BBVA Research

Global Funds Outlook

Seeking shelter

July 2018

Creating Opportunities

Executive summary

- In 2Q18 global investment funds (GIFs) registered outflows for the first time since the US Presidential election. The reversal –driven by tighter global financing and growing concerns on trade- has remained mild and controlled thanks to solid economic growth. As anticipated in our previous report, the reversal was especially strong in EM that enjoyed the 2017 bonanza.

- EM funds are losing their appeal due to a confluence of two factors: higher US rates (10y bond yields surpassed 3%) that lead to a reversion in “search for yield” strategies, and a more appreciated USD that leads to concerns on the sustainability of EM countries that are highly-indebted in hard currency. On top of that, we observe that recent trade tensions have affected EM equity positions, especially in Emerging Asia. In particular, China has started to show net capital outflows, a source of concern.

- The Eurozone exhibited worse dynamics than other developed markets, reminding us of lingering vulnerabilities in its periphery - particularly in Italy.

- As a result, investor sentiment has veered from risk-on to risk-off mood. The probability to enter a “safe-haven” regime has spiked up in the last few weeks and markets are now more sensitive to any (negative) shock.

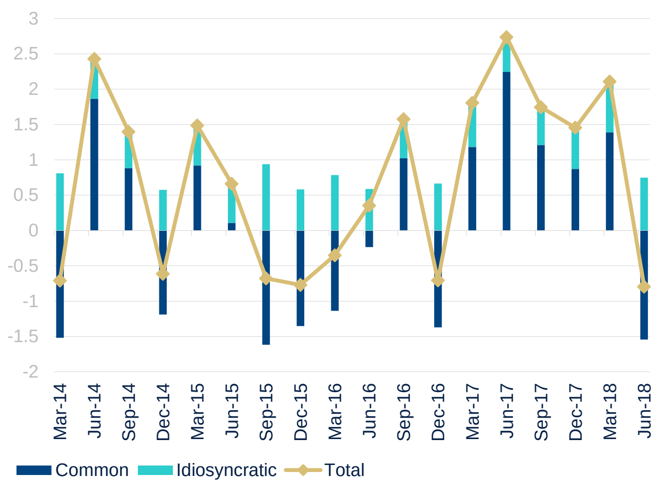
- Under our current macroeconomic scenario, we expect net EM outflows for 2H18. Risks are tilted to the downside. If a trade war materializes, EM net outflows would rise significantly for a prolonged period of time.

Global Investment Funds (GIF)

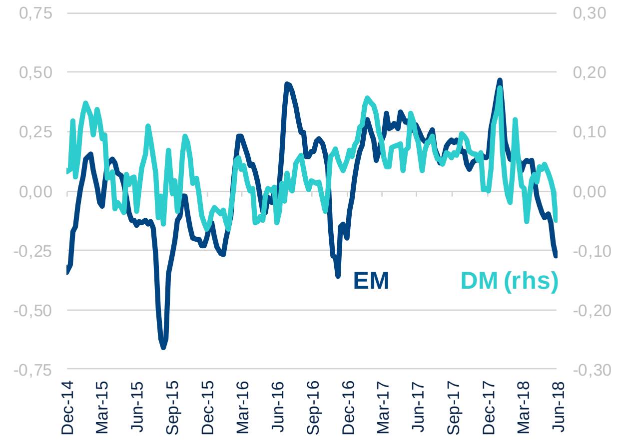
- We analyse EPFR data on global fund flow over the quarter:
  - to track asset volumes,
  - to describe net reallocations across regions and asset types
  - to identify common factors underlying those dynamics

Global investment funds registered outflows in 2Q18 for the first time since the US elections.

GIF flows and their composition
(quarterly average, all countries, % AUM)



GIF flows to EM and DM
(weekly flows, 4w moving average, % AUM)



Source: BBVA Research, EPFR

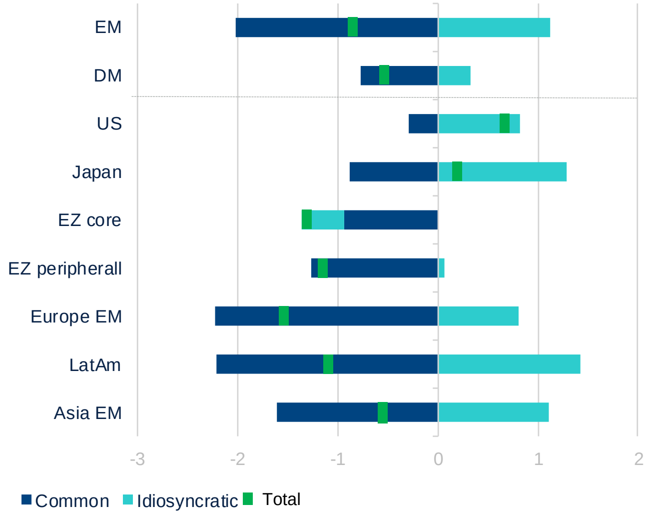
Worsening global financial conditions are behind the negative dynamics of portfolio flows. The "common component" turned negative as sources of concern are mounting (funding, trade tensions)

The bulk of outflows has been concentrated in Emerging Markets, while Developed Markets have only recently started to registered modest withdrawals

Net outflows across EM and the Eurozone, while the US and Japan remained on the receiving end.

GIF flows across regions in 2Q18: common vs idiosyncratic factors

(monthly average,%, AUM)



Source: BBVA Research, EPFR

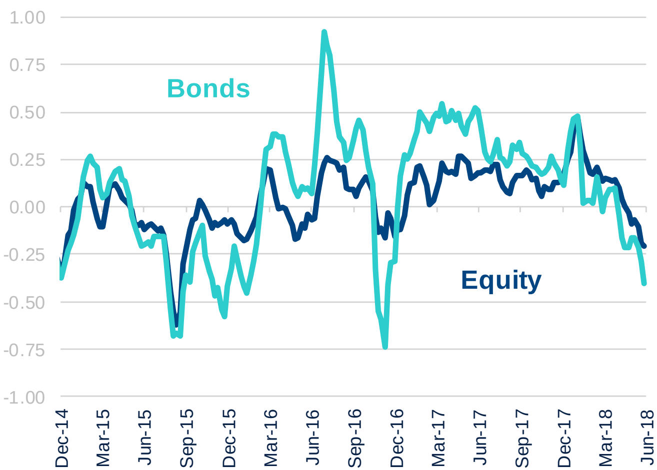
*All comparative inferences across countries are based on inflows relative to each country's total assets under management (AUM). They are NOT based on actual USD flows, which tend to be significantly larger for the US than for any other economy
Source: BBVA Research, EPFR

- EM were particularly hampered by global tailwinds amidst domestic vulnerabilities in some major economies, particularly some countries in Emerging Europe and LatAm. Lately, China returned to the spotlight as a source of concern due to the escalation of trade tensions
- Inflows to the Eurozone have also been dragged down by renewed political uncertainty in the Eurozone (driven by Italian politics and more recently by Germany)
- Against the backdrop of lower risk appetite, the US and Japan have benefited from some safe-haven flows

Unlike previous episodes, EM outflows have crept in slowly yet persistently.

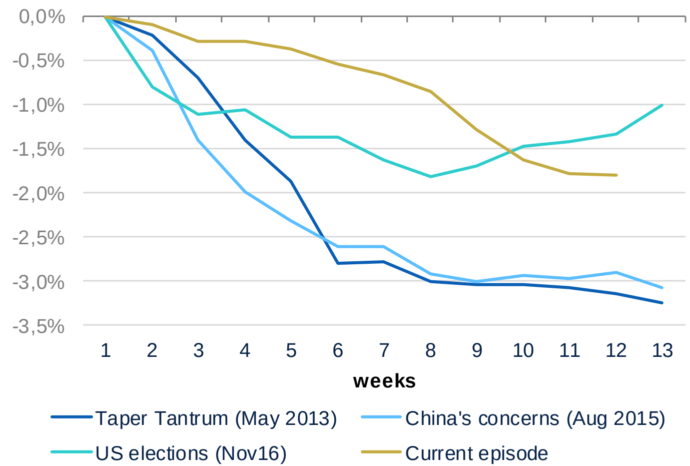
GIF flows to EM

(weekly flows, 4w moving average, % AUM)



Outflows from EM in different episodes

(cumulated flows in different episodes, % AUM)



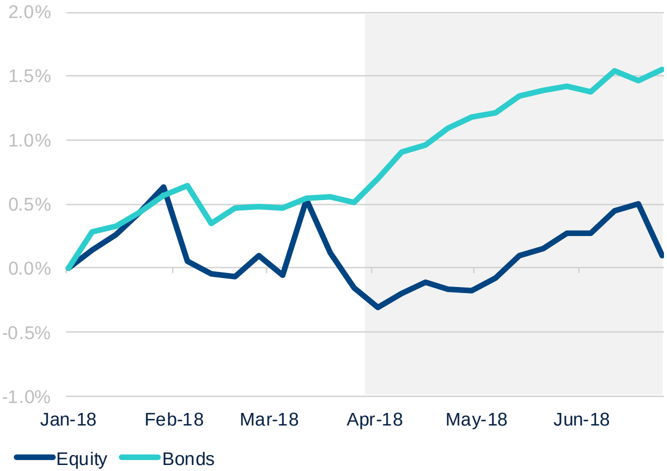
Source: BBVA Research, Bloomberg

Early in the quarter, tightening of global funding led to outflows from bond funds, while the escalation of trade tensions, affecting particularly Asia, boosted outflows from equity funds

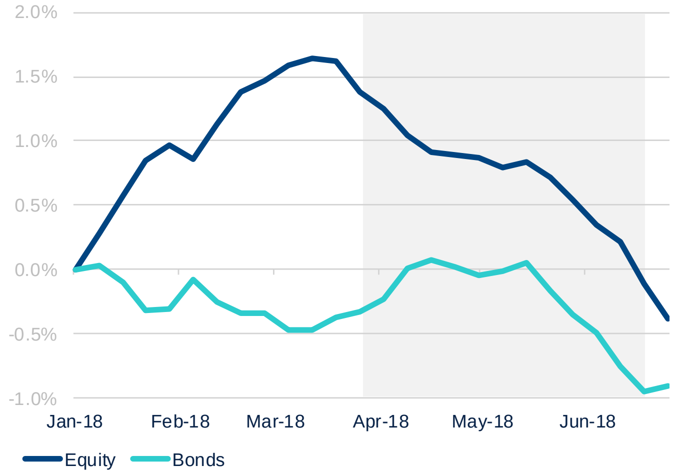
The accumulation of sources of risk during the quarter is behind the persistence of the recent EM sell-off. Outflows since April have already surpassed those registered after US elections

Differentiation in DM : Safe-haven flows favoured US and Japan funds while Eurozone suffers from political uncertainty

GIF flows to US funds
(cumulated flows since 2018, % AUM)



GIF flows to Eurozone funds
(cumulated flows since 2018 % AUM)



Source: BBVA Research, EPFR

GIFs to US recovered during the 2Q18 mainly due to inflows into bond funds that attracted safe-haven

Europe showed a clear underperformance on the back of growing policy uncertainty in Italy. However, no major differentiation between core and periphery countries has been seen

Major macro determinants of GIF flows

- We identify the global and idiosyncratic macro-drivers of net GIF inflows to both EM and DM

Main drivers behind outflows from Emerging Markets during 2Q18

Positive

Oil prices

- At their highest since 2014 due to global supply shortage (Iran)
- Asymmetric impact among emerging markets

Global Growth

- Holding up: more growth in the US, resilience in China and reversion to a lower level in Europe earlier than expected. Latam and many EMs are resilient

Neutral

Global liquidity

- **Fed's** target range raised to 1.75%- 2.00% at June meeting with hawkish tone
- FED marked the end of the post-crisis era and the beginning of a new phase of monetary policy
- The strong and explicit guidance of **ECB** on rates translates to a delaying of depo/refi rate hikes (still supportive stance)

Negative

Strong USD

- Realignment with higher growth and rates in the US
- Political risks weigh on the euro

US interest rates

- 10Y US breaching 3%
- 2Y US at its highest since

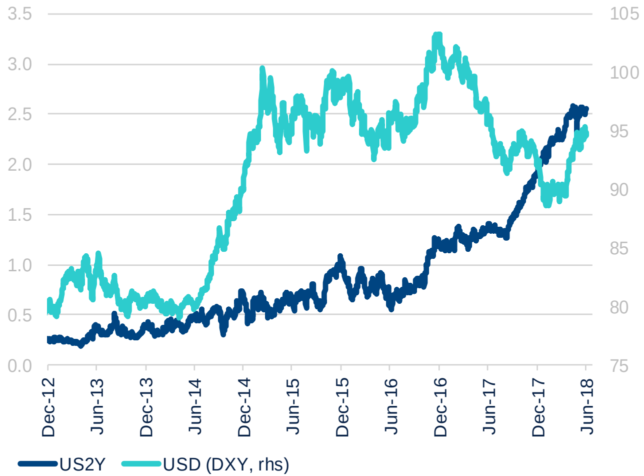
Global volatility (VIX)

- Complacency is over
- Protectionism fears
- Politics in Italy

Financial conditions have deteriorated due to a combination of higher rates (led by the Fed) and a stronger US Dollar

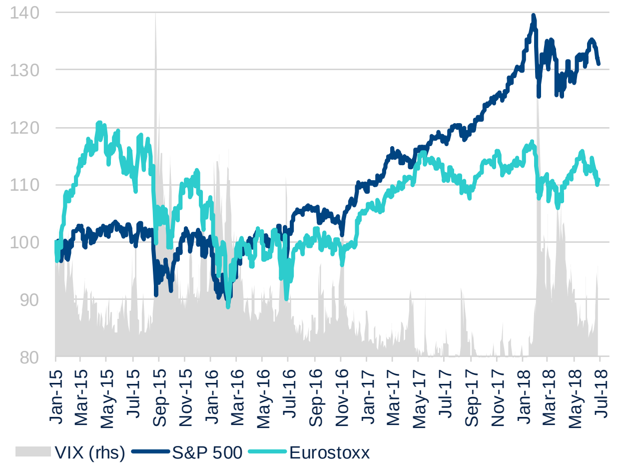
Global Financial conditions: US Dollar and US bond yields

(DXY index: US Dollar vs major developed currencies, %)



Main developed equity indices and volatility (VIX)

(Equity indices Jan15=100; Volatility, %)



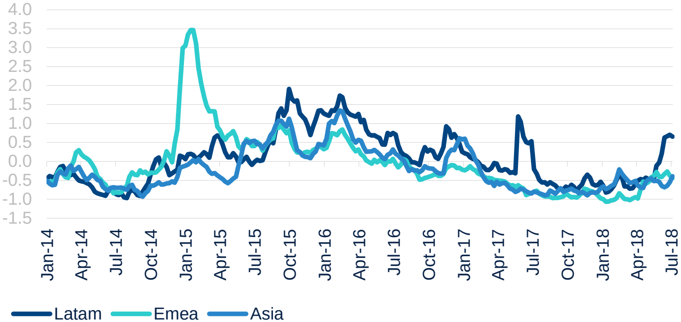
Source: BBVA Research, Bloomberg

Against this backdrop, EM become more vulnerable, particularly those with high external funding needs, prompting a diminishing appetite for EM assets

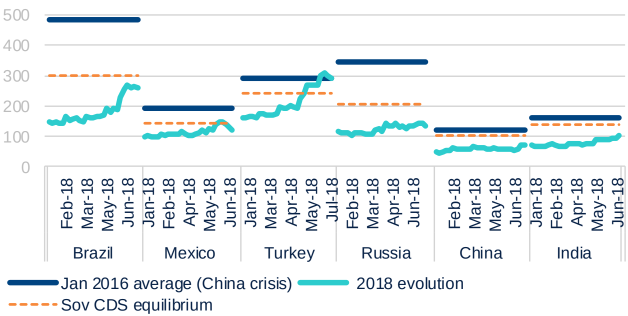
Financial volatility has resumed its upwards trend (VIX above 17 and BBB bond spread at highest levels since 2016), weighing on other risk assets such as equity and credit (IG and HY spreads widening)

EM sell-off has been triggered by global factors and exacerbated by country-specific vulnerabilities.

BBVA Research Financial tension index for EM



CDS of main Emerging Markets
(5Y term)



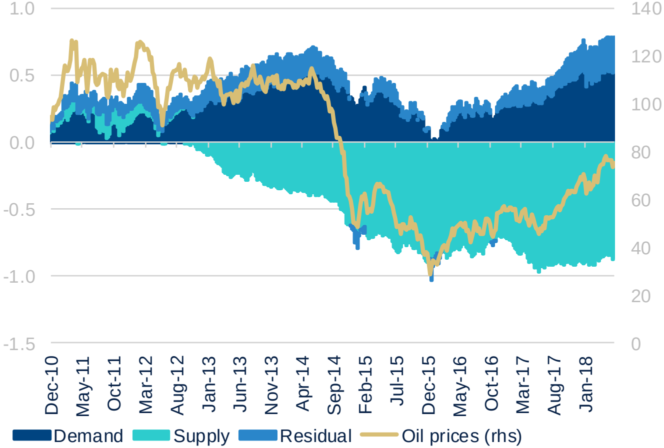
Source: BBVA Research, Bloomberg

- Financial tensions in EM are increasing, with currencies bearing the bulk of the adjustment
- Higher impact on most vulnerable countries (high current account deficit and external funding needs, mainly in LatAm and Eastern Europe) but increasing risk of contagion across Asia due to growing risk of trade wars
- Sovereign risk has started to deteriorate from very low levels, due to repricing of EM risk as the likelihood of rating downgrades in some countries increased. However, they are still far from previous sell-off episodes
- Corporate spread is also widening significantly and constitutes a source of concern given the substantial increase of indebtedness during last decade

Higher oil prices and a resilient global outlook have partially offset recent shocks.

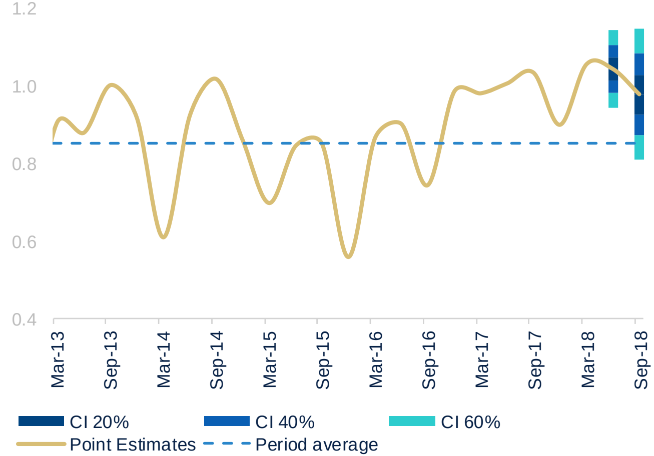
Oil prices and decomposition of shocks

(USD/b, accumulated changes since January 2010, NY Fed)



World GDP growth, current and forecast based on BBVA-GAIN

(%, QoQ)



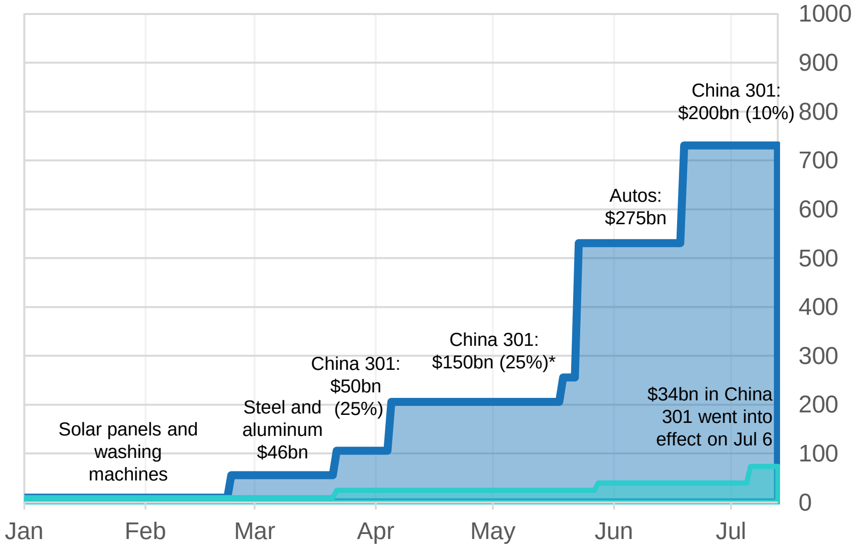
Source: BBVA Research, Bloomberg and NY Fed

Geopolitics drove oil prices in 2Q18 close to 80 USD/b (supply constrains) while prices will remain supported by robust demand from China, India and the US

Global GDP growth remains strong in 2Q18 at 1% q/q, with a slight deceleration projected for Q318

The escalation of trade tensions increases the odds of a full-fledged trade war.

US import tariffs applied vs. announced
(volume under treat of new tariffs, $bn)

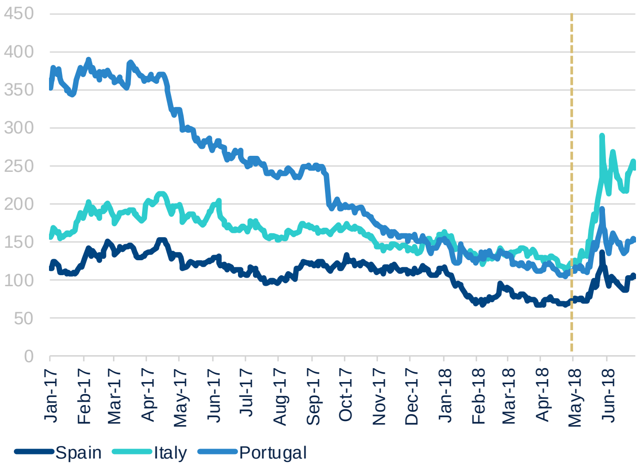


*Tariff increase was reduced to 10% after Trump announced additional $200bn on Jun 18

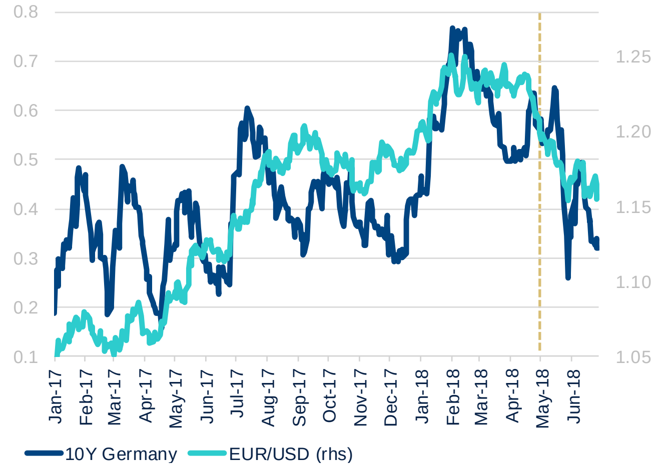
- Trade hostilities raise the likelihood of escalation towards a full trade war between major economic blocks
- Still a limited impact (some early signals in confidence indicators)…
- …but an increasing risk of GDP corrections due to both direct trade channel and financial spillovers (risk aversion)

Outflows from the Eurozone: fostered by political uncertainty in Italy with limited contagion to other peripherals

European peripheral risk premia
(bps vs German 10Y)



Euro and 10Y Germany
(% and level)



Source: BBVA Research, Bloomberg

Italian risk premium widened abruptly underpinned by concerns about fiscal expansion and the route map of new government on the European project

The higher risk perception on Italy initially had global spillovers (euro depreciation and lower core bond yields) but its impact seems to be waning

Investor sentiment

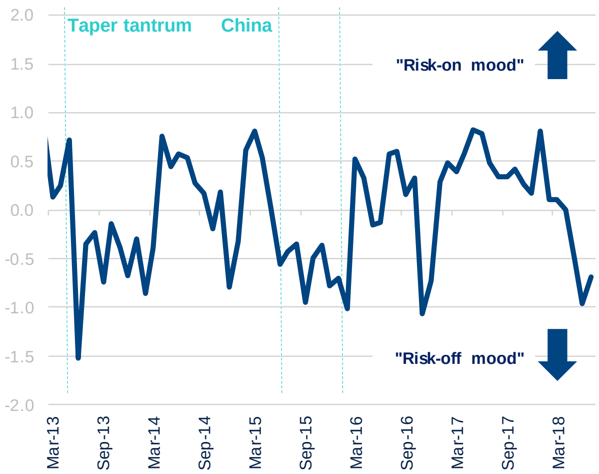
- We have developed a set of indicators, which combine asset prices
  and GIF flow data from EPFR, to identify:
  - episodes of risk-on mood and
  - episodes of risk-off mood, of which there are three types - pure risk aversion, redemption and safe-haven flight

- Furthermore, we assess investor appetite for funds in emerging markets vs. developed markets or equity vs. bonds

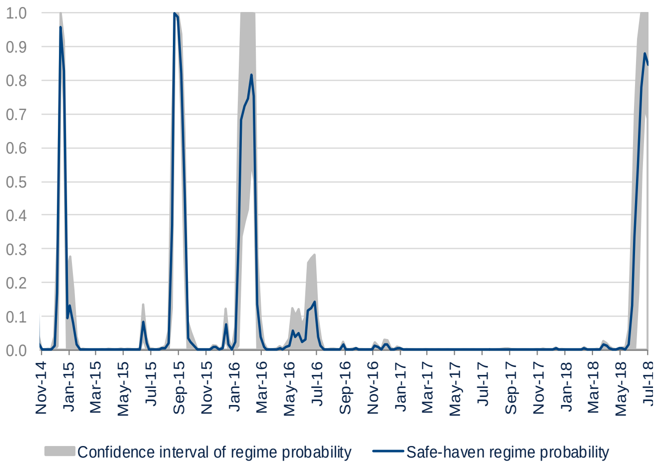
Investor sentiment has veered from a risk-on to a risk-off mood, with a growing probability of entering into safe-haven dynamics

Investment mood index

(Factor 1 in factor analysis, see annex)



Probability of safe-haven flight based only on portfolio flow data



Source: BBVA Research, EPFR

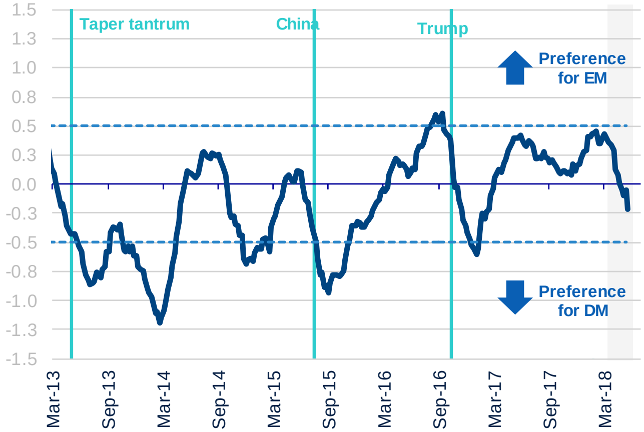
The risk-on mood, that prevailed during 2017, has faded abruptly in 2Q18, with investor sentiment falling into “risk-off” territory

According to our *probit* model, the probability of markets entering into safe-haven mode increased substantially recently

“Defensive” asset allocation has gained ground after a prolonged period of preference for EM assets and equity

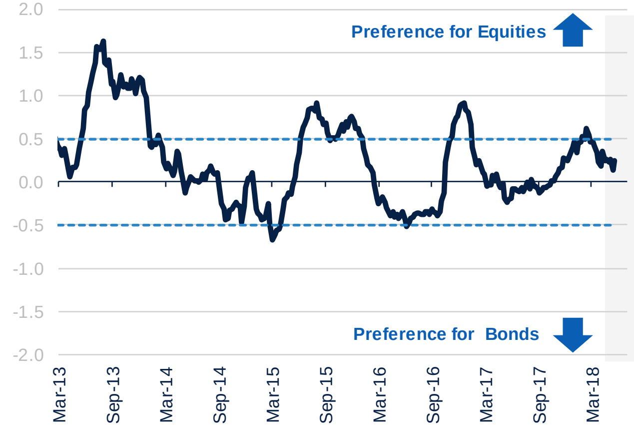
Investor appetite for DM vs EM

(indicator expressed as standard deviation from historical mean)



Investor appetite for bonds vs equity in DM

(indicator expressed as standard deviation from historical mean)



Source: BBVA Research, EPFR

GIF outflows have mostly been concentrated in EM, curbing the preference for EM assets which had prevailed since early 2017

Given the more uncertain outlook, rotation from equity towards bond funds is taking place in DM

What's next?

Our baseline macroeconomic outlook

Global economic outlook

- **Global GDP growth remains strong,** with a slight deceleration projected for Q318
  - **US:** despite moderate growth in 1Q18 our baseline remains 2.8% as solid fundamentals support strong growth in short-term
  - **China,** gradual slowdown as headwinds will continue to weigh on growth through 2019. We maintain 2018 GDP growth projection at 6.3%
  - **EZ**, faster than expected convergence towards a more moderate growth over 1H18
- **Uncertainty has increased, linked to protectionism**. Still limited impact, but sizable losses estimated from further measures

Major central banks' monetary policy

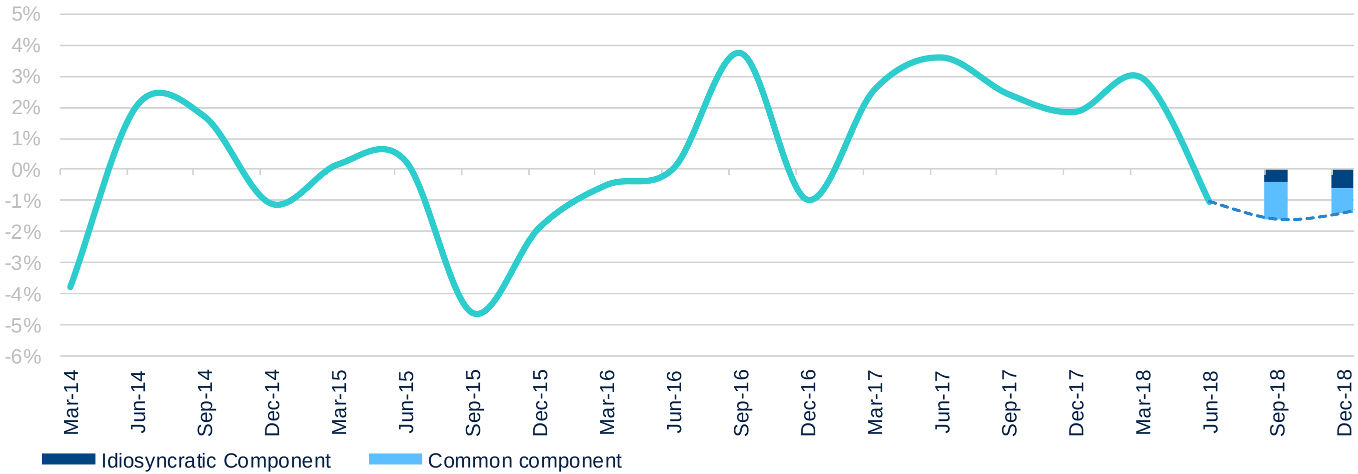
- **New phase in monetary policies:**
- The **Fed proceeding even at a faster pace:** is expected to further raise rates by 50 bps in 2018 (to 2.50%) and by 75 bps in 2019 (+25pbs than previously expected)
- **The ECB to end QE by the end of 2018,** as expected, **but anchoring rates longer** than expected (*"at least through the summer of 2019"*).

Global financial conditions

- **Financial volatility is expected to remain** given the lingering concerns about the global outlook.
- **Long-term interest rates** in the US are expected to increase gradually, while euro rates remained anchored due to safe-haven flows.
- **Stronger USD in the short-run** due to divergent monetary policies, growth and politics
- **Oil prices will remain above70 USD/b** and the estimated long-term equilibrium

Outflows from EM are expected to persist at current pace during the second half of 2018 - driven by global factors

Estimated GIF to EM
(common & idiosyncratic factor, % AUM)



- As we anticipated, EM registered modest portfolio outflows in the 2Q18 (-1% vs -0.7% expected) on the back on a more challenging global financial outlook.
- In our baseline scenario –consistent with our macro and financial projections- we expect the recent dynamic to persist in the 2H18. That is, EM to see net outflows for the first time since 2015.

Source: BBVA Research, Bloomberg

Risks are tilted to the downside: withdrawals from EM could accelerate or be more persistent if global risk events materialize

Triggers & channels

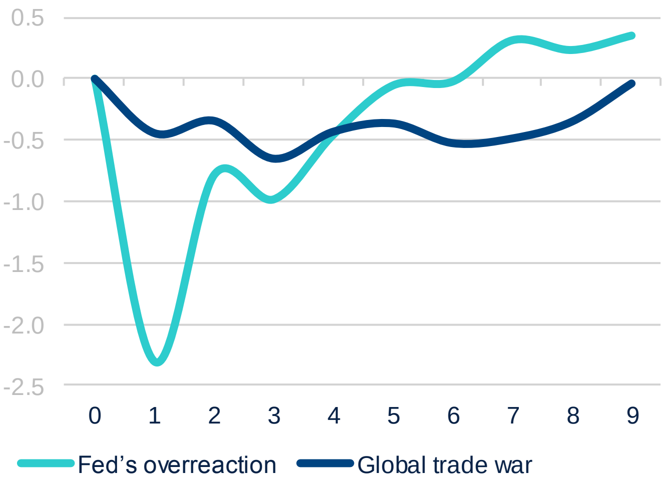
Global trade war

- **Trade war involving US-China-EU**
- US raises tariffs on main imports and trading partners respond with **fairly strong retaliation**
- Global trade relapse & commodity prices correction
- Rebound of financial volatility & **tighter funding conditions in EM**

Fed's overreaction

- **Aggressive hikes of *fed funds*** *(overshooting)* in response to a transitory increase of inflation without demand support (tepid GDP slowdown)
- **Tightening of global funding conditions**: spike of US 10y sovereign rate
- Moderation of global trade and commodity prices

Estimated GIF to EM, Desviation vs Baseline
(% AUM)



Main assumptions

- Global slowdown (focus on China), deeper negative spillovers on EM, appreciatory pressures on USD and divergent monetary policies (slower monetary normalization in DM vs. higher rates in EM)
- Differential impact on growth in EM, mainly in the short-term, global USD appreciation and interest rate hikes in EM to contain capital outflows & inflation pressures (pass-through effect)

Annex

Glossary

- **GIF:** Global Investors Funds: these are the funds covered by the EPFR database in the "Country flows" allocation, with amounts shown in millions of US Dollars. This database includes the flows in country-denominated funds and the proportional amounts in global or supranational labelled funds.

- **AUM:** Assets under management in the EPFR database

- **DM:** Developed markets included in our sample are Austria, Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the US.

- **EM:** Emerging markets included in our sample are Argentina, Brazil, Chile, China, Colombia, Czech Republic, Hungary, India, Indonesia, Korea, Mexico, Peru, Philippines, Poland, Russia, Slovenia, South Africa, Thailand, Turkey and Venezuela.

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Methodological annex

November 2017

Creating Opportunities

Factor analysis of EPFR flows, decomposition of global and idiosyncratic factors

% of 42 **EQ** flows explained		% of 42 **BN** flows explained		Implicity, % of 42 **Total** flows explained
F1 31%		F1 41%		F1 48%
F2 19%	+	F2 10%	=	F2 9%
F3 11%		F3 6%		F3 11%

GIF flows could be explained by 3 identified factors and idiosyncratic differences

1. **Global:** Captures common movements across all countries (same direction), i.e. due to changes in market risk appetite

2. **Asset reallocation** (bonds and equities) Variation explained by the reallocation between assets within a geographical region. The effect on each country will vary according to the composition of its stock between equities and bonds. Positive factor for preference for Equities over Bonds.

3. **Regional reallocation** (EM vs, DM) Explains the variation caused by the appetite for one area as against the other. Inverse effect between DM and EM

Macro-Financial Determinants of EPFR Flows

01 Methodology: GLS panel data

02 Sample: 42 countries, quarterly data from October 2005 to June 2017

03 Dependent Variables: Equities (EQ), Bonds (BN) and Total flows to each country.

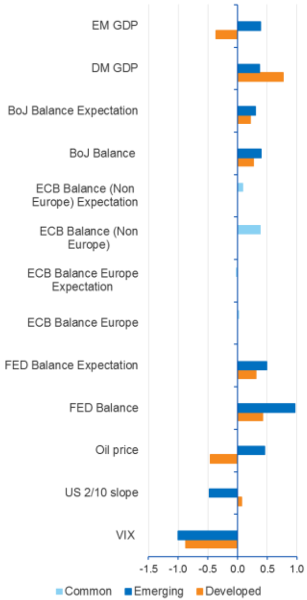
04 We have allowed each explanatory variable to have a different effect on Developed vs. Emerging Markets

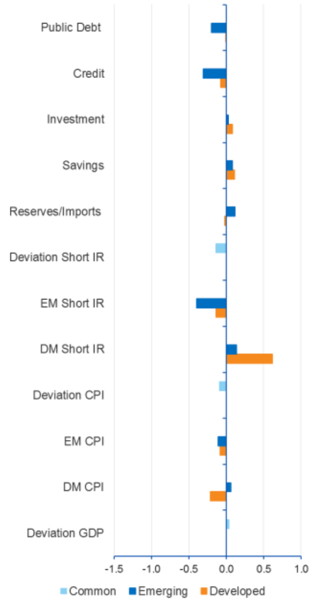
05 Explanatory variables (first differences)

- VIX
- USA 10Y-2Y Curve
- GDP Growth (EM, DM, Idios.)
- Inflation (EM, DM, Idios.)
- Short-term interest rate (EM, DM, Idios.)
- West Texas Intermediate (WTI)
- FED, ECB & BoJ Balance Sheet
- Expectation of changes in FED, ECB & BoJ Balance Sheet

- Public Debt-to-GDP
- Credit-to-GDP gap*
- Investment-to-GDP
- Savings-to-GDP
- Reserves-to-Imports

Macro-Financial Determinants of EPFR Flows. Panel Regression Results (Coefficients)





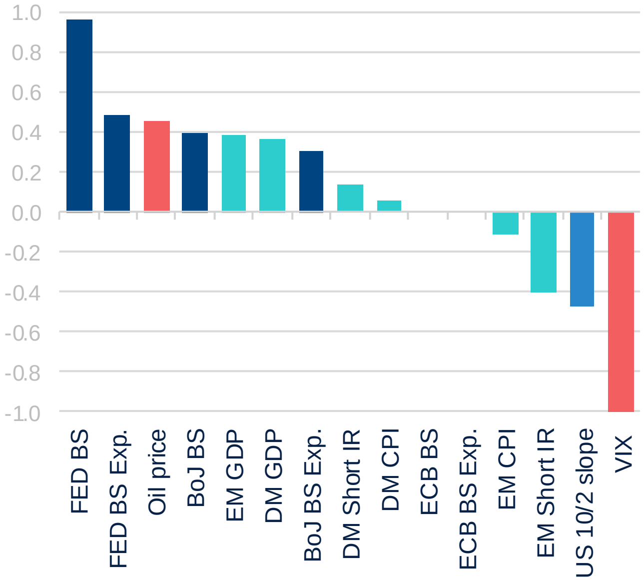
- Global variables are by far the most important determinants of total, equity & bond flows.
- Idiosyncratic variables play a limited role
- Markets seem to differentiate sharply between Emerging and Developed countries, but differentiation between countries seems quite limited

R^2 = 0.54

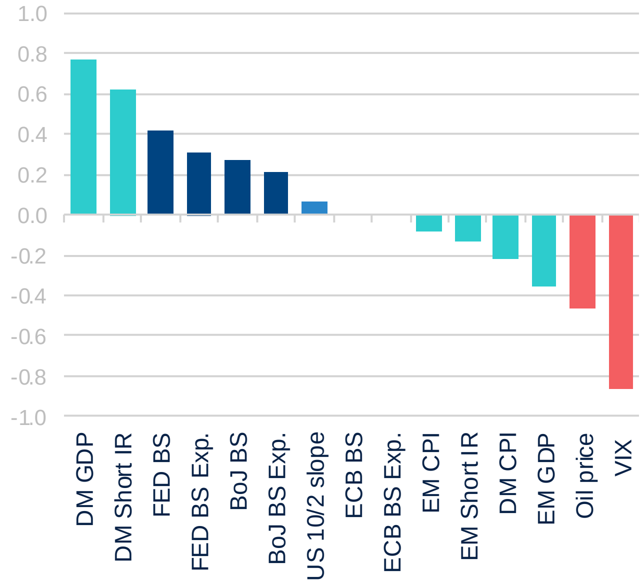
(*) Coefficients of standardised variables.

Global macro drivers

Sensitivity of EM GIF flows
(Coefficient of standardised variables in a panel regression)



Sensitivity of DM GIF flows
(Coefficient of standardised variables in a panel regression)



Source: BBVA Research, EPFR

Safe-haven indicator

The starting point for developing the indicator is to identify periods of risk aversion in financial markets. We determine these periods based on significant movements in selected financial variables. That is, we define a period t of risk aversion as follows:

$$t \text{ is a risk aversion period } \Leftrightarrow (\Delta T10 < 0 \text{ or } \Delta GER10 < 0 \;\&\; \Delta VIX > 0 \;\&\; \Delta EquityEM < 0)$$

Where:

- ∆T10 refers to the weekly change of the 10Y Treasury

- YTM
- ∆GER10 refers to the weekly change of the 10Y German government bond YTM
- ∆VIX refers to the weekly change of the VIX index
- ∆EquityEM refers to the weekly change of the MSCI Emerging Markets Index

In short, a risk aversion period is such that we witness lower long-term rates in developed market's government bonds, higher volatility in developed markets' equity and losses in emerging markets (EM) equity.

Once we have defined the set of risk aversion episodes, we categorize Safe Haven periods as a subset. To do so we follow two steps:

- First, we use the EPFR data to determine the conditional distribution of bond flows from institutional investors to Safe Haven countries (USA, Germany and Japan) and the conditional distribution of equity flows to Emerging Market countries (EM) from retail investors, both based on the four-week moving average change of assets under management (AUM). We are interested in the distributions in periods of risk aversion given their different behavior in comparison when considering the whole sample. In addition, we separate the distributions by type of investor given that we found a significant difference in their behavior under conditions of uncertainty (see figures 1, 2 and 3,4). That is, we found that institutional investors tend to fly to government bonds, while retail investors tend to reduce significantly their exposure to EM equity. These patterns could be associated with the different investment objectives and investment horizons of these types of investors

- Second, based on the analysis of the distributions by type of investor in risk aversion episodes we define the safe haven episodes as those periods t' such that

$$t' \text{ is a safe haven period } \Leftrightarrow (\text{Bond flows to haven countries from Institutional Investors} > p50) \;\&\; (\text{Equity flows to EM from Retail Investors} < p50) \mid t' \varepsilon \text{ risk aversion episode})$$

That is, given that we are in a risk aversion episode, this can be considered in the subset of Safe Haven episodes if and only if the flows from Institutional Investors to safe haven bonds during the period increases in more than the median of the distribution; and if bonds from retail investors to emerging market equity decrease during the period in more than the median of the distribution. All measured by the four-week moving average change of assets under management

A second subset of risk aversion episodes is given by the redemption category. This tries to capture all risk aversion episodes in which investors sell most financial assets looking not just for save haven but for liquidity. In short, we define redemption episodes as follows:

$$t'' \text{ is a redemption} \Leftrightarrow \text{Bond flows} < 0 \;\&\; \text{Equity flows} < 0 \;\&\; \text{Money market flows} > 0 \mid t'' \varepsilon \text{ risk aversion episode}$$

That is, given that we are in a risk aversion episode, this can be considered in the subset of redemption episodes if and only if two conditions hold:
1) The flows to bonds and equity during the period decrease;
2) The flows to money markets increase;

All measured by the monthly average of assets under management

Regional re-allocation

This exercise pursues a simple indicator to measure the investor's preference for a certain region over time. It is based on EPFR data* The indicator has been built with the EPFR data (since 2005) in USD but the portfolio flows have been relativized by assets under management (of each period) to make their comparable.

The indicator allows us to capture the short term dynamics and to quantify and compare the effects in portfolio flows of the realization of some risk events in a very simple way. It lets us identify easily the regions that suffered the most and to measure the relative impact.

This is a relative indicator as it compares the flows to different regions to create relative measure.

The previous step is to create an indicator for EM and to DM. Those indices are obtained by smoothing (moving average 3M) the normalized flows to each region (weighted by asset under management of each country or area) in order to create a more stable indicator for each region given we aim to capture the trend more than the weekly spikes. As the flows have been standardized, those indices should be understood as standard deviation from their historical mean (since 2005). These partial indicators allow us to breakdown areas or countries' contribution to the indicator.

The difference between developed markets and emerging market indices shows the relative appetite of each region, and a deviation of 0.5 from the mean means a marked preference for one region over the other.

- Weekly change in total portfolio flows by Country (% of assets under management)

$$x_i = \frac{Weekly\ total\ flows\ (USD)}{Total\ assets\ under\ management\ (USD)}$$

- Standardization

$$Z_i = \frac{x_i - \bar{x}}{\sigma}$$

- Moving average of 3 months

$$\frac{1}{n}\sum_{i=0}^{n} Z_i$$

n: 12 weeks

- The moving average weighted by its relative weight in EPFR database

$$\bar{x}_{DM} = \frac{\sum_{i=1}^{n}(x_{DMi} * w_{DMi})}{\sum_{i=1}^{n} w_{DMi}} \qquad \bar{x}_{EM} = \frac{\sum_{i=1}^{n}(x_{EMi} * w_{EMi})}{\sum_{i=1}^{n} w_{EMi}}$$

W: is the weight of each country or area in the assets under management in each area (DM or EM)
X: is the 3-month moving average of the standardized flow to a country or region
i: is the countries or area in the regional (DM or EM) index

- Relative preference:

$$Y = \bar{x}_{EM} - \bar{x}_{DM}$$

Weight of each country in the region

Region	Country	Weight	
DM	United States	73%	100%
	Eurozone	13%	
	Japan	6%	
	United Kingdom	5%	
	Swizerland	3%	
EM	Latin America	31%	100%
	Asia (ex China & Japan)	51%	
	Emerging Europe	18%	

Type of asset re-allocation

This exercise pursues a simple indicator to measure the investor's preference for a certain type of assets (equity or bonds) over time. It is based on EPFR data* The indicator has been built with the EPFR data (since 2005) in USD but the portfolio flows have been relativized by assets under management (of each period) to make their comparable.

The indicator allows us to capture the short term dynamics and to quantify and compare the effects on portfolio flows of the realization of some risk events in a very simple way. It allows us to easily identify the type of assets that suffered the most and allows us to measure the relative impact.

This is a relative indicator as it compares the flows to different type of assets to create relative measure.

The previous step is to create an indicator for Bonds or Equity. Those indices are obtained by **smoothing** (moving average 3M) the normalized flows to each type of asset (weighted per asset under management of each country or area) in order to create a more stable indicator for each region given we aim to capture the trend more than the weekly spikes. As the flows have been standardized, those indices should be understood as standard deviation from their historical mean (since 2005).

The difference between bonds and equity shows the relative appetite of each type of asset, and a deviation of 0.5 from the mean means a marked preference for one type of assets over the other.

- Weekly change in Bonds and Equity portfolio flows by Country (% of assets under management)

$$x_i = \frac{Weekly\ total\ flows\ (USD)}{Total\ assets\ under\ management\ (USD)}$$

- Standardization

$$Z_i = \frac{x_i - \bar{x}}{\sigma}$$

- Moving average of 3 months

$$\frac{1}{n}\sum_{i=0}^{n} Z_i$$

n: 12 weeks

- The moving average weighted by its relative weight in EPFR database (example for DM)

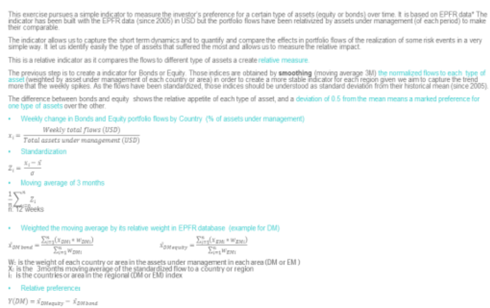
$$\bar{x}_{DM\ bond} = \frac{\sum_{i=1}^{n}(x_{DMi} * w_{DMi})}{\sum_{i=1}^{n} w_{DMi}} \qquad \bar{x}_{DM\ equity} = \frac{\sum_{i=1}^{n}(x_{EMi} * w_{EMi})}{\sum_{i=1}^{n} w_{EMi}}$$

W: is the weight of each country or area in the assets under management in each area (DM or EM)
X: is the 3-month moving average of the standardized flow to a country or region
i: is the countries or area in the regional (DM or EM) index

- Relative preference:

$$Y(DM) = \bar{x}_{DMequity} - \bar{x}_{DM\ bond}$$

Weight of each country in the region



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n: 12 weeks

- Weighted the moving average by its relative weight in EPFR database (example for DM)

$$\bar{x}_{DM\ bond} = \frac{\sum_{i=1}^{n}(x_{DMi} * w_{DMi})}{\sum_{i=1}^{n} w_{DMi}} \qquad \bar{x}_{DM\ equity} = \frac{\sum_{i=1}^{n}(x_{EMi} * w_{EMi})}{\sum_{i=1}^{n} w_{EMi}}$$

W: is the weight of each country or area in the assets under management in each area (DM or EM)
X: is the 3months moving average of the standardized flow to a country or region
i: is the countries or area in the regional (DM or EM) index

- Relative preference:

$$Y(DM) = \bar{x}_{DMequity} - \bar{x}_{DM\ bond}$$

DISCLAIMER