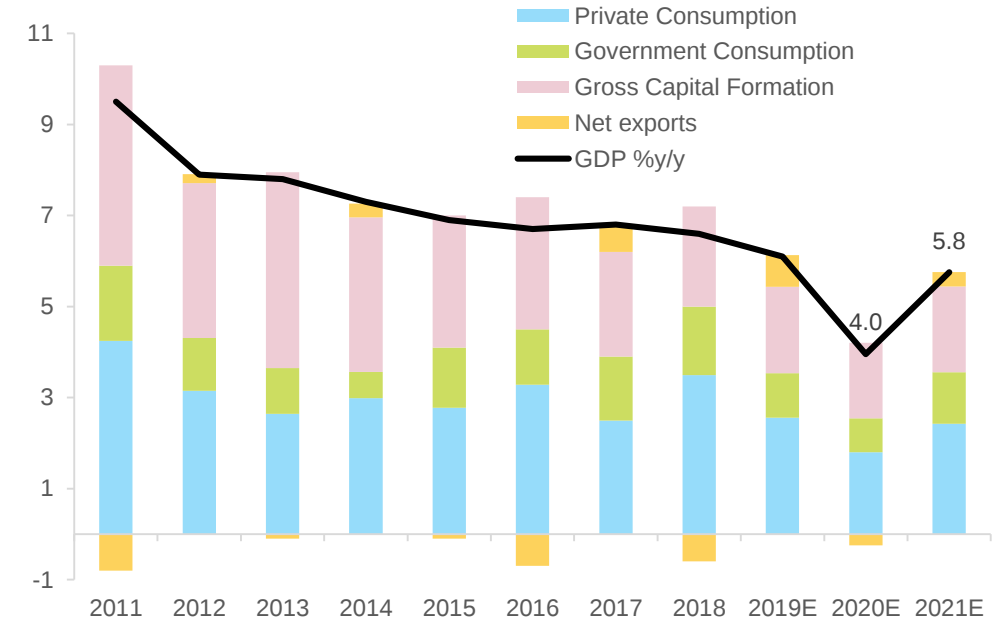
GDP growth



Source: National statistics, Allianz Research

Activity data at the beginning of the year declined to record lows. This does not bode well for overall economic growth in Q1, and we have pencilled in a forecast of 1.3% y/y (down from 6.0% in Q4 2019).

GDP growth (%) & breakdown of contributions (pp)

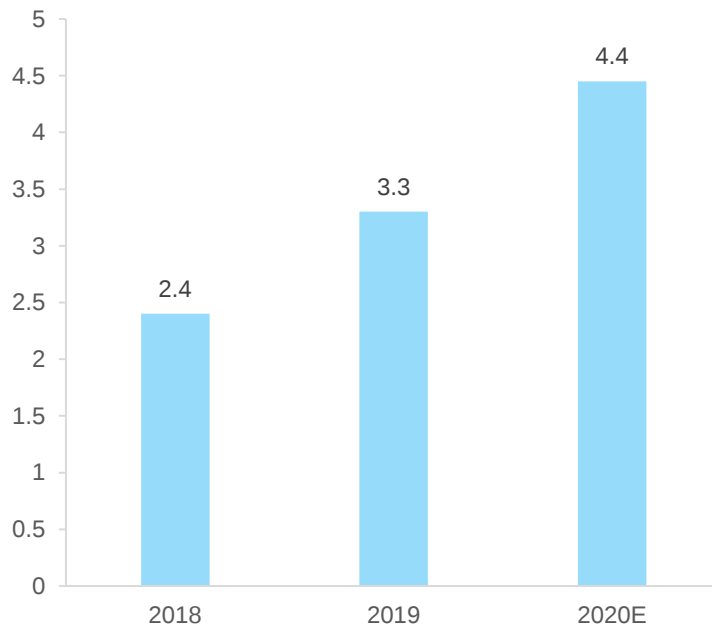


Source: National statistics, Allianz Research

After the slump of Q1, we expect a gradual recovery thereafter, particularly visible in H2. This should be possible thanks to some catch-up from pent-up production and policy support. We expect 2020 GDP growth at 4.0%.

CHINA POLICY MIX: FURTHER EASING TO COME

Size of fiscal stimulus package (% of GDP)

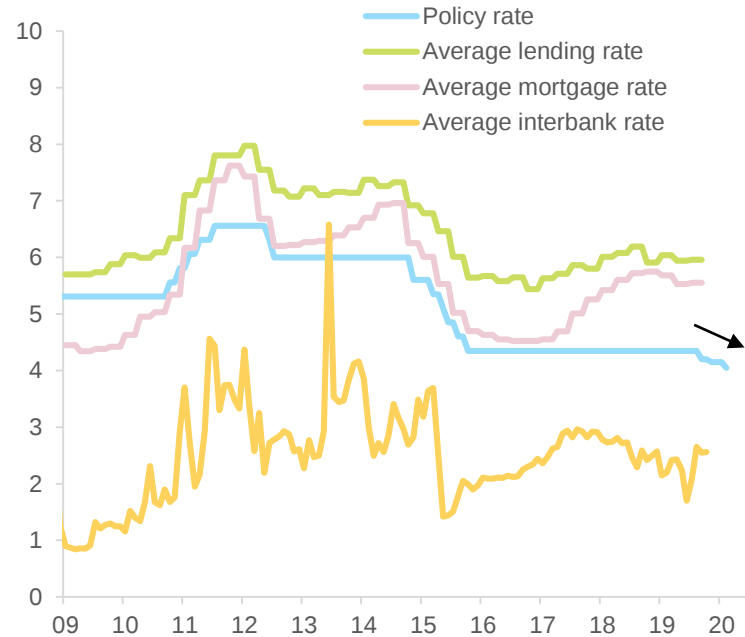


Source: Allianz Research

Fiscal easing is likely to increase in 2020. We now expect fiscal support amounting to 4.4% of GDP, up from 2.7% forecast before the COVID-19 outbreak.

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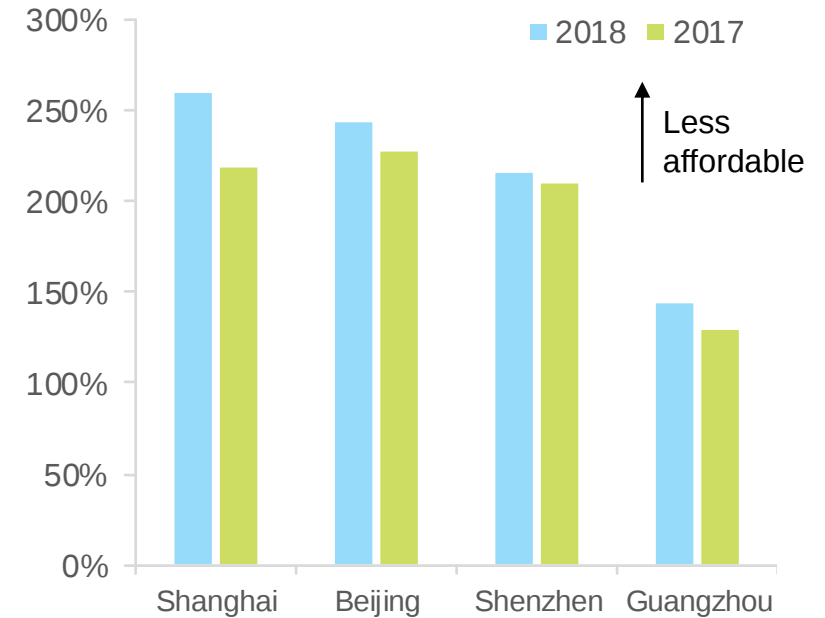
Interest rates (%)



Source: Datastream, Allianz Research

On the monetary side, the PBOC should continue easing. Over 2020, we expect cuts in the policy rate worth 30bp in total, and the Reserve Requirement Ratios to be lowered by 150bp overall.

Housing affordability (cost as % of income)



Source: Bloomberg, Allianz Research

Authorities still seem reluctant to use the housing sector as a cyclical stabiliser, as they may be more concerned with housing affordability. Credit conditions may be loosened only marginally.

EU POLICY RESPONSES WILL HELP TO ALLEVIATE THE SHOCK BUT HURT PUBLIC FINANCES



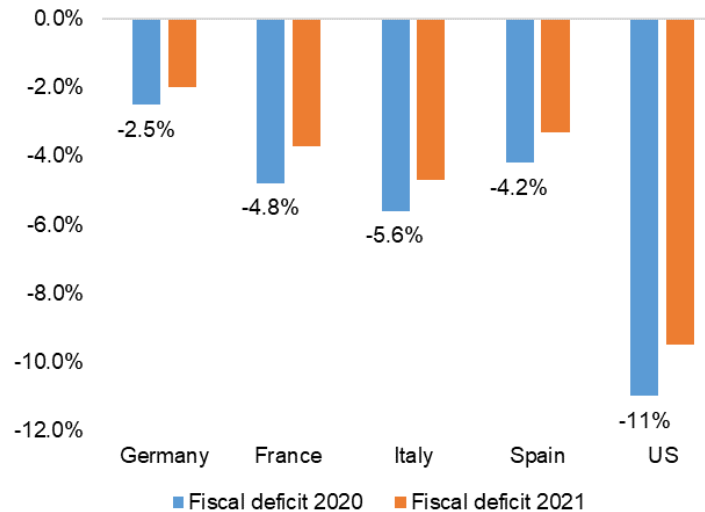
Fiscal stimulus by country and impact on real GDP growth and fiscal balance

	Fiscal stimulus (EURbn)	Share of GDP	Impact on GDP growth (in pp)	Impact on fiscal balance (in pp)
Germany	150	5.0%	1.5	-3.9
France	45	2.0%	0.8	-1.3
Italy	25	1.4%	0.7	-0.9
Spain	18	1.4%	0.5	-1.1
UK	30	1.4%	0.6	-0.9

Sources: Euler Hermes

Bazooka economic policy responses will not avoid a global recession in H1 2020, but should help companies and consumers withstand the severe albeit temporary shock.

Fiscal balance, % of GDP

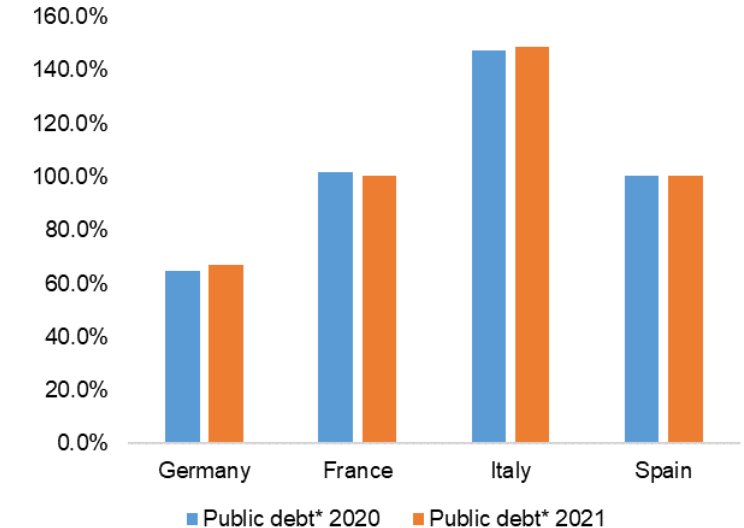


Note: forecasts do not include State guarantees and potential nationalisations of firms.

Sources: Euler Hermes

Fiscal responses in every impacted country amount to as high as 10% of GDP by supporting companies' working capital requirements (credit lines for SMEs, tax reliefs) and scaling up social safety nets (temporary unemployment and other transfers).

Public debt, % of GDP



Note: forecasts do not include State guarantees and potential nationalisations of firms.

Sources: Euler Hermes

The increase in fiscal deficits in 2020 would push public debts above 100% of GDP in France and Spain and to 147% of GDP in Italy

GERMANY: NO PLACE TO HIDE FOR THE ECONOMY AS FIRST AND SECONDARY ROUND EFFECTS BITE

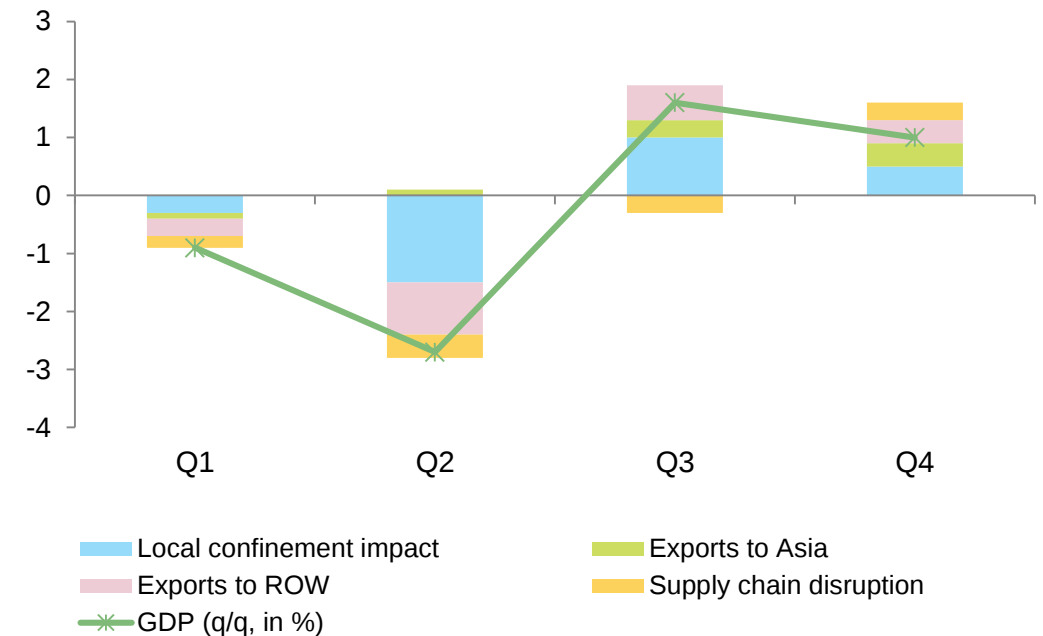
Germany: IFO survey & real GDP (y/y, %)



Sources: Allianz Research

Available high frequency data suggests that the German economy moved from a timid recovery in Jan/Feb to a full-blown recession a la 2008/9 within a month's time. The ifo survey currently suggests that German GDP contracted by 4% y/y in March and that further pain is ahead.

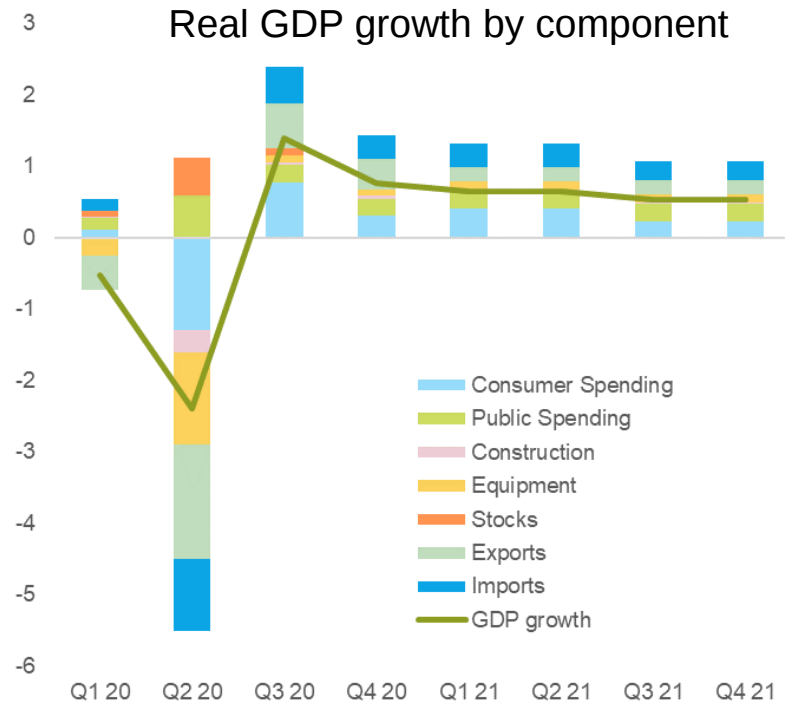
Germany: Impact of Covid-19 on quarterly GDP



Sources: Refinitiv, Allianz Research

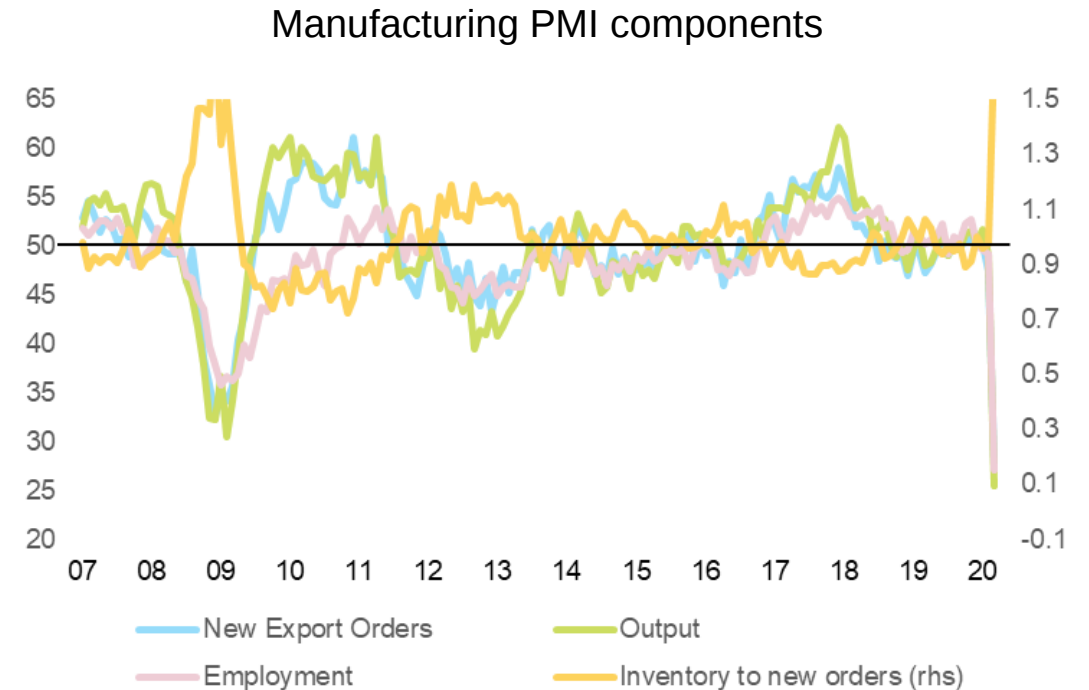
The German economy will be under pressure on all fronts in H1 2020 as confinement measures hurt global trade, disrupt supply chains and put a pause on domestic investment and consumption activity. The rebound in H2 will only partially compensate.

FRANCE: RECORD HIGH SHOCK ON PRIVATE CONSUMPTION AND INVESTMENT IN Q2



Sources: Allianz Research

The shock on domestic demand will be much worse than during the 2008-09 crisis, but fiscal spending will alleviate the overall impact. Should the confinement be prolonged by 1 more month, GDP would fall by -3.1% in 2020 (vs. -1.3% in the baseline)



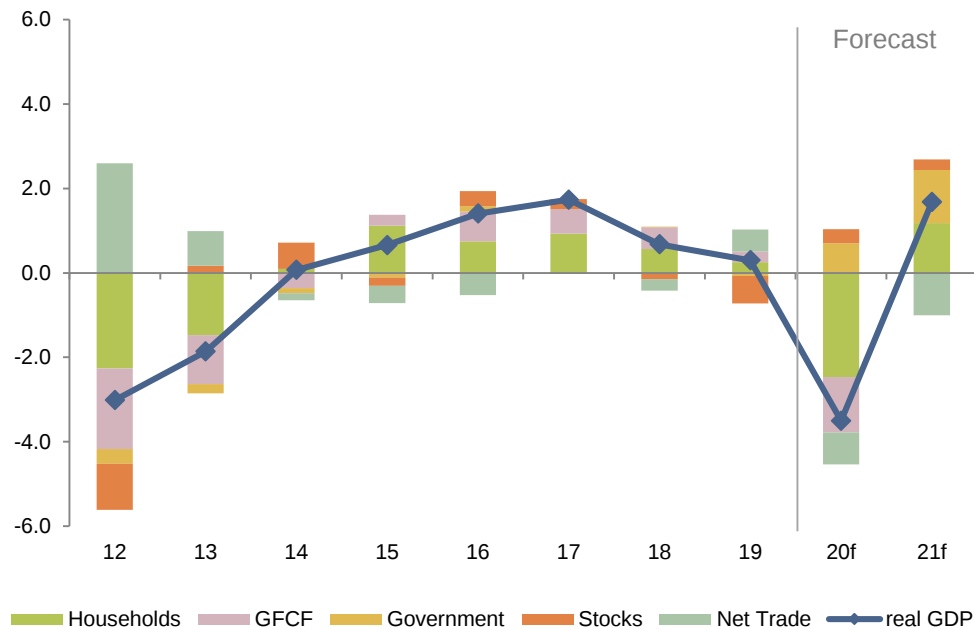
Sources: AGI, Allianz Research

Transposing the Chinese shock on France bring the total level of activity in the manufacturing sector at levels similar to 2009. The inventory to new orders ratio is expected to go significantly above 1, which is a sign of future downside pressures on firms' turnovers

ITALY: DEEP RECESSION EXPECTED



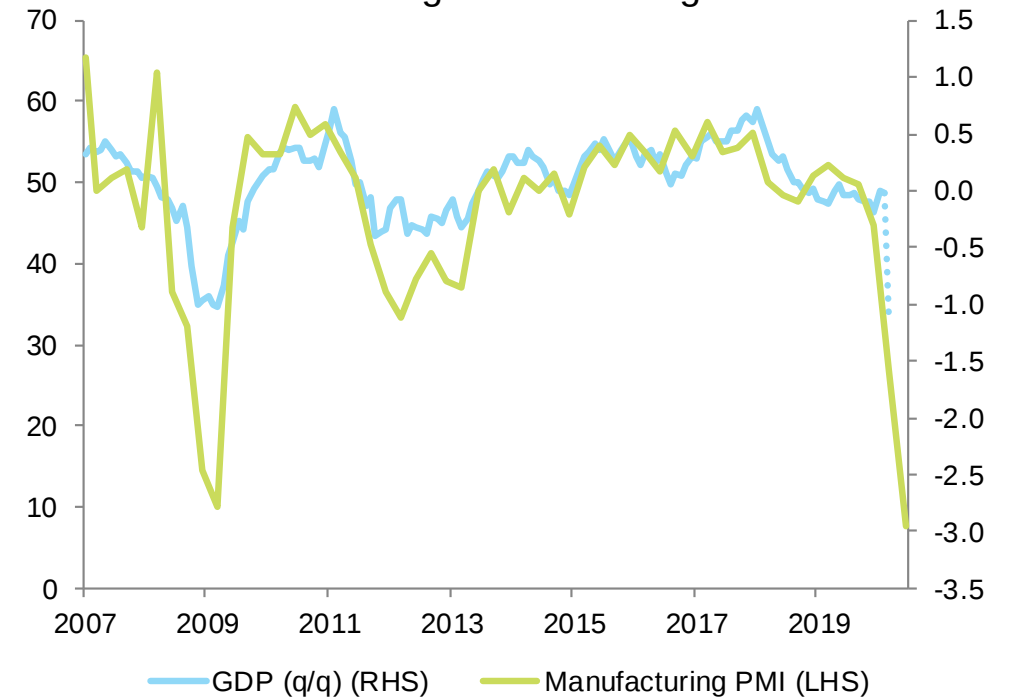
GDP by component, %



Sources: Refinitiv, Allianz Research

In 2020: major consumption shock in Q1 and Q2, while investment will suffer from uncertainty and funding constraints due banking vulnerability. Trade balance will deteriorate strongly due to slump in tourism receipts. In 2021: rebound thanks to fiscal stimulus.

Manufacturing PMI vs GDP growth



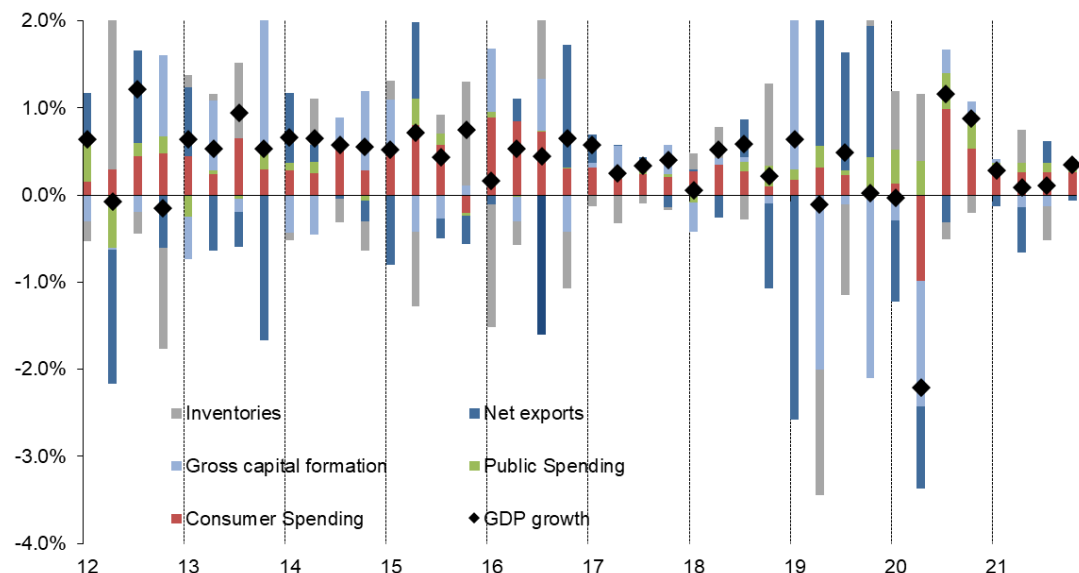
Sources: Refinitiv, Allianz Research

With a similar fall in manufacturing sentiment in March than in China, quarterly growth is expected to contract sharply in H2 2020.

UK: A FULL YEAR RECESSION IN 2020, FOR THE FIRST TIME SINCE 2009



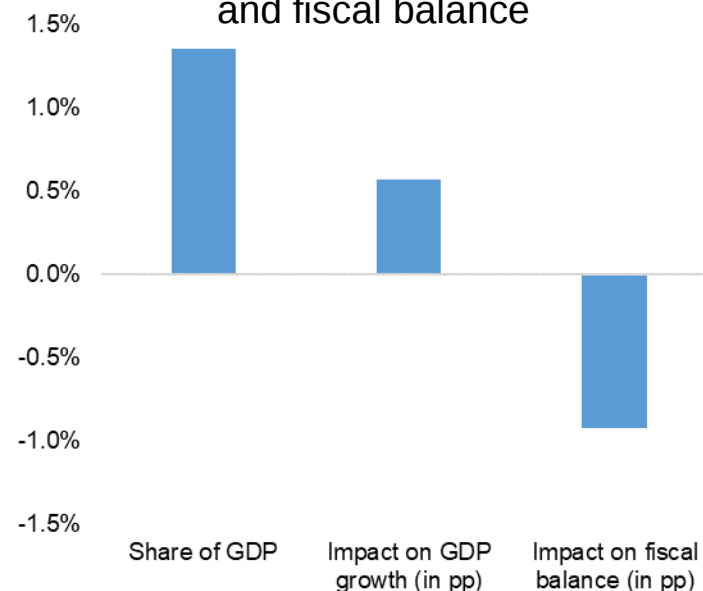
Real GDP growth by component



Sources: ONS, Allianz Research

The full shock will be visible in Q2. We expect a fall in private consumption of -1.5% qoq, -5% in business investment and -6% in exports. Overall GDP would fall by -2.2% qoq. The recovery in 2021 will be capped by Brexit related uncertainty, notably in H1 2021.

Fiscal stimulus package and impact on real GDP growth and fiscal balance

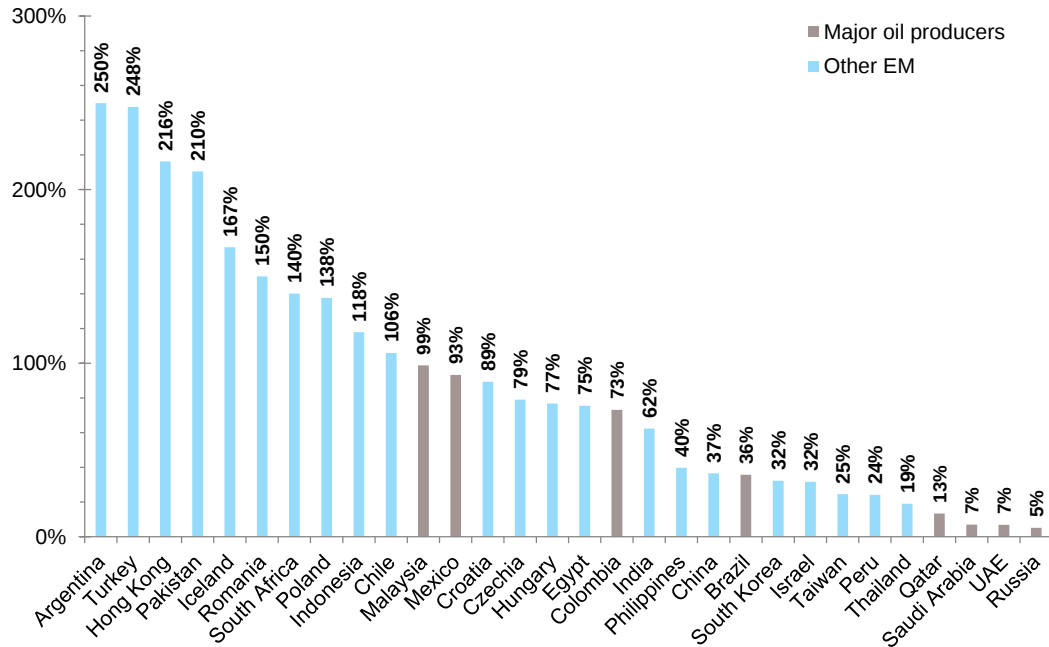


Sources: Allianz Research

The BoE cut the key rate by 65bp to 0.10%, introduced a new Term Funding scheme for SMEs of an estimated GBP100bn to support lending and increased QE purchases by GBP200bn. This latter would be equivalent to a decrease in rates of 150bp. More QE could come as well as negative interest rates should the country be put on full lockdown. Fiscal stimulus of EUR30bn has been announced which will support growth by +0.2pp this year

EMERGING MARKETS: SUDDEN STOPS, CURRENCIES, AND CORPORATES

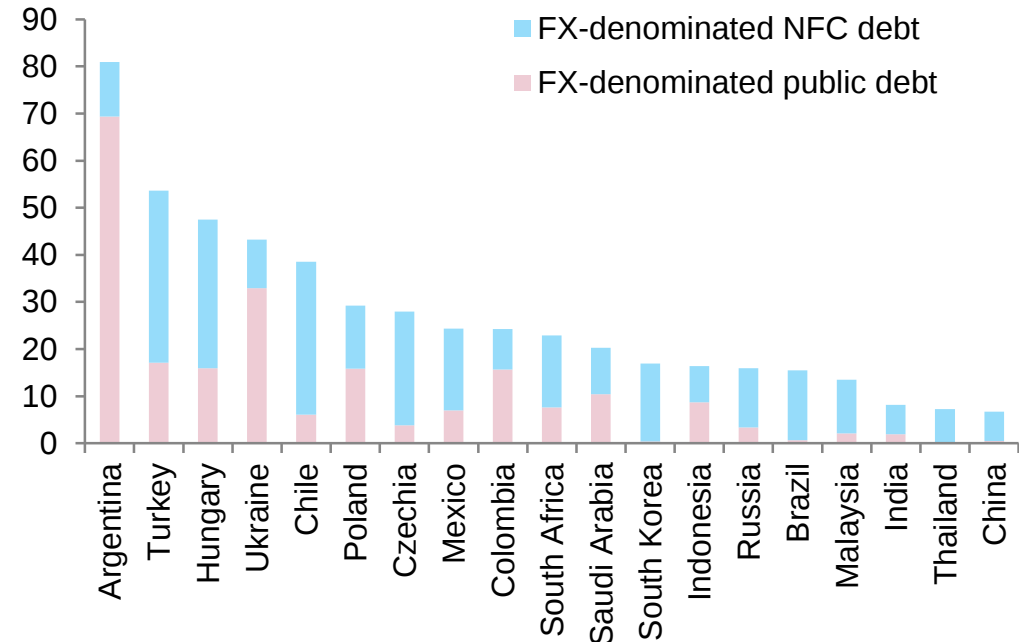
Emerging Markets: Gross external financing requirement (% of FX reserves)



Sources: IHS Markit, Allianz Research

Risk appetite likely to deteriorate in markets with high gross external financing requirements.

Foreign exchange-denominated sovereign and NFC debt (% of GDP), Q3 2019, selected EM



Sources: National statistics, IIF, Allianz Research

Argentina has the highest share of FX-denominated debt to GDP (80%). And most of that is sovereign debt.

EMERGING EUROPE: GROWTH FORECAST REVISIONS AND POLICY LEEWAY

2020 GDP growth forecasts

Real GDP growth	2019	2020 Dec. forecasts	2020	2021
Emerging Europe	2.2	2.1	1.2	2.8
Poland	4.1	3.1	1.0	3.6
Czechia	2.4	2.2	-0.5	2.7
Romania	4.1	2.8	0.8	3.2
Hungary	4.9	3.0	1.0	3.1
Slovakia	2.3	2.3	-0.6	2.6
Croatia	2.9	2.4	-0.8	3.0
Bulgaria	3.7	2.7	0.5	3.1
Slovenia	2.4	2.5	-0.5	2.5
Lithuania	3.9	2.5	0.5	3.0
Latvia	2.2	2.4	0.2	2.7
Estonia	4.3	2.7	0.6	3.0
Turkey	0.9	2.3	2.5	4.0
Serbia	4.1	2.6	1.3	3.2
Russia	1.3	1.3	1.2	1.8
Ukraine	3.2	3.0	1.0	2.8
Azerbaijan	2.2	2.3	-0.2	2.7
Kazakhstan	4.5	3.5	1.3	3.8

Sources: National statistics, IHS Markit, Allianz Research

Sharp downward revision of growth, especially in EU member states which are very export-dependent on the Eurozone.

Monetary policy leeway

	Inflation target	Inflation Q4 2019	Inflation latest month	Policy rate	Monetary policy leeway
Poland	2.5%	2.8%	4.7%	1.00%	●
Czechia	2.0%	3.0%	3.7%	1.75%	●
Romania	2.5%	3.7%	3.0%	2.50%	●
Hungary	3.0%	3.4%	4.4%	0.90%	●
Slovakia*	2.0%	2.9%	2.9%	0.00%	●
Croatia	-	0.9%	1.5%	2.50%	●
Bulgaria**	2.0%	3.1%	3.7%	0.00%	●
Russia	4.0%	3.5%	2.3%	6.00%	●
Turkey	5.0%	10.3%	12.4%	9.75%	●

* Slovakia is a Eurozone member, thus monetary policy is set by the ECB.

** Bulgaria has currency board with a peg to the EUR, thus it follows the monetary policy of the ECB.

Sources: National statistics, IHS Markit, Allianz Research

Monetary policy leeway is limited, in theory. Yet, and despite elevated inflation, the central banks of Czechia, Poland and Turkey cut rates at Emergency meetings in mid-March.

Fiscal policy leeway (2019 ratios)

	Fiscal balance % of GDP	Public debt % of GDP	Fiscal policy leeway
Poland	-1.9%	47.5%	●
Czechia	0.3%	32.0%	●
Romania	-3.8%	36.0%	●
Hungary	-1.9%	69.0%	●
Slovakia	-1.2%	48.0%	●
Croatia	0.1%	71.5%	●
Bulgaria	1.0%	21.0%	●
Russia	1.8%	15.0%	●
Turkey	-5.0%	32.3%	●

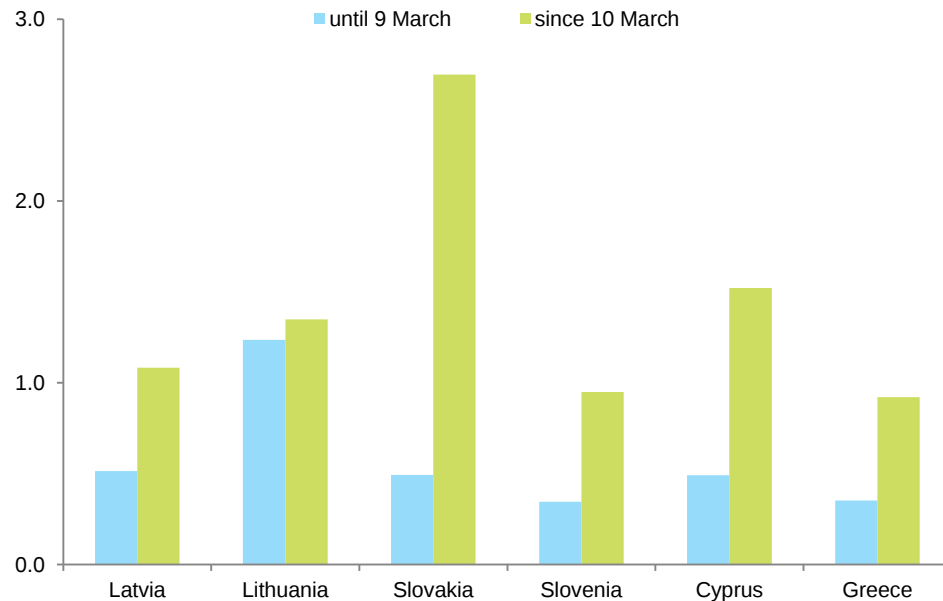
Orange if <-3% if >50%

Sources: Eurostat, IHS Markit, Allianz Research

Fortunately all countries have policy leeway and will use it. But fiscal deficits and public debt ratios will rise.

EMERGING EUROPE: SOUNDING THE LIQUIDITY ALARM

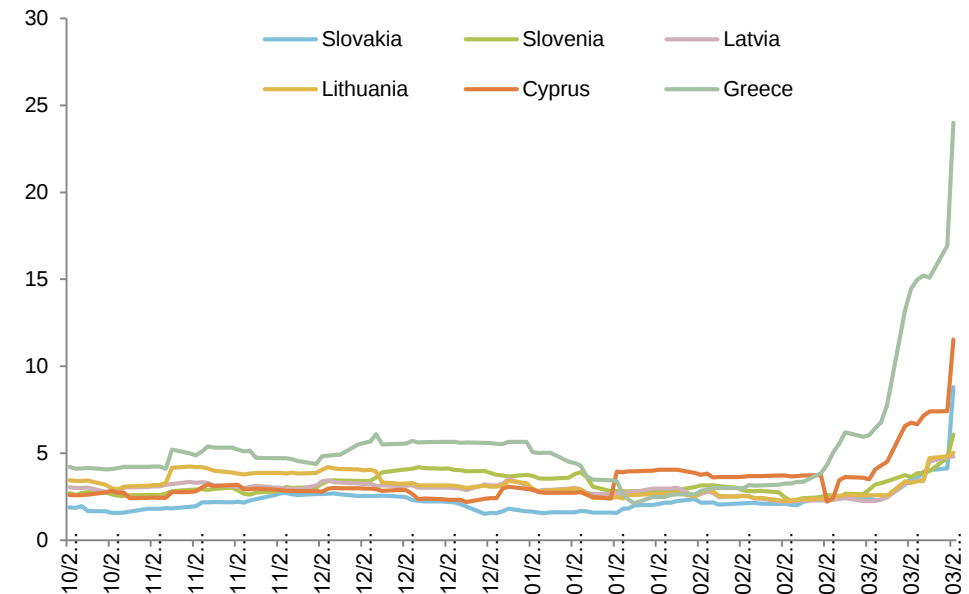
Bid-Ask spreads widening strongly
(10y tenor)



Sources: Bloomberg Allianz Research

Sharp increases in liquidity costs in peripheral markets indicate reduced supply by market makers. Also visible in volumes and immediacy of transactions.

Risk of liquidity bifurcation
(daily spread volatility)



Sources: Refinitiv, Allianz Research

Risk of liquidity bifurcation: liquid bonds becoming more liquid and illiquid ones more illiquid. Risk of an accident (impaired market access) cannot be excluded in such a volatile environment.

ASIA-PACIFIC: POLICIES AIMING TO CUSHION THE ECONOMIC BLOW OF COVID-19

Real GDP growth (%)

	2019	2020 Dec forecasts	2020	2021
Asia-Pacific	4.3	4.2	2.9	4.3
Australia	1.7	1.4	1.0	1.9
China	6.1	5.9	4.0	5.8
Hong Kong	-1.2	3.0	-2.4	0.6
India	5.5	5.8	5.5	5.8
Indonesia	5.0	4.8	4.3	4.7
Japan	0.9	0.7	-0.5	1.0
Malaysia	4.4	3.5	1.9	4.1
New Zealand	2.2	2.1	1.4	2.7
Philippines	5.7	6.0	5.1	5.4
Singapore	0.7	1.1	0.4	1.9
South Korea	1.7	1.9	1.5	2.0
Taiwan	2.2	1.4	1.0	1.5
Thailand	2.6	2.2	0.2	3.4
Vietnam	7.0	6.5	6.1	6.2

Source: National Statistics, Allianz Research

We expect Asia-Pacific GDP growth at 2.9% in 2020, after 4.3% in 2019. After negative sequential growth in H1, a partial recovery should follow.

Monetary policy leeway

	Inflation Target	Inflation 2019 Q4	Inflation latest month	Policy rate	Monetary policy leeway
Australia	2%-3%	1.8%	1.8%	0.25%	●
China	3.0%	4.2%	5.2%	4.05%	●
India	4.0%	5.8%	6.6%	5.15%	●
Indonesia	3.5% +/-1%	2.7%	3.0%	4.50%	●
Japan	2.0%	0.5%	0.5%	-0.10%	●
Malaysia*	-	1.0%	1.6%	2.25%	●
New Zealand	1%-3%	1.9%	1.9%	0.25%	●
Philippines	3% +/-1%	1.5%	2.6%	3.25%	●
South Korea	2.0%	0.0%	1.1%	0.75%	●
Taiwan*	-	0.4%	-0.2%	1.13%	●
Thailand	2.5% +/-1.5%	0.6%	0.7%	1.00%	●
Vietnam*	-	2.2%	5.4%	5.00%	●

* no explicit inflation targeting framework

Light red when policy rate < latest inflation, green otherwise

Source: National Statistics, Allianz Research

Most central banks in Asia-Pacific have been aggressively cutting policy rates, with some now pursuing unconventional easing measures. Inflationary and FX pressures need to be watched.

Fiscal policy leeway

2019	Fiscal balance % of GDP	Public debt % of GDP	Fiscal leeway
Australia	-0.7%	42%	●
China	-6.1%	55%	●
Hong Kong	0.6%	0%	●
India	-7.5%	69%	●
Indonesia	-1.9%	30%	●
Japan	-3.0%	246%	●
Malaysia	-3.0%	56%	●
New Zealand	0.1%	29%	●
Philippines	-1.1%	39%	●
Singapore	4.3%	114%	●
South Korea	0.7%	41%	●
Taiwan	-1.3%	33%	●
Thailand	-0.2%	42%	●
Vietnam	-4.4%	54%	●

Light red if < -3% if > 50%

Source: National Statistics, Allianz Research

Given the leeway, almost all economies have announced fiscal stimulus, in particular in Hong Kong, New Zealand, Thailand, South Korea, Malaysia, Singapore and China.

LATIN AMERICA: RECESSION, LOWER POLICY RATES AND HIGHER PUBLIC DEBT BURDENS



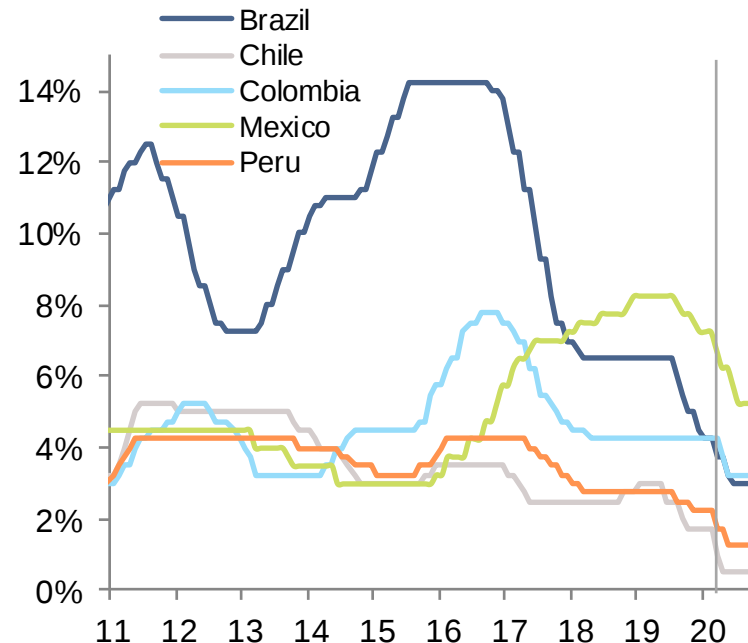
GDP growth forecasts (% , y/y, excluding Venezuela)

	2017	2018	2019	2020	2021
Argentina	2.7	-2.5	-3.0	-4.0	2.4
Brazil	1.1	1.3	1.1	-0.7	1.6
Chile	1.3	4.0	1.0	-0.9	2.3
Colombia	1.4	2.6	3.3	0.5	2.3
Mexico	2.1	2.1	-0.1	-2.0	1.0
Peru	2.5	4.0	2.2	0.5	2.8
Latin America	1.7	1.5	0.7	-0.9	1.6

Sources: IHS Markit, Euler Hermes, Allianz Research

We see Latam entering recession this year (-0.9%) due to the external shock (Chinese contraction in Q1, U.S. in Q2) and internal shock (confinement in Q2).

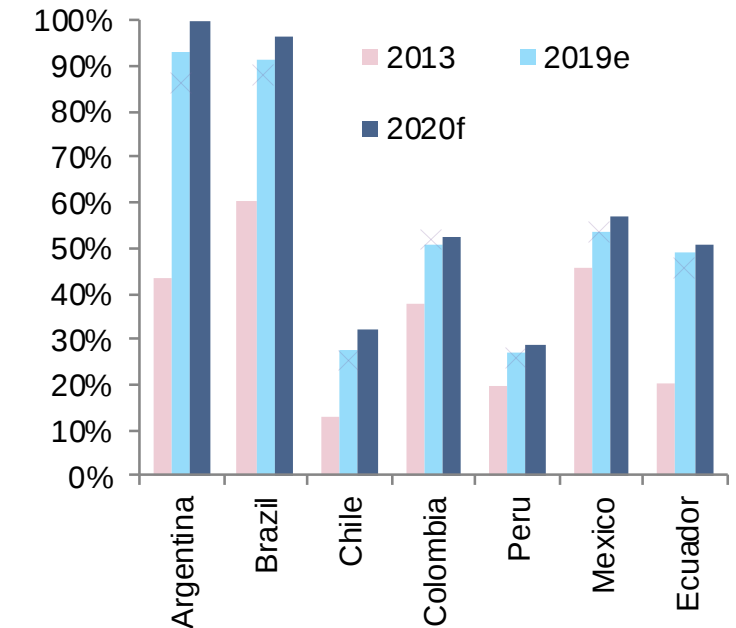
Central bank policy rates (%)



Sources: IHS Markit, Euler Hermes, Allianz Research

Central banks in Brazil (-50bps), Chile (-0.75bps) already cut rates to support activity. Expect the rest to join, despite downside pressures on currencies.

Public debt to GDP ratios (% GDP)



Sources: IHS Markit, Euler Hermes, Allianz Research

Lower fiscal revenues due to lower oil prices and lower growth, depressed activity, and large fiscal stimulus will contribute to increase the public debt burden.

MIDDLE EAST: GROWTH FORECAST REVISIONS



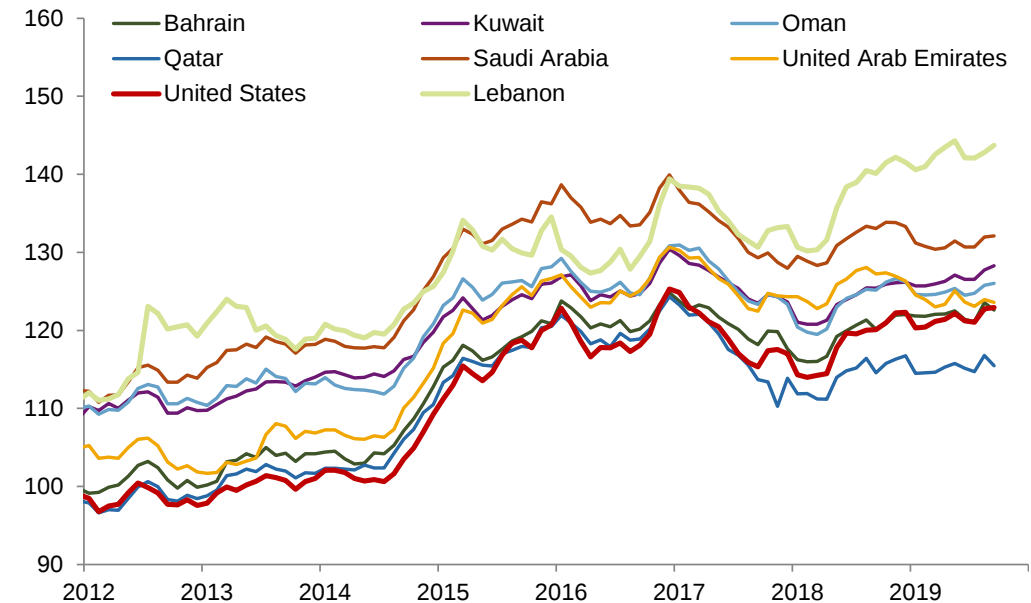
2020 GDP growth forecasts

Real GDP growth	2019	2020 Dec. forecasts	2020	2021
Middle East	0.1	1.4	-0.2	2.0
Saudi A.	0.2	1.2	1.2	2.0
UAE	2.2	2.0	-0.1	1.5
Qatar	0.7	2.0	0.6	2.5
Kuwait	0.9	1.0	0.3	1.5
Oman	1.3	1.7	0.5	2.2
Bahrain	1.2	1.8	0.6	2.0
Iran	-7.0	-1.0	-5.0	1.0
Israel	3.3	3.3	2.0	3.3
Iraq	3.3	3.0	0.5	3.0
Lebanon	-0.2	0.5	-3.0	1.0
Jordan	2.1	2.0	1.0	2.4

Sources: National statistics, IHS Markit, Allianz Research

The Middle East region as a whole will experience a contraction in 2020.

Real Effective Exchange Rate

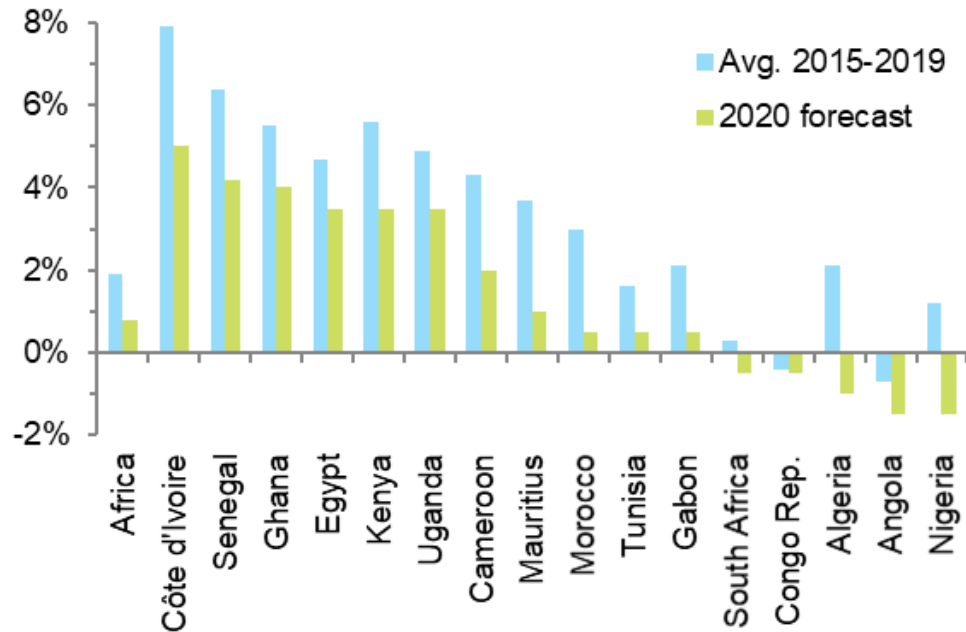


Sources: Bruegel, IHS Markit, Allianz Research

GCC states will follow the monetary policy stance of the US and have sufficient assets to maintain their currency pegs. Oman and Bahrain are weaker but will get support from their larger neighbors, if needed.

AFRICA: STRONG DECELERATION AND LIMITED LEEWAY TO COPE WITH CURRENCY DEPRECIATIONS

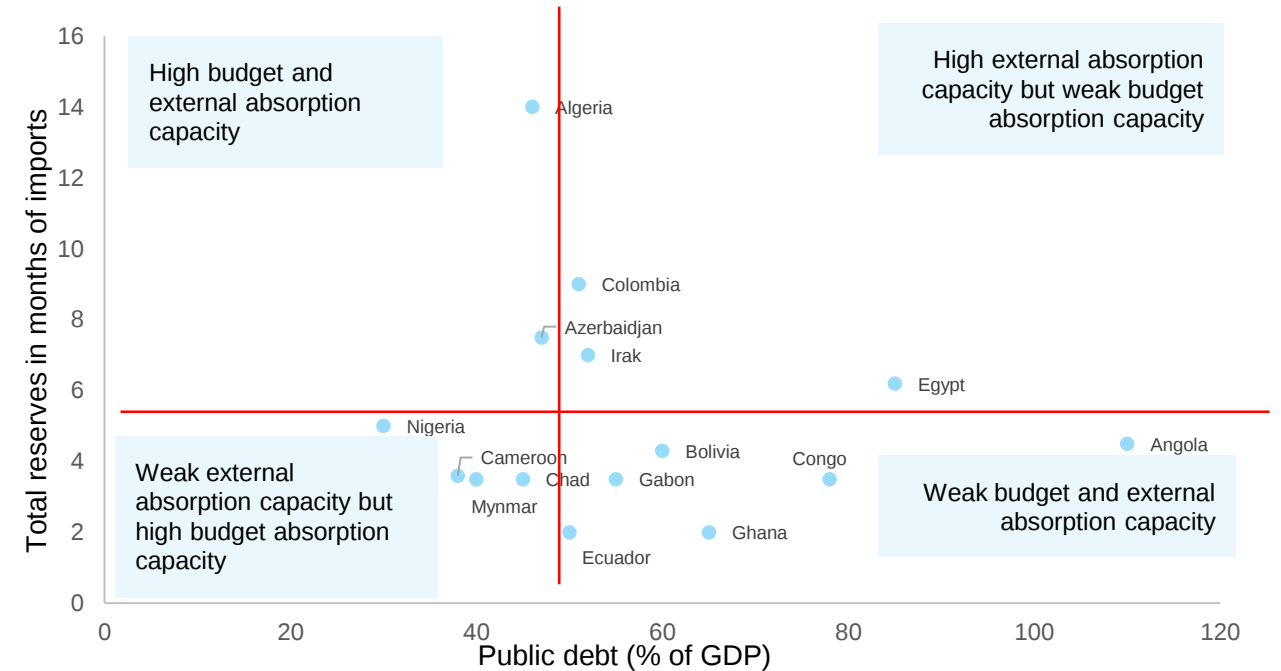
Sharp GDP growth slowdown in 2020



Sources: IHS Markit, IMF, Allianz Research

Growth will disappoint in many countries in Africa: all will experience a deceleration and major oil producers will see a contraction. Countries in recession: South Africa, Congo, Algeria, Angola and Nigeria

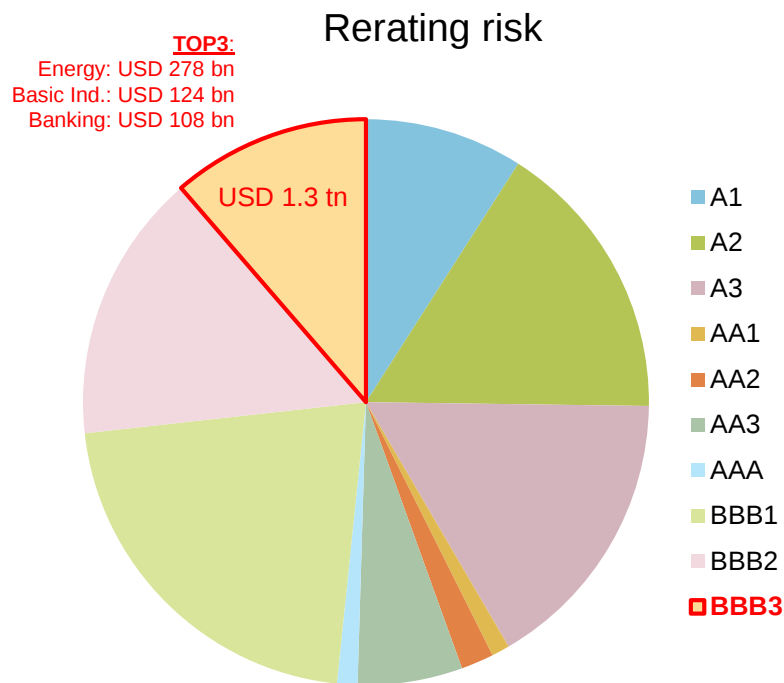
Foreign exchange reserves and public debt



Sources: IMF, Allianz Research

Some countries are more exposed than others to possible liquidity shocks. Angola, Gabon, Congo and Ghana are expected to be at the center of the storm.

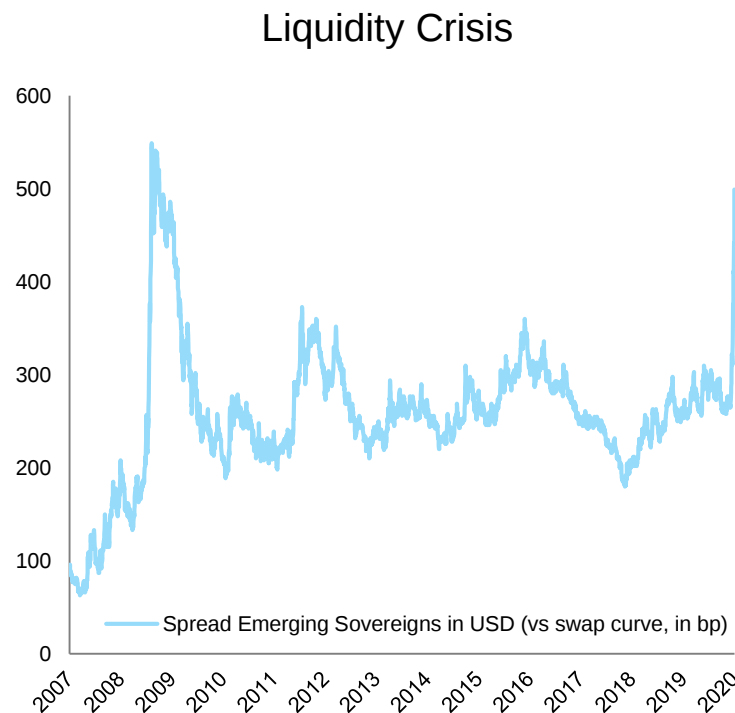
WHAT COULD GO WRONG? CANARIES IN THE COAL MINE



Source: ICE BofA Global Corp. Index, Allianz Research

Major credit event triggering a vast movement of re-rating in particular for BBB- (BBB3) companies (11% of Global Corp. Bond Index, corresponds to a volume of USD1.3tn.

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Source: ICE BofA, Allianz Research

Signs that the liquidity supply in financial markets is impaired; the risk of liquidity bifurcation with more liquid segments becoming more liquid and more illiquid segment more illiquid.



Source: Refinitiv, Allianz Research

Restarting engines from a large share of GDP administered will require precise, collaborative, and transparent moves to allow for price discovery on markets, and supply chains.

MID-TERM: CRISIS LEGACY

Strong state, redux

The role of the state vis-à-vis markets has been strengthened:

- Expect more assertive and interventionist governments
- Expect more basic needs and goods – from (green) infrastructure to health – provided by the state

A blow to globalization

The close interlinkages between states has been put into question

- Expect states to reduce their foreign reliance on “strategic” goods (from drugs to batteries)
- Expect companies to shorten their supply chains

Goodbye risk-taking

Trust in financial market stability & functioning has been challenged

- Expect investors to shift to more defensive strategies
- Expect households to increase savings in low-yield safer financial products.

Chinese soft power

Authoritarian vs democratic state: Who can better fight a pandemic?

- Expect the Chinese government to use its draconic but successful measures to stop Covid-19 as a blueprint to increase its global influence

Rising risk awareness

The fragility of modern life has been demonstrated

- Expect more demand for risk cover
- Expect rising pressure on insurers to offer comprehensive and simple solutions (no exclusions...)

Increase in productivity

The way we work has been changed

- Expect more flexible team structures and remote working, pushing up productivity by around 5% (according to several studies)
- Expect less business trips

THANK YOU

Economic, Capital Markets
and Industry Research

Global Economic Outlook

as of March 2020

