

GOAL: Global Opportunity Asset Locator

Outlook for 2021: Rotation inoculation — remain pro-risk

GS MACRO OUTLOOK 2021

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- We are pro-risk for 2021 and expect the pro-cyclical rotation across and within assets to continue, supported by a strong economic recovery from the COVID-19 shock. With a favourable growth/inflation mix and still elevated equity risk premia we are OW equities and UW bonds. With tighter credit spreads we are N credit but still see opportunities to move down in quality. Over a 12m horizon we are OW commodities (N for 3m), supported in particular by a bullish oil view.
- While absolute equity valuations are high after the sharp recovery, they remain attractive vs. bonds. And equities should be able to digest a gradual increase in bond yields better than fixed income as long as they come alongside better growth. We expect more rotation within equities – the leadership in regions, sectors and styles has been unusually defensive in the recovery.
- Our Risk Appetite Indicator (RAI) has turned positive, which alone is not a bearish signal. In the past when the RAI shifted positive the macro backdrop was similarly strong. We expect growth to take over from the search for yield as the main driver. Renewed COVID-19 concerns might weigh on sentiment in the near term but we think growth pricing across assets remains relatively conservative.
- Four multi-asset themes for 2020: (1) Managing duration frustration – higher equity duration risk, (2) Time to give credit to equity, (3) Commodity commotion and oil price recovery and (4) Diversification desperation continues.
- We highlight four risks for 2020: (1) Second-wave risks and inoculation disappointments, (2) Concentration, regulation, taxation, (3) Inflation and rates volatility and (4) Policy uncertainty.
- Positioning was at bearish or neutral levels for most of 2020, but recently there has been a bullish shift in investor sentiment. Still, we think positioning can pick up further in 2021 given our constructive view on next year.
- Volatility across assets reset sharply lower last month, with implied levels for a lot of markets nearing or at all-time lows – we look at selective hedges.

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Asset allocation: Remain pro-risk — focus on cyclical exposure

We are pro-risk for 2021 and expect the pro-cyclical rotation across and within assets to continue, supported by a strong economic recovery from the COVID-19 shock. With a favourable growth/inflation mix and still elevated equity risk premia we are OW equities and UW bonds. With tighter credit spreads we are N credit but still see opportunities to move down in quality. Over a 12m horizon we are OW commodities (N for 3m), supported in particular by a bullish oil view.

Our tactical trade ideas across assets have a pro-cyclical flavour, supported by our strong, above-consensus global growth outlook and expectations for easy monetary policy. The rotation might be bumpy with renewed COVID-19 waves and as US fiscal stimulus is likely pushed to next year. We would use any volatility to re-risk as markets are likely to focus increasingly on the recovery next year – we also look for overlay hedges post the reset in cross-asset volatility.

Exhibit 1: We are pro-risk in our asset allocation for 2021

3-Month Horizon		12-Month Horizon	
Asset Class	Weight**	Asset Class	Weight**
Equities	OW	Equities	OW
MSCI Asia Pac ex Japan	↑	S&P 500	→
STOXX Europe 600	↑	MSCI Asia Pac ex Japan	→
TOPIX	↑	TOPIX	→
S&P 500	→	STOXX Europe 600	→
Cash	N	Commodities	OW
Credit	N	Credit	N
EMBI	↑	EMBI	↑
USD HY	↑	EUR HY	→
EUR HY	↑	USD HY	→
EUR IG	→	EUR IG	→
USD IG	↓	USD IG	→
Commodities	N	Cash	N
10 yr. Gov. Bonds	UW	10 yr. Gov. Bonds	UW
US	↑	Germany	→
Japan	→	Japan	→
Germany	→	US	↓

** Arrows denote preferences within asset classes.

Source: Goldman Sachs Global Investment Research

We are OW equities (3m and 12m) and expect strong returns across regions.

Valuation expansion drove the equity recovery from the COVID-19 shock, consistent with the 'Hope' phase – in 2021 earnings should take over as the main driver as markets transition to the 'growth' phase. We forecast strong earnings growth across regions, mostly above consensus. With elevated equity risk premia and a gradual increase in rates we see absolute valuations, while high, as well-supported. We do not have strong regional preferences for 12m – forecast returns in Dollar are similar. For 3m we are OW non-US markets as they should benefit more from a cyclical recovery. We generally prefer cyclical and value and have reduced defensive/growth exposures.

Key Ideas: **US:** High growth investment (*GSTHHGIR*); **Europe:** Fiscal Infrastructure (*GSSTFISC*), Recovery (*GSSTRCOV*), Renewables (*GSSBRNEW*); **Asia ex Japan:** Digital Dozen (*GSSZDG12*), Global cyclicals vs. defensives (*GSSZMSGC* vs. *GSSZMSDF*), **Japan:** Capex (*GSJPCPEX*), Cyclicals (*GSJPCYCL*), Womenomics (*GSJPWJDL*); **EM:** LatAm, long banks vs. consumer staples, Long Korea vs. Taiwan.

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We are UW bonds (3m and 12m) but see modest downside due to muted inflation pressures and central banks on hold. We forecast modestly higher yields across most of the G10 – YE2021 10yr forecasts: US 1.3%, Germany -0.4%, Japan 0.10% and UK 0.5%. Bond risk premia should drive much of the repricing – we expect yield curves to steepen. The US real yield curve could steepen significantly with large declines in front-end real yields, especially if our bullish oil view materialises. With low global bond yields we think bonds are unlikely to be good hedges for equities; however, pronounced sell-offs could present tactical opportunities to add duration as a hedge as we think yields will remain range-bound until there is a sustainable pick-up in realised inflation.

Key Ideas: Long 3y1y forward US real yields, Long (1.65:1) 1y forward 5s30s steepeners, Long 2s30s Gilt curve steepeners, Long 10y10y-2y2y HICP curve flatteners.

We are N credit (3m and 12m) due to limited total return potential. Credit spreads should continue to inch to their pre-COVID-19 levels. While near-term growth may prove bumpy, a better outlook for next year following recent positive vaccine developments, the accommodative stance of monetary policy, direct central bank interventions and a supportive supply/demand technical backdrop should support credit risk appetite. Valuations limit long-term upside relative to the stellar performance since late March, but credit will likely deliver decent excess returns and solid Sharpe ratios. We generally favour a down-in-quality stance and pro-cyclical and “disrupted” sectors.

Key Ideas: Long High Yield vs. Investment Grade in the USD cash market (1 to 1.15 notional), Long USD Investment Grade bonds vs. agency MBS, Long EUR AT1 vs. High Yield bonds, Long US AAA CLOs vs. AAA CMBX index, Long EM HY credit.

We are N commodities for 3m and shift OW for 12m as we see a new structural bull market emerging in 2021. As demand recoveries meet restrained supply due structural under-investment, we see upside in most commodities. Non-energy commodities face immediate upside supported by Chinese demand and adverse weather shocks. We expect copper prices to end 2021 at \$7500/mt. Because of high inventories, upside in oil will likely come after the winter – we forecast Brent at \$65/bbl from the fall of 2021 to early 2022. This should support the oil-heavy S&P GSCI Enhanced index. Near term gold may be range-bound, but we maintain our \$2,300/toz target, supported by declines in 5-year US real rates and a weaker Dollar.

Key Trade Ideas: Long carbon-neutral S&P GSCI, Long “Back to the USSR” basket.

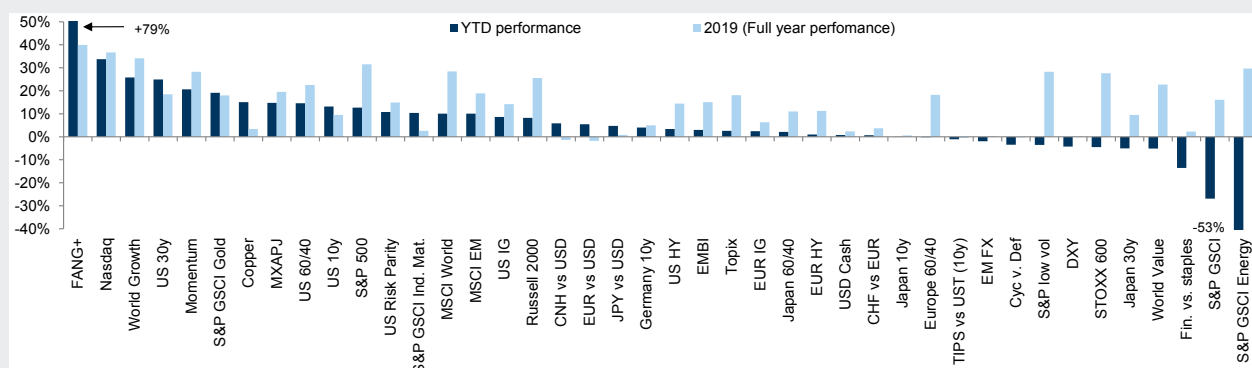
We remain bearish the Dollar and forecast a 6% decline in the trade-weighted Dollar over the next 12m. The Dollar appears meaningfully overvalued and investors are overweight US assets. High valuations, negative real rates and a recovery of global growth should weigh on the Dollar. We are cautious EUR and satellite currencies near-term and prefer CAD and AUD to position for better growth. JPY can appreciate despite higher bond yields on more favourable net portfolio flows. We forecast further Yuan gains, with USD/CNY falling to 6.30. We like MXN, ZAR and INR for a combination of value, real carry and current account dynamics that provide better risk/reward.

Key Ideas: Long CAD and AUD vs. USD with equal weights, Long vol-weighted basket of MXN, ZAR and INR, Long CNY and Long 3Y CGBs combined, Long SGD vs. TWD.

Review of 2020: Average global equity returns with high volatility and concentrated leadership

The MSCI World has posted an 8% annualised return for 2020 so far, roughly in-line with the long-run average. But this masks the extreme volatility of 2020, where the MSCI World was at some point down 35% and recovered 59% from the trough. Even more remarkable, a standard US 60/40 portfolio returned 11%, well above long-run averages, and following a very strong 2019. The main winners of 2020 were long-duration, safe and stable growth assets such as Nasdaq, S&P 500, Gold, global growth stocks and US 30yr bonds. On the flip side more cyclical assets, especially energy commodities, financials, value, EM FX and European equities have been material laggards.

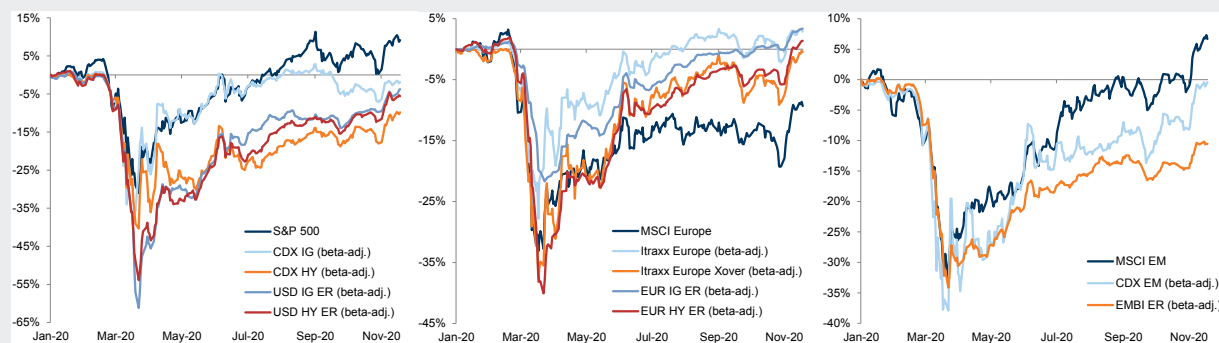
Exhibit 2: Strong year for some assets, especially Nasdaq, growth stocks and Gold but energy and cyclical assets have lagged



Source: Datastream, iBoxx, Goldman Sachs Global Investment Research

Credit had one of the most violent sell-offs but also recovered sharply, supported by aggressive monetary and fiscal policy. However, adjusting for beta, equities have generally outperformed credit since the summer, at least outside Europe. USD credit has also struggled to keep up with the S&P 500 during the strong summer rally due to less exposure to US Tech – EMBI has also lagged MSCI EM for similar reasons. Early in the recovery CDX IG managed to keep pace with the S&P 500, supported by the Fed, but it also underperformed in August due to the increasingly narrow leadership in equities. In Europe in contrast, credit has generally outperformed equities. This has been due to less of a boost from the Tech sector for equities as well as European credit fundamentals being better compared with the US.

Exhibit 3: While in the US and EM equity outperformed credit in the recovery, in Europe it lagged



Adjustment based on 1-year beta of monthly returns as of 2019YE

Source: Datastream, Bloomberg, Haver Analytics, Goldman Sachs Global Investment Research

Multi-asset: Rotation inoculation

Vaccine supports continued recovery with little inflation pressure

We expect a strong recovery in 2021 and forecast global growth of 6.0% (vs. consensus of 5.2%). In the near term risks to growth are skewed to the downside due to renewed COVID-19 waves. We think the global economy will return to the GDP levels from end-2019 by around mid-2021 (China is already back to its pre-Covid peak, while Europe is not likely to get there until the end of 2021). At the same time we expect inflation to remain low as it will likely take several years before output and employment are back to their potential levels.

We expect DM central banks to steer a dovish path for the next several years. The Fed, the ECB and the Bank of England are likely to wait until early 2025 before hiking rates. As a result, with a continued recovery in risky assets, financial conditions are likely to remain very easy ([Exhibit 4](#)). And while the US elections have not resulted in a 'blue wave' outcome, limiting potential for aggressive US fiscal stimulus, we expect governments in the hardest-hit countries to continue supporting their economies and limit scarring from the COVID-19 crisis.

A successful and broadly available vaccine is critical for our bullish growth outlook and likely to remain key for markets. It should boost economic activity in depressed sectors such as travel, accommodation and food services from Q1. Among the G3, our economists estimate that the US and Europe will enjoy a GDP boost of about 2%, with most emerging economies on a more delayed timeline and China benefiting much less because it has already largely recovered from the virus ([Exhibit 5](#)).

Exhibit 4: US Financial Conditions are very easy, close to the all-time lows from the Tech Bubble

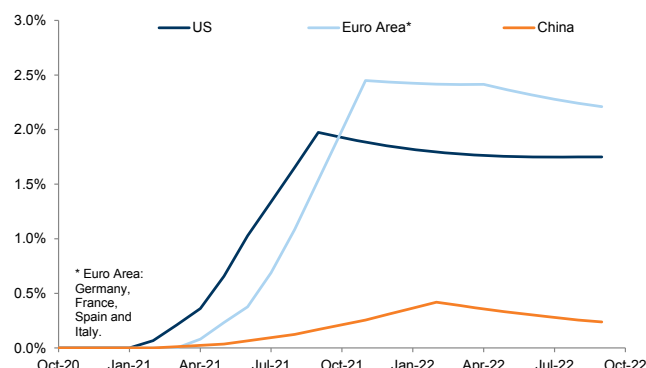
US Financial conditions index (FCI)



Source: Goldman Sachs Global Investment Research

Exhibit 5: A larger vaccine GDP boost to the US and Europe vs. China

Estimated Impact of Vaccine on Real GDP Level



Source: Goldman Sachs Global Investment Research

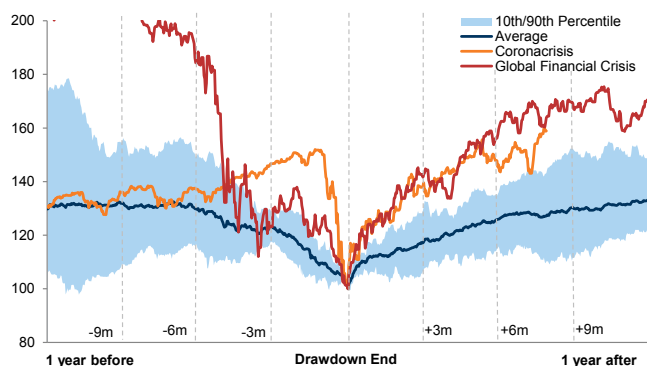
Strong equity recovery driven by valuations but unusually defensive

After one of the sharpest bear markets on record, global equities recovered similarly quickly and the MSCI World is up 10% for the year. From the trough, the recovery has been as strong as post the GFC (which followed a much longer and deeper

bear market). In fact, the recovery of the S&P 500 has been the strongest since the Great Depression in the mid-1930s, making it the shortest bear market on record: the S&P 500 is now up 13% and the Nasdaq up 34% for the year.

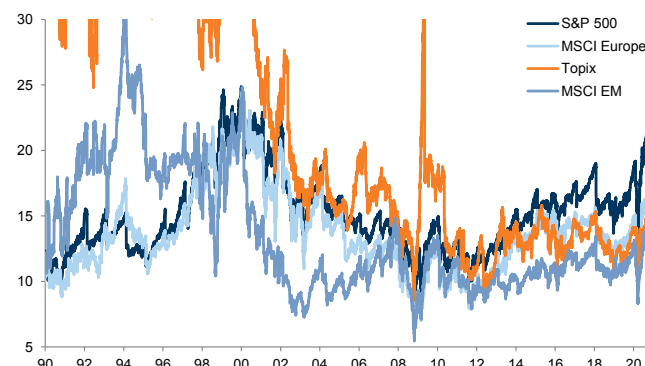
However, non-US markets have only just recovered their losses, with the recent rally post the positive vaccine newsflow. Valuations have been the main driver of the equity recovery, as is common in early recoveries from bear markets. However, even on 2021/FY2 earnings which include some recovery, valuations are higher than before the bear market and expanded more than during the GFC recovery. S&P 500 absolute valuations are now particularly high and nearing Tech Bubble levels.

Exhibit 6: A sharp recovery, comparable to post-GFC
MSCI World around bear markets (data since 1973)



Source: Datastream, Goldman Sachs Global Investment Research

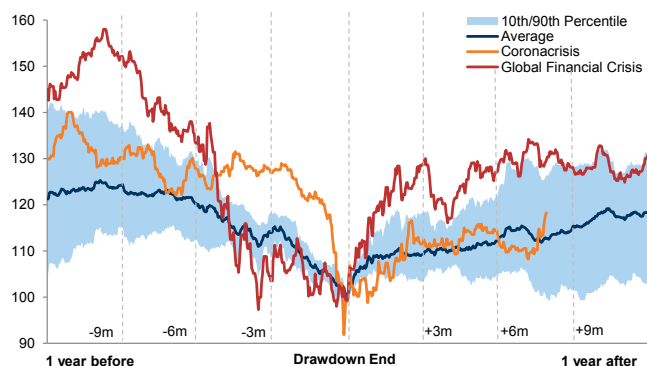
Exhibit 7: Valuations have been the key driver of the recovery
FY2 P/E ratio



Source: Datastream, IBES, Goldman Sachs Global Investment Research

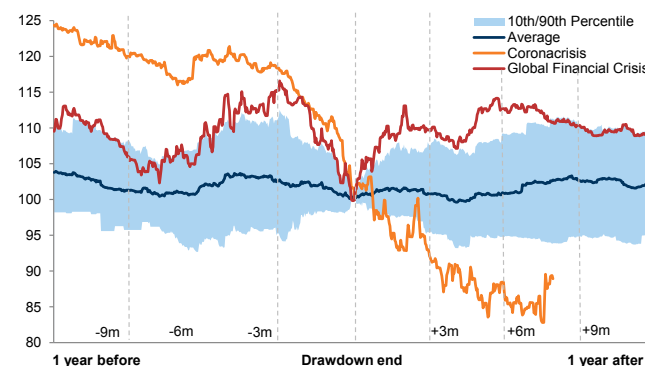
Another unusual feature of the recovery has been the defensive leadership within equities (and across assets): while cyclicals have recovered vs. defensives roughly in line with a normal recovery, they have lagged the post-GFC recovery despite a similarly large underperformance in the previous 6 months. Even more remarkable has been the underperformance of value vs. growth, both during the bear market and the recovery. While value stocks have not always led during recoveries, the magnitude of underperformance this time is unprecedented.

Exhibit 8: Cyclicals have outperformed defensives, in line with the average recovery but less than the GFC
World Cyclicals vs Defensives around bear markets (data since 1997)



Source: Datastream, Goldman Sachs Global Investment Research

Exhibit 9: The underperformance of value stocks has been very different to the GFC recovery
MSCI World Value vs. Growth around bear markets (data since 1970)



Source: Datastream, Goldman Sachs Global Investment Research

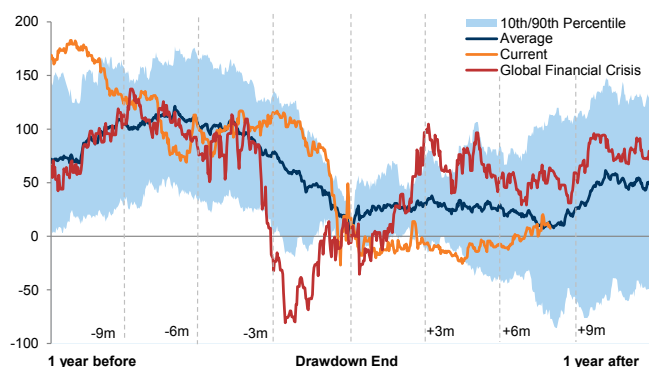
Bonds are still yielding to equities — equity risk premia appear high

A key reason for the strong rise in equity valuations and the leadership in equities has been low and anchored bond yields during the recovery; in contrast to a normal recovery since the late 1990s, they remain close to all-time lows ([Exhibit 10](#)). With more than a quarter of global bonds (or US\$16.5trn) having negative yields again, the search for yield has pushed investors to equities. **And after 4 decades of de-rating vs. bonds, LT growth expectations implied by equities are conservative.**

An equity risk premium (ERP) estimate based on a single-stage DDM ($ERP = \text{Dividend yield} + \text{LT growth} - 10\text{-year bond yield}$) using consensus trend GDP growth suggests the ERP remains close to GFC highs ([Exhibit 11](#)). The US ERP has increased most during the COVID-19 crisis due to US 10-year yields catching up with the G4: it is still roughly 100bp above pre-crisis levels. **As long as growth recovers, we expect further ERP declines, which should outweigh increases in bond yields.**

Exhibit 10: Bond yields have been more anchored compared with a normal bear market recovery

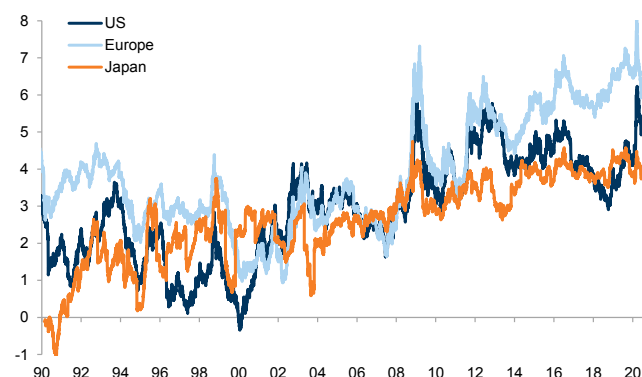
US 10-year yields around bear markets (bp, data since 1998)



Source: Datastream, Goldman Sachs Global Investment Research

Exhibit 11: Equity risk premia have trended up since the late 1990s

Single stage DDM $ERP = DY + LT \text{ growth} - 10\text{-year bond yield}$ with LT growth = 6-10y GDP growth based on consensus economics



Source: Haver Analytics, Consensus Economics, Goldman Sachs Global Investment Research

The real regime — boost from falling real yields during the recovery

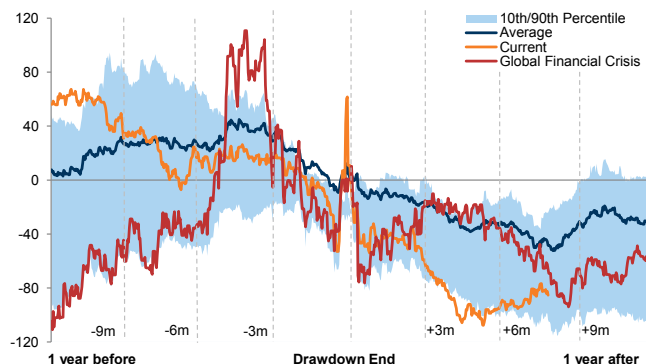
But the drivers of higher bond yields will matter: while nominal yields have been anchored, breakeven inflation has recovered as markets faded deflation risks, pushing down real yields into negative territory ([Exhibit 12](#)). As a result, the S&P 500 has become very negatively correlated with US 10-year TIPS yields ([Exhibit 13](#)) – **continued declines in real yields with rising inflation expectations can boost equity valuations as long as real growth expectations are stable or pick up.**

We expect real yield curves to steepen in 2021 but only modest increases in

long-dated real yields: equities should also be able to digest those, especially if they are gradual and come alongside better growth. Rising longer-dated real yields might also drive some valuation de-rating of growth vs. value, as LT growth expectations for secular growth stocks were stable or picked up during the COVID-19 crisis, e.g., for 'stay at home' beneficiaries, they benefitted most from lower real yields.

Exhibit 12: US real yields declined more than normal during the recovery from the bear market

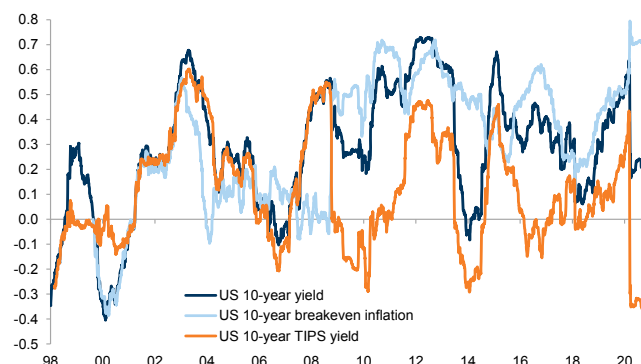
US 10-year real yields (bp, data since 1998)



Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 13: Equities have become very negatively correlated with US 10yr real yields in 2020

12-month correlation of weekly changes with S&P 500

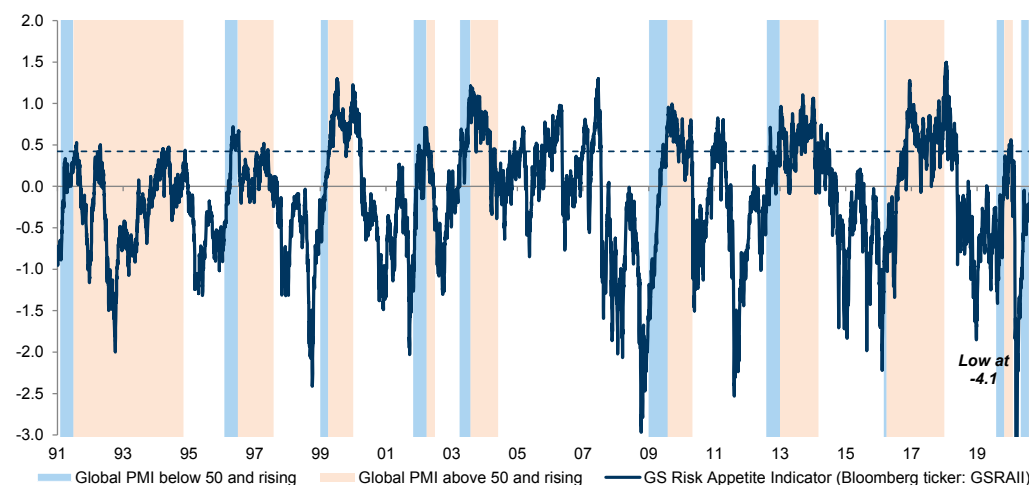


Source: Bloomberg, Goldman Sachs Global Investment Research

Rotation continuation — risk appetite indicator in positive territory

After the largest decline on record in March (to -4.1), our Risk Appetite Indicator (RAI) has shifted into positive territory again (Exhibit 14). Risk appetite picked up due to the search for yield and more positive macro momentum. While a lot of our positioning and sentiment indicators have been range-bound since Q2, there are signs of a broader pick-up in risk appetite this month (see *Cross-asset positioning* section).

With global PMIs above 50 and rising, our RAI has been mostly positive. With growth slowing in Q4 due to lockdowns, there is a risk that PMIs will double-dip, which could weigh on risk appetite temporarily. Increased risk appetite also increases vulnerability to other growth shocks, e.g., disappointments on US fiscal stimulus. However, with growing confidence in next year's recovery, supported by effective vaccines, our RAI should spend more time in positive territory in 2021.

Exhibit 14: Risk appetite tends to increase during periods of rising PMIs when they are above 50
 GS Risk Appetite Indicator (RAI)


Source: Datastream, Haver Analytics, Goldman Sachs Global Investment Research

Periods when the RAI was positive usually had a reflationary backdrop, supported by positive growth momentum (Exhibit 15): US 10-year yields generally increased, USD HY credit spreads tightened further and commodities rallied in most cases. Equity valuations generally expanded less, with earnings growth taking over as a driver.

Cyclicals and value outperformed defensives and growth stocks, although the hit ratios were less good and the average outperformance of value vs. growth has been small, likely due to structural headwinds in recent years. Finally, EM outperform DM – the main exception was the recovery post the Euro area crisis. **Performance across and within assets since October is consistent with such a shift and with our outlook for 2021.**

Exhibit 15: Historical periods when the RAI was rising from positive levels had a reflationary backdrop

Periods with positive RAI				S&P 500			S&P 500 12m forw. P/E			US 10-year yield			USD HY credit spreads			Equity styles (MSCI World)				S&P GSCI
Zero	Peak	Months	Change	Return	At zero	At peak	Change	At zero	At peak	Change	At zero	At peak	Change	Cyc vs Def	Val vs Gro	EM vs DM	Global			
Mar-91	Aug-91	5	0.4	5%	13.7	14.0	2%	8.0	8.2	0.1	848	607	-241	-3%	-1%	17%	4%			
Feb-92	Apr-92	2	0.5	0%	15.3	14.7	-4%	7.4	7.6	0.2	576	489	-87	-4%	1%	15%	-1%			
Jun-93	May-94	11	0.4	4%	14.6	13.4	-9%	5.9	7.2	1.3	488	359	-129	7%	8%	28%	-1%			
Mar-96	Jul-96	4	0.7	3%	14.7	14.9	1%	6.5	7.0	0.6	388	345	-43	-1%	0%	0%	15%			
Feb-99	Dec-99	10	1.2	19%	22.9	23.9	4%	5.3	6.4	1.1	515	476	-39	6%	-9%	38%	44%			
Dec-01	Mar-02	3	0.6	0%	21.6	20.5	-5%	5.0	5.3	0.3	812	734	-78	7%	0%	10%	11%			
Nov-02	Jul-03	8	1.2	7%	16.0	17.2	7%	4.2	4.5	0.3	901	567	-334	5%	3%	11%	19%			
May-09	Sep-09	4	1.0	19%	14.0	14.6	4%	3.2	3.5	0.3	1323	809	-514	6%	3%	6%	15%			
Nov-10	Feb-11	3	0.8	9%	12.7	13.2	4%	2.5	3.7	1.2	579	453	-126	5%	2%	-9%	7%			
Aug-12	Sep-13	13	1.0	23%	12.4	13.9	12%	1.6	3.0	1.3	591	460	-131	3%	3%	-14%	-1%			
Aug-16	Jan-18	18	1.4	34%	17.0	18.5	9%	1.6	2.7	1.1	546	332	-214	25%	-1%	8%	21%			
Oct-19	Jan-20	3	0.5	9%	17.2	18.4	7%	1.8	1.8	0.0	389	348	-41	-2%	-4%	3%	2%			
Oct-20	Nov-20	1	0.4	5%	21.3	21.9	3%	0.8	0.8	0.1	518	448	-70	6%	4%	4%	5%			
Average:		7	0.8	11%	16.0	16.4	3%	4.4	5.1	0.7	663	498	-165	4%	0%	9%	11%			
Median:		4	0.7	8%	15.0	14.8	4%	4.6	4.9	0.4	577	468	-127	5%	1%	9%	9%			
Hit ratio:				11/12			9/12			12/12			12/12	8/12	7/12	10/12	9/12			

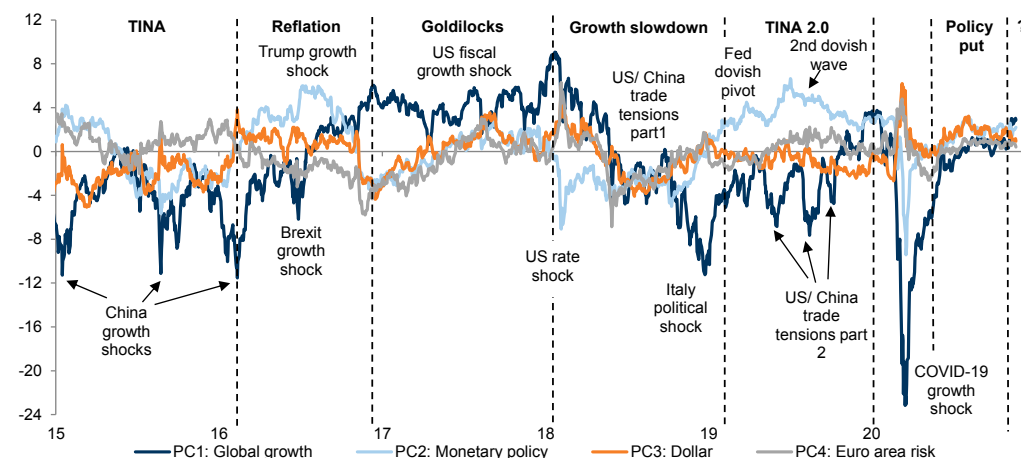
Source: Datastream, Haver Analytics, Goldman Sachs Global Investment Research

From policy to growth — changing drivers of risk appetite in 2021

There should also be a change in the drivers of risk appetite. After a sharp pick-up in the early part of the recovery in May, growth optimism (PC1) has struggled to turn positive up until recently – monetary policy (PC2) and a weaker Dollar (PC3) were the key drivers. But with the positive vaccine newsflow this month, growth optimism (PC1) has broken out and has risen sharply into positive territory.

Exhibit 16: Growth should take over as a driver of risk appetite from policy in 2021

RAI principal components



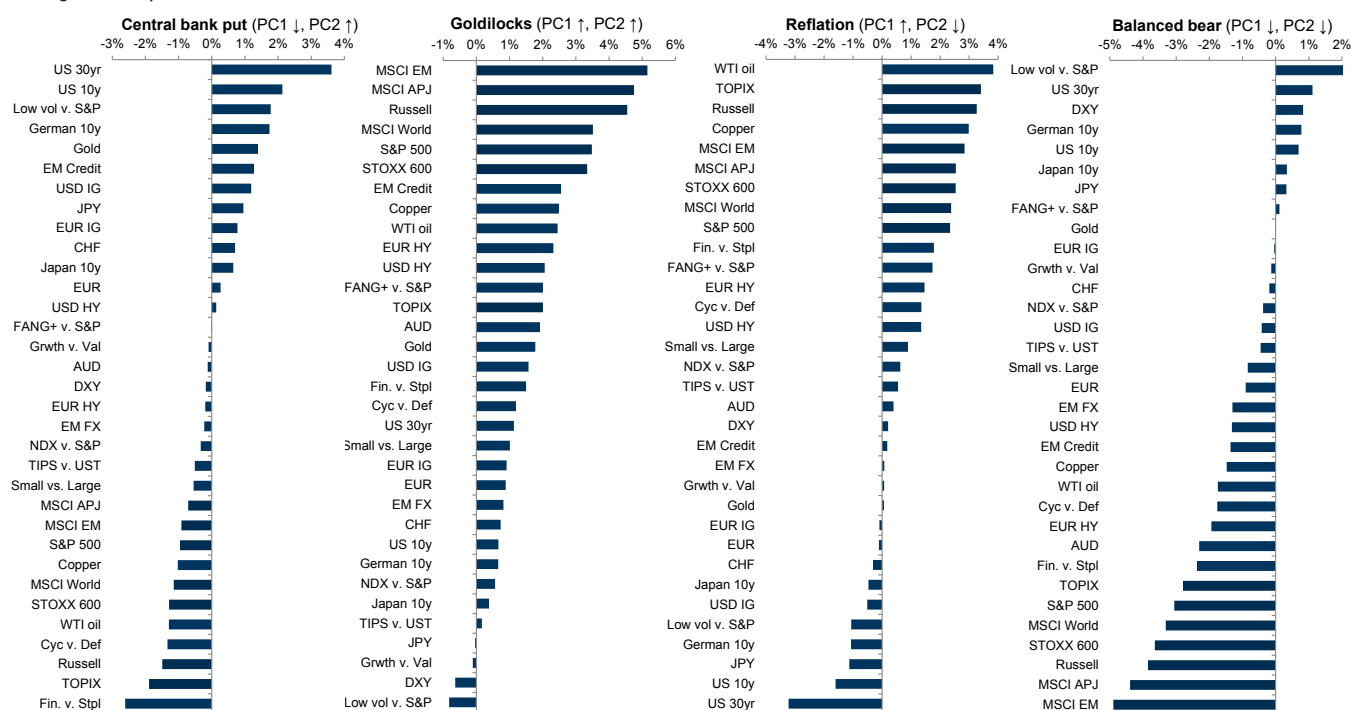
Source: Datastream, Goldman Sachs Global Investment Research

The interaction of the drivers will matter for cross-asset performance from here; combined changes result in four different regimes: (1) Central bank put: easier monetary policy expectations in response to weaker growth, (2) Goldilocks: easier monetary policy despite better growth, (3) Reflation: tighter monetary policy with better growth, and (4) Balanced Bear: tighter monetary policy despite weaker growth.

Cross-asset performance varies in those different regimes ([Exhibit 17](#)). While in 'Goldilocks' most assets tend to post positive returns (similar to 1H 2019), during a 'Balanced Bear' the majority of assets tend to have negative returns. The latter can result in diversification desperation with few places to hide. **During 2020 the dominant regimes have been 'Central bank put' and 'Balanced Bear' – in 2021 it is likely markets will spend more time between 'Reflation' and 'Goldilocks', in our view.**

Exhibit 17: More time spent between Goldilocks and Reflation in 2021

Average monthly returns for different RAI PC1 and PC2 mixes since 2000



Source: Datastream, Goldman Sachs Global Investment Research

Growth pricing remains conservative, in particular in Europe

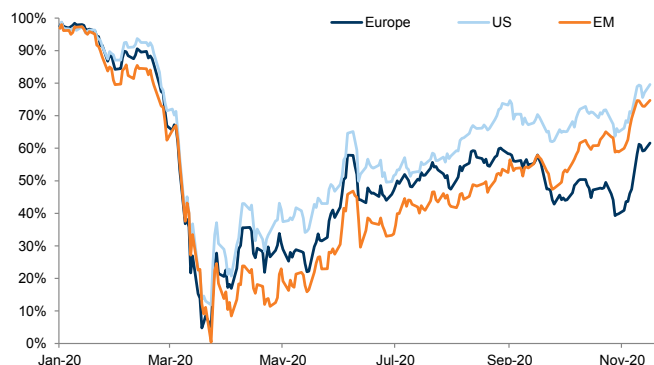
Growth pricing remains conservative in several places across assets and regions.

[Exhibit 18](#) shows cyclical assets have not fully retraced in the recovery so far. DM assets initially discounted a better recovery than EM, but more recently EM growth pricing has picked up more and been more resilient, with renewed lockdowns in Europe but also strong growth momentum in China.

In Europe/EM the largest retracements were in credit, and in the US in US breakeven inflation and equity vs. bond performance ([Exhibit 19](#)). **Across markets cyclicals vs. defensives have recovered only half of the earlier declines.** And since Q4 there has been a tug of war for cyclical assets between a better growth outlook for 2021, supported by vaccines, and potential for more challenging growth data into year-end.

Exhibit 18: Cyclical assets have recovered but are still below levels from the start of the year

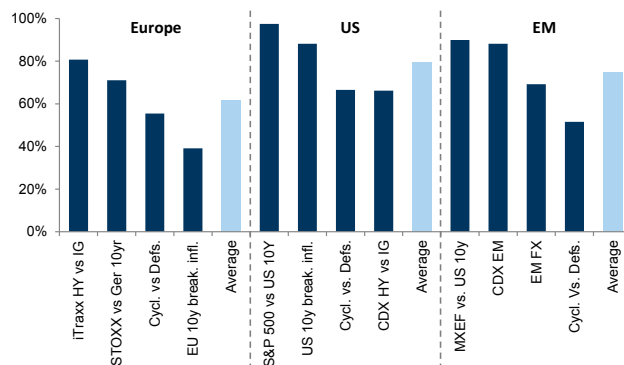
Retracement of cyclical assets post COVID-19 bear market. Based on assets in Exhibit 19



Source: Datastream, Goldman Sachs Global Investment Research

Exhibit 19: Credit has led in non-US markets with cyclicals vs. defensives broadly lagging

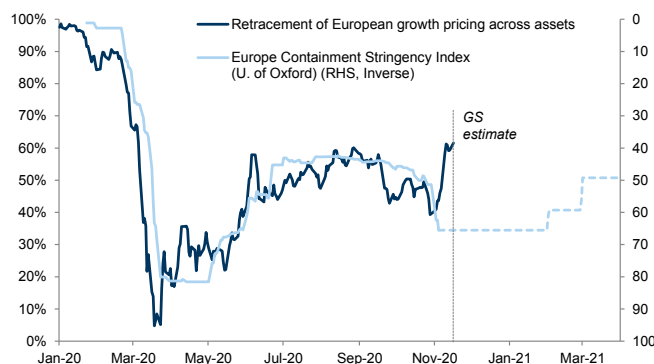
Retracement of cyclical assets post COVID-19 bear market



Source: Datastream, Goldman Sachs Global Investment Research

This has been particularly the case for Europe: in the first COVID-19 wave, European cyclical assets were closely correlated with lockdown indicators, and they suffered again in October (Exhibit 20). But European growth pricing has started to decouple due to the vaccine and prospects for a decline in infection rates. **This suggests positive asymmetry with conservative growth pricing – European growth expectations have become very bearish relative to the US** (Exhibit 21).

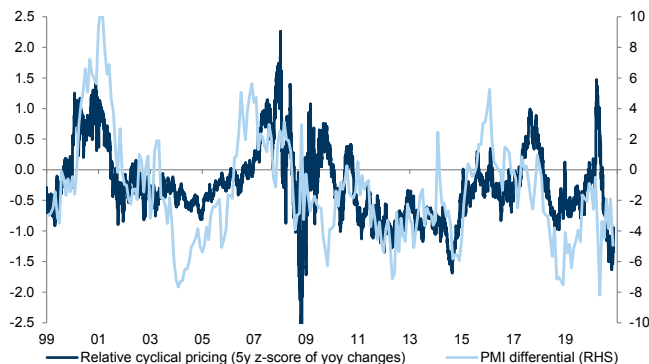
Exhibit 20: European growth pricing has managed to decouple from recent lockdown news



Source: Datastream, University of Oxford, Goldman Sachs Global Investment Research

Exhibit 21: European growth pricing across assets has been particularly bearish vs. US before the positive vaccine newsflow

Europe vs. US growth pricing vs. manufacturing PMIs



Source: Haver Analytics, Goldman Sachs Global Investment Research

Several related cross-currents are likely to matter for multi-asset investors in 2021:

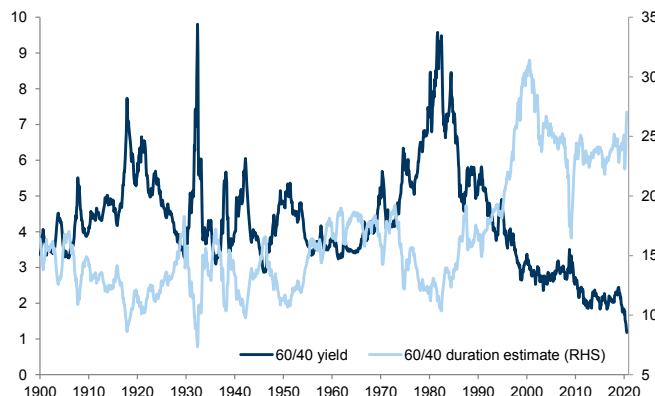
(1) Managing duration frustration — higher equity duration risk

Duration of a 60/40 portfolio has increased close to all-time highs with yields moving closer to the zero lower bound (Exhibit 22). The role of bonds in portfolios is more questionable. But higher valuations and concentration in growth stocks has also lengthened equity duration, which increases sensitivity to growth and rate shocks. Balanced portfolios are more risky either way – higher equity duration increases deflation tails, higher bond duration increases inflation risk (and weighs on returns).

The increase in equity duration has been most pronounced in the US, driven by a record market concentration and a larger weight in low-yielding growth stocks (Exhibit 23). In Europe equity duration has also increased but remains lower and in Japan it has actually declined in recent years. Also, duration in USD IG credit markets has also increased in recent years and YTD. The same has been true for EM USD credit (EMBI). More international diversification within equities and bonds, to non-US markets, might help lower multi-asset portfolio risk going forward.

Exhibit 22: Duration risk for a standard US 60/40 portfolio has increased materially

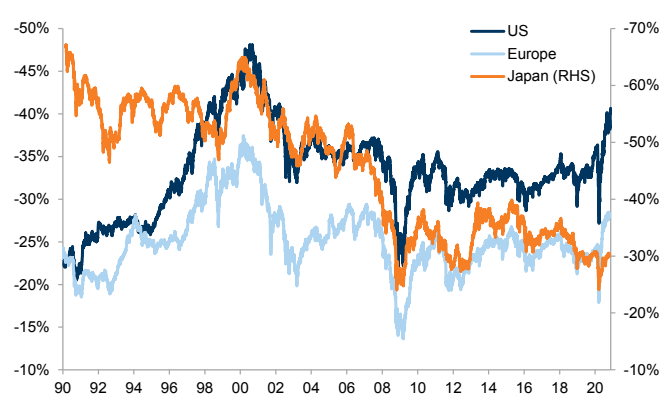
Data for US (60% S&P 500, 40% US 10-year bonds)



Source: Robert Shiller, Goldman Sachs Global Investment Research

Exhibit 23: US equity duration is the highest across markets while in Japan it has declined since the late 1990s

Equity duration estimate for +100 bps in discount rate

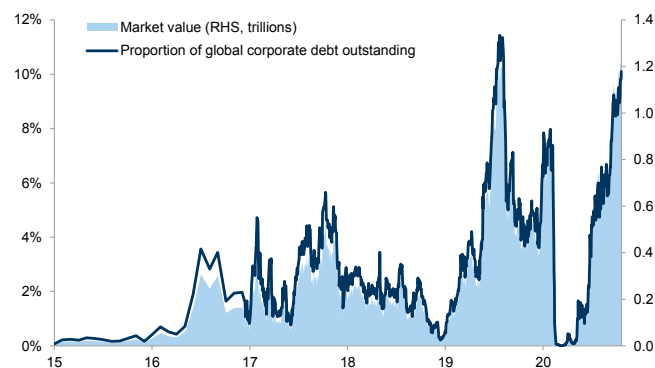


Source: Datastream, Goldman Sachs Global Investment Research

(2) Time to give credit to equity

The total return potential for fixed income investors looks increasingly limited: the proportion of negative-yielding corporate bonds (mostly IG) is close to 10% (Exhibit 24). Credit yields are close to all-time lows across markets, leaving little buffer for even gradual increases in bond yields (Exhibit 25). Investors will likely have to give more credit to equity in 2021 – the search for yield is likely to remain intense but for most equity markets we see more upside than in credit, even adjusted for risk.

Exhibit 24: Return-free risk - proportion of negative-yielding corporate bonds has increased again



Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 25: While credit yields are close to all-time lows, credit spreads and the gap to dividend yields are well above those Percentiles since 1998

Asset	Yield (%)	Credit spread (bps)	DY - credit spread (bps)	%	
				ile	ile
US					
S&P 500	1.5	14%			
USD IG	1.9	0%	109	28%	41%
USD HY	5.4	0%	448	38%	52%
USD IG BBB	2.3	0%	148	26%	46%
USD HY BB	4.1	0%	317	47%	43%
USD HY CCC	10.7	21%	971	48%	47%
Europe					
MSCI Europe	2.4	15%			
EUR IG	0.4	0%	105	30%	15%
EUR HY	3.5	6%	391	34%	52%
EM					
MSCI EM	2.2	24%			
EMBI	4.7	3%	382	55%	35%

Source: Datastream, Haver Analytics, Goldman Sachs Global Investment Research

But how to give credit to equity will matter. Credit spreads on an absolute basis and relative to dividend yields still point to some value: USD HY credit spreads lagged materially the decline in S&P 500 dividends yields in the recovery. While equity valuations appear elevated vs. credit, a strong recovery in earnings next year should still support relative returns. But equity vs. credit performance will also heavily depend on relative sector skews – in the US and EM equities are overweight Tech vs. credit and cyclical/value parts of the market might have the best chance of outperforming credit.

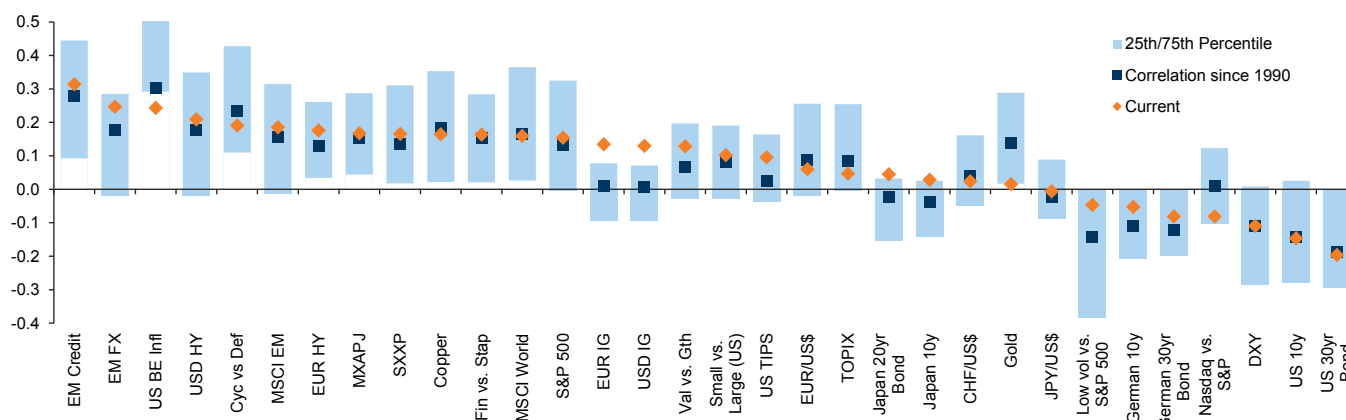
(3) Commodities commotion — oil price recovery

Commodities, and in particular oil, are likely to become a more important

cross-asset driver in 2021: we forecast Brent oil prices at US\$65/bbl in 2H 2021. Higher oil prices tend to boost cyclical assets: EM assets, USD HY credit, non-US equities, cyclicals vs. defensives and value vs. growth have been positively correlated with oil prices ([Exhibit 26](#)). In the last 12 months US 10-year breakeven inflation has been less correlated to oil – on the flip side, equity markets with a larger weight in long-duration growth stocks, such as the US and Asia, might benefit less.

Direct investment in commodities may be the most efficient expressions of our bullish forecasts; we are OW for 12m. Energy-related assets, such as oil equity, HY USD energy credit and oily FX might not provide the same exposure to an oil rally as in the past. This is due to ESG headwinds for equities, cash flow concerns for credit and across EMs and DMs, the beta of currencies to oil prices has fallen due to governments' FX interventions to lower oil-related volatility. Still, CLP, RUB and NOK have lagged commodity prices materially and could be an attractive laggard trade.

Exhibit 26: EM assets and USD HY credit tend to benefit most from higher oil prices - US 10y breakeven inflation less correlated recently
12m correlation of weekly returns versus WTI



Source: Datastream, Haver Analytics, Goldman Sachs Global Investment Research

(4) Diversification desperation continues

Lack of safe assets is likely to remain a key theme in 2021 – benefits from

cross-asset diversification were much lower in 2020 ([Exhibit 27](#)). As we wrote in [Global Strategy Paper: Balanced Bear Repair](#), after 3 decades of tailwinds from disinflation and monetary policy easing, with bond yields close to the zero lower bound there is less of a buffer for equity drawdowns. Balanced portfolios, such as 60/40 and

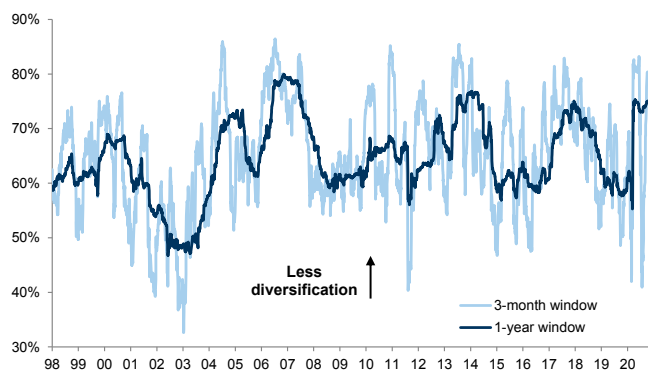
risk parity strategies, might offer lower returns with higher risk and face more deleveraging pressure in 'risk off'.

Due to the negative correlations of longer-dated real yields with risky assets at the zero lower bound, a lot of traditional safe havens have become less reliable as well: for example, Gold and Yen have been more positively correlated with the S&P 500 in 2020 ([Exhibit 28](#)). **The Dollar is the only asset that has been more negatively correlated with equities**, and we think at the zero lower bound FX can offer more attractive 'risk off' hedges. The Yen looks cheap and should perform better in 'risk off' in 2021 – also, buying downside optionality on pro-cyclical FX after vol resets appears attractive.

Generally we see a stronger case for international diversification within both equities and bonds in 2021 – we think low-yielding EM local currency bonds ('DMs of EM') can be a good alternative to DM bonds, and we see benefits from mixing US with non-US equity. Another option is to replace equity risk itself: after the vol reset, longer-dated calls or short-dated put hedges can help limit downside exposure, while substituting dividend swaps may help to lower the duration of equity portfolios (see *Cross-asset volatility* section). Finally, as uncertainty during the recovery is likely to remain high, large increases in bond yields might offer opportunities to add duration again.

Exhibit 27: In 2020 multi-asset portfolios were more risky due to lack of diversification across assets

Ratio of equal-weighted portfolio volatility and average of each asset's volatility (daily returns)

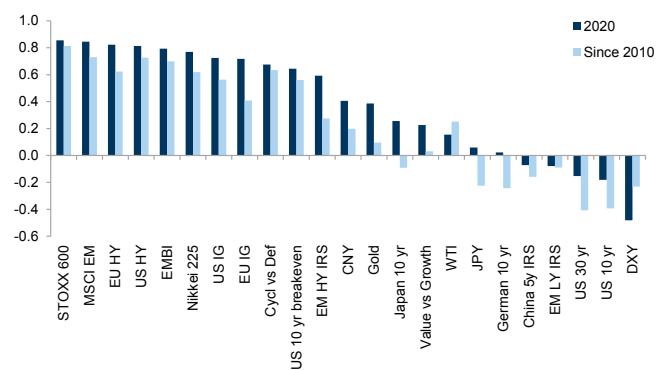


Note: assets included are S&P 500, US 10yr bond, Gold, S&P GSCI Commodities, USD HY credit.

Source: Datastream, Goldman Sachs Global Investment Research

Exhibit 28: Dollar has been more negatively correlated with S&P 500 while most assets are more correlated

Correlation with S&P 500 (weekly changes)



Source: Datastream, Goldman Sachs Global Investment Research

Risks: Inoculation, Concentration, Inflation, Politics

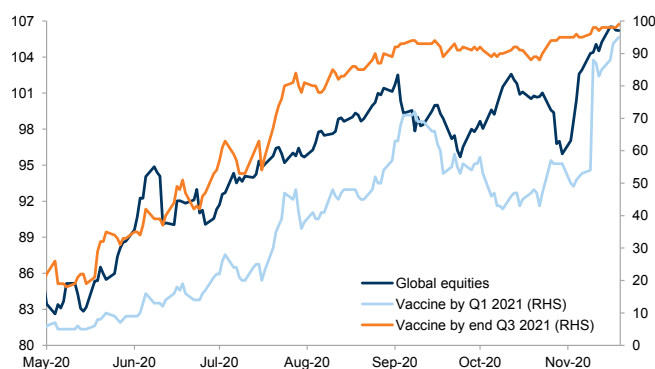
As always there are plenty of risks to worry about, e.g., COVID-19 developments, Brexit, EM vulnerabilities, US/China trade tensions. Below, we highlight four risks in particular:

(1) Second-wave risks and inoculation disappointments

Risks related to COVID-19 are likely to remain front and centre into 2021. Near-term for markets there is a tug of war of rising COVID-19 cases weighing on growth due to lockdowns and newsflow on vaccines/ second-derivative improvements on infections. The recovery has been closely linked to the probability of the availability of a vaccine by Q1 2021, which rose with positive Phase 3 data from Pfizer/BioNT and Moderna (Exhibit 29). Unsurprisingly, cyclical assets, e.g., value and 'going out' stocks such as Airlines, have been particularly correlated with vaccine newsflow (Exhibit 30).

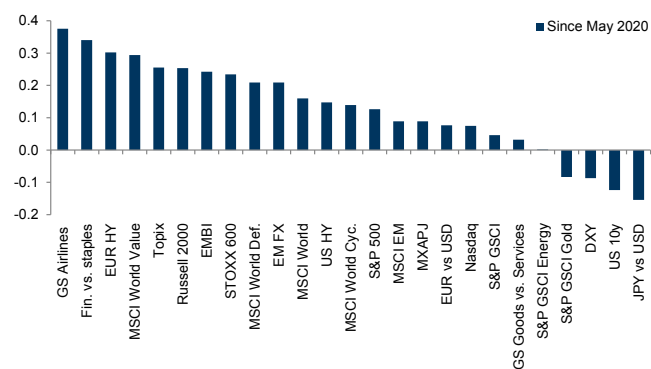
Focus will likely shift to regulatory approvals, manufacturing capacity/supply dynamics and distribution, together with signs of successful inoculation. The FDA still looks likely to approve at least one safe and effective vaccine by January, which would be followed by rapid immunisations of high-risk groups and –within a few months – the broader population. Given the likely global demand (and current supply dynamics) for a COVID-19 vaccine, there might be the need for multiple companies to succeed; our Healthcare equity analysts expect Phase 3 data from AstraZeneca before the end of the year and from Johnson & Johnson shortly after, although efficacy might be lower.

Exhibit 29: The recovery of global equities has been somewhat correlated with the probability of a vaccine
Global equities vs. probability of a vaccine



Source: Good Judgment Project, Goldman Sachs Global Investment Research

Exhibit 30: Value, EM, Europe and 'going out' cyclicals have benefited the most from a higher probability of a vaccine
Correlation with probability of 25mn vaccine doses available 2021 Q1-end in the US (weekly changes)



Source: Datastream, Bloomberg, Good Judgement Project, Goldman Sachs Global Investment Research

(2) Concentration, regulation, taxation

The strong performance of global growth stocks, especially during the COVID-19 crisis, has increased market concentration, with a few low-yielding, growth stocks having a larger weight in indices (in some cases due to index rebalancing). The effective N, which is the number of stocks in an equal-weighted portfolio with a similar level of

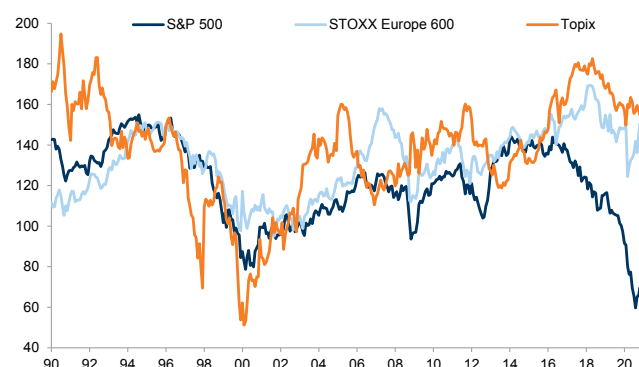
diversification, has dropped across indices since 2018 but in particular for the S&P 500 (Exhibit 31).

Having a less well-diversified, concentrated portfolio of long-duration stocks

might also justify a higher ERP. The volatility contribution of the top 20 S&P 500 stocks was more than 50% during the summer (Exhibit 32). With rising market concentration, there is more potential for idiosyncratic growth shocks, such as taxation and regulation, to affect performance. Our US equity strategy team has highlighted the negative LT growth impact from historical regulatory scrutiny in the case of IBM in 1969, AT&T in 1974 and Microsoft in 1998.

Exhibit 31: In particular, the S&P 500 has become increasingly concentrated in just a few stocks

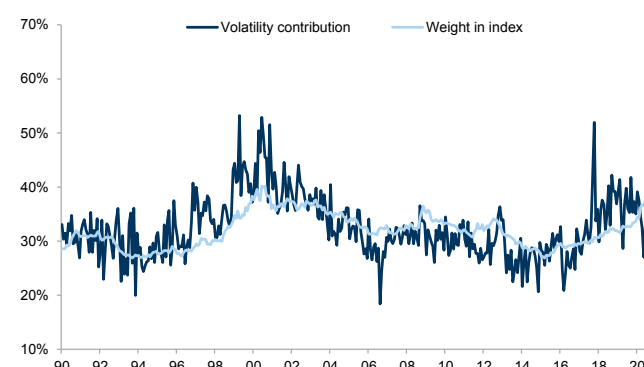
Effective N (1/ Herfindahl index)



Source: Datastream, Goldman Sachs Global Investment Research

Exhibit 32: In August nearly half of all S&P 500 risk was driven by the top 20 stocks

Volatility contribution of the top 20 stocks to the S&P 500



Source: Datastream, Goldman Sachs Global Investment Research

(3) Inflation and rates volatility

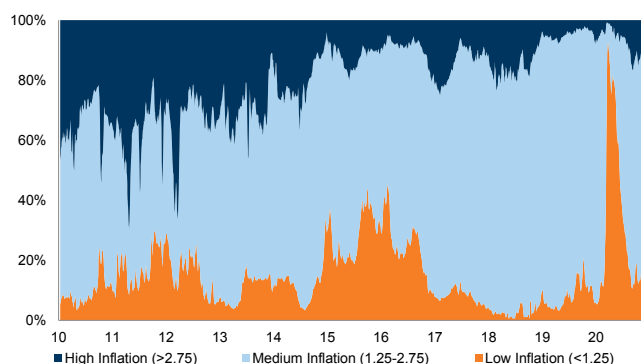
Markets are pricing little risk of high inflation in the next 5 years (Exhibit 33). While our economists also expect anchored inflation and policy rates globally, they forecast US core inflation to rise temporarily above 2% in the second quarter of 2021 (PCE peaking at around 2¼%), reflecting a rebound in virus-sensitive categories and base effects. With our bullish oil forecasts, headline inflation could temporarily bounce to 3% before weakening into year-end. This might fuel investor concerns on an earlier-than-expected exit from the current expansionary policy stance.

Historically, equity/bond return correlations have turned more positive when rates have risen too much too quickly:

if US 10-year yields increased by more than 2 standard deviations over 3 months, bond sell-offs weighed on the S&P 500 and 3-month rolling equity/bond correlations turned positive (Exhibit 34). Such sharp increases in yields happened during the May 2013 'taper tantrum', the 'Bund tantrum' in April 2015 and twice during the Fed tightening in 2018. Those were usually due to hawkish monetary policy pivots and to concerns about rising inflation.

Exhibit 33: Markets have repriced deflation risk lower but little upside risk to inflation

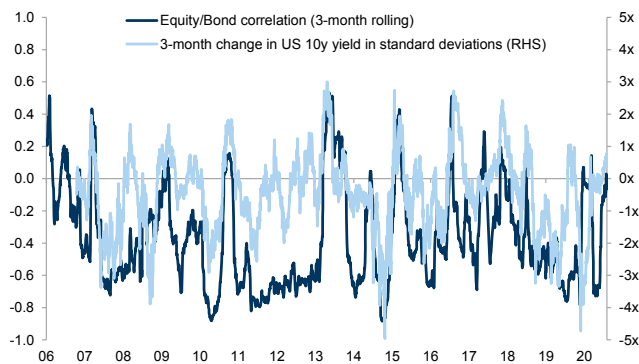
Option-implied distribution of 5-year US CPI inflation



Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 34: Fast increases in bond yields tend to weigh on equities

S&P 500 vs. US 10-year bond correlation



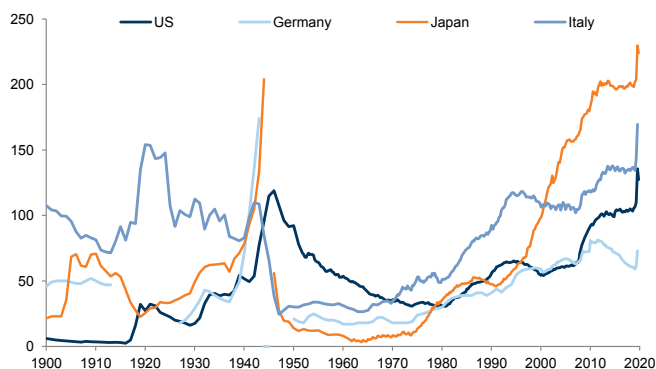
Source: Bloomberg, Goldman Sachs Global Investment Research

(4) Policy uncertainty

The COVID-19 crisis has triggered a material policy response, which is leaving most governments with more stretched fiscal and monetary positions, and less of a buffer for fresh shocks – debt/GDP ratios have risen sharply to Great Depression levels (Exhibit 35). While with both ECB support and the Recovery Plan the bar for Euro area sovereign stress to return in 2021 is high, Germany and Netherlands will hold national elections next year. Also, several EMs have used both fiscal and monetary policy aggressively, and some (such as Brazil) have maxed out on both dimensions.

And US policy uncertainty remains high even after the elections and has likely kept equity risk premia elevated through 2020 (Exhibit 36). US fiscal stimulus is likely to be pushed to next year and there remain larger uncertainties on size as well. While a 'blue wave' outcome did not materialise, there will likely be a Georgia Senate runoff election on January 5, 2021. Our economists would expect both an earlier Fed liftoff and a slightly faster pace of tightening if Democrats win both Georgia races and pass a larger stimulus package that substantially accelerates the recovery.

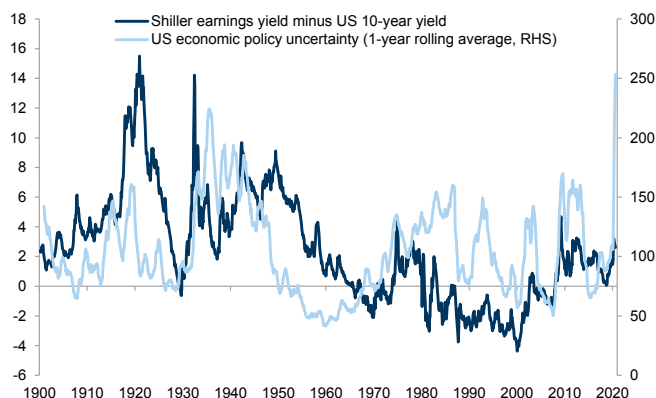
Exhibit 35: Global debt/GDP ratios have increased sharply during the COVID-19 crisis



Note: Germany and Japan defaulted on their debt in WW2.

Source: GFD, Goldman Sachs Global Investment Research

Exhibit 36: Rising policy uncertainty has likely continued to weigh on equity vs. bond valuations



Source: Datastream, Haver Analytics, Goldman Sachs Global Investment Research

Multi-asset positioning: More bullish sentiment but little rotation so far

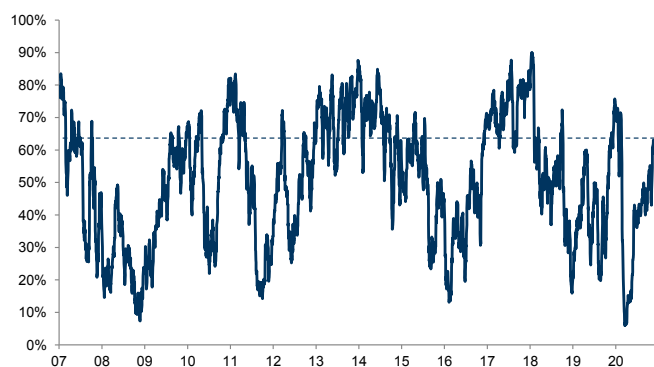
Positioning was at bearish or neutral levels for most of 2020, but recently there has been a bullish shift in investor sentiment. Based on the 13 indicators we track, overall risky asset positioning moved from the 40th percentile prior to the US election to the 60th percentile ([Exhibit 37](#)). While positioning indicators are far from the extremes, they are no longer signalling positive or negative asymmetry for risky assets. In November there has been a sharp increase in sentiment surveys (AAII) and one of the largest weekly inflows into equity funds since the Tech Bubble ([Exhibit 38](#)).

That said, even after the recent pick-up, we think positioning can pick up further in 2021 given our constructive view on next year. During the COVID-19 bear market investors materially reduced risk. Government bond and money market funds showed the largest inflows, while equity fund flows were very negative. Adjusting for assets under management, US IG fund flows showed the largest inflows as investors re-risked mostly via high-quality fixed income ([Exhibit 39](#)). Our estimate of cash allocations is still high ([Exhibit 40](#)). We found that, historically, a steepening of the yield curve combined with a pick-up in activity indicators should result in money markets outflows.

The elevated uncertainty around both the US elections and the trajectory of the recovery has weighed on investor sentiment. Historically, positioning indicators tend to weaken ahead of US elections and improve afterwards, and there was a similar pattern of relief this year, helped by the vaccine newsflow ([Exhibit 41](#)). **Global equity fund flows have materially lagged the improvement in activity indicators ([Exhibit 42](#)): a continued recovery should support a catch-up of equity fund flows.**

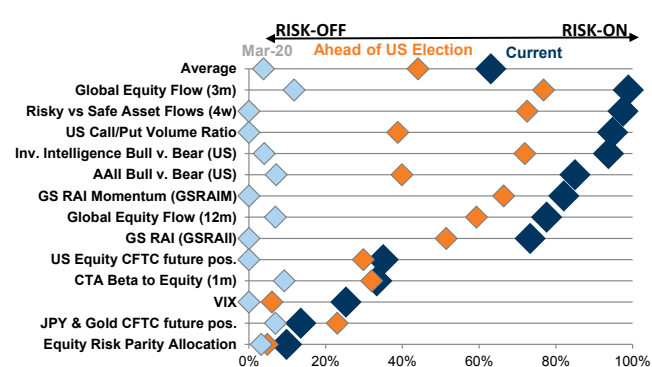
While sentiment has improved, institutional investor positioning is not uniformly bullish. US equity future positions declined over the last 2 months and are well below YTD highs ([Exhibit 43](#)). Options positioning indicators also declined from the bullish levels at after the summer. And still elevated volatility has likely prevented a re-risking of systematic investors. Lower volatility next year might support an increase in risky asset allocation from pro-cyclical investors, such as CTAs, vol target and risk parity funds.

Exhibit 37: Positioning indicators back above average levels
Average percentile of sentiment indicators in Exhibit 38



Source: Haver, EPFR, Datastream, Goldman Sachs Global Investment Research

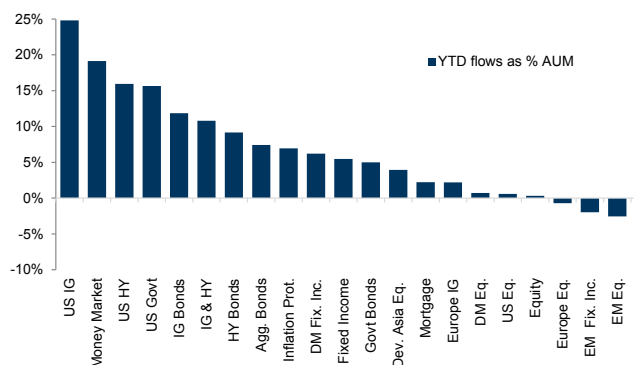
Exhibit 38: Sharp increase in sentiment and fund flows
Percentile of sentiment indicators since 2007



Source: Haver, EPFR, Datastream, Goldman Sachs Global Investment Research

Exhibit 39: Money market and high-quality risky fixed income showed the largest increase in positioning in 2020

Global YTD fund flows as a percentage of AuM



Source: EPFR, Haver, Goldman Sachs Global Investment Research

Exhibit 40: Cash allocation remains at cycle highs but is declining

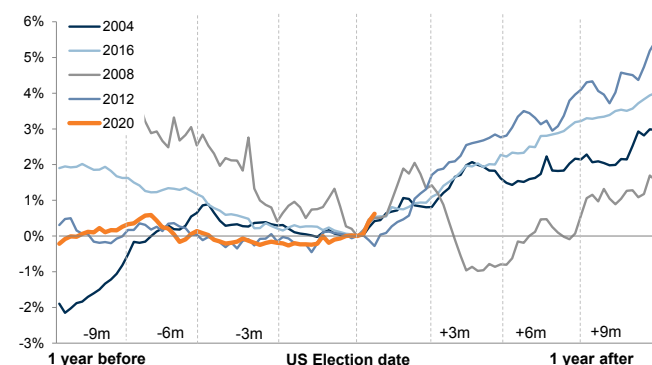
US asset class size. Bond size based on Bloomberg Barclays bonds indices market cap. Cash size based on zero maturity money (M2M: M2 + Money Market AuM)



Source: Haver, Goldman Sachs Global Investment Research

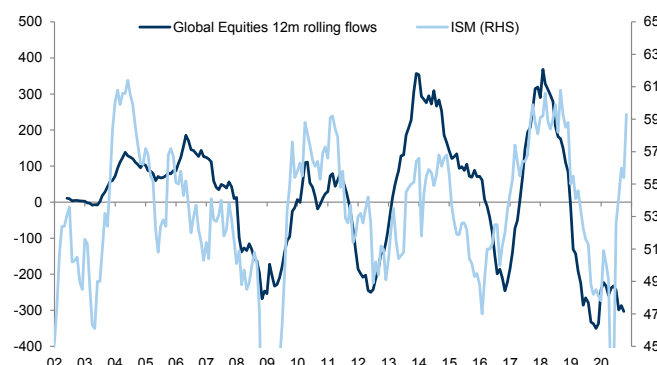
Exhibit 41: Global equity fund flows picked up post election, similarly to previous episodes

Global equity fund flows as a percentage of AuM around US elections



Source: EPFR, Haver, Goldman Sachs Global Investment Research

Exhibit 42: Global equity fund flows have materially diverged from activity indicators in 2020



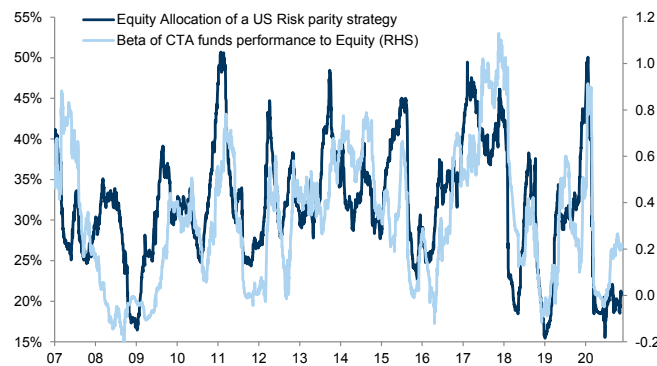
Source: EPFR, Haver, Goldman Sachs Global Investment Research

Exhibit 43: US Equity future positions is not extreme



Source: Haver, CFTC, Goldman Sachs Global Investment Research

Exhibit 44: Systematic investors have room for re-risking into equity



Source: Datastream, Bloomberg, Goldman Sachs Global Investment Research

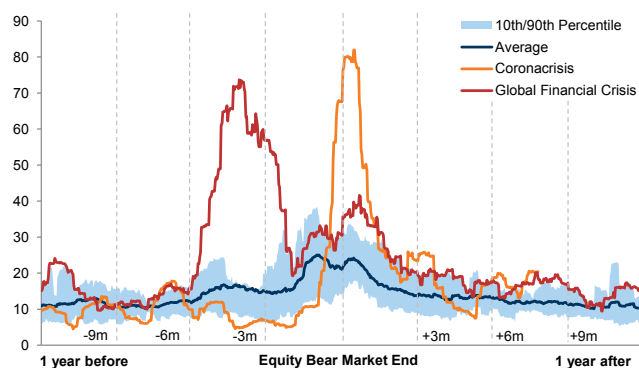
Multi-asset volatility: Lower but no low-vol regime — hedge opportunities

Large vol reset but still elevated for risky assets

Volatility for risky assets has remained elevated in the recovery. Global equity volatility has normalised at a slower pace than in previous recoveries from bear markets ([Exhibit 45](#)). The sharp but uncertain recovery coupled with US election and vaccine newsflow kept realised (and implied) volatility elevated. Ahead of the US elections, there was still a large volatility premium priced. But since then 3m implied vol has reset sharply and trades below 1m realised for many assets ([Exhibit 46](#)).

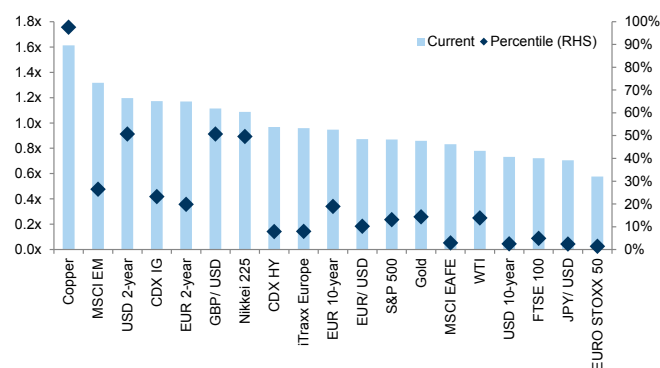
Equity vol was pricing the largest tail moves and saw the largest reset – VIX term structure has shown a remarkable decline, in particular in the front end. Since the US election, VIX has halved, from 40 to 20 ([Exhibit 47](#)). That said, even after the reset, volatility for risky assets remains elevated (roughly 70th percentile) and vol curves are generally flat, which suggests not all risks have been priced out ([Exhibit 48](#)). Across assets, US equity volatility is still the most expensive, gold vol is also elevated while rates and FX vol are relatively low ([Exhibit 49](#)).

Exhibit 45: Realised vol has been high for a recovery
MSCI World 1m realised volatility around bear markets (data since 1970)



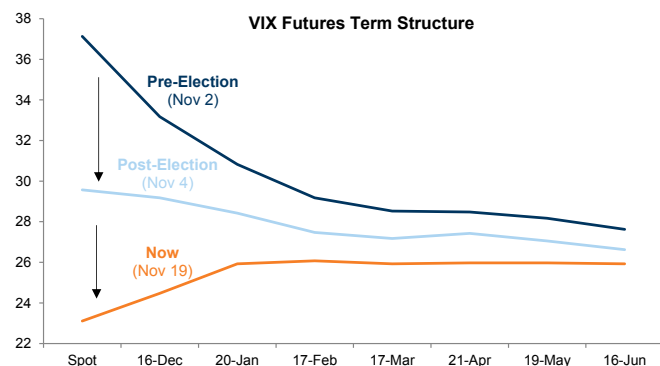
Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 46: Implied vol below realised for many assets
3m implied vs 1m realised volatility



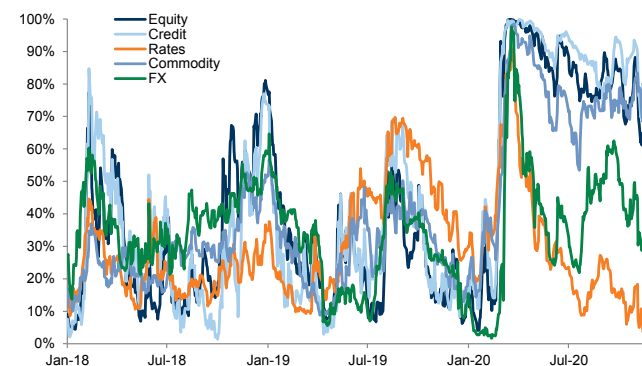
Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 47: Significant decline in front-end VIX



Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 48: Lower vol but still elevated for risky assets
3m implied volatility percentile last 10y



Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 49: S&P 500, Gold and Oil vol remains elevated, while rates and FX vol is low

	Equities						Rates				Credit			Commodities			Currencies		
	S&P 500	EURO STOXX 50	Nikkei 225	FTSE 100	MSCI EM	MSCI EAFE	USD 2-year	USD 10-year	EUR 2-year	EUR 10-year	CDX IG	CDX HY	iTraxx Europe	WTI	Gold	Copper	EUR/USD	JPY/USD	GBP/USD
Implied (3-month ATM, %)																			
Current:	19.9	18.8	18.6	18.0	20.8	16.9	0.9	3.5	1.0	2.1	61.2	53.9	59.2	40.3	16.9	20.4	6.1	6.6	9.1
Percentile:	85%	51%	43%	78%	55%	61%	0%	5%	9%	2%	87%	78%	64%	80%	66%	47%	13%	12%	58%
1M change:	-4.3	-3.7	0.3	-3.3	-2.0	-3.0	-0.3	-0.4	0.0	-0.2	-11.7	-5.1	-7.3	-0.2	-1.5	-0.1	-0.7	-0.3	-1.5
Average:	15.7	19.3	19.8	15.4	21.0	17.1	3.0	4.8	2.0	3.7	50.7	46.9	56.7	32.4	15.5	21.8	8.7	9.1	8.9
95th:	26.5	30.6	27.1	24.7	31.5	29.1	4.9	7.1	5.3	6.2	73.7	78.3	86.4	50.4	23.0	33.0	13.6	12.7	12.7
5th:	10.0	12.3	13.8	10.3	15.2	10.4	1.3	3.5	0.9	2.2	38.7	30.7	40.3	17.1	9.7	15.2	5.1	5.8	5.8
Realised (%)																			
1-month:	22.8	32.5	17.1	24.9	15.8	20.4	0.8	4.8	0.8	2.2	52.2	55.7	61.7	51.7	19.6	12.6	7.0	9.3	8.2
Percentile:	88%	91%	49%	91%	71%	88%	3%	65%	42%	20%	89%	94%	88%	90%	82%	9%	43%	69%	54%
Average:	14.5	18.8	19.6	14.8	14.6	13.7	2.7	4.5	1.5	3.3	38.9	34.5	44.0	35.5	15.2	20.0	8.0	8.4	8.3

Source: Goldman Sachs, Goldman Sachs Global Investment Research

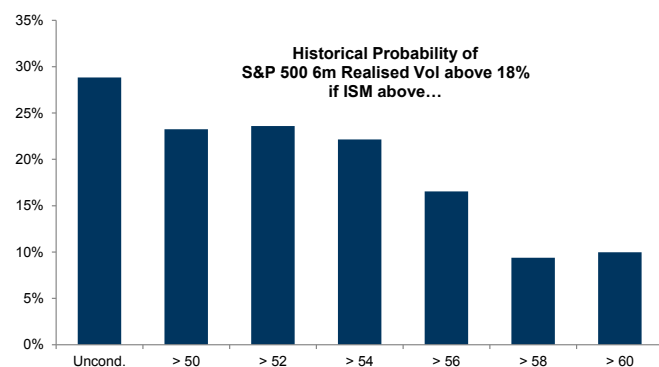
2021 Volatility Regime: Lower but not low vol — equity duration risk elevated

Our forecast for above-consensus, above-trend global growth next year should help anchor volatility in 2021. And the recent strong growth momentum also points to lower volatility. Historically, the probability of being in a high-volatility regime (top quartile of realised volatility level is 18%) is just 10% if ISM is above 58 (Exhibit 50). The recent large decline of the VIX is in line with a simple model on macro factors, and all of these are expected to turn more friendly in 2021.

That said, some factors that might keep equity volatility more elevated and prevent a low-vol regime.

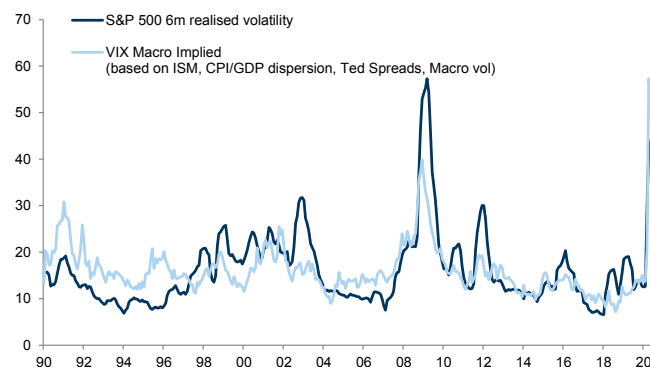
First, there is still considerable uncertainty over the recovery, in part due to COVID-19, and macro volatility is likely to remain high. Second, equity duration has increased with high valuations and market concentration and, although rates vol should remain supportive, that makes risky assets more vulnerable to growth and rate shocks. Both realised and implied volatility have room to decline from current levels, although elevated valuations and lingering uncertainty should temper the decline.

Exhibit 50: High-volatility regimes are unlikely with elevated levels of ISM



Source: Datastream, Goldman Sachs Global Investment Research

Exhibit 51: An improvement in US growth and normalisation of economic uncertainty, liquidity and macro volatility should support lower level volatility

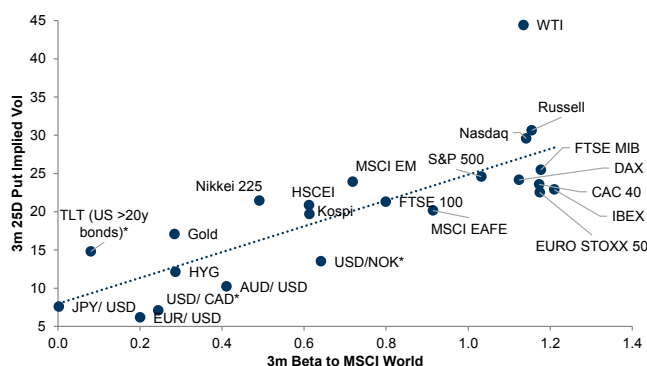


Source: Haver Analytics, Bloomberg, Goldman Sachs Global Investment Research

Opportunities post the reset: vol curve, long-dated vol, short-dated puts, FX vol

- **European equity puts screen as attractive** considering low vol, recent beta to global equity and the rally since November ([Exhibit 52](#)). Put spreads can further cheapen cost considering elevated put skew ([Exhibit 53](#)). **Hedging equity with FX vol also appears attractive** - NOK, CAD and AUD screen cheap based on their beta to equity, their implied volatility is screening as cheap. HYG put spreads look also attractive given the low level of credit vol and elevated HYG put skew.
- **Gold vol is very elevated** compared with other safe assets such as Rates and JPY. To position for higher real rates, selling calls on Gold can offer an attractive carry and skew is negative, much in contrast to bonds ([Exhibit 54](#)).
- Despite the vol reset in the front end, implied volatility curves between 3m and 12m remain inverted or flat across assets ([Exhibit 55](#)). **Continued vol normalisation might drive steeper vol curves** – short maturity options could be an attractive funding strategy for long-dated options in equity.
- **Only US option markets are still pricing elevated long-dated volatility:** selling longer-dated S&P 500 puts can help fund selective overlay hedges. S&P 500 2y vol looks expensive compared with credit protection – the annualised cost of a 2y 80% put on S&P 500 is high vs. buying CDX IG or HY ([Exhibit 57](#)).
- **S&P 500 can help fund cheaper long-dated calls on EURO STOXX 50 and Nikkei 225** ([Exhibit 58](#)). S&P 500 long-dated vol also looks expensive relative to long-dated US rates vol, which prices a low probability of a large move up ([Exhibit 56](#)). With a more positive correlation between real rates and breakeven, there is potential for long-dated yields to increase in the event of positive growth.
- While a weaker Dollar is our base case, **selective Dollar upside can help hedge a 'risk off'**, especially if driven by higher US real rates. In this scenario, most assets are likely to suffer except for the Dollar. Across FX, the risk reversal on the EUR screens the best ([Exhibit 59](#)). To express our base case for further Dollar depreciation, risk reversal on MXN and CNH screen the best ([Exhibit 59](#)).

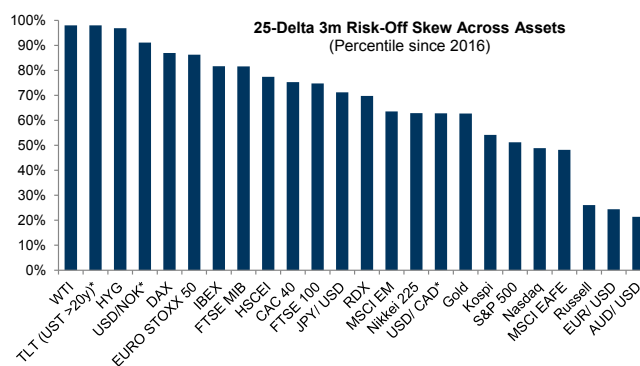
Exhibit 52: CAD, AUD, NOK and European equity vol attractive
3m beta to MSCI World (weekly return). Based on 25-delta call implied vol where asset has *



* denotes asset implied vol based on 25-delta call

Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 53: Risk-off skew for NOK, HYG, European equity elevated
25-delta Put skew: (25d Put IV - 50d IV) / 50d IV. For asset with * based on (25d Call IV - 50d IV) / 50d IV

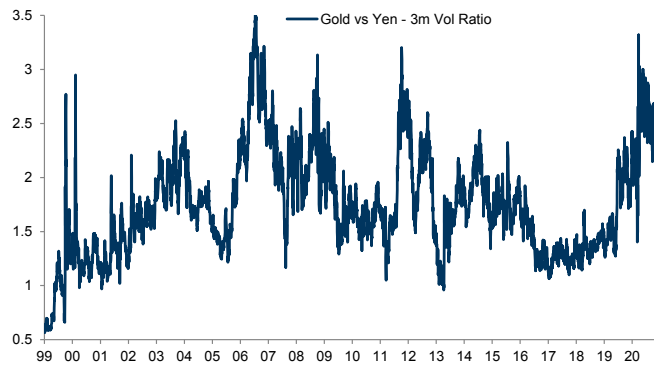


* denotes asset implied vol based on 25-delta call

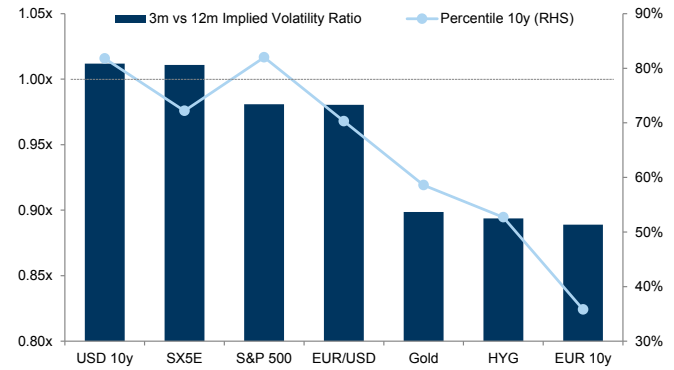
Source: Goldman Sachs Global Investment Research

Exhibit 54: Gold volatility is elevated vs JPY

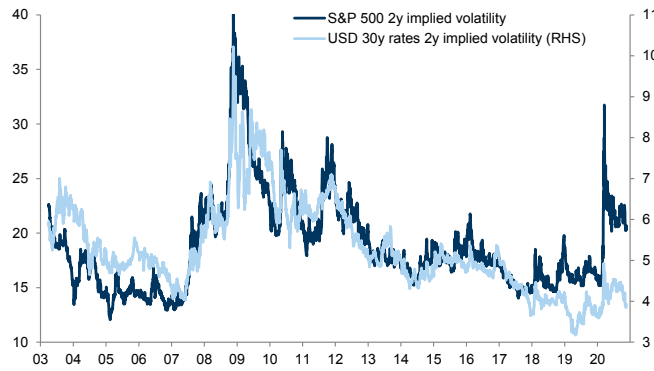
Gold vs USD/JPY 3m implied volatility ratio



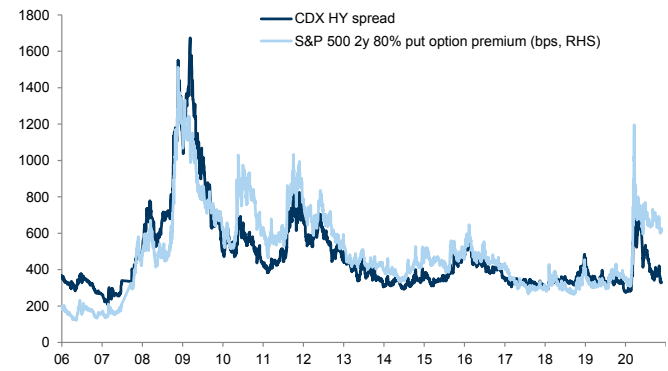
Source: Goldman Sachs Global Investment Research

Exhibit 55: Equity and US Rates implied volatility term structure is still inverted between 3m and 12m

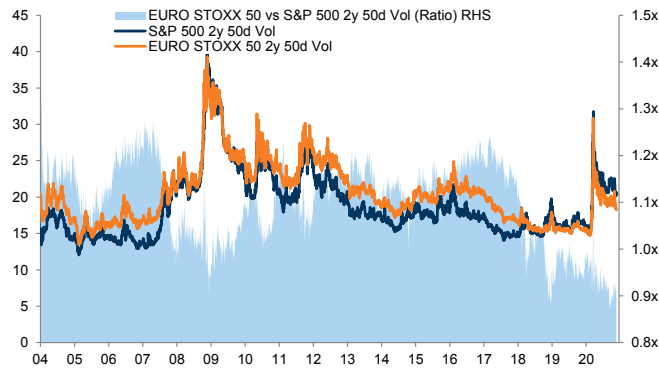
Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 56: Long-dated equity volatility is elevated compared with rates

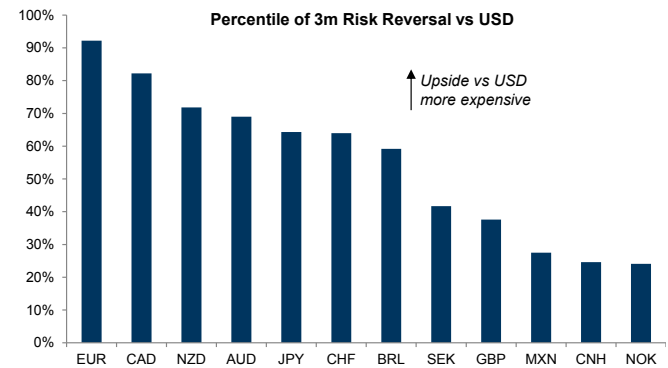
Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 57: Long-dated US Equity volatility looks very expensive compared with CDX HY spreads

Source: Goldman Sachs Global Investment Research

Exhibit 58: US Equity long-dated vol also looks expensive vs Europe

Source: Goldman Sachs Global Investment Research

Exhibit 59: EUR risk reversal looks expensive while MXN and CNH look cheap

Source: Bloomberg, Goldman Sachs Global Investment Research

Equities (3m & 12m Overweight): The bull run in 2021

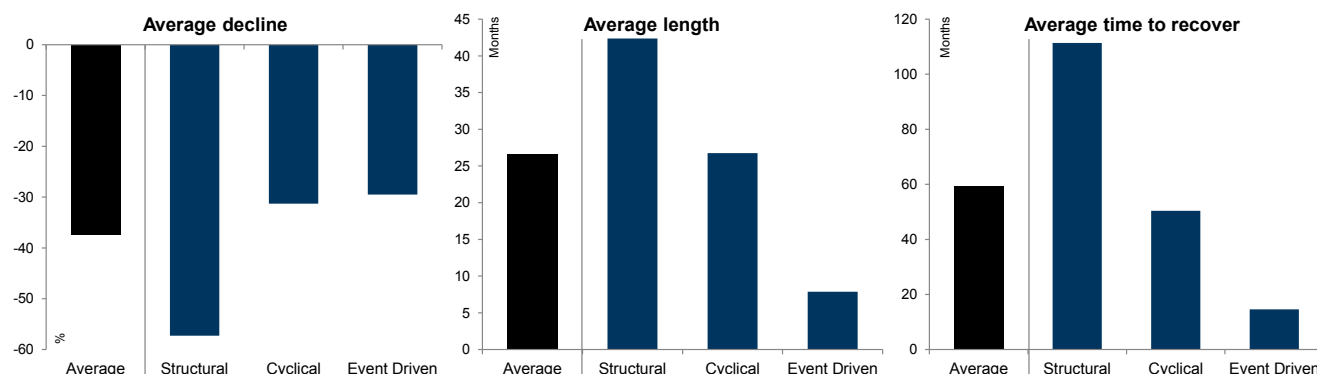
We are OW equities (3m and 12m) and expect relatively strong returns and above-consensus earnings growth across regions. We do not have strong regional preferences: we are OW non-US markets over 3m and N across regions over 12m. We prefer cyclical and value parts of the market and have reduced defensive/growth exposures, but we retain a barbell approach.

While the outcome of the US election has moderated the positive growth and supportive pro-risk environment in the short term, it hasn't derailed the broader recovery. We think the approval and distribution of an effective vaccine is likely to boost investors' confidence in the economic rebound, providing a broadly positive backdrop for global equity markets and we continue to have a more pro-risk, pro-cyclical stance.

We would describe the 2020 bear market as 'event-driven', characterized by a much quicker collapse and recovery than in 'cyclical' (typically driven by interest rates) or 'structural' (preceded by asset bubbles and imbalances) bear markets. This cycle was unusual given the depth of the economic shock, but extraordinary monetary easing and fiscal support have introduced a central bank and government 'put', which has reduced scarring and tail risks, and allowed risk premia to moderate quickly.

Exhibit 60: US bear markets & recoveries since the 1800s

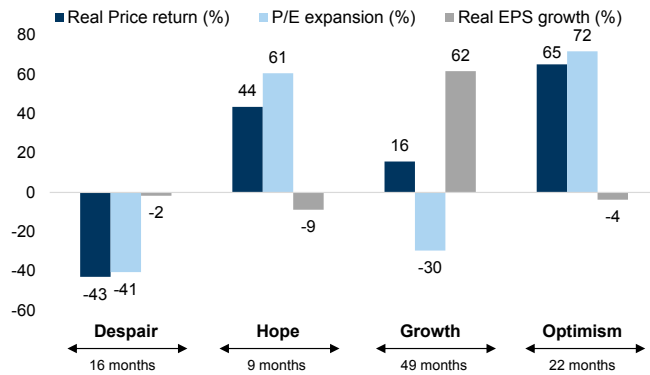
SPX down 34% since peak on February 19, 2020



Source: Goldman Sachs Global Investment Research

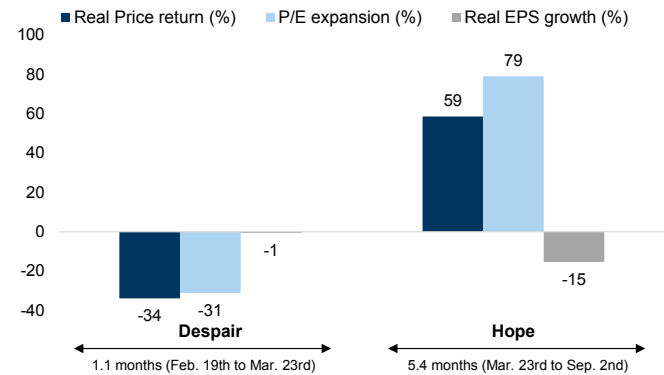
The powerful rebound in equities from March to October represented the initial 'Hope'-driven phase of a new bull market, led mainly by valuation expansion as profits collapsed ([Exhibit 61](#) & [Exhibit 62](#)). We should now be moving into the longer 'Growth' phase in which profits and dividend growth should take over as the main drivers, but returns tend to be lower. **Often, the transition between the two phases is marked by heightened volatility and a market setback as investors wait for, or begin to doubt, the recovery that has been priced.**

Exhibit 61: Typical phases of the equity market
S&P 500. Average across market cycles since 1973



Source: Datastream, I/B/E/S, Haver Analytics, Goldman Sachs Global Investment Research

Exhibit 62: The Coronacrisis Despair and Hope phases
S&P 500



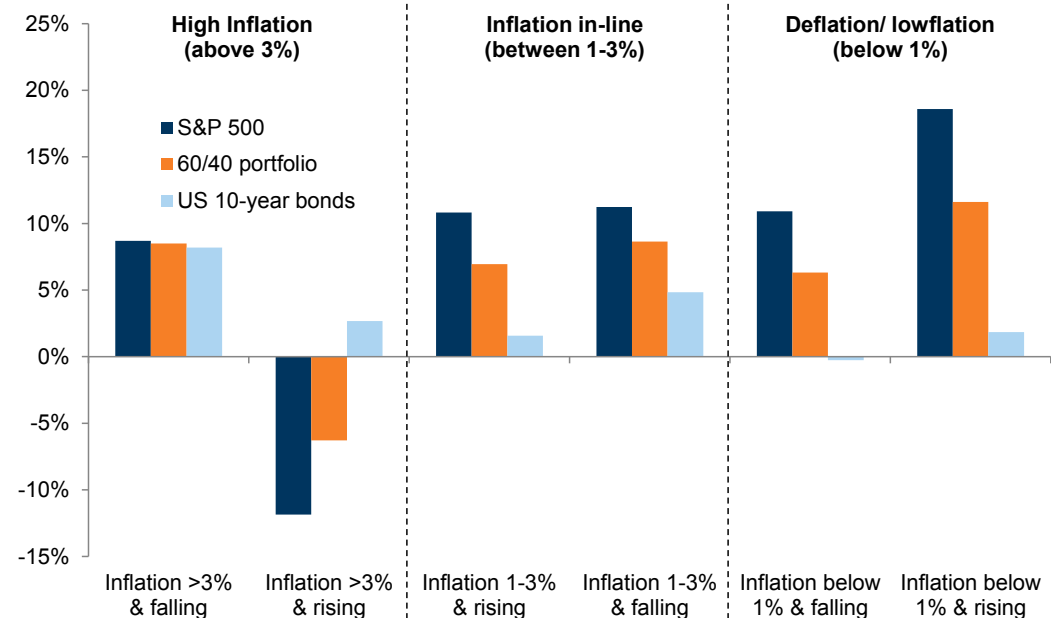
Source: Datastream, I/B/E/S, Haver Analytics, Goldman Sachs Global Investment Research

Into the 'Growth phase': reasons for a bullish stance

(1) Low inflation and anchored yields

The backdrop of low bond yields should be supportive for equity markets, particularly if accompanied by stronger growth. As markets are pricing extremely low inflation expectations, even small surprises could trigger a shift in expectations, which could be supportive for the equity market. Any rise in inflation expectations also leads to more negative real yields – the equity market correlation with real rates has turned sharply negative this year. Historically, **equities have delivered the highest annualised returns in periods when inflation is very low (below 1% but rising)** (Exhibit 63).

Exhibit 63: Steady returns with range-bound inflation - reversal from extremes tends to be bullish
Annualised average monthly, real total returns (data since September 1929, excluding 2020)



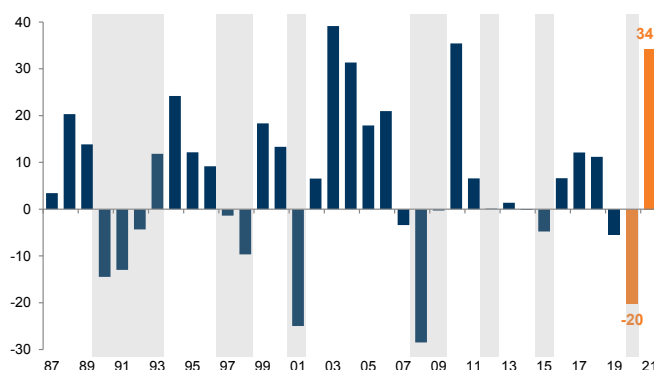
Source: GFD, Datastream, Haver Analytics, Goldman Sachs Global Investment Research

(2) Strong EPS growth into 2021

Global equity markets should post +34% EPS growth in 2021, rebounding from a sharp 20% decline in 2020 (Exhibit 64). Our equity strategists expect the level of EPS to revert to the pre-pandemic peak by end-2021 in the US and Asia, and only by end-2022 in Europe. While the levels of EPS may still take a long time to recover, next year consensus expectations for EPS growth are strong across regions (Exhibit 65), supported by an above-consensus acceleration in the global economy and in profits in 2021 and 2022.

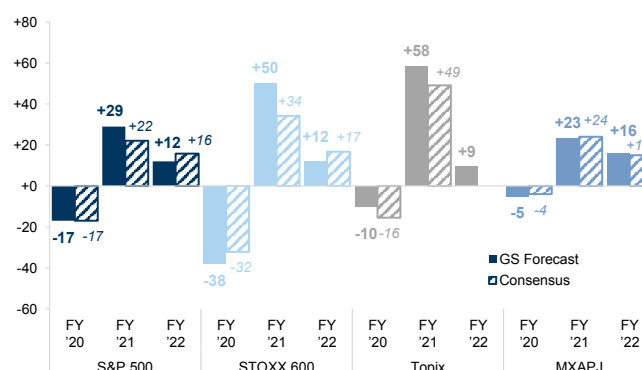
Exhibit 64: Global EPS growth in 2021 will likely be similar to previous rebounds out of recessions

Orange bars: weighted average of GS EPS growth forecasts. Blue bars: MSCI AC World



Source: Datastream, I/B/E/S, Goldman Sachs Global Investment Research

Exhibit 65: GS top-down y/y EPS growth forecasts



Source: FactSet, Compustat, I/B/E/S, Goldman Sachs

(3) Valuations: elevated on an absolute basis, cheaper relative to bonds

In absolute terms equities – as for all other markets – look expensive relative to their own history, which could make them more vulnerable to both growth and rates shocks. That said, relative valuations look attractive as equities have de-rated relative to both bonds and credit (Exhibit 66) – metrics such as the ERP and cash flow yield look cheap across regions and on most metrics non-US markets look cheap vs. the US.

Exhibit 66: Cross-asset valuation for the US

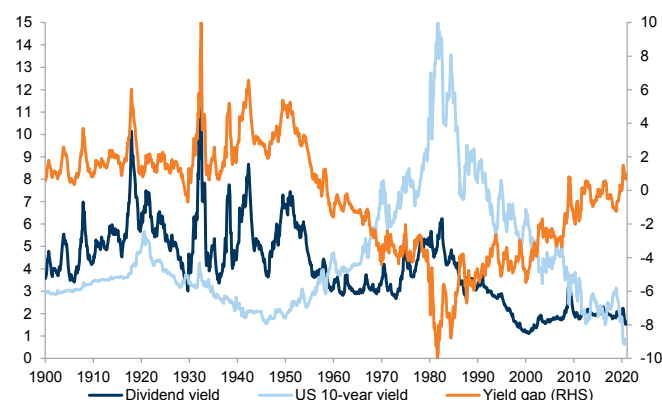
Data since 1976 (FCF yield (1990), Credit market data (1997), Government BYs (1921), ERP (2001))

	Metrics	Current Level	Historical Percentile	Median
Equity (SPX)	EV / Sales	3.0	100%	92%
	EV / EBITDA	15.9	99%	
	Price / Book	4.0	92%	
	NTM P/E	22.3	96%	
	NTM Free cash flow yield	3.8	60%	
	Cyclically Adjusted P/E	27.1	88%	
	ERP (%)	5.7	11%	
Rates	Nominal 10-year Treasury	1.0%	100%	93%
	Real 10-year Treasury	-0.8%	87%	
Credit	High Yield YTM	5.4%	100%	93%
	Investment Grade YTM	2.1%	99%	
	High Yield spread	422bp	64%	
	Investment Grade spread	119bp	64%	

Source: Compustat, Goldman Sachs Global Investment Research

Exhibit 67: The gap between dividend yields and bond yields is close to levels from the 1950s again

Data for S&P 500



Source: Robert Shiller, Goldman Sachs Global Investment Research

In recent years the ERP has trended up alongside lower yields as they have been accompanied by declining long-term growth expectations and rising risk. As a result, the dividend yield gap is back to the levels last seen in the 1950s and in the first half of the 20th century (Exhibit 67). But, with growth expectations likely to improve and falling uncertainty, and with rates likely only rising modestly, we expect the ERP to compress and a lower cost of equity.

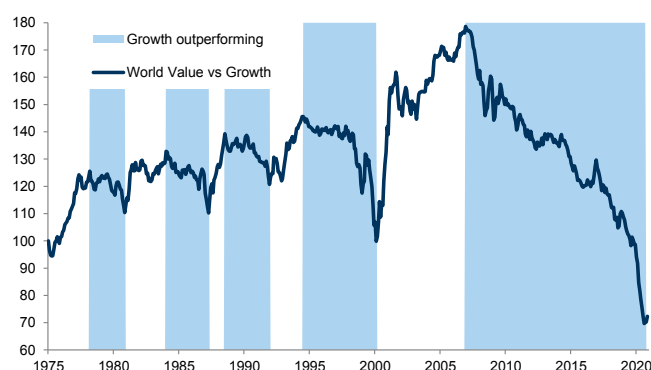
A pro-cyclical tone across sectors, styles, themes and baskets

Alongside a more positive risk and growth outlook, we would expect some challenge to the secular leadership of the global equity market, both in terms of geography and sectors. This does not mean the secular attraction of growth stocks (Exhibit 68) should reverse, but record valuation spreads and an inflection point in growth and bond yields point to a period of outperformance of cyclical and value parts of the markets, and we would suggest more diversification across sectors and factors.

We think that the approval/distribution of a vaccine would likely trigger a continued sharp 'catch-up' in some cyclical parts of the market which have lagged their typical relationship with activity indicators, such as the ISM. Additionally, together with value, cyclicals are more positively correlated with rising inflation expectations, so further measures to boost global growth via easier policy are likely to favour such a shift.

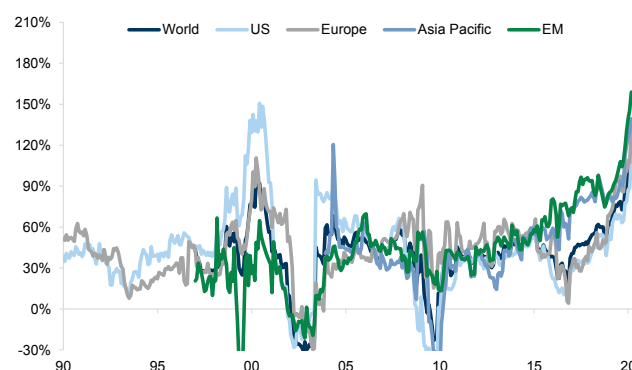
The stretched valuation spreads in growth and value (Exhibit 69) – which are the highest since the Technology bubble in the late 1990s – could also be supportive. **Valuation extremes have rarely triggered changes in market direction or leadership, but they do help to support the ferocity of a shift if fundamentals are perceived to change.**

Exhibit 68: Growth has outperformed since the GFC
Relative price performance in local currency



Source: Datastream, Goldman Sachs Global Investment Research

Exhibit 69: Growth has recently started to de-rate versus value
12m trailing P/E Premium(Discount) of MSCI Growth vs Value indices



Source: Bloomberg, Goldman Sachs Global Investment Research

We take a pro-cyclical stance across regions in our sector, thematic and style allocation. We are broadly OW economy-gear, cyclical sectors and UW consumer staples and utilities across regions. Still, in both Europe and US, we continue to like some secular growth sectors such as Healthcare and emphasise an ESG theme, e.g., our European Renewables basket (GSSBRNEW).

In the US we focus on a barbell approach: (1) tactical positions in deep value stocks that benefit from the vaccine and economic normalisation, and (2) stocks with long-term

secular growth prospects that have high growth investment ratios –we recommend OW in Information Technology, Healthcare, Industrials and Materials.

In Europe we remain OW in Banks and Energy, Autos, Basic Resources and Construction & Materials. We remain UW Defensives (such as Food and Telecoms) and we are N Tech. We recommend our Fiscal Infrastructure (GSSTFISC) and Recovery (GSSTRCOV) baskets as both should be geared to economic improvement next year.

In Asia and Japan, we focus on pro-cyclical allocations, upgrading Autos and Transportation and downgrading Healthcare. We like three growth-driven themes: structural (Digital Dozen, dual circulation), recovery (Global cyclicals vs. defensives, earnings recovery, value cyclicals) and targeted alpha (upstream vs. downstream, renewables, strong CNY winners). Our equity strategists also highlight laggard quality cyclical stocks in Japan and, with scope for more restructuring, screen for companies that may be ripe for reorganising their business portfolios.

In EM, the outperformance into next year is likely to come from laggard sectors and countries. Among domestically oriented cyclical sectors, we prefer Banks (and Industrials), and Mexico within Latin America (our preferred region). We like Brazil tactically on the commodities rebound and prospects for a vaccine roll-out. CE-3 markets are likely to be among the main beneficiaries of positive vaccine news given their close ties to heavily-affected markets in Western Europe.

Exhibit 70: Our trade recommendations across regions

Trade recommendations			
US	Europe	Japan	Asia-Pacific
Value recovery	Fiscal Infrastructure basket (GSSTFISC)	Laggard quality cyclicals	Digital Dozen (GSSZDG12)
High Growth Investment Ratio (GSTHHGIR)	Recovery basket (GSSTRCOV)	Restructuring opportunities	Global Cycl. vs. Def. (GSSZMSGC vs. GSSZMSDF)
High-ranking ESG firms	Renewables (GSSBRNEW)	Capex basket (GSJPCPEX)	Value Cyclicals
		Japan Cyclicals (GSJPCYCL)	Renewables
		Womenomics basket (GSJPWJDL)	Strong CNY winners

Source: Goldman Sachs Global Investment Research

Regional allocation — 3m OW non-US markets, neutral 12m

We forecast strong returns across all equity market. We do not have strong regional preferences but near-term the prospect of a weaker US Dollar and fading global risks points to a narrowing of the performance gap relative to the US and a recovery in laggard regions such as Europe, Japan and EM. We are OW non-US markets for 3m and neutral across regions over 12m.

The outperformance of the US vs. non-US equity markets post-GFC has been mainly driven by stronger earnings growth and sector composition, i.e., an overweight in growth sectors such as Technology and Healthcare, while Japan and Europe are more levered to cyclical sectors (Exhibit 72). Therefore, should we get a rotation towards more cyclical- and even value-oriented industries, we would expect a shift in relative returns,

particularly if the USD weakens.

As [Exhibit 73](#) shows, in USD terms, non-US equity markets tend to outperform when the Dollar is weak. An improved trajectory for the global economy should also benefit stock markets outside of the US disproportionately due to their higher sensitivity to global growth. Additionally, emerging markets and parts of Europe (Germany in particular) look particularly cheap relative to forward expected earnings.

Exhibit 71: Total return forecasts (in local currency and USD) and the allocation relative to benchmark on 3- and 12-month horizons

	3-month					12-month					
	Current	Level	Wgt	Price Return		Level	Wgt	Price Return		Total return	
				Local	USD			Local	USD	Local	USD
S&P 500	3582	3700	N	3 %	3 %	4300	N	20 %	20 %	22 %	22 %
MSCI Asia Pac ex Japan	620	650	OW	4 %	5 %	700	N	12 %	13 %	14 %	15 %
TOPIX	1726	1750	OW	1 %	2 %	1875	N	9 %	13 %	11 %	15 %
STOXX Europe 600	388	405	OW	4 %	3 %	430	N	11 %	17 %	14 %	20 %

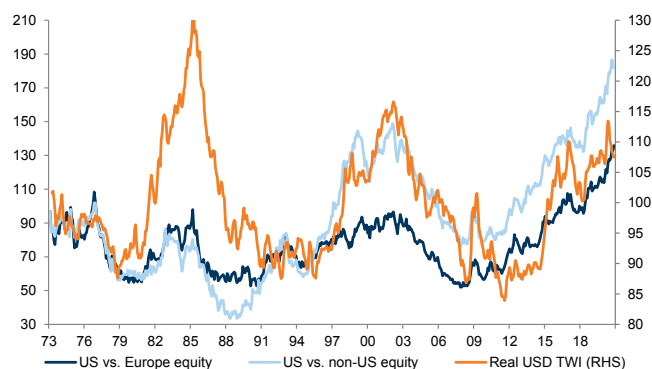
Source: Datastream, Bloomberg, Goldman Sachs Global Investment Research

Exhibit 72: Index sector composition

GICS Sector	U.S.	Europe	Japan	APxJ	AC World
Energy	2.0	4.1	0.5	3.1	2.9
Materials	2.6	7.8	5.0	5.9	4.7
Industrials	8.5	14.7	20.6	5.5	9.9
Consumer Discretionary	11.7	11.1	18.5	18.2	12.7
Consumer Staples	6.6	14.2	7.8	5.2	7.8
Health Care	14.0	15.3	11.2	6.0	12.3
Financials	9.9	15.3	8.6	19.9	13.2
Real Estate	2.8	1.4	3.5	4.7	2.8
Information Technology	28.0	7.2	12.9	18.0	21.0
Communication Services	11.0	4.1	10.0	11.3	9.5
Utilities	3.0	5.0	1.4	2.2	3.2
Total	100.0	100.0	100.0	100.0	100.0

Source: MSCI, FactSet, Goldman Sachs Global Investment Research

Exhibit 73: Broad Dollar weakness has historically coincided with non-US vs. US equity outperformance
Equity performance in USD



Source: Datastream, Worldscope, Haver, Goldman Sachs Global Investment Research

Global: [Global Strategy Views: Global Strategy Outlook: The Bull Run in 2021](#), November 12, 2020

US: [2021 US Equity Outlook: Roaring '20s Redux](#), November 11, 2020

Europe: [Europe Equity Strategy: 2021 Outlook: A V\(alue\)-shaped recovery](#), November 11, 2020

Asia: [Asia-Pacific Portfolio Strategy: 2021 Outlook: The sweet spot between growth and rates](#), November 11, 2020

Japan: [Japan Portfolio Strategy: Cyclical Stocks in the Year of the Ox](#), November 10, 2020

EM: [EM Market Outlook 2021: From Resilience to Outperformance](#), November 17, 2020

Contributors: Peter Oppenheimer, David Kostin, Tim Moe, Kathy Matsui, Sharon Bell, Ceasar Maasry, Cecilia Mariotti

Government Bonds (3m & 12m UW): Robust recovery, shallow selloff

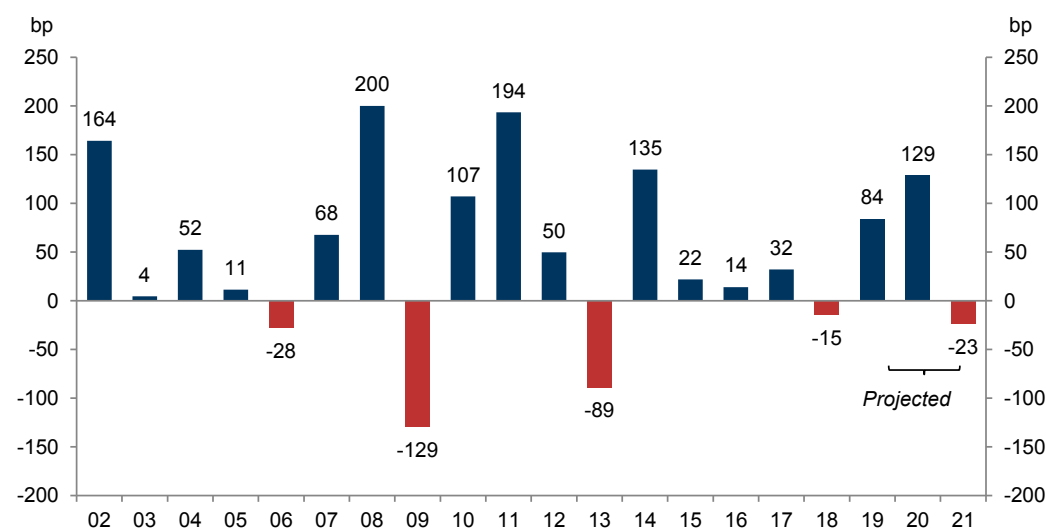
After another year of solid fixed income returns, we see the duration portion of investor portfolios yielding flat to negative returns next year. We forecast modestly higher yields across G10 markets, mostly in line with forwards despite our above-consensus 2021 economic growth forecasts – largely on a more tempered medium-term inflation and growth outlook. In terms of the trajectory, we see benchmark yields trading sideways in the near term before reflation themes reemerge in 2Q2021. Our YE2021 forecasts for key 10y yields are: US 1.3%, Germany -0.4%, Japan 0.10%, and UK 0.5%. Further upside to yields would require a sustainable pick-up in realized inflation as well, which we see as some time further away.

Global duration: no obvious misalignment to fundamentals

We expect higher yields by year-end 2021 across most of the G10, though our forecasts are largely in line with forwards. The exceptions here are the US, where we expect a modest overshoot above forwards ([Exhibit 74](#)), and some smaller open economies like New Zealand, where we believe yields have overreacted to recent positive vaccine news. The high reported efficacy on the Pfizer vaccine has understandably resulted in a trimming of the negative tail scenario, allowing for a move higher. However, over the next few months, we expect a modest retracement as downbeat news on the near-term trajectory of the pandemic dominates – a portion of the recent repricing reflects a temporary increase in bond risk premia, in our view.

Exhibit 74: We expect total returns will turn modestly negative next year

Total return for 10y USTs, per unit of duration risk



2020 and 2021 are implied total returns if GS forecasts are realized

Source: Bloomberg, Goldman Sachs Global Investment Research

With divided government the most likely election outcome in the US, organic economic recovery and progress on mass vaccination will be the prime driver of reflationary

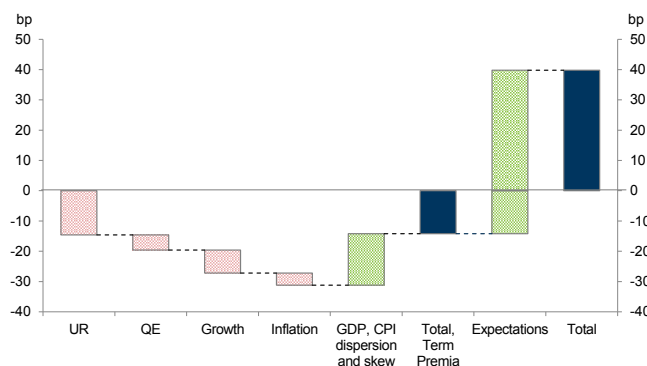
pricing, not expansionary fiscal policy. The lack of a significant fiscal impulse removes the “right tail” and upside risks to the economy that would have required much higher bond risk premia. That said, we believe this less turbocharged recovery will nonetheless be sufficiently robust to result in longer-term forward real yields migrating towards the neutral rate (r^*), which we believe remains substantially above the current forwards. For 10y USTs, in addition to this move, which could contribute about 10bp of upside to 10y real yields, we also expect a roughly 30bp increase in 10y breakevens over the course of the next year. In both the real and inflation components, we expect much of the shift could occur in expectations as we draw closer to eventual liftoff. After the recent term premium-led selloff, our model suggests that risk premia may modestly decline in 2021, and much of the repricing could come from a shifting expectation window ([Exhibit 75](#)).

On cross-market yield spreads, we see downside risk to the 10y UST-Bund spread over the next few months, though we see it widening from 2Q21 onward (we anticipate it will shift from around 140bp now to 170bp by YE2021); while wide availability of the vaccine should help both regions, fundamentals related to a divergent inflation trajectory should reassert themselves later next year when it comes to nominal bond pricing.

Markets appear too optimistic on policy rate normalization

Markets generally appear to be under-appreciating how tied policy normalization is likely to be to inflation outcomes. As can be seen in [Exhibit 76](#), markets are substantially ahead of our projections in most cases. Our economists expect later liftoff despite above-consensus growth forecasts in most cases because they expect slow progress in sustainably hitting inflation targets. Indeed, in most regions the inflation mandate may prove to be the binding constraint to achieving liftoff. Given this, we would be inclined to fade instances where markets run well ahead of our projections, particularly when markets that are pricing an early liftoff are also pricing a steeper normalization path; some of the best carry positions across G10 are inflection points on yield curves around liftoff. **The sequencing of growth and inflation readings next year that produces bouts of optimism may in fact end up offering the best opportunities to pursue this “pushback” strategy.**

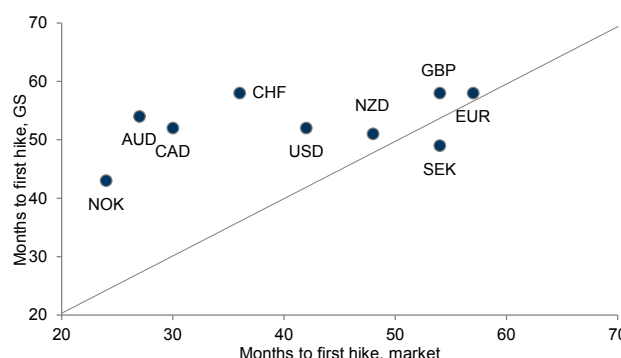
Exhibit 75: With term premium already having repriced, the move higher in yields should come from the expectations component
Model-implied estimated impact on 10y US yields



Source: Goldman Sachs Global Investment Research

Exhibit 76: Markets appear to be anticipating policy liftoff too soon, in our view

Timing of policy rate liftoff in G10, market vs GS



Source: Goldman Sachs Global Investment Research

Flat forward curves argue for steepeners

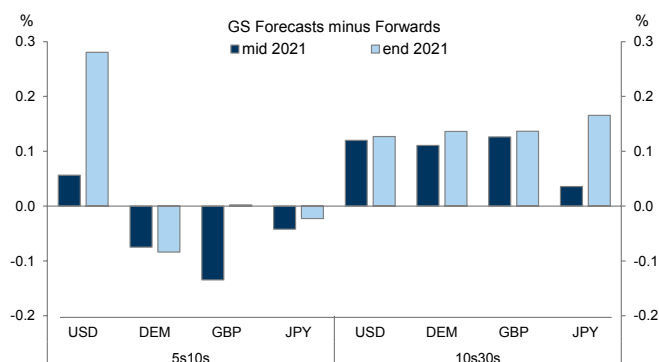
Across most G10 economies, front-end curves (2s5s) are likely to remain relatively stable, or only modestly steepen, given the unchanged policy rate path we are projecting over the next few years. More broadly, the relative cheapness of the belly has led the market to price fairly flat belly/long-end forward curve. In contrast, we expect shifts in perceptions of the policy rate path and the neutral rate should lead to upward movement in the 5s10s portion of the yield curve via the expectations channel, particularly in the US. While the real expectations component at longer maturities should increase due to the migration towards the neutral rate, at the 5y point, real policy rate averages ought to price lower than where they are. On net, this should imply significantly steeper real yield curves. Combined with our view for modest flattening of the inflation curve in this sector, we expect about 25bp of steepening of the 5s10s UST curve.

While the high efficacy reported on the Pfizer vaccine appears to have spurred yield curve steepening (excessively so in the near term, in our view), forward yield curves remain too flat due to the recent cheapening of the belly ([Exhibit 77](#)). We find 1y forward US 5s30s (vol-weighted) steepeners particularly attractive as a way to monetize this. In the UK we expect some clearing of Brexit risk, the supply backdrop, and the cyclical recovery to lead long-end yields higher and support 2s30s steepeners.

G3 inflation outlook: varying upside

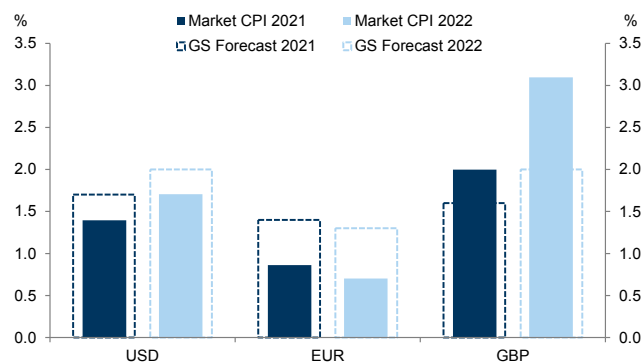
Inflation pricing over the next two years appears too downbeat in the US (see [Exhibit 78](#)) and Euro area, too upbeat in the UK. While slack-sensitive sectors may be somewhat of a drag over the next few years, COVID-affected components of inflation should provide an offsetting boost next year. Additionally, our commodity teams' outlook for energy prices presents upside for near-term traded inflation if it materializes. In Europe, while the degree of slack points to subdued inflation for the coming years, we think the market is likely overstating the degree of near-term weakness.

Exhibit 77: While long-end forward curves appear too flat across G4, the US is likely to also experience steepening in the belly
GS projected sovereign curves versus forwards



Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 78: The US and Euro area are underpricing our economists' inflation forecasts; UK traded inflation appears rich
y/y headline inflation priced by inflation swaps vs. GS econ forecasts



Source: Goldman Sachs Global Investment Research

Looking further out the inflation curve we expect to see somewhat greater variation between the US and Europe, where, energy-driven strength notwithstanding, the US is

likely to see more upside in the belly (while the front-end should lead in Europe). Ultimately we see scope for 5y5y breakevens to widen about 35bp by end 2021, which would take them towards levels that prevailed in 2018, while for spot 5y breakevens and for longer term forwards (10y20y) we think upside is somewhat closer to 25bp. In Europe, we think there is limited room for inflation forwards at the long end to reprice higher, favoring HICP curve flatteners going into next year.

In terms of the impact of average inflation targeting, our interpretation of the Fed's AIT framework suggests the natural shape of the belly/long end should be one of inversion while the front-end of the inflation curve should be much more reliant on the cyclical recovery discussed above. One point to make is that even if inflation were to evolve along the lines laid out, markets may not be willing to price those outcomes in advance—historical experience from the late 1960s through early 1990s suggests that structural shifts in inflation expectations take time (see [here](#)).

Policy support eclipses diverging fundamentals within Europe

With the ECB having achieved a compression in spreads and a reduction in volatility, and with policy support likely priced near a local maximum as we head into the December ECB meeting, the hurdle for further ECB-driven compression is high. It is therefore up to other drivers, namely a vaccine-driven growth boost to tighten spreads further. We estimate that the growth boost expected as a result of the vaccine is worth an incremental 10-20bp in spread compression. However, given the strong influence of ECB policy, we think the starting point for spreads is already rich to macro valuation, and so will be highly sensitive to any reversal in expectations for policy support.

Overall, we expect sideways movement in spreads throughout the year — the start of the year is likely to bring the most favorable conditions for spreads, with policy support at a maximum, a positive cyclical inflection resulting from a vaccine, and relative political calm. Towards the end of 2021 we will be through the acceleration phase of growth, policy support will be (presumably gently) withdrawn, and the political calendar will be heating up. For this reason, we are less confident that sovereign spreads end 2021 at substantially tighter than current levels.

Vol repricing: mainly mechanical

We see some pick-up in rate volatility next year alongside the move to higher yields. Generally speaking, the level of vol has a strongly positive relationship with the level of rates across expiry and tail combinations, particularly with yields closer to the effective lower bound (ELB). Over the next year, we expect intermediate rates (7y and 10y tails) will add the most distance (relatively speaking), and should mechanically see a greater increase in (normal) vol as a result. Because shorter maturities are likely to remain fairly well anchored, so should vol on these tenors. With respect to timing, we find historically that vol changes are on average more strongly directional with rate changes when the Fed is at the ELB; given that this reflects the current regime, we would expect vol increases to coincide with moves higher in yields.

For rates markets like the UK where the perceived hurdle to further policy rate cuts is lower than it is for the Fed, the greater potential for the market to reassess the lower

bound means that vol may not be quite as strongly directional with yields as we expect it to be in the US. Even in these economies, however, because the magnitude of cuts being discussed are relatively small, deviation from the vol-rate relationship should also be small.

Exhibit 79 shows forecasts under a divided US government assumption, as well as deviations from forwards over the next year. As can be seen, most of our forecasts are in line with forwards, with US modestly above, and New Zealand somewhat below. We are neutral on benchmark 10y yields in most places. We expect some widening of cross-market yield spreads—the UST-Bund spread could approach 170bp over the next year (from around 140bp currently).

Exhibit 79: G10 yield forecasts and deviation from forwards

G10 10-Year Yield Forecasts										
	USD	DEM	GBP	JPY	CAD	CHF	SEK	NOK	AUD	NZD
spot	0.88	-0.54	0.35	0.03	0.72	-0.47	0.03	0.83	0.89	0.85
4Q20	0.75	-0.60	0.20	0.00	0.65	-0.50	0.00	0.70	0.70	0.50
1Q21	0.85	-0.55	0.20	0.00	0.70	-0.45	0.00	0.70	0.75	0.55
2Q21	1.00	-0.50	0.30	0.05	0.80	-0.40	0.05	0.80	0.80	0.55
3Q21	1.15	-0.45	0.40	0.10	0.90	-0.40	0.05	0.80	0.90	0.60
4Q21	1.30	-0.40	0.50	0.10	1.00	-0.35	0.15	0.90	1.00	0.70
1Q22	1.40	-0.30	0.60	0.15	1.10	-0.30	0.25	1.00	1.10	0.80
2Q22	1.50	-0.25	0.70	0.15	1.15	-0.25	0.35	1.10	1.20	0.90
3Q22	1.60	-0.15	0.75	0.20	1.20	-0.20	0.45	1.20	1.30	1.10
4Q22	1.65	-0.10	0.80	0.20	1.25	-0.15	0.50	1.30	1.40	1.20
1Q23	1.70	0.00	0.85	0.20	1.30	-0.10	0.55	1.35	1.45	1.30
2Q23	1.75	0.10	0.90	0.20	1.35	-0.05	0.60	1.40	1.50	1.40
3Q23	1.80	0.15	0.95	0.25	1.40	0.00	0.65	1.45	1.55	1.50
4Q23	1.85	0.20	1.00	0.25	1.45	0.00	0.70	1.50	1.60	1.60
1Q24	1.90	0.25	1.05	0.25	1.50	0.05	0.70	1.55	1.65	1.70
2Q24	1.95	0.30	1.10	0.25	1.55	0.05	0.75	1.60	1.70	1.80
3Q24	2.00	0.35	1.15	0.30	1.60	0.10	0.75	1.65	1.75	1.85
4Q24	2.05	0.40	1.20	0.30	1.65	0.10	0.80	1.70	1.80	1.90

Deviation from Forwards										
	USD	DEM	GBP	JPY	CAD	CHF	SEK	NOK	AUD	NZD
4Q20	-0.16	-0.08	-0.20	-0.04	-0.11	-0.03	-0.01	-0.14	-0.21	-0.36
1Q21	-0.10	-0.06	-0.26	-0.07	-0.11	-0.02	-0.02	-0.16	-0.20	-0.33
2Q21	0.00	-0.03	-0.19	-0.04	-0.04	0.00	0.01	-0.08	-0.20	-0.37
3Q21	0.11	0.00	-0.12	-0.01	0.03	-0.02	-0.02	-0.11	-0.15	-0.37
4Q21	0.21	0.03	-0.05	-0.03	0.10	0.01	0.03	-0.03	-0.09	-0.32
1Q22	0.27	0.11	0.02	0.00	0.17	0.04	0.09	0.05	-0.04	-0.27
2Q22	0.32	0.14	0.09	-0.02	0.19	0.07	0.15	0.13	0.02	-0.22
3Q22	0.38	0.22	0.11	0.01	0.21	0.10	0.22	0.22	0.07	-0.07
4Q22	0.38	0.25	0.12	-0.02	0.23	0.13	0.24	0.30	0.12	-0.02

Source: Goldman Sachs Global Investment Research

For details see:

Global Rates Outlook: Robust Recovery, Shallow selloff, November 16, 2020

Euro Area Sovereign Outlook 2021: The Point of No Returns, November 19, 2020

Contributors: Praveen Korapaty, George Cole, William Marshall, Avisha Thakkar

Credit (3m & 12m Neutral): Same direction, different magnitude

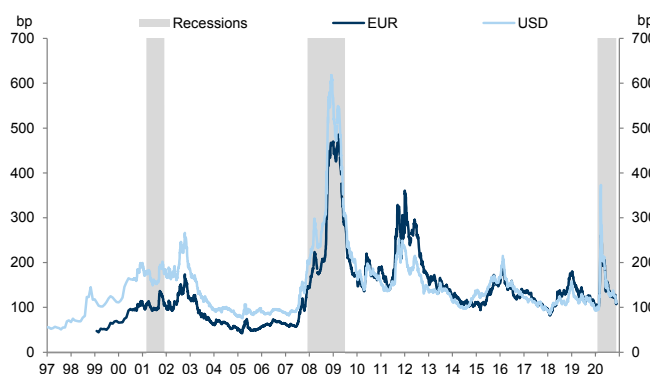
We expect credit spreads will continue to inch to their pre COVID-19 levels. While the near-term growth path may prove bumpy, a better outlook for next year following recent positive vaccine developments, the accommodative stance of monetary policy, direct central bank interventions, and a remarkably supportive supply/demand technical backdrop should support credit risk appetite, in our view. Valuations limit long-term upside relative to the stellar performance since late March, but credit will likely deliver decent excess returns and solid Sharpe ratios in 2021. We generally favor a down-in-quality stance and pro-cyclical and “disrupted” sectors.

DM Credit: Decent returns; strong Sharpe ratios

After being range bound for the last several months, spreads have once again resumed their downward trend towards pre-pandemic levels ([Exhibit 80](#)), grinding tighter on two key recent developments: resolution of the US election event risk and positive vaccine news. Clarity on these fronts should allow investors to refocus on macro fundamentals after a year in which tail risks were in the driver’s seat. However, although it is yet to be determined how smooth the near-term path will be, with waning fiscal support, surging virus infections and renewed restrictions, particularly in Europe, having two efficacious vaccines in late-stage trials is an unequivocally positive milestone.

The question is whether investors will be able to look through near-term risks or reprice spreads wider if expectations are not met. Having said that, in the medium-term we remain optimistic on the [recovery](#), and while spread valuations clearly limit long-term upside relative to the stellar performance since late March, [Exhibit 81](#) shows that we continue to be of the view that there is more scope for further tightening across currencies given the likely decline in volatility on a forward basis over the coming year.

Exhibit 80: Spreads have recently resumed their tightening, inching closer to pre-pandemic levels
EUR IG and USD IG OAS



Source: Bloomberg Barclays, Iboxx, Goldman Sachs Global Investment Research

Exhibit 81: We expect USD and EUR spreads will revert to their pre-pandemic levels

IG and HY spread forecasts for USD and EUR markets

Sector	Updated through November 17, 2020				
	Current	2020Q4	2021Q1	2021Q2	2021Q4
USD Spreads					
IG	112	110	103	101	100
IG Fin	99	102	97	95	94
IG Non-Fin	117	118	109	107	106
High Yield	427	400	370	350	340
EUR Spreads					
IG	107	105	100	97	96
IG Fin	117	112	106	102	99
IG Non-Fin	102	98	96	94	92
High Yield	396	385	365	340	330

Source: Bloomberg Barclays, Iboxx, ICE-BAML, Goldman Sachs Global Investment Research

We generally favor a down-in-quality stance. Our relative value views include: 1. Overweight HY vs. IG in both the USD and EUR markets; 2. Overweight CCCs, neutral

Bs and underweight BBs; 3. Overweight AT1s vs. HY bonds in the EUR market; 4. Overweight 30-year spreads vs. 10s in USD IG; 5. Steeper USD HY spread curves; 6. Overweight leveraged loans vs. HY bonds in the USD market; and 7. Overweight IG-rated CLO tranches vs. IG corporate bonds.

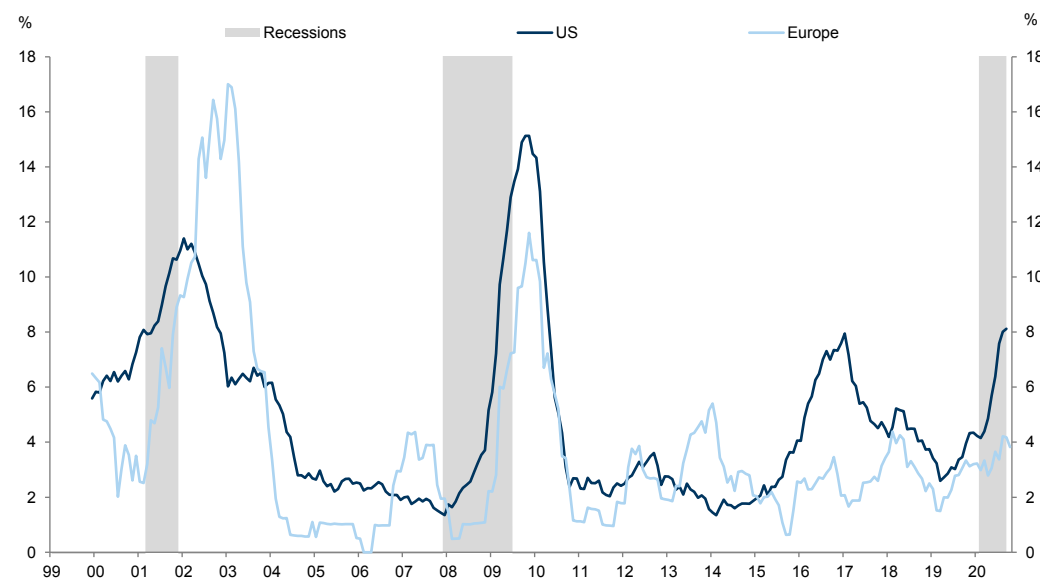
In line with our overall view of strong growth in the upcoming year, we expect that defaults will further normalize in the US, and forecast the 12-month trailing default rate will decline to its long-run average of 4% by year-end 2021, from its recent level of 8.3%, shown in [Exhibit 82](#). While the risk of a second wave of defaults is not trivial, especially if additional business restrictions are implemented and another round of stimulus from Congress does not materialize, it is not our modal expectation at this point.

Relative to the US, in Europe the default picture remained much more benign over 2020. For context, the 12-month trailing default rate stood at 4.2% by the end of October ([Exhibit 82](#)). This isn't unusual for European firms, as defaults were also lower than in the US during the aftermath of the global financial crisis in 2009, but the gap appears to be more pronounced this time around.

However, we believe that large firms that have access to debt capital markets will not experience many defaults in 2021, due to relatively easy funding conditions. But the prospect of diminishing direct government support will likely pressure smaller firms that lack financial flexibility, thereby fueling a modest uptick in the default rate. For the bond market as well as macro synthetic indices, we think these defaults will have virtually no impact on performance, as they will be predominately focused on smaller issuers.

Exhibit 82: US defaults likely peaked earlier this year; by contrast, the default rate in Europe has only modestly increased

The 12-month trailing issuer-weighted default rate for US and European HY firms



Source: Moody's, Goldman Sachs Global Investment Research

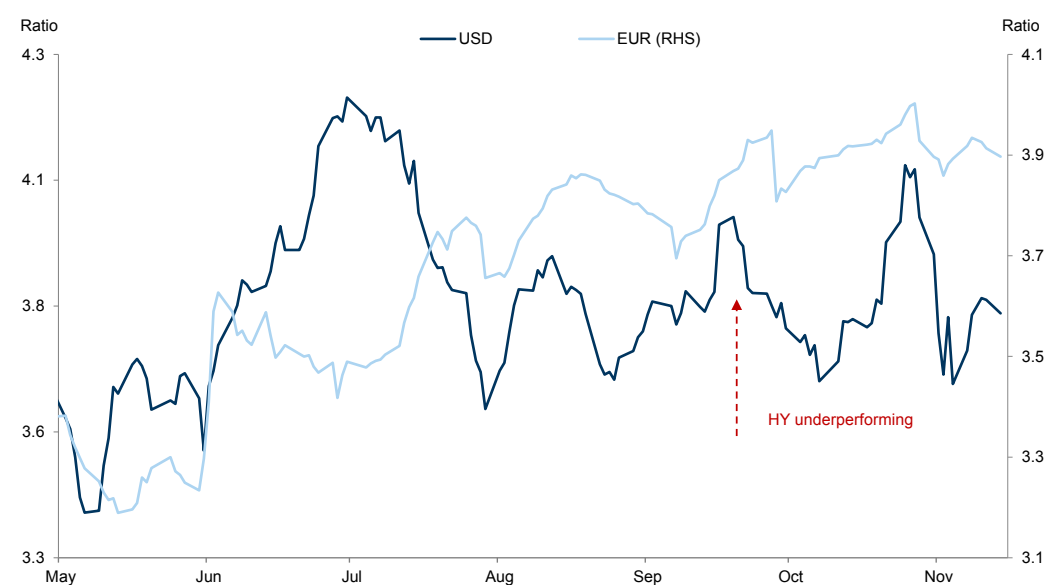
Putting all of this together at macro level, we recommend reaching down in quality

within corporate credit and favour being overweight HY vs IG in both the USD and EUR markets. While [Exhibit 83](#) shows that this theme has been relatively range-bound over the few past months, we expect two key drivers will likely break this trend and fuel spread compression going forward. The first is strong search-for-yield motives, given the combination of the recent contraction in volatility in light of the US election results/positive vaccine headlines and the anchored low levels of absolute yields across the fixed income universe. The second is our expectation defaults will likely be benign in 2021.

However, as mentioned above, one key risk to this view is if the gap between vaccine approval and distribution is longer than anticipated. In particular, it remains an open question as to whether the market would continue to look through negative news or reprice lower amid any more restrictions being reintroduced. However, while the path is somewhat narrow, we continue to hold the view that these tail risks are just that, tail-risks, and feel comfortable with compression across markets overall.

Exhibit 83: The compression theme has been relatively range-bound in the USD market while it has underperformed in the EUR market

HY/IG spread ratio in the USD and EUR markets



Source: Bloomberg Barclays, Iboxx, Goldman Sachs Global Investment Research

EM Credit: Still upside, led by HY - left-tail risks linger, but the risk premium still screens as attractive

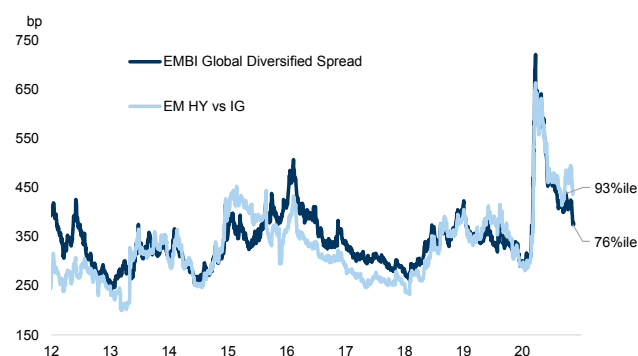
The COVID-19 shock brought the spread differential between EM IG and HY sovereigns to a historical high ([Exhibit 84](#)). In EM IG, spreads have normalized to pre Covid-19 levels for most sovereigns, with many sovereigns funding at all-in yields that were lower than pre-pandemic levels. In our view, this is a reflection of having benefited from the spillovers of DM central bank policies to ease liquidity and funding pressures and support credit markets directly. In addition, IG sovereigns were better positioned to face the Covid-19 shock given their lower external vulnerabilities.

Conversely, the still wide spreads across EM HY sovereigns likely reflect concerns around sovereign defaults and the scarring effects on the fiscal balance-sheets from Covid-19. In 2020 alone, three sovereigns defaulted on their Eurobonds (Lebanon, Ecuador and Zambia), and two restructured within the grace period (Belize and Suriname¹). That has brought the default rate to ~4% for the EMBI index (~6.5% for HY), which is at the higher end of the recent historical range ([Exhibit 85](#)).

Going into 2021, the sharp rise in public debt levels following Covid-19 is likely to leave a number of sovereigns still at risk of default. However, we find that wider spreads compensate for these risks, leaving the risk-premium in EM HY at the higher end of the historical range. Moreover, on an index level, a ~4% default rate for the EMBI Global Diversified Index is still relatively benign compared to US HY Credit, where we forecast a default rate of ~8.50% for 2020.

As such, we see room for further spread compression on an index level, driven mostly by a spread compression in HY, where spreads are still relatively wide. More specifically, we forecast the EMBI Global Diversified Spread to tighten by ~50bp to ~325bp in the next 12 months.

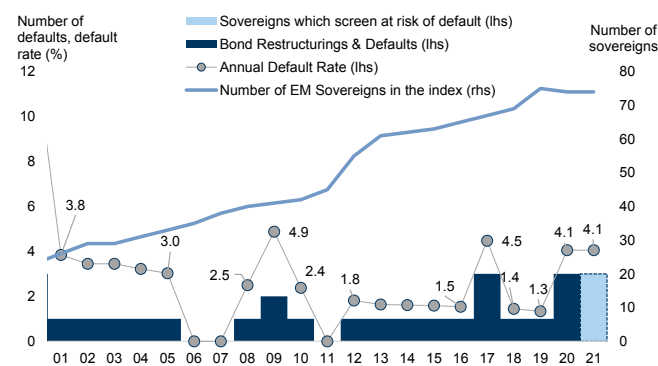
Exhibit 84: EM credit spreads are still at the wider end of the historical range, driven by HY
Percentile ranks refer to 2007-2020



EM HY and IG refer to benchmark-weighted sovereign and quasi sovereign USD bond spreads differentiated by rating. EM HY excludes Argentina and Ecuador.

Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 85: Still wide spreads in EM HY partly reflects higher left-tail risks, with a number of sovereigns still at risk of default



Source: Bloomberg, Goldman Sachs Global Investment Research

For details see:

[2021 Global Credit Outlook: Same direction, different magnitude](#), November 18, 2020

[EM Market Outlook 2021: From Resilience to Outperformance](#), November 17, 2020

Contributors: Lotfi Karoui, Amanda Lynam, Michael Puempel, Sara Grut

¹ In Suriname, the bond restructuring is ongoing.

Commodities (3m N and 12m OW): RE Ving up a structural bull market

We are N commodities for 3m but would shift OW for 12m as we see a new structural bull market. As demand recoveries meet restrained supply due to structural under-investment, we see upside in almost all commodity markets. Non-energy commodities face immediate upside supported by Chinese demand and adverse weather shocks. We expect copper prices to end 2021 at \$7500/mt. Because of high inventories, upside in oil will likely come after the winter - we expect Brent at \$65/bbl from the fall of 2021 to early 2022. This should support the S&P GSCI Enhanced index. Near term gold may be range-bound but we maintain our \$2,300/toz target, supported by declines in 5yr US real rates and a weaker Dollar.

It's easy – and largely accurate – to present the 2021 commodity outlook as a V-shaped vaccine trade. What we think is key, however, is that this recovery in commodity prices will actually be the beginning of a much longer structural bull market for commodities driven by three key themes:

1. **Revenge of the old economy.** Structural under-investment in the old economy due to a decade of poor returns, particularly in energy where ESG issues have further reduced investment, was accelerated during 2020 in response to Covid, leaving inadequate production capacity to meet a V-shaped vaccine-driven demand recovery. Investment decisions are at a historical trough, taking 7.9 mn bld of oil out of 2025 expected supply. In our view, this will spell the end of non-OPEC growth in 2021.
2. **REV'ing demand through social need.** Covid is already ushering in a new era of policies aimed at social need instead of financial stability. This will likely create cyclically stronger, more commodity-intensive economic growth that should create the elusive cyclical upswing in demand. Three global initiatives have the potential to REV the global demand for commodities: Redistributive policies, Environmental policies and Versatile supply chain initiatives. From China's new 5YP to Europe's Green Deal or Biden's stimulus plan, policymakers are looking to REV demand after a decade of policies aimed at financial stability.
3. **Revaluation and reflation.** Covid has led to a massive rise in government spending, particularly in the US where the dollar was already facing headwinds. Although the dollar got a boost from a flight to safety at the beginning of the crisis, this support is likely to fade in 2021 and beyond, creating a positive feedback loop similar to what it did during the 1970s and 2000s when oil and gold reached historical highs. In addition, inflation tail risks are greater than at any other time since the 1970s due to the REV policies above.

Over the past decade the GSCI is down c.60%, erasing 3 decades of gains. We believe this streak of poor returns has reached an end in the aftermath of the Covid crisis. Indeed, **the mid-cycle trap, not supply, created the lost decade.** In oil, OPEC+ in the spirit of 'market stability' offset shale increases, or in metals Chinese 'supply-side reforms' did the same. In our view, it was the inevitable **consequence of global policy focused on financial-stability** following the financial crisis. Such policies, by definition,

took risk out of the system, and along with it many of the drivers of strong demand growth that would potentially have created inflation, a commodity bull market.

The financial crisis was a crisis of financial instability whereas the Covid pandemic is a crisis of social need, the need to deal with political issues that can no longer be ignored such as inequality, climate change and structural unemployment in key sectors and demographics. Policies aimed at social need benefit lower-income households that are larger in number and volumetrically consume more goods. **Such social need policies help escape the mid-cycle trap.**

Stimulus aimed at social need creates far more growth than stimulus aimed at fixing a financial crisis. And more importantly, it can create a cyclical upswing in demand to finally reach escape velocity to solidly enter a period of above-capacity growth, helping commodities and the old economy out of the mid-cycle trap they have been in for the past decade which lies at the core of the poor performance. Even the US Fed in announcing its new framework, acknowledges a cyclically strong economy helps solve many of these social issues.

This will create **a structural bull market on par with the 2000s**. Looking at the 2020s, we believe that similar structural forces to those which drove commodities in the 2000s could be at play. Not only can the green capex increase be as big as BRIC's investment 20 years ago, but the redistributive push in DMs, and in China this time, is likely to lead to a large boost to consumer spending, comparable to the lending-fuelled consumption increase in the 2000s. Finally, similar to 2000s, there is structural under-investment in supply of almost all commodities, against a weak dollar backdrop. As a result, **we recommend going long our "Back to the USSR" basket of copper, crude, corn, soy, platinum and palladium.**

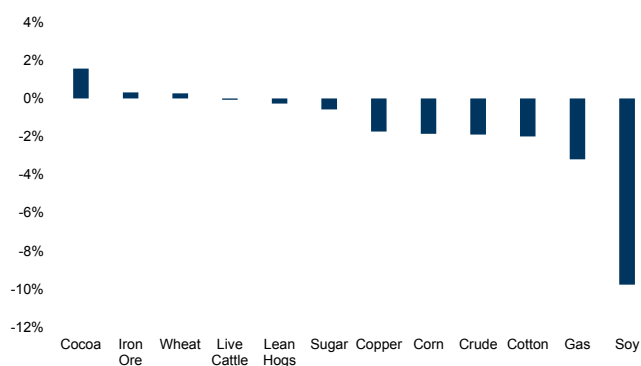
Exhibit 86: We are opening our "Back to the USSR" trading recommendation

Commodity	Contract	Opening Price	Current Price	% Return
Copper	S&P GSCI Subindex ER	4241	4241	0%
Brent Crude	S&P GSCI Subindex ER	176	176	0%
Corn/Soybeans	S&P GSCI Subindex ER	2147	2147	0%
Palladium/Platinum	S&P GSCI Subindex ER	1736	1736	0%
Total Return				0%

*Corn/Soy and Platinum/Palladium are pair, each taking a 12.5% weighting in the basket

Exhibit 87: Nearly all commodity markets are already drawing inventory

Yoy change in inventories as a % of US/global demand



Source: Goldman Sachs Global Investment Research

Source: Goldman Sachs Global Investment Research

In the near term, the longer the current crisis drags on, the larger the social need and policy response; however, once the normalization begins (whether that is in 2H21 as our economists are forecasting, or later, should vaccines disappoint), a V-shaped recovery in demand will almost certainly face tight supply across all markets. As we have emphasized over the past month, nearly every commodity is in a deficit, including oil

today, despite lockdowns. Such broad-based deficits are usually only seen late in the business cycle.

Exhibit 88: S&P GSCI Index Forecasts

GSCI Commodity Index	Dollar Weight	Historical Performance			GS Forecast		
		2018	2019	2020 YTD _„	3m	6m	12m
S&P GSCI	100.0	-12.9	17.4	-27.7	3.4	9.4	26.8
Energy	62.6	-13.9	28.5	-45.7	4.6	12.7	40.1
Industrial Metals	11.2	-18.0	2.8	9.8	-0.1	1.5	3.0
Precious Metals	4.1	-3.6	17.7	22.4	20.7	20.2	19.2
Agriculture	15.4	-7.0	-1.6	4.0	-0.7	0.3	-1.0
Livestock	6.7	-2.2	-5.4	-25.0	-2.9	5.4	10.6

„ YTD returns through Nov 16, 2020

Source: Goldman Sachs Global Investment Research

Energy

We expect a second wave of lockdowns in Europe and the US to bring the oil market's rebalancing to a halt in the coming months. Our **expected peak 3.1 mb/d associated hit to oil demand**, while smaller than in April 2020 given lighter restrictions, will nonetheless bring the oil market rebalancing to a halt, on our forecasts. The increase in inventories that we anticipate is likely to remain modest, however, as **we expect OPEC to delay its planned January ramp up by three months**. Importantly, this is only a speed bump in our forecast of a sharp tightening of oil fundamentals through 2021, driven by a recovery in demand, boosted by vaccines and rapid testing, and by the collapse in upstream investment and change in the shale reaction function. Accounting for this winter Covid delay, we now expect the oil market rebalancing to occur next year, with normalized OECD stocks, OPEC+ spare capacity returning to 1Q20 levels, and shale production growth all occurring by 4Q21.

Net, we expect the winter Covid wave to delay, but not derail, the oil market's rebalancing, with normalized OECD stocks, OPEC+ spare capacity returning to 1Q20 levels and finally shale production growth all occurring by 4Q21. Our 2022 balances point to a balanced oil market, even after now assuming a near-full return of Iranian production. As a result, we expect **Brent prices to resume their rally in 1Q21, when we forecast the Brent price averaging \$47/bbl**, with the winter speed bump simply delaying the **return to \$65/bbl by year-end 2021**.

For petroleum products, our constructive demand forecasts, along with a surprisingly quick shuttering of refining capacity, leave us bullish on 2022 margins, even though the next few months will likely prove challenging. We are most constructive on distillates that are most levered to the vaccine roll-out, given their positive impact on jet demand. With oil demand back to late 2019 levels by year-end 2021 on our forecasts, **we expect 2022 demand to only be 2 mb/d below our pre-Covid19 expectations**.

For natural gas, we believe US markets are transitioning into a significantly tighter 2021 balance driven by low associated gas production growth given the collapse in US oil production capex. Despite a very warm start to winter, which has weighed on heating-related gas demand, we believe this has not been near enough to rectify this forward tightness. This is because it's been accompanied by a sharp sell-off in the US gas curve, which we believe supports implied forward coal-to-gas (C2G) substitution by

more than enough to completely offset the reduction in heating demand this month. Hence, we maintain our constructive NYMEX natural gas price view with a **\$3.23/mmBtu forecast for 2021, 14% above current forwards.**

Precious Metals

We believe global reflation at the zero lower bound will drive precious higher. This year, the focus in precious markets has been on fiscal and monetary stimulus, and participants have largely ignored the inflation numbers (which were heavily impacted by the pandemic). Next year, as the economy reopens, we expect the focus to shift to whether policy stimulus and aggregated savings will lead to real inflation. Our rates team notes that under our economists' inflation forecasts and our oil view, near-term real rates are expected to average -2.1% over the next five years. Currently, 5-year tips are only -1.2%, which suggests material room to fall. There will likely be less downside pressure on 10-year real rates, but we believe that the gold and silver markets will focus on shorter maturity rates. The reason for this is that **gold is currently viewed primarily as a hedge against currency debasement, rather than equity market risk.** The bulk of gold purchases this year were made, in our view, because investors were concerned about the real purchasing power of the dollar vs. losses in their equity portfolios. Nearer-term real rates were also more important post the GFC, when gold was better correlated with 2- and 5-year real rates than 10-year rates. In late-2011, while longer-term real rates continued to move higher, gold did not. Instead, it was correlated with the dollar and front-end rates. For **silver, we see an additional tailwind in the form of a strong rebound in industrial demand**, spearheaded by a boost to global solar investment.

Base Metals

We expect a broad tightening trend in industrial metals fundamentals through 2021, which should generate a positive bias to price dynamics. First and foremost, we believe **this will be supported by a firm recovery in Western demand conditions**, supported by a combination of vaccine deployment from early in the year, and continued dovish policy setting. Evidence of this has already started to emerge in the US, and particularly for aluminium-related use in autos and construction. Moreover, there is limited evidence so far that the second wave of lockdowns in Europe is denting the positive momentum in manufacturing activity. Second, there still remains strong positive momentum in China's demand conditions, and although more policy restraint is likely ahead, only a modest sequential deceleration is anticipated by our economists. We also believe that any stimulus-restraining moves by Beijing will be tied to evidence of a sustained Western recovery, which suggests any policy adjustments will be weighted towards at least 2Q20 with an actual activity impact unlikely until well into the second half of the year. **Copper has the most bullish prospects on a near-term basis**, we believe, and higher prices will need to eventuate across the complex, to prevent scarcity conditions developing.

Agriculture

Agricultural markets have posted a remarkable turnaround this year, following adverse

weather and a record import pull from China in recent months. While benign weather conditions and trade wars have weighed on prices in recent years, we believe this year's reversal reflects the beginning of a multi-year structural repricing higher for crops. First, weather: recent years have posted low weather variability, as observed in the 1960s, and a reversion to long-run weather swings would add to price volatility and upside, with La Nina already a threat to South American production. Second, **China is starting a multi-year import surge**. The US-China trade war led to large destocking of Chinese corn and soybean inventories, now requiring a multi-year restocking cycle (this fits within its next five-year plan targets and should occur alongside the expansion of the Chinese hog herd). Third, we expect **a return of a US-led biofuel demand pull in coming years, this time led by renewable diesel**, which our agribusiness analysts estimate could represent an additional 1.5 bn bu of soybean use.

Exhibit 89: Individual commodity return forecasts

Commodity	Dollar Weight*		GS Forecast Return								
	GSCI	BCOM	Spot			Roll			Total		
			3m	6m	12m	3m	6m	12m	3m	6m	12m
WTI	20.8%	5.1%	8.3	17.9	45.5	-2.4	-3.3	-1.7	5.7	14.1	43.3
Brent	14.1%	4.3%	7.3	16.4	43.8	-2.3	-2.6	-0.5	4.9	13.5	43.3
Gasoline	3.5%	1.4%	9.2	28.8	41.7	-12.0	-13.9	-5.2	-3.8	11.0	34.6
Heating Oil	3.1%	1.2%	7.8	18.7	47.4	-2.8	-4.2	-4.2	4.9	13.8	41.5
Natural Gas	3.7%	10.0%	4.7	22.2	13.5	0.0	-4.5	-12.7	4.8	16.8	-0.7
Aluminum	4.5%	4.5%	2.7	5.2	7.8	-0.5	-1.3	-3.0	2.2	3.9	4.8
Copper	5.8%	7.6%	-1.5	2.0	5.6	0.0	0.0	0.3	-1.5	2.2	6.1
Nickel	1.1%	3.0%	3.9	0.8	0.8	-0.4	-0.7	-1.5	3.6	0.1	-0.5
Zinc	1.3%	3.7%	-4.7	-7.5	-10.3	-0.2	-0.5	-1.0	-4.8	-7.8	-10.9
Gold	6.7%	15.6%	21.4	21.4	21.4	-0.6	-1.1	-2.1	20.8	20.2	19.1
Silver	0.8%	4.9%	20.4	20.4	20.4	-0.3	-0.6	-1.1	20.1	19.8	19.3
Wheat	4.0%	3.2%	-1.6	-3.3	-9.1	-0.3	-0.6	-1.5	-1.9	-3.8	-10.2
Corn	6.3%	6.2%	2.5	6.1	2.5	-0.6	-1.4	-1.4	2.0	4.7	1.3
Soybeans	4.7%	6.7%	2.3	1.9	-0.3	-0.4	1.0	1.3	1.9	3.0	1.3
Cotton	1.4%	1.5%	2.0	3.4	4.8	-0.9	-1.7	0.0	1.2	1.7	5.0
Sugar	2.2%	3.2%	-9.5	-12.7	-9.5	0.0	2.2	2.9	-9.5	-10.7	-6.6
Coffee	0.9%	2.5%	-5.7	1.1	13.7	-1.0	-2.0	-3.9	-6.5	-0.9	9.4
Cocoa	0.4%	0.0%	-3.5	-1.4	2.7	-0.2	-0.1	0.0	-3.6	-1.4	2.9
Live Cattle	4.4%	3.4%	0.0	2.7	11.6	-2.7	-0.1	-1.3	-2.6	2.7	10.4
Lean Hogs	2.2%	1.6%	1.9	25.4	9.8	-5.4	-12.1	0.8	-3.5	10.4	10.9

* dollar weights as of Nov 17, 2020

Source: Goldman Sachs Global Investment Research

For details see: [2021 Commodity Outlook: RE Ving up a structural bull market](#),
November 18, 2020

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Daniel Sharp

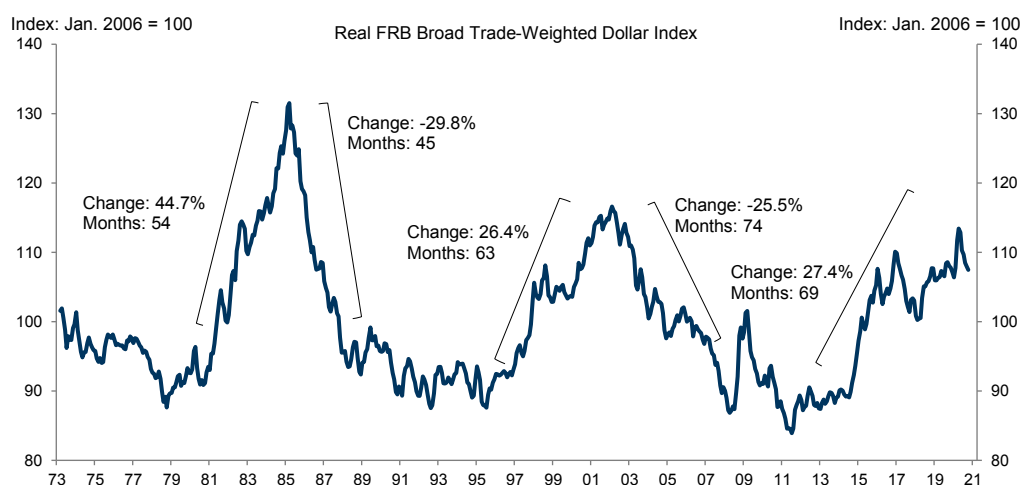
FX: Dollar downtrend

After a long period of US economic and asset market outperformance, the Dollar appears overvalued - about 10% on standard metrics - and many investors are overweight US assets. The combination of high valuations and negative real rates skews the Dollar outlook to the downside, in our view. We expect the broad Dollar to decline 6% over the next 12m, and 15% cumulatively from its 2020 peak to the end of 2024. We think commodity currencies like AUD and CAD will be key beneficiaries of the global recovery. EM FX broadly should also benefit, but our favorite longs vs USD - MXN, ZAR, and INR - offer a combination of value, real carry, and current account dynamics that provide better risk/reward.

USD: Stronger Growth, Weaker Dollar

Based on the Fed's real trade-weighted index (TWI), the US Dollar appreciated 27% from July 2014 to April 2020. In terms of length and magnitude the gains were similar to past periods of trend appreciation and depreciation in the broad Dollar ([Exhibit 90](#)). On our GSDEER model—which is based on price levels, productivity differentials, and terms of trade—the Dollar was about 20% overvalued at the highs in March and April of this year, and is about 10% overvalued today.

Exhibit 90: Substantial Appreciation Trend since 2014



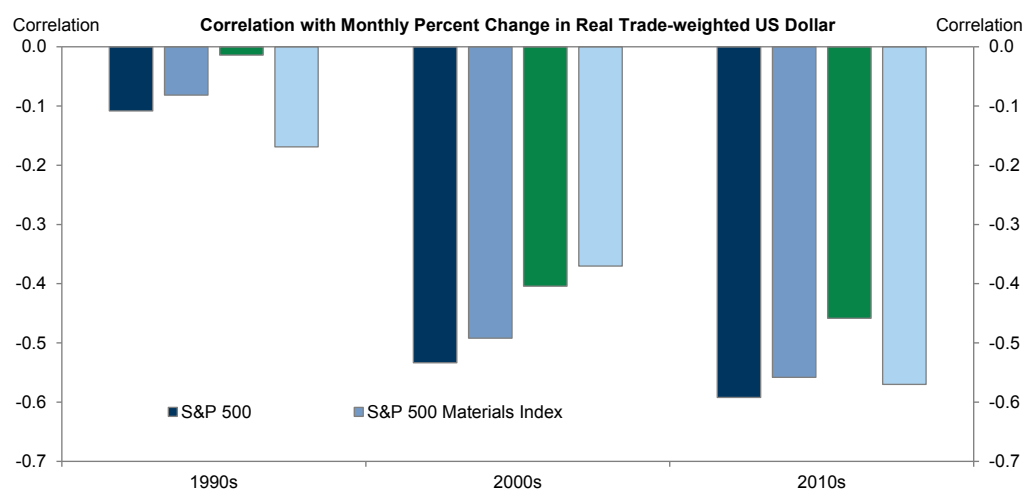
Source: Haver Analytics, Goldman Sachs Global Investment Research

The Dollar's appreciation since 2014 has been accompanied by higher real money positioning in US assets. Investor positioning is difficult to measure, but the range of indicators we monitor suggests that Dollar assets make up a larger share of many investor portfolios. Much of this was driven by an elevated carry-to-vol in most crosses for several years when the Fed was hiking and other G10 central banks were still adding more accommodation, which has now changed dramatically.

Over the coming year we are optimistic about the US economy but bearish the Dollar. This outcome would be an unusual pattern for many currencies, but is fairly common for

the greenback and certain other “safe havens.” The value of the broad Dollar is negatively correlated with market proxies of real economic activity—e.g. equity and commodity prices—and this correlation has strengthened over time ([Exhibit 91](#)). These correlations are probably related to the unique international role of the Dollar. For example, when the global economy improves, investor demand for US Treasuries tends to fall, and if (unhedged) investors allocate into assets denominated in other currencies the value of the Dollar may also decline.

Exhibit 91: Dollar TWI Negatively Correlated with Market Proxies of Growth



Source: Bloomberg, Goldman Sachs Global Investment Research

Through these types of channels, we think that our forecast for a robust global economic recovery and an on-hold Fed next year will translate into broad Dollar depreciation—led by currencies that will benefit most from rising commodity prices, greater investor risk appetite, and higher trade and industrial activity. There are both upside and downside risks to our forecast of orderly Dollar depreciation. Most importantly, our market calls are based on a view that global GDP will expand rapidly over the next year as vaccines bring major economies close to herd immunity.

However, if COVID outbreaks cause major regions to fall back into recession, safe-haven assets such as the Dollar would likely appreciate. At the same time, there are downside risks to the Dollar relative to our projections. For instance, we could envision much more hedging of US assets by non-US investors given near-zero vol-adjusted carry. Overall we see the risks around our baseline forecasts for the broad Dollar as balanced.

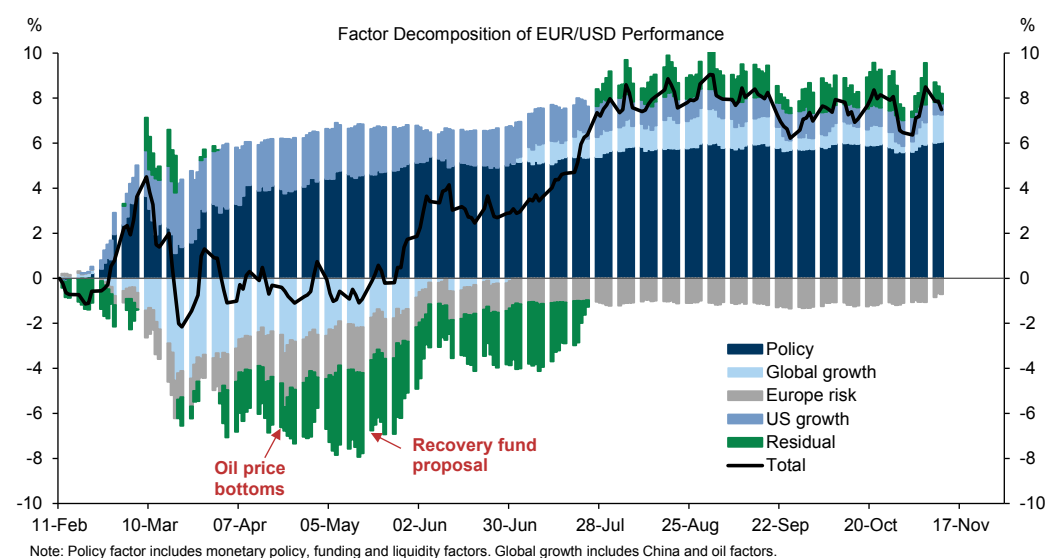
G10: Rotation anticipation

Near-term Euro underperformance. We expect that a stronger global economy will ultimately propel EUR/USD to 1.25 over the next 12 months, but it may be a bumpy ride, and we expect the EUR TWI to be about flat over the coming year. With Europe's exposure to global trade and demand from China, the Euro stands to benefit from a resurgent global economy, just as the initial reopening back in Q2 2020 was a key factor behind the Euro's rise out of the doldrums this year ([Exhibit 92](#)). In the near term, we expect the EUR to underperform this beta as the economy is hindered by the surge in

COVID cases and associated mitigation measures that seem very likely to push growth negative over the next few months.

But, taking a wider view, we think the Euro is uniquely positioned to benefit from the turn in the Dollar trend. Following years of underperformance and sovereign credit concerns, institutional international investors have reduced their allocations to Europe across a range of measures we follow. The COVID crisis has reset the global playing field, however, and the Dollar no longer enjoys such a clear total return advantage, which should push these investors to revisit their allocations.

Exhibit 92: Euro Boosted by Global Growth, Monetary Policy



Source: Goldman Sachs, Goldman Sachs Global Investment Research

Turning the page on Brexit. It appears the UK is getting ready to turn the page on the Brexit process and begin to explore life outside of the EU. We think that clarity is enough to push for some near-term currency appreciation; we continue to believe that EUR/GBP can trade down to 0.87 on a clear “deal” outcome, mostly because it will eliminate what has been at times a substantial negative tail outcome that has likely deterred investment from abroad. Two other idiosyncratic factors add to the near-term bullish case:

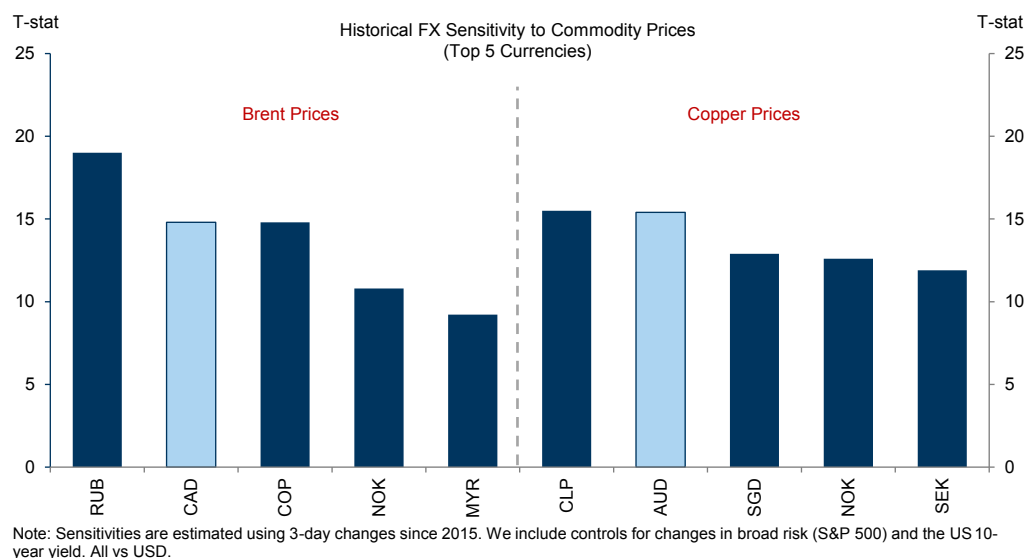
First, we expect that negative interest rates can be slowly priced out of the near-term BoE rate path as the recovery takes hold. Second, the UK economy is especially exposed to sectors that have been throttled back by COVID restrictions, and the UK is well-positioned for relatively quick vaccine deployment, so its economy stands to “uncoil” more than others when high-contact sectors can return to normal life. Beyond that, we do not think Sterling looks particularly cheap, so do not expect sustained trend appreciation.

Pick your beta. Commonwealth currencies (AUD, NZD, CAD) and European satellites (NOK, SEK) tend to perform well when the global growth outlook improves due to their relatively high exposures to global trade. Thus, these currencies should see positive

returns over the next 12 months as the global economy reopens and central banks across the globe maintain accommodative policy.

But certain characteristics will likely drive some differentiation in performance across these currencies. For instance, the Swedish Krona should be the biggest beneficiary of the global cyclical recovery; the currency has exhibited a relatively strong historical correlation with swings in production activity. Meanwhile, the Australian Dollar and the Canadian Dollar should see the best returns in a commodity price rally ([Exhibit 96](#)).

Exhibit 93: CAD and AUD Geared to Commodity Prices



Source: Bloomberg, Goldman Sachs Global Investment Research

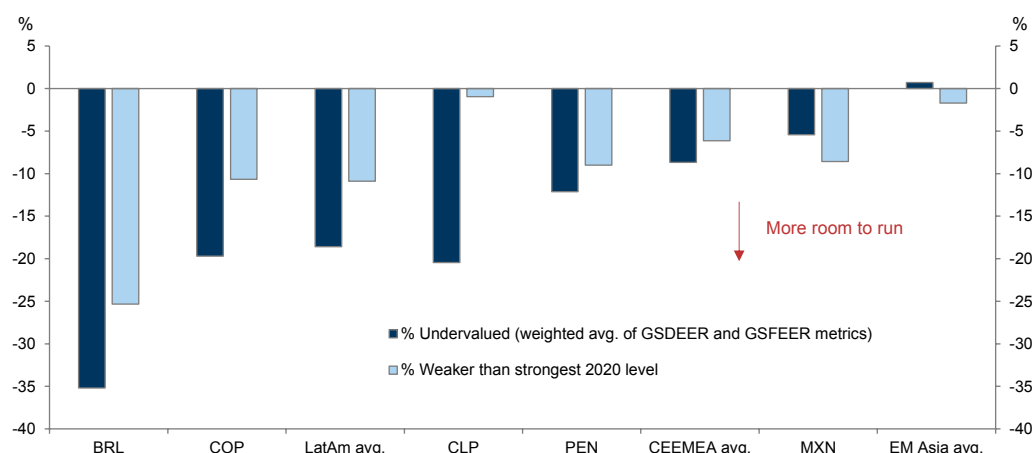
EM: From resilience to outperformance

NJA offers attractive risk-reward after the US election. With a Biden win in the US presidential election, risk-reward for the low-yielding currencies of North Asia appears attractive heading into 2021. In our base case of a strong recovery in global growth and global trade, NJA low-yielders are very likely to benefit (as they have done over the past two decades). Relative to their EM peers, North Asian currencies feature both (i) limited exposure to a dampening of expectations around US fiscal spending, and (ii) substantial exposure to expectations of firmer Chinese growth that could result from an easing of US-China tensions as clarity emerges on US foreign policy ([Exhibit 94](#)).

On the other hand, should the global public health outlook impact global growth more negatively than expected, the past year has provided ample evidence that North Asia's relative combination of (i) relatively sound COVID management, (ii) healthy external balances, (iii) exposure to global industrial demand, more than domestic services (which typically require more face-to-face interaction), and (iv) limited downside risk from lower oil prices, has been a recipe for resilience.

Exhibit 94: NJA offers attractive risk-reward after the US election

CEEMEA average excludes TRY

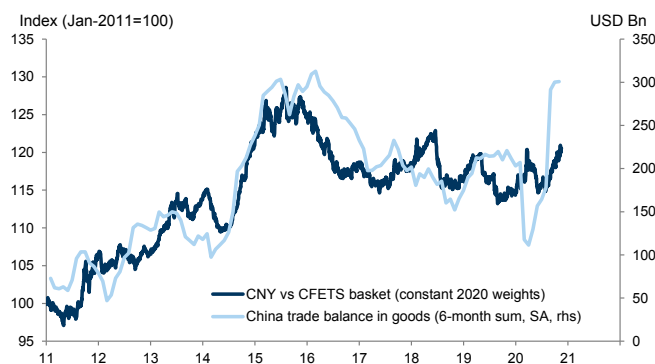


Note: CEEMEA average excludes TRY.

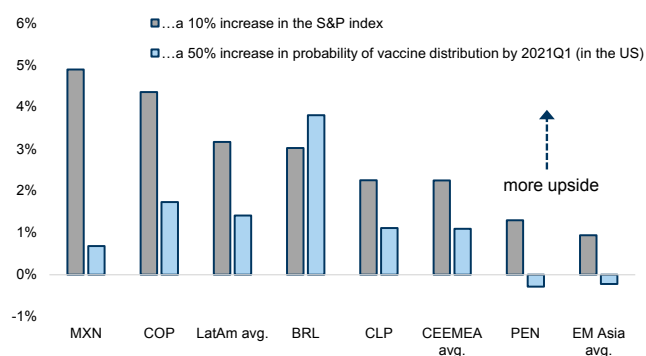
Source: Thomson Reuters, Goldman Sachs Global Investment Research

Still Room for RMB to Appreciate, at a Slower Pace. Shifting US policy priorities and China's outperformance on virus control and growth have led the USD/CNY exchange rate to trend steadily lower. From here, we believe the trajectory of CNY will depend on both the evolution of macro fundamentals and also on the stance of policy—and both of those are likely to continue to push in the direction of a stronger Renminbi, even if at a slower pace. China's economic recovery remains very much "first among equals" with GDP already above pre-pandemic levels and expected to expand strongly in 2021.

From a currency standpoint, what is even more pertinent is that this growth recovery has come alongside a substantial improvement in China's external balance, and uniquely among most major economies, an increase in short- and long-term rates back to 2.5% to 3% levels (Exhibit 95). These attractive yields should further catalyze portfolio inflows into Chinese government bonds (now part of major international bond indices), pushing the currency to appreciate further.

Exhibit 95: On a tactical basis, risk-reward looks better for the CNY and North Asia

Source: Haver Analytics, Goldman Sachs, Goldman Sachs Global Investment Research

Exhibit 96: LatAm FX features the most upside in a "Good State of the World"

Source: Thomson Reuters, Goldman Sachs Global Investment Research

LatAm presents the deepest value and highest beta. Following a significant selloff in 2020, LatAm currencies scan as both deeply undervalued and particularly well-placed to benefit from positive news on vaccine approval, stronger growth expectations and stronger risk sentiment heading into 2021 ([Exhibit 96](#)). The Brazilian Real is the region's leading case in point: during one of the most severe coronavirus pandemics in EM, the BRL featured a peak-to-trough selloff of more than 40% versus the Dollar in 2020H1, and remains the most deeply-undervalued major EM currency on our metrics. At the same time, BRL's sensitivity to positive risk sentiment and, in particular, to positive vaccine news is evident not just in our empirical work, but in the stand-out performance of the lightly-positioned Real through the US election and subsequent vaccine headlines.

The case for the Mexican peso is very different than others in the region. After strong performance, which has been bolstered by more conservative fiscal and monetary policy, MXN likely doesn't have as much "room to run" as most LatAm currencies; however, Peso longs are supported by an attractive combination of (i) high [leverage](#) to a cyclical risk upswing, (ii) the region's highest carry (4% annualized), (iii) significant monetary policy room and (iv) relatively resilient external balances. In addition, an easing in uncertainties around regional policy proposals under a Biden administration, while well-flagged, could continue to provide support for the Peso.

Idiosyncratic risks in CEE offer mixed opportunities. Recent TCMB [personnel changes](#) and associated signaling have increased the likelihood of a significant, near-term increase in policy rates that, if realized, would imply significant downside risks to our USD/TRY forecasts. Even after a one-off rate hike, however, a credible commitment to pivot away from prioritizing growth, and towards addressing macroeconomic balances, would be required to a return to higher USD/TRY.

Compared to TRY, we are far more bullish on RUB. In the run-up to the US election, the Ruble had priced a significant amount of political risk premium, even compared to historical episodes of currency volatility. Given that the immediate focus of a new US administration may be on domestic issues in the midst of a pandemic, a smaller-than-expected rise in tensions around Russia in the aftermath of the election could be a meaningful tactical tailwind for the Ruble.

Elsewhere, for the next 3 to 6 months, our CE-3 forecasts strike a cautious tone, reflecting the possibility that renewed virus outbreaks and lockdowns in Q4 and Q1 can weigh on the growth, both domestically and in the Euro area. By end-2021, however, our forecasts are more optimistic, reflecting both (i) the potential for an easing of activity restrictions due to higher spring temperatures, and (ii) the potential for CEE to benefit from a coordinated roll-out of vaccine distribution at the EU level, which would likely put these countries on an accelerated timeline compared to many EMs.

For details see:

[2021 Global FX Outlook: Dollar Downtrend](#), November 13, 2020

[EM Market Outlook 2021: From Resilience to Outperformance](#), November 17, 2020

Contributors: Zach Pandl, Kamakshya Trivedi, Mike Cahill, Ian Tomb

Calendar: Key events in 2021

Date	Region	Event
End 2020		
21 -22 Nov	Global	2020 G20 Riyadh Summit
30 Nov - 1 Dec	Global	OPEC Meeting
Late Nov - Dec	Global	BNT162 & mRNA-1273 vaccine: Potential EUA filing (Pfizer & Moderna)
Late Nov - Dec	Global	MK-4482 anti-viral: Initial Ph2 data (Merck & Co.)
Late Nov - Dec	Global	REGN-COV2 antibody: Potential EUA granted from FDA (Regeneron)
Late Nov - Dec	Global	AZD1222 vaccine: Ph3 ex-US data (Astrazeneca)
Dec	Global	Recombinant Vaccine: Ph 1/2 (Pfizer) + Ph 3 study (Eli Lilly/Moderna)
Dec	Global	BNT162 vaccine: Potential FDA Adcom panel meeting (Pfizer)
8 Dec	US	"Safe Harbor" - deadline for states with contested elections to file results
8 - 10 Dec	US	FDA VRBPAC meeting on vaccine approval
10 Dec	Eurozone	ECB Meeting
10 - 11 Dec	EU	EU Council meeting
14 Dec	US	Electors meet in State Capital to vote
15 - 16 Dec	US	FOMC Meeting & Conference
17 - 18 Dec	Japan	BOJ Monetary Policy Meeting
23 Dec	US	States send electoral votes to Congress
31 Dec	UK/EU	End of UK's post-Brexit transition period
Dec 2020 - early 2021	Global	LY-CoV555 antibody: Ph3 data from NIAID studies (Eli Lilly)
Dec 2020 - early 2021	Global	BNT162 & mRNA-1273 vaccine: Potential EUA from FDA (Pfizer & Moderna)
Q1 2021		
Jan - Mar	Global	FY20 Reporting season
Jan	Portugal	Presidential Election
3 Jan	US	New Congress sits at noon
5 Jan	US	Georgia U.S. Senate runoff elections
6 Jan	US	Congress meets to count electoral votes and declare winner
18 - 19 Jan	HK/Asia	Asia Financial Forum
20 Jan	US	Inauguration Day
20 - 21 Jan	Japan	BOJ Monetary Policy Meeting (with Outlook Report)
21 Jan	Eurozone	ECB Meeting
26 - 27 Jan	US	FOMC Meeting
22 - 25 Feb	HK/Asia	Asia Trade Summit 2021
Mar	China	National People's Congress and CPPCC
11 Mar	Eurozone	ECB Meeting
16- 17 Mar	US	FOMC Meeting & Conference
17 Mar	Netherlands	General Election
18 - 19 Mar	Japan	BOJ Monetary Policy Meeting
25 - 26 Mar	EU	EU Council meeting
Q2 2021		
22 Apr	Eurozone	ECB Meeting
26 - 27 Apr	Japan	BOJ Monetary Policy Meeting (with Outlook Report)
27 - 28 Apr	US	FOMC Meeting
Apr - May	India	Regional Elections
2 - 5 May	Asia	54th Asia Development Bank Annual Meetings
6 May	UK	Scottish Parliamentary Election
18 - 21 May	Global	World Economic Forum Annual Meeting
June - TBD	Global	Sintra Forum on Central Banking
10 Jun	Eurozone	ECB Meeting
15 - 16 Jun	US	FOMC Meeting & Conference
17 - 18 Jun	Japan	BOJ Monetary Policy Meeting
24 - 25 Jun	EU	EU Council meeting
Q3 2021		
15 - 16 Jul	Japan	BOJ Monetary Policy Meeting (with Outlook Report)
22 Jul	Eurozone	ECB Meeting
27 - 28 Jul	USA	FOMC Meeting
Aug - TBD	Global	Jackson Hole FRB Symposium
Aug-Oct	Germany	Federal Election
5 Sep	Hong Kong	Legislative Election
9 Sep	Eurozone	ECB Meeting
19 Sep	Russia	Legislative Election
13 Sep	Norway	Parliamentary Election
21 - 22 Sep	USA	FOMC Meeting & Conference
21 - 22 Sep	Japan	BOJ Monetary Policy Meeting
Q4 2021		
14 - 15 Oct	EU	EU Council meeting
22 Oct	Japan	General Election
27 - 28 Oct	Japan	BOJ Monetary Policy Meeting (with Outlook Report)
28 Oct	Eurozone	ECB Meeting
1 - 2 Nov	Global	26th UN Climate Change Conference of the Parties (COP26) in Glasgow
2 - 3 Nov	USA	FOMC Meeting
16 Dec	Eurozone	ECB Meeting
14 - 15 Dec	US	FOMC Meeting & Conference
16 - 17 Dec	Japan	BOJ Monetary Policy Meeting
To schedule		
TBD	Global	2021 G20 Rome Summit
TBD	Global	2021 G7 Summit (UK to host)
TBD	Global	OPEC
TBD	Global	NATO leader's Summit

Source: Goldman Sachs Global Investment Research

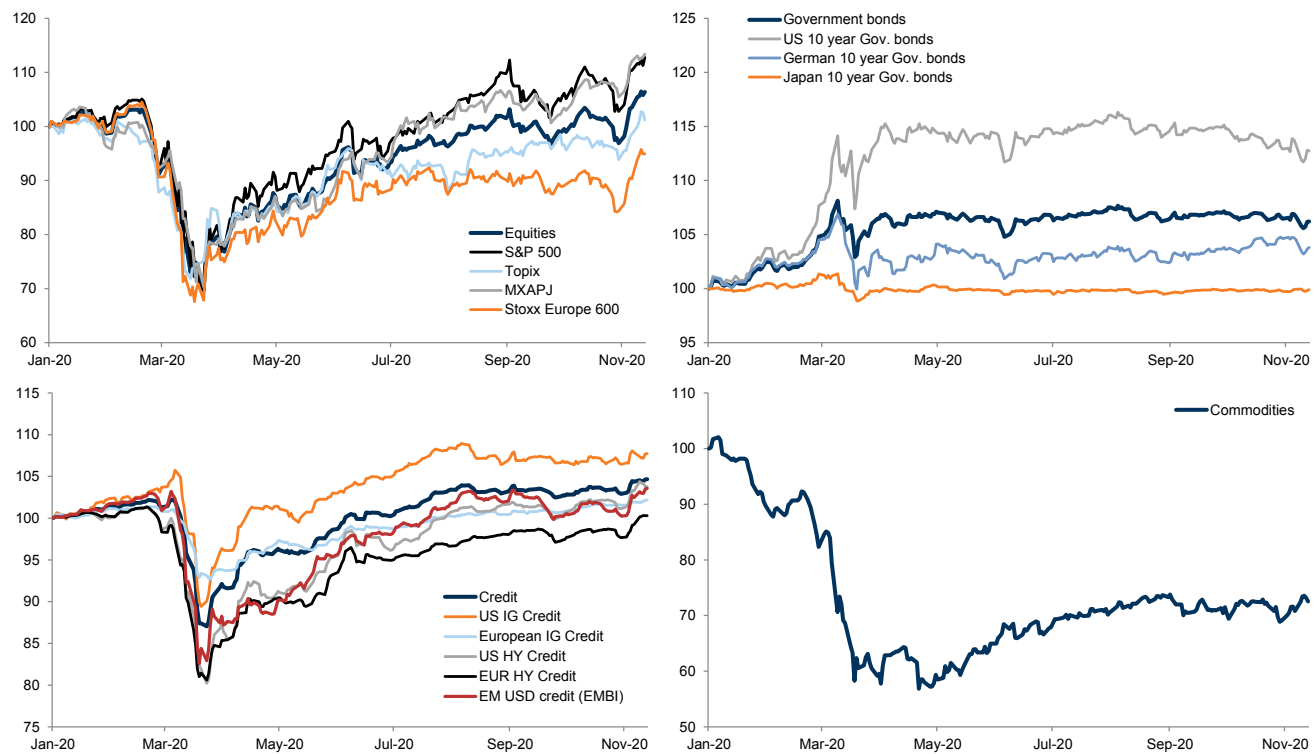
Asset class forecast returns and performance

Exhibit 97: Goldman Sachs' 3-, 6- and 12-month return forecasts by asset class

Asset Class	Benchmark Weight	3-month Total Return		6-month Total Return		12-month Total Return	
		Local currency	In USD	Local currency	In USD	Local currency	In USD
Equities	35	4.3	4.0	11.5	12.3	16.8	19.4
S&P 500	40	3.7	3.7	15.3	15.3	21.7	21.7
STOXX Europe 600	30	5.3	3.7	9.9	11.4	14.0	20.4
MSCI Asia Pac ex Japan	20	5.0	5.4	9.4	10.1	14.2	15.3
TOPIX	10	1.9	2.8	5.4	7.3	10.8	15.2
10 yr. Government Bonds	45	0.9	0.8	0.2	1.2	-1.4	1.4
US	40	1.5	1.5	0.4	0.4	-2.0	-2.0
Germany	30	0.4	-0.8	-0.3	1.1	-1.6	3.9
Japan	30	0.6	1.4	0.3	2.2	-0.4	3.5
Credit	10	2.0	1.6	2.6	3.0	3.0	4.8
Bloomberg Barclays US IG	40	2.1	2.1	2.2	2.2	1.4	1.4
Bloomberg Barclays US HY	20	2.0	2.0	3.1	3.1	4.9	4.9
iBoxx EUR IG	20	0.9	-0.3	1.2	2.6	1.5	7.2
BAML EUR HY	10	1.6	0.4	3.2	4.6	5.0	10.9
JP Morgan EMBI Div.	10	3.8	3.8	5.2	5.2	6.9	6.9
Commodities (S&P GSCI Enhanced)	5	3.4	3.4	9.4	9.4	26.8	26.8
Cash	5	0.0	-0.6	-0.1	0.6	-0.1	2.7
US	50	0.1	0.1	0.2	0.2	0.3	0.3
Euro area	50	-0.1	-1.3	-0.3	1.1	-0.5	5.0
FX		3m target	Return	6m target	Return	12m target	Return
EUR/\$		1.17	-1.2	1.20	1.4	1.25	5.6
\$/YEN		103	-0.9	102	-1.8	100	-3.7

Source: Datastream, Bloomberg, Goldman Sachs Global Investment Research

Exhibit 98: Performance of asset classes YTD



Source: Datastream, Goldman Sachs Global Investment Research

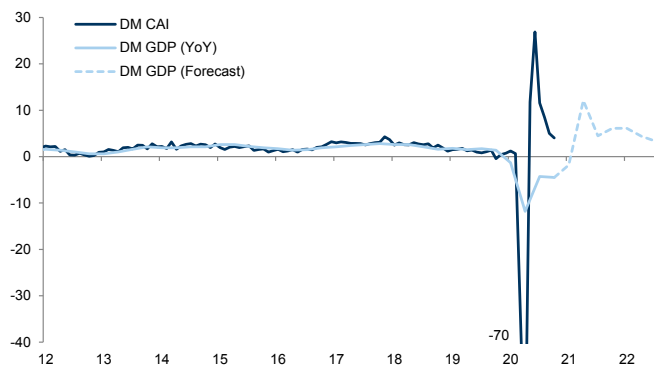
Key macro forecasts

Exhibit 99: GS forecasts across asset classes

	Return in % over last				Current Level	Forecasts			Unit	Up/ (downside) in %		
	12 m	3 m	1 m	YTD		3m	6m	12m		3m	6m	12m
S&P 500 (\$)	17.0	6.6	4.7	12.7	3582	3700	4100	4300	Index	3.3	14.5	20.0
Stoxx Europe 600 (€)	-1.9	5.2	5.8	-4.5	388	405	420	430	Index	4.5	8.4	10.9
MSCI Asia-Pacific Ex-Japan (\$)	19.7	9.8	6.5	14.7	620	650	675	700	Index	4.8	8.9	12.9
Topix (¥)	4.2	7.9	5.4	2.6	1726	1750	1800	1875	Index	1.4	4.3	8.6
10 Year Government Bond Yields												
US	12.0	-1.4	-0.7	13.1	0.86	0.80	0.93	1.23	%	-5 bps	8 bps	38 bps
Germany	2.5	0.8	-0.6	4.0	-0.57	-0.57	-0.52	-0.42	%	0 bps	5 bps	15 bps
Japan	-0.7	0.2	0.1	0.0	0.02	0.00	0.03	0.10	%	-2 bps	1 bps	8 bps
UK	4.6	-0.8	-1.3	5.4	0.33	0.20	0.25	0.45	%	-13 bps	-7 bps	13 bps
Credit												
Bloomberg Barclays US IG	9.6	1.5	1.5	8.8	110	106	102	100	Bps	-4 bps	-8 bps	-10 bps
Bloomberg Barclays US HY	6.8	3.5	2.2	4.4	417	384	359	342	Bps	-33 bps	-58 bps	-75 bps
iBoxx EUR IG	2.4	1.7	0.7	2.4	107	102	98	96	Bps	-4 bps	-8 bps	-10 bps
BAML EUR HY	2.7	3.4	2.4	1.0	391	374	351	332	Bps	-17 bps	-40 bps	-59 bps
JP Morgan EMBI Div.	6.3	1.4	2.0	3.8	382	360	346	325	Bps	-22 bps	-36 bps	-57 bps
Commodities												
WTI	-24.5	-3.2	2.2	-32.0	42	45	49	60.5	\$/bbl	8.3	17.9	45.6
Brent	-27.4	-2.5	3.7	-33.2	44	47	51	63	\$/bbl	6.2	15.2	42.3
Copper	20.8	5.6	4.7	15.1	7076	7000	7250	7500	\$/mt	-1.1	2.5	6.0
Gold	26.2	-5.3	-2.5	22.3	1859	2300	2300	2300	\$/troy oz	23.7	23.7	23.7
FX												
EUR/USD	6.9	-0.5	0.5	5.5	1.18	1.17	1.20	1.25		-1.2	1.4	5.6
USD/JPY	-4.2	-1.7	-1.5	-4.4	104	103	102	100		-0.9	-1.8	-3.7
GBP/USD	2.3	0.3	1.7	-0.2	1.32	1.34	1.38	1.44		1.3	4.4	8.9
USD/BRL	26.1	-3.3	-5.1	32.1	5.31	5.2	5.1	5.1		-2.1	-4.0	-4.0
USD/RUB	19.5	4.5	-1.5	22.9	76.34	71	70	68		-7.0	-8.3	-10.9
USD/INR	3.6	-0.7	1.2	4.1	74.27	72	71	70		-3.1	-4.4	-5.7
USD/CNY	-6.2	-4.7	-1.6	-5.5	6.59	6.50	6.40	6.30		-1.3	-2.8	-4.3

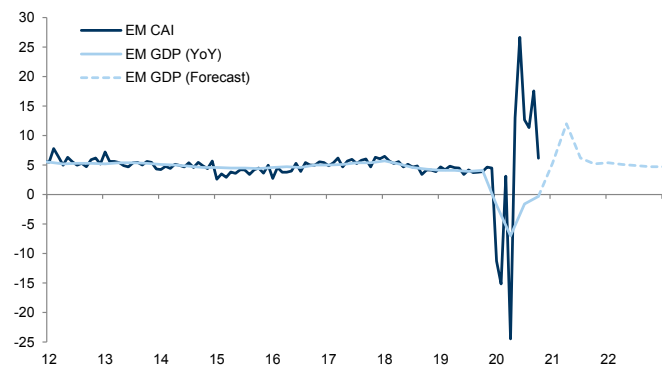
Source: Datastream, Bloomberg, Goldman Sachs Global Investment Research

Exhibit 100: DM GDP growth vs. GS CAI and GDP forecasts



Source: Goldman Sachs Global Investment Research

Exhibit 101: EM GDP growth vs. GS CAI and GDP forecasts



Source: Goldman Sachs Global Investment Research

Exhibit 102: GS real GDP growth forecasts vs. consensus

% yoy	2019	2020E		2021E		2022E	
	Realized	GS	Consensus*	GS	Consensus*	GS	Consensus*
USA	2.2	-3.5	-3.6	5.3	3.8	3.8	2.9
Japan	0.7	-5.3	-5.4	3.4	2.5	2.0	1.7
Euro area	1.3	-7.2	-7.3	5.3	4.8	4.3	3.4
UK	1.3	-11.2	-11.0	5.3	5.2	7.3	4.0
Advanced Economies	1.6	-5.5	-5.3	5.0	4.0	4.0	2.9
Emerging Markets	4.1	-2.7	-0.8	6.8	4.9	5.0	5.0
World	2.9	-3.9	-3.9	6.0	5.2	4.6	3.6

* Bloomberg Consensus

Source: Bloomberg, Goldman Sachs Global Investment Research

Disclosure Appendix

Reg AC

We, Christian Mueller-Glissmann, CFA, Alessio Rizzi, Cecilia Mariotti, Andrea Ferrario, Peter Oppenheimer, David J. Kostin, Kathy Matsui, Timothy Moe, CFA, Jeffrey Currie, Lotfi Karoui, Zach Pandl, Kamakshya Trivedi, Praveen Korapaty and Caesar Maasry, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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