

Flows & Liquidity

Shortage in dollar funding

- The decline in the cross currency swap basis across most USD pairs points to shortage in dollar funding vs. funding in other currencies.
- Different to previous episodes of dollar funding shortage such as the ones experienced during the Lehman crisis or during the euro debt crisis, the current one is not driven by banks.
- It is rather caused by the monetary policy divergence between the US and the rest of the world. Funding conditions have become a lot easier outside the US with QE-driven liquidity injections and rate cuts raising the supply of other currency funding vs. dollar funding.
- Cross border corporate issuance trends are consistent with this picture. Reverse Yankee issuance i.e. EUR denominated corporate bond issuance by non-European issuers spiked this year while Yankee issuance slowed.
- There are around €140bn Euro area government bonds trading below the negative depo rate threshold of -20bp, but almost all of them with below one year remaining maturity.
- Euro money market funds started suffering outflows as the net yield on government funds entered deeply negative territory.
- Greek banks have room to further increase their central bank dependency. Deposit outflows appear to have stopped this week.
- This week was the 8th continuous week of inflows into European equity ETFs. Japanese equity ETFs have similarly not experienced any weekly outflow so far this year.

- The decline in the cross currency swap basis across most USD pairs in recent months is raising questions regarding a shortage in **dollar funding**. The fx basis reflects the relative supply and demand for dollar vs. foreign currency funds and a very negative basis currently points to relative shortage of USD funding or relative abundance of funding in other currencies. Such supply and demand imbalances can create big shifts in the fx basis away from its actuarial value of zero. Figure 1 shows that the **dollar fx basis** weighted across eight DM and EM currencies, declined **significantly over the past year** to its lowest level since mid 2013, although it remains well above the lows seen during the depths of the Lehman or the Euro debt crisis.

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Global Asset Allocation

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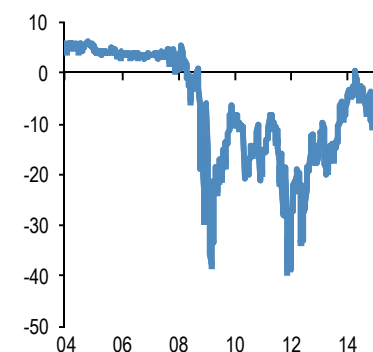
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Figure 1: Dollar fx basis

In bps. Weighted average of the basis of 8 USD pairs: EUR, JPY, GBP, CAD, AUD, CHF, KRW, MXN. The weights are based on the Bloomberg BBDXY Index.

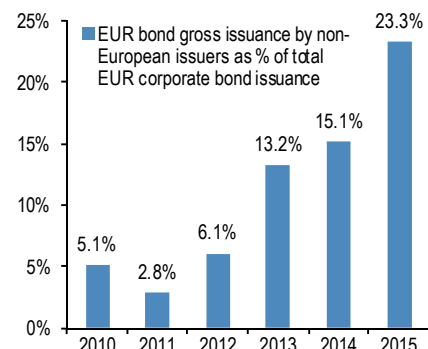


Source: Bloomberg

- Cross currency swaps and FX swaps encompass similar structures which allow investors to raise funds in a particular currency, e.g. the dollar from other funding currencies such as the euro. For example an institution which has dollar funding needs can raise euros in euro funding markets and convert the proceeds into dollar funding obligations via an FX swap. The only difference between cross currency swaps and FX swaps is that the former involves the exchange of floating rates during the contract term. Since a cross currency swap involves the exchange of two floating currencies, the two legs of the swap should be valued at par and thus the basis should be theoretically zero. But in periods when perceptions about credit risk or supply and demand imbalances in funding markets make the demand for one currency (e.g. the dollar) high vs. another currency (e.g. the euro), then the basis can be negative as a substantial premium is needed to convince an investor to exchange dollars against a foreign currency, i.e. to enter a swap where he receives USD Libor flat, an investor will want to pay Euribor minus a spread (because the basis is negative).
- **Both cross currency and FX swaps are subjected to counterparty and credit risk** by a lot more than interest rate swaps due to the exchange of notional amounts. As such the pricing of these contracts is affected by perceptions about the creditworthiness of the banking system. The Japanese banking crisis of the 1990s caused a structurally negative basis in USD/JPY cross currency swaps. Similarly the European debt crisis of 2010/2012 was associated with a sustained period of very negative basis in USD/EUR cross currency swaps.
- What had caused these dollar funding shortages? Financial globalization meant that Japanese banks had accumulated a large amount of dollar assets during the 1980s and 1990s. Similarly European banks accumulating a large amount of dollar assets during 2000s created structural US dollar funding needs. The Japanese banking crisis of 1990s made Japanese banks less creditworthy in dollar funding markets and they had to pay a premium to convert yen funding into dollar funding. Similarly the Euro debt crisis created a banking crisis making Euro area banks less worthy from a counterparty/credit risk point of view in dollar funding markets. As dollar funding markets including fx swap markets dried up, these funding needs took the form of an acute dollar shortage.
- Given the absence of a banking crisis currently, what is causing negative basis? The answer is **monetary policy divergence**. The ECB's and BoJ's QE coupled with a chorus of rate cuts across DM and EM central banks has created an imbalance between supply and demand across funding markets. Funding conditions have become a lot easier outside the US with QE-driven liquidity injections and rate cuts raising the supply of euro and other currency funding vs. dollar funding. This divergence manifested itself as one-sided order flow in cross currency swap markets causing a decline in the basis.
- Do we see these funding imbalances in debt issuance? The answer is yes if one looks at **cross border corporate issuance**. Figure 2 shows how EUR denominated corporate bond issuance by non-European issuers (Reverse Yankee issuance) spiked this year as percentage of total EUR denominated corporate issuance. Similarly Figure 3 shows how Yankee issuance, the share of USD denominated corporate issuance by non-US companies, declined sharply this year. In other words, cross border issuance trends are consistent with higher supply of EUR funding vs. USD funding. We get a similar picture in value terms. Reverse Yankee issuance totaled €47bn YTD which annualized is twice as big as last year's pace. Yankee issuance totaled \$41bn YTD which represents a decline of more than 30% from last year's annualized pace.
- Does this cross border issuance have a currency impact? It depends. For example, if a US company issues in EUR and swaps back into USD to effectively achieve cheaper synthetic USD funding rather than issuing directly in US dollar funding markets, the transaction has no currency impact. This synthetic USD funding

Figure 2: Reverse Yankee issuance

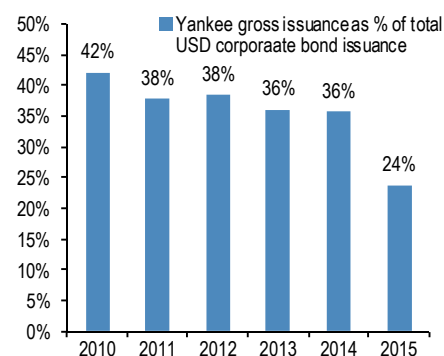
EUR corporate bond gross issuance by non-European issuers as % of total EUR corporate bond issuance



Source: Dealogic, J.P. Morgan

Figure 3: Yankee issuance

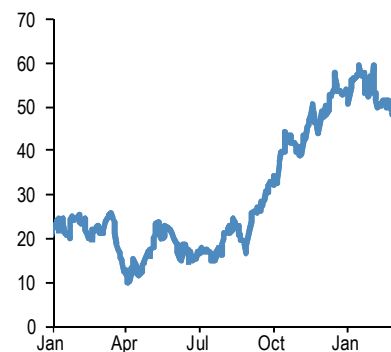
USD corporate bond gross issuance by non-US issuers as % of total USD corporate bond issuance



Source: Dealogic, J.P. Morgan

Figure 4: USD-EUR A-rated 7-10yr corporate credit spread difference

In Bps. Difference between USD and EUR corporate credit spreads over swaps for A-rated 7-10yr paper. Data based on JPMorgan's Maggie and Juli indices



Source: J.P. Morgan

especially attractive right now as credit spreads over swaps are much tighter in Europe than in the US by around 40bp-50bp for A-rated corporate currently in intermediate maturities, which more than offsets the negative fx basis. This means there is a significant yield advantage for US companies using synthetic USD funding (i.e. issuing in EUR and swapping back into USD rather than issuing in USD directly). In theory, the **USD-EUR credit spread difference** of Figure 4 suggests that the fx basis has room to widen by another 20bp, i.e. to decline to -50bp before the **yield advantage of synthetic USD funding** disappears. For the EURUSD, the basis cannot go below -50bp as this is the floor implied by the ECB's FX swap line with the Fed.

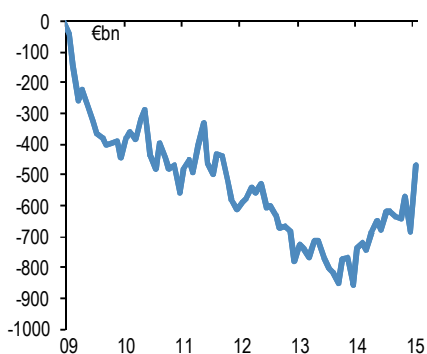
- If a US company issues debt in EUR to fund purchases of EUR assets, there is no currency impact also. For example, if a US company acquires a Euro area company by issuing EUR debt to fund its acquisition, there will be no currency impact. But if a US company changes its liability structure and issues in EUR to hedge existing EUR assets that were previously unhedged, then there is currency impact. The US company effectively converts the proceeds of its EUR issuance to USD to withdraw USD obligations. As a result, there is currency impact and its liability structure changes to better match the composition of its assets.
- It is well known that US companies have accumulated large operations abroad accumulating foreign assets and cash flows over the past two decades. More than a third of US companies sales are derived abroad. As US multinationals have expanded their involvement across the world, they are exposed to fx risk which causes fluctuations to their cash flows and the value of their assets or equity. To reduce the volatility induced by fx operations, US multinationals make extensive use of hedging programs to reduce transaction (revenue/expense) and translation (balance sheet) fx exposure.
- Anecdotal information from syndicate desks suggests that a decent amount of this year's EUR corporate issuance by US companies was for hedging existing EUR exposures suggesting that it might have had currency impact, i.e. it might have been partly responsible for this year's euro weakness.
- **Whether the above YTD trends continue forward is a difficult call to make.** The widening of USD vs. EUR credit spreads shown in Figure 4 has the propensity to sustain the strength of Reverse Yankee issuance putting more downward pressure on the basis. On the other hand, this potential downward pressure on the basis should be offset to some extent by Yankee issuance the attractiveness of which increases the more negative the basis becomes.
- In all, different to previous episodes of dollar funding shortage such as the ones experienced during the Lehman crisis or during the euro debt crisis, the current one is not driven by banks. It is rather driven by the monetary policy divergence between the US and the rest of the world. This divergence appears to have created an imbalance in funding markets and a shortage in dollar funding. It is important to monitor how this dollar funding shortage and issuance patterns evolve over time even if the currency implications are uncertain.

Euro area banks' buying of foreign assets

- Last week we reported the jump in the outstanding amounts of euro area banks' external assets for the month of January. The ECB also provides transactions data, which unlike stock data, are adjusted for valuations and currency effects. By looking at these transactions data, the picture still remains that of euro banks accumulating foreign assets at a faster pace in January (Figure 5).
- The ECB defines financial transactions in MFI balance sheet statistics as follows:
 $T_t = (L_t - L_{t-1}) - C_t - V_t - E_t$, where T_t = Transactions in period t ; L_t = outstanding amounts at the end of period t ; C_t = Reclassification adjustment in period t ; V_t = Revaluation adjustment in period t ; E_t = Exchange rate adjustment in period t .

Figure 5: Cumulative transactions in external assets by euro area MFIs

€bn, monthly cumulative transactions since Jan 09. Last obs Jan 15.



Source: ECB, J.P. Morgan

- Admittedly “external assets” are a convoluted item that potentially includes bonds, equities, loans and other asset classes. Monthly data by the ECB allow for somewhat more disaggregation. These data suggest for example that buying of debt securities by MFIs with “extra” euro area counterparties has been increasing since May last year (Figure 6). We observe a similar trend in purchases of equities and non MMF investment fund shares as well as loans, although these series are more volatile.

€140bn of Euro area government bonds trading below the negative depo rate threshold

- Following the ECB’s announcement that it will buy government bonds with yields as low as the depo rate i.e. -20bp, we extend our analysis on the euro area bond universe trading with negative yields to separate the universe trading yields below -20bp. Figure 7 shows an estimate of the amount of Euro area government bonds trading at negative yields over time using pricing data from our JPM EMU bond index. Around €1.6tr of Euro area government bonds (with >1yr original maturity) are currently trading with negative nominal yields, almost all of them of core euro governments of up to 5 years maturity. Figure 8 shows the universe of euro area bonds (again with >1yr original maturity) trading below -20bps. This currently stands at €140bn, but it was as high as €450bn on Feb 26th. Admittedly these bonds trading with yields that are below -20bp reflect almost exclusively euro area government bonds with less than 1yr remaining maturity whereas the ECB will only buy bonds between 2-30yr remaining maturity.

Euro money market funds suffered outflows in November and December

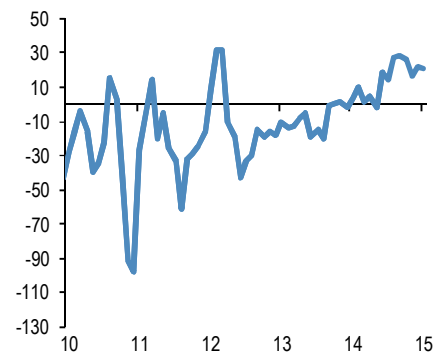
- We highlighted previously in *F&L* dated Nov 21, that negative rates in the Euro area, with a depo rate cut to -10bp in June and -20bp in Sep last year, had little impact so far on either the activity in money markets or the flows in money market fund space.
- More recent data suggest that euro money market funds have started suffering. Figure 9 shows both Lipper and EFAMA monthly data reported outflows for the month of Nov and Dec 2014. Money funds mainly suffered outflows as their yield moved to or below zero since October. Figure 10 shows that the average net yield of EUR dominated offshore money market funds entered negative territory for government related funds in October with a further steep decline over the past two months to -8bp. The net yield on prime funds collapsed to zero. We had previously forecasted that EUR money market fund net yields will turn negative eventually, causing a contraction of the €800bn Euro money market fund industry. This process appears to have started in Q4 last year.
- There is little evidence of a downshift in money market activity as can be seen in Figure 11 below which shows unsecured (EONIA volume) and secured (GC Pooling EUR overnight index volume). That is, interbank activity appears to be holding up as market participants are now accustomed to negative rates.

Greek banks have room to further increase their central bank dependency. Deposit outflows appear to have stopped this week

- The ECB, which continues to take its guidance from the Eurogroup, decided to raise its ELA limit on Greek banks by the minimum needed, i.e. by only €0.5bn relative to the €2bn requested by Greek banks, i.e. the ECB continues to keep Greek banks on a tight leash putting pressure on the Greek government for a quick progress on their negotiations with the Eurogroup. We do not think that the ECB’s incremental €0.5bn increase of the ELA limit means that Greek banks have already reached their collateral limit. In fact we believe that Greek banks have room to borrow another €20bn or so from the Eurosystem before they reach their

Figure 6: Purchases of debt securities by euro area MFIs from extra Euro area counterparts

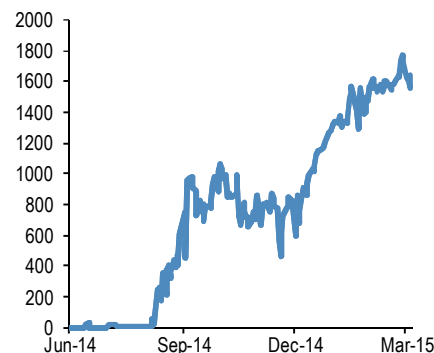
3month rolling sum, €bn. Last obs Jan 15.



Source: ECB, J.P. Morgan

Figure 7: Euro area government bonds trading with negative yields

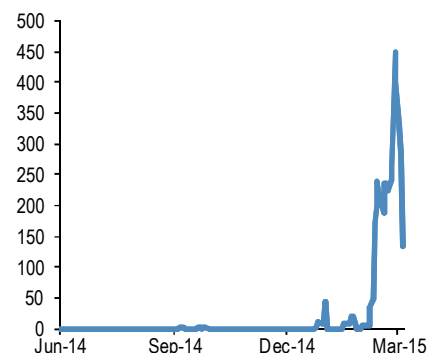
€bn.



Source: J.P. Morgan

Figure 8: Euro area government bonds trading below -20bp

€bn.

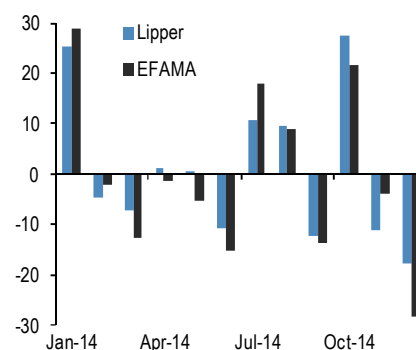


Source: J.P. Morgan

collateral limit. We describe the reasoning below.

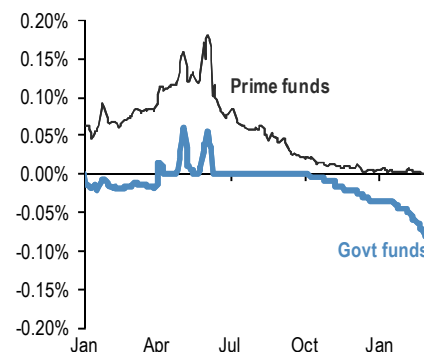
- The ECB President revealed this week that Greek banks' reliance on central bank financing currently stands at around €100bn. With the ELA limit set at €68.8bn, the implication is that Greek banks borrow another €30bn via normal ECB operations by using EFSF bonds as collateral.
- Previously we had assumed that, of the €38bn of EFSF bonds, Greek banks had repoed around €30bn split between private repo markets and regular ECB operations. January data on Greek bank balance sheets revealed that Greek banks lost access to private interbank markets even using EFSF bonds as collateral. That is, from January already, Greek banks had used around €30bn of EFSF bonds as collateral with ECB operations. As a result, their overall central borrowing had climbed to €87bn in January, i.e. it increased by a lot more than the €12bn of January's deposit outflow.
- Now including all EFSF bonds, the maximum Greek banks can borrow is €38bn by using EFSF as collateral, €8bn by using government securities as collateral and €75bn by using credit claims as collateral, so €121bn in total. This is higher than the €108bn maximum we reported before in *F&L* Feb 6th, as at the time we had assumed that Greek banks will continue to borrow around €13bn from private repo markets using EFSF bonds as collateral. That is, at the time we had assumed €108bn of maximum central bank borrowing and €13bn of private sector borrowing using EFSF bonds as collateral, i.e. the total was exactly the same as above and equal to €121bn. We now effectively merge the two figures as Greek banks lost access to private repo markets and these €13bn of EFSF bonds are now repoed at the ECB.
- In all, Greek banks' current central dependency of €100bn is around €20bn below the maximum they can borrow based on our estimated collateral availability above. In addition, Greek banks have around €8bn of unencumbered EFSF bonds, which they keep in the (unlikely) event that the ECB stops increasing the ELA limit.
- In terms of deposit outflows, our daily proxy of deposit outflows based on purchases of offshore money market funds by Greek citizens, which is one way for Greek citizens to deploy their withdrawn deposits, was flat this week vs. €64m last week and €153m during the previous week (between Feb 13th and Feb 20th). **That is Greek bank deposit outflows appear to have stopped this week.** As a reminder to our readers, the rule of thumb is that each €50m of purchases of offshore money market funds are associated with €1bn of deposit outflow. That is €380m of purchases of offshore money market funds in February were associated with bank deposit outflows of around €8bn. This is enough to have pushed the central bank dependency of Greek banks towards the €100bn figure that Draghi mentioned from €87bn in January.

Figure 9: European money market fund flows
 €bn per month



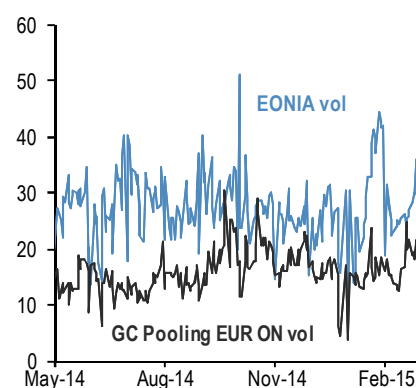
Source: Bloomberg, Lipper, EFAMA, J.P. Morgan.

Figure 10: Net yield on EUR denominated funds



Source: iMoneyNet, J.P. Morgan

Figure 11: European money markets volumes
 €bn per month



Source: Bloomberg, J.P. Morgan

Table A1: Weekly flow monitor

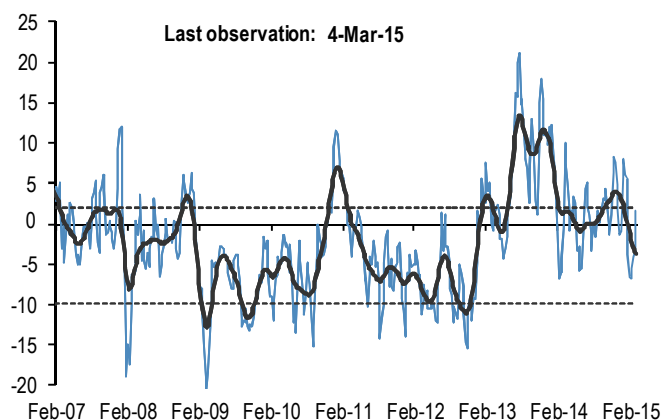
\$bn, Includes US domiciled Mutual Fund flows from ICI with a one week lag and globally domiciled ETF flows from Bloomberg. Current week data only includes ETF flows.

MF & ETF Flows	4-Mar	4 wk avg	13 wk avg	2014 avg
All Equity	4.33	5.1	2.3	3.6
All Bond	-3.32	3.6	2.4	1.9
US Equity	2.50	0.9	0.9	1.2
Intl. Equity	1.83	4.2	1.8	2.2
Taxable Bonds	-3.40	3.1	1.4	1.4
Municipal Bonds	0.08	0.6	1.0	0.5

Source: Bloomberg, ICI, J.P. Morgan

Chart A1: Fund flow indicator

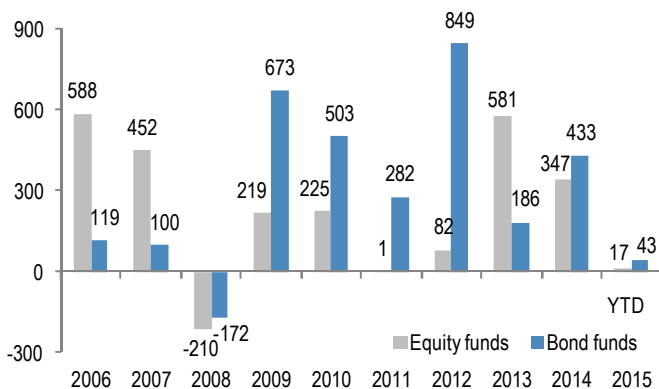
Difference between flows into Equity and Bond funds: \$bn per week. Flow includes US domiciled Mutual Fund and globally domiciled ETF flows. Current week data only includes ETF flows. The thin blue line shows the 4-week average of this difference. The thick black line shows a smoothed version of the 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. Flows include global MF and ETF flows. MF flows are from ICI (global flows up to Q3'14 is from ICI and data since then up to now is combination of EFAMA and ICI). Full year 2014 and YTD 2015 are estimated flows. ETF flows are from Bloomberg.



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

Table A2: Weekly corporate flows

\$bn, Gross bond issuance includes all corporates incl. financials. United States issuance is all issuance globally by US companies and W. European issuance is all issuance globally by W. European companies. 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. Equity supply and corporate announcements are based on announced deals, not completed.

Equity Supply	6-Mar	4 wk avg	13 wk avg	y/y chng
Global IPOs	0.3	3.1	2.5	7%
Secondary Offerings	2.1	6.1	8.7	97%
Gross corporate bond issuance				
United States	57.4	43.3	26.5	2%
Western Europe (€bn)	18.6	22.9	17.6	-7%
Japan	4.4	4.1	3.1	40%
EM	6.5	6.5	11.4	-2%
Corporate announcements				
M&A - Global	57.6	42.6	53.5	-2%
- US Target	46.0	22.3	21.1	-33%
- Non-US Target	11.7	20.3	32.4	37%
US buybacks	0.7	15.9	8.1	-25%
Non-US buybacks	2.1	2.4	1.7	-29%

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

Table A3: Trading turnover monitor

3 month avg. 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 i.e. the ratio of monthly trading volumes annualized divided by the outstanding amount. 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 deal values over the same period last year.

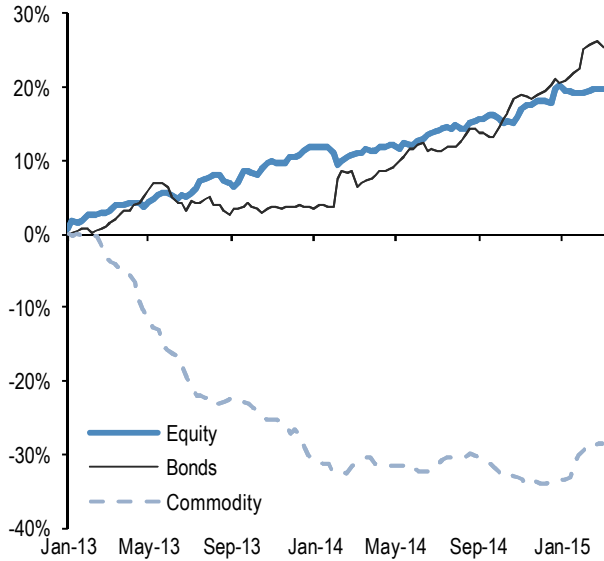
As of Feb-15	MIN	MAX	Turnover ratio	Vol (tr)	y/y chng
Equities					
EM Equity*			4.4	\$2.7	136%
DM Equity*			1.0	\$3.9	2%
Govt Bonds					
USTs			8.5	\$6.1	-28%
JGBs*			12.7	¥913	18%
Bunds			1.1	€2	3%
Credit					
US HG			0.8	\$0.3	10%
US HY			1.1	\$0.2	25%
US Convertibles			2.2	\$0.0	-14%
Commodities					
Gold			33.6	\$0.3	9%
Oil			93.3	\$1.6	-53%
Copper			4.7	\$0.5	46%

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

ETF Flow Monitor (data as of Mar 04)

Chart A3: Global Cross Asset ETF Flows

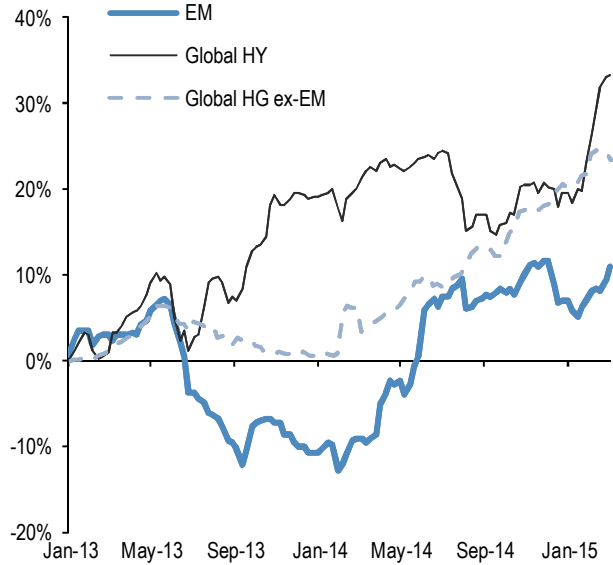
Cumulative flow into ETFs as a % of AUM.



Source: J.P. Morgan, Bloomberg

Chart A4: Bond ETF Flows

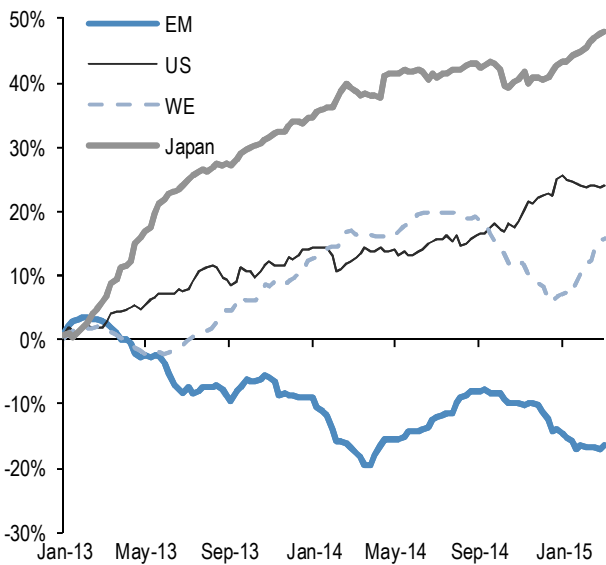
Cumulative flow into bond ETFs as a % of AUM.



Source: J.P. Morgan, Bloomberg

Chart A5: Global Equity ETF Flows

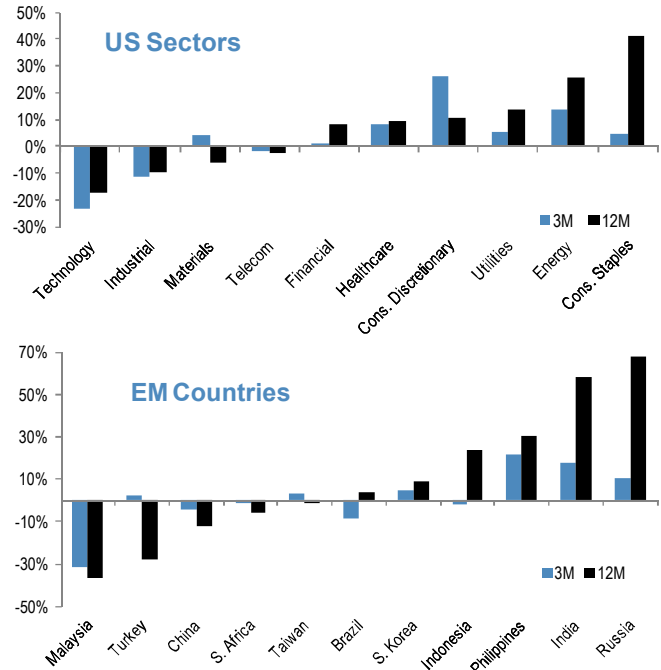
Cumulative flow into global equity ETFs as a % of AUM.



Source: J.P. Morgan, Bloomberg

Chart A6: Equity Sectoral and Regional ETF

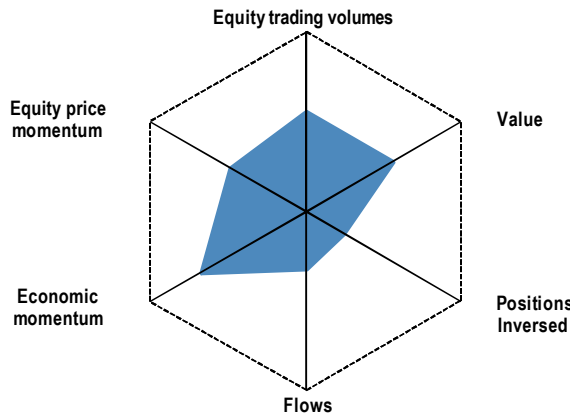
Rolling 3 month and 12 month change in cumulative flows as a % of AUM. Both sorted by 12 month change.



Source: J.P. Morgan, Bloomberg

Chart A7: 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.



Explanation of indicators: 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.

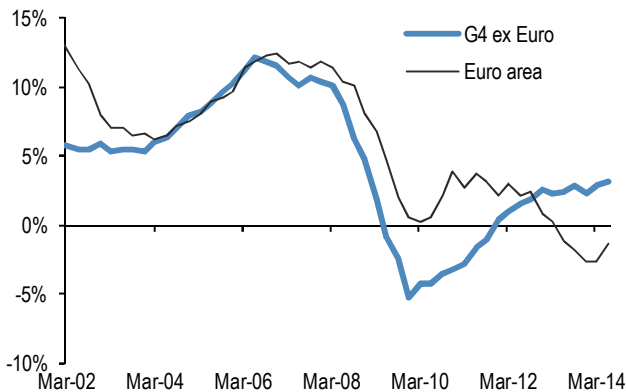
Equity trading volumes: The Y/Y change in the average daily trading volume of stocks on the NYSE.

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).

Credit growth

Chart A9: 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 Q2'14.



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

Conti... Explanation of indicators

Positions: Difference between net spec positions on US equities and rates. See Chart A14.

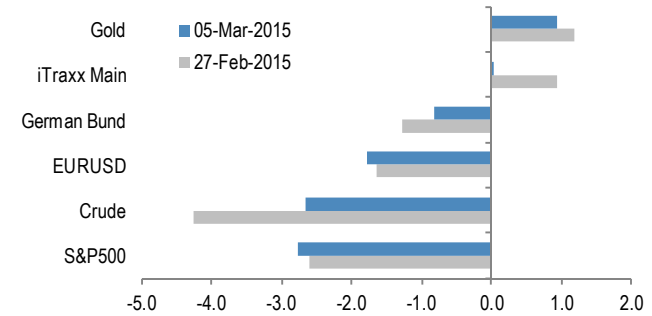
Flow momentum: The difference between flows into equity funds (incl. ETFs) and flows into bond funds. Chart A1. We then smooth this using a Hodrick-Prescott filter with a lambda parameter of 100. We then take the weekly change in this smoothed series as shown in Chart A1

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 A8: Option skew monitor

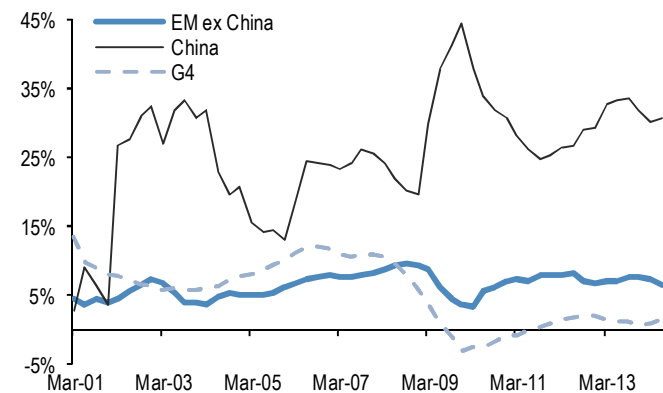
Skew is the difference between the implied volatility of out-of-the-money (OTM) call options and put options. A positive skew implies more demand for calls than puts and a negative skew, higher demand for puts than calls. It can therefore be seen as an indicator of risk perception in that a highly negative 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 positive 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

Chart A10: 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 Q2'14.

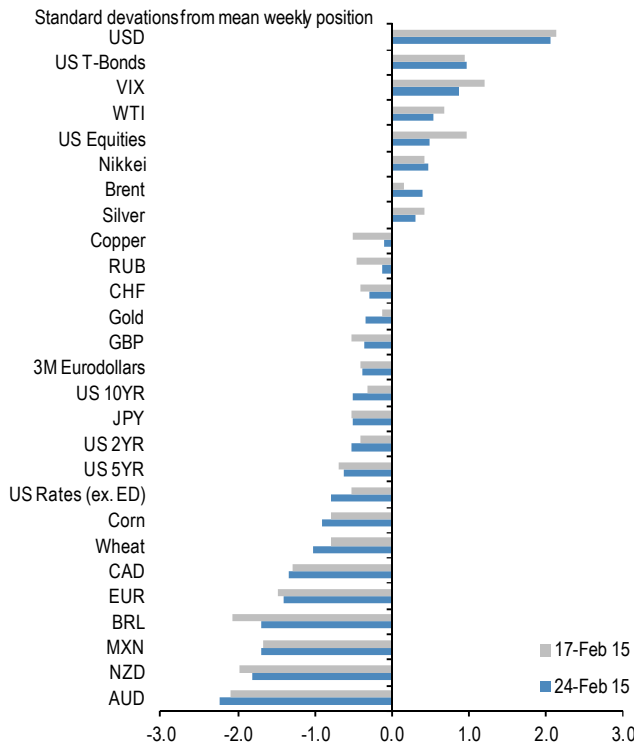


Source: Central bank, BIS, ICI, Barcap, Bloomberg, IMF and J.P. Morgan calculations

Spec position monitors

Chart A11: Weekly Spec Position Monitor

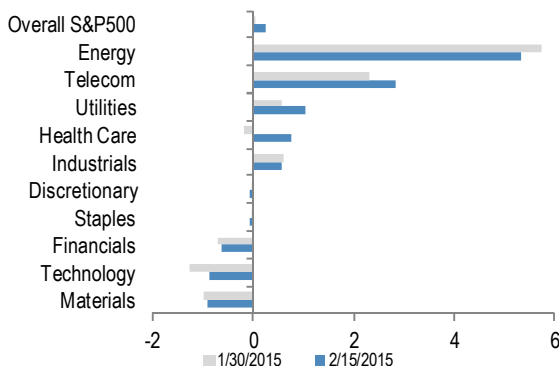
Net spec positions are the number of long contracts minus the number of short using CFTC futures only data. This net position is then converted to a USD amount by multiplying by the contract size and then the corresponding futures price. To proxy for speculative investors, commodity positions use the 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. The sample starts on the 13th of June 2006.



Source: Bloomberg, CFTC, J.P. Morgan

Chart A13: 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)

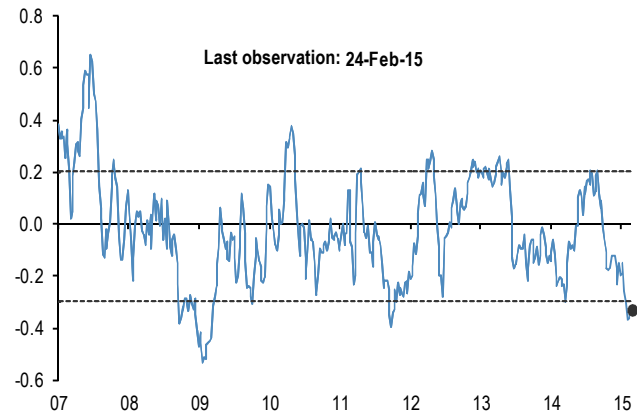


Source: NYSE, J.P. Morgan

Chart A12: 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.

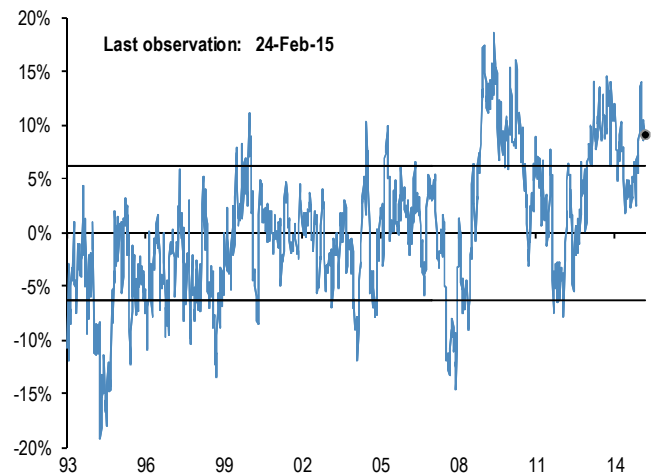


Source: CFTC, J.P. Morgan

Chart A14: Spec position indicator on US equities vs. rates

Difference between net spec positions on US equities & rates

Similar to Chart A12, 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 duration weighted composite of UST futures and scaled by open interest. The US equity is an aggregate of the S&P500, Dow Jones, NASDAQ and their Mini index. The US rates series is duration weighted aggregate of the UST2YR, UST5YR, UST10YR, UST long bond & the UST Ultra long bond futures.

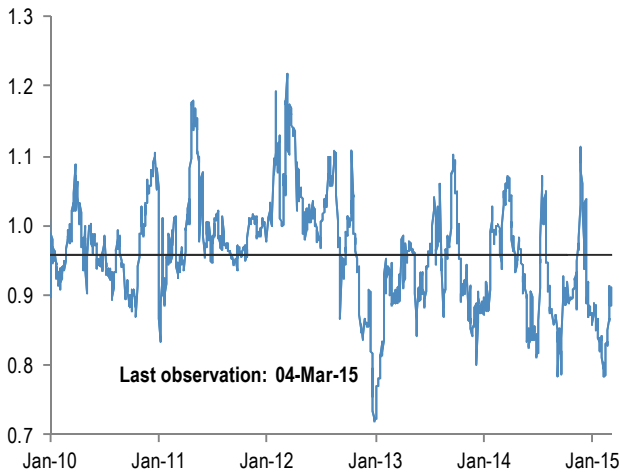


Source: CFTC, Bloomberg and J.P. Morgan

Mutual fund and hedge fund betas

Chart A15: Balanced fund equity exposure

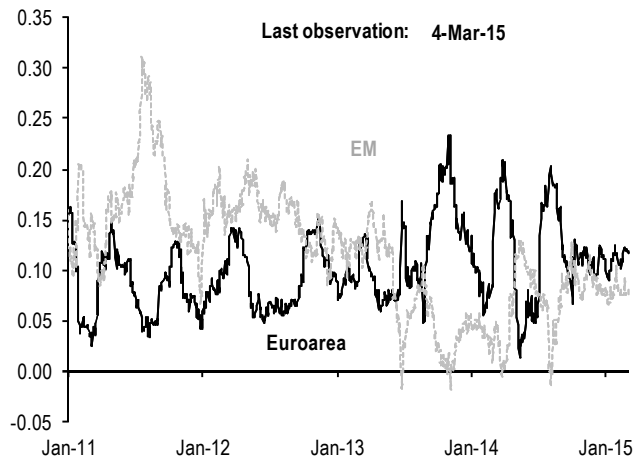
Rolling 21-day beta of balanced MF returns to returns on the S&P500. Balanced funds are top 20 US-based funds by assets that have existed since 2006. It excludes tracker funds and funds with a low tracking error. The thin black line is the average during expansion since 2006.



Source: Bloomberg J.P. Morgan

Chart A16: Equity mutual fund beta to Euro vs. US and EM vs. US equities relative performance

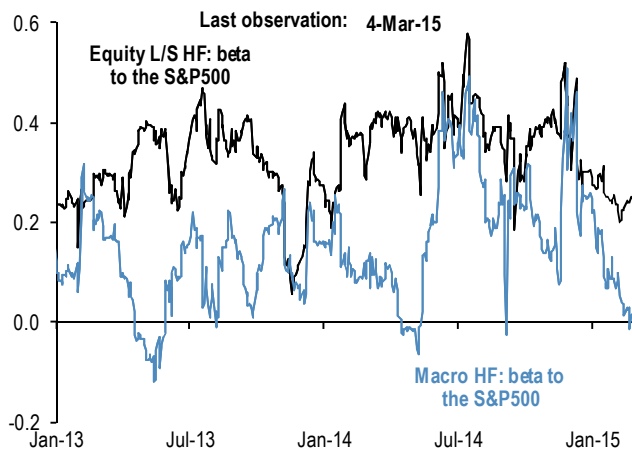
41-business-day rolling beta of the average daily returns of 20 biggest US-domiciled active equity funds against the daily relative return of Euro area vs. US equities and emerging markets vs. US equities. The betas are based on multiple regressions of the relative performance of the Eurostoxx50 vs. the S&P500, MSCI EM vs. the S&P500 and the S&P500 outright performance.



Source: Bloomberg J.P. Morgan

Chart A17: Hedge fund monitor

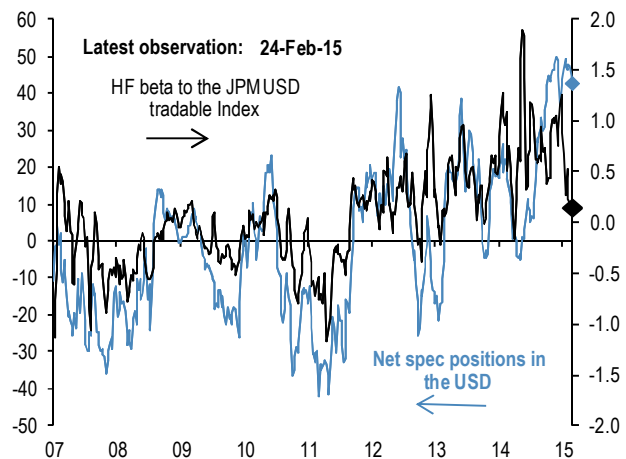
Rolling 21-day beta of macro and equity L/S hedge fund returns to returns on the S&P500. The beta represents the average exposure of macro hedge funds to equities over the previous 21 days.



Source: Datastream, Bloomberg, J.P. Morgan

Chart A18: 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.

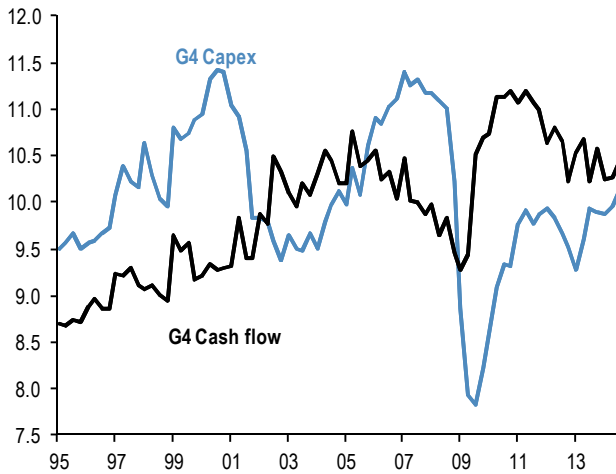


Source: CFTC, Datastream, Barclay Group, Bloomberg J.P. Morgan

Corporate activity

Chart A19: G4 non-financial corporate capex and cash flow as % of GDP

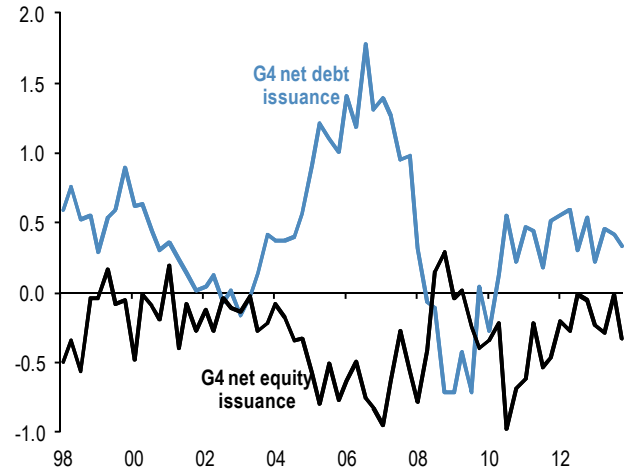
% of GDP, G4 includes the US, the UK, the Euro area and Japan. Last observation as of Q3 2014.



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

Chart A20: G4 non-financial corporate sector net debt and equity issuance

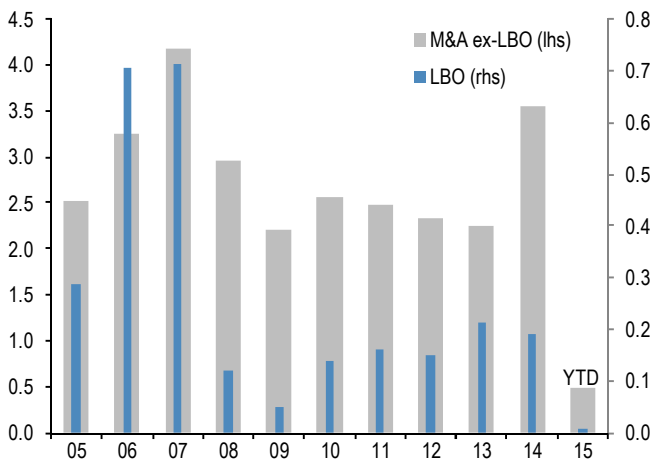
\$tr per quarter, G4 includes the US, the UK, the Euro area and Japan. Last observation as of Q3 2014.



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

Chart A21: Global M&A and LBO

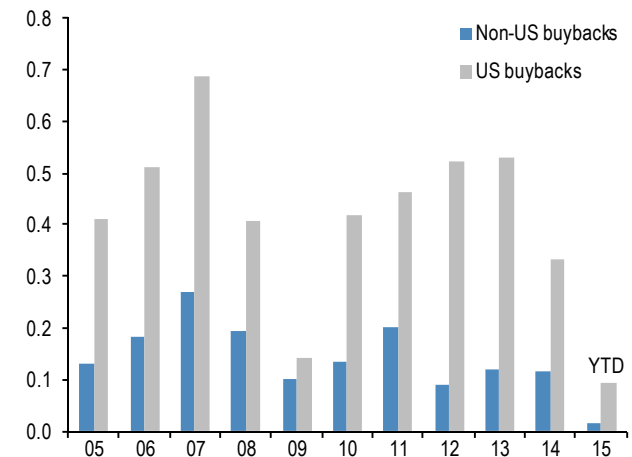
\$tr. YTD 2015 as of Mar 05, 2015. M&A and LBOs are announced.



Source: Reuters ThomsonOne, J.P. Morgan

Chart A22: US and non-US share buybacks

\$tr. YTD 2015 as of Mar 05, 2015. Buybacks are announced.

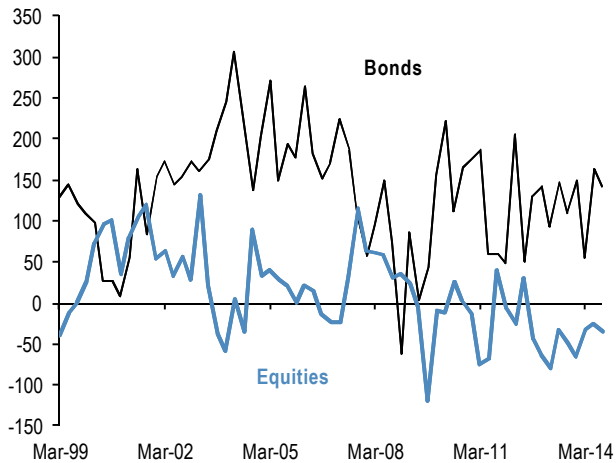


Source: Reuters ThomsonOne, J.P. Morgan

Pension fund and insurance company flows

Chart A23: G4 pension funds and insurance companies equity and bond flows

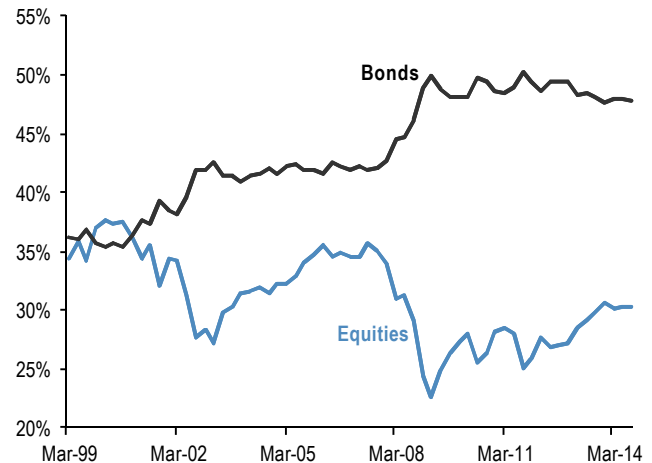
Equity and bond buying in \$bn per quarter. G4 includes the US, the UK, Euro area and Japan. Last observation is Q3 2014



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

Chart A24: G4 pension funds and insurance companies equity and bond levels

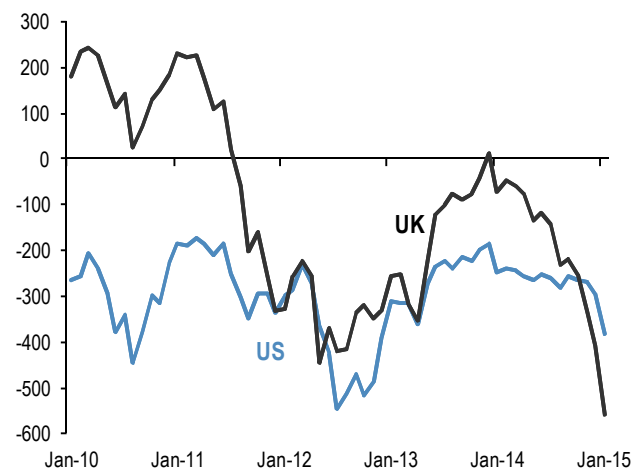
Equity and bond as % of total assets per quarter. G4 includes the US, the UK, Euro area and Japan. Last observation is Q3 2014.



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

Chart A25: Pension fund deficits

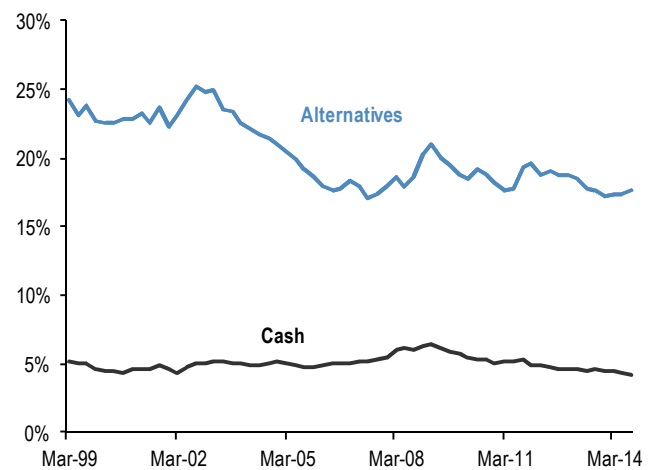
US\$bn. For US, funded status of the 100 largest corporate defined benefit pension plans, from Milliman. For UK, funded status of the defined benefit schemes eligible for entry to the Pension Protection Fund, converted to US\$ at current exchange rates. Last observation is Jan 2015.



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

Chart A26: 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 Q3 2014.



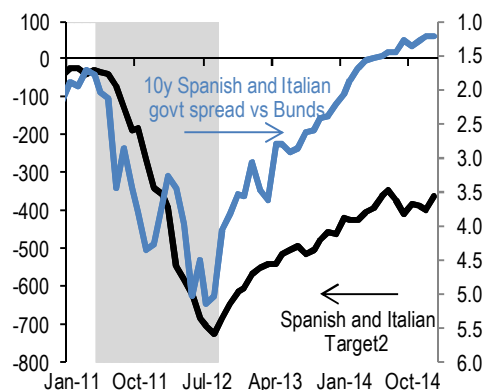
Source: ECB, BOJ, BOE, Federal Reserve flow of funds

European Funding market monitor

Table A4: Bank deposits and ECB reliance

Deposits are non-seasonally adjusted Euro area non-bank, non-government deposits as of Jan 2015. 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	-39	0	14	0.4%	0.6%
Belgium	-9	12	6	0.7%	4.1%
Cyprus	-3	3	1	-0.8%	-4.4%
Finland	14	0	1	1.3%	3.5%
France	-65	-34	62	2.7%	5.0%
Germany	515	72	43	0.6%	2.5%
Greece	-76	-44	82	-10.1%	-8.5%
Ireland	-35	11	19	2.7%	6.7%
Italy	-164	-34	163	1.2%	4.0%
Luxembourg	107	4	2	0.1%	2.3%
Netherlands	0	-2	13	12.7%	13.6%
Portugal	-48	12	28	0.4%	3.3%
Spain	-195	21	142	-0.3%	-1.4%

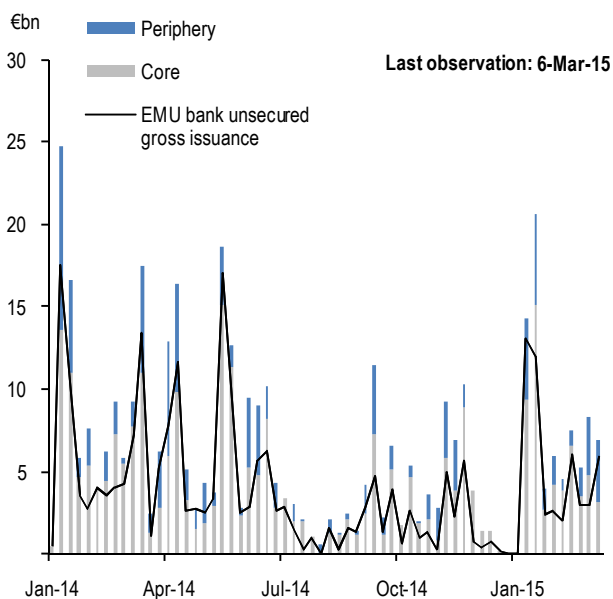


Source: Bloomberg, ECB, National Central Banks, J.P. Morgan

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

Chart A27: Euro area gross bank debt issuance

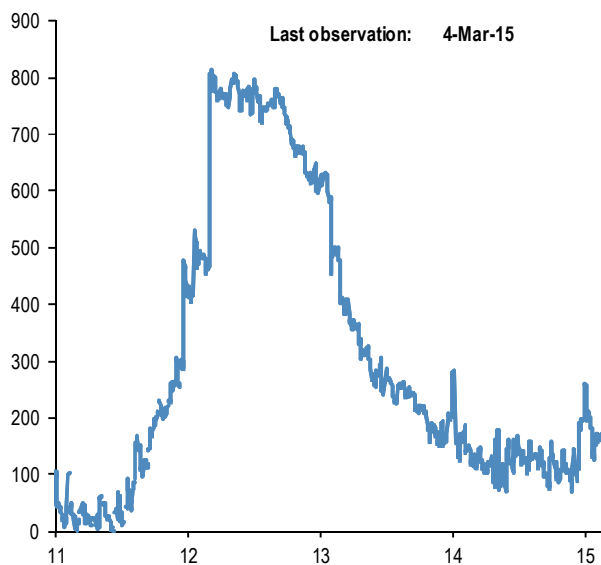
Includes secured, unsecured and securitized issuance in any currency. Excludes short-term debt (maturity less than 1-year) and self funded issuance (where the issuing bank is the only book runner).



Source: Dealogic, J.P. Morgan

Chart A28: Excess cash in the Euro area banking system

€bn, Measured as the difference between the amount in the ECB deposit facility minus that in the lending facility, plus the difference between the current account reserves that banks hold with the ECB minus required reserves.

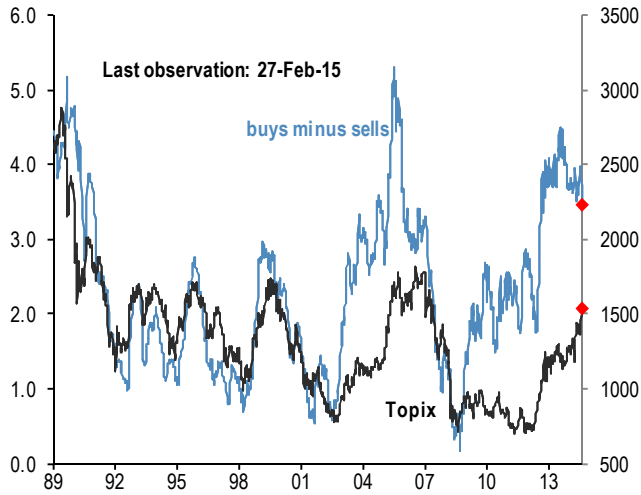


Source: ECB, J.P. Morgan

Japanese flows and positions

Chart A29: Tokyo Stock Exchange margin trading: total buys minus total sells

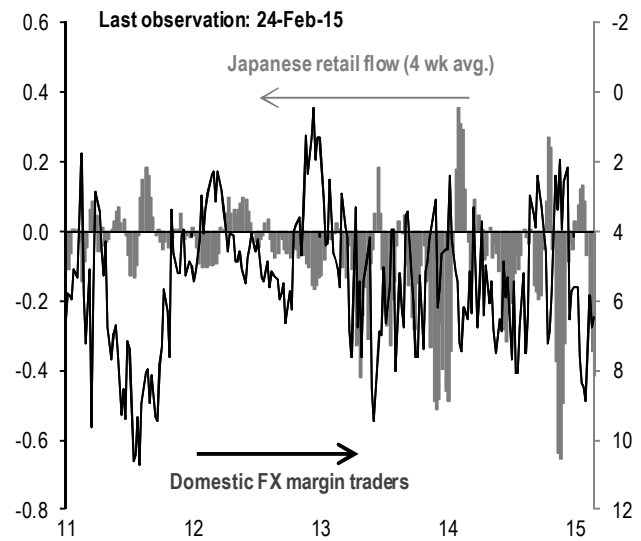
In bn of shares. Topix on right axis.



Source: Tokyo Stock Exchange, J.P. Morgan

Chart A30: Domestic retail flows

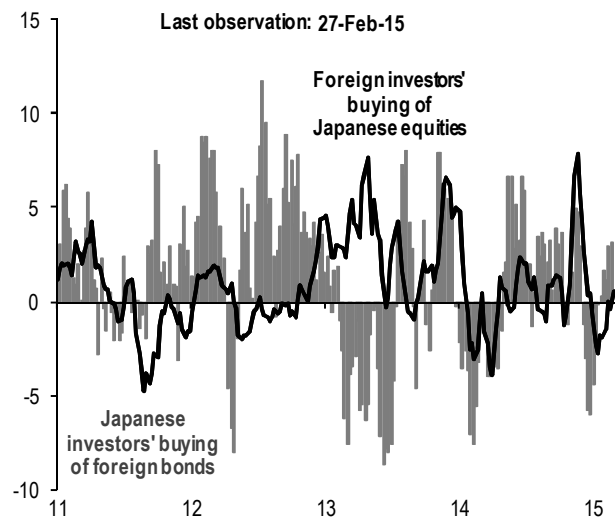
In JPY tr. Retail flows are from Tokyo stock exchange and FX margin trader positions are JPM calculation. FX margin trader positions are in reverse order. A higher number means a larger short and vice versa.



Source: TSE, J.P. Morgan calculations

Chart A31: Japanese equity buying by foreign investors. Japanese investors' buying of foreign bonds

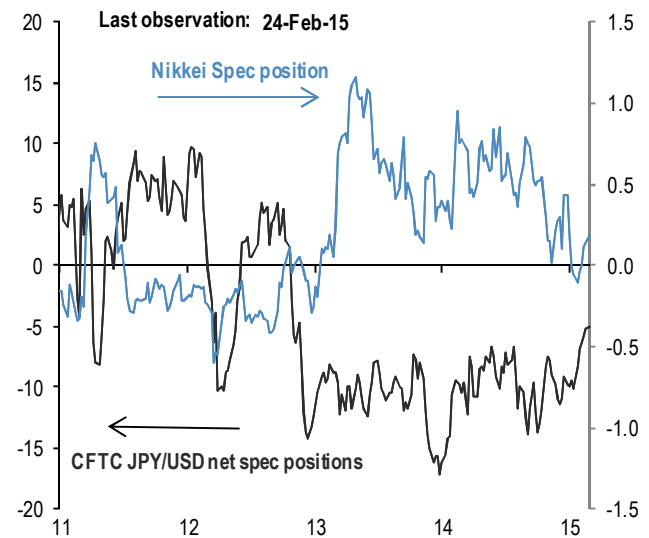
\$bn, 4 week moving average.



Source: Japan MoF, J.P. Morgan

Chart A32: Overseas CFTC spec positions

CFTC positions are in \$bn.

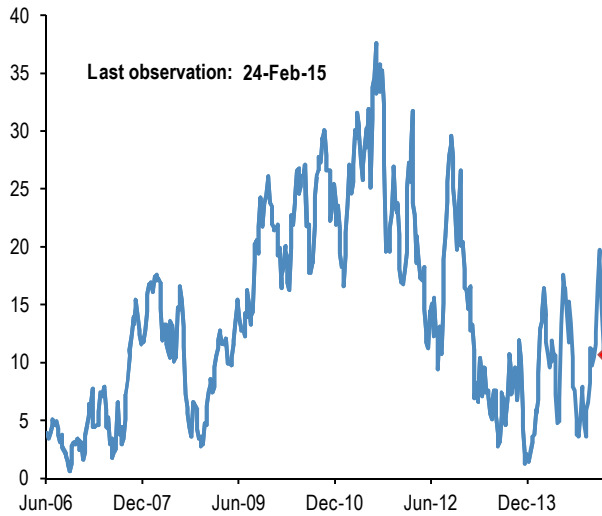


Source: Bloomberg, CFTC, J.P. Morgan calculations.

Commodity flows and positions

Chart A33: Gold spec positions

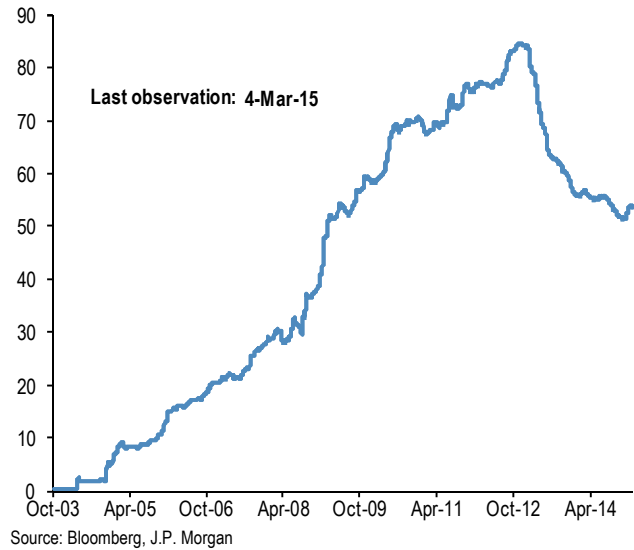
\$bn. CFTC net long minus short position in futures for the Managed Money category.



Source: CFTC, Bloomberg, J.P. Morgan

Chart A34: Gold ETFs

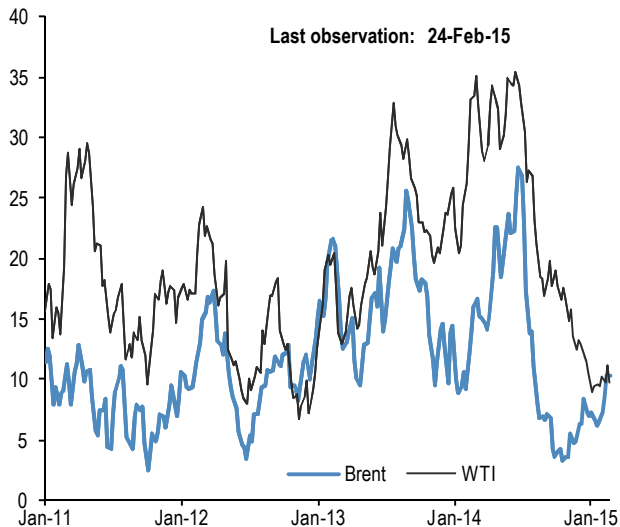
Mn troy oz. Physical gold held by all gold ETFs globally.



Source: Bloomberg, J.P. Morgan

Chart A35: Oil spec positions

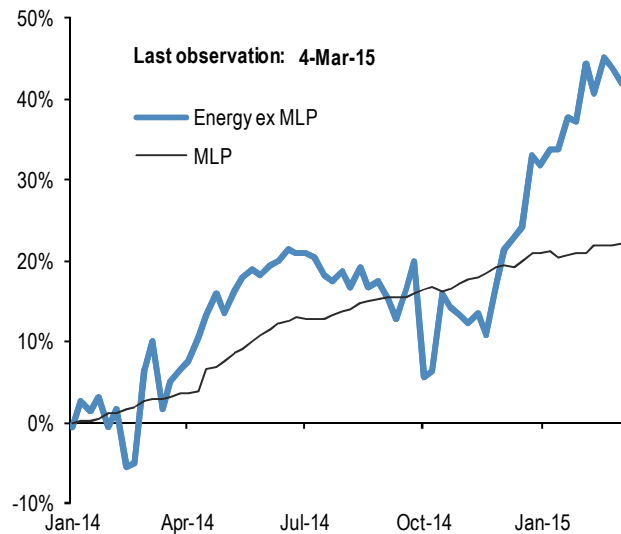
\$bn. CFTC futures positions for WTI and Brent are net long minus short for the Managed Money category.



Source: CFTC, Bloomberg, J.P. Morgan

Chart A36: Energy equity ETF flows

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



Source: Bloomberg, J.P. Morgan.

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Global Asset Allocation
Flows & Liquidity
06 March 2015

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