Deutsche Bank Research

North America

Asset Allocation & Delta-1 Strategy

Investor Positioning and Flows

Date 24 May 2019 Strategy Update



Catching Down To Slowing Growth

Equities catching down to growth, which looks set to weaken further

We had noted last week that equities had again run ahead of current growth indicators, but with this week's sell-off that gap has now been closed. The manufacturing ISM has already fallen from a high of 60.8 last August to 52.8 in April. However, as our US economists have pointed out, export orders have been leading the manufacturing ISM and suggest further weakness down to 49.5 over the next 3 months or so. That points to further downside (5-6%) in the S&P 500 over the next 3 months.

Equity positioning declining but still at elevated levels

Equity-futures net long positioning has been declining over the last 4 weeks but is only a little below the top of its historical range. Futures volumes relative to cash set a new record last week (for periods outside quarterly futures rolls) amidst continued low and falling liquidity, suggesting relatively higher market impact. Vol Control funds have been tweaking their equity allocations, and on yesterday's down move sold about \$4-\$6bn, bringing the net selling for this month to \$12-\$15bn. Their equity exposure, however, remains close to maximum allocation, and the risk is to the downside. CTAs following shorter-term trends already exited long S&P 500 positions, but the aggregate CTA complex is still net long, albeit not as crowded as in 2018. Risk Parity added equity beta near the top, but volatility of the cross-asset portfolio is still relatively low helped by the negative correlation between equities and bonds. Equity L/S is running tight net exposure in a beta-driven market. Amongst other indicators, put/call ratios spiked yesterday as the market sold off, while retail sentiment remains near the bottom of its normal range.

Safety bid in flows

- As trade concerns continue to flare, money-market funds this week saw the largest inflow for the year. The large inflow is striking for a seasonally weak period of the year. Indeed over the last 4 weeks, money-market funds have seen inflows of almost \$100bn, reversing all of the outflows since mid-March, and a stark contrast to outright outflows or small inflows typically seen in corresponding periods in previous years.
- Flows rotating away from credit and into safer bonds. While bond funds (+\$6.4bn) continued to rake in strong inflows this week, there is a rotation happening within, with HY (-\$0.6bn) and EM (-\$1.1bn) seeing outflows, IG (+\$0.3bn) seeing small inflows, while defensive categories like government bonds (+\$1.8bn) and munis (+\$1.3bn) benefit. Shorter-term (+\$2.7bn) and

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intermediate-term (+\$2.6bn) bond funds have been the main beneficiaries, while flows into long-term (+\$0.2bn) funds are muted.

US equities saw inflows return this week, but other regions, especially EM, continue to bleed. Equity funds overall eked out a small inflow (+ \$0.9bn) this week with large inflows into US equities (+\$5.9bn) mostly offset by outflows from other regions. EM (-\$3.9bn) especially, saw the largest outflow since last June. The outflows from EM would have been even larger if not for Saudi Arabia (+\$1.1bn), which benefited from its inclusion into MSCI indices. Outflows from China equity funds resumed (-\$1.2b), after big inflows the week before. Europe (-\$1.9bn) and Japan (-\$0.2bn) continued to see outflows albeit at a somewhat slower pace than in recent weeks.

13F Flash: Hedge Funds added beta to Leverage, Profitability

Hedge Fund 13F filings for March 31st portfolios reveal that Equity L/S managers increased beta to both Leverage and Profitability in their single-stock portfolios over Q1. The increase in beta to Profitability is consistent with the historical outperformance of profitable companies in the late cycle of the macro regime. The increase in beta to Leverage is likely a response to the Fed's surprise policy shift in turning more dove-ish at their March meeting. Hedge Funds actually increased their sensitivity to the market in their single-stock portfolios. However we know Equity L/S is running tight net exposures, so we conclude PMs are controlling their net beta primarily via futures, ETFs, and options.

Oil long positioning declining but remains elevated amidst overvaluation

Oil positioning was near the top of its historical range and had been declining slowly prior to this week's sell-off. Despite the recent sell-off oil prices remain elevated relative to their long run fair value which takes into account the dollar and global growth but are no longer at extremes and are now back within their historical +/-30% overvaluation band.

Positioning details

Vol Control sold \$12-\$15bn of equities in May; CTA complex is still long S&P 500

- Vol Control has sold net \$12-\$15bn in equities in May. Starting the month at maximum equity allocations, Vol Control funds have been tweaking their equity allocations, selling when vol rises and buying when vol falls. On yesterday's down move, Vol Control sold ~\$4-\$6bn bringing the net selling for this month to \$12-\$15bn. VIX pick-up was moderate ending the week at 16.9, while 1M realized vol increased over the month to 14. With Vol Control still very close to maximum equity allocations, risk is to the downside. Vol Control de-risks quickly on a significant vol spike so could exacerbate a move particularly given low futures liquidity.
- More CTAs would sell S&P 500 on a move down through 2775. Funds following shorter-term trend already exited long S&P 500 positions, however the aggregate CTA complex is still net long. CTAs are also net long US Treasuries and USD and generally long other equity indices. We do not believe CTAs are as crowded in S&P 500 relative to 2018. However much of the asset base is systematic so will be forced seekers of liquidity on a large down move.
- Risk Parity added equity beta near the top. The PMs for these funds have significant discretion. However our models show Risk Parity re-allocating

Investor Positioning and Flows



more significantly to equities in Q2, missing the largest part of the rally in Q1. Volatility of the cross asset portfolio is still relatively low, as the pick-up in volatility across asset classes is mitigated by the negative correlation between equities and bonds.

Equity L/S is running tight net exposure in beta-driven market. Returns were relatively flat this past week, so YTD returns remain near +5% versus an equity market that has gained +13%. Top HF longs have performed largely in-line with top shorts, as the volatility in May has been mostly beta-driven. With both gross and net leverage down significantly from Q3'18, positioning from Equity L/S is light.

CFTC update:

- US equities: Net positioning in US equity futures continue to fall, but at a slower pace than the previous two weeks. Positioning fell across all US indices except for the Russell 2000 and NASDAQ where positioning rose.
- EM: MSCI EM futures longs fell modestly further this week after declining sharply from elevated levels last week. Despite the decline positions remain quite high. In EM FX, MXN long positioning fell while RUB long positioning rose. BRL elevated short positioning was unchanged.
- Commodities: Oil net long positioning continues to be pared back as has been the case over the last four weeks, but remains elevated. Short positioning in copper rose slightly further from the previous week while long positioning in gold fell sharply to almost neutral.
- FX: Long positioning in the trade-weighted dollar was flat this week. Shorts in GBP rose sharply from close to neutral while Euro, Yen, Swiss Franc, AUD and CAD shorts fell modestly.
- Bonds: Long positioning in Eurodollar rates continues a gradual climb higher over the last five weeks after turning long for the first time since Oct 2015. Positioning remains close to neutral in the 2y contract, a little short in the 5y and 15-25y and clearly short in the 10y and 25y+ maturities.
- VIX: VIX futures positioning is now in-line with historical averages, but short positioning rose from the previous week.

Fund flows details

US equities saw inflows return but other regions, especially EM, continue to bleed

■ Equity funds got their first inflows in 10 weeks, a modest \$0.9b, after persistent outflows amounting to -\$89b since mid-March. Inflows this week were driven by the US (+\$5.9b) and broad-based global funds (\$0.6b) even as outflows from EM (-\$3.9b), Europe (-\$1.9b) and Japan (-\$0.2b) continued. Outflows from Europe were largely driven by domestic funds (-\$1.7b), while that from Japan by foreign funds (-\$0.4b). EM equities witnessed their biggest weekly outflows in 11 months (-\$3.9b), as outflows from broad-based EM funds (-\$2.7b), Asia ex Japan (-\$1.9b) and Latam (-\$0.2b) could only be partly offset by record inflows to EMEA (\$1.0b) which could be attributed to the inclusion of Saudi Arabia in MSCI indices. Outflows from China resumed (-\$1.2b), after big inflows the week before, taking cumulative flows in the year to (-\$5.1b). India focused funds, which have been seeing steady outflows amounting to -\$5.9b since global trade tussles started early in 2018, saw inflows (\$0.1b), albeit small, on positive expectations relating to election outcomes.

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- Across sectors, (Utilities (-\$0.6b) and Health care (-\$0.5b)) and Energy (-\$0.2b) witnessed outflows; Cons Goods (\$0.8b), Tech (\$0.3b) and Real Estate (\$0.1b) got inflows; flows to other sectors were negligible. Broadly, defensive equities continued to draw inflows (\$0.8b) this week again on strong inflows to Low Vol funds (\$0.6b) and dividend funds (\$0.4b), despite outflows from utilities funds.
- Across size funds, large cap funds (\$7.5b) got huge inflows, their largest in 10 weeks, whereas steady outflows from mid-cap (-\$0.5b) and small cap (-\$0.7b) funds continued.
- Across style funds, both Growth funds (-\$0.3b) and Value funds (-\$0.5b) witnessed outflows this week; this is the 10th straight week of outflows from Value funds.

Steady inflows to bond funds continue

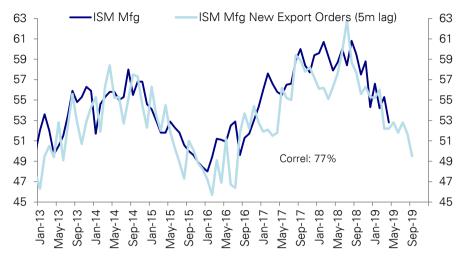
- Bond fund inflows (\$6.4b) continued for the 20th consecutive week, but at a slower pace compared with that in late Mar/early Apr. These inflows continue to be driven by rate-sensitive funds that absorbed \$6.1b in flows this week.
- Across bond categories, generic bonds (+\$5.0b) continued to be the biggest beneficiary of interest in fixed income funds; government bonds (\$1.8b) and corporate investment grade (\$0.3b) received inflows, while EM bonds (-\$1.1b) and high yield (-\$0.6) witnessed modest outflows. TIPS funds (\$0.1b), MBS (+\$0.4b) and Munis (+\$1.3b) continued to receive inflows while bank loans (-\$0.6b) completed their six of months weekly outflows.
- Across regions, US (\$2.8b) and Europe (\$2.6b) absorbed inflows, while EM (-\$1.1b) witnessed outflows; flows to Japan were muted.
- Across maturities, short term funds (+\$4.3b) benefitted the most, while intermediate term funds (+\$3.7b) and long term funds (+\$1.7b) too received inflows.

Money-market funds get their biggest inflows ytd

 Money-market funds received massive inflows (\$49.6b), their biggest year to date; US (\$41.1b) absorbed the bulk of inflows, while Europe (\$7.3b) and Japan (\$0.3b) received relatively modest inflows.

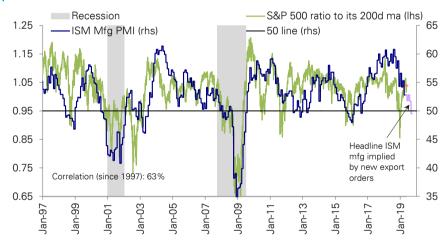


Figure 1: Export orders have been leading the manufacturing ISM and point to further weakness ...



Source: DB US Economics, Deutsche Bank Asset Allocation & Delta-1 Strategy, Haver

Figure 2: ...which in turn points to lower equities

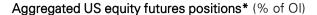


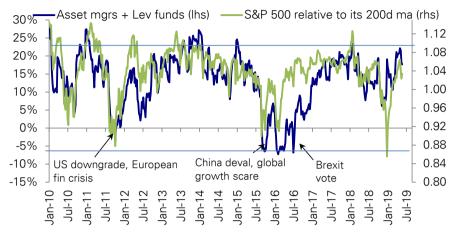
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Haver

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Figure 3:Equity futures positioning is declining but still remains at elevated levels

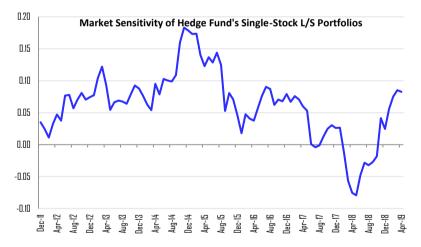




Net long futures positions in S&P 500, NASDAQ 100, DJIA, S&P 400 and R2K Positioning data as of May 21 2019

Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver

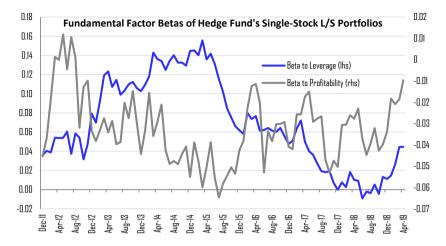
Figure 4: Hedge Funds increased market beta in their single-stock portfolios over Q1, net exposure is low due to beta hedging with ETFs, futures, options



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Bloomberg Finance LP

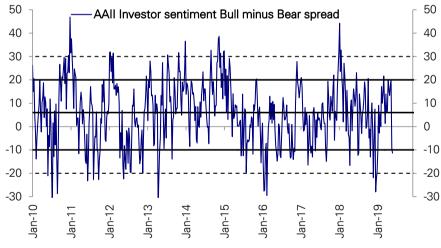


Figure 5: Hedge Funds increased their exposure to both Leverage and Profitability in their single-stock portfolios over Q1



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy

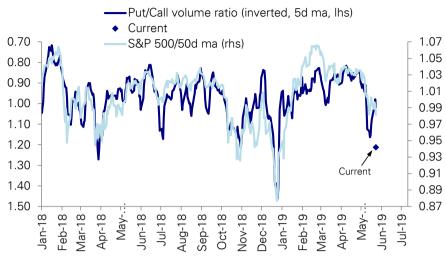
Figure 6:Retail sentiment remains near the bottom of its normal range



Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, Bloomberg







Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Haver

Figure 8:There is a safety bid in fund flows

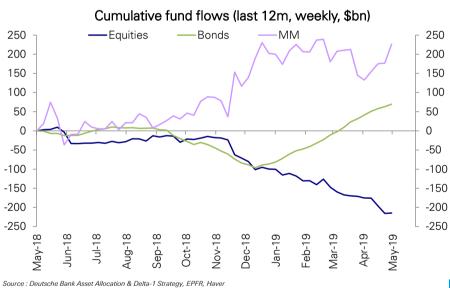
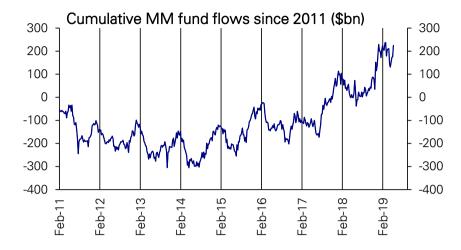


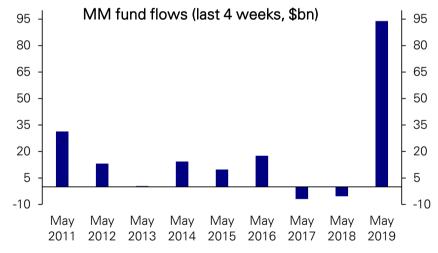


Figure 9: Money-market funds are getting large inflows in a period which usually sees seasonal weakness



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver

Figure 10:Money-market funds have seen almost \$100bn flow in over the last 4 weeks, considerably larger than in corresponding periods in previous years



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haven

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Figure 11: Money-market funds and government bond funds are seeing inflows while riskier asset classes are seeing outflows

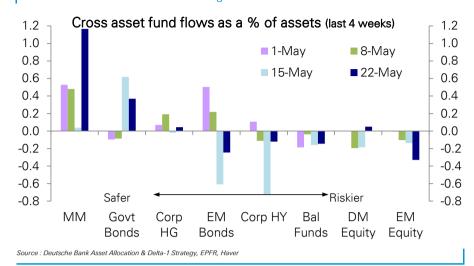
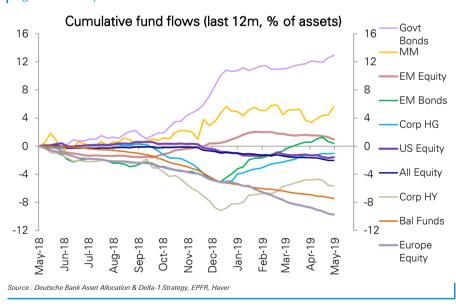


Figure 12:Sharp divide in flows into safer asset classes and out of riskier ones



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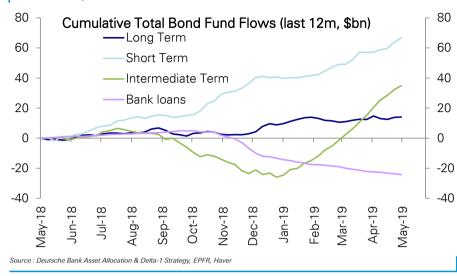
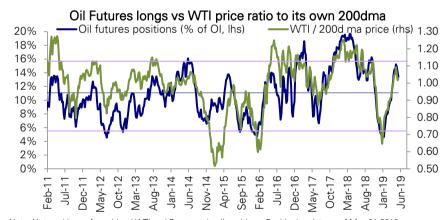


Figure 14:Oil positioning is elevated



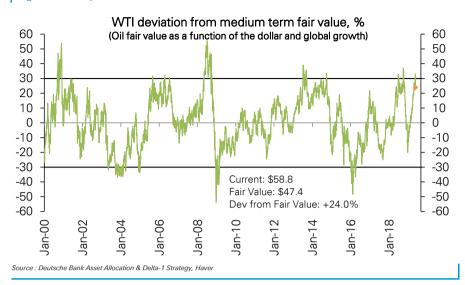
Note: Net positions of combined WTI and Brent crude oil positions; Positioning data as of May 21 2019

Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Havel

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Figure 15:Oil prices remain overvalued

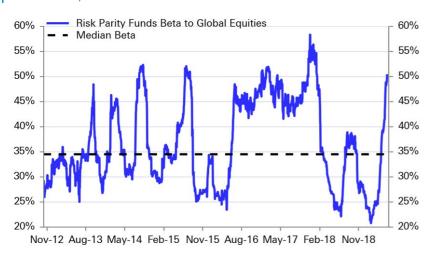


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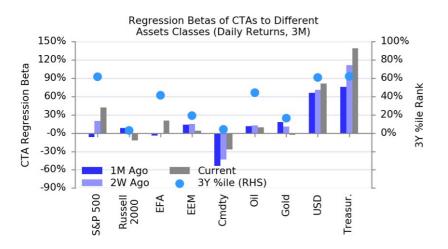
vFLARE: Volatility-Sensitive Systematic Strategies

Figure 16: Risk Parity equity exposure has steadily climbed to the highest in more than a year



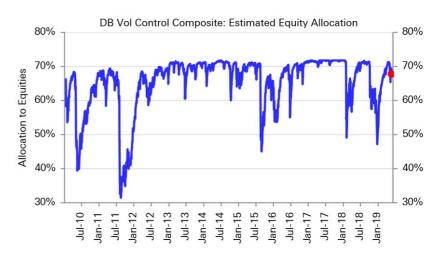
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, SEC filings, Bloomberg Finance LP, Data as of 22-May-19

Figure 18: CTAs are most crowded in long USD and Treasuries



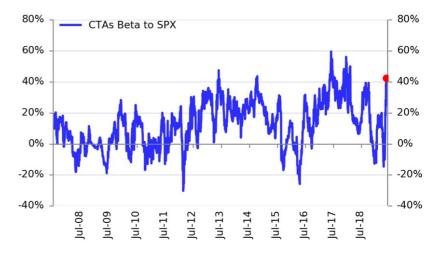
Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, SEC filings, Bloomberg Finance LP, Data as of 22-May-19

Figure 17: Vol Control sold net \$12-\$15bn in equities in May



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, SEC fillings, Bloomberg Finance LP, Data as of 23-May-19

Figure 19: CTAs are long S&P 500 but not as crowded as in 2018



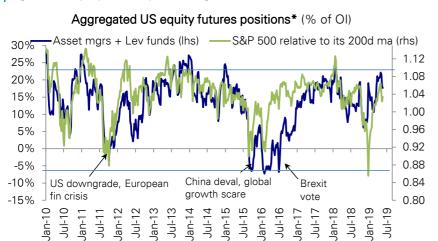
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, SEC filings, Bloomberg Finance LP, Data as of 22-May-19



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S&P 500 futures liquidity is still very low

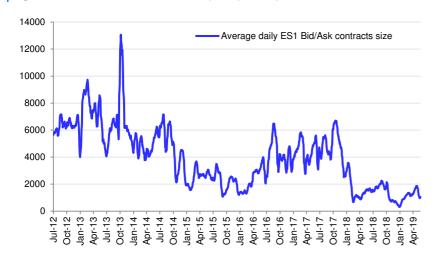
Figure 20: Equity futures positioning and the S&P 500



Net long futures positions in S&P 500, NASDAQ 100, DJIA, S&P 400 and R2K Positioning data as of May 21 2019

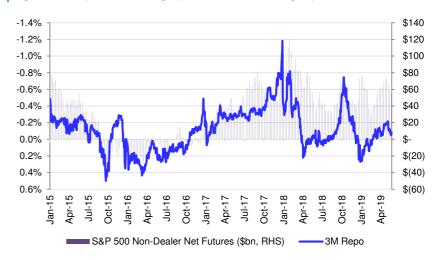
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 22: On-screen ES1 futures liquidity is very low



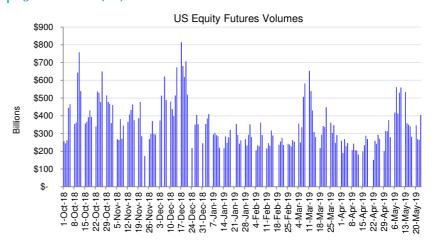
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy. Data as of 23-May-19.

Figure 21: Implied financing spreads fell further slightly this week



Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC. Data as of 21-May-19.

Figure 23: US equity futures volumes remain elevated

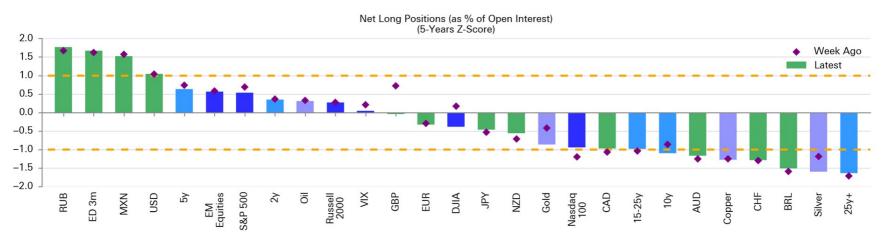


Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, Bloomberg Finance LP, Data as of 23-May-19.



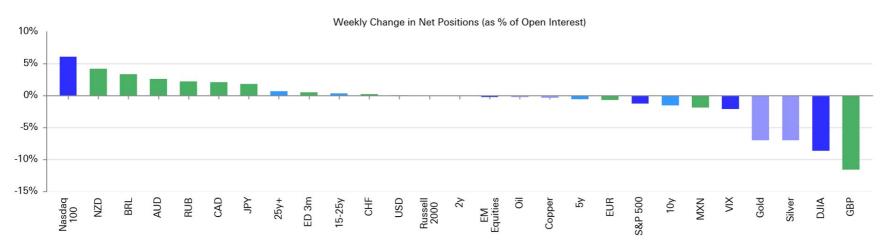
Cross-Asset Futures Positioning and Flows

Figure 24: Investor positioning in cross asset futures as of May 21st



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Bloomberg Finance LP, Data as of 21-May-19.

Figure 25: Week-over-week changes in futures positioning



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Bloomberg Finance LP, Data as of 21-May-19

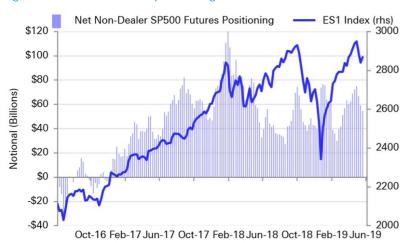


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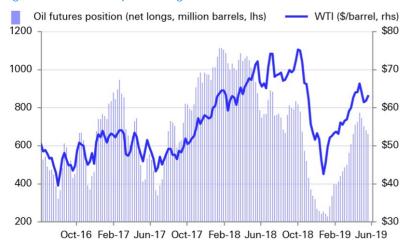
Futures Positioning: US Equities, USD, WTI Oil, & 10Y Treasuries

Figure 26: S&P 500 futures positioning



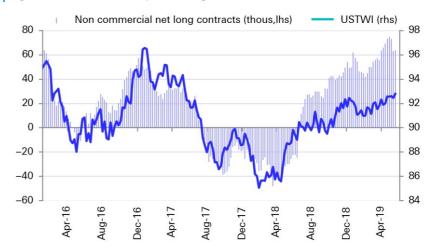
Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Bloomberg Finance LP, Data as of 21-May-19

Figure 28: Oil futures positioning



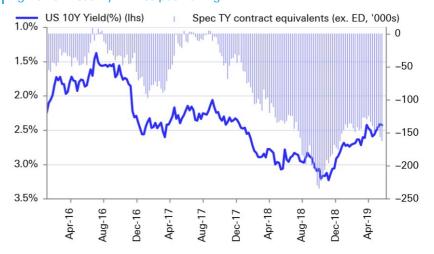
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Bloomberg Finance LP, Data as of 21-May-19

Figure 27: Dollar futures positioning



Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Bloomberg Finance LP, Data as of 21-May-19

Figure 29: Treasury futures positioning

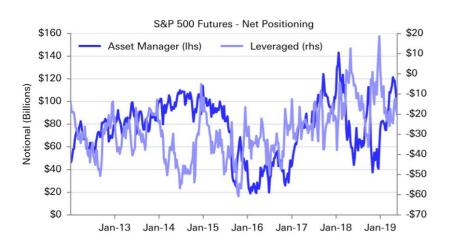


Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Bloomberg Finance LP, Data as of 21-May-19.



Futures Positioning: US Equities

Figure 30: Leveraged Funds and Asset Managers futures positioning



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Bloomberg Finance LP, Data as of 21-May-19.

Figure 32: US equity futures positioning - 1Y Percentile Ranks

	SPX	RTY	RTY NDX DJIA I		MSCI EM MSCI EAF	
ND-LONG	51%	19%	58%	38%	64%	89%
ND-SHORT	51%	6%	40%	70%	11%	96%
ND-NET	60%	49%	62%	23%	64%	57%
AM-LONG	57%	40%	72%	77%	64%	91%
AM-SHORT	36%	64%	2%	34%	26%	100%
AM-NET	79%	53%	96%	77%	66%	70%
LM-LONG	30%	4%	49%	8%	6%	15%
LM-SHORT	51%	15%	89%	91%	47%	25%
LM-NET	30%	43%	6%	2%	23%	45%
OT-LONG	58%	32%	23%	74%	53%	98%
OT-SHORT	100%	96%	91%	55%	2%	13%
OT-NET	15%	25%	9%	58%	89%	98%

Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Bloomberg Finance LP, Data as of 21-May-19.

Figure 31: Aggregate futures positions and shorts in single stocks and ETFs



Note: Futures net longs minus single stock and ETF shorts. Shorts data as of Apr 30, S&P futures May 21

Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Bloomberg Finance LP.

Figure 33: US equity futures WoW Change - 1Y Z-score

	SPX	RTY	NDX	DJIA	MSCI EM	MSCI EAFE	
ND-LONG	0.24	0.25	0.73	-1.44	-0.66	0.87	
ND-SHORT	0.92	0.14	-0.43	0.14	-0.18	0.7	
ND-NET	-0.6	0.18	0.76	-1.4	-0.63	0.55	
AM-LONG	0.13	0.18	0.65	-2.4	-0.49	0.68	
AM-SHORT	0.74	-0.66	-0.29	-0.05	-0.43	0.62	
AM-NET	-0.19	0.61	0.6	-1.99	-0.3	0.45	
LM-LONG	-0.2	-0.03	0.07	-0.07	-1.25	0.34	
LM-SHORT	0.22	0.46	-0.43	0.07	0.76	0.45	
LM-NET	-0.29	-0.42	0.33	-0.11	-1.5	-0.11	
OT-LONG	0.7	0.61	1.21	0.81	0.65	0.35	
OT-SHORT	1.58	1.25	0.65	0.47	-1.12	-0.87	
OT-NET	-0.41	-0.43	0.47	-0.01	1.37	0.57	

Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Bloomberg Finance LP, Data as of 21-May-19.



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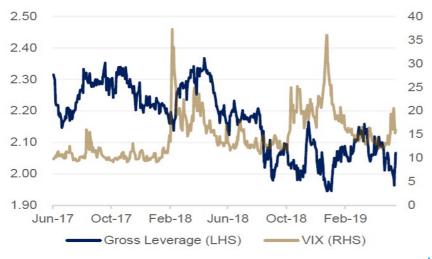
Equity L/S Hedge Funds

Figure 34: Hedge Fund's top \$-longs relative performance to top \$-shorts was stable this week



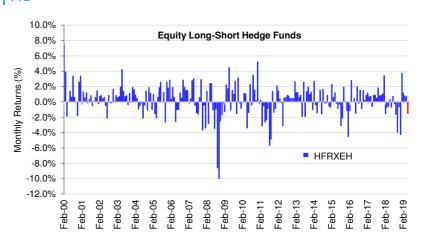
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Bloomberg Finance LP, Factset, Axioma. Data as of 23-May-19.

Figure 36: L/S Equity Hedge Funds Gross Leverage increased with relatively stable volatility



Source: Deutsche Bank Global Prime Finance, Reuters. Data as of 23-May-19.

Figure 35: Equity L/S Hedge Fund returns are down -1.5% in May but +5% YTD



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Bloomberg Finance LP. Data as of 22-May-19.

Figure 37: Net Beta for Equity L/S is low

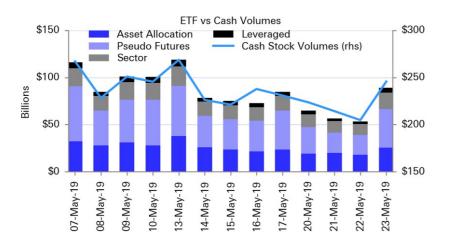


Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Bloomberg Finance LP. Data as of 22-May-19.



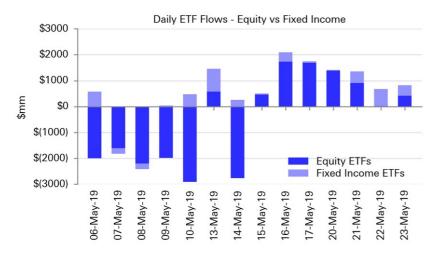
ETFs: Volumes and Flows

Figure 38: Cash and ETF volumes increased during the Thursday sell-off



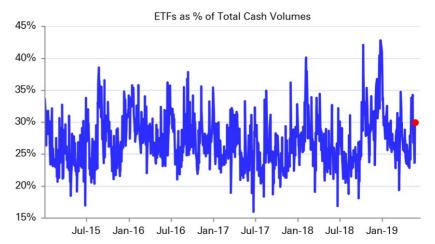
Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, Factset, Reuters, Bloomberg Finance LP, Data as of 23-May-19

Figure 40: Equity and Fixed Income ETFs saw inflows this week



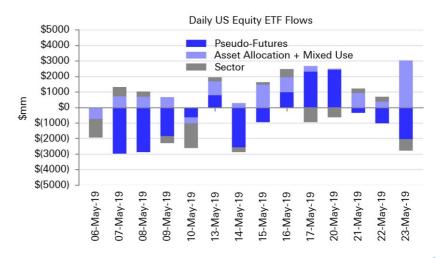
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Factset, Reuters, Bloomberg Finance LP, Data as of 23-May-19.

Figure 39: ETF participation in cash trading remained range bound



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Factset, Reuters, Bloomberg Finance LP, Data as of 23-May-19.

Figure 41: Asset Allocation Equity ETFs had inflows on Thursday, while SPY was down by more than 1%



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Factset, Reuters, Bloomberg Finance LP, Data as of 23-May-19.



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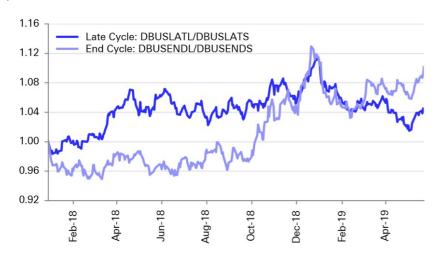
Equity Premia: Momentum rallied; China-beta themes underperformed

Figure 42: US Fast Factors: Momentum kept up its rally this week



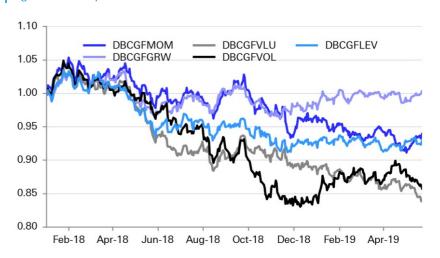
Source : Deutsche Bank Quantitative & Delta-1 Strategy, Axioma, Factset, Bloomberg Finance LP, Data as of 23-May-19

Figure 44: End Macro Cycle basket performance picked up this week



Source : Deutsche Bank Asset Allocation & Delta-1 Strategy. Haver Analytics, Bloomberg Finance LP. Data as of 23-May-19.

Figure 43: Europe Fast Factors: Residual Vol and Value sold off



Source :Deutsche Bank Quantitative & Delta-1 Strategy, Axioma, Factset, Bloomberg Finance LP, Data as of 23-May-19

Figure 45: Machinery, Capital Goods, Inflation, China Internet underperformed

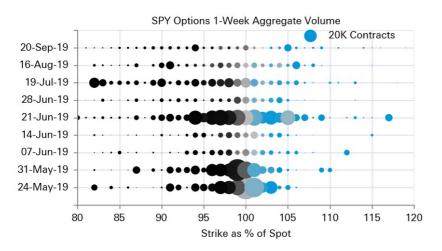


Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Axioma, Factset, Bloomberg Finance LP, Data as of 23-May-19



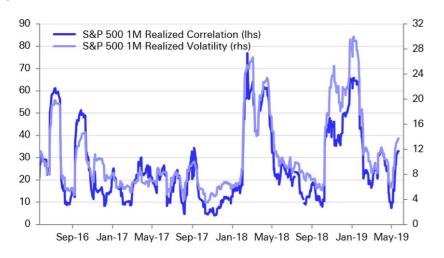
S&P 500 Options: Open Interest, Vol, Skew, Correlation

Figure 46: SPY put options were active



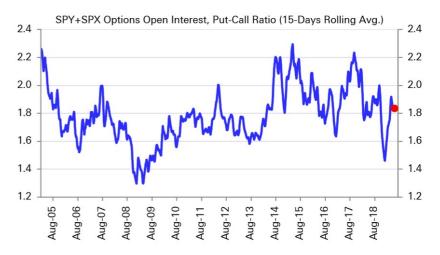
Source: Deutsche Bank Quant & Delta-1 Strategy, OptionMetrics, Bloomberg Finance LP. Data as of 23-May-19.

Figure 48: 1M realized correlation and volatility increased but are still moderate



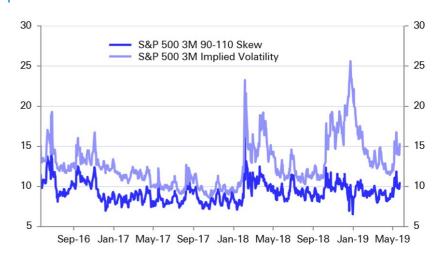
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Bloomberg Finance LP, Reuters. Data as of 23-May-19.

Figure 47: Put-call ratio for S&P 500 is near YTD high



Source: Deutsche Bank Quant & Delta-1 Strategy, OptionMetrics, Bloomberg Finance LP. Data as of 23-May-19

Figure 49: Implied volatility and skew spiked but have partially retraced



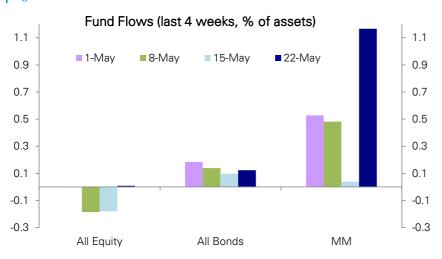
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, Bloomberg Finance LP, Reuters. Data as of 23-May-19.



Cross-asset flows

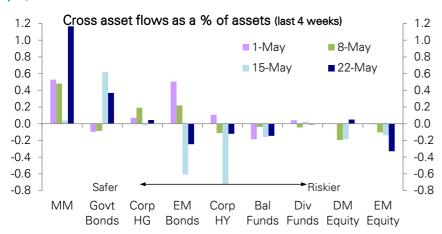
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Figure 50: Flows across asset classes last 4 weeks



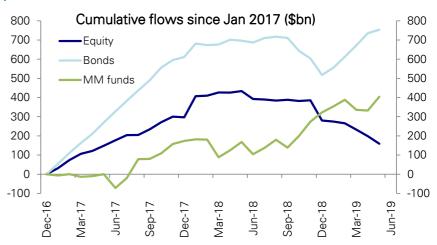
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19

Figure 52: Cross asset flows last 4 weeks



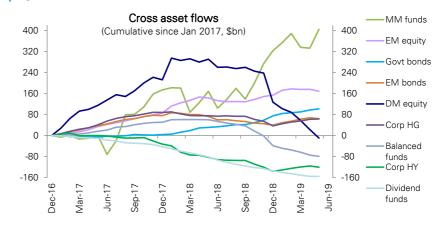
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19

Figure 51: Flows across asset classes cumulative since 2017



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19

Figure 53: Cross asset flows cumulative since 2017

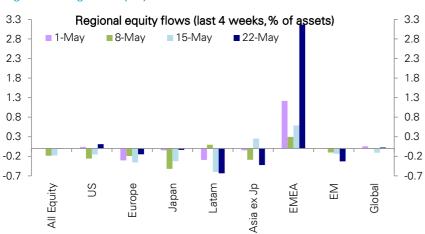


Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19



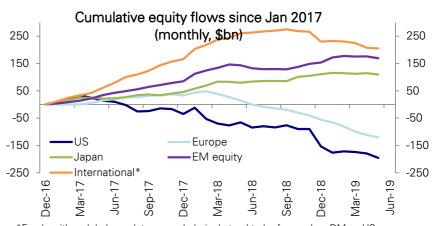
Equity Flows

Figure 54: Regional equity fund flows last 4 weeks



Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19

Figure 55: Equity flows across region



*Funds with a global mandate, overwhelmingly tend to be focused on DM ex-US

Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19

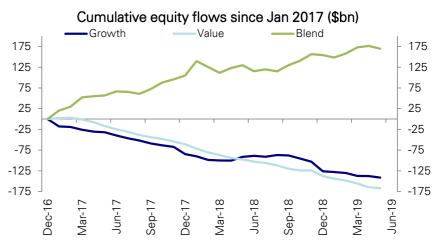
Figure 56: Equity flows by fund style last 4 weeks

Equity fund flows (last 4 weeks,% of assets)



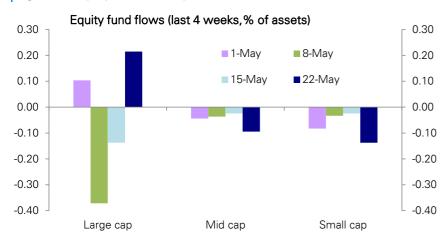
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19

Figure 57: Equity flows by fund style



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19





Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19

Figure 60: Sector fund flows last 4 weeks

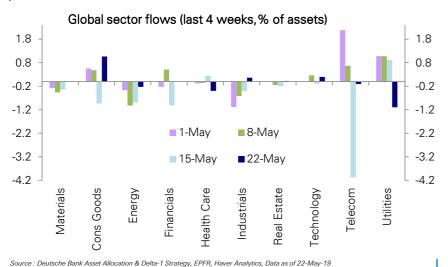


Figure 59: Equity fund flows by size

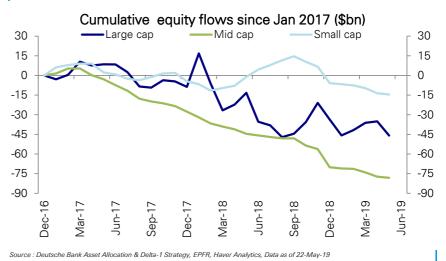
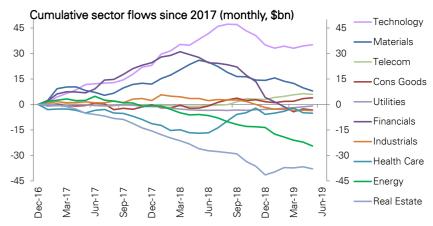


Figure 61: Sector fund flows

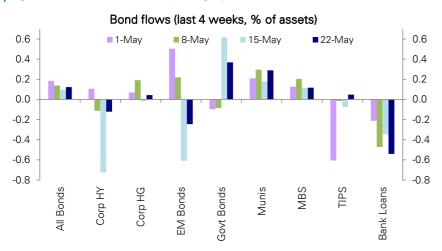


Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19



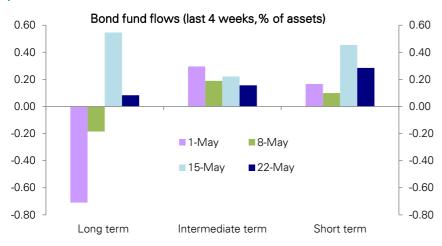
Bond fund flows

Figure 62: Bond fund flows by category last 4 weeks



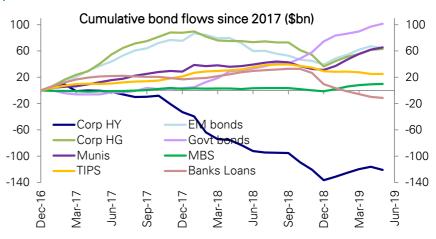
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19

Figure 64: Bond fund flows by maturity last 4 weeks



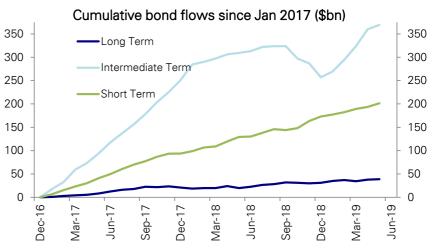
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19

Figure 63: Bond flows by category



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19

Figure 65: Bond fund flows by maturity



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, EPFR, Haver Analytics, Data as of 22-May-19



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Equity futures positioning

Figure 66: 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 May 21 2019

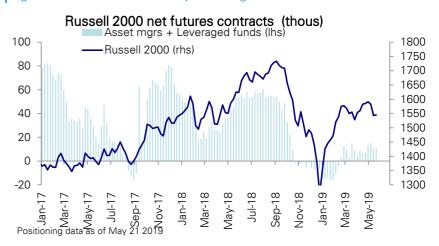
Source : DB Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 68: US equity futures positioning



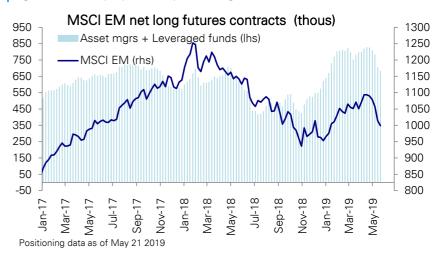
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 67: Russell 2000 futures positioning



Source: DB Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 69: EM equity futures positioning

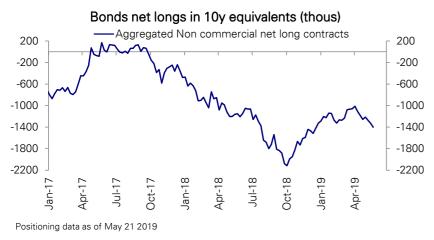


Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics



Bond futures positioning

Figure 70: Aggregate bond futures positioning



Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 72: Eurodollar futures positioning

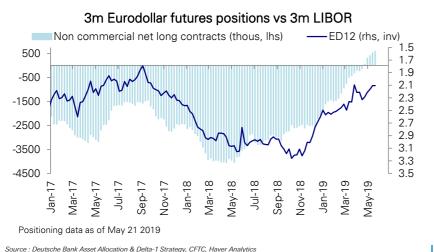
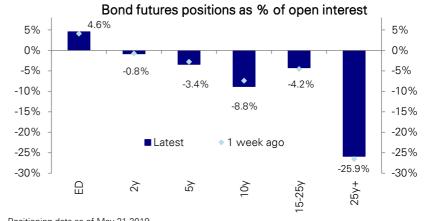


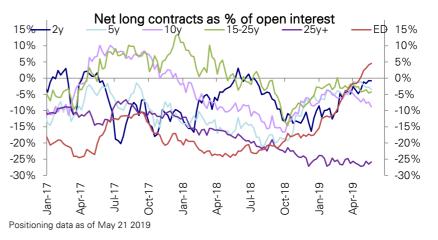
Figure 71: Bond futures positioning by maturity



Positioning data as of May 21 2019

Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 73: Bond futures positioning by maturity



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

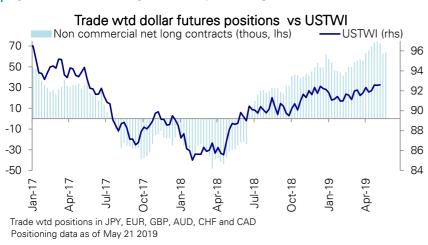


Deutsche Bank Securities Inc.

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FX futures positioning

Figure 74: US trade weighted dollar positioning



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 76: Yen futures positions

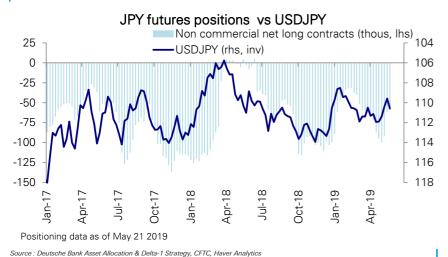
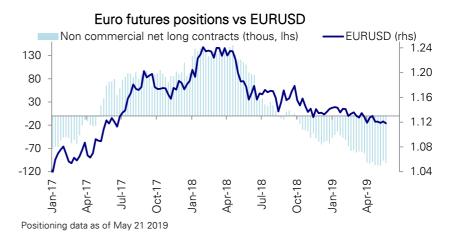
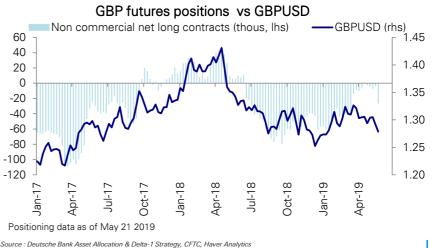


Figure 75: Euro future positions



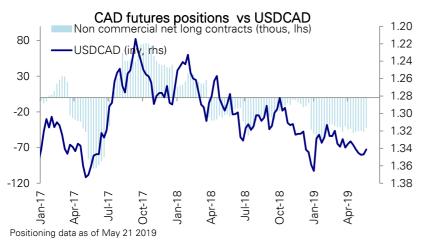
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 77: Sterling futures positions



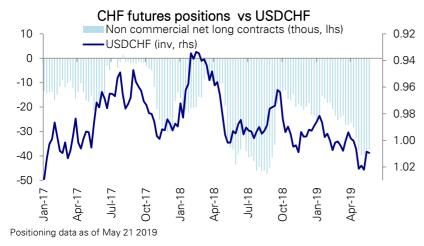






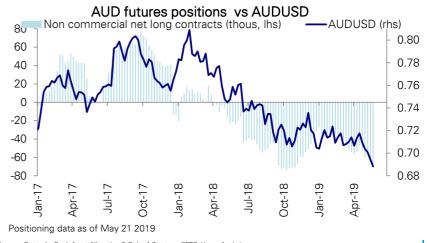
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 80: Swiss franc futures positions



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 79: Aussie dollar futures positions



Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 81: Currency futures positions



Positioning data as of May 21 2019

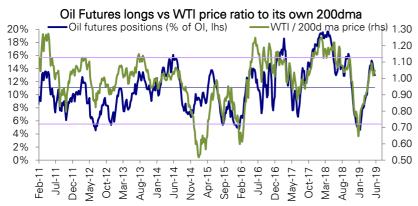
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics



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Commodity futures positioning

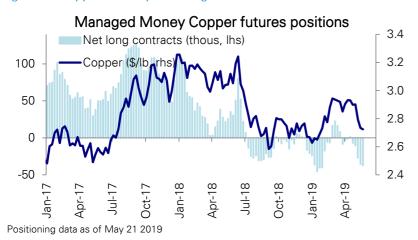
Figure 82: Oil futures positioning



Note: Net positions of combined WTI and Brent crude oil positions: Positioning data as of May 21 2019

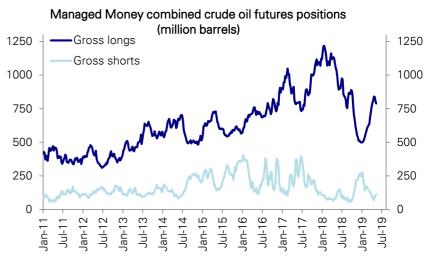
Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 84: Copper futures positioning



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 83: Oil futures gross longs vs shorts



Source: Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics

Figure 85: Gold futures positioning



Source : Deutsche Bank Asset Allocation & Delta-1 Strategy, CFTC, Haver Analytics



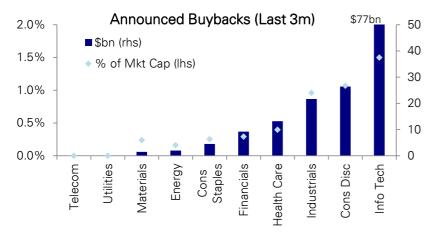
Buybacks Tracker

Figure 86: Recently announced buybacks

Date Ticker				Mkt Cap (\$	Buyback Programs		Excess Returns		
	Ticker	Company Name	Sector	Industry Group	mn)	\$mn	% mcap	(-1d to +1d)	Since Ann.
5/23/19	UNM	Unum Group	Financials	Insurance	7,051	750	10.6%	-2.6%	NA
5/16/19	PHM	PulteGroup Inc	Consumer Discretionary	Consumer Durables & App.	8,960	500	5.6%	1.4%	-0.4%
5/15/19	PGR	Progressive Corp/The	Financials	Insurance	45,260	1,938	4.3%	4.2%	3.8%
5/14/19	RL	Ralph Lauren Corp	Consumer Discretionary	Consumer Durables & App.	8,899	600	6.7%	-3.6%	-3.8%
5/9/19	TPR	Tapestry Inc	Consumer Discretionary	Consumer Durables & App.	9,678	1,000	10.3%	4.7%	-7.8%
5/9/19	TSCO	Tractor Supply Co	Consumer Discretionary	Retailing	12,367	1,500	12.1%	1.1%	1.1%
5/9/19	SYF	Synchrony Financial	Financials	Diversified Financials	23,696	4,000	16.9%	3.4%	2.6%
5/8/19	EW	Edwards Lifesciences Corp	Health Care	Health Care Equipment & :	37,047	1,000	2.7%	2.1%	-2.6%
5/7/19	FANG	Diamondback Energy Inc	Energy	Energy	16,170	2,000	12.4%	6.9%	7.9%
5/3/19	JCI	Johnson Controls International plcIndustrials		Capital Goods	35,546	4,000	11.3%	1.0%	2.0%
5/2/19	ANET	Arista Networks Inc	Information Technology	Technology Hardware & E	23,765	1,000	4.2%	-11.1%	-15.1%
4/30/19	AAPL	Apple Inc	Information Technology	Technology Hardware & Er	924,544	75,000	8.1%	3.5%	-6.1%
4/29/19	HON	Honeywell International Inc	Industrials	Capital Goods	125,572	7,700	6.1%	0.6%	0.9%
4/26/19	COST	Costco Wholesale Corp	Consumer Staples	Food & Staples Retailing	107,278	4,000	3.7%	-1.1%	6.0%
4/24/19	GWW	WW Grainger Inc	Industrials	Capital Goods	16,320	1,472	9.0%	0.9%	-7.5%
4/18/19	CE	Celanese Corp	Materials	Materials	13,318	1,500	11.3%	-1.2%	-3.1%
4/9/19	CERN	Cerner Corp	Health Care	Health Care Equipment & :	20,466	1,200	5.9%	11.8%	12.8%
3/26/19	PVH	PVH Corp	Consumer Discretionary	Consumer Durables & App.	8,302	750	9.0%	1.3%	-3.0%
3/24/19	BIIB	Biogen Inc	Health Care	Pharmaceuticals Biotechno	42,735	5,000	11.7%	1.7%	4.6%
3/22/19	PFG	Principal Financial Group Inc	Financials	Insurance	13,821	7	0.1%	-2.7%	7.3%
3/20/19	AZO	AutoZone Inc	Consumer Discretionary	Retailing	24,483	1,000	4.1%	1.5%	5.2%
3/13/19	DG	Dollar General Corp	Consumer Discretionary	Retailing	31,318	1,000	3.2%	-7.3%	-0.6%
3/8/19	MDT	Medtronic PLC	Health Care	Health Care Equipment & !	121,350	6,000	4.9%	-0.3%	-1.5%
3/7/19	JCI	Johnson Controls International plc Industrials		Capital Goods	32,556	8,500	26.1%	3.0%	6.4%
3/5/19	ROST	Ross Stores Inc	Consumer Discretionary	Retailing	34,677	2,550	7.4%	1.6%	-1.0%

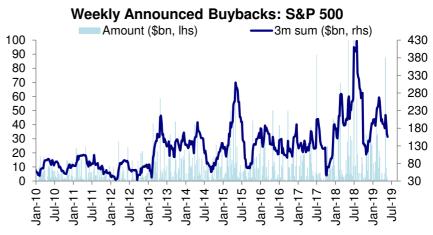
Source: Bloomberg Finance LP, Factset, DB US Equity Strategy

Figure 88: S&P 500 sectors announced buybacks



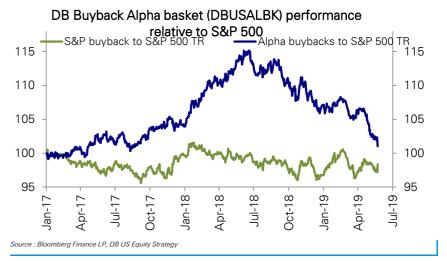
Source : Bloomberg Finance LP, DB US Equity Strategy

Figure 87: S&P 500 weekly announced buybacks



Source : Bloomberg Finance LP, DB US Equity Strategy

Figure 89: Buyback baskets performance





Appendix 1

Important Disclosures

*Other information available upon request

*Prices are current as of the end of the previous trading session unless otherwise indicated and are sourced from local exchanges via Reuters, Bloomberg and other vendors. Other information is sourced from Deutsche Bank, subject companies, and other sources. For disclosures pertaining to recommendations or estimates made on securities other than the primary subject of this research, please see the most recently published company report or visit our global disclosure look-up page on our website at https://research.db.com/Research/Disclosures/CompanySearch. Aside from within this report, important risk and conflict disclosures can also be found at https://research.db.com/Research/Topics/Equities?topicId=RB0002. Investors are strongly encouraged to review this information before investing.

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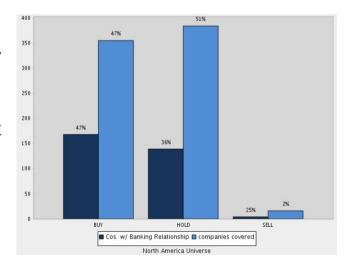
Buy: Based on a current 12- month view of total share-holder return (TSR = percentage change in share price from current price to projected target price plus pro-jected dividend yield), we recommend that investors buy the stock.

Sell: Based on a current 12-month view of total share-holder return, 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.

Newly issued research recommendations and target prices supersede previously published research.

Equity rating dispersion and banking relationships



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Investor Positioning and Flows



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