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Delta-One Flows & Positioning

Strong Europe, Gold & Levered ETF inflows, Crypto outflows; Asset Managers sold and HFs bought equity futures; rotation in Bond ETFs

In this publication, we analyze flow and positioning metrics for global futures and US-listed ETFs across asset classes.

Weekly Highlights

- **Futures Flows:** Last week we saw large net buying (>1.5z) in China A50, SSE50, Canada/UK 10y, Euribor and Heating Oil futures, but large net selling (<-1.5z) in Brent and Bitcoin futures.
- **CTAs:** Based on key momentum signals, CTAs are likely short US and most of Asia ex-China equities, but likely remain long in Europe and China. CTAs have mixed exposure in rates: likely long US front-end, short in EMEA, and mixed exposures in APAC. CTAs likely remain short Oil & Ags, long Metals, and in FX are long EUR, GBP and JPY but short CAD and AUD.
- If prices are unchanged over the next week, CTA signals are expected to turn incrementally negative in US/GEM/Japan/Korea/Taiwan/S.Africa equities, UST 10y, Natgas, Nickel, Corn and USD/CNH futures, and incrementally positive in UST Ultra Bond, Australia/Korea 10y, EUR and CHF futures.
- **CFTC Positioning:** Asset managers significantly reduced US equity longs, while leveraged funds were large buyers last week. Dealers' net shorts increased, suggesting [demand for equity financing](#) remains high. Managed Money increased longs in Silver and cut longs in Corn and Gasoline w/w.
- **ETF Flows:** Last week we saw near-average inflows into Equities (\$15.6Bn, 0z), below-average inflows into Fixed Income (\$3.4Bn, -1z), strong inflows into Commodities (\$2.5Bn, 2.4z), and the 5th straight week of outflows from Currency/Multi-asset funds (-\$1Bn, -1.4z).
- Regionally, US equity funds (\$11.6Bn, -0.1z) accounted for the majority of inflows. **Europe saw continued strong inflows** (\$2Bn, 3.3z), and EAFE/World ex-US funds also recorded notable inflows. Meanwhile, Latam (-1.6z) and developed Asia (-1.4z) saw outflows last week.
- **Levered ETFs** recorded their strongest weekly inflows in 1Y, led by TQQQ and TSL. We saw a ~\$20Bn switch from IVV to VOO (Tables 22 & 23).
- In equity styles, we saw a rotation from Momentum (-1.9z) to Low Vol (3.7z) and Dividends (0.8z) last week.
- In equity sectors, Comm. Services and Industrials saw ~2z outflows last week, while Health Care and Financials recorded inflows.
- We saw a **large rotation in Bond ETFs** last week, with significant outflows from Loans (-3.5z), Gov't Bond (-2.2z, led by GOVT) and Mortgage (-1.8z) funds, and strong inflows to Money Market (3.3z) and Inflation (3z).

See page 21 for analyst certification and important disclosures.

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Global Equity Derivatives Strategy

Bram Kaplan, CFA ^{AC}

(1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC

Daniel Motoc, CFA ^{AC}

(1-212) 622-0105
daniel.motoc@jpmchase.com
J.P. Morgan Securities LLC

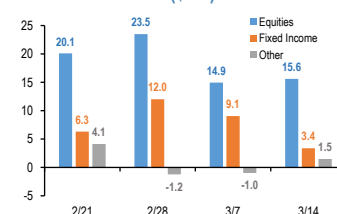
Tony SK Lee

(852) 2800-8857
tony.sk.lee@jpmorgan.com
J.P. Morgan Securities (Asia Pacific) Limited/ J.P. Morgan Broking (Hong Kong) Limited

Davide Silvestrini

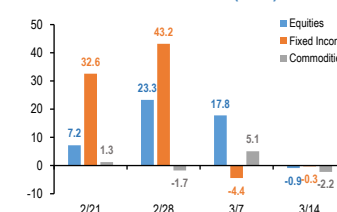
(44-20) 7134-4082
davide.silvestrini@jpmorgan.com
J.P. Morgan Securities plc

4w US ETF Flows (\$Bn)



Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

4w Global Futures Flows (\$Bn)



Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P., summed across futures listed in Tables 1-5.

- **Precious Metals saw strong inflows** (\$2.4Bn, 2.3z), while Crypto funds saw continued outflows last week (-\$1.1Bn, -1.4z).

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com
Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

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Futures Flows & Positioning

Table 1: Equity Futures Flows & Positioning

See Appendix for definitions; asterisk denotes expiry week

Americas	Ticker	Net Flow - 1y History	1w Net Flow (z)	4w Net Flow (z)	1w Return	AM + HF (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
S&P 500	ES1 Index		-4.5	0.9	-2.3%	-1.2	1.8	9.6%	-10%	Short
Nasdaq 100	NQ1 Index		-1.1	-4.9	-2.5%	1.1	0.9	5.9%	-16%	Short
Russell 2000	RTY1 Index		-1.3	-0.7	-1.5%	0.6	0.5	7.0%	13%	Short
DJIA	DM1 Index		0.2	0.2	-3.1%	-1.0	-1.1	9.8%	-30%	Short
S&P MidCap 400	FA1 Index		0.2	2.6	-2.0%	0.0	0.2	6.3%	12%	Short
MSCI EM	MES1 Index		0.3	-1.0	-0.8%	-1.2	0.6	2.6%	-7%	Long
MSCI EAFE	MFS1 Index		-1.1	-1.1	-1.2%	-1.6	2.7	-0.3%	15%	Long
VIX	UX1 Index		0.0	-1.3	-6.8%	0.3	0.8	-4.2%	17%	Long
S&P TSX 60	PT1 Index		1.3	1.1	-1.1%	-	-	16.0%	15%	Neutral
Bovespa	XB1 Index		-1.5	-1.2	3.1%	-	-	11.5%	-6%	Long
EMEA	Ticker	Net Flow - 1y History	1w Net Flow (z)	4w Net Flow (z)	1w Return	AM + HF (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
Euro Stoxx 50	VG1 Index		-0.8	-0.5	-1.2%	-	-	6.0%	-5%	Long
FTSE 100	Z 1 Index		1.1	1.7	-0.5%	-	-	-2.1%	44%	Long
DAX	GX1 Index		0.2	1.0	-0.1%	-	-	-4.4%	22%	Long
SMI	SM1 Index		0.9	1.6	-1.2%	-	-	5.4%	16%	Long
CAC 40	CF1 Index		-0.7	1.0	-1.1%	-	-	0.5%	-10%	Long
FTSE/JSE Top 40	A11 Index		-0.6	-0.5	-0.6%	-	-	-2.5%	32%	Long
BIST 30	A51 Index		0.9	2.4	2.5%	-	-	-3.3%	-16%	Long
APAC	Ticker	Net Flow - 1y History	1w Net Flow (z)	4w Net Flow (z)	1w Return	AM + HF (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
TOPIX	TP1 Index		-1.9	-1.6	0.3%	-	-	-14.8%	-29%	Short
Nikkei 225	NK1 Index		0.7	1.0	0.4%	-	-	-17.5%	-27%	Short
ASX SPI 200	XP1 Index		1.3	1.1	-2.0%	-	-	4.1%	34%	Short
KOSPI 200	KM1 Index		0.9	-1.2	0.7%	-	-	-15.0%	-16%	Neutral
Hang Seng	HI1 Index		1.4	2.5	-1.1%	-	-	2.7%	8%	Long
Hang Seng China Ent.	HC1 Index		0.4	0.7	-0.4%	-	-	2.3%	24%	Long
FTSE China A50	XU1 Index		1.6	1.6	2.8%	-	-	7.5%	-5%	Long
CSI 300	IFB1 Index		1.4	1.2	1.6%	-	-	14.9%	12%	Long
CSI 500	FFD1 Index		-1.4	-1.0	1.4%	-	-	7.2%	-5%	Long
CSI 1000	IFD1 Index		1.0	0.9	1.0%	-	-	3.9%	-24%	Long
SSE50	FFB1 Index		2.2	1.5	2.2%	-	-	21.1%	19%	Long
NIFTY 50	JGS1 Index		0.5	1.3	-0.7%	-	-	2.9%	-38%	Short
SET 50	BC1 Index		-1.1	-0.8	-2.7%	-	-	-3.9%	-4%	Short
SGX FTSE Taiwan	TWT1 Index		-1.4	0.6	-2.3%	-	-	0.1%	12%	Short
TAIEX	FT1 Index		0.2	0.7	-2.7%	-	-	8.5%	-13%	Short
MSCI Singapore	QZ1 Index		1.0	0.7	-3.4%	-	-	-3.6%	2%	Long

Source: J.P. Morgan Equity Derivatives Strategy, CFTC, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com
Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

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Table 2: Fixed Income Futures Flows & Positioning

See Appendix for definitions; asterisk denotes expiry week

Americas	Ticker	Net Flow - 1y History	1w Net Flow (z)	1w Net Flow (DV01)	4w Net Flow (z)	1w Return	AM + HF (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
2y UST	TU2 Comdty		-0.1	+\$71k/01	-0.7	0.0%	2.3	-0.4	-0.2%	-21%	Long
5y UST	FV2 Comdty		-0.3	-\$3,031k/01	-0.6	0.0%	0.5	-1.2	3.5%	11%	Long
10y UST	TY2 Comdty		-0.8	-\$4,577k/01	1.0	0.1%	1.2	-0.2	2.1%	0%	Long
UST Ultra 10y Note	UXY2 Comdty		0.5	+\$2,125k/01	0.8	0.1%	0.2	1.5	2.3%	-5%	Neutral
UST Long Bond	US2 Comdty		0.4	+\$1,229k/01	0.6	0.1%	-0.5	-0.1	0.5%	-4%	Neutral
UST Ultra Bond	WN2 Comdty		0.0	-\$271k/01	0.6	0.0%	1.2	0.7	1.1%	2%	Neutral
Canada 10y	CN2 Comdty		1.9	+\$1,171k/01	1.0	0.0%	-	-	-6.2%	-3%	Long
EMEA	Ticker	Net Flow - 1y History	1w Net Flow (z)	1w Net Flow (DV01)	4w Net Flow (z)	1w Return	AM + HF (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
Germany 2y	DU1 Comdty		-0.5	-\$415k/01	-1.2	0.1%	-	-	1.2%	-8%	Short
Germany 5y	OE1 Comdty		-0.5	-\$868k/01	-1.2	0.0%	-	-	-1.1%	1%	Short
Germany 10y	RX1 Comdty		0.4	+\$3,342k/01	-0.8	-0.3%	-	-	-0.4%	-15%	Short
Germany 30y	UB1 Comdty		0.5	+\$837k/01	-0.8	-1.8%	-	-	1.3%	7%	Short
10y Gilt	G 2 Comdty		1.6	+\$4,613k/01	-0.5	-0.7%	-	-	2.1%	4%	Short
France 10y	OAT1 Comdty		0.9	+\$1,007k/01	1.0	-0.1%	-	-	-3.2%	4%	Short
Italy 10y	IK1 Comdty		0.3	+\$663k/01	1.4	-0.3%	-	-	-0.7%	24%	Short
APAC	Ticker	Net Flow - 1y History	1w Net Flow (z)	1w Net Flow (DV01)	4w Net Flow (z)	1w Return	AM + HF (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
Japan 10y	JB1 Comdty		-0.1	+\$588k/01	1.1	-0.3%	-	-	-32.3% *	7%	Short
Australia 10y	XM1 Comdty		-0.3	+\$213k/01	0.8	0.0%	-	-	1.1% *	24%	Short
China 10y	TFT1 Comdty		-0.5	-\$274k/01	0.4	0.0%	-	-	4.9% *	5%	Neutral
Korea 10y	KAA1 Comdty		-1.2	+\$38k/01	-0.7	-0.4%	-	-	2.9%	7%	Long

Source: J.P. Morgan Equity Derivatives Strategy, CFTC, Bloomberg Finance L.P.

Table 3: Interest Rates Futures Flows & Positioning

See Appendix for definitions; asterisk denotes expiry week

Global	Ticker	Net Flow - 1y History	1w Net Flow (z)	1w Net Flow (DV01)	4w Net Flow (z)	1w Chg (bps)	AM + HF (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
3M SOFR	SFR1 Comdty		-0.6	-\$7k/01	1.0	0.25	-1.3	-1.3	3.0%	1%	Long
3M Euribor	ER1 Comdty		2.3	+\$1,035k/01	1.2	0.50	-	-	2.2%	-1%	Long
3M SONIA	SFI1 Comdty		0.0	+\$1k/01	0.6	0.00	-	-	1.7%	47%	Long

Source: J.P. Morgan Equity Derivatives Strategy, CFTC, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
 bram.kaplan@jpmorgan.com
 J.P. Morgan Securities LLC
 Daniel Motoc, CFA ^{AC} (1-212) 622-0105
 daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
 tony.sk.lee@jpmorgan.com
 Davide Silvestrini (44-20) 7134-4082
 davide.silvestrini@jpmorgan.com

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Table 4: Commodity Futures Flows & Positioning

See Appendix for definitions; asterisk denotes expiry week

Energy	Ticker	Net Flow - 1y History	1w Net Flow (z)	4w Net Flow (z)	1w Return	Producer + Managed Money (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
Brent Crude	CO1 Comdty		-1.6	-1.8	0.3%	-1.0	-	2.7%	-4%	Short
WTI	CL1 Comdty		-1.3	-0.6	0.2%	0.7	-1.3	-0.3%	0%	Short
US Natural Gas	NG1 Comdty		-0.5	0.5	-6.7%	2.2	0.5	-2.0%	6%	Long
Gasoline	XB1 Comdty		-0.6	1.5	1.9%	-0.6	-1.6	2.9%	-20%	Long
Heating Oil	HO1 Comdty		3.1	1.1	-2.2%	1.1	-1.2	-3.6%	-20%	Short
Low Sulphur Gasoil	QS1 Comdty		-0.7	0.3	-3.9%	-0.3	-	-1.1% *	-6%	Short
TTF Nat Gas	TZ1 Comdty		1.1	0.0	5.8%	-	-	2.2%	7%	Neutral
Base Metals	Ticker	Net Flow - 1y History	1w Net Flow (z)	4w Net Flow (z)	1w Return	Producer + Managed Money (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
Copper	HG1 Comdty		0.2	1.1	4.0%	0.4	-0.6	2.3%	14%	Long
Nickel	LN1 Comdty		-0.7	0.9	-0.4%	-	-	2.1%	25%	Long
Aluminum	LA1 Comdty		0.5	0.7	-0.9%	-	-	2.8%	28%	Long
Precious Metals	Ticker	Net Flow - 1y History	1w Net Flow (z)	4w Net Flow (z)	1w Return	Producer + Managed Money (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
Gold	GC1 Comdty		-1.3	-1.1	3.0%	-0.3	-0.6	6.6%	23%	Long
Silver	SI1 Comdty		-1.3	-0.9	5.0%	2.5	1.2	10.2%	47%	Long
Agriculture	Ticker	Net Flow - 1y History	1w Net Flow (z)	4w Net Flow (z)	1w Return	Producer + Managed Money (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
Soybean	S 1 Comdty		0.8	1.4	-1.1%	-0.4	1.3	1.2% *	32%	Short
Corn	C 1 Comdty		0.5	1.0	-2.1%	-1.6	1.0	0.4% *	42%	Neutral
Wheat	W 1 Comdty		-1.2	-1.3	2.2%	0.5	-1.5	2.1% *	-9%	Short

Source: J.P. Morgan Equity Derivatives Strategy, CFTC, Bloomberg Finance L.P.

Table 5: FX/Crypto Futures Flows & Positioning

See Appendix for definitions; asterisk denotes expiry week

FX/Crypto	Ticker	Net Flow - 1y History	1w Net Flow (z)	4w Net Flow (z)	1w Return	AM + HF (z)	Non Commercial (z)	OI Change (w/w)	OI Correlation w/Spot	CTA Signal
EUR/USD	EC1 Currency		-1.4	0.2	0.4%	0.2	0.2	13.1%	-7%	Long
GBP/USD	BP1 Currency		0.0	-0.8	0.5%	0.0	-1.3	9.0%	12%	Long
JPY/USD	JY1 Currency		0.5	-0.6	-0.9%	1.9	1.9	13.5%	0%	Long
CAD/USD	CD1 Currency		-0.2	-0.7	0.6%	-0.6	-0.4	5.2%	12%	Short
AUD/USD	AD1 Currency		-0.2	-0.1	0.9%	0.0	-0.3	27.1%	13%	Short
USD/CNH	XUC1 Currency		-0.9	-0.1	-0.3%	-	-	2.3%	19%	Neutral
CHF/USD	SF1 Currency		0.8	0.0	-0.5%	-1.3	-0.3	35.3%	3%	Neutral
USD/BRL	UC1 Currency		0.5	-0.2	-2.2%	-	-	11.3%	1%	Neutral
Bitcoin	BTC1 Currency		-2.0	0.0	7.4%	-1.0	2.2	3.4%	16%	Neutral
Ether	DCR1 Currency		-1.2	-1.1	3.8%	-1.4	1.0	1.9%	30%	Short

Source: J.P. Morgan Equity Derivatives Strategy, CFTC, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com
Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

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CTA Signals

Table 6: Equity CTA Signals

Americas	Ticker	Current	Prior Week CTA Signal	Current CTA Levels								CTA Signal	CTA Levels in 1w								CTA Signal	1w Chg
				1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA			1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA			
S&P 500	ESI Index	5,640	Short	6,100	6,066	5,623	5,141	5,968	5,967	5,771		Short	6,149	5,915	5,731	5,294	5,935	5,956	5,780		Short	↓
				-7.5%	-7.0%	0.3%	9.7%	-5.5%	-5.5%	-2.3%			-8.3%	-4.6%	-1.6%	6.5%	-5.0%	-5.3%	-2.4%			
Nasdaq 100	NQ1 Index	19,712	Short	21,902	21,852	19,470	17,986	21,236	21,150	20,390		Short	22,208	21,271	19,913	18,539	21,064	21,114	20,416		Short	↓
				-10.0%	-9.8%	1.2%	9.6%	-7.2%	-6.8%	-3.3%			-11.2%	-7.3%	-1.0%	6.3%	-6.4%	-6.6%	-3.4%			
Russell 2000	RTY1 Index	2,044	Short	2,278	2,359	2,170	2,041	2,225	2,277	2,214		Short	2,285	2,225	2,248	2,105	2,202	2,268	2,214		Short	↓
				-10.3%	-13.4%	-5.8%	0.1%	-8.1%	-10.2%	-7.7%			-10.5%	-8.1%	-9.1%	-2.9%	-7.2%	-9.9%	-7.7%			
DJIA	DM1 Index	41,510	Neutral	44,660	43,870	41,411	38,890	43,621	43,607	42,143		Short	44,541	42,625	42,168	40,005	43,485	43,543	42,215		Short	↓
				-7.1%	-5.4%	0.2%	6.7%	-4.8%	-4.8%	-1.5%			-6.8%	-2.6%	-1.6%	3.8%	-4.5%	-4.7%	-1.7%			
S&P MidCap 400	FA1 Index	2,928	Short	3,198	3,285	3,027	2,934	3,151	3,196	3,113		Short	3,212	3,120	3,131	3,027	3,128	3,185	3,112		Short	-
				-8.4%	-10.9%	-3.3%	-0.2%	-7.1%	-8.4%	-5.9%			-8.8%	-6.1%	-6.5%	-3.2%	-6.4%	-8.1%	-5.9%			
MSCI EM	MES1 Index	1,129	Neutral	1,116	1,105	1,085	1,041	1,101	1,103	1,105		Long	1,140	1,081	1,114	1,049	1,107	1,102	1,107		Long	↓
				1.2%	2.2%	4.1%	8.5%	2.6%	2.4%	2.2%			-0.9%	4.5%	1.3%	7.7%	2.0%	2.5%	2.1%			
MSCI EAFE	MFS1 Index	2,487	Long	2,421	2,323	2,416	2,334	2,390	2,354	2,372		Long	2,449	2,252	2,444	2,357	2,411	2,359	2,375		Long	-
				2.7%	7.1%	3.0%	6.6%	4.1%	5.7%	4.9%			1.6%	10.4%	1.7%	5.5%	3.2%	5.4%	4.7%			
VIX	UX1 Index	21.52	Long	16.57	14.54	16.91	14.25	18.23	17.41	17.10		Long	16.21	19.00	17.99	14.37	18.65	17.54	17.28		Long	-
				29.9%	48.0%	27.2%	51.1%	18.1%	23.6%	25.9%			32.8%	13.3%	19.6%	49.8%	15.4%	22.7%	24.5%			
S&P TSX 60	PT1 Index	1,476	Neutral	1,543	1,517	1,418	1,323	1,512	1,506	1,440		Neutral	1,539	1,478	1,436	1,334	1,509	1,506	1,444		Neutral	-
				-4.4%	-2.7%	4.1%	11.6%	-2.4%	-2.0%	2.5%			-4.1%	-0.2%	2.8%	10.6%	-2.2%	-2.0%	2.2%			
Bovespa	XB1 Index	130,328	Short	126,130	124,854	135,857	128,654	125,136	126,730	128,317		Long	129,911	123,027	132,385	128,981	126,068	126,629	128,504		Long	-
				3.3%	4.4%	-4.1%	1.3%	4.1%	2.8%	1.6%			0.3%	5.9%	-1.6%	1.0%	3.4%	2.9%	1.4%			
EMEA				Prior Week CTA Signal								CTA Signal	CTA Levels in 1w								CTA Signal	1w Chg
				1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA			1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA			
Euro Stoxx 50	VG1 Index	5,398	Long	5,442	4,964	4,828	5,005	5,309	5,094	5,003		Long	5,497	4,858	4,918	4,988	5,347	5,116	5,012		Long	-
				-0.8%	8.7%	11.8%	7.9%	1.7%	6.0%	7.9%			-1.8%	11.1%	9.8%	8.2%	0.9%	5.5%	7.7%			
FTSE 100	Z 1 Index	8,640	Long	8,757	8,293	8,269	7,749	8,576	8,396	8,330		Long	8,686	8,081	8,302	7,884	8,614	8,414	8,340		Long	-
				-1.3%	4.2%	4.5%	11.5%	0.7%	2.9%	3.7%			-0.5%	6.9%	4.1%	9.6%	0.3%	2.7%	3.6%			
DAX	GX1 Index	22,948	Long	22,348	20,393	18,620	17,981	21,894	20,795	19,712		Long	22,604	19,899	18,954	18,413	22,147	20,965	19,820		Long	-
				2.7%	12.5%	23.2%	27.6%	4.8%	10.4%	16.4%			1.5%	15.3%	2.1%	24.6%	3.6%	9.5%	15.8%			
SMI	SM1 Index	12,929	Long	12,750	11,698	12,007	11,725	12,516	12,156	12,143		Long	12,795	11,382	12,025	11,563	12,630	12,191	12,165		Long	-
				1.4%	10.5%	7.7%	10.3%	3.3%	6.4%	6.5%			1.0%	13.6%	7.5%	11.8%	2.4%	6.1%	6.3%			
CAC 40	CF1 Index	8,032	Long	8,085	7,401	7,455	8,171	7,924	7,636	7,597		Long	8,149	7,267	7,554	8,190	7,980	7,661	7,599		Long	-
				-0.7%	8.5%	7.7%	-1.7%	1.4%	5.2%	5.7%			-1.4%	10.5%	6.3%	-1.9%	0.6%	4.8%	5.7%			
FTSE/JSE Top 40	A11 Index	80,743	Long	80,503	78,510	74,261	67,187	78,820	78,222	76,665		Long	81,568	76,683	76,735	66,443	79,292	78,323	76,907		Long	↓
				0.3%	2.8%	8.7%	20.2%	2.4%	3.2%	5.3%			-1.0%	5.3%	5.2%	21.5%	1.8%	3.1%	5.0%			
BIST 30	A51 Index	12,487	Long	11,146	11,186	11,000	9,857	11,424	11,096	11,227		Long	11,050	10,682	11,392	10,059	11,517	11,225	11,245		Long	-
				12.0%	11.6%	13.5%	26.7%	9.3%	12.5%	11.2%			13.0%	16.9%	9.6%	24.1%	8.4%	11.2%	11.0%			
APAC				Prior Week CTA Signal								CTA Signal	CTA Levels in 1w								CTA Signal	1w Chg
				1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA			1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA			
TOPIX	TP1 Index	2,692	Short	2,746	2,753	2,560	2,635	2,737	2,722	2,716		Short	2,760	2,720	2,607	2,763	2,728	2,722	2,714		Short	↓
				-2.0%	-2.2%	5.2%	2.2%	-1.6%	-1.1%	-0.9%			-2.5%	-1.0%	3.2%	-2.6%	-1.3%	-1.1%	-0.8%			
Nikkei 225	NK1 Index	36,860	Short	39,067	39,587	36,483	38,443	38,700	38,796	38,594		Short	39,057	38,993	37,317	40,297	38,407	38,692	38,545		Short	↓
				-5.6%	-6.9%	1.0%	-4.1%	-4.8%	-5.0%	-4.5%			-5.6%	-5.5%	-1.2%	-8.5%	-4.0%	-4.7%	-4.4%			
ASX SPI 200	XP1 Index	7,782	Short	8,470	8,303	8,095	7,710	8,273	8,288	8,131		Short	8,372	8,138	8,224	7,764	8,222	8,265	8,130		Short	-
				-8.1%	-6.3%	-3.9%	0.9%	-5.9%	-6.1%	-4.3%			-7.0%	-4.4%	-5.4%	0.2%	-5.4%	-5.8%	-4.3%			
KOSPI 200	KM1 Index	340.2	Neutral	337.1	329.3	345.0	363.7	335.6	334.4	351.1		Neutral	350.3	320.8	346.6	371.3	337.6	334.1	350.3		Neutral	↓
				0.9%	3.3%	-1.4%	-6.5%	1.4%	1.7%	-3.1%			-2.9%	6.1%	-1.9%	-8.4%	0.8%	1.8%	-2.9%			
Hang Seng	HI1 Index	24,069	Long	21,688	20,104	17,359	16,939	21,528	20,765	19,565		Long	22,842	19,788	18,203	16,651	21,996	20,941	19,714		Long	-
				11.0%	19.7%	38.7%	42.1%	11.8%	15.9%	23.0%			5.4%	21.6%	32.2%	44.5%	9.4%	14.9%	22.1%			
Hang Seng China Ent.	HCI Index	8,921	Long	7,981	7,242	6,062	5,893	7,889	7,545	7,029		Long	8,424	7,174	6,366	5,825	8,079	7,623	7,091		Long	-
				11.8%	23.2%	47.2%	51.4%	13.1%	18.2%	26.9%			5.9%	24.4%	40.1%	53.2%	10.4%	17.0%	25.8%			
FTSE China A50	XU1 Index	13,739	Long	13,114	13,426	11,166	12,129	13,102	13,270	12,756		Long	13,333	13,372	11,270	12,189	13,184	13,286	12,793		Long	-
				4.8%	2.3%	23.0%	13.3%	4.9%	3.5%	7.7%			3.0%	2.7%	21.9%	12.7%	4.2%	3.4%	7.4%			
CSI 300	IFB1 Index	4,005	Long	3,901	3,963	3,168	3,565	3,878	3,919	3,691		Long	3,927	3,940	3,197	3,574	3,884	3,923	3,700		Long	-
				2.7%	1.1%	26.4%	12.3%	3.3%	2.2%	8.5%			2.0%	1.7%	25.3%	12.1%	3.1%	2.1%	8.3%			
CSI 500	FFD1 Index	6,088	Long	5,889	6,005	4,471	5,408	5,768	5,833	5,379		Long	5,911	5,883	4,493	5,446	5,799	5,855	5,396		Long	-
				3.4%	1.4%	36.2%	12.6%	5.5%	4.4%	13.2%			3.0%	3.5%	35.5%	11.8%	5.0%	4.0%	12.8%			
CSI 1000	IFD1 Index	6,553	Long	6,217	6,368	4,441	5,500	6,084	6,113	5,502		Long	6,245	6,186	4,457	5,617	6,136	6,152	5,530		Long	-
				5.4%	2.9%	47.5%	19.1%	7.7%	7.2%	19.1%			4.9%	5.9%	47.0%	16.7%	6.8%	6.5%	18.5%			
SSE50	FFB1 Index	2,740	Long	2,632	2,661	2,210	2,425	2,630	2,652	2,526		Long	2,655	2,663	2,231	2,423	2,635	2,655	2,532		Long	-
				4.1%	3.0%	24.0%	13.0%	4.2%	3.3%	8.5%			3.2%	2.9%	22.8%	13.1%	4.0%	3.2%	8.2%			
NIFTY 50	JGS1 Index	22,555	Short	23,151	24,675	25,439	22,152	23,046	23,593	24,131		Short	22,940	23,843	25,797	22,070	22,950	23,506	24,118		Short	-
				-2.6%	-8.6%	-11.3%	1.8%	-2.1%	-4.4%	-6.5%			-1.7%	-5.4%	-12.6%	2.2%	-1.7%	-4.0%	-6.5%			

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com

Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

Global Markets Strategy

17 March 2025

J.P.Morgan

Table 7: Fixed Income CTA Signals

See Appendix for definitions.

				Current CTA Levels								CTA Levels in 1w								
				1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signal	1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signal	
Americas	Ticker	Current	Prior Week CTA Signal																	
2y UST	TU2 Comdty	103.4	Long	102.9	102.8	104.4	102.1	103.1	103.0	103.2	Long	103.1	102.7	104.4	102.3	103.1	103.0	103.2	Long	-
				0.5%	0.6%	-0.9%	1.3%	0.3%	0.4%	0.2%		0.4%	0.7%	-0.9%	1.1%	0.3%	0.4%	0.2%		
5y UST	FV2 Comdty	107.7	Long	106.5	106.7	110.6	106.5	106.8	106.9	107.7	Long	106.8	106.1	110.3	107.0	106.9	106.9	107.8	Long	-
				1.1%	1.0%	-2.6%	1.1%	0.9%	0.7%	0.0%		0.8%	1.5%	-2.3%	0.6%	0.7%	0.7%	-0.1%		
10y UST	TY2 Comdty	110.6	Neutral	109.2	109.6	115.3	110.0	109.3	109.8	111.2	Long	109.6	108.5	115.1	111.0	109.6	109.7	111.2	Neutral	↓
				1.3%	1.0%	-4.1%	0.6%	1.2%	0.8%	-0.5%		1.0%	2.0%	-3.9%	-0.3%	1.0%	0.8%	-0.5%		
UST Ultra 10y Note	UXY2 Comdty	113.6	Neutral	111.9	112.6	119.8	113.6	111.9	112.7	114.5	Neutral	112.4	111.5	119.1	114.6	112.2	112.6	114.6	Neutral	-
				1.5%	0.8%	-5.2%	0.0%	1.5%	0.8%	-0.8%		1.1%	1.8%	-4.7%	-0.9%	1.2%	0.8%	-0.9%		
UST Long Bond	US2 Comdty	116.8	Neutral	115.2	115.9	126.7	118.5	114.8	116.0	118.9	Neutral	115.6	113.7	125.1	119.6	115.2	115.9	118.9	Neutral	-
				1.4%	0.7%	-7.9%	-1.5%	1.7%	0.7%	-1.8%		1.0%	2.7%	-6.7%	-2.4%	1.4%	0.8%	-1.8%		
UST Ultra Bond	WN2 Comdty	122.1	Neutral	120.4	122.3	136.9	126.5	119.9	121.9	126.1	Neutral	120.8	119.4	135.0	128.6	120.4	121.7	126.0	Neutral	↑
				1.5%	-0.2%	-10.8%	-3.5%	1.9%	0.2%	-3.1%		1.1%	2.3%	-9.5%	-5.1%	1.5%	0.3%	-3.1%		
Canada 10y	CN2 Comdty	123.7	Long	123.3	122.9	125.6	119.4	122.8	122.6	122.6	Long	122.8	121.3	125.6	121.0	123.0	122.6	122.8	Long	-
				0.3%	0.7%	-1.5%	3.6%	0.8%	0.9%	0.9%		0.7%	2.0%	-1.6%	2.2%	0.6%	0.8%	0.7%		
EMEA	Ticker	Current	Prior Week CTA Signal																	
Germany 2y	DU2 Comdty	106.7	Short	106.9	107.3	107.3	105.9	106.8	107.0	106.8	Short	106.9	107.2	107.5	106.1	106.8	107.0	106.8	Short	-
				-0.2%	-0.5%	-0.5%	0.8%	-0.1%	-0.3%	-0.1%		-0.2%	-0.5%	-0.7%	0.6%	-0.1%	-0.2%	-0.1%		
Germany 5y	OE2 Comdty	115.8	Short	118.5	119.4	119.0	116.9	117.9	118.2	118.3	Short	118.3	119.0	119.2	117.4	117.7	118.1	118.3	Short	-
				-2.2%	-3.0%	-2.7%	-0.9%	-1.7%	-2.0%	-2.1%		-2.1%	-2.6%	-2.8%	-1.4%	-1.5%	-1.9%	-2.1%		
Germany 10y	RX2 Comdty	127.0	Short	131.8	133.8	136.3	132.6	130.6	132.4	132.9	Short	131.3	132.8	136.2	133.6	130.3	132.0	132.8	Short	-
				-3.6%	-5.1%	-6.8%	-4.2%	-2.8%	-4.1%	-4.4%		-3.2%	-4.4%	-6.7%	-4.9%	-2.5%	-3.8%	-4.4%		
Germany 30y	UB2 Comdty	115.9	Short	129.1	135.5	137.6	133.4	126.4	130.5	132.2	Short	127.7	133.0	135.5	135.6	125.2	129.7	131.8	Short	-
				-10.2%	-14.5%	-15.8%	-13.1%	-8.3%	-11.2%	-12.3%		-9.2%	-12.9%	-14.4%	-14.5%	-7.4%	-10.6%	-12.1%		
10y Gilt	G 2 Comdty	91.9	Short	93.2	93.3	100.8	98.5	92.1	93.2	95.7	Short	92.4	92.2	99.0	99.5	92.3	93.0	95.6	Short	-
				-1.4%	-1.5%	-8.8%	-6.7%	-0.3%	-1.3%	-4.0%		-0.5%	-0.3%	-7.2%	-7.7%	-0.4%	-1.1%	-3.8%		
France 10y	OAT2 Comdty	120.6	Short	125.4	126.5	127.0	127.1	123.8	124.5	125.0	Short	124.8	125.1	126.2	127.6	123.5	124.3	124.9	Short	-
				-3.9%	-4.7%	-5.1%	-5.2%	-2.6%	-3.2%	-3.6%		-3.4%	-3.7%	-4.5%	-5.5%	-2.4%	-3.0%	-3.5%		
Italy 10y	IK2 Comdty	115.6	Short	119.8	121.0	120.3	118.2	118.7	119.5	119.1	Short	119.3	119.9	120.4	118.7	118.4	119.3	119.0	Short	-
				-3.5%	-4.5%	-3.9%	-2.2%	-2.6%	-3.3%	-2.9%		-3.1%	-3.5%	-4.0%	-2.6%	-2.3%	-3.1%	-2.9%		
APAC	Ticker	Current	Prior Week CTA Signal																	
Japan 10y	JB1 Comdty	138.1	Short	139.6	142.3	144.8	145.4	140.2	141.7	142.8	Short	139.1	142.2	144.9	145.5	139.8	141.4	142.7	Short	-
				-1.0%	-2.9%	-4.6%	-5.0%	-1.4%	-2.5%	-3.3%		-0.7%	-2.9%	-4.6%	-5.1%	-1.2%	-2.3%	-3.2%		
Australia 10y	XM1 Comdty	95.6	Short	95.5	95.7	96.2	95.9	95.5	95.5	95.7	Short	95.5	95.5	96.1	96.0	95.5	95.5	95.7	Neutral	↑
				0.0%	-0.1%	-0.6%	-0.3%	0.0%	0.0%	-0.2%		0.1%	0.0%	-0.5%	-0.4%	0.0%	0.0%	-0.2%		
China 10y	TFT1 Comdty	107.8	Neutral	108.9	108.6	106.7	103.9	108.7	107.9	106.7	Neutral	108.1	108.7	106.8	103.8	108.6	108.0	106.8	Neutral	-
				-1.1%	-0.7%	1.0%	3.7%	-0.9%	-0.1%	1.0%		-0.2%	-0.8%	0.0%	3.8%	-0.8%	-0.2%	0.9%		
Korea 10y	KAA1 Comdty	118.5	Long	118.2	118.8	117.4	112.7	118.2	117.9	116.7	Long	118.3	117.2	117.1	113.6	118.3	118.0	116.9	Long	↑
				0.3%	-0.2%	0.9%	5.1%	0.3%	0.5%	1.5%		0.2%	1.1%	1.2%	4.3%	0.1%	0.5%	1.4%		

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Table 8: Interest Rates CTA Signals

See Appendix for definitions.

				Current CTA Levels								CTA Levels in 1w									
Global	Ticker	Current	Prior Week CTA Signal	1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signal	1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signal	1w Chg	
3M SOFR	SFR1 Comdty	95.6	Long	95.6	95.4	94.8	94.6	95.6	95.5	95.1	Long	95.6	95.7	95.3	94.7	95.6	95.5	95.2	Long	-	
				0.0%	0.3%	0.8%	1.0%	0.0%	0.2%	0.5%		0.0%	0.0%	0.4%	1.0%	0.0%	0.1%	0.5%			
	Mar 25 expiry	SFR2 Comdty	95.7	Long	95.7	95.7	95.4	94.7	95.7	95.7	95.4	Long	95.7	95.8	96.1	94.9	95.7	95.7	95.4	Neutral	↓
				0.0%	0.0%	0.3%	1.1%	0.0%	0.0%	0.3%		0.0%	-0.1%	-0.4%	0.8%	0.0%	0.0%	0.3%			
	Jun 25 expiry	SFR3 Comdty	95.9	Long	95.8	95.8	96.2	94.8	95.9	95.9	95.8	Long	95.9	95.9	96.6	95.2	95.9	95.9	95.8	Long	-
				0.1%	0.1%	-0.3%	1.1%	0.0%	0.1%	0.2%		0.1%	0.0%	-0.7%	0.8%	0.0%	0.1%	0.2%			
	Sep 25 expiry	SFR4 Comdty	96.1	Long	95.9	95.9	96.7	95.1	96.0	96.0	96.0	Long	96.0	95.9	97.0	95.5	96.0	96.0	96.0	Long	-
				0.2%	0.2%	-0.6%	1.1%	0.1%	0.1%	0.1%		0.2%	0.2%	-0.8%	0.7%	0.1%	0.1%	0.1%			
	Dec 25 expiry	SFR5 Comdty	96.3	Long	96.0	96.0	97.0	95.4	96.1	96.1	96.2	Long	96.1	96.0	97.1	95.8	96.1	96.1	96.2	Long	-
				0.3%	0.3%	-0.7%	0.9%	0.2%	0.2%	0.1%		0.2%	0.3%	-0.8%	0.6%	0.2%	0.2%	0.1%			
Mar 26 expiry	SFR6 Comdty	96.4	Long	96.0	96.1	97.1	95.7	96.1	96.2	96.3	Long	96.1	96.0	97.1	96.0	96.2	96.2	96.3	Long	-	
				0.3%	0.3%	-0.8%	0.7%	0.2%	0.2%	0.1%		0.3%	0.4%	-0.8%	0.4%	0.2%	0.2%	0.0%			
	Jun 26 expiry	SFR7 Comdty	96.4	Long	96.1	96.1	97.1	95.9	96.2	96.2	96.4	Long	96.1	96.0	97.1	96.1	96.2	96.2	96.4	Long	-
				0.4%	0.3%	-0.8%	0.6%	0.3%	0.2%	0.0%		0.3%	0.4%	-0.7%	0.3%	0.2%	0.2%	0.0%			
	Sep 26 expiry	SFR8 Comdty	96.4	Long	96.1	96.1	97.1	96.0	96.1	96.2	96.4	Long	96.2	96.0	97.1	96.3	96.2	96.2	96.4	Long	-
				0.4%	0.3%	-0.7%	0.4%	0.3%	0.2%	0.0%		0.3%	0.5%	-0.7%	0.2%	0.2%	0.2%	0.0%			
	Dec 26 expiry	SFR9 Comdty	96.4	Long	96.1	96.1	97.1	96.1	96.1	96.2	96.4	Long	96.2	96.0	97.1	96.3	96.2	96.2	96.4	Long	-
				0.4%	0.3%	-0.7%	0.3%	0.3%	0.2%	0.0%		0.3%	0.5%	-0.7%	0.1%	0.2%	0.2%	0.0%			
	Mar 27 expiry	SFR10 Comdty	96.4	Long	96.0	96.1	97.1	96.2	96.1	96.2	96.4	Long	96.1	96.0	97.0	96.4	96.2	96.2	96.4	Long	-
				0.4%	0.3%	-0.8%	0.2%	0.3%	0.2%	0.0%		0.3%	0.4%	-0.6%	0.0%	0.2%	0.2%	0.0%			
Jun 27 expiry	SFR11 Comdty	96.4	Long	96.0	96.1	97.1	96.2	96.1	96.2	96.4	Long	96.1	96.0	97.0	96.4	96.1	96.2	96.4	Neutral	↓	
				0.3%	0.3%	-0.8%	0.1%	0.3%	0.2%	0.0%		0.3%	0.4%	-0.6%	0.0%	0.2%	0.2%	-0.1%			
	Sep 27 expiry	SFR12 Comdty	96.3	Neutral	96.0	96.1	97.1	96.3	96.1	96.2	96.4	Long	96.1	96.0	96.9	96.4	96.1	96.2	96.4	Neutral	-
				0.3%	0.2%	-0.8%	0.1%	0.3%	0.2%	-0.1%		0.2%	0.4%	-0.6%	-0.0%	0.2%	0.2%	-0.1%			
	Dec 27 expiry	SFR13 Comdty	96.3	Neutral	96.0	96.1	97.0	96.3	96.1	96.2	96.4	Neutral	96.1	95.9	96.9	96.6	96.1	96.1	96.4	Neutral	-
				0.3%	0.2%	-0.8%	0.0%	0.3%	0.2%	-0.1%		0.2%	0.2%	-0.6%	-0.1%	0.2%	0.2%	-0.1%			
	Mar 28 expiry	SFR14 Comdty	96.3	Neutral	96.0	96.1	97.0	96.3	96.0	96.1	96.4	Neutral	96.1	95.9	96.9	96.4	96.1	96.1	96.4	Neutral	-
				0.3%	0.1%	-0.8%	0.0%	0.2%	0.1%	-0.1%		0.2%	0.3%	-0.6%	-0.1%	0.2%	0.1%	-0.1%			
	Jun 28 expiry	SFR15 Comdty	96.2	Neutral	96.0	96.1	97.0	96.3	96.0	96.1	96.4	Neutral	96.2	96.0	95.9	96.4	96.1	96.1	96.4	Neutral	-
				0.3%	0.1%	-0.8%	0.0%	0.2%	0.1%	-0.1%		0.2%	0.3%	-0.6%	-0.1%	0.2%	0.1%	-0.1%			
Sep 28 expiry	SFR16 Comdty	96.2	Neutral	96.0	96.1	97.0	96.3	96.0	96.1	96.4	Neutral	96.2	96.0	95.9	96.8	96.3	96.0	96.1	96.4	Neutral	-
			0.3%	0.1%	-0.8%	-0.1%	0.2%	0.1%	-0.2%		0.2%	0.3%	-0.6%	-0.1%	0.2%	0.1%	-0.2%				
3M Euribor	ER1 Comdty	97.5	Long	97.6	97.5	96.8	96.1	97.6	97.4	97.1	Long	97.6	97.7	97.1	96.3	97.6	97.5	97.1	Long	-	
				0.0%	0.0%	0.7%	1.5%	0.0%	0.1%	0.5%		0.0%	-0.2%	0.5%	1.2%	0.0%	0.1%	0.5%			
3M SONIA	SFI1 Comdty	95.4	Long	95.4	95.2	95.0	94.8	95.4	95.3	95.1	Long	95.4	95.3	95.1	94.8	95.4	95.3	95.1	Long	-	
				0.0%	0.2%	0.4%	0.6%	0.0%	0.1%	0.3%		0.0%	0.0%	0.2%	0.6%	0.0%	0.1%	0.3%			

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com

Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

Global Markets Strategy
Delta-One Flows & Positioning
17 March 2025

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Table 9: Commodity CTA Signals

See Appendix for definitions.

Energy	Ticker	Current	Prior Week CTA Signal	Current CTA Levels								CTA Levels in 1w								1w Chg
				1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signals	1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signals	
Brent Crude	CO1 Comdty	70.6	Short	75.3	73.2	74.1	86.7	75.4	74.4	76.8	Short	74.1	73.5	73.4	86.4	75.2	74.3	76.7	Short	-
				-6.2%	-3.5%	-4.7%	-18.6%	-6.5%	-5.1%	-8.1%		-4.7%	-3.9%	-3.9%	-18.3%	-6.2%	-5.0%	-8.0%		
WTI	CL1 Comdty	67.2	Short	71.1	70.2	71.4	82.6	72.0	70.8	73.2	Short	70.0	69.9	69.6	81.6	71.8	70.7	73.2	Short	-
				-5.5%	-4.3%	-5.8%	-18.7%	-6.7%	-5.1%	-8.3%		-4.0%	-3.9%	-3.5%	-17.7%	-6.4%	-5.0%	-8.2%		
US Natural Gas	NG1 Comdty	4.10	Long	3.82	3.42	2.32	1.72	3.84	3.46	2.93	Long	4.13	3.87	2.59	1.64	3.88	3.49	2.95	Long	↓
				7.5%	19.9%	77.0%	139.3%	6.8%	18.8%	40.0%		-0.7%	6.1%	58.4%	150.9%	5.7%	17.6%	39.2%		
Gasoline	XB1 Comdty	214.9	Neutral	208.9	193.7	202.4	275.1	207.7	203.1	215.4	Long	200.2	195.5	199.7	271.1	207.5	203.0	215.1	Long	-
				2.9%	11.0%	6.2%	-21.9%	3.4%	5.8%	-0.2%		7.3%	9.9%	7.6%	-20.7%	3.6%	5.8%	-0.1%		
Heating Oil	HO1 Comdty	216.7	Short	245.5	224.0	215.2	274.8	240.5	231.5	232.6	Short	241.9	221.6	215.9	263.3	240.1	231.4	232.5	Short	-
				-11.7%	-3.3%	0.7%	-21.2%	-9.9%	-6.4%	-6.9%		-10.5%	-2.2%	0.4%	-17.7%	-9.8%	-6.4%	-6.8%		
Low Sulphur Gasoil	QS1 Comdty	645	Short	715	681	659	845	707	691	704	Short	708	673	667	820	706	691	704	Short	-
				-9.8%	-5.3%	-2.1%	-23.7%	-8.7%	-6.7%	-8.4%		-8.9%	-4.1%	-3.2%	-21.4%	-8.6%	-6.7%	-8.4%		
TTF Nat Gas	TZ11 Comdty	42.29	Neutral	49.35	42.05	34.63	28.48	47.75	46.27	41.22	Neutral	46.21	45.73	36.87	27.77	47.54	46.22	41.23	Neutral	↓
				-14.3%	0.6%	22.1%	48.5%	-11.4%	-8.6%	2.6%		-8.5%	-7.5%	14.7%	52.3%	-11.0%	-8.5%	2.6%		
Base Metals	Ticker	Current	Prior Week CTA Signal	Current CTA Levels								CTA Levels in 1w								1w Chg
				1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signals	1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signals	
Copper	HG1 Comdty	487.0	Long	464.0	407.1	424.6	407.1	447.4	433.1	433.0	Long	451.9	405.7	448.0	400.1	447.1	432.6	432.5	Long	-
				4.9%	19.6%	14.7%	19.6%	8.8%	12.4%	12.5%		7.8%	20.0%	8.7%	21.7%	8.9%	12.6%	12.6%		
Nickel	LN1 Comdty	16,253	Long	15,248	15,211	16,089	17,422	15,553	15,589	16,132	Long	15,278	15,302	16,567	16,567	15,584	15,593	16,120	Long	↓
				6.6%	6.9%	1.0%	-6.7%	4.5%	4.3%	0.8%		6.4%	6.2%	-1.9%	-1.9%	4.3%	4.2%	0.8%		
Aluminum	LA1 Comdty	2,701	Long	2,675	2,500	2,540	2,236	2,639	2,607	2,526	Long	2,669	2,552	2,564	2,276	2,644	2,608	2,526	Long	-
				1.0%	8.0%	6.3%	20.8%	2.3%	3.6%	6.9%		1.2%	5.9%	5.3%	18.7%	2.3%	3.6%	6.9%		
Precious Metals	Ticker	Current	Prior Week CTA Signal	Current CTA Levels								CTA Levels in 1w								1w Chg
				1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signals	1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signals	
Gold	GC1 Comdty	3,001	Long	2,900	2,624	2,578	2,162	2,834	2,751	2,610	Long	2,930	2,626	2,661	2,181	2,833	2,750	2,612	Long	-
				3.5%	14.4%	16.4%	38.8%	5.9%	9.1%	15.0%		2.4%	14.3%	12.8%	37.6%	5.9%	9.1%	14.9%		
Silver	SI1 Comdty	34.19	Long	33.03	30.03	30.68	25.00	32.01	31.72	30.80	Long	32.48	30.00	31.94	24.66	31.95	31.65	30.77	Long	-
				3.5%	13.9%	11.4%	36.8%	6.8%	7.8%	11.0%		5.3%	14.0%	7.0%	38.6%	7.0%	8.0%	11.1%		
Agriculture	Ticker	Current	Prior Week CTA Signal	Current CTA Levels								CTA Levels in 1w								1w Chg
				1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signals	1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signals	
Soybean	S 1 Comdty	999	Short	1,037	964	1,011	1,194	1,027	1,008	1,037	Short	1,033	980	1,046	1,200	1,028	1,008	1,036	Short	-
				-3.6%	3.7%	-1.2%	-16.3%	-2.7%	-0.8%	-3.6%		-3.3%	2.0%	-4.4%	-16.7%	-2.8%	-0.9%	-3.6%		
Corn	C 1 Comdty	445.5	Long	498.2	440.5	410.3	438.2	474.6	451.7	428.9	Neutral	484.5	450.3	413.4	432.3	475.2	452.5	429.0	Neutral	↓
				-10.6%	1.1%	8.6%	1.7%	-6.1%	-1.4%	3.9%		-8.0%	-1.1%	7.8%	3.0%	-6.2%	-1.5%	3.8%		
Wheat	W 1 Comdty	546	Short	602	540	572	547	556	553	560	Short	581	537	584	549	556	553	560	Short	-
				-9.3%	1.1%	-4.6%	-0.2%	-1.8%	-1.4%	-2.6%		-6.0%	1.7%	-6.5%	-0.5%	-1.8%	-1.3%	-2.5%		

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Table 10: FX/Crypto CTA Signals

See Appendix for definitions.

FX/Crypto	Ticker	Current	Prior Week CTA Signal	Current CTA Levels								CTA Levels in 1w								1w Chg
				1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signals	1m Mom.	3m Mom.	6m Mom.	12m Mom.	50d MA	100d MA	200d MA	CTA Signals	
EUR/USD	EC1 Curncy	1.09	Long	1.05	1.05	1.12	1.09	1.05	1.05	1.08	Long	1.05	1.04	1.12	1.09	1.05	1.05	1.08	Long	↑
				3.7%	4.1%	-2.7%	-0.3%	3.8%	3.2%	1.2%		3.7%	4.3%	-2.8%	0.1%	3.8%	3.2%	1.2%		
GBP/USD	BP1 Curncy	129.3	Long	126.0	126.0	132.3	127.5	125.3	126.3	127.9	Long	126.4	125.2	133.8	126.4	125.3	126.3	127.9	Long	-
				2.7%	2.7%	-2.3%	1.4%	3.2%	2.4%	1.1%		2.3%	3.3%	-3.3%	3.2%	2.4%	2.4%	1.1%		
JPY/USD	JY1 Curncy	67.3	Long	66.0	65.2	71.3	67.1	65.7	65.6	66.2	Long	67.1	64.1	70.1	66.9	65.8	65.6	66.2	Long	-
				2.1%	3.3%	-5.6%	0.3%	2.5%	2.7%	1.7%		0.3%	5.0%	-3.9%	0.7%	2.3%	2.6%	1.6%		
CAD/USD	CD1 Curncy	69.6	Short	70.7	69.8	73.8	73.9	69.8	70.5	71.9	Short	70.2	69.7	74.4	73.7	69.7	70.4	71.9	Short	-
				-1.5%	-0.3%	-5.7%	-5.8%	-0.3%	-1.3%	-3.2%		-0.9%	-0.2%	-6.5%	-5.6%	-0.2%	-1.2%	-3.2%		
AUD/USD	AD1 Curncy	63.2	Short	63.6	62.7	68.0	65.7	62.7	63.7	65.3	Short	63.5	62.3	68.8	65.5	62.7	63.6	65.3	Short	-
				-0.5%	0.8%	-6.9%	-3.7%	0.9%	-0.7%	-3.2%		-0.4%	1.6%	-8.0%	-3.4%	0.9%	-0.6%	-3.2%		
USD/CNH	XUC1 Curncy	7.24	Neutral	7.26	7.29	7.06	7.20	7.28	7.26	7.21	Neutral	7.25	7.30	7.01	7.24	7.28	7.27	7.21	Short	↓
				-0.3%	-0.8%	2.4%	0.5%	-0.7%	-0.4%	0.3%		-0.1%	-0.8%	3.3%	-0.1%	-0.7%	-0.4%	0.3%		
CHF/USD	SF1 Curncy	113.0	Neutral	111.4	112.6	119.5	113.5	111.3	112.5	114.0	Neutral	111.9	112.1	119.2	111.8	111.4	112.5	114.0	Long	↑
				1.4%	0.3%	-5.4%	-0.5%	1.5%	0.4%	-0.9%		1.0%	0.8%	-5.2%	1.1%	1.5%	0.4%	-0.9%		
USD/BRL	UC1 Curncy	5,759	Neutral	5,718	6,149	5,454	5,009	5,894	5,898	5,705	Neutral	5,746	6,190	5,460	4,978	5,894	5,903	5,711	Neutral	-
				0.7%	-6.3%	5.6%	15.0%	-2.3%	-2.3%	0.9%		0.2%	-7.0%	5.5%	15.7%	-2.3%	-2.4%	0.9%		
Bitcoin	BTC1 Curncy	84,840	Neutral	96,388	101,522	61,220	65,922	95,158	92,018	77,343	Neutral	92,203	97,908	64,132	69,735	94,464	91,975	77,325	Neutral	-
				-12.0%	-16.4%	38.6%	28.7%	-10.8%	-7.8%	9.7%		-8.0%	-13.3%	32.3%	21.7%	-10.2%	-7.8%	9.7%		
Ether	DCR1 Curncy	1,939	Short	2,701	3,680	2,381	3,409	2,798	3,028	2,983	Short	2,587	3,448	2,626	3,565	2,763	3,019	2,973	Short	-
				-28.2%	-47.3%	-18.5%	-43.1%	-30.7%	-36.0%	-35.0%		-25.0%	-43.8%	-26.2%	-45.6%	-29.8%	-35.8%	-34.8%		

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

CFTC Futures Positioning

Table 11: Commitment of Traders (COT) Legacy Report

Equity	Non-Commercial	Non-Commercial (z)	Non-Commercial w/w Chg	Commercial	Commercial (z)	Commercial w/w Chg
S&P 500	80,613	18	48,510 (0.9%)	-218,014	40	-50,699 (-0.9%)
Nasdaq 100	22,729	09	963 (0.1%)	-46,722	17	-6,500 (-0.7%)
DJIA	2,072	1	962 (0.3%)	-4,484	12	-1,965 (-0.6%)
MSCI EM	70,728	06	-806 (-0.1%)	-88,424	15	-545 (0.0%)
Russell 2000	-5,176	05	-602 (-0.1%)	-3,805	13	-225 (0.0%)
MSCI EAFE	7,632	27	19,453 (2.4%)	-14,744	18	-20,336 (-2.6%)
S&P MidCap 400	2,860	02	921 (0.9%)	-5,378	13	861 (0.6%)
VIX	-17,882	08	22,343 (1.9%)	19,477	17	-20,754 (-1.7%)
Fixed Income	Non-Commercial	Non-Commercial (z)	Non-Commercial w/w Chg	Commercial	Commercial (z)	Commercial w/w Chg
2yr UST	-1,222,215	14	-50,916 (-0.7%)	1,085,301	05	53,078 (0.7%)
5y UST	-1,873,367	12	-75,006 (-0.7%)	1,701,117	11	68,291 (0.7%)
10y UST	-737,075	12	-25,035 (-0.3%)	641,661	01	-11,479 (-0.2%)
UST Ultra 10y Note	-52,153	15	22,040 (0.7%)	117,762	12	-1,129 (0.0%)
UST Long Bond	-34,204	1	-16,407 (-0.6%)	-60,059	16	22,597 (0.9%)
UST Ultra Bond	-251,394	07	-19,490 (-1.0%)	218,313	0	17,336 (0.9%)
Commodities	Non-Commercial	Non-Commercial (z)	Non-Commercial w/w Chg	Commercial	Commercial (z)	Commercial w/w Chg
WTI	164,126	13	9,285 (0.5%)	-178,744	14	-764 (-0.1%)
US Natural Gas	-92,990	05	-13,846 (-1.1%)	72,267	17	13,572 (1.0%)
Gasoline	18,576	16	-18,914 (-2.7%)	-15,515	16	20,563 (2.4%)
Copper	18,598	16	5,586 (0.7%)	-22,056	07	-5,867 (-0.7%)
Gold	236,100	16	-7,161 (-0.5%)	-265,188	05	5,927 (0.5%)
Silver	59,526	12	6,210 (1.2%)	-77,356	17	-6,412 (-1.3%)
Soybean	-12,140	13	22,143 (0.8%)	44,304	12	-23,200 (-0.9%)
Corn	268,357	10	-67,081 (-1.7%)	-216,719	11	56,110 (1.7%)
Wheat	-78,073	15	6,769 (0.7%)	76,926	15	-4,132 (-0.5%)
Interest Rates	Non-Commercial	Non-Commercial (z)	Non-Commercial w/w Chg	Commercial	Commercial (z)	Commercial w/w Chg
3M SOFR	-748,949	13	89,995 (0.8%)	717,887	13	-96,478 (-0.8%)
1M Fed Funds	-195,261	1	44,814 (0.6%)	179,908	10	-40,989 (-0.5%)
FX/Crypto	Non-Commercial	Non-Commercial (z)	Non-Commercial w/w Chg	Commercial	Commercial (z)	Commercial w/w Chg
EUR/USD	13,090	02	23,196 (1.3%)	-47,847	14	-28,588 (-1.4%)
GBP/USD	29,193	13	10,619 (0.6%)	-32,361	02	-18,651 (-1.0%)
JPY/USD	133,902	19	251 (-0.2%)	-149,269	10	-3,350 (0.1%)
CAD/USD	-142,410	14	1,360 (0.2%)	156,148	05	1,168 (-0.1%)
AUD/USD	-48,226	13	7 (-0.1%)	55,401	04	-1,628 (0.0%)
CHF/USD	-36,957	13	818 (0.3%)	42,241	12	-5,830 (-1.2%)
Bitcoin	1,529	22	915 (1.4%)	-1,301	17	-785 (-1.3%)
Ether	429	10	-223 (-0.6%)	-526	17	200 (0.6%)

Source: J.P. Morgan Equity Derivatives Strategy, CFTC, Bloomberg Finance L.P.

Table 12: Traders in Financial Futures and COT Disaggregated Report

Equity	Asset Manager	Asset Manager w/w Chg	Asset Manager w/w Chg	Leveraged Funds	Leveraged Funds w/w Chg	Leveraged Funds	Leveraged Funds w/w Chg	Dealer	Dealer (2)	Dealer w/w Chg	Other Reportables	Other Reportables (2)	Other Reportables
S&P 500	846,785	-4.9	-64,719 (-1.82)	-193,552	1.9	94,428 (1.62)	-929,037	-4.5	-57,841 (-1.22)	138,403	2.8	25,943 (0.92)	
Nasdaq 100	38,468	-2.1	-10,062 (-1.72)	4,666	4.3	16,321 (1.42)	-92,132	-2.1	-9,019 (-0.82)	25,005	0.5	-2,777 (-0.42)	
DJIA	-4,474	-1.9	-3,619 (-0.82)	7,118	0.4	6,037 (1.52)	-3,544	1.0	-4,563 (-1.02)	-1,512	0.4	1,142 (0.72)	
MSCI EM	461,242	1.2	-19,941 (-0.82)	5,110	-4.1	4,927 (0.32)	-507,811	-4.1	-163 (0.22)	23,763	1.0	13,826 (0.72)	
Russell 2000	48,030	-2.0	-23,978 (-1.52)	15,124	2.8	26,432 (1.92)	-58,077	-4.3	-7,658 (-0.42)	-14,058	-2.7	4,377 (0.52)	
MSCI EAFE	203,297	-2.7	-29,013 (-2.82)	6,154	0.9	2,426 (0.62)	-207,941	-4.1	10,670 (1.62)	-8,622	2.8	15,034 (2.32)	
S&P MidCap 400	-2,006	1.4	-1,078 (-0.62)	3,102	2.2	254 (0.32)	-3,913	0.4	2,307 (1.42)	299	0.5	299 (0.52)	
VIX	18,350	1.4	13,016 (1.12)	-43,354	-2.2	-3,064 (-0.22)	13,675	-7	-15,326 (-1.42)	12,924	1.2	6,963 (1.32)	
Fixed Income	Asset Manager	Asset Manager w/w Chg	Asset Manager w/w Chg	Leveraged Funds	Leveraged Funds w/w Chg	Leveraged Funds	Leveraged Funds w/w Chg	Dealer	Dealer (2)	Dealer w/w Chg	Other Reportables	Other Reportables (2)	Other Reportables
2y UST	1,905,485	0.0	43,635 (0.32)	-1,895,197	0.7	-92,588 (-0.92)	-241,220	0.3	82,048 (1.82)	94,018	-2.6	-30,933 (-0.82)	
5y UST	3,133,784	1.2	24,854 (0.02)	-3,125,591	-2.0	18,111 (0.42)	-767,895	1.1	-55,333 (-0.92)	587,252	0.5	5,653 (0.12)	
10y UST	1,625,161	0.7	56,248 (0.72)	-1,433,107	0.4	-13,209 (-0.12)	-329,140	-4.4	-67,429 (-1.12)	41,672	-3.5	-12,124 (-0.22)	
UST Ultra 10y Note	342,501	1.3	-71,719 (-1.62)	-1,657,716	0.7	76,847 (2.02)	-158,055	-4.1	27,046 (1.42)	46,879	0.0	-11,263 (-0.72)	
UST Long Bond	552,724	1.0	-29,684 (-1.42)	-543,331	-2.2	-13,178 (-0.42)	-83,864	1.5	52,404 (2.62)	-19,792	-1.3	-3,352 (-0.22)	
UST Ultra Bond	679,722	-2.8	-9,215 (-0.52)	-529,640	1.2	-15,019 (-0.82)	-128,523	-9	-1,101 (0.02)	-54,640	-2.7	23,181 (2.92)	
Commodities	Producer	Producer w/w Chg	Producer w/w Chg	Managed Money	Managed Money w/w Chg	Managed Money	Managed Money w/w Chg	Swap Dealer	Swap Dealer (2)	Swap Dealer w/w Chg	Other Reportables	Other Reportables (2)	Other Reportables
Brent Crude	-421,990	-4.8	1,861 (0.12)	146,398	-4.2	-8,847 (-0.22)	391,910	1.4	8,728 (0.52)	-127,514	0.6	-4,500 (-0.42)	
WTI	240,122	1.3	5,125 (0.22)	107,744	-2.1	9,095 (0.32)	-418,866	4	-5,889 (-0.32)	56,382	-4.3	190 (0.02)	
US Natural Gas	-51,369	0.5	17,711 (1.42)	91,617	1.8	-16,733 (-0.82)	123,656	-4.3	-4,139 (-0.32)	-184,607	-2.0	2,887 (0.32)	
Gasoline	-43,659	1.4	14,516 (1.92)	6,085	1.7	-14,332 (-1.82)	28,144	0.9	6,047 (1.52)	12,491	1.5	-4,582 (-1.62)	
Copper	-41,722	0.8	-4,348 (-0.62)	14,216	-2.6	5,314 (0.52)	19,666	0.1	-1,519 (-0.52)	4,382	0.1	272 (0.02)	
Gold	-57,259	0.1	1,320 (0.32)	1,675,76	-4.2	918 (0.02)	-207,929	0.6	4,607 (0.42)	68,524	-4.2	-8,079 (-1.42)	
Silver	-35,240	0.5	-3,614 (-1.52)	41,977	1.5	7,879 (1.42)	-42,116	2	-2,798 (-0.72)	17,549	-6.7	-1,669 (-0.62)	
Soybean	-85,297	-2	-17,786 (-0.62)	-7,922	0.8	16,603 (0.52)	129,601	0.7	-5,414 (-1.32)	-4,218	0.9	5,540 (0.52)	
Com	-509,634	-4.1	64,358 (1.72)	132,412	0.8	-74,432 (-1.72)	292,915	1.0	-8,248 (-0.92)	135,945	2.1	7,351 (0.52)	
Wheat	1,253	0.9	-2,551 (-0.32)	-76,346	-4.6	6,300 (0.52)	75,673	2.4	-1,581 (-0.52)	-1,727	-2.2	469 (0.22)	
Interest Rates	Asset Manager	Asset Manager w/w Chg	Asset Manager w/w Chg	Leveraged Funds	Leveraged Funds w/w Chg	Leveraged Funds	Leveraged Funds w/w Chg	Dealer	Dealer (2)	Dealer w/w Chg	Other Reportables	Other Reportables (2)	Other Reportables
3M SOFR	584,777	1.8	113,245 (0.92)	-953,598	-2.3	72,161 (0.62)	545,084	1.1	-190,765 (-1.12)	-207,325	-4.1	-1,124 (0.02)	
1M Fed Funds	169,921	2.4	37,635 (1.02)	-326,234	-3.8	-22,862 (-0.32)	126,444	0.4	-15,577 (-0.22)	14,516	1.1	4,629 (0.22)	
FX/Crypto	Asset Manager	Asset Manager w/w Chg	Asset Manager w/w Chg	Leveraged Funds	Leveraged Funds w/w Chg	Leveraged Funds	Leveraged Funds w/w Chg	Dealer	Dealer (2)	Dealer w/w Chg	Other Reportables	Other Reportables (2)	Other Reportables
EUR/USD	239,231	0.2	27,507 (1.72)	-5,919	-0.4	2,303 (0.22)	-263,293	-4.2	-30,121 (-1.22)	-4,776	-3.1	-5,081 (-1.62)	
GBP/USD	-25,452	0.4	19,187 (1.22)	27,933	-2.6	-5,817 (-0.62)	-14,192	-4.2	-23,783 (-1.12)	8,543	-2.7	2,381 (0.82)	
JPY/USD	84,539	2.3	770 (-0.12)	417	1.2	-2,133 (-0.32)	-189,201	-3.1	-2,456 (0.12)	88,878	2.2	700 (-0.12)	
CAD/USD	-147,092	0	61 (0.12)	-43,461	0.2	1,119 (0.22)	203,875	0.6	-3,358 (-0.32)	20,416	1.4	4,706 (1.32)	
AUD/USD	-38,382	0.2	6,988 (0.52)	-23,790	-2.5	4,583 (0.62)	50,074	0.0	-13,146 (-0.62)	19,273	0.8	-46 (-0.12)	
CHF/USD	-33,304	-4.9	2,508 (0.92)	-16,741	-3.2	-1,645 (-0.42)	58,559	0.7	-5,541 (-1.22)	-3,230	-4.0	-334 (-0.22)	
Bitcoin	7,334	5	-557 (-0.32)	-18,271	0.1	206 (0.22)	8,342	0.9	-572 (-0.52)	2,823	0.4	1,053 (0.52)	
Ether	1,502	-2.8	-628 (-1.62)	-6,369	-4.0	1,427 (1.72)	3,885	0.8	-1,251 (-1.82)	885	0.9	429 (0.52)	

Source: J.P. Morgan Equity Derivatives Strategy, CFTC, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
 bram.kaplan@jpmorgan.com
 J.P. Morgan Securities LLC
 Daniel Motoc, CFA ^{AC} (1-212) 622-0105
 daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
 tony.sk.lee@jpmorgan.com
 Davide Silvestrini (44-20) 7134-4082
 davide.silvestrini@jpmorgan.com

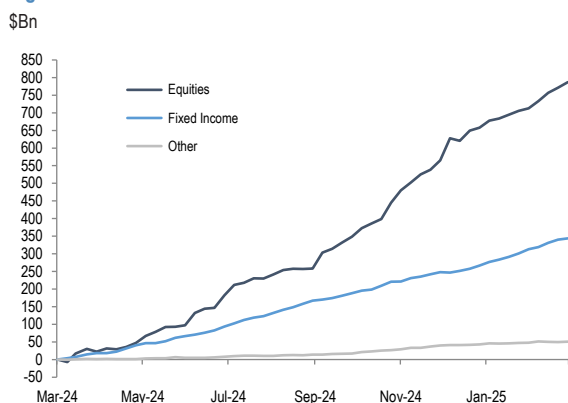
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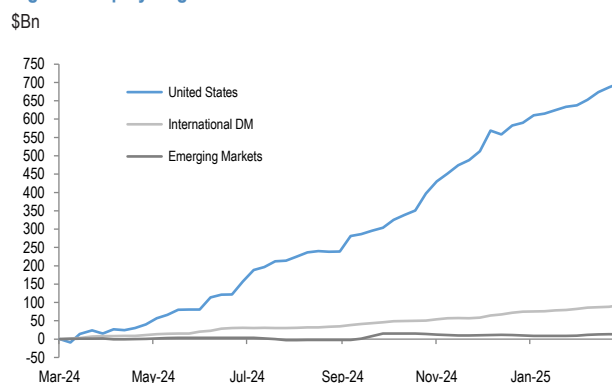
ETF Flows

Figure 1: Asset Class Flows



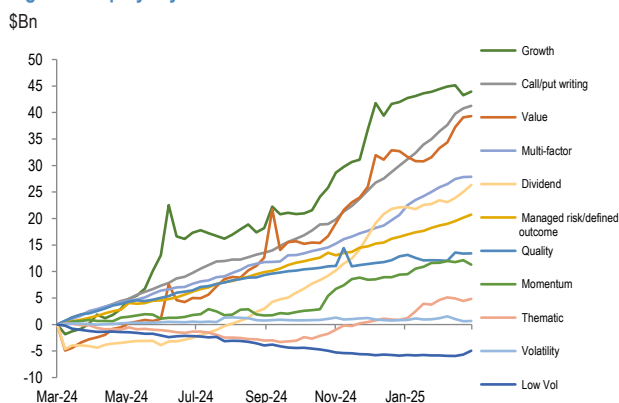
Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Figure 2: Equity Regional Flows



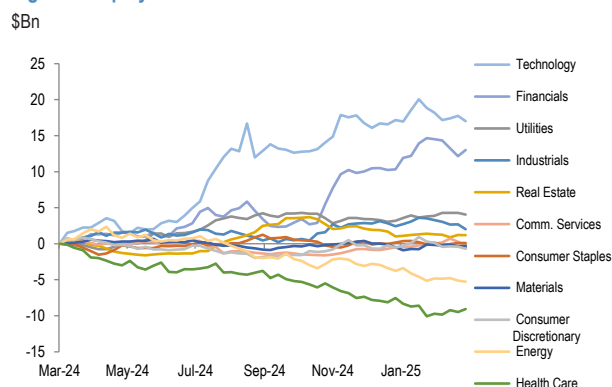
Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Figure 3: Equity Style Flows



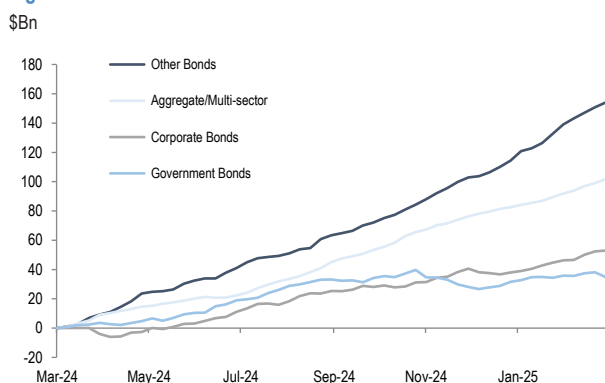
Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Figure 4: Equity Sector Flows



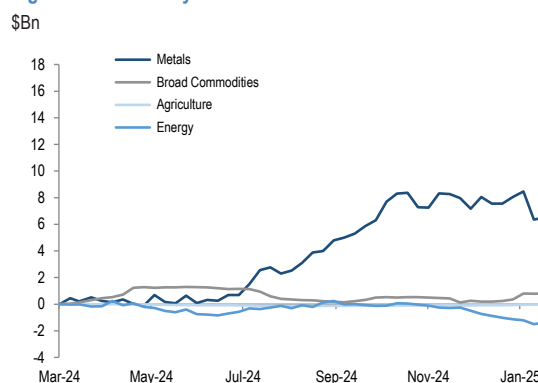
Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Figure 5: Fixed Income Flows



Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Figure 6: Commodity Flows



Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
 bram.kaplan@jpmorgan.com
 J.P. Morgan Securities LLC
 Daniel Motoc, CFA ^{AC} (1-212) 622-0105
 daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
 tony.sk.lee@jpmorgan.com
 Davide Silvestrini (44-20) 7134-4082
 davide.silvestrini@jpmorgan.com

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Table 13: ETF Flows by Asset Class

Asset Class	Net Flow - 1y History	Net 1w Flow (\$Bn)	Net 4w Flow (\$Bn)	Net 1w Flow (z)	Net 4w Flow (z)
Equities		15.6	74.2	0.0	0.4
Fixed Income		3.4	30.7	-1.0	0.5
Commodities		2.5	8.6	2.4	3.5
Currency/Multi-asset		-1.0	-5.2	-1.4	-2.3

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Table 14: Equity ETF Flows by Region

Region	Net Flow - 1y History	Net 1w Flow (\$Mn)	Net 4w Flow (\$Mn)	Net 1w Flow (z)	Net 4w Flow (z)
United States		11,651	60,713	-1.1	0.2
International DM		4,557	10,154	1.8	0.8
Europe (Developed)		1,991	5,661	3.3	3.4
Asia Pac (Developed)		-478	-867	-1.4	-0.8
Japan		-195	-515	-0.6	-0.5
Canada		71	-268	0.8	-1.1
Emerging Markets		-592	3,292	-0.5	0.5
Latam		-144	-127	-1.6	-0.4
Mexico		-47	-23	-0.8	-0.1
Brazil		-34	-57	-0.5	0.0
EM Asia		-344	-203	-1.3	-1.1
China		-170	362	-0.2	0.0
Korea		-98	-127	-0.9	-0.2
India		-82	-205	-0.6	-0.5
CEEMEA		60	54	3.9	2.0
MENA		-10	3	-0.5	0.1

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
 bram.kaplan@jpmorgan.com
 J.P. Morgan Securities LLC
 Daniel Motoc, CFA ^{AC} (1-212) 622-0105
 daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
 tony.sk.lee@jpmorgan.com
 Davide Silvestrini (44-20) 7134-4082
 davide.silvestrini@jpmorgan.com

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Table 15: Equity ETF Flows by Style

Style	Net Flow - 1y History	Net 1w Flow (\$Mn)	Net 4w Flow (\$Mn)	Net 1w Flow (z)	Net 4w Flow (z)
Growth		693	-483	-0.1	-1.1
Value		230	6,060	-0.2	0.9
Dividend		1,303	2,887	0.8	0.3
Multi-factor		42	1,996	-1.5	-0.3
Momentum		-833	-345	-1.9	-1.0
Quality		35	1,330	-0.3	0.2
Low Vol		691	881	3.7	3.1
Call/put writing		479	4,800	-0.7	1.1
Managed risk/defined outcome		573	2,071	0.7	1.3
Volatility		62	-513	0.2	-1.8
Thematic		392	201	0.7	-1.1

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Table 16: Equity ETF Flows by Sector

Sector	Net Flow - 1y History	Net 1w Flow (\$Mn)	Net 4w Flow (\$Mn)	Net 1w Flow (z)	Net 4w Flow (z)
Consumer Discretionary		-311	-813	-0.8	-1.1
Consumer Staples		-2	-51	0.0	-0.1
Energy		-160	-444	-0.1	0.0
Financials		854	-1,504	0.7	-1.2
Health Care		411	640	1.1	1.9
Industrials		-664	-1,260	-1.8	-1.9
Materials		47	-173	0.3	-0.4
Real Estate		-27	-105	-1.2	-1.2
Technology		-744	-1,175	-0.9	-1.0
Comm. Services		-487	-225	-2.0	-0.5
Utilities		-238	184	-1.0	-0.2

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
 bram.kaplan@jpmorgan.com
 J.P. Morgan Securities LLC
 Daniel Motoc, CFA ^{AC} (1-212) 622-0105
 daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
 tony.sk.lee@jpmorgan.com
 Davide Silvestrini (44-20) 7134-4082
 davide.silvestrini@jpmorgan.com

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Table 17: Fixed Income ETF Flows by Segment

Segment	Net Flow - 1y History	Net 1w Flow (\$Bn)	Net 4w Flow (\$Bn)	Net 1w Flow (z)	Net 4w Flow (z)
Aggregate/Multi-sector		2.8	9.9	0.9	0.7
Government Bonds		-3.2	-0.9	-2.2	-0.9
Short-term		-0.9	0.8	-2.0	0.7
Medium-term		-0.3	1.2	-1.5	-0.3
Long-term		0.8	-0.4	0.4	-0.4
Corporate Bonds		0.6	6.7	-0.2	0.7
IG		-0.7	2.6	-1.1	0.0
HY		1.2	3.9	0.9	1.3
Money Market/Ultrashort		5.2	12.9	3.3	3.6
Municipals		-0.2	0.4	-1.1	-1.3
Mortgage		-0.4	-0.1	-1.8	-1.7
Inflation		1.0	1.7	3.0	2.2
International		-0.1	1.5	-1.1	-0.4
Loans		-2.2	-1.3	-3.5	-1.9

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Table 18: Commodity ETF Flows by Segment

Segment	Net Flow - 1y History	Net 1w Flow (\$Mn)	Net 4w Flow (\$Mn)	Net 1w Flow (z)	Net 4w Flow (z)
Broad Commodities		101	173	0.5	0.1
Energy		78	-243	0.6	-0.4
Precious Metals		2,353	8,703	2.3	3.7
Base Metals		23	21	2.3	0.7
Agriculture		-6	-46	-0.5	-1.5

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
 bram.kaplan@jpmorgan.com
 J.P. Morgan Securities LLC
 Daniel Motoc, CFA ^{AC} (1-212) 622-0105
 daniel.motoc@jpmchase.com





Tony SK Lee (852) 2800-8857
 tony.sk.lee@jpmorgan.com
 Davide Silvestrini (44-20) 7134-4082
 davide.silvestrini@jpmorgan.com

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Table 19: Currency/Multi-asset ETF Flows by Segment

Currency/Multi-asset	Net Flow - 1y History	Net 1w Flow (\$Mn)	Net 4w Flow (\$Mn)	Net 1w Flow (z)	Net 4w Flow (z)
Fiat		54	148	0.7	0.8
Cryptocurrency		-1,162	-5,515	-1.4	-2.3
Asset Allocation		7	143	-0.5	-0.1
Liquid Alts		53	40	-0.1	-1.4

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com
Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

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Table 20: Top Performing ETFs

1W & 4W, excludes levered ETFs

Ticker	ETF Name	1w Perf	Ticker	ETF Name	4w Perf
SIL	Global X Silver Miners ETF	8.8%	EUAD	Select STOXX Europe Aerospace	31.4%
SILJ	Amplify Junior Silver Miners E	8.5%	VXX	iPath Series B S&P 500 VIX Sho	20.2%
SLVP	iShares MSCI Global Silver and	8.1%	VIXY	ProShares VIX Short-Term Futur	19.9%
GDXJ	VanEck Junior Gold Miners ETF	5.8%	SHLD	Global X Defense Tech ETF	17.2%
NVDY	YieldMax NVDA Option Income St	5.7%	UNG	United States Natural Gas Fund	16.0%

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Table 21: Bottom Performing ETFs

1W & 4W, excludes levered ETFs

Ticker	ETF Name	1w Perf	Ticker	ETF Name	4w Perf
CONY	YieldMax COIN Option Income St	-14.0%	WGMI	CoinShares Valkyrie Bitcoin Mi	-32.7%
APLY	YieldMax AAPL Option Income St	-11.2%	CONY	YieldMax COIN Option Income St	-32.6%
ETHW	Bitwise Ethereum ETF	-10.5%	PLTY	YieldMaxTM PLTR Option Income	-30.7%
ETHE	Grayscale Ethereum Trust ETF	-10.4%	BKCH	Global X Blockchain ETF	-28.8%
ETH	Grayscale Ethereum Mini Trust	-10.3%	DAPP	VanEck Digital Transformation	-28.3%

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Table 22: Largest Fund Inflows

1W & 4W

Ticker	ETF Name	1w Inflow	Ticker	ETF Name	4w Inflow
VOO	Vanguard S&P 500 ETF	\$21.3Bn (4.4z)	VOO	Vanguard S&P 500 ETF	\$30.2Bn (3.0z)
SPY	SPDR S&P 500 ETF Trust	\$7.2Bn (0.8z)	SPY	SPDR S&P 500 ETF Trust	\$21.6Bn (1.5z)
BIL	SPDR Bloomberg 1-3 Month T-Bil	\$2.6Bn (4.3z)	BIL	SPDR Bloomberg 1-3 Month T-Bil	\$4.7Bn (4.2z)
SGOV	iShares 0-3 Month Treasury Bon	\$1.3Bn (2.3z)	GLD	SPDR Gold Shares	\$4.1Bn (3.0z)
TQQQ	ProShares UltraPro QQQ	\$1.2Bn (2.6z)	SGOV	iShares 0-3 Month Treasury Bon	\$4.0Bn (3.2z)

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Table 23: Largest Fund Outflows

1W & 4W

Ticker	ETF Name	1w Outflow	Ticker	ETF Name	4w Outflow
IVV	iShares Core S&P 500 ETF	\$-20.3Bn (-3.0z)	IVV	iShares Core S&P 500 ETF	\$-18.5Bn (-2.5z)
GOVT	iShares U.S. Treasury Bond ETF	\$-2.9Bn (-6.3z)	EFG	iShares MSCI EAFE Growth ETF	\$-3.4Bn (-3.4z)
RSP	Invesco S&P 500 Equal Weight E	\$-1.5Bn (-2.7z)	TLT	iShares 20+ Year Treasury Bond	\$-3.3Bn (-1.4z)
SCHO	Schwab Short-Term U.S. Treasur	\$-1.3Bn (-6.3z)	GOVT	iShares U.S. Treasury Bond ETF	\$-2.6Bn (-3.9z)
BKLN	Invesco Senior Loan ETF	\$-1.3Bn (-4.1z)	BKLN	Invesco Senior Loan ETF	\$-1.8Bn (-2.7z)

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
 bram.kaplan@jpmorgan.com
 J.P. Morgan Securities LLC
 Daniel Motoc, CFA ^{AC} (1-212) 622-0105
 daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
 tony.sk.lee@jpmorgan.com
 Davide Silvestrini (44-20) 7134-4082
 davide.silvestrini@jpmorgan.com

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Futures Liquidity

Table 24: Equity Futures Liquidity

See Appendix for definitions

Americas	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
S&P 500	ES1 Index	0.5	20	-0.6	724.2	20	452.5
Nasdaq 100	NQ1 Index	0.5	2	0.1	316.1	17	236.7
Russell 2000	RTY1 Index	0.9	4	-0.6	31.1	12	21.1
DJIA	DM1 Index	0.6	3	-0.6	36.8	15	27.0
S&P MidCap 400	FA1 Index	4.5	2	-0.5	6.1	16	3.6
MSCI EM	MES1 Index	1.1	19	-0.4	13.6	10	7.1
MSCI EAFE	MFS1 Index	1.3	4	-0.3	13.3	15	5.3
VIX	UX1 Index	24.8	209	-0.1	8.2	21	3.7
S&P TSX 60	PT1 Index	1.9	4	0.9	7.5	07	4.9
Bovespa	XB1 Index	0.4	135	-0.7	61.2	06	69.3
EMEA	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
Euro Stoxx 50	VG1 Index	2.0	203	-0.0	61.8	12	41.2
FTSE 100	Z 1 Index	1.0	10	-0.1	14.0	06	10.5
DAX	GX1 Index	1.7	3	-0.4	30.3	12	23.0
SMI	SM1 Index	1.7	6	0.5	6.7	08	4.2
CAC 40	CF1 Index	1.3	3	-0.4	5.0	12	5.7
FTSE/JSE Top 40	AI1 Index	3.0	2	-0.4	1.0	01	0.9
BIST 30	AS1 Index	1.4	26	2.4	0.7	-0.1	0.8
APAC	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
TOPIX	TP1 Index	2.2	14	-0.5	38.8	33	11.6
Nikkei 225	NK1 Index	3.0	24	-0.3	29.2	29	13.6
ASX SPI 200	XP1 Index	1.9	7	-0.7	7.2	02	6.5
KOSPI 200	KM1 Index	1.6	43	0.1	13.5	04	15.1
Hang Seng	HI1 Index	1.1	3	-0.5	21.7	08	16.4
Hang Seng China Ent.	HC1 Index	1.4	9	-0.6	7.2	-0.1	7.5
FTSE China A50	XU1 Index	0.9	22	4.3	4.7	-0.1	5.1
CSI 300	IFB1 Index	1.0	4	1.9	21.9	02	19.7
CSI 500	FFD1 Index	1.2	3	1.8	19.5	05	16.4
CSI 1000	IFD1 Index	0.9	4	0.0	49.7	11	34.0
NIFTY 50	JGS1 Index	1.0	4	2.0	2.1	-0.8	3.3
SET 50	BC1 Index	2.1	34	-0.1	1.1	-0.2	1.1
SSE50	FFB1 Index	1.3	4	0.8	7.5	01	7.0
SGX FTSE Taiwan	TWT1 Index	1.8	9	-0.2	3.9	-0.6	5.1
TAIEX	FT1 Index	1.0	4	-0.2	20.3	02	19.3
MSCI Singapore	QZ1 Index	2.3	6	0.0	0.5	-0.5	1.0

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
 bram.kaplan@jpmorgan.com
 J.P. Morgan Securities LLC
 Daniel Motoc, CFA ^{AC} (1-212) 622-0105
 daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
 tony.sk.lee@jpmorgan.com
 Davide Silvestrini (44-20) 7134-4082
 davide.silvestrini@jpmorgan.com

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Table 25: Fixed Income Futures Liquidity

See Appendix for definitions

Americas	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
2y UST	TU2 Comdty	0.4	1,152	-0.6	176.4	-0.3	211.6
5y UST	FV2 Comdty	0.7	928	-0.1	181.4	0.0	188.1
10y UST	TY2 Comdty	1.4	1,582	-0.8	271.0	0.1	262.1
UST Ultra 10y Note	UXY2 Comdty	1.4	521	-0.7	76.2	-0.1	78.7
UST Long Bond	US2 Comdty	2.7	559	-0.1	57.6	-0.2	64.5
UST Ultra Bond	WN2 Comdty	2.6	225	0.4	45.3	-0.2	52.0
Canada 10y	CN2 Comdty	0.9	32	-1.7	13.1	-0.3	15.4
EMEA	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
Germany 2y	DU1 Comdty	0.5	1,565	-0.5	79.6	-0.1	85.5
Germany 5y	OE1 Comdty	0.9	843	-0.8	110.2	0.2	103.0
Germany 10y	RX1 Comdty	0.8	266	-1.3	188.2	0.5	159.8
Germany 30y	UB1 Comdty	1.9	38	-0.6	17.8	0.0	18.1
10y Gilt	G 2 Comdty	1.2	70	0.4	31.6	-0.2	35.9
France 10y	OAT1 Comdty	0.9	130	-0.4	33.5	-0.1	34.8
Italy 10y	IK1 Comdty	0.9	206	0.4	48.2	0.6	38.6
APAC	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
Japan 10y	JB1 Comdty	0.9	18	-1.9	99.9	2.3	39.1
Australia 10y	XM1 Comdty	0.5	498	-1.4	53.0	4.2	14.7
China 10y	TFT1 Comdty	0.5	25	-1.8	13.5	0.5	11.5
Korea 10y	KAA1 Comdty	0.9	59	-0.2	6.5	-0.4	7.0

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Table 26: Interest Rates Futures Liquidity

See Appendix for definitions

Global	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
3M SOFR	SFR1 Comdty	0.5	12,655	0.7	1,077.1	1.1	814.8
3M Euribor	ER1 Comdty	0.5	5,456	0.4	591.4	1.5	401.1
3M SONIA	SFI1 Comdty	0.6	3,160	0.0	165.1	-0.4	188.1

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
 bram.kaplan@jpmorgan.com
 J.P. Morgan Securities LLC
 Daniel Motoc, CFA ^{AC} (1-212) 622-0105
 daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
 tony.sk.lee@jpmorgan.com
 Davide Silvestrini (44-20) 7134-4082
 davide.silvestrini@jpmorgan.com

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Table 27: Commodity Futures Liquidity

See Appendix for definitions

Energy	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
Brent Crude	CO1 Comdty	1.8	23	1.7	66.1	-1.1	86.4
WTI	CL1 Comdty	1.8	12	-1.2	47.5	-1.2	66.2
US Natural Gas	NG1 Comdty	3.8	5	-1.0	28.0	2.0	15.2
Gasoline	XB1 Comdty	2.7	3	0.7	16.1	-1.5	17.7
Heating Oil	HO1 Comdty	2.9	3	1.9	16.7	-1.3	17.8
Low Sulphur Gasoil	QS1 Comdty	4.5	55	3.0	26.0	0.2	24.6
TTF Nat Gas	TZT1 Comdty	11.4	12	-1.2	12.1	0.6	10.0
Base Metals	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
Copper	HG1 Comdty	2.1	3	-1.5	7.0	-1.9	11.0
Nickel	LN1 Comdty	15.7	2	-1.4	4.4	0.4	3.9
Aluminum	LA1 Comdty	9.8	4	-1.3	11.9	0.6	10.1
Precious Metals	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
Gold	GC1 Comdty	0.7	4	-1.6	82.1	1.7	58.2
Silver	SI1 Comdty	1.9	6	-1.3	11.2	-1.4	12.6
Agriculture	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
Soybean	S 1 Comdty	2.9	44	0.3	10.5	-1.4	15.3
Corn	C 1 Comdty	5.7	228	-1.2	9.9	0.1	9.6
Wheat	W 1 Comdty	5.3	45	-1.2	3.3	-1.4	3.8

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Table 28: FX/Crypto Futures Liquidity

See Appendix for definitions

FX/Crypto	Ticker	Bid/Ask Spread (% of notional, bps)	Market Depth (contracts, top of book)	Market Depth (z)	ADV (prior week - \$Bn)	ADV (prior week - z)	1y ADV (\$Bn)
EUR/USD	EC1 Curncy	0.6	21	-1.4	80.3	3.6	32.4
GBP/USD	BP1 Curncy	0.9	45	-1.1	16.3	2.4	9.4
JPY/USD	JY1 Curncy	0.9	35	0.5	29.5	2.6	15.1
CAD/USD	CD1 Curncy	0.9	25	-1.2	17.5	3.2	7.9
AUD/USD	AD1 Curncy	0.9	27	-1.4	12.8	2.5	7.2
USD/CNH	XUC1 Curncy	0.3	6	1.6	21.8	2.1	14.6
CHF/USD	SF1 Curncy	0.8	8	0.8	10.9	2.7	4.9
USD/BRL	UC1 Curncy	1.2	32	1.4	12.1	-1.8	14.2
Bitcoin	BTC1 Curncy	7.3	2	-1.8	5.6	-1.2	6.2
Ether	DCR1 Curncy	8.6	2	1.4	1.2	0.0	1.2

Source: J.P. Morgan Equity Derivatives Strategy, Bloomberg Finance L.P.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com
Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

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Appendix

**Unless otherwise specified, all Z-scores are calculated over a 1Y period. $Z\text{-score} = (\text{Current Value} - \text{Average}) / \text{Standard Deviation}$*

Flows and Positioning Definitions

1. **Net Flows:** The net flow traded on a futures contract, calculated across the futures chain. Volumes are classified via an attribution of trade-by-trade flows, based on whether the trade price was on the bid side (identified as a sell flow) or offer side (identified as a buy flow) of the order book.
2. **AM + HF:** Asset managers' and Hedge Funds' positioning in the relevant futures contract, as reported in the latest CFTC Traders in Financial Futures report. Expressed as a Z-score.
3. **Non-Commercial:** Non-commercial entities' positioning in the relevant futures contract, as reported in the latest CFTC Commitment of Traders report. Expressed as a Z-score.
4. **OI Change:** The weekly change in the notional value of contracts outstanding for the relevant futures contracts.
5. **OI Correlation w/Spot:** The 3M correlation between changes in the number of contracts outstanding and the price of the future's underlying spot index. A positive (negative) correlation indicates likely increased (decreased) positioning as open interest is growing at the same time as the market is rallying (selling off), indicating the incremental contracts opened are most likely initiated by investors looking to go directionally long (short), respectively.
6. **CTA Signals:** Whether CTAs are likely to be short, neutral, or long a certain futures contract based on key momentum signals – see more below.

CTA Signals Definitions

1. **CTA Signal:** Whether CTAs are likely to be short, neutral, or long in a certain futures contract based on key momentum signals. Our metric looks at seven signals, assigning a score of -1, 0, or 1 depending on whether the index is below/at/above the relevant signal. The net score determines our CTA metric. The seven signals we look at are 1M, 3M, 6M, and 12M momentum and 50d, 100d, and 200d moving averages. In each cell, the top number is the price level of the signal that indicates where CTAs are likely to buy or sell the contract, and the bottom number is the distance from the signal to the current futures price. Cells shaded in green are currently long momentum signals and those in red are short signals.
2. **1w Chg:** Indicates the change in CTA signals in one week's time if futures levels are unchanged. "↑" indicates CTAs are likely to become longer/less short, "↓" indicates they will become shorter/less long, and "-" indicates no change.

Liquidity Definitions

1. **Bid/Ask Spread:** The average bid/ask spread on the futures contract, expressed as a percentage of notional, in bps.
2. **Market Depth:** The average number of contracts at the top of the order book intraday (averaged across the bid and offer side).
3. **ADV:** The average daily notional value traded on a particular futures contract.

Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com
Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

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Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com
Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

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Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com
Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

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Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com
Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

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Bram Kaplan, CFA ^{AC} (1-212) 272-1215
bram.kaplan@jpmorgan.com
J.P. Morgan Securities LLC
Daniel Motoc, CFA ^{AC} (1-212) 622-0105
daniel.motoc@jpmchase.com

Tony SK Lee (852) 2800-8857
tony.sk.lee@jpmorgan.com
Davide Silvestrini (44-20) 7134-4082
davide.silvestrini@jpmorgan.com

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