Global FX Trader

From Diminished to Finished

Our Thoughts on USD, EUR, JPY, CNY, EM FX, Scandi FX, & CEE

- **USD: Exceptionalism eroded.** We are making a major shift in our Dollar view for the year ahead: we now see Dollar weakness of the first quarter persisting and deepening further. The reciprocal tariff announcement itself was close to our economists' expectations in terms of aggregate tariff rate. If enacted, it would be the sharpest rise in the US effective tariff rate in more than 100 years. However, we do not think these tariffs are likely to prove as Dollar supportive as we had previously thought for a number of reasons. First, the combination of an unnecessary trade war and other uncertainty raising policies is severely eroding consumer and business confidence as we have discussed, so that any Dollar positive impulses are being offset by the likelihood of lower growth. Second, the negative trends in US governance and institutions are eroding the exorbitant privilege long-enjoyed by US assets, and that is weighing on US asset returns and the Dollar, and may continue to do so in the future unless reversed. Third, and related, the implementation of the tariffs themselves is eroding the ability of investors to price these. While it is still true that currencies (and Dollar strength) provide the most natural margin of adjustment to US tariffs, as was the case both in the first trade war and also in the first episode of Canada/Mexico tariffs in late-Jan/early-Feb, the constant back and forth on timelines and the rudimentary calculations compound the uncertainty that underpins rising recession risks. Moreover rather than clearly targeted tariffs that allow precise room for negotiation, with such broad, unilateral tariffs there is less incentive for foreign producers to provide any accommodation–US businesses and consumers become the price-takers, and it is the Dollar that needs to weaken to adjust if supply chains and/or consumers are relatively inelastic in the short term. We have previously talked about the risk case of a shift in the relative growth outlook reversing the "exceptional" positioning that underpins the Dollar's strong valuation. In light of recent events, we are now making that our base case, and revising our EUR/USD forecasts to 1.12, 1.15 and 1.20 in 3, 6 and 12 months (from 1.07, 1.05 and 1.02 previously) and revising our USD/JPY forecasts to 138, 136, and 135 in 3, 6 and 12 months (from 150, 151 and 152 previously) with commensurate shifts elsewhere (Exhibit 1). This would bring the Dollar closer to measures of long-run fair value. There are a number of risks to this forecast, including the possibility of a convincing policy pivot that dials back some of the

Kamakshya Trivedi
+44(20)7051-4005 |
kamakshya.trivedi@gs.com
Goldman Sachs International

Michael Cahill
+44(20)7552-8314 |
michael.e.cahill@gs.com
Goldman Sachs International

Danny Suwanapruti
+65-6889-1987 |
danny.suwanapruti@gs.com
Goldman Sachs (Singapore) Pte

Teresa Alves
+44(20)7051-7566 |
teresa.alves@gs.com
Goldman Sachs International

Karen Reichgott Fishman
+1(212)855-6006 |
karen.fishman@gs.com
Goldman Sachs & Co. LLC

Isabella Rosenberg
+1(212)357-7628 |
isabella.rosenberg@gs.com
Goldman Sachs & Co. LLC

Stuart Jenkins
+44(20)7051-4700 |
stuart.jenkins@gs.com
Goldman Sachs International

Victor Engel
+44(20)7051-3862 | victor.engel@gs.com
Goldman Sachs International

Lexi Kanter
+1(212)855-9701 |
alexandra.kanter@gs.com
Goldman Sachs & Co. LLC

uncertainty that has weighed on US data. In addition, it is possible that the rapid shift in tariff policy will create global disruptions sufficient to activate the "left tail" of the Dollar smile that currently looks further away.

Exhibit 1: G10 FX forecast changes

		New Forecasts			Previous Forecasts		
	Spot	3m	6m	12m	3m	6m	12m
EUR/USD	1.10	1.12	1.15	1.20	1.07	1.05	1.02
GBP/USD	1.31	1.32	1.35	1.39	1.29	1.28	1.24
AUD/USD	0.64	0.60	0.60	0.60	0.62	0.62	0.62
NZD/USD	0.58	0.56	0.56	0.56	0.56	0.56	0.56
USD/JPY	146	138	136	135	150	151	152
USD/CAD	1.40	1.40	1.39	1.38	1.44	1.44	1.44
USD/CHF	0.86	0.85	0.83	0.79	0.86	0.86	0.88
USD/NOK	10.32	10.27	9.91	9.42	11.03	11.24	11.57
USD/SEK	9.73	9.64	9.30	8.83	10.84	11.14	11.57
EUR/NOK	11.40	11.50	11.40	11.30	11.80	11.80	11.80
EUR/SEK	10.76	10.80	10.70	10.60	11.60	11.70	11.80
EUR/GBP	0.84	0.85	0.85	0.86	0.83	0.82	0.82
EUR/CHF	0.95	0.95	0.95	0.95	0.92	0.90	0.90
AUD/NZD	1.08	1.07	1.07	1.07	1.11	1.11	1.11
NOK/SEK	0.93	0.94	0.94	0.94	0.98	0.99	1.00

Source: Bloomberg, Goldman Sachs Global Investment Research

- **EUR: Switchin' the positions.** We think recent policy changes will erode the exceptional performance that has formed the central pillar of the Dollar's strong valuation for the last decade. The Euro stands to be a key beneficiary in this shift. Because of the combination of substantial savings and weak domestic economic performance, Europe has been responsible for a large portion of the cross-border flows that supported the Dollar. If those forces now move in reverse, pressures on the capital account can see FX make outsized moves compared to other asset classes. The decade of relative fiscal restraint in Europe coupled with easier monetary policy—a recipe for currency weakness—is now turning, with the US instead aiming for that policy mix. While a number of implementation risks remain on both sides, we think investors need to be imaginative in an environment of rapidly shifting economic outlooks. We think this combination will spur a rotation in cross-border flows and move toward closing the valuation gap (Exhibit 2). This would see EUR/USD rise to around 1.20. As we have discussed previously, this happened once before in 2017, and the parallels to today are striking. We expect a replay of this dynamic, and are now moving this from a risk case to the base case. That said, there are a number of remaining risks, including the potential that higher tariff rates will overpower some of the growth optimism as Europe is more exposed to global trade activity. In this context, it is worth noting that episodes of Euro strength in 2017 (and, to some extent, late 2020), coincided with European growth optimism, rather than a more pessimistic US outlook.

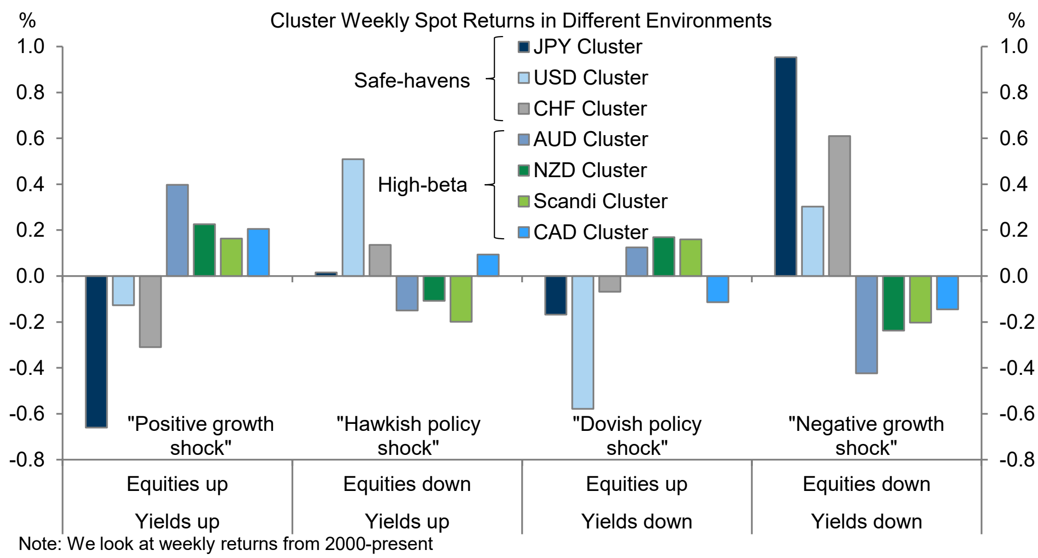
Exhibit 2: We now expect EUR will move toward closing the valuation gap

*60/40 fair value is computed using 60% of the corresponding GSDEER fair value and 40% of the GSFEER fair value

Source: Goldman Sachs Global Investment Research

- **JPY: Flipping to structural bulls, stay long vs AUD.** Higher US recession risk and elevated policy uncertainty strengthens the case to own safer assets. We had already been recommending tactical longs in JPY but our shorter-term preference has now flipped to a structural one. The loss of US exceptionalism (that will likely remain a feature of the outlook, even if we see a nearer-term shift on policy) removes the pillar of support that has justified the Dollar's high valuation over the past decade. That leaves a clear runway for structural Dollar depreciation, where we can see USD weaken for longer periods alongside lower US equities. This backdrop alone argues in favor of adding exposure to JPY, CHF, and even EUR, but higher recession risk should further point to owning JPY and CHF in particular (Exhibit 3). Therefore, consistent with our recent downgrades to our S&P 500 and rates forecasts (where risks are also skewed to the downside), we are revising down our USD/JPY forecasts to 138, 136, 135 in 3, 6, 12 months (vs 150, 151, 152 previously). We also think the risks look skewed towards reaching our 12-month forecast of 135 quicker than expected. For that reason, we are extending the target of our open short AUD/JPY recommendation from 90.5 to 85.0 and lowering our stop from 97.0 to 91.5 to protect a potential gain of nearly 3%. While we see scope for some tactical reversal in both JPY and AUD after the outsized moves in recent days, we think the fundamental backdrop continues to argue for further downside.

Exhibit 3: Higher recession risk should point to owning JPY and CHF



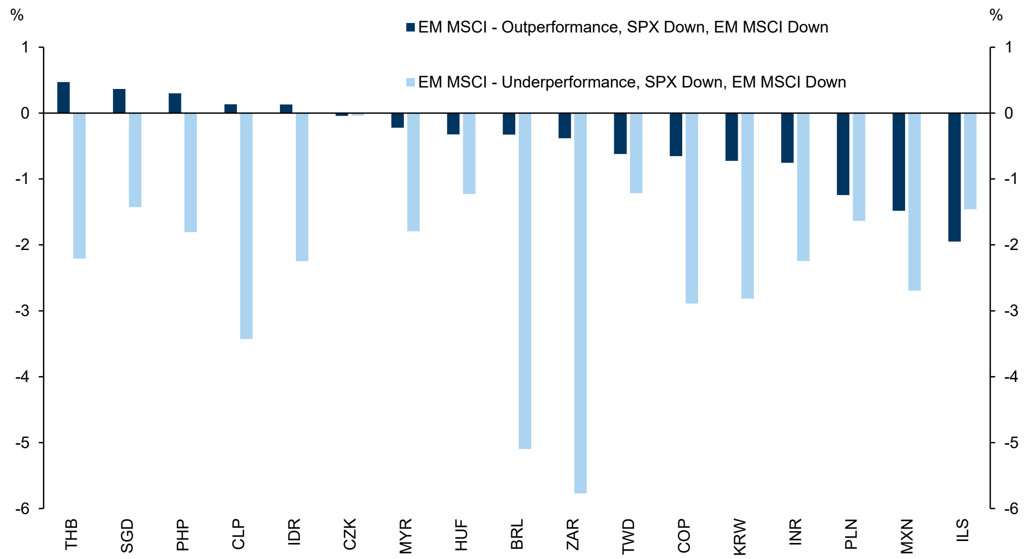
Source: Bloomberg, Goldman Sachs Global Investment Research

- **CNY: Eyes fixed on the fix.** In response to US reciprocal tariffs, Chinese policymakers announced a 34pp tariff increase on all US exports to China, effective April 10th (one day after the US reciprocal tariffs take full effect). The magnitude of the tariff hike mirrors the US move and the tariff action was part of a broader set of countermeasures including export controls on rare earths and agricultural products. While the escalating trade war creates downside risks to growth, our China team continues to expect fiscal and monetary policy easing to provide important offsets. Coming into this Trade War 2.0, we did anticipate that these other levers of policy would see more emphasis relative to currency depreciation compared to Trade War 1.0 in 2018-19. Even so, it is still remarkable how steady the CNY fix has been this year. After the US reciprocal tariffs were announced, the PBoC did allow slightly more currency depreciation and the USD/CNY fix rose to 7.1889 from 7.1793 (+96pips) on April 3— the largest one-day change since President Trump assumed office. Onshore markets were closed on April 4, so no fixing was observed, and it will be crucial to see how this evolves in the coming week. Our flattish forecasts for USD/CNY between 7.30-7.35 are consistent with a revealed preference for stability from policymakers, and our conjecture is that still holds even after the events of this week. After all given the strong starting level of China's external balance, reduced trade exposure to the US relative to 2018-19, and a depreciation in the CFETS basket (given an unchanged USD/CNY in the face of a depreciating Dollar), stability should still be manageable. And even if there is some further weakening in the near-term, as we look ahead and take account of our revised forecasts for a broader weakening in the Dollar, we would flag that the downside tail in USD/CNH also now has value.

- **EM FX: Less upside than G9.** An expanding trade war and growing downside risks to global growth present a challenging backdrop for EM FX, a highly cyclical asset class. This argues for underperformance relative to G9 currencies, where safe-haven demand and declining US exceptionalism have a larger impact. When it comes to

EM FX returns versus the Dollar, we think that will largely depend on how the market prices the relative growth hit between the US and emerging markets. In our recent deep-dive on the relationship between EM FX and relative equity performance, we found that when both US and EM equity indices are selling off, EM equity outperformance has tended to cushion EM FX from the fall in the S&P 500 to a significant extent relative to when EM equities underperform (Exhibit 4). Our EM economists have downgraded growth forecast across regions since the reciprocal tariff announcement but have notably kept the Chinese growth forecast unchanged (with an adjustment higher in policy stimulus expectations), which we think can help support China-linked currencies. More broadly, we think that if markets are more clearly trading USD underperformance (as on Thursday) rather than global risk-off (as on Friday), then EM FX returns can still be positive versus the Dollar. But we expect volatility to be high as expectations switch around between those two regimes. Across currencies and regions, we think there is scope for CEE FX to be relatively more resilient given the potential for meaningful Euro appreciation (though there are still domestic headwinds to keep in mind, see CEE bullet below). Asia is likely to bear the brunt of the reciprocal tariffs with small open-economies particularly vulnerable, but the extent of any FX move will depend on whether the CNY fix remains steady around current levels or exhibits more volatility. Within Latin America, we continue to have a relative preference for BRL where high carry and limited tariff exposure can cushion the Real. Elsewhere in EM HY, the South African Rand's high beta to global risk and local political developments argue for a cautious stance in the near-term. Finally, we consistently find that US equity returns screen as more important than EM equity returns for MXN and ILS and therefore think there is less scope for EM growth pricing resilience to support these currencies.

Exhibit 4: When both the S&P 500 and MSCI EM are selling off, EM equity outperformance has tended to cushion EM FX from the fall in the S&P to a large extent (except for ILS and MXN)
Monthly returns of EM FX vs. USD (CEE vs. EUR), in periods of out/underperformance of MSCI EM vs S&P above/below the 75th percentile



Source: Goldman Sachs FICC and Equities, Goldman Sachs Global Investment Research

- **Scandi FX: Launch to orbit**. We think the Euro and its satellites stand to be key beneficiaries of the erosion of US exceptionalism alongside a reversal of relative fiscal restraint in Europe (see EUR bullet). The market has already moved quite far to price European growth optimism, and we still see hurdles ahead. European satellites should still be exposed to a tariff induced hit to EA growth, particularly SEK which has historically operated like "Euro-squared," and risks remain that tariffs will ultimately depress economic growth in the rest of the world more than in the US and delivery of European defense spending will disappoint. That said, we see room for continued outperformance vs both the Dollar and EUR off the back of defense spending optimism and a broader rotation in cross asset flows. More coordinated defense spending should disproportionately benefit the Scandis given their outsized concentration in the industrial sector relative to the rest of Europe, whereas domestic shifts may mute the EUR/USD beta for CE3 currencies (see CEE bullet). We also recently noted that record portfolio flows have likely contributed to outsized currency moves over the past several weeks and think a broader rotation in cross-border flows as a result of recent policy changes should allow for this dynamic to extend.
- **CEE: Dovish drifts vs the Euro shift.** We now forecast EUR/USD to trade to 1.20 in 12-months. This is an important tailwind for CEE currencies given their historical positive beta to EUR/USD moves. However, we think there are other offsetting factors at play currently that argue for a more muted move in EUR/CE3. First, while we are arguing for a return to fair value in EUR/USD, CEE currencies already trade stronger than our estimates of fair value, with CZK and PLN in particular screening around 10% overvalued in our frameworks (whereas HUF is close to fair). Second,

US tariffs, especially those on autos, will have a negative impact on CEE growth, especially in Czechia and Hungary where the auto sector is a key contributor to GDP. Third, we expect currency appreciation (and growth risks) to be met with more dovish monetary policy. In Poland, where a high real rate policy has been a key pillar of PLN outperformance, the NBP pivoted in a more dovish direction this week, leading the Zloty to underperform on the day. And, in Hungary, we think that the MNB continuing to signal an extended pause is unlikely to provide further support to the Forint given that this is already well reflected in rates pricing. Fourth, we think that some risk premium is warranted given rising fiscal risks, especially in Hungary. Finally, we note that more muted EUR/CE3 moves in the face of a large EUR/USD repricing are not unusual. In 2014-15, CE3 currencies stayed resilient as the Euro depreciated by over 20%. And in 2017, when EUR/USD moved around 20% higher, CZK and PLN appreciated around 7% versus the Euro and EUR/HUF was roughly flat. So we are making more muted revisions lower in our EUR/CE3 forecasts together with other EM FX revisions (Exhibit 5). We also close our trade recommendation to be short CZK and HUF vs EUR for a potential total returns of around 0.6%.

Exhibit 5: EM FX forecast changes

	New Forecasts			Previous Forecasts		
	3m	6m	12m	3m	6m	12m
USD/BRL	5.80	5.70	5.70	6.10	6.00	5.90
USD/MXN	21.25	21.00	20.75	20.75	20.50	20.00
USD/PEN	3.70	3.70	3.70	3.75	3.80	3.85
USD/ILS	3.80	3.70	3.70	3.65	3.60	3.60
USD/ZAR	19.50	19.25	19.00	19.00	18.75	18.75
EUR/CZK	25.20	25.40	25.50	25.25	25.50	26.00
EUR/HUF	410	405	400	405	410	420
EUR/PLN	4.30	4.25	4.20	4.20	4.25	4.30

Source: Goldman Sachs Global Investment Research

Global FX Forecasts

	Current Spot	3-Month Horizon		6-Month Horizon		12-Month Horizon		Longer-term Forecasts (eop)		
		Forward	Forecast	Forward	Forecast	Forward	Forecast	2026	2027	2028
G10										
EUR/$	1.10	1.10	1.12	1.11	1.15	1.12	1.20	1.20	1.20	1.20
£/$	1.29	1.29	1.32	1.29	1.35	1.29	1.39	1.36	1.34	1.33
AUD/$	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.68	0.71
NZD/$	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.58	0.60	0.61
$/CAD	1.42	1.42	1.40	1.41	1.39	1.40	1.38	1.36	1.33	1.30
$/CHF	0.85	0.85	0.85	0.84	0.83	0.82	0.79	0.81	0.82	0.83
$/NOK	10.75	10.75	10.27	10.77	9.91	10.80	9.42	8.87	8.42	8.07
$/SEK	10.05	10.00	9.64	9.96	9.30	9.89	8.83	8.58	8.38	8.21
$/JPY	145	144	138	142	136	140	135	127	120	115
EMEA										
$/CZK	23.0	22.9	22.5	22.9	22.1	22.8	21.3	21.7	21.7	21.7
$/HUF	371	373	366	375	352	380	333	333	338	338
$/PLN	3.89	3.90	3.84	3.91	3.70	3.92	3.50	3.58	3.67	3.75
$/RON	4.54	4.55	4.44	4.58	4.35	4.64	4.17	4.25	4.25	4.25
$/RUB	89.45	89.45	100.0	93.05	105.0	100.31	110.0	120.0	130.0	130.0
$/UAH	41.2	42.3	42.0	43.4	43.0	46.2	46.0	48.0	49.0	51.0
$/TRY	38.01	42.15	37.0	46.31	39.0	54.57	42.0	44.00	45.00	47.00
$/ILS	3.75	3.74	3.80	3.73	3.70	3.72	3.70	3.60	3.60	3.55
$/ZAR	19.11	19.25	19.50	19.41	19.25	19.76	19.00	18.00	17.00	16.50
$/NGN	1537	1698	1600	1775	1500	1922	1400	1600	1800	2000
Americas										
$/ARS	1073	1196	1080	1293	1110	1502	1350	1530	1680	1820
$/BRL	5.82	5.93	5.80	6.07	5.70	6.35	5.70	5.50	5.40	5.30
$/MXN	20.50	20.75	21.25	20.98	21.00	21.44	20.75	20.50	20.00	19.00
$/CLP	981	982	970	983	975	987	980	960	940	920
$/PEN	3.70	3.71	3.70	3.72	3.70	3.71	3.70	3.60	3.55	3.50
$/COP	4295	4348	4400	4401	4450	4516	4500	4400	4300	4200
Asia										
$/CNY	7.28	7.27	7.30	7.25	7.35	7.20	7.35	7.30	7.10	6.90
$/HKD	7.78	7.76	7.80	7.75	7.80	7.74	7.80	7.80	7.80	7.80
$/INR	85.24	86.22	87.50	86.72	88.00	87.80	89.00	85.00	84.00	83.00
$/KRW	1463	1455	1450	1448	1455	1437	1455	1390	1350	1320
$/MYR	4.44	4.42	4.50	4.41	4.55	4.39	4.55	4.40	4.30	4.20
$/SGD	1.34	1.34	1.35	1.33	1.36	1.32	1.36	1.37	1.35	1.33
$/TWD	33.1	33.0	33.5	32.7	33.7	32.2	33.8	32.0	31.0	30.1
$/THB	34.20	34.40	34.00	34.22	34.50	33.89	35.00	35.50	35.00	34.00
$/IDR	16560	17142	16700	17224	16800	17408	16800	16000	15500	15000
$/PHP	56.83	56.90	57.50	57.00	58.00	57.20	58.00	59.50	59.00	59.00
Euro Crosses										
EUR/GBP	0.85	0.85	0.85	0.86	0.85	0.87	0.86	0.88	0.90	0.90
EUR/CHF	0.94	0.93	0.95	0.93	0.95	0.92	0.95	0.97	0.98	0.99
EUR/NOK	11.80	11.86	11.50	11.93	11.40	12.06	11.30	10.64	10.10	9.68
EUR/SEK	11.03	11.03	10.80	11.03	10.70	11.05	10.60	10.29	10.05	9.85
EUR/CZK	25.20	25.28	25.20	25.36	25.40	25.49	25.50	26.00	26.00	26.00
EUR/HUF	407	411	410	415	405	424	400	400	405	405
EUR/PLN	4.26	4.30	4.30	4.33	4.25	4.38	4.20	4.30	4.40	4.50
EUR/RON	4.98	5.02	4.97	5.07	5.00	5.18	5.00	5.10	5.10	5.10
EUR/RUB	98.1	98.6	112.0	103.1	120.8	112.1	132.0	144.0	156.0	156.0

Note: Spot values are as of Thursday's close.

See dynamic table here (or click image above): https://publishing.gs.com/content/themes/fx-forecasts.html

Source: Goldman Sachs Global Investment Research

Return Forecasts & Valuations

	Current Spot	Forecast: 12-Month Return (%)				GSDEER			GSFEER			Average Estimate	PPP*
		Spot	Carry	Total	NEER	Estimate	Misalignment Bilateral	Misalignment Trade-Weighted	Estimate	Misalignment Bilateral	Misalignment Trade-Weighted		
G10													
EUR/$	1.10	9.4	-1.8	7.4	6.8	1.20	-8%	6%	1.36	-19%	-2%	1.26	1.50
GBP/$	1.29	7.5	0.3	7.7	2.7	1.25	4%	20%	1.50	-14%	6%	1.35	1.52
AUD/$	0.60	-0.5	-0.3	-0.8	-1.8	0.83	-27%	-4%	0.80	-25%	-2%	0.82	0.69
NZD/$	0.56	0.1	-0.6	-0.5	-1.0	0.68	-17%	5%	0.66	-15%	9%	0.67	0.68
$/CAD	1.42	3.1	-1.5	1.5	1.9	1.25	-12%	-7%	1.28	-10%	-4%	1.26	1.18
$/CHF	0.85	8.0	-3.7	4.0	2.8	0.86	0%	11%	0.72	-16%	-1%	0.80	0.96
$/NOK	10.75	14.2	0.4	14.7	7.2	6.70	-38%	-27%	7.95	-26%	-3%	7.20	9.12
$/SEK	10.05	13.8	-1.6	12.0	5.6	7.54	-25%	-12%	7.97	-21%	2%	7.72	8.45
$/JPY	145.1	7.5	-3.4	3.8	7.2	94	-35%	-25%	105	-28%	-11%	98	93
EMEA													
$/CZK	22.98	8.1	-0.7	7.4	0.9	25.0	9%	24%	18.6	-19%	-1%	22.4	15.9
$/HUF	371	11.2	2.4	13.9	4.1	333	-10%	2%	305	-18%	2%	322	249
$/PLN	3.89	11.0	0.9	12.0	4.7	3.96	2%	18%	3.3	-15%	7%	3.70	2.55
$/RON	4.54	8.9	2.2	11.3	--	--	--	--	--	--	--	--	--
$/RUB	89.4	-18.7	12.1	-8.8	-21.8	77.90	-13%	6%	69.45	-22%	21%	74.52	39.98
$/UAH	41.18	-10.5	12.3	1.8	--	--	--	--	--	--	--	--	--
$/TRY	38.01	-9.5	43.6	29.9	-12.6	25.90	-32%	-30%	30.34	-20%	-3%	27.68	24.26
$/ILS	3.75	1.3	-0.8	0.6	-1.5	3.49	-7%	8%	2.82	-25%	0%	3.22	4.71
$/ZAR	19.1	0.6	3.4	4.0	-2.4	12.71	-34%	-22%	13.6	-29%	-6%	13.05	18.78
$/NGN	1537	9.8	25.0	34.8	--	--	--	--	--	--	--	--	--
Americas													
$/ARS	1073.2	-20.5	39.9	19.4	-21.8	--	--	--	--	--	--	--	--
$/BRL	5.82	2.0	9.1	11.4	2.2	4.17	-28%	-14%	4.99	-14%	9%	4.50	5.11
$/MXN	20.50	-1.2	4.6	3.3	-2.1	19.90	-3%	7%	17.69	-14%	-4%	19.01	20.65
$/CLP	981	0.1	0.6	0.7	-0.4	681	-31%	-13%	739	-25%	-3%	704	756
$/PEN	3.70	-0.1	0.3	0.2	-0.6	3.11	-16%	0%	3.07	-17%	3%	3.09	4.00
$/COP	4295	-4.6	5.1	0.4	-5.3	3372	-21%	-5%	3750	-13%	7%	3523	3148
Asia													
$/CNY	7.28	-0.9	-1.2	-2.1	-2.4	5.18	-29%	-16%	5.60	-23%	-5%	5.35	6.50
$/HKD	7.78	-0.3	-0.5	-0.8	-0.7	7.06	-9%	15%	6.22	-20%	0%	6.72	5.91
$/INR	85.24	-4.2	3.0	-1.3	-5.3	77.45	-9%	3%	70.20	-18%	0%	74.55	58.96
$/KRW	1463	0.5	-1.8	-1.3	-0.2	1181	-19%	0%	1096	-25%	-5%	1147	915
$/MYR	4.44	-2.5	-1.1	-3.6	-3.3	3.34	-25%	-8%	3.72	-16%	4%	3.49	2.16
$/SGD	1.344	-1.2	-1.7	-2.9	-2.0	1.35	0%	21%	1.12	-17%	8%	1.26	0.61
$/TWD	33.10	-2.1	-2.6	-4.7	-3.4	26.5	-20%	0%	24.6	-26%	-9%	25.8	14.1
$/THB	34.20	-2.3	-0.9	-3.2	-3.7	30.94	-10%	12%	28.78	-16%	6%	30.07	19.41
$/IDR	16560	-1.4	5.1	3.6	-2.1	14240	-14%	4%	12669	-23%	-7%	13611	11353
$/PHP	56.83	-2.0	0.7	-1.4	-3.3	58.53	3%	25%	53.76	-5%	16%	56.62	53.39
Euro Crosses													
EUR/GBP	0.85	-1.8	2.1	0.3	2.7	0.96	13%	20%	0.91	7%	6%	0.94	0.98
EUR/CHF	0.94	-1.3	-1.9	-3.2	2.8	1.03	9%	11%	0.98	4%	-1%	1.01	1.44
EUR/NOK	11.80	4.4	2.2	6.6	7.2	8.03	-32%	-27%	10.82	-8%	-3%	9.15	13.63
EUR/SEK	11.03	4.0	0.2	4.2	5.6	9.04	-18%	-12%	10.85	-2%	2%	9.77	12.63
EUR/CZK	25.20	-1.2	1.1	0.0	0.9	29.93	19%	24%	25.31	0%	-1%	28.08	23.76
EUR/HUF	407	1.7	4.2	5.9	4.1	399	-2%	2%	415	2%	2%	406	372
EUR/PLN	4.26	1.5	2.7	4.2	4.7	4.74	11%	18%	4.5	6%	7%	4.65	3.82
EUR/RON	4.98	-0.4	4.0	3.5	--	--	--	--	--	--	--	--	--
EUR/RUB	98.1	-25.7	14.0	-11.7	-21.8	93.4	-5%	6%	94.5	-4%	21%	93.8	--
Addendum													
USD	--	-1.7	-2.2	-3.7	-2.5	--	--	19%	--	--	18%	--	--

Note: USD returns average of all other currencies (except ARS, NGN and UAH) with opposite sign; *EM estimates adjusted for per capita income. Spot values as of Thursday.

See dynamic table here (or click image above): https://publishing.gs.com/content/themes/table.html?criteriaKey=1k2HGqqS2h

Source: Goldman Sachs Global Investment Research

Disclosure Appendix

Reg AC

We, Kamakshya Trivedi, Michael Cahill, Danny Suwanapruti, Teresa Alves, Karen Reichgott Fishman, Isabella Rosenberg, Stuart Jenkins, Victor Engel and Lexi Kanter, 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.

Unless otherwise stated, the individuals listed on the cover page of this report are analysts in Goldman Sachs' Global Investment Research division.

Disclosures

Regulatory disclosures

Disclosures required by United States laws and regulations

See company-specific regulatory disclosures above for any of the following disclosures required as to companies referred to in this report: manager or co-manager in a pending transaction; 1% or other ownership; compensation for certain services; types of client relationships; managed/co-managed public offerings in prior periods; directorships; for equity securities, market making and/or specialist role. Goldman Sachs trades or may trade as a principal in debt securities (or in related derivatives) of issuers discussed in this report.

The following are additional required disclosures: **Ownership and material conflicts of interest:** Goldman Sachs policy prohibits its analysts, professionals reporting to analysts and members of their households from owning securities of any company in the analyst's area of coverage. **Analyst compensation:** Analysts are paid in part based on the profitability of Goldman Sachs, which includes investment banking revenues. **Analyst as officer or director:** Goldman Sachs policy generally prohibits its analysts, persons reporting to analysts or members of their households from serving as an officer, director or advisor of any company in the analyst's area of coverage. **Non-U.S. Analysts:** Non-U.S. analysts may not be associated persons of Goldman Sachs & Co. LLC and therefore may not be subject to FINRA Rule 2241 or FINRA Rule 2242 restrictions on communications with subject company, public appearances and trading securities held by the analysts.

Additional disclosures required under the laws and regulations of jurisdictions other than the United States

The following disclosures are those required by the jurisdiction indicated, except to the extent already made above pursuant to United States laws and regulations. **Australia:** Goldman Sachs Australia Pty Ltd and its affiliates are not authorised deposit-taking institutions (as that term is defined in the Banking Act 1959 (Cth)) in Australia and do not provide banking services, nor carry on a banking business, in Australia. This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act, unless otherwise agreed by Goldman Sachs. In producing research reports, members of Global Investment Research of Goldman Sachs Australia may attend site visits and other meetings hosted by the companies and other entities which are the subject of its research reports. In some instances the costs of such site visits or meetings may be met in part or in whole by the issuers concerned if Goldman Sachs Australia considers it is appropriate and reasonable in the specific circumstances relating to the site visit or meeting. To the extent that the contents of this document contains any financial product advice, it is general advice only and has been prepared by Goldman Sachs without taking into account a client's objectives, financial situation or needs. A client should, before acting on any such advice, consider the appropriateness of the advice having regard to the client's own objectives, financial situation and needs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests and a copy of Goldman Sachs' Australian Sell-Side Research Independence Policy Statement are available at: https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html. **Brazil:** Disclosure information in relation to CVM Resolution n. 20 is available at https://www.gs.com/worldwide/brazil/area/gir/index.html. Where applicable, the Brazil-registered analyst primarily responsible for the content of this research report, as defined in Article 20 of CVM Resolution n. 20, is the first author named at the beginning of this report, unless indicated otherwise at the end of the text. **Canada:** This information is being provided to you for information purposes only and is not, and under no circumstances should be construed as, an advertisement, offering or solicitation by Goldman Sachs & Co. LLC for purchasers of securities in Canada to trade in any Canadian security. Goldman Sachs & Co. LLC is not registered as a dealer in any jurisdiction in Canada under applicable Canadian securities laws and generally is not permitted to trade in Canadian securities and may be prohibited from selling certain securities and products in certain jurisdictions in Canada. If you wish to trade in any Canadian securities or other products in Canada please contact Goldman Sachs Canada Inc., an affiliate of The Goldman Sachs Group Inc., or another registered Canadian dealer. **Hong Kong:** Further information on the securities of covered companies referred to in this research may be obtained on request from Goldman Sachs (Asia) L.L.C. **India:** Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (India) Securities Private Limited, Research Analyst - SEBI Registration Number INH000001493, 951-A, Rational House, Appasaheb Marathe Marg, Prabhadevi, Mumbai 400 025, India, Corporate Identity Number U74140MH2006FTC160634, Phone +91 22 6616 9000, Fax +91 22 6616 9001. Goldman Sachs may beneficially own 1% or more of the securities (as such term is defined in clause 2 (h) the Indian Securities Contracts (Regulation) Act, 1956) of the subject company or companies referred to in this research report. Investment in securities market are subject to market risks. Read all the related documents carefully before investing. Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Goldman Sachs (India) Securities Private Limited compliance officer and investor grievance contact details can be found at this link: https://publishing.gs.com/disclosures/hedge.html - /general/equity. **Japan:** See below. **Korea:** This research, and any access to it, is intended only for "professional investors" within the meaning of the Financial Services and Capital Markets Act, unless otherwise agreed by Goldman Sachs. Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (Asia) L.L.C., Seoul Branch. **New Zealand:** Goldman Sachs New Zealand Limited and its affiliates are neither "registered banks" nor "deposit takers" (as defined in the Reserve Bank of New Zealand Act 1989) in New Zealand. This research, and any access to it, is intended for "wholesale clients" (as defined in the Financial Advisers Act 2008) unless otherwise agreed by Goldman Sachs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests is available at: https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html. **Russia:** Research reports distributed in the Russian Federation are not advertising as defined in the Russian legislation, but are information and analysis not having product promotion as their main purpose and do not provide appraisal within the meaning of the Russian legislation on appraisal activity. Research reports do not constitute a personalized investment recommendation as defined in Russian laws and regulations, are not addressed to a specific client, and are prepared without analyzing the financial circumstances, investment profiles or risk profiles of clients. Goldman Sachs assumes no responsibility for any investment decisions that may be taken by a client or any other person based on this research report. **Singapore:** Goldman Sachs (Singapore) Pte. (Company Number: 198602165W), which is regulated by the Monetary Authority of Singapore, accepts legal responsibility for this research, and should be contacted with respect to any matters arising from, or in connection with, this research. **Taiwan:** This material is for reference only and must not be reprinted without permission. Investors should carefully consider their own investment risk. Investment results are the responsibility of the individual investor. **United Kingdom:** Persons who would be categorized as retail clients in the United Kingdom, as such term is defined in the rules of the Financial Conduct Authority, should read this research in conjunction with prior Goldman Sachs research on the covered companies referred to herein and should refer to the risk warnings that have been sent to them by Goldman Sachs International. A copy of these risks warnings, and a glossary of certain financial terms used in this report, are available from Goldman Sachs International on request.

European Union and United Kingdom: Disclosure information in relation to Article 6 (2) of the European Commission Delegated Regulation (EU)

(2016/958) supplementing Regulation (EU) No 596/2014 of the European Parliament and of the Council (including as that Delegated Regulation is implemented into United Kingdom domestic law and regulation following the United Kingdom's departure from the European Union and the European Economic Area) with regard to regulatory technical standards for the technical arrangements for objective presentation of investment recommendations or other information recommending or suggesting an investment strategy and for disclosure of particular interests or indications of conflicts of interest is available at https://www.gs.com/disclosures/europeanpolicy.html which states the European Policy for Managing Conflicts of Interest in Connection with Investment Research.

Japan: Goldman Sachs Japan Co., Ltd. is a Financial Instrument Dealer registered with the Kanto Financial Bureau under registration number Kinsho 69, and a member of Japan Securities Dealers Association, Financial Futures Association of Japan Type II Financial Instruments Firms Association, The Investment Trusts Association, Japan, and Japan Investment Advisers Association. Sales and purchase of equities are subject to commission pre-determined with clients plus consumption tax. See company-specific disclosures as to any applicable disclosures required by Japanese stock exchanges, the Japanese Securities Dealers Association or the Japanese Securities Finance Company.

Global product; distributing entities

Goldman Sachs Global Investment Research produces and distributes research products for clients of Goldman Sachs on a global basis. Analysts based in Goldman Sachs offices around the world produce research on industries and companies, and research on macroeconomics, currencies, commodities and portfolio strategy. This research is disseminated in Australia by Goldman Sachs Australia Pty Ltd (ABN 21 006 797 897); in Brazil by Goldman Sachs do Brasil Corretora de Títulos e Valores Mobiliários S.A.; Public Communication Channel Goldman Sachs Brazil: 0800 727 5764 and / or contatogoldmanbrasil@gs.com. Available Weekdays (except holidays), from 9am to 6pm. Canal de Comunicação com o Público Goldman Sachs Brasil: 0800 727 5764 e/ou contatogoldmanbrasil@gs.com. Horário de funcionamento: segunda-feira à sexta-feira (exceto feriados), das 9h às 18h; in Canada by Goldman Sachs & Co. LLC; in Hong Kong by Goldman Sachs (Asia) L.L.C.; in India by Goldman Sachs (India) Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Seoul Branch; in New Zealand by Goldman Sachs New Zealand Limited; in Russia by OOO Goldman Sachs; in Singapore by Goldman Sachs (Singapore) Pte. (Company Number: 198602165W); and in the United States of America by Goldman Sachs & Co. LLC. Goldman Sachs International has approved this research in connection with its distribution in the United Kingdom.

Goldman Sachs International ("GSI"), authorised by the Prudential Regulation Authority ("PRA") and regulated by the Financial Conduct Authority ("FCA") and the PRA, has approved this research in connection with its distribution in the United Kingdom.

European Economic Area: GSI, authorised by the PRA and regulated by the FCA and the PRA, disseminates research in the following jurisdictions within the European Economic Area: the Grand Duchy of Luxembourg, Italy, the Kingdom of Belgium, the Kingdom of Denmark, the Kingdom of Norway, the Republic of Finland and the Republic of Ireland; GSI - Succursale de Paris (Paris branch) which is authorised by the French Autorité de contrôle prudentiel et de resolution ("ACPR") and regulated by the Autorité de contrôle prudentiel et de resolution and the Autorité des marches financiers ("AMF") disseminates research in France; GSI - Sucursal en España (Madrid branch) authorized in Spain by the Comisión Nacional del Mercado de Valores disseminates research in the Kingdom of Spain; GSI - Sweden Bankfilial (Stockholm branch) is authorized by the SFSA as a "third country branch" in accordance with Chapter 4, Section 4 of the Swedish Securities and Market Act (Sw. lag (2007:528) om värdepappersmarknaden) disseminates research in the Kingdom of Sweden; Goldman Sachs Bank Europe SE ("GSBE") is a credit institution incorporated in Germany and, within the Single Supervisory Mechanism, subject to direct prudential supervision by the European Central Bank and in other respects supervised by German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin) and Deutsche Bundesbank and disseminates research in the Federal Republic of Germany and those jurisdictions within the European Economic Area where GSI is not authorised to disseminate research and additionally, GSBE, Copenhagen Branch filial af GSBE, Tyskland, supervised by the Danish Financial Authority disseminates research in the Kingdom of Denmark; GSBE - Sucursal en España (Madrid branch) subject (to a limited extent) to local supervision by the Bank of Spain disseminates research in the Kingdom of Spain; GSBE - Succursale Italia (Milan branch) to the relevant applicable extent, subject to local supervision by the Bank of Italy (Banca d'Italia) and the Italian Companies and Exchange Commission (Commissione Nazionale per le Società e la Borsa "Consob") disseminates research in Italy; GSBE - Succursale de Paris (Paris branch), supervised by the AMF and by the ACPR disseminates research in France; and GSBE - Sweden Bankfilial (Stockholm branch), to a limited extent, subject to local supervision by the Swedish Financial Supervisory Authority (Finansinpektionen) disseminates research in the Kingdom of Sweden.

General disclosures

This research is for our clients only. Other than disclosures relating to Goldman Sachs, this research is based on current public information that we consider reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. The information, opinions, estimates and forecasts contained herein are as of the date hereof and are subject to change without prior notification. We seek to update our research as appropriate, but various regulations may prevent us from doing so. Other than certain industry reports published on a periodic basis, the large majority of reports are published at irregular intervals as appropriate in the analyst's judgment.

Goldman Sachs conducts a global full-service, integrated investment banking, investment management, and brokerage business. We have investment banking and other business relationships with a substantial percentage of the companies covered by Global Investment Research. Goldman Sachs & Co. LLC, the United States broker dealer, is a member of SIPC (https://www.sipc.org).

Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and principal trading desks that reflect opinions that are contrary to the opinions expressed in this research. Our asset management area, principal trading desks and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

We and our affiliates, officers, directors, and employees will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this research, unless otherwise prohibited by regulation or Goldman Sachs policy.

The views attributed to third party presenters at Goldman Sachs arranged conferences, including individuals from other parts of Goldman Sachs, do not necessarily reflect those of Global Investment Research and are not an official view of Goldman Sachs.

Any third party referenced herein, including any salespeople, traders and other professionals or members of their household, may have positions in the products mentioned that are inconsistent with the views expressed by analysts named in this report.

This research is focused on investment themes across markets, industries and sectors. It does not attempt to distinguish between the prospects or performance of, or provide analysis of, individual companies within any industry or sector we describe.

Any trading recommendation in this research relating to an equity or credit security or securities within an industry or sector is reflective of the investment theme being discussed and is not a recommendation of any such security in isolation.

This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The price and value of investments referred to in this research and the income from them may fluctuate. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur.

Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

Certain transactions, including those involving futures, options, and other derivatives, give rise to substantial risk and are not suitable for all investors. Investors should review current options and futures disclosure documents which are available from Goldman Sachs sales representatives or at https://www.theocc.com/about/publications/character-risks.jsp and https://www.fiadocumentation.org/fia/regulatory—disclosures/fia—uniform—futures—and—options—on—futures—risk—disclosures—booklet—pdf—version—2018. Transaction costs may be significant in option strategies calling for multiple purchase and sales of options such as spreads. Supporting documentation will be supplied upon request.

Differing Levels of Service provided by Global Investment Research: The level and types of services provided to you by Goldman Sachs Global Investment Research may vary as compared to that provided to internal and other external clients of GS, depending on various factors including your individual preferences as to the frequency and manner of receiving communication, your risk profile and investment focus and perspective (e.g., marketwide, sector specific, long term, short term), the size and scope of your overall client relationship with GS, and legal and regulatory constraints. As an example, certain clients may request to receive notifications when research on specific securities is published, and certain clients may request that specific data underlying analysts' fundamental analysis available on our internal client websites be delivered to them electronically through data feeds or otherwise. No change to an analyst's fundamental research views (e.g., ratings, price targets, or material changes to earnings estimates for equity securities), will be communicated to any client prior to inclusion of such information in a research report broadly disseminated through electronic publication to our internal client websites or through other means, as necessary, to all clients who are entitled to receive such reports.

All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Not all research content is redistributed to our clients or available to third-party aggregators, nor is Goldman Sachs responsible for the redistribution of our research by third party aggregators. For research, models or other data related to one or more securities, markets or asset classes (including related services) that may be available to you, please contact your GS representative or go to https://research.gs.com.

Disclosure information is also available at https://www.gs.com/research/hedge.html or from Research Compliance, 200 West Street, New York, NY 10282.