Deutsche Bank Research



Asset Allocation

Investor Positioning and Flows





A Six-Month High

Our measure of aggregate equity positioning surged to a six-month high this week (z score 0.56, 79th percentile), after having moved sideways in a tight range since mid-December. Positioning while clearly elevated is not yet extreme. The latest move was driven by discretionary investor positioning which climbed well into the top quintile (z score 0.72, 87th percentile), while systematic strategies positioning continued to steadily move higher (z score 0.52, 73rd percentile). Across sectors, positioning in Tech (73rd percentile) rose further and is the only one notably above historical average. Meanwhile, equity funds received strong inflows (+\$18bn) this week, with the US (\$5bn) unsurprisingly seeing strong inflows but the rest being driven by an unusually large inflow into China funds (\$12bn), the largest in almost 9 years. Across sectors, already strong inflows into Tech funds (\$2.8bn) picked up even further to a 5-month high. Strong inflows into bond funds continued (\$14bn), but with credit funds seeing inflows slow while government bond funds saw an acceleration.

Strategist +1-212-250-6605

Parag Thatte

Binky Chadha Chief Strategist +1-212-250-4776

Karthik Prabhu Strategist

+1-212-250-1246

Ben Lipsius Strategist +1-212-250-9671

Positioning and flows detail

- Under discretionary investor positioning,
 - Total net call volume (call minus put volume, 5d ma) rose sharply again this week (84th percentile), driven by increases for single stocks. While net call volume in ETF options also increased modestly, that in index options declined. Within single stock options, net call volume rose across all sector groups this week, but most notably in cyclicals and mega cap growth & Tech stocks. S&P 500 options skew (3m. 90%-110%) declined this week, while the implied correlation amongst S&P 500 stocks declined to near record lows.
 - Investor sentiment (bull minus bear spread) was largely unchanged this week (63rd percentile). Both bullish responses (58th percentile) and bearish responses (35th percentile) declined modestly, while neutral responses rose (65th percentile).
- Under systematic strategies positioning,
 - Vol control funds modestly increased their equity exposure above the 70% mark (80th percentile) to just below historical maximums.
 - CTA allocations to equities fell this week but remain a little above historical average (58th percentile). The move was driven by another drop in European equity allocations (63rd percentile). In US equities (53nd percentile), positioning rose slightly for the S&P 500 (56th percentile) and the Nasdaq 100 (48th percentile) while that in

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the Russell 2000 (48th percentile) went sideways. Japanese equity longs also moved sideways (60th percentile) while CTAs continued to cut their EM equity shorts (29th percentile). Aggregate bond allocations turned down but remain slightly long (38th percentile). The move was driven by rising shorts across the curve in the US. In FX, dollar shorts were cut slightly but positioning is still in its bottom quartile historically (25th percentile). The move was driven by CAD longs dropping to neutral (69th percentile) and EUR positions turning slightly short (56th percentile). AUD longs also fell (63th percentile). Positioning in other currencies moved sideways. Finally in commodities, oil shorts increased slightly and positioning remains very low (21st percentile); gold longs moved sideways and remain elevated (79th percentile).

- Risk Parity gross exposure moved up slightly this week but remains extremely low (9th percentile) due to high correlation among asset classes and still elevated bond vol. Gross equity exposure rose slightly but is still below average (32nd percentile) with US equity exposure moving sideways (46th percentile) while that in other developed markets (31nd percentile) and EM (26th percentile) ticking higher. Bond exposure remains extremely low (4th percentile) with that in both US bonds (4th percentile) and the rest of the world (5th percentile) moving sideways at extreme lows. Inflation linked bond positioning (11th percentile) ticked up while commodities positioning moved sideways and is above average (60th percentile).
- Sector positioning: Across our measures of absolute equity positioning for sectors, that in Technology (z score 0.43, 73rd percentile) is the only one well above average and rose further this week. Positioning in Financials (z score 0.17, 60th percentile) also moved higher and is above average but only modestly so. Positioning in Consumer Staples dropped this week to neutral (z score 0.0, 53rd percentile). Positioning in Energy (z score -0.11, 60th percentile) remains modestly below average, while that in Communication Services (z score -0.20, 53rd percentile) rose this week but is also modestly below average. Positioning in Consumer Discretionary (z score -0.34, 42nd percentile), Industrials (z score -0.35, 40th percentile), Healthcare (z score -0.52, 27th percentile) and Real estate (z score -0.54, 23rd percentile) is notably below average. Positioning in Materials (z score -0.77, 20th percentile) and Utilities (z score -1.11, 5th percentile) is extremely low.

Weekly fund flows to ETFs & mutual funds,

- Equity funds (\$17.6bn) received solid inflows, driven notably by China funds (\$12.0bn), which received the biggest weekly inflows since July 2015, and the US (\$5.3bn) which received robust inflows after two weeks of outflows. Broad-global funds (\$1.8bn) and Japan (\$0.5bn) also registered inflows. Meanwhile, Europe (\$1.9bn) continued to see outflows unabated (in 45 of the last 46 weeks). Across sectors, inflows to Technology (\$2.8bn), which were already strong, accelerated to the highest in five months. Financials (\$0.5bn) and Telecom (\$0.1bn) received modest inflows. Flows to Real Estate were muted this week while other sectors suffered outflows, led by Energy and Materials with outflows of \$0.7bn each. Utilities saw outflows of -\$0.6bn, whereas Consumer Goods, Industrials and Healthcare saw outflows of -\$0.4bn each.
- Bond funds (\$14.2bn) saw a fifth consecutive week of strong inflows. Across categories, inflows to IG (\$2.2bn) continued but slowed this week, while inflows to broad-mandate funds (\$6.2bn)

26 January 2024

Investor Positioning and Flows



and Govt bonds (\$4.9bn) accelerated. HY (\$0.8bn) received modest inflows again. EM bonds (-\$0.9bn) and TIPS (-\$0.4bn) saw outflows. Munis (\$0.4bn) received inflows at a slower pace than last week, while MBS (\$0.7bn) and Bank Loans (\$0.1bn) also absorbed inflows.

- Money Market funds (\$7.4bn) received inflows this week. US (\$5.4bn) and Japan (\$1.3bn) received inflows, whereas Europe (\$0.8bn) and broad-global (\$0.6bn) saw modest outflows.
- CFTC Update. Aggregate longs in US equity net futures ticked down this week but remain elevated and near the top of the historical range. The move was led by a drop in net longs for the S&P 500 while those in the Russell 2000 and the Nasdaq 100 went sideways. Aggregate bond net shorts moved down slightly but remain very elevated. 2y and 5y net shorts rose while 10y net shorts fell. 3m SOFR net longs rose. In FX, dollar net shorts fell again this week led by a fall in EUR net longs and increases in AUD, JPY, and CHF net shorts. CAD net shorts fell while GBP net longs were flat and remain near all-time highs. In commodities, oil net longs rose slightly but remain near the bottom of their historical ranges while gold net longs fell and both silver and platinum positions flipped from net long to short. Copper net shorts increased slightly.

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Investor Positioning and Flows



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Our Recent Publications

Investor Positioning And Flows

- Still In A Tight Range, Jan 19 2024
- Time For Buyback Announcements To Pick Up This Earnings Season, Jan 12 2024
- Steep Climb But Only Modestly Overweight, Jan 5 2024
- Equity Sentiment And Inflows Surge, Dec 15 2023
- Will The FOMC Spike Vol Again?, Dec 8 2023
- Systematic Strategies Creeping Higher, Discretionary Holding On, Dec 1 2023
- Discretionary Continues To Climb, Nov 24 2023
- Unwinding The Shocks, Not Pricing In Cyclical Upside, Nov 17 2023
- Jump Back Up To Neutral, Nov 10 2023
- Behind The Bounce, Nov 3 2023
- Down Again, Oct 27 2023
- Drifting Lower, Oct 20 2023
- At Neutral, Oct 13 2023
- Dipped Further Underweight, Oct 6 2023
- Sharp Cut Back To Underweight, Sep 29 2023
- The Pullback Extends, Sep 22 2023
- Rates Vol At An 18-Month Low, Sep 15 2023

Asset Allocation

- Q4 2023 Earnings: Set Up For Big Beats, Jan 05 2024
- Outlook 2024: Solid Fundamentals Poor Perceptions, Nov 27 2023
- What Companies Are Saying: Resilient But Cautious Awaiting Better Visibility, Nov 15 2023
- Q3 2023 Global Earnings Chart Pack, Nov 03 2023
- Q3 2023 Earnings Takes: Third Straight Quarter Of Solid Sequential Growth, Oct 27 2023
- Q3 Earnings Preview: Looking For A New High, Oct 06 2023
- Now Come The Tests, Sep 14 2023
- What Companies Are Saying: Better Demand But Don't Say Green Shoots, Aug 10 2023
- Q2 2023 Global Earnings Chart Pack, Aug 4 2023
- Q2 Takes: Underlying Earnings At A New High, Jul 28 2023
- Q2 Earnings: Looking For A Second Straight Quarter Of Sequential Growth, Jul 5 2023
- Skeptical Of The Liquidity Scare, Jun 5 2023
- After The Squeeze: Looking For A Choppy Grind Higher, June 2 2023



Consolidated Equity Positioning

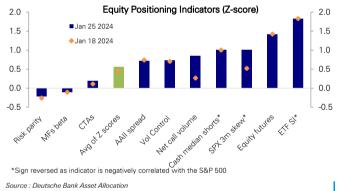
Figure 1: Consolidated equity positioning¹



in regression of equity performance on indicators

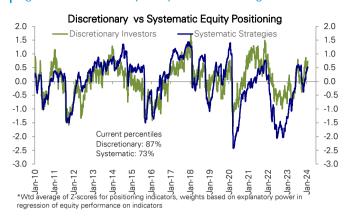
Source: Deutsche Bank Asset Allocation

Figure 3: All equity positioning indicators



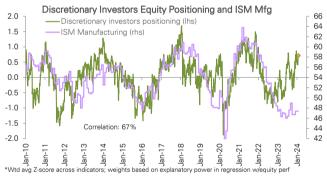
Source: Deutsche Bank Asset Allocation

Figure 2: Discretionary vs Systematic strategies divide²



Source: Deutsche Bank Asset Allocation

Figure 4: Discretionary investors positioning vs ISM Manufacturing



Source: ISM, Haver, Deutsche Bank Asset Allocation

Equity positioning indicators includes: CTA portfolio weight, Risk-Parity portfolio weight, Vol control allocation, L/S HF beta, active MF beta, AAII Bull-Bear spread, cash equity median shorts, ETF short interest, equity futures positions, net call volume, S&P 500 option skew. More details can be found

Systematic strategy indicators: CTA portfolio weight, Risk-Parity portfolio weight, Vol control allocation, equity futures positions; Discretionary indicators: Active MF beta, AAII Bull-Bear spread, cash equity median shorts, ETF short interest, equity futures positions, net call volume, S&P 500 option skew



Sector Positioning

Figure 5: Equity positioning across sectors³ 80% Sector positioning measure 0.3 (Weighted average z-score of indicators) 70% 60% 50% -0.2 40% 30% -0.7 Positioning wtd z score, lhs 20% Latest percentile, rhs 10% 0%

Source : Deutsche Bank Asset Allocation

Data as of Jan 25 2024

Figure 7: Energy positioning



Source: Deutsche Bank Asset Allocation

Figure 9: Consumer Discretionary positioning

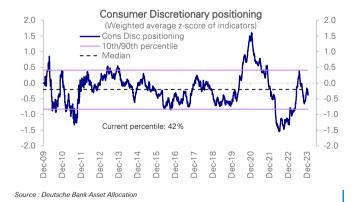


Figure 6: Financials positioning



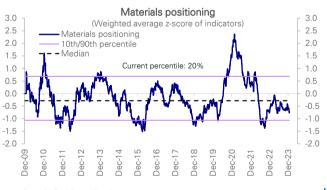
Source: Deutsche Bank Asset Allocation

Figure 8: Technology positioning



Figure 10: Materials positioning

Source: Deutsche Bank Asset Allocation

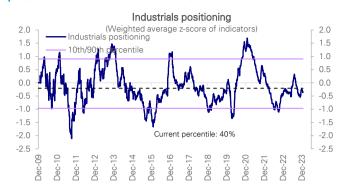


Source : Deutsche Bank Asset Allocation

³ Sector positioning indicator includes: Net call volume, cash equity median shorts, sector fund flows, active MF excess return correlation and Sell-side analyst consensus targets. More details can be found in <u>Appendix</u>

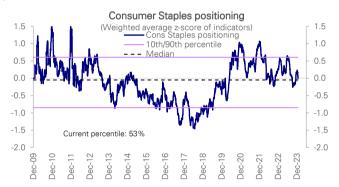


Figure 11: Industrials positioning



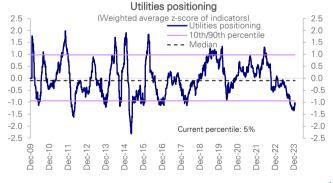
Source: Deutsche Bank Asset Allocation

Figure 13: Consumer Staples positioning



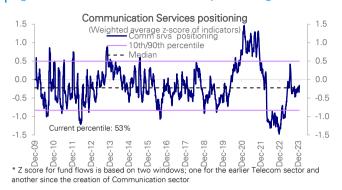
Source : Deutsche Bank Asset Allocation

Figure 15: Utilities positioning



Source : Deutsche Bank Asset Allocation

Figure 12: Communication Services positioning



Source: Deutsche Bank Asset Allocation

Figure 14: Healthcare positioning



Source: Deutsche Bank Asset Allocation

Figure 16: Real Estate positioning



Source : Deutsche Bank Asset Allocation

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Fund flows summary

Figure 17: Summary of fund flows across assets and categories⁴

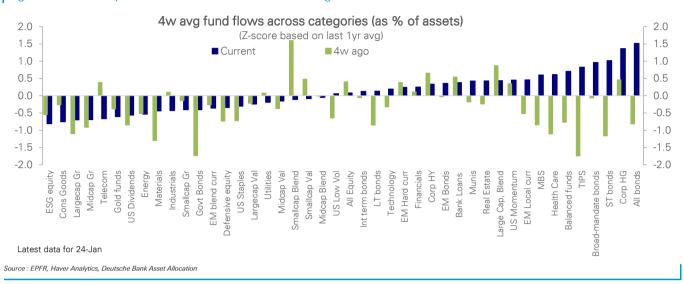
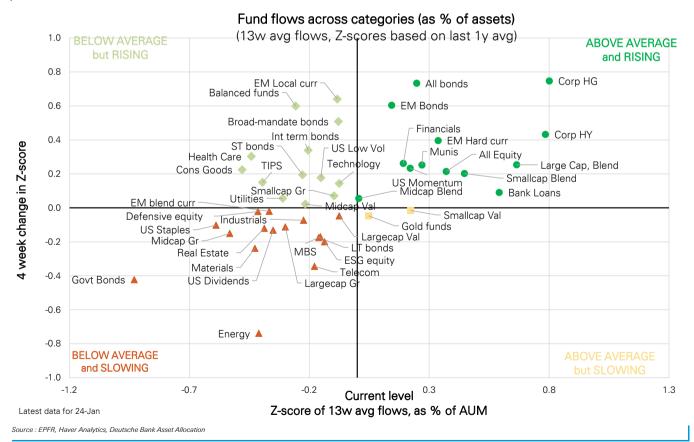


Figure 18: Recent trends in fund flows across asset classes and categories



⁴ Detailed fund flows charts are shown in the sections <u>Cross-Asset Fund Flows</u>, <u>Equity Fund Flows</u>, <u>Bond Fund Flows</u>



vFLARE: Volatility-Sensitive Systematic Strategies 5

Systematic strategies equity positioning

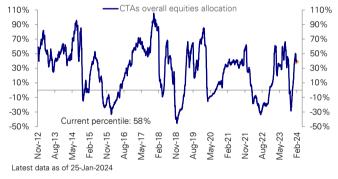
Figure 19: Systematic strategies positioning



*Weights based on explanatory power in regression of equity performance on indicators

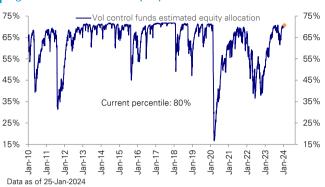
Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 21: CTAs exposure to equities



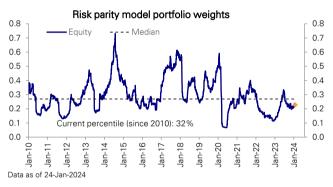
Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 20: Vol-Control equity allocations



Source : SEC filings, Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 22: Risk-Parity portfolio weight in equity



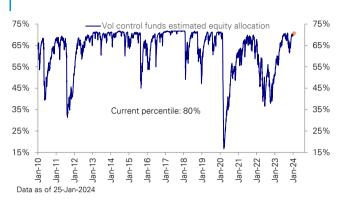
Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

⁵ More details can be found in Appendix



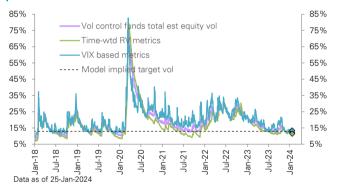
Vol control funds allocations

Figure 23: Vol-Control funds equity allocations⁶



Source: SEC filings, Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 25: Vol metrics breakdown



Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 24: Vol control funds equity allocation and estimated observed equity volatility



Source : SEC filings, Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 26: Vol control funds sensitivity to a 2% market selloff



Source : SEC filings, Bloomberg Finance LP, Deutsche Bank Asset Allocation

⁶ Vol funds total equity allocation tries to mimic the equity rebalancing behavior of a sample of 25 Vol funds following a constant target volatility strategy.



CTA portfolio weights⁷

Figure 27: CTAs exposure to equities



Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

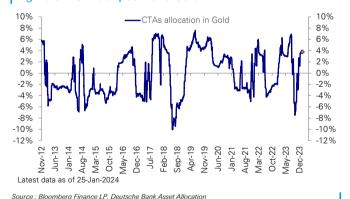
Source . Bloomberg i mance Er , Deutsche Bank Asset Allocation

Figure 29: CTAs exposure to FX

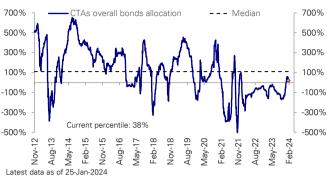


Source : Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 31: CTAs exposure to Gold







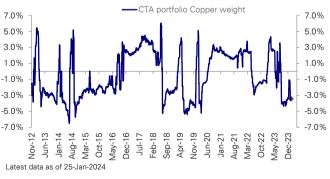
Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 30: CTAs exposure to Oil



Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 32: CTAs exposure to Copper



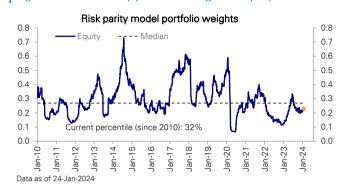
Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

⁷ These are model-based portfolio weights, and take into account for each asset class the momentum trend signal, volatility, and cross asset correlations. The model is designed to follow movements in CTA benchmark indices.



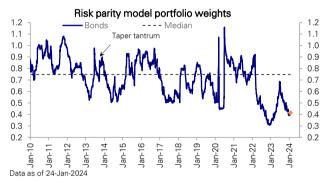
Risk Parity funds portfolio weights 8

Figure 33: Risk-Parity portfolio weight in equity



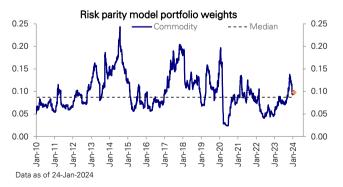
Source :Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 35: Risk-Parity portfolio weight in bonds



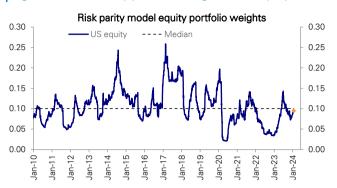
Source : Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 37: Risk-Parity portfolio weight in Commodity



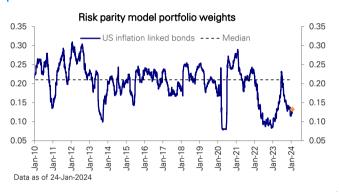
Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 34: Risk-Parity portfolio weight in US equity



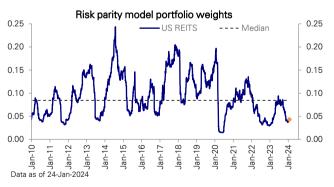
Source : Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 36: Risk-Parity portfolio weight in US inflation-linked bonds



Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 38: Risk-Parity portfolio weight in US REITs



Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

⁸ These are our model-based portfolio weights calculated to balance the risk contribution across different asset classes (equities, bonds, commodities), using volatility and cross asset correlations. The model is designed to follow movements in risk-parity benchmark indices



Custom Baskets Performance9

Figure 39: Early and Mid US Macro Cycle baskets performance



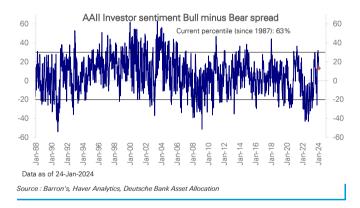
Figure 40: Late and End US Macro Cycle baskets performance



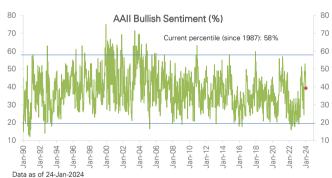
Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Investor Sentiment

Figure 41: Investor bull minus bear spread 10







Source : Barron's, Haver Analytics, Deutsche Bank Asset Allocation

Long/Short baskets with top 50 names deemed to outperform during each phase of the business cycle. More details in the report US Equity Strategy - Phase Of Cycle Baskets, Stay Long Late Cycle -

¹⁰ Investor sentiment (Bull minus Bear spread) from the AAII Investor Sentiment Survey.



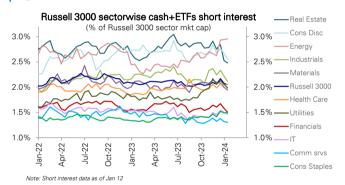
Equity Short Interest

Figure 43: Cash equities plus ETFs short interest¹¹



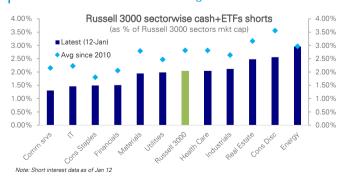
Source: Bloomberg Finance LP, Compustat, Deutsche Bank Asset Allocation

Figure 45: Russell 3000 sector wise short interest



Source: Bloomberg Finance LP, Compustat, Deutsche Bank Asset Allocation

Figure 47: Current Cash equities plus ETFs short interest across sectors vs historical average



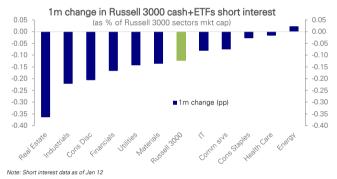
Source: Bloomberg Finance LP, Compustat, Deutsche Bank Asset Allocation

Figure 44: Median cash shorts taken as % of shares outstanding for S&P 500, Russell 2000 and Nasdaq 100



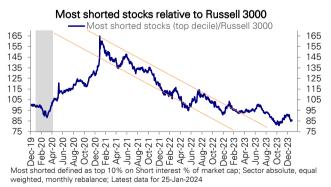
Source: Bloomberg Finance LP, Compustat, Deutsche Bank Asset Allocation

Figure 46: 1 month change in sector wise short interest



Source : Bloomberg Finance LP, Compustat, Deutsche Bank Asset Allocation

Figure 48: Short interest basket relative performance



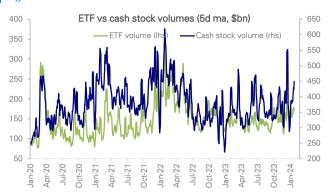
Source : Bloomberg Finance LP, Compustat, Deutsche Bank Asset Allocation

¹¹ Single stocks and ETFs short interest aggregate (price*shorted shares) across the Russell 3000 universe, taken as % of overall Russell 3000 market cap.



Volume and Liquidity

Figure 49: ETF and cash stock volumes¹²



Latest data for 25-Jan-2024

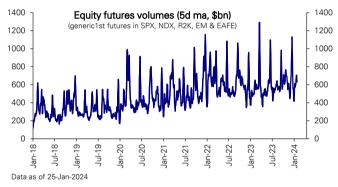
Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Total option volume (5d ma,thousands) 10500 10500 Total option volume (call + puts, 5d ma) 9500 9500 8500 8500 7500 7500 6500 6500 5500 5500 4500 4500 Jan-24

Source : CBOE, Haver Analytics, Deutsche Bank Asset Allocation

Data as of 25-Jan-2024

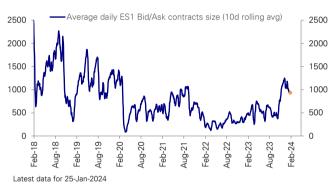




Source : Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 52: On-screen ES1 futures liquidity

Figure 50: Total options call+put volume



Source : Deutsche Bank Asset Allocation

¹² ETF Volume: Bottom up aggregate of volumes for more than 1300 equity ETF; Cash Volume: Total volume (US TAPE A+B+C) minus ETF volume

¹³ Futures Volume: 5-day rolling average of generic 1st futures volume across ES1, RTY1, NQ1, MES1 and MFS1 index.



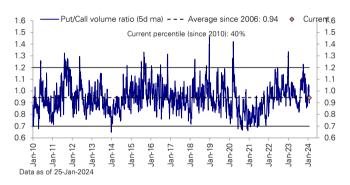
Option Metrics

Figure 53: Net bullish opened option volume for all customers ¹⁴



Source: OCC, Deutsche Bank Asset Allocation

Figure 55: Equity put/call volume ratio 15



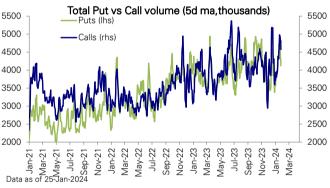
Source : CBOE, Haver Analytics, Deutsche Bank Asset Allocation

Figure 54: Net bullish opened option volume by customer category



Source: OCC, Deutsche Bank Asset Allocation

Figure 56: Equity put vs call volumes



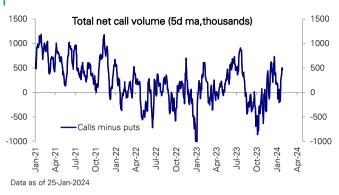
Source : CBOE, Haver Analytics, Deutsche Bank Asset Allocation

¹⁴ Net Bullish Opened option volumes: Difference between newly opened aggregate bullish contracts (buying a new Call or writing a Put) minus newly opened aggregate bearish contracts (buying a new Put or writing a Call)

¹⁵ Put/call volume ratio (5d ma): 5-day rolling average of the ratio of total put volume to total call volume across single stocks, indices and ETPs.

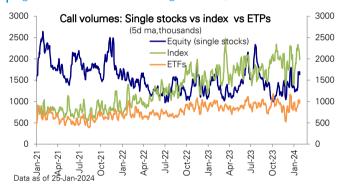


Figure 57: Total net call volume



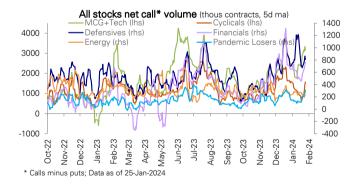
Source: CBOE, Haver Analytics, Deutsche Bank Asset Allocation

Figure 59: Call volume of single stocks, Index and ETPs



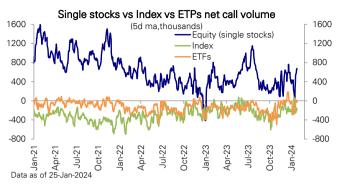
Source: CBOE, Haver Analytics, Deutsche Bank Asset Allocation

Figure 61: All stocks net call volume across sector groups



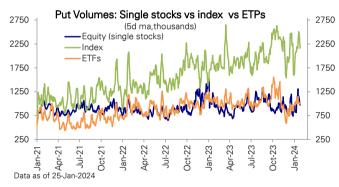
Source: OCC, Axioma, Deutsche Bank Asset Allocation

Figure 58: Net call volume of single stocks, Index and ETFs



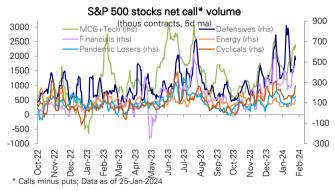
Source: CBOE, Haver Analytics, Deutsche Bank Asset Allocation

Figure 60: Put volume of single stocks, Index and ETPs



Source : CBOE, Haver Analytics, Deutsche Bank Asset Allocation

Figure 62: S&P 500 stocks net call volume across sector groups



Source: OCC, Axioma, Deutsche Bank Asset Allocation

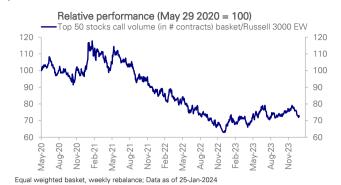


Figure 63: Put-call ratio of Open interest for S&P 500¹⁶



Source : Deutsche Bank Asset Allocation, OptionMetrics, Bloomberg Finance LP

Figure 64: Relative performance of a basket of stocks with the highest call volume in # of contracts



Source: OCC, Compustat, Deutsche Bank Asset Allocation

¹⁶ Put-call ratio of Open interest: Ratio of put to call open interest for S&P 500 and SPY ETF



S&P 500 Options: Vol, Skew, Correlation

Figure 65: 1M realized correlation and volatility

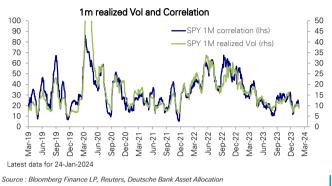
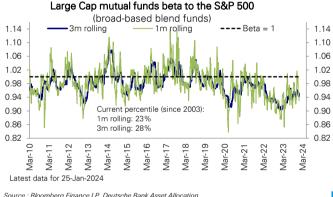


Figure 66: 3M implied vol and skew S&P 500 3m implied Vol and Skew 22 70 S&P 500 3m 90-110 skew (lhs) 20 60 S&P 500 3m implied volatility (rhs) 18 50 16 40 14 30 12 20 10 10 8 0 Jan-Latest data for 25-Jan-2024 Source: Bloomberg Finance LP, Reuters, Deutsche Bank Asset Allocation

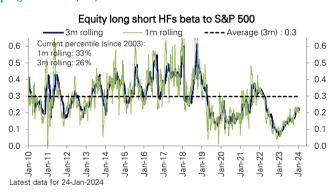
Equity funds beta to the S&P 500 17

Figure 67: Blended mutual funds beta to the S&P 500



Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 68: Equity L/S HFs beta to the S&P 500



Source : Bloomberg Finance LP, Deutsche Bank Asset Allocation

¹⁷ Equity mutual funds and L/S Hedge Index (HFRXEH) rolling 1-month and 3-month beta to the S&P 500.



Cross-Asset Fund Flows

Figure 69: Summary of fund flows across assets and categories

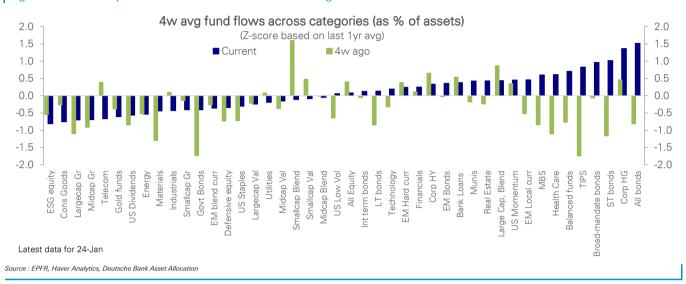
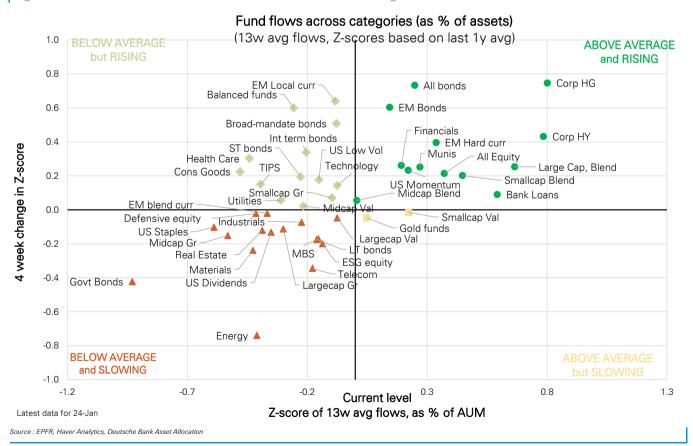


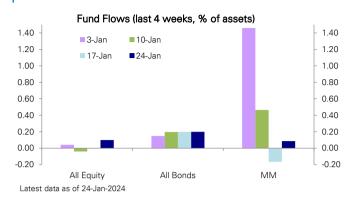
Figure 70: Recent trends in fund flows across asset classes and categories



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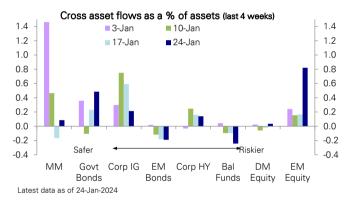
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Figure 71: Flows across major asset classes last 4 weeks



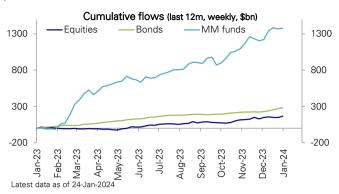
Source : EPFR, Haver Analytics, Deutsche Bank Asset Allocation

Figure 73: Cross-asset flows last 4 weeks



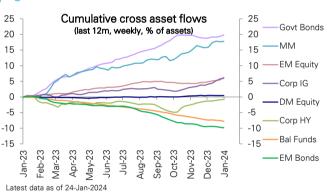
Source: EPFR, Haver Analytics, Deutsche Bank Asset Allocation

Figure 72: Flows across major asset classes in last 12 months



Source: EPFR, Haver Analytics, Deutsche Bank Asset Allocation

Figure 74: Cross-asset flows in last 12 months



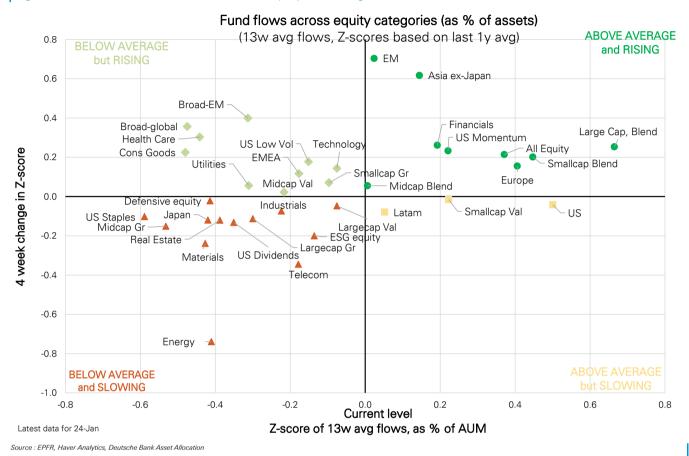
Source : EPFR, Haver Analytics, Deutsche Bank Asset Allocation

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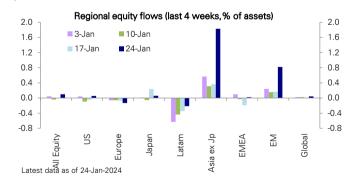


Equity Fund Flows

Figure 75: Recent trends in fund flows across equity fund categories

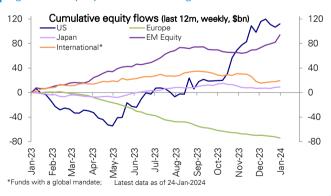






Source: EPFR, Haver Analytics, Deutsche Bank Asset Allocation

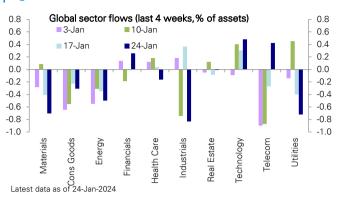
Figure 77: Equity flows across regions



Source: EPFR, Haver Analytics, Deutsche Bank Asset Allocation

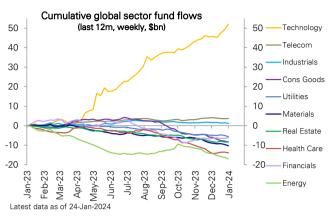


Figure 78: Sector fund flows last 4 weeks



Source: EPFR, Haver Analytics, Deutsche Bank Asset Allocation

Figure 79: Sector fund flows



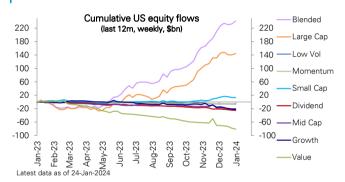
Source : EPFR, Haver Analytics, Deutsche Bank Asset Allocation

Figure 80: US equity flows into thematic funds last 4 weeks



Source : EPFR, Haver Analytics, Deutsche Bank Asset Allocation

Figure 81: US equity flows into thematic funds

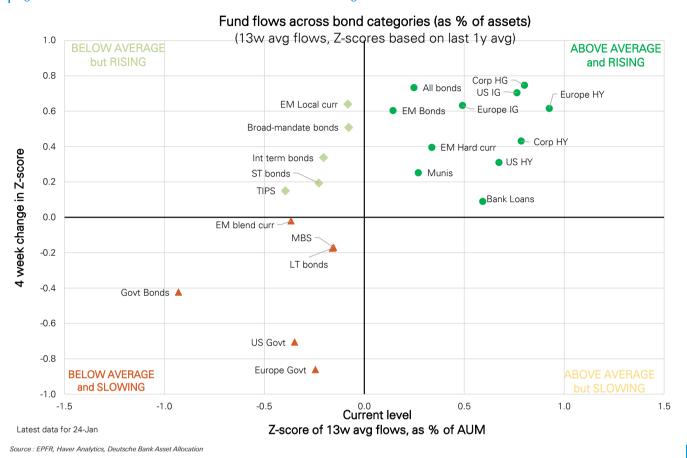


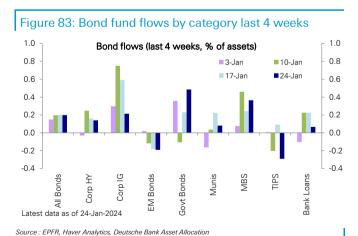
Source : EPFR, Haver Analytics, Deutsche Bank Asset Allocation

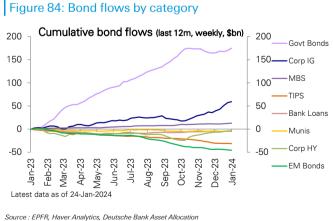


Bond Fund Flows

Figure 82: Recent trends in fund flows across bond fund categories



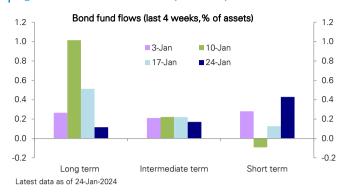




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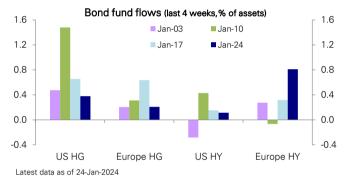
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Figure 85: Bond fund flows by maturity last 4 weeks



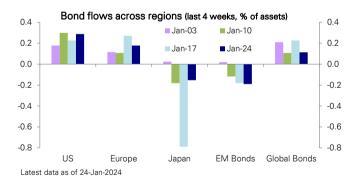
Source: EPFR, Haver Analytics, Deutsche Bank Asset Allocation

Figure 87: Credit fund flows to US and Europe last 4 weeks



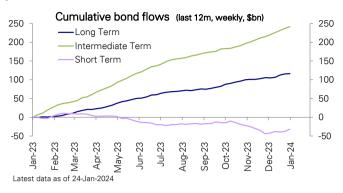
Source : EPFR, Haver Analytics, Deutsche Bank Asset Allocation

Figure 89: Bond fund flows across regions last 4 weeks



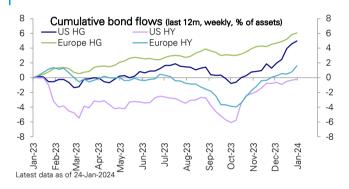
Source : EPFR, Haver Analytics, Deutsche Bank Asset Allocation

Figure 86: Bond fund flows by maturity



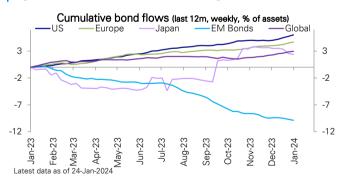
Source: EPFR, Haver Analytics, Deutsche Bank Asset Allocation

Figure 88: Credit fund flows to US and Europe



Source : EPFR, Haver Analytics, Deutsche Bank Asset Allocation

Figure 90: Bond fund flows across regions

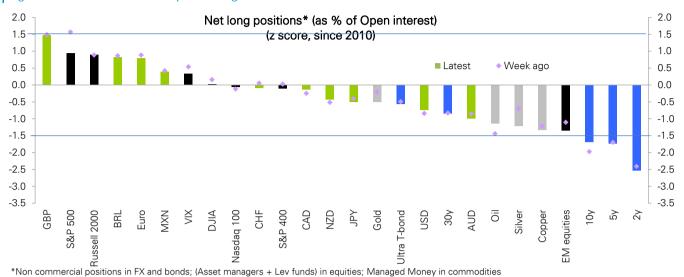


Source : EPFR, Haver Analytics, Deutsche Bank Asset Allocation



Cross-Asset Futures Positioning

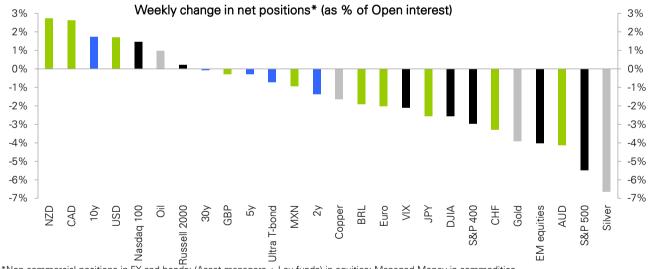
Figure 91: Cross-asset futures positioning



Source: CFTC, Bloomberg Finance LP, Haver Analytics, Deutsche Bank Asset Allocation

Positioning data as of 23 Jan 2024

Figure 92: Week-over-week changes in futures positioning



*Non commercial positions in FX and bonds; (Asset managers + Lev funds) in equities; Managed Money in commodities Positioning data as of 23 Jan 2024

Source: CFTC, Bloomberg Finance LP, Haver Analytics, Deutsche Bank Asset Allocation



Equity Futures Positioning

Figure 93: Aggregate US equity futures positioning



*Based on futures positions in S&P 500, Russell 2000, NASDAQ 100, S&P 400 and DJIA Positioning data as of 23 Jan 2024

Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 95: Aggregate US equity futures and ISM Manufacturing



Source : ISM, CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 97: Current US equity futures positioning



Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

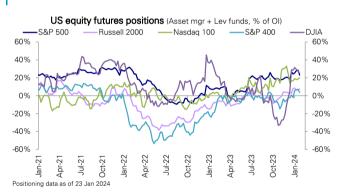
Figure 94: Aggregate US equity futures and S&P 500 ratio to its 200d ma



Net long futures positions in S&P 500, NASDAQ 100, DJIA, S&P 400 and R2K Positioning data as of 23 Jan 2024

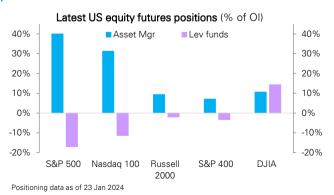
Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 96: US equity futures positioning



Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

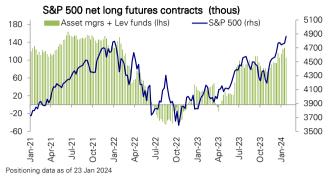
Figure 98: US equity futures positioning by Asset managers and Leveraged funds



 $Source: {\it CFTC, Haver Analytics, Deutsche Bank Asset Allocation}$

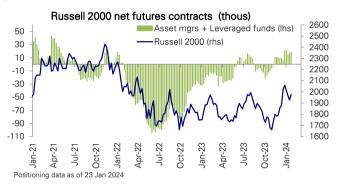


Figure 99: S&P 500 futures positioning



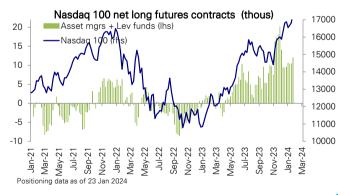
Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 101: Russell 2000 futures positioning



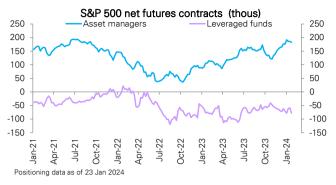
Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 103: Nasdag 100 futures positioning



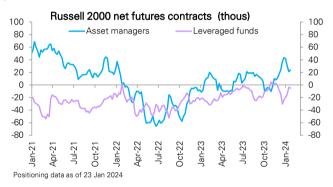
Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 100: S&P 500 futures positioning by Asset managers and Leveraged funds



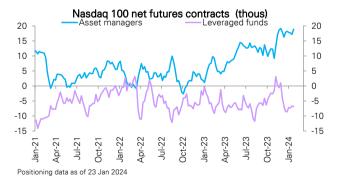
Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 102: Russell 2000 futures positioning by Asset managers and Leveraged funds



Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 104: Nasdaq 100 futures positioning by Asset managers and Leveraged funds

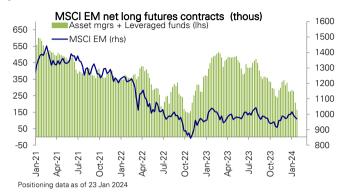


Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

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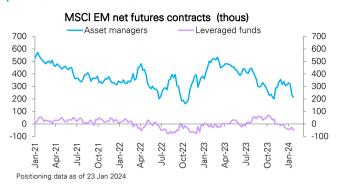


Figure 105: EM equity futures positioning



Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 106: EM equity futures positioning by Asset managers and Leveraged funds

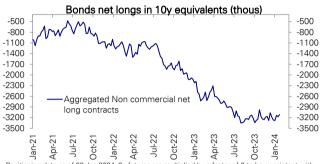


Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation



Bond Futures Positioning

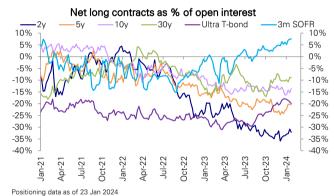
Figure 107: Aggregate bond futures positioning in thousand contracts



Positioning data as of 23 Jan 2024; 2y futures are multiplied by a factor of 2 to be consistent with other Treasury futures contracts which have face value of \$100k; contracts are wtd by effective duration based on 10y equivalents while aggregation

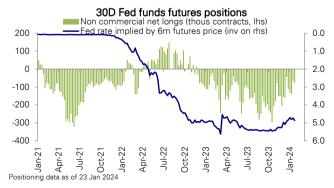
Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 109: Bond futures positioning by maturity



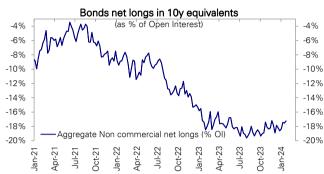
Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 111: 30d Fed Fund futures positioning



Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

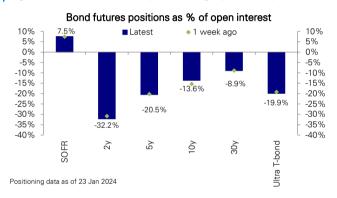
Figure 108: Aggregate bond futures positioning in % of open interest terms



Positioning data as of 23 Jan 2024; contracts are wtd by effective duration based on 10y equivalents while aggregation

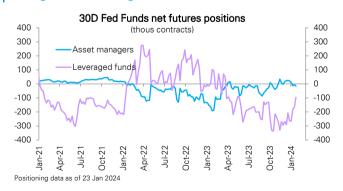
Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 110: Bond futures positioning by maturity



Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 112: 30d Fed Fund futures positioning by Asset managers and Leveraged funds

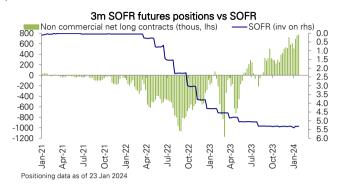


Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

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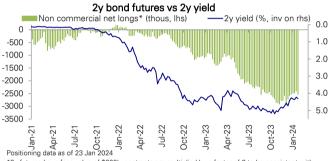
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Figure 113: SOFR futures positioning



Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

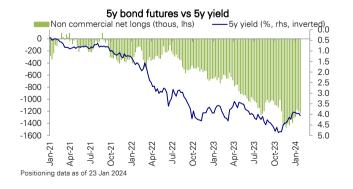
Figure 115: 2y treasury notes futures positioning



*2y futures have face value of \$200k; contracts are multiplied by a factor of 2 to be consistent with other Treasury futures contracts which have face value of \$100k

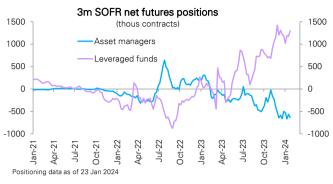
Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 117: 5y treasury notes futures positioning



Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 114: SOFR futures positioning by Asset managers and Leveraged funds



Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

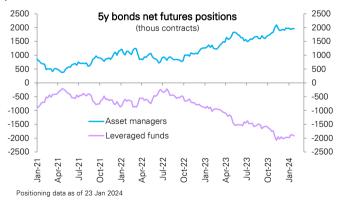
Figure 116: 2y treasury notes futures positioning by Asset managers and Leveraged funds



*2y futures have face value of \$200k; contracts are multiplied by a factor of 2 to be consistent with other Treasury futures contracts which have face value of \$100k

Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 118: 5y treasury notes futures positioning by Asset managers and Leveraged funds

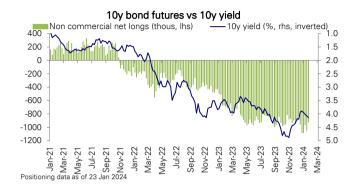


Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

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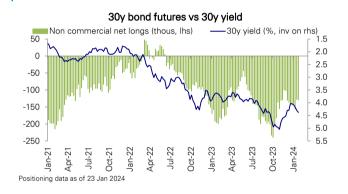
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Figure 119: 10y treasury notes futures positioning



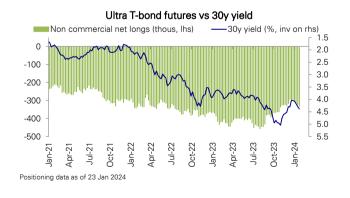
Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 121: 15-25y treasury bonds futures positioning



Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 123: 25y+ treasury bonds futures positioning



Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 120: 10y treasury notes futures positioning by Asset managers and Leveraged funds



Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 122: 15-25y treasury bonds futures positioning by Asset managers and Leveraged funds

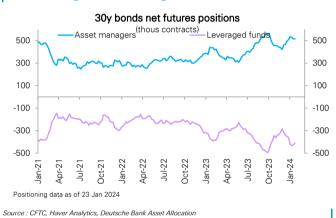
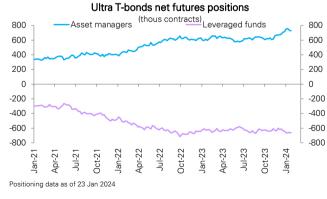


Figure 124: 25y+ treasury bonds futures positioning by Asset managers and Leveraged funds



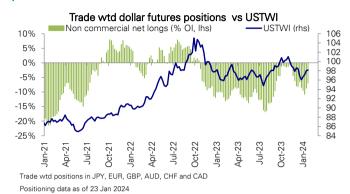
Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

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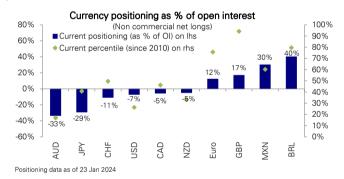
FX Futures Positioning

Figure 125: US trade weighted dollar positioning



Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 127: Currency futures positioning

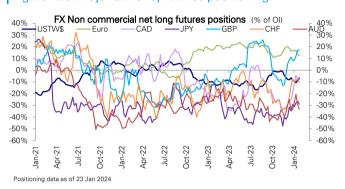


Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 129: US trade weighted dollar positioning

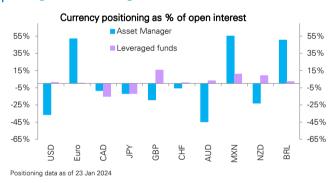


Figure 126: Major currency futures positioning



Source: CFTC. Haver Analytics, Deutsche Bank Asset Allocation

Figure 128: Currency futures positioning by Asset managers and Leveraged funds



Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 130: US trade weighted dollar positioning by Asset managers and Leveraged funds



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Figure 131: Euro futures positions

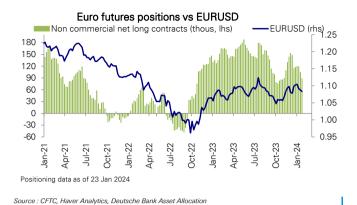


Figure 133: Yen futures positions

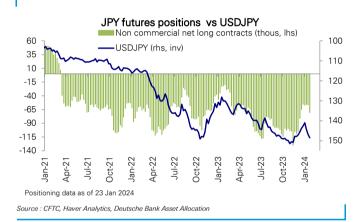


Figure 135: Sterling futures positions

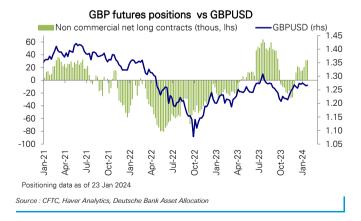


Figure 132: Euro futures positioning by Asset managers and Leveraged funds

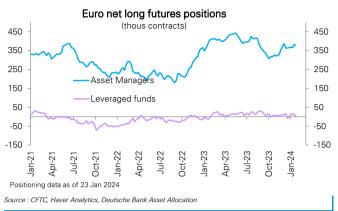


Figure 134: Yen futures positioning by Asset managers

and Leveraged funds

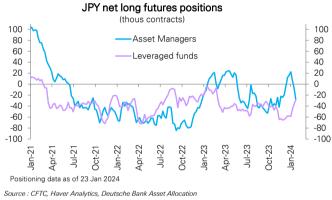
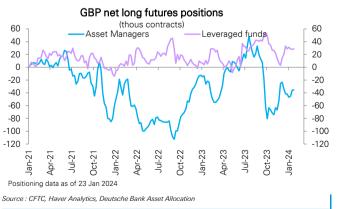


Figure 136: Sterling futures positioning by Asset managers and Leveraged funds



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Figure 137: Canadian dollar futures positions

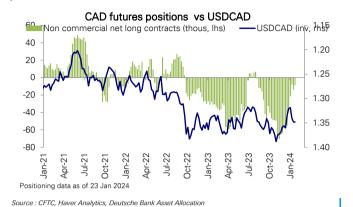


Figure 139: Aussie dollar futures positions

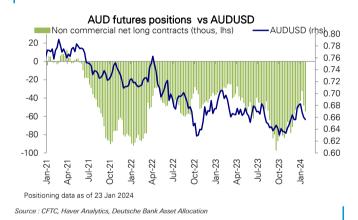


Figure 141: Swiss franc futures positions

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Figure 138: Canadian dollar futures positioning by Asset managers and Leveraged funds

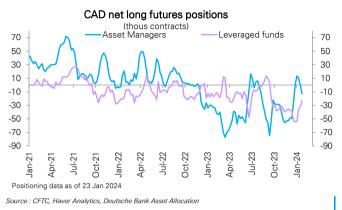
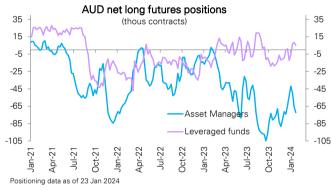


Figure 140: Aussia dollar futures positioning by Assat

Figure 140: Aussie dollar futures positioning by Asset managers and Leveraged funds



Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 142: Swiss franc futures positioning by Asset managers and Leveraged funds



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Figure 143: New Zealand dollar futures positions



Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 145: Mexican peso futures positions



Positioning data as of 23 Jan 2024

Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 147: Brazilian real futures positions



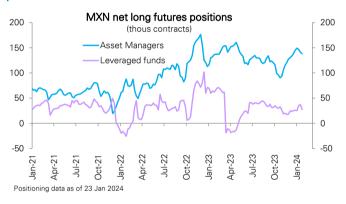
Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 144: New Zealand dollar futures positioning by Asset managers and Leveraged funds



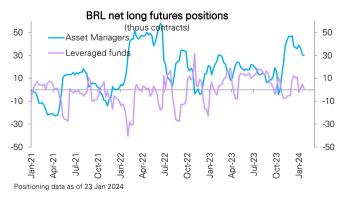
Source: CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 146: Mexican peso futures positioning by Asset managers and Leveraged funds



Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

Figure 148: Brazilian real futures positioning by Asset managers and Leveraged funds



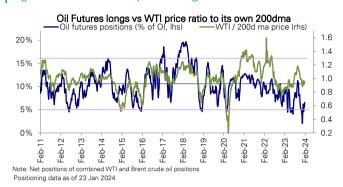
Source : CFTC, Haver Analytics, Deutsche Bank Asset Allocation

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Commodity Futures Positioning

Figure 149: Oil futures positioning



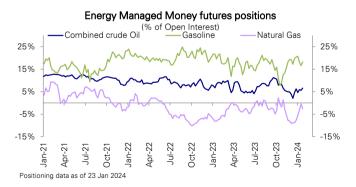
Source: CFTC, Bloomberg Finance LP, Haver Analytics, Deutsche Bank Asset Allocation

Figure 151: Copper futures positioning



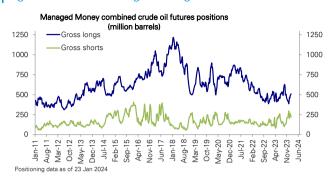
Source : CFTC, Bloomberg Finance LP , Haver Analytics, Deutsche Bank Asset Allocation

Figure 153: Energy futures positioning



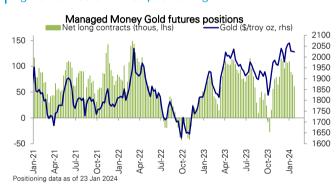
Source : CFTC, Bloomberg Finance LP , Deutsche Bank Asset Allocation

Figure 150: Oil futures gross longs and shorts



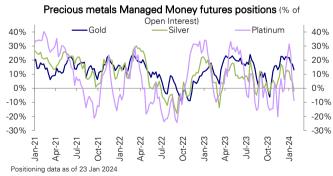
Source: CFTC, Bloomberg Finance LP, Haver Analytics, Deutsche Bank Asset Allocation

Figure 152: Gold futures positioning



Source : CFTC, Bloomberg Finance LP , Haver Analytics, Deutsche Bank Asset Allocation

Figure 154: Precious metals futures positioning



Source: CFTC, Bloomberg Finance LP, Deutsche Bank Asset Allocation

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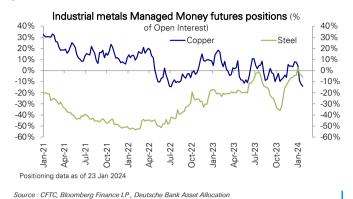
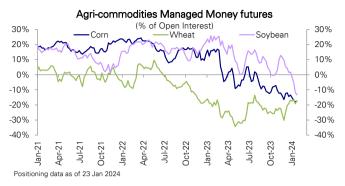


Figure 156: Agri commodities futures positioning

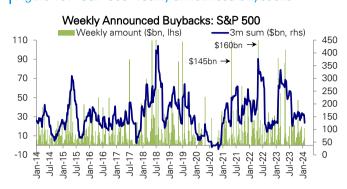


Source: CFTC, Bloomberg Finance LP, Deutsche Bank Asset Allocation



Buybacks Tracker

Figure 157: S&P 500 weekly announced buybacks



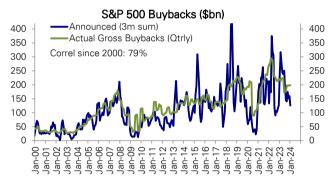
Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 158: S&P 500 sectors announced buybacks



Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 159: S&P 500 announced and actual buybacks



Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

Figure 160: Buyback baskets performance



Source: Bloomberg Finance LP, Deutsche Bank Asset Allocation

DB S&P 500 Forecasts

DB S&P 500 forecasts	
S&P 500 2024 target	5100
S&P 500 2024 EPS	\$250



Appendix

Aggregate Equity Positioning Indicator

Our measure of aggregate equity positioning is a weighted average of Z-scores across several positioning indicators. The indicator weights are based on the explanatory power of each variable in a regression with movements in the S&P 500.

Below is the list of indicators used in the aggregate positioning indicator

- Vol control funds equity allocation (Systematic). Vol funds total equity allocation tries to mimic the equity rebalancing behavior of a sample of 25 Vol funds following a constant target volatility strategy. More details can be found in the report '<u>Derivatives Spotlight: Vol Control Products</u> Disentangled: A Driver of Low-to-High Vol Transitions 24 Aug 2016'
- CTAs equity weight (Systematic). These are model-based portfolio weights, and take into account for each asset class the momentum trend signal, volatility, and cross asset correlations. The model is designed to follow movements in CTA benchmark indices.
- Risk parity funds equity portfolio weight (Systematic). These are our model-based portfolio weights calculated to balance the risk contribution across different asset classes (equities, bonds, commodities), using volatility and cross asset correlations. The model is designed to follow movements in risk parity benchmark indices.
- Equity futures (Systematic/Discretionary). Aggregate net long futures (long minus short contracts) for Asset managers and Leveraged funds in the S&P 500, Nasdaq 100, Russell 2000, S&P 400 and DJIA index, taken as a percentage of their open interest. Data from CFTC's Traders in Financial Futures report.
- Net call volume (Discretionary). Total net call volume (call minus put) across single stocks, indices and ETPs. Data from the Chicago Board Options Exchange.
- S&P 500 3m option skew (Discretionary). S&P 500 options skew (90%-110% moneyness implied volatility spread, 3-month maturity) from Bloomberg. Indicator is negatively correlated with the S&P 500, and the z-score values are multiplied by -1 before inclusion in the composite.
- Investor Bull minus Bear spread (Discretionary). Investor sentiment (Bull minus Bear spread) from the AAII Investor Sentiment Survey.
- Cash equity median shorts (Discretionary). Median of Russell 3000 universe shorted shares, taken as % of outstanding shares. Indicator is negatively correlated with the S&P 500, and the z-score values are multiplied by -1 before inclusion in the composite.
- ETFs short interest (Discretionary). Aggregate short interest (price*shorted shares) of more than 100 largest equity ETFs in the US, taken as % of overall Russell 3000 market cap. Indicator is negatively correlated with the S&P 500, and the z-score values are multiplied by -1 before inclusion in the composite.

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- IMX Retail positioning index (Discretionary). TD Ameritrade Investor Movement Index (IMX) which gauges the sentiment of retail investors.
- MFs holdings beta (Discretionary). The equity beta of the holdings of a sample of broad active equity mutual funds (excluding cash) taken from their quarterly 13F filings. The beta of the holdings to S&P 500 returns is calculated over a 3 year window

Sectors Equity Positioning

As an extension of the aggregate equity positioning, the sector positioning measure is also a weighted average of Z-scores across different sector level positioning indicators. The indicator weights are based on the explanatory power of each variable in a regression with movements in the S&P 500 sectors. More details can be found in the report 'Investor Positioning and Flows - Looking Across Sectors, Jul 7 2023'

Below is the list of indicators used in the aggregate sector positioning measure

- Net call volume. Net call volume (call minus put) across single stocks and sector ETFs averaged out over the last one month. Data from the OCC.
- Sector fund flows: Fund flows to sector based ETFs and mutual funds, taken as a percentage of AUM, and averaged out for the last 13 weeks. Data from EPFR.
- Cash equity median shorts. A de-trended median of Russell 3000 sector shorted shares, taken as % of outstanding shares. Indicator is negatively correlated with the S&P 500 sector performance, and the z-score values are multiplied by -1 before inclusion in the composite.
- Active MFs excess return correlation. Rolling 3-month correlation of the excess returns of a representative sample of US blended mutual funds with S&P 500 sector excess returns (both relative to the S&P 500).
- Analyst consensus target. Analysts current 12-month target price for the S&P 500 sector, taken as a ratio to its 200d ma. Data from Bloomberg.



Appendix 1

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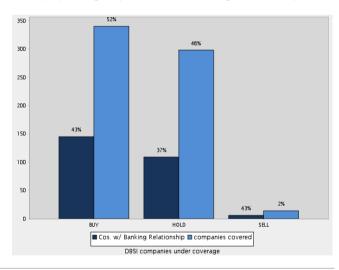
Sell: Based on a current 12-month view of TSR, we recommend that investors sell the stock.

Hold: We take a neutral view on the stock 12-months out and, based on this time horizon, do not recommend either a Buy or Sell.

TSR = Total Shareholder Return. Percentage change in share price from current price to projected target price plus projected dividend yield

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Equity rating dispersion and banking relationships



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David Folkerts-Landau

Group Chief Economist and Global Head of Research

Pam Finelli Global Chief Operating Officer Research

Steve Pollard Global Head of Company Research and Sales

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International Production Locations

Deutsche Bank AG

Deutsche Bank Place Level 16 Corner of Hunter & Phillip Streets Sydney, NSW 2000 Australia

Tel: (61) 2 8258 1234

Deutsche Bank AG 1 Great Winchester Street London EC2N 2EQ United Kingdom Tel: (44) 20 7545 8000

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Deutsche Bank Securities Inc. The Deutsche Bank Center 1 Columbus Circle New York, NY 10019 Tel: (1) 212 250 2500

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