

Flows & Liquidity

The most favorable bond demand/supply balance since 2009

- Global bond supply was very weak during Q1 this year, especially compared to an exceptionally strong Q1 2015.
- Equity market volatility had an impact on share buyback and M&A activities last quarter and given that these corporate activities are predominantly financed by debt, net bond issuance was also affected.
- This drag on bond supply should fade going forward on improving equity and credit market conditions.
- Spread product supply outside the US remains weak, failing to respond to strong QE purchases by the ECB or the BoJ.
- Overall, we project a 15% reduction in global bond supply this year.
- While we expect that SWFs will liquidate more fixed income mandates this year and commercial banks will offload more bonds (we believe mostly negatively yielding) to the ECB and the BoJ, the ECB's QE should more than offset these reductions in demand.
- A fall in bond supply and a rise in bond demand create a significantly more favorable environment for bonds, the most favorable since 2009 on our estimates.

- Global bond supply started the year on a very weak tone with materially lower net issuance for both dollar and non-dollar denominated debt.
- Dealogic data show that net issuance of USD denominated bonds was only \$185bn in the first quarter of 2016 vs. \$378bn during the first quarter of 2015 and \$239bn during the previous quarter i.e. Q4 2015. Net issuance of non-USD denominated bonds, excluding EM local debt, was only \$113bn in the first quarter vs. \$265bn during the first quarter of 2015 and \$139bn during the previous quarter.
- Have equity market volatility and global growth concerns taken their toll on bond issuance during Q1? Surely the trajectory for equity markets looked shakier after the January correction which reduced the appetite by companies to engage in debt-financed share buyback and M&A activities. Indeed, announced share buybacks totaled only \$106bn in Q1 this year vs \$230bn in Q1 2015 and \$173bn in the previous quarter. The M&A pace of \$700bn over the past quarter was also weak compared to a 2015 quarterly average of \$1,180bn. So in all, we would note that equity market volatility had an impact on share buyback and M&A activities and given that these activities are predominantly financed by debt, debt issuance was also affected.

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Global Asset Allocation

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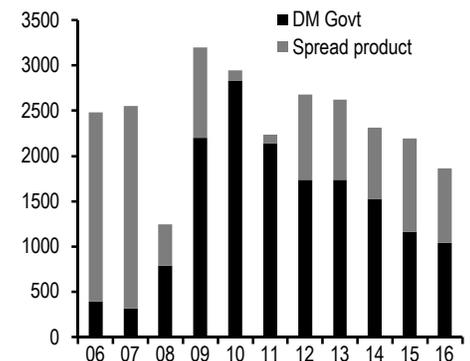
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Figure 1: Global bond supply

Net bond issuance globally. \$bn per annum at constant (today's) exchange rates. It excludes EM local debt. We estimate a 15% reduction in global bond supply in 2016.



Source: Dealogic, Bloomberg, J.P. Morgan.

See page 18 for analyst certification and important disclosures.

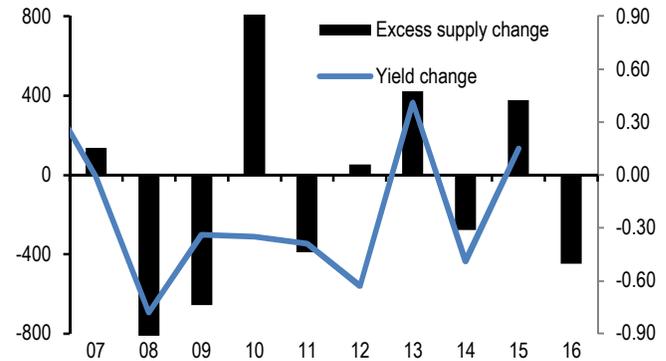
- Another factor we had previously identified as a source of weak bond supply was related to EM. Worries about Chinese and EM growth had made it more difficult for EM governments and companies to issue external debt which depressed overall issuance during last year. In particular, market pressures have been inducing non-financial corporates in EM to either repay or replace external debt with local debt or bank loans. This mechanically reduces our overall bond supply figures given that we exclude EM local debt and bank loans from our bond/supply demand analysis. This depressing factor faded somewhat over the past quarter but only slightly. EM external net bond issuance improved to \$32bn in Q1 relative to \$24bn in the previous quarter as worries about EM and China decreased. However, at \$32bn, EM external net bond issuance in Q1 was less than half compared to the same quarter of 2015 (\$70bn).
- Another depressing factor for global bond issuance in the past was spread product supply outside the US. Spread product supply including agency debt weakened last year in both Japan and Euro area relative to 2014. The BoJ's and ECB's QE have not generated as much spread product issuance as we had hoped. Net issuance of spread product in Euro area and Japan totaled \$34bn in Q1, an improvement from the very low level of \$10bn seen in Q4 2015, but still 60% below the \$102bn seen in Q1 2015.
- **Where does this leave us in terms of overall issuance?** Adding DM government and spread product issuance and adjusting for currency changes which tend to influence the dollar value of non-USD issuance, we arrive at total net bond issuance of \$300bn in Q1 at today's exchange rates vs. \$640bn in Q1 2015 and vs. \$379bn in Q4 2015. I.e. Q1 issuance was less than half that seen during the same quarter of last year. But as we explained above Q1 issuance was at least partly depressed by reduced equity buyback and M&A activity and subdued EM external debt issuance. Both of these drags are likely to normalize over the coming quarters on better equity market and EM credit conditions. In addition the yoy comparison for Q1 is exaggerated by an exceptionally strong Q1 in 2015. The yoy comparisons will mechanically look better vs. the last three quarters of 2015.
- As a result, full year issuance should be around 10% to 20% below the 2015 level. As a base case **we project a 15% reduction in global bond supply this year.**
- Figure 1 depicts net global bond supply across time. It excludes EM local debt. Net bond supply is expressed in \$bn per annum, at constant (today's) exchange rates all the way back to 2006. In this way we avoid distortions to issuance volumes arising from currency swings that mechanically alter the dollar value of non-USD issuance. The reduction we project for this year is once again led by government bond supply. Indeed, Figure 1 shows that net bond issuance has been drifting lower steadily since

2013 led by lower government deficits. Spread product supply has been increasing instead, preventing overall bond supply from falling as fast as government bond supply. On our projections for 2016 we expect a stable spread product supply, failing to offset the reduction in government bond supply.

- **What about demand? Official sector demand** had been the biggest negative surprise of last year. Severe FX reserve depletion by China coupled with slower accumulation by other EM countries meant that overall FX reserve accumulation was negative in the last three quarters of 2015 with an additional big decline seen in Q1 this year. We estimate that foreign official institutions sold more than \$240bn of bonds in 2015 vs. buying of more than \$250bn in 2014. We project selling of close to \$380bn this year. Of this, \$140bn stems from SWFs of oil producing countries which are more likely to liquidate fixed income mandates this year after liquidating mostly equity mandates last year and at the beginning of this year. The remaining \$240bn stems from FX reserve managers of non-oil producing countries, mostly China. However, more than half of this \$240bn is driven by Q1 and reserve depletion in China, which is projected to slow significantly over the coming quarters.
- We argued before that when thinking about overall bond demand and supply there are offsets to FX reserve depletion via 1) lower bond supply, as EM sovereigns and corporates repay external debt and 2) a potential increase in **bond buying by commercial banks**. As capital flees EM economies, these commercial banks are recipients of excess dollar deposits which are typically invested in short-dated government bonds. Indeed, US commercial banks have increased their holdings of US government-related securities over the past eight months following selling in previous months. Since last August, US commercial banks bought \$122bn of bonds following selling of \$24bn in June and July 2015. Using this monthly pace of purchase of \$15bn per month seen since last August, we estimate US commercial bank bond buying of around \$180bn for 2016.
- In contrast, European and Japanese banks sold bonds to the ECB and the BoJ via QE programs, and this selling is likely to intensify this year given an expansion of ECB's QE. Last year, Japanese and European banks sold \$470bn of bonds, an increase in selling of \$240bn vs. 2014, in response to an increase in QE by \$460bn in 2015 vs. 2014. Using the same sensitivity, we estimate that these Japanese and European banks would sell an extra \$170bn of bonds in response to an increase in QE by \$340bn this year. This extra \$170bn should push the bond selling by European and Japanese banks to \$640bn during 2016. Subtracting from this the projected \$180bn buying by US banks; we arrive at total selling by G4 commercial banks of \$460bn for 2016.

- **Bond buying by G4 pension funds and insurance companies** has been relatively steady at just above \$450bn per annum over the last couple of years and we assume the same for this year.
- **Retail investors** slowed their bond fund purchases during 2015 year to \$260bn vs. \$500bn in 2014. We project stronger demand for bond funds this year driven by a more benign credit cycle relative to last year. Most bond funds invest in corporate bonds and therefore the state of the credit cycle is a key determinant of demand. Taking an average of the previous two years point to bond fund demand of \$380bn for this year.
- **G4 central bank demand** looks set to increase this year driven by ECB's increase in the pace of purchases to €80bn per month from €60bn last year. This is the most significant demand change we envisage for this year (Figure 2). In Figure 2, similar to what we did with our estimates of bond supply and the other components of demand, we convert all previous years' G4 central bank demand (i.e. bond purchases related to QE programs) and retail investors' demand (i.e. bond fund purchases) to today's exchange rates. Coupled with a projected reduction in bond supply into 2016, we see a significant improvement in the balance between bond supply and demand this year vs. 2015 (Figure 3). The previous deterioration in the balance between bond supply and demand seen in 2015 is expected to more than reverse in 2016.
- In all, we project that a fall in bond supply and a rise in bond demand led by ECB's QE, together create a significantly more favorable environment for bonds this year, the most favorable since 2009.

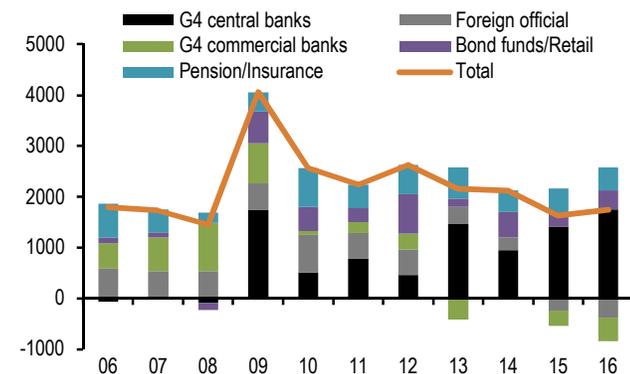
Figure 3: Annual change in the balance between supply and demand
 Change in excess bond supply in \$bn per annum in the left axis calculated as the difference between changes in global bond supply and changes in global bond demand as explained in the text. It includes our 2016 estimate. The 2008 and 2010 figures are capped at +/-800bn to improve chart visualization. Right axis shows the annual change of the yield on the Barcap Global Agg index in %.



Source: Bloomberg and J.P. Morgan calculations.

Figure 2: Global bond demand

Annual flow in \$bn at constant (today's) exchange rates by investor type. 2016 projections are explained in the text.



Source: Central bank sources, ICI, Bloomberg, IMF and J.P. Morgan calculations.

Fund Flow Monitor

Table A1: Weekly flow monitor

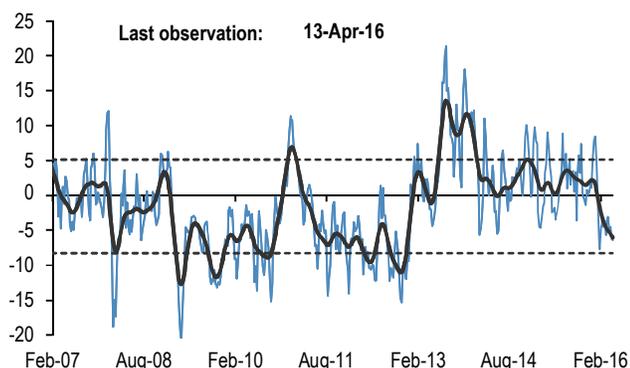
\$bn, Includes US domiciled Mutual Fund flows from ICI with a one week lag and globally domiciled ETF flows from Bloomberg. We exclude China On-shore funds from our analysis. Current week data only includes ETF flows.

MF & ETF Flows	13-Apr	4 wk avg	13 wk avg	2015 avg
All Equity	-2.43	-1.5	-0.4	2.6
All Bond	1.59	4.9	4.3	0.8
US Equity	2.02	0.6	-0.4	-2.2
Intl. Equity	-4.45	-1.6	0.4	4.8
Taxable Bonds	1.66	3.8	3.2	0.4
Municipal Bonds	-0.07	1.1	1.1	0.4

Source: Bloomberg, ICI, J.P. Morgan

Chart A1: Fund flow indicator

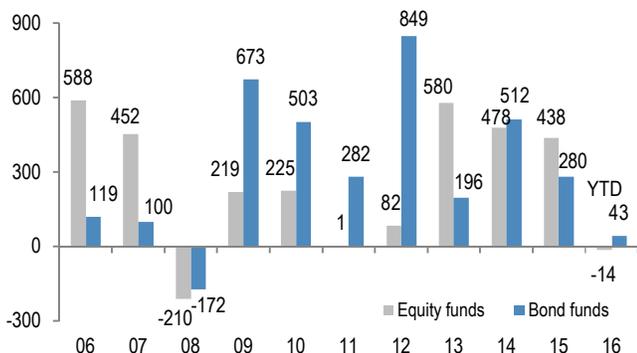
Difference between flows into Equity and Bond funds: \$bn per week. Flow includes US domiciled Mutual Fund and globally domiciled ETF flows. Current week data only includes ETF flows. We exclude China On-shore funds from our analysis. The thin blue line shows the 4-week average of this difference. Dotted lines are mean \pm 1 StDev of blue line. The thick black line shows a smoothed version of the same series. The smoothing is done using a Hodrick-Prescott filter with a Lambda parameter of 100.



Source: Bloomberg, ICI, J.P. Morgan

Chart A2: Global equity & bond fund flows

\$bn per year of Net Sales, i.e. includes net new sales + reinvested dividends for MF and ETFs. Flows are from ICI (worldwide data up to Q4'15) and data since then up to now is combination of monthly and weekly data from ICI, EFAMA and ETF flows are from Bloomberg. YTD 2016 are estimates.



Source: Bloomberg, ICI, EFAMA, J.P. Morgan

Table A2: Equity and Bond issuance

\$bn, Equity supply and corporate announcements are based on announced deals, not completed. M&A is announced deal value and Buybacks are announced transactions. Y/Y change is change in YTD announcements over the same period last year. More details on net bond issuances over the same period last year. More details on net bond issuances in Chart A31.

Equity Supply	15-Apr	4 wk avg	13 wk avg	y/y chng
Global IPOs	0.1	0.8	1.3	-38%
Secondary Offerings	3.3	7.1	8.1	25%
Corporate announcements				
M&A - Global	12.2	26.5	51.1	-20%
- US Target	4.8	10.7	23.5	-17%
- Non-US Target	7.4	15.7	27.6	-22%
US buybacks	1.6	1.2	5.2	-67%
Non-US buybacks	0.0	0.3	3.1	-4%
Net bond issuance				
USD	15	62	62	-51%
Non-USD	-56	38	38	-57%

Source: Bloomberg, Dealogic, Thomson Reuters, J.P. Morgan

Table A3: Trading turnover monitor

Volumes are monthly and Turnover ratio is annualized (monthly trading volume annualised divided by the amount outstanding). USTs are primary dealer transactions in all US government securities. JGBs are OTC volumes in all Japanese government securities. Bunds, Gold, Oil and Copper are futures. Gold includes Gold ETFs. Min-Max chart is based on Turnover ratio. For Bunds and Commodities, futures trading volumes are used while the outstanding amount is proxied by open interest. The diamond reflects the latest turnover observation. The thin blue line marks the distance between the min and max for the complete time series since Jan-2005 onwards. Y/Y change is change in YTD notional volumes over the same period last year.

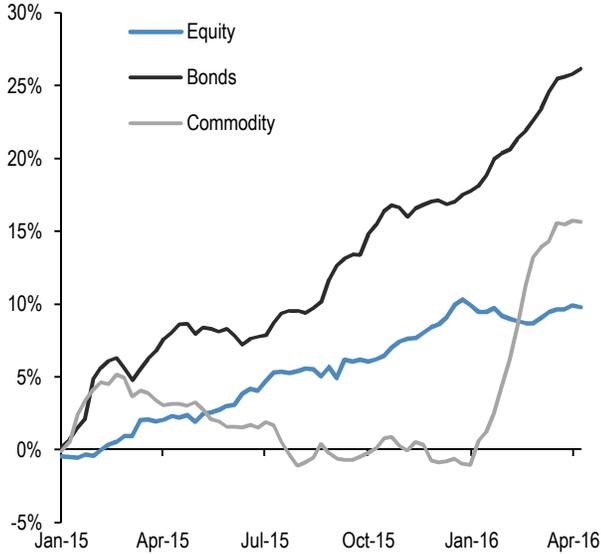
As of Mar-16	MIN	MAX	Turnover ratio	Vol (tr)	y/y chng
Equities					
EM Equity			5.0	\$2.8	-24%
DM Equity			1.4	\$5.0	2%
Govt Bonds					
USTs			16.8	\$12.5	9%
JGBs*			11.5	¥874	-3%
Bunds			1.5	€5.9	11%
Credit					
US HG			0.9	\$0.4	9%
US HY			1.4	\$0.2	15%
US Convertibles			2.7	\$0.0	-2%
Commodities					
Gold			67.2	\$0.7	22%
Oil			95.9	\$1.2	-42%
Copper			6.8	\$0.7	-23%

Source: Bloomberg, Federal Reserve, Trace, Japan Securities Dealer Association, WFE, J.P. Morgan. * Data with one month lag

ETF Flow Monitor (as of Apr 13th)

Chart A3: Global Cross Asset ETF Flows

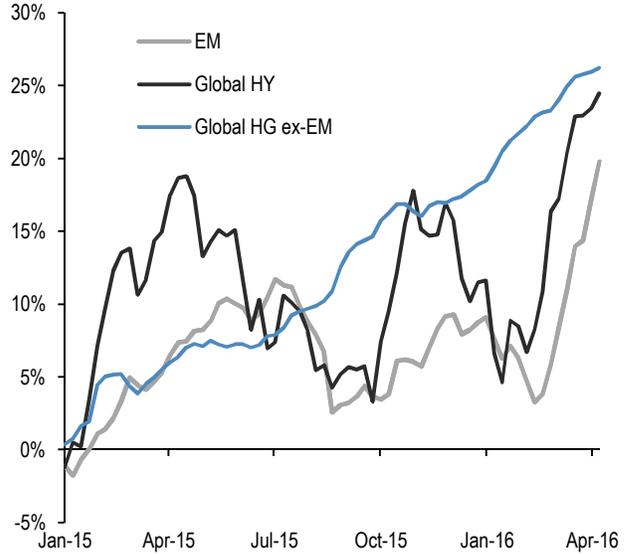
Cumulative flow into ETFs as a % of AUM



Source: J.P. Morgan. Bloomberg

Chart A4: Bond ETF Flows

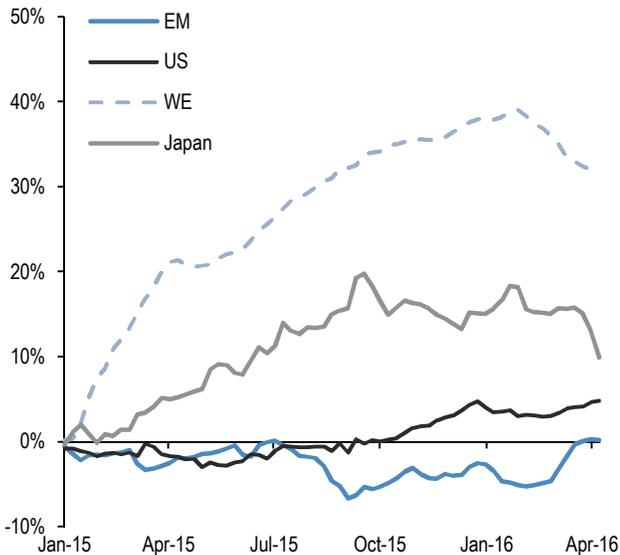
Cumulative flow into bond ETFs as a % of AUM



Source: J.P. Morgan. Bloomberg

Chart A5: Global Equity ETF Flows

Cumulative flow into global equity ETFs as a % of AUM

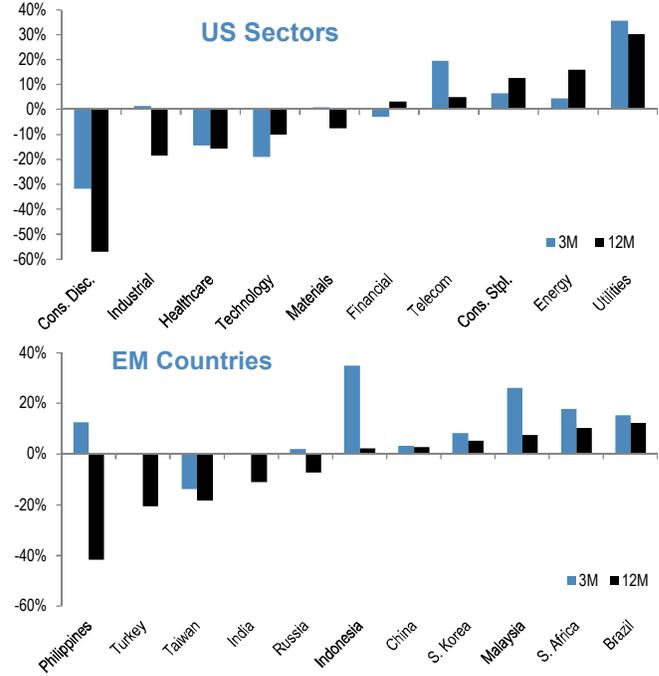


Source: J.P. Morgan. Bloomberg

Note: We exclude China On-shore ETFs, we deduct the BoJ buying of ETFs and include one leveraged ETF in Japan (1570 JP, which is the biggest) in our ETF flow monitor (Chart A3 and Chart A5).

Chart A6: Equity Sectoral and Regional ETF Flows

Rolling 3 month and 12 month change in cumulative flows as a % of AUM. Both sorted by 12 month change

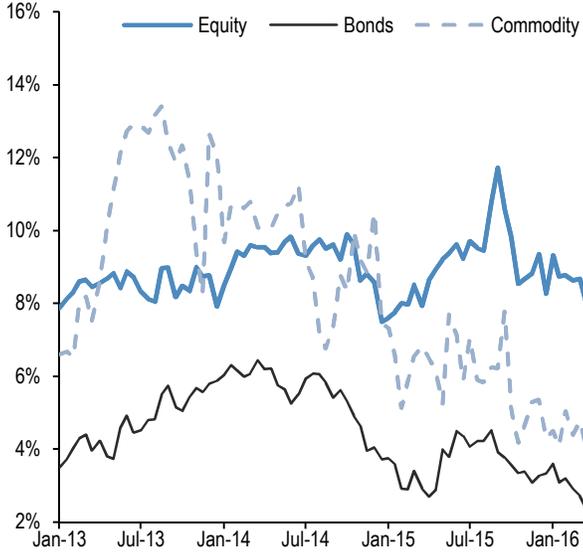


Source: J.P. Morgan. Bloomberg

ETF Short Interest Monitor (as of Mar 31th)

Chart A7: Cross Asset ETF Short Interest

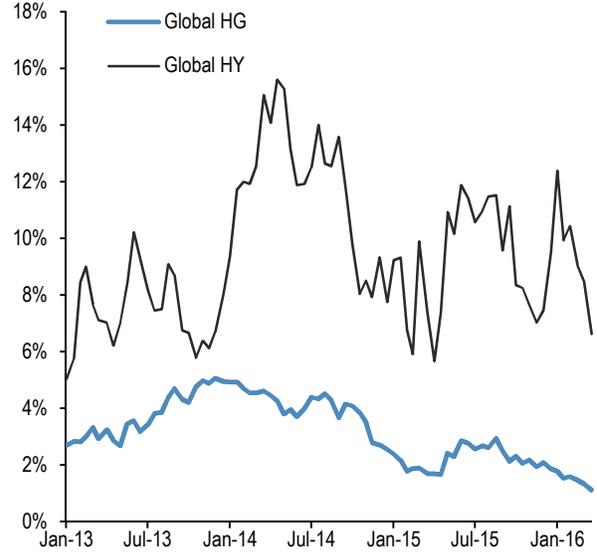
Short interest as a % of outstanding shares. Short interest is for US Domiciled ETFs and is available bi-monthly from Bloomberg. Short interest is weighted by AUM



Source: J.P. Morgan. Bloomberg

Chart A8: Bond ETF Short Interest

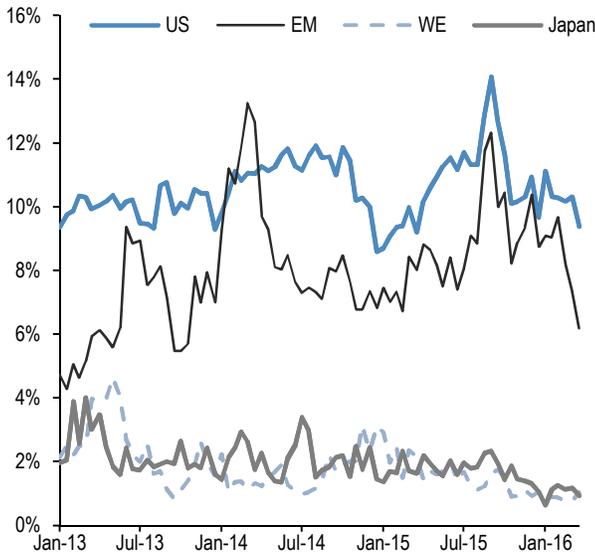
Short interest as a % of outstanding shares. Short interest is for US Domiciled ETFs and is available bi-monthly from Bloomberg. Short interest is weighted by AUM



Source: J.P. Morgan. Bloomberg

Chart A9: Equity ETF Short Interest

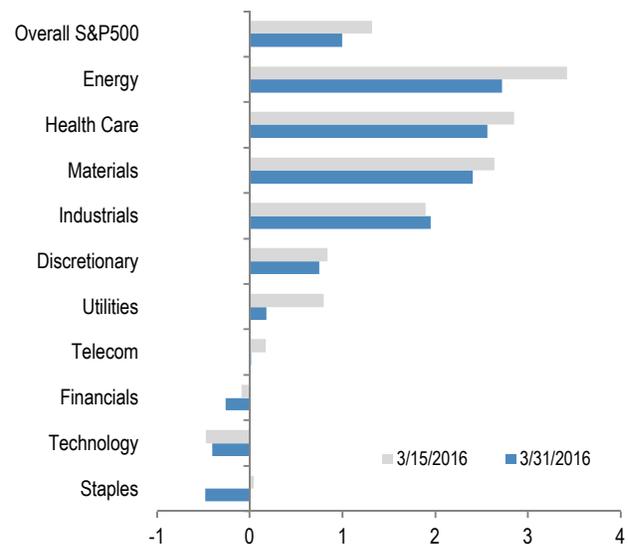
Short interest as a % of outstanding shares. Short interest is for US Domiciled ETFs and is available bi-monthly from Bloomberg. Short interest is weighted by AUM



Source: J.P. Morgan. Bloomberg.

Chart A10: S&P500 sector short interest

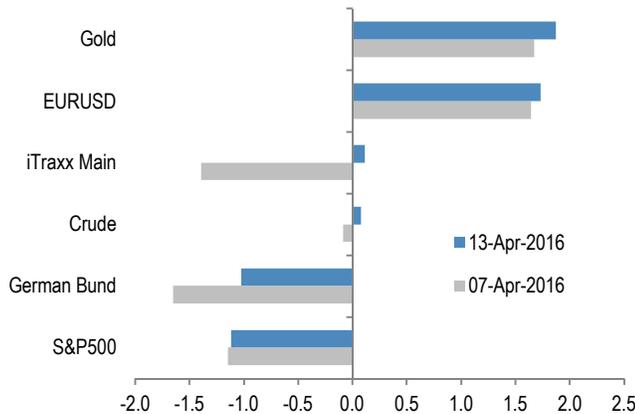
Short interest as a % of shares outstanding based on z-scores. A strategy which overweight's the S&P500 sectors with the highest short interest z-score (as % of shares o/s) vs. those with the lowest, produced an information ratio of 0.7 with a success rate of 56% (see F&L, Jun 28, 2013 for more details)



Source: NYSE, J.P. Morgan

Chart A11: Option skew monitor

Skew is the difference between the implied volatility of out-of-the-money (OTM) call options and put options. A positive skew implies more demand for calls than puts and a negative skew, higher demand for puts than calls. It can therefore be seen as an indicator of risk perception in that a highly negative skew in equities is indicative of a bearish view. The chart shows z-score of the skew, i.e. the skew minus a rolling 2-year avg skew divided by a rolling two-year standard deviation of the skew. A negative skew on iTraxx Main means investors favor buying protection, i.e. a short risk position. A positive skew for the Bund reflects a long duration view, also a short risk position.

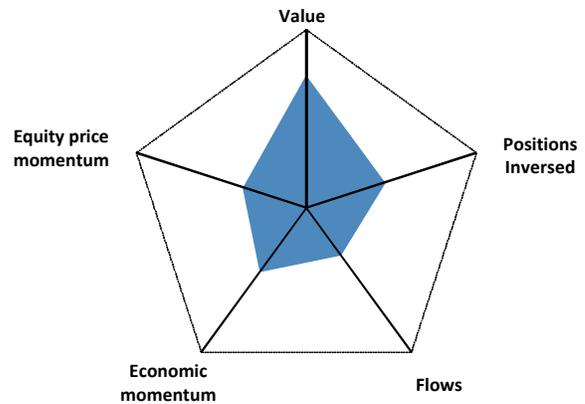


Source: Bloomberg, J.P. Morgan

Explanation of Market health map: All variables are expressed as the percentile of the distribution that the observation falls into. I.e. a reading in the middle of the axis means that the observation falls exactly at the median of all historical observations. **Value:** The slope of the risk-return tradeoff line calculated across USTs, US HG and HY corporate bonds and US equities (see GMOS p. 6, Loeys et al, Jul 6 2011 for more details). **Positions:** Difference between net spec positions on US equities and 10yr UST. See Chart A18. **Flow momentum:** The difference between flows into equity funds (incl. ETFs) and flows into bond funds. Chart A1. We then smooth this using a Hodrick-Prescott filter with a lambda parameter of 100. We then take the weekly change in this smoothed series as shown in Chart A1. **Economic momentum:** The 2-month change in the global manufacturing PMI. (See [REVISITING: Using the Global PMI as trading signal](#), Nikolaos Panigirtzoglou, Jan 2012). **Equity price momentum:** The 6-month change in the S&P500 equity index.

Chart A12: Market health map

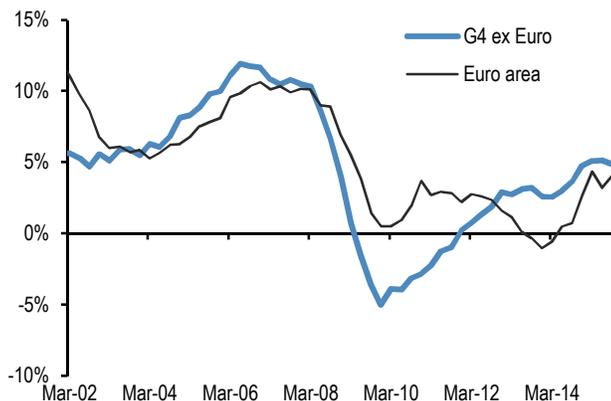
Each of the six axes corresponds to a key indicator for markets. The position of the blue line on each axis shows how far the current observation is from the extremes at either end of the scale. The dotted line shows the same but at the beginning of 2012 for comparison. For example, a reading at the centre for value would mean that risky assets are the most expensive they have ever been while a reading at the other end of the axis would mean they are the cheapest they have ever been. See explanation on the right for each indicator. Overall, the larger the blue area within the hexagon, the better for risky markets.



Credit growth

Chart A13: Credit creation in the G4

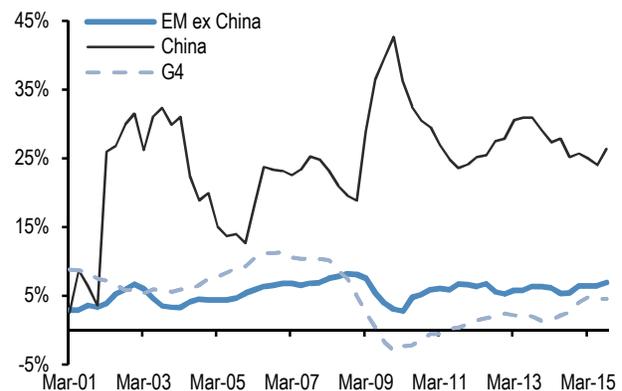
Rolling sum of 4 quarter credit creation as % of GDP. Credit creation includes both bank loans as well as net debt issuance by non financial corporations and households. Last obs. is for Q3'15.



Source: Central bank, BIS, ICI, Barcap, Bloomberg, IMF and J.P. Morgan calculations

Chart A14: Credit creation in EM

Rolling sum of 4 quarter credit creation as % of GDP. Credit creation includes both bank loans as well as net debt issuance by non financial corporations and households. Last obs. is for Q3'15.

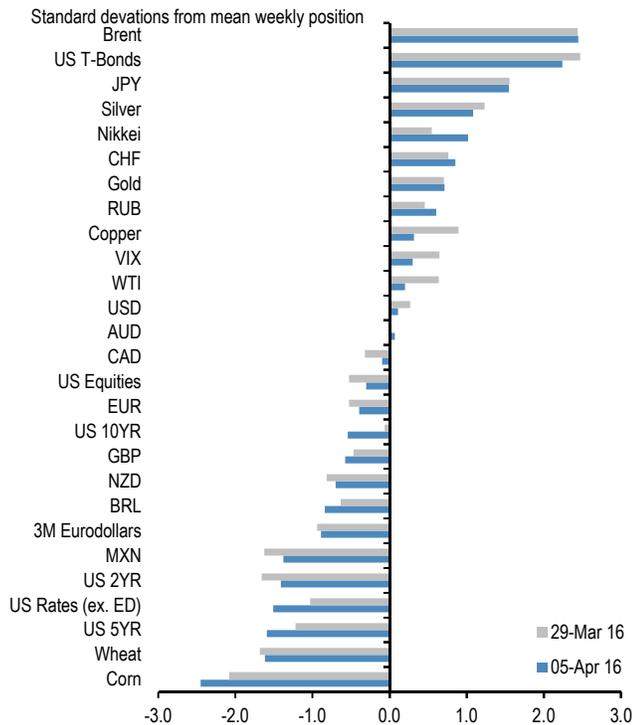


Source: Central bank, BIS, ICI, Barcap, Bloomberg, IMF and J.P. Morgan calculations

Spec position monitors

Chart A15: Weekly Spec Position Monitor

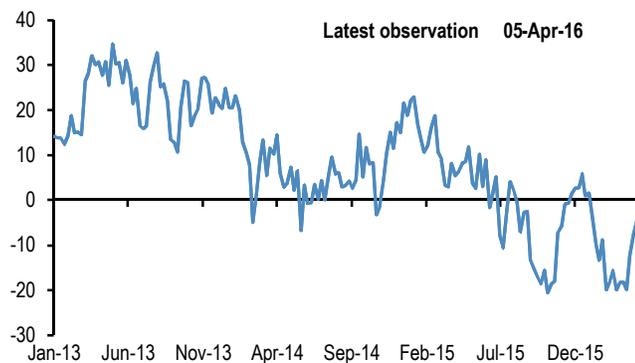
Net spec positions are the number of long contracts minus the number of short using CFTC futures only data. This net position is then converted to a USD amount by multiplying by the contract size and then the corresponding futures price. To proxy for speculative investors, commodity positions use the managed money category, while the other assets use the non-commercial category. We then scale the net positions by open interest. The chart shows the z-score of these net positions, i.e. the current net position divided by the open interest, minus the average over the whole sample divided by the standard deviation of the weekly positions over the whole sample. US rates is a duration-weighted composite of the individual UST series excluding the Eurodollar contract. Brent positions are with one week lag. The sample starts on the 13th of June 2006.



Source: Bloomberg, CFTC, J.P. Morgan

Chart A16: Spec position indicator on US equities

CFTC spec positions in US equity futures (in \$bn). The US equity is an aggregate of the S&P500, Dow Jones, NASDAQ and their Mini index.

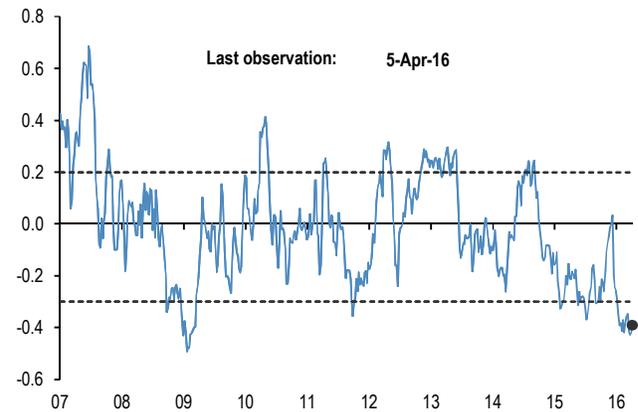


Source: CFTC, Bloomberg and J.P. Morgan

Chart A17: Spec position indicator on Risky vs. Safe currencies

Difference between net spec positions on risky & safe currencies

Net spec position is calculated in USD across 5 "risky" and 3 "safe" currencies (safe currencies also include Gold). These positions are then scaled by open interest and we take an average of "risky" and "safe" assets to create two series. The chart is then simply the difference between the "risky" and "safe" series. The final series shown in the chart below is demeaned using data since 2006. The risky currencies are: AUD, NZD, CAD, RUB, MXN and BRL. The safe currencies are: JPY, CHF and Gold.

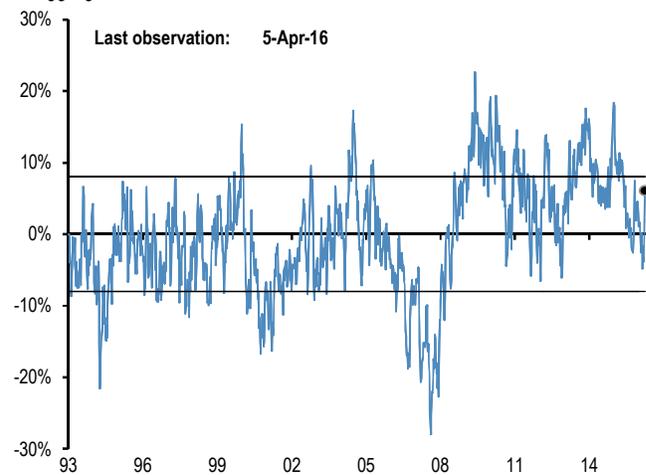


Source: CFTC, J.P. Morgan

Chart A18: Spec position indicator on US equities vs. 10yr UST

Difference between net spec positions on US equities & 10yr UST

Similar to Chart A17, this indicator is derived by the difference between total CFTC spec positions in US equity futures (in \$bn) scaled by open interest (in \$bn) minus a 10yr UST futures and scaled by open interest. The US equity is an aggregate of the S&P500, Dow Jones, NASDAQ and their Mini index.

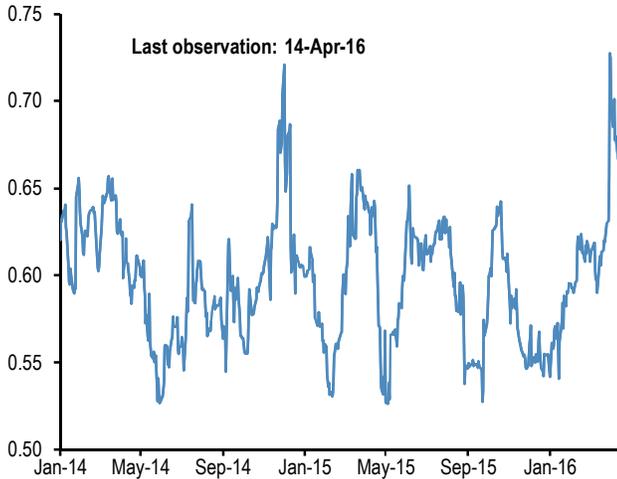


Source: CFTC, Bloomberg and J.P. Morgan

Mutual fund and hedge fund betas

Chart A19: Equity beta of US balanced mutual funds

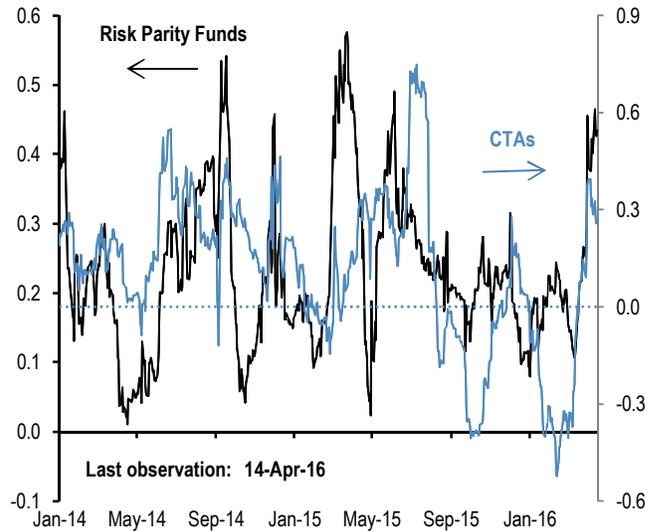
Rolling 21-day equity betas based on a univariate regression of the daily returns of our balanced mutual fund return index to the daily returns of the S&P 500. Our balanced mutual fund index includes the top 20 US-based active funds by assets that have existed since 2006. It excludes tracker funds and funds with a low tracking error.



Source: Bloomberg, Barcap, J.P. Morgan

Chart A20: Equity beta of CTAs and Risk Parity funds

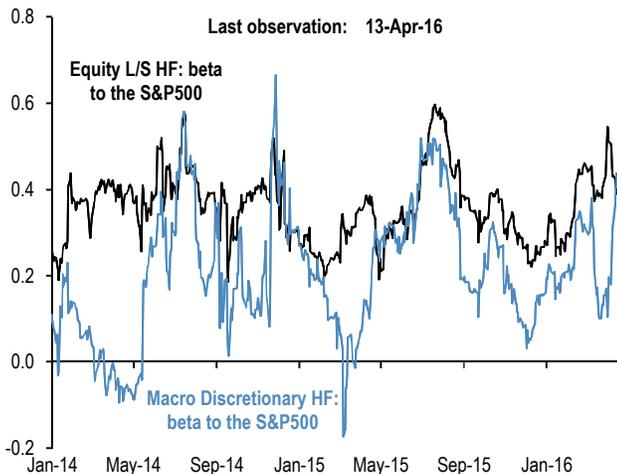
Rolling 21-day equity betas based on a univariate regression of the daily returns of the HFRX Systematic Diversified CTA Index and our Risk Parity fund return index to the daily returns of the S&P 500.



Source: Bloomberg, Barcap, J.P. Morgan.

Chart A21: Equity beta of Equity L/S and Macro Discretionary

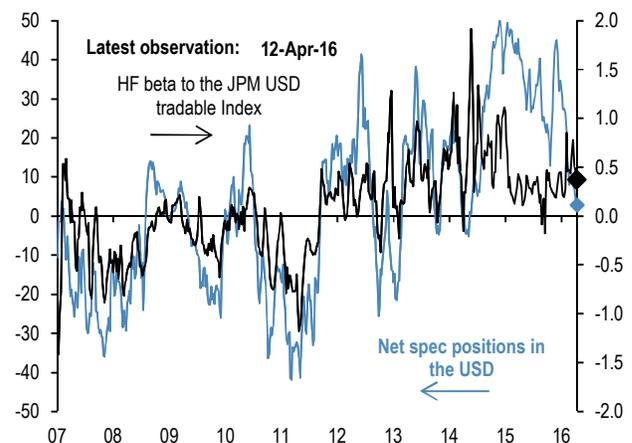
Rolling 21-day equity beta. The Equity L/S hedge fund and Macro Discretionary hedge fund equity beta is based on univariate regression of their daily returns to returns on the S&P500.



Source: Datastream, Barcap, Bloomberg, J.P. Morgan.

Chart A22: Currency hedge fund USD exposure

The rolling 21-day beta of the Barclay Hedge FX index with the JPM USD tradable index vs. the net spec position in the USD as reported by the CFTC. Spec is the non-commercial category from the CFTC. Net spec position below is with one week's lag.

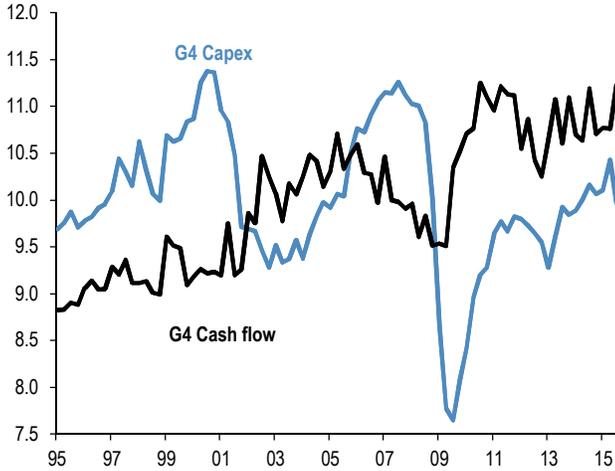


Source: CFTC, Barclay, Datastream, Bloomberg J.P. Morgan

Corporate activity

Chart A23: G4 non-financial corporate capex and cash flow as % of GDP

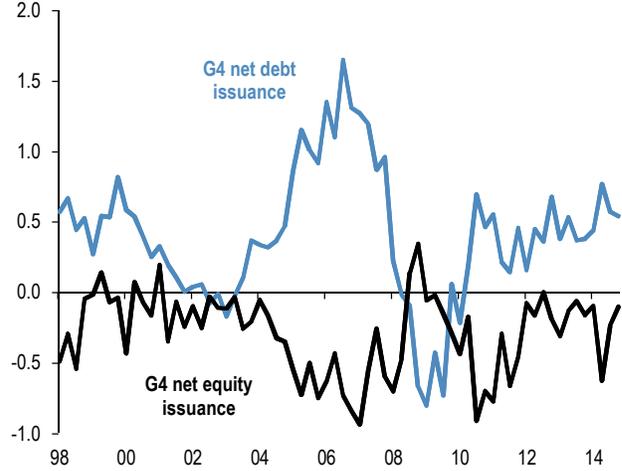
% of GDP, G4 includes the US, the UK, the Euro area and Japan. Last observation as of Q3 2015.



Source: ECB, BOJ, BOE, Federal Reserve flow of funds

Chart A24: G4 non-financial corporate sector net debt and equity issuance

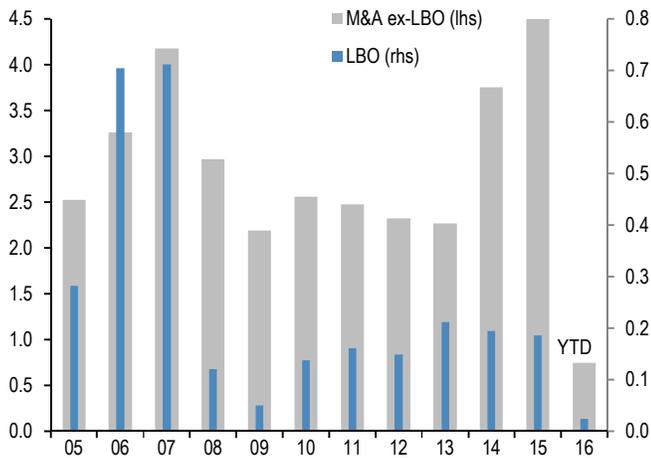
\$tr per quarter, G4 includes the US, the UK, the Euro area and Japan. Last observation as of Q3 2015.



Source: ECB, BOJ, BOE, Federal Reserve flow of funds

Chart A25: Global M&A and LBO

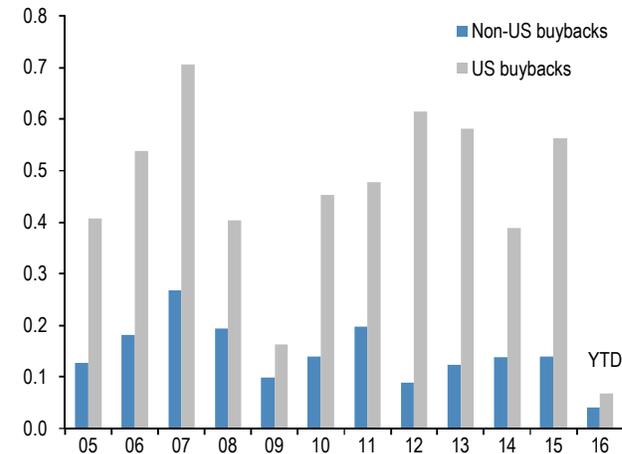
\$tr. YTD 2016 as of Apr 15. M&A and LBOs are announced.



Source: Reuters ThomsonOne, J.P. Morgan

Chart A26: US and non-US share buybacks

\$tr. YTD 2016 as of Apr 15. Buybacks are announced.

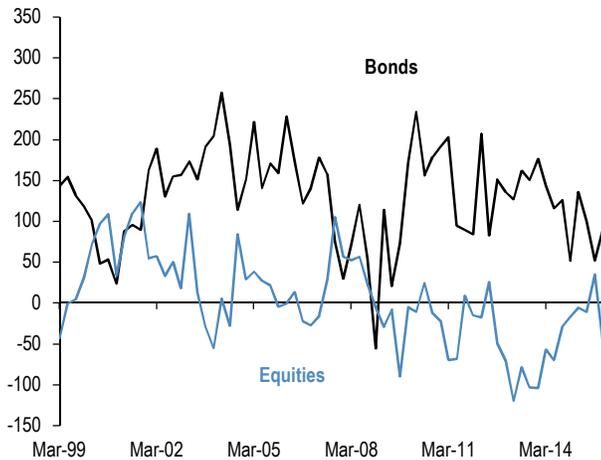


Source: Reuters ThomsonOne, J.P. Morgan

Pension fund and insurance company flows

Chart A27: G4 pension funds and insurance companies equity and bond flows

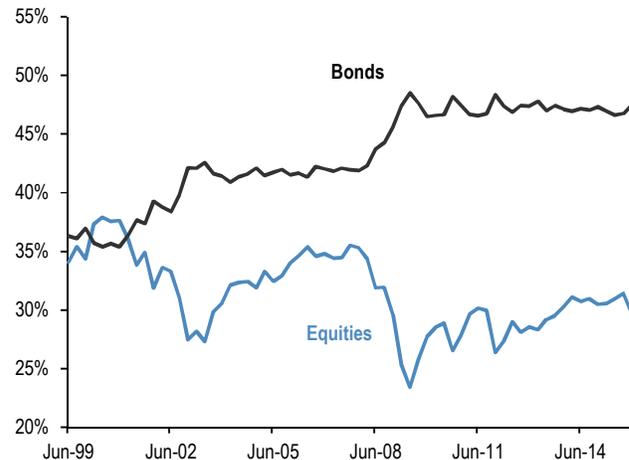
Equity and bond buying in \$bn per quarter. G4 includes the US, the UK, Euro area and Japan. Last observation is Q4 2015



Source: ECB, BOJ, BOE, Federal Reserve flow of funds.

Chart A28: G4 pension funds and insurance companies equity and bond levels

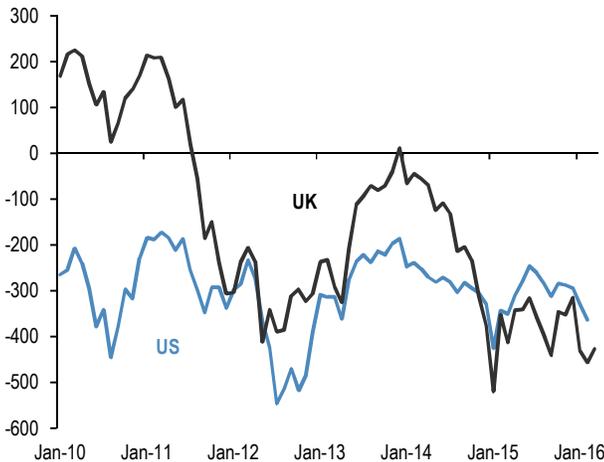
Equity and bond as % of total assets per quarter. G4 includes the US, the UK, Euro area and Japan. Last observation is Q4 2015.



Source: ECB, BOJ, BOE, Federal Reserve flow of funds

Chart A29: Pension fund deficits

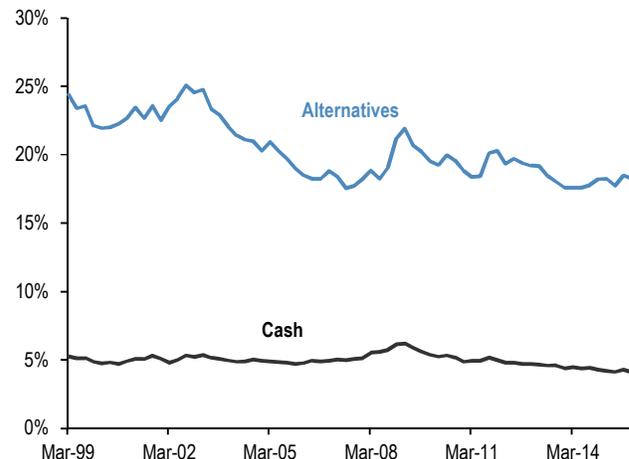
US\$bn. For US, funded status of the 100 largest corporate defined benefit pension plans, from Milliman. For UK, funded status of the defined benefit schemes eligible for entry to the Pension Protection Fund, converted to US\$ at today's exchange rates. Last obs. is Mar'16 for UK and Feb'16 for US.



Source: Milliman, UK Pension Protection Fund, J.P. Morgan

Chart A30: G4 pension funds and insurance companies cash and alternatives levels

Cash and alternative investments as % of total assets per quarter. G4 includes the US, the UK, Euro area and Japan. Last observation is Q4 2015.



Source: ECB, BOJ, BOE, Federal Reserve flow of funds

Funding market monitor

Table A4: Bank deposits and ECB reliance

Deposits are non-seasonally adjusted Euro area non-bank, non-government deposits as of February 2016. We take total deposits (item 2.2.3. in MFI balance sheets minus "deposits from other financial institutions", which includes deposits from securitized vehicles and financial holding corporations among others. We also subtract repos (item 2.2.3.4) from the total figures to give a cleaner picture of deposits outside interbank borrowing. ECB borrowing and Target 2 balances are latest available. ECB borrowing is gross borrowing from regular MROs and LTROs. The Chart shows the evolution of Target 2 balance for Spain and Italy along with government bond spreads. The shaded area denotes the period between May 2011 and Aug 2012 when convertibility risk premia were elevated due to Greece exit fears.

€bn	Target 2 bal.	Target 6m chng	ECB borrowing	Depo 3m chng	Depo 12m chng
Austria	-38	-4	16	2.2%	1.9%
Belgium	-16	-11	8	0.2%	4.4%
Cyprus	2	1	1	1.5%	6.0%
Finland	58	29	1	6.7%	10.1%
France	-68	-11	84	1.6%	4.9%
Germany	605	44	45	0.2%	2.4%
Greece	-95	6	36	0.9%	-13.3%
Ireland	1	7	10	0.1%	1.6%
Italy	-263	-28	151	1.7%	3.3%
Luxembourg	147	31	3	0.8%	-0.3%
Netherlands	59	4	15	0.5%	0.8%
Portugal	-67	-7	25	0.3%	3.8%
Spain	-263	-34	131	0.1%	0.8%

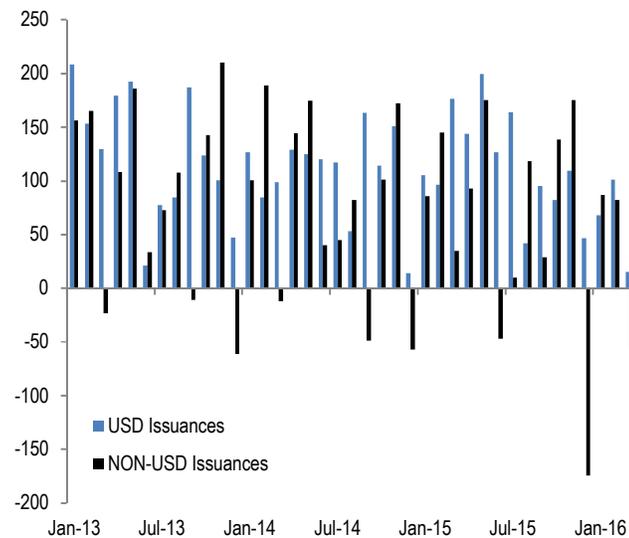


Source: Bloomberg, ECB, National Central Banks, J.P. Morgan

Source: Bloomberg, National Central Banks, J.P. Morgan

Chart A31: USD and Non-USD net bond issuances

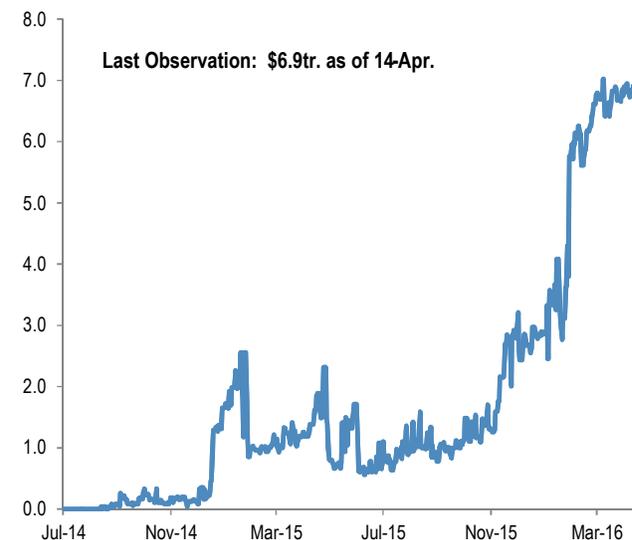
Gross issuance minus redemptions in \$bn per month. Non-USD issuance includes bonds issued in EUR, GBP and JPY. Non-USD bond issuance is converted to USD at today's exchange rate through the full historical period. In this way net bond issuance fluctuations are unaffected by currency changes. Our bond issuance figures include Government as well as non-Government bonds issued globally, excluding short-term debt (maturity less than 1-year) and self-funded issuance (where the issuing bank is the only book runner). Last observation is Mar 2016



Source: Dealogic, J.P. Morgan

Chart A32: Global government bonds with negative yields

In \$tr., Amount outstanding of bonds trading with negative yield within the JPM Global Government Bond Index (JPM GBI Broad Index). Converted to USD at today's exchange rate.



Source: ECB, J.P. Morgan.

Japanese flows and positions

Chart A33: Tokyo Stock Exchange margin trading: total buys minus total sells

In bn of shares. Topix on right axis.

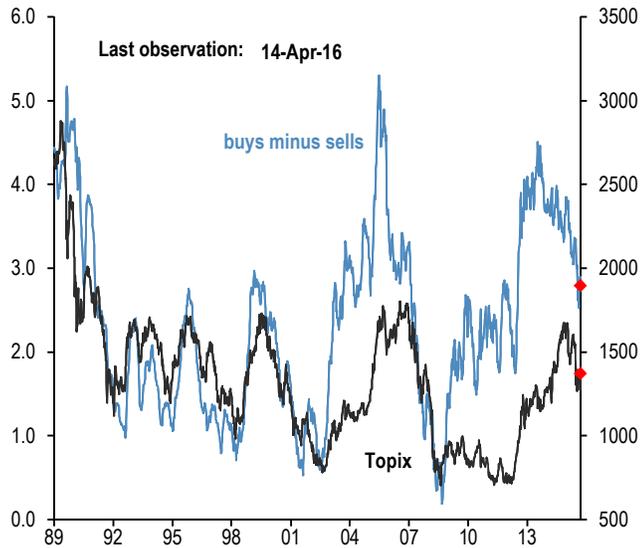


Chart A34: Domestic retail flows

In JPY tr. Retail flows are from Tokyo stock exchange.

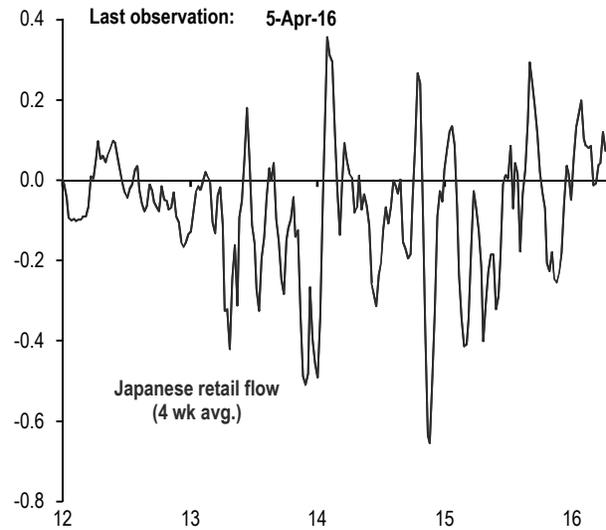


Chart A35: Japanese equity buying by foreign investors. Japanese investors' buying of foreign bonds

\$bn, 4 week moving average.

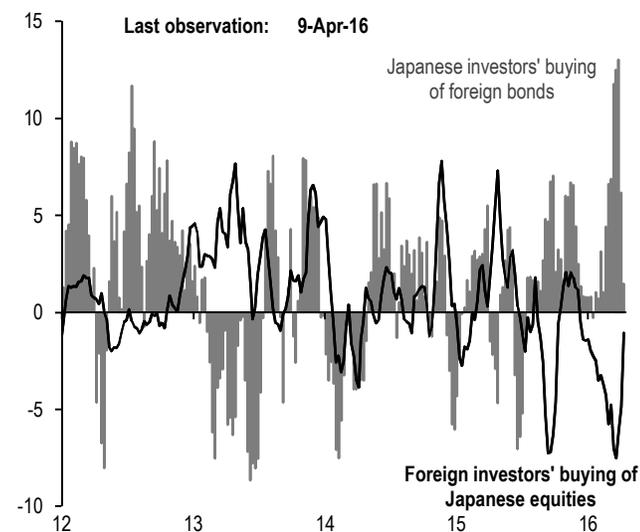
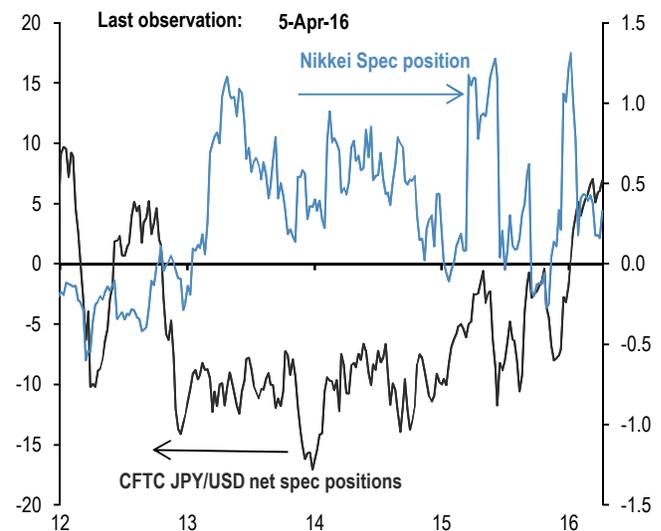


Chart A36: Overseas CFTC spec positions

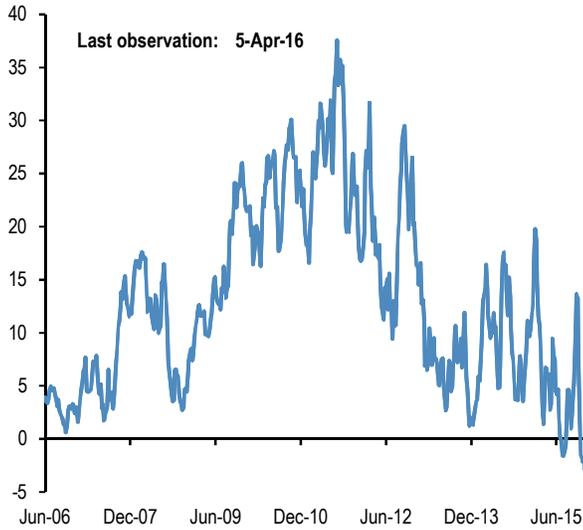
CFTC positions are in \$bn.



Commodity flows and positions

Chart A37: Gold spec positions

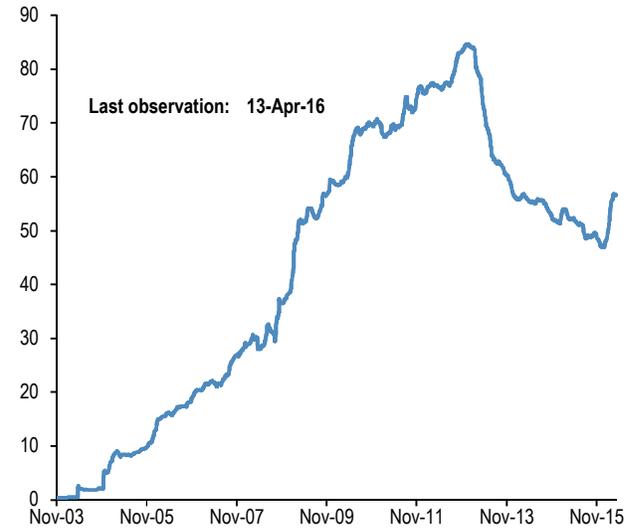
\$bn. CFTC net long minus short position in futures for the Managed Money category.



Source: CFTC, Bloomberg, J.P. Morgan.

Chart A38: Gold ETFs

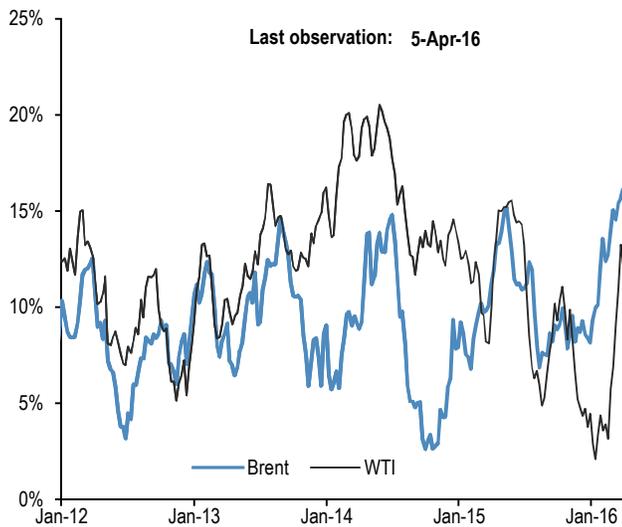
Mn troy oz. Physical gold held by all gold ETFs globally.



Source: Bloomberg, J.P. Morgan.

Chart A39: Oil spec positions

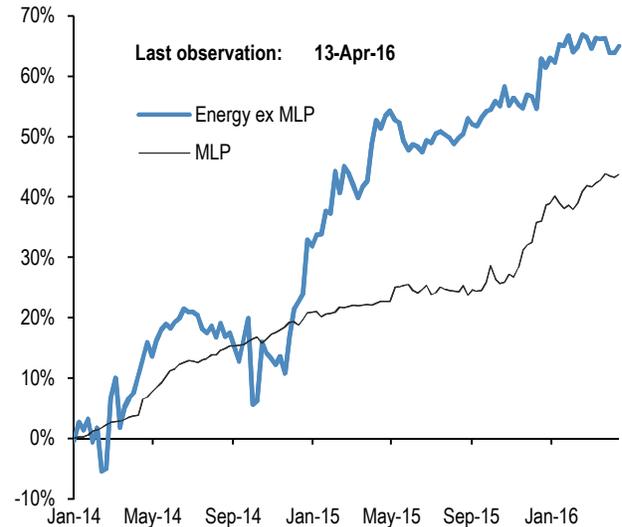
Net spec positions divided by open interest. CFTC futures positions for WTI and Brent are net long minus short for the Managed Money category. Brent positions are with one week lag.



Source: CFTC, Bloomberg, J.P. Morgan

Chart A40: Energy equity ETF flows

Cumulative flow energy equity ETFs as a % of AUM. MLP refers to the Alerian MLP ETF



Source: CFTC, Bloomberg, J.P. Morgan

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