

# Global Funds Outlook

3Q17

November 2017

## Executive summary

1. In 3Q17, capital continued to flow toward Global Investment Funds (GIF), albeit at a slower pace than in the first half of the year.
2. Net positive inflows to GIF were largely driven by common factors: high global liquidity, subdued US interest rates and, to a lesser extent, the global economic recovery.
3. Risk-on mood strengthened late in the quarter, reverting an earlier downturn. The momentum remains positive for EM, but according to our indicator, preference for EM has made a turning point in mid year.
4. What's next? Over the coming quarters, inflows to GIF shall cool down as the unwinding of central bank balance sheets starts draining liquidity off the markets. Averting spikes in volatility (and/or bond sell-offs) remains a critical mission. Our baseline scenario assumes a smooth normalization process.





## Global Investment Funds (GIF)

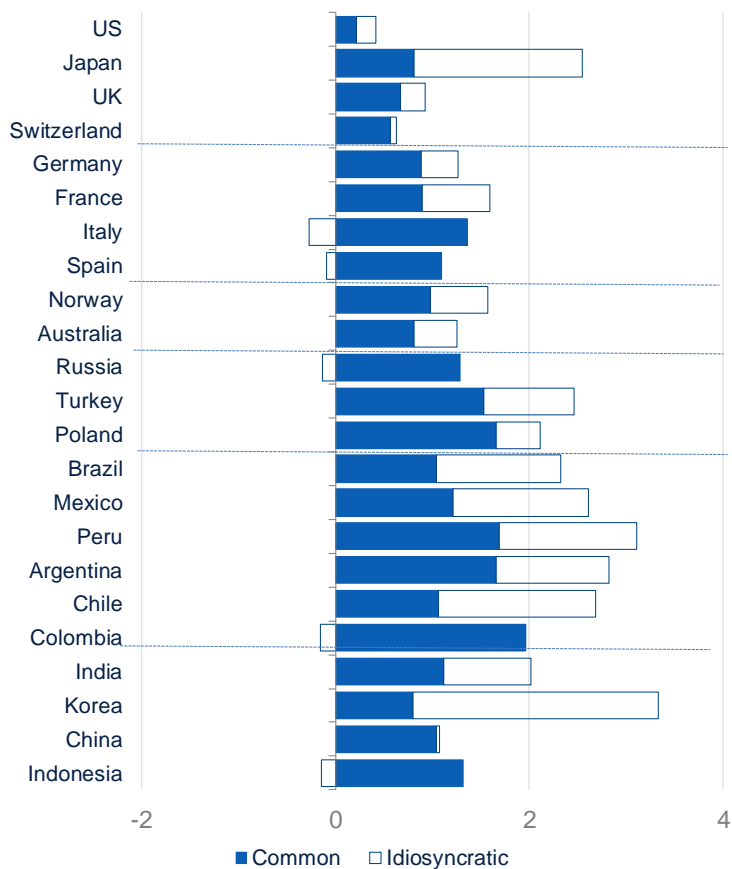
We analyze EPFR data on global fund flow over the quarter:

- to track asset volume,
- to describe net reallocations across regions and asset types and
- to identify common factors underlying those dynamics



# In 3Q17, capital continued to flow towards GIF, albeit at a slower pace.

## GIF flows: common vs idiosyncratic factors (selected countries, %AUM)

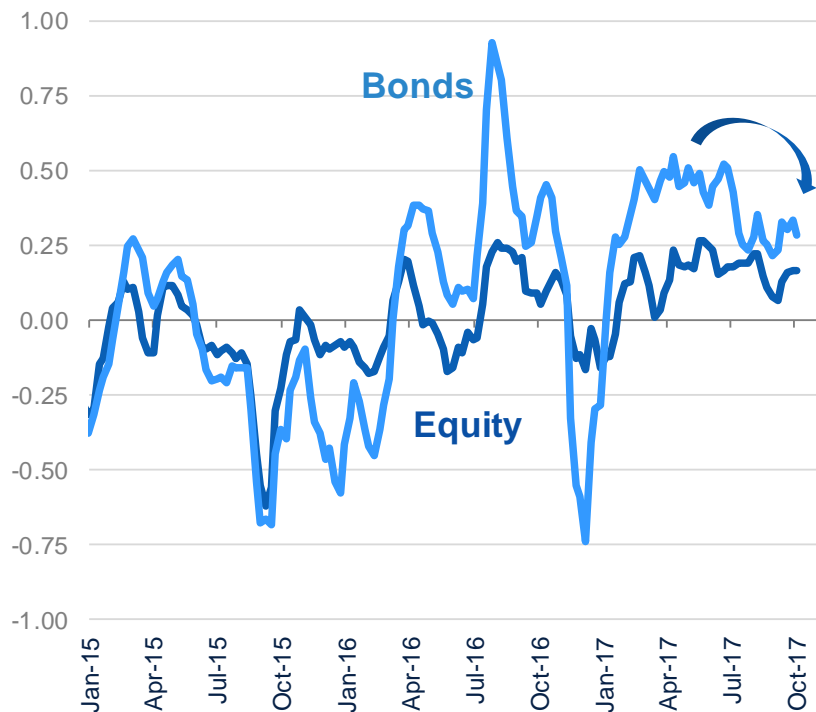


- ◆ **Net positive GIF inflows** were largely driven by **common factors**, which explain over half of the total stream.
- ◆ **GIF inflows moderated compared to 2Q17** (3% to 2.5% in EM and 1% to 0.8% in DM)
- ◆ **Within DM**, Japan was among the most favored destinations, while the US was the least attractive one.\*
- ◆ **Within EM**, Latin America was favored relative to other regions.

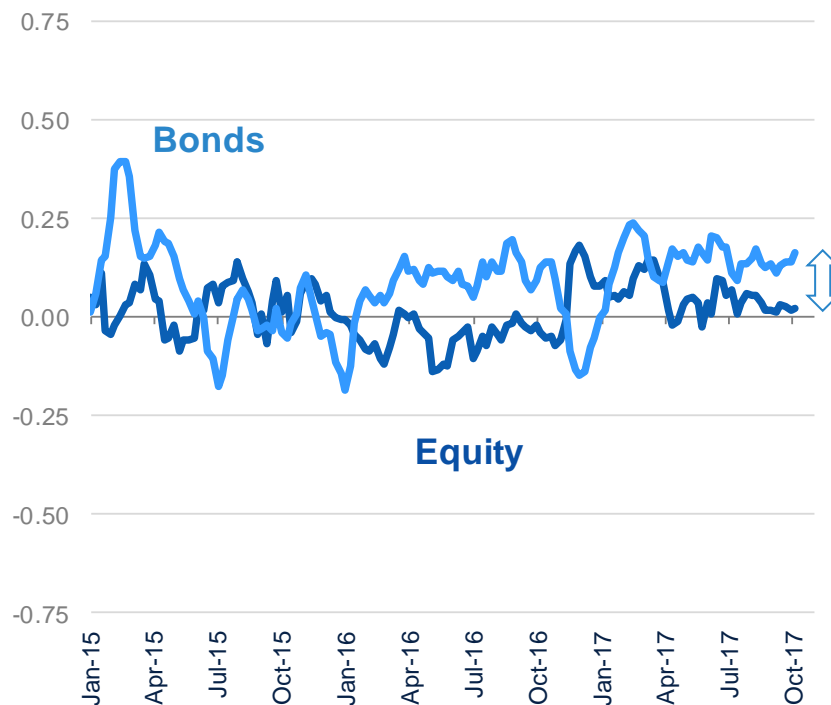
\*All comparative inferences across countries are based on *inflows relative to each country's total assets under management (AUM)*. They are NOT based on actual USD flows, which tend to be significantly larger for the US than for any other economy.

# Relative to developed markets, GIF inflows to emerging markets remained strong despite sharp deceleration.

**GIF flows to Emerging Markets**  
(weekly flows, 4w moving average, % AUM)



**GIF flows to Developed Markets**  
(weekly flows, 4w moving average, % AUM)



Source: BBVA Research, EPFR

**Carry-trade strategies favoring EM assets persisted, but there are slight signs of exhaustion after a year-long period of robust inflows.**

**GIF inflows to DM remained stable . Despite the US equity rally, the boost to US inflows since Trump has gradually vanished while EZ inflows have grown stronger.**

## Major macro determinants of GIF flows

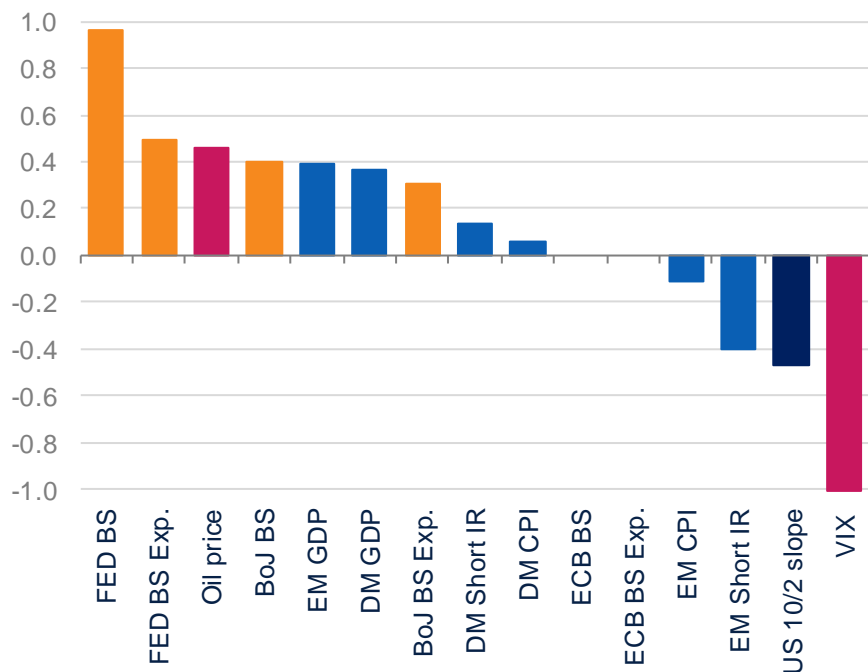
We identify the global and idiosyncratic macro drivers of GIF flows to both EM and DM.



# Global macro drivers have been essential determinants of GIF flows, while idiosyncratic drivers have played a more limited role.

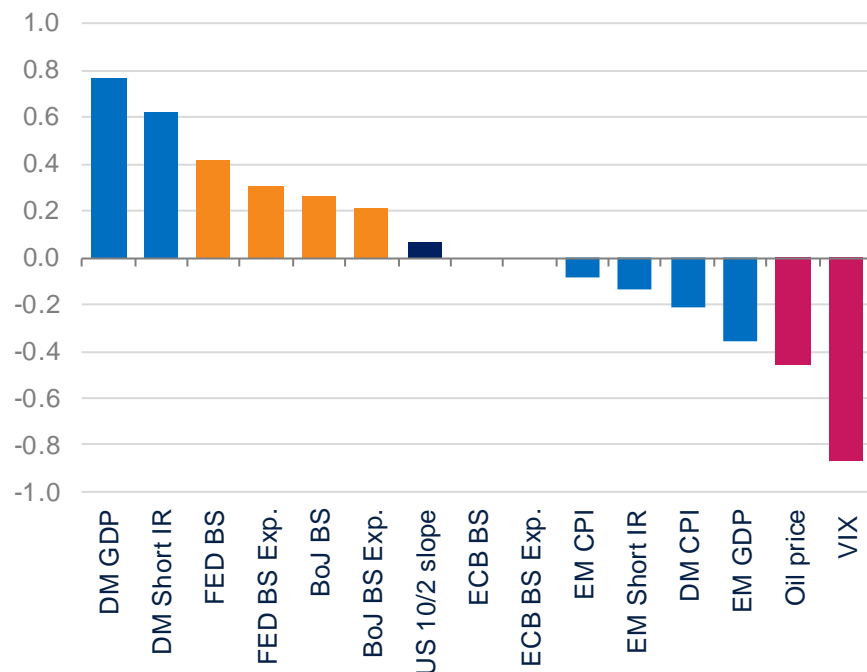
## Sensitivity of EM GIF flows

(Coefficient of standardized variables in a panel regression)



## Sensitivity of DM GIF flows

(Coefficient of standardized variables in a panel regression)



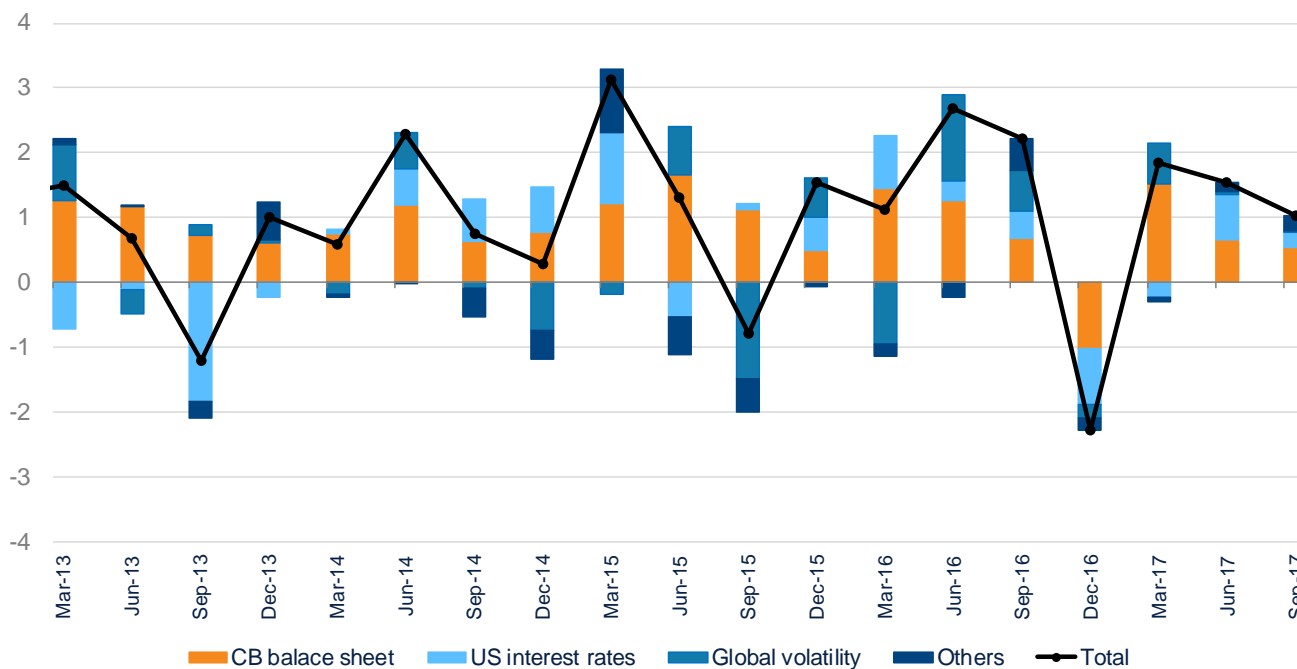
Source: BBVA Research, EPFR

**Investors seem to strongly differentiate between Emerging and Developed countries, but differentiation across countries seems quite limited**

# In 3Q17, poised investors continued to manage the orderly reduction in global liquidity.

## Contribution of global factors to GIF Flows to EM

(The breakdown does not include idiosyncratic factors; it only considers the contribution of global components)



Source: BBVA Research, EPFR

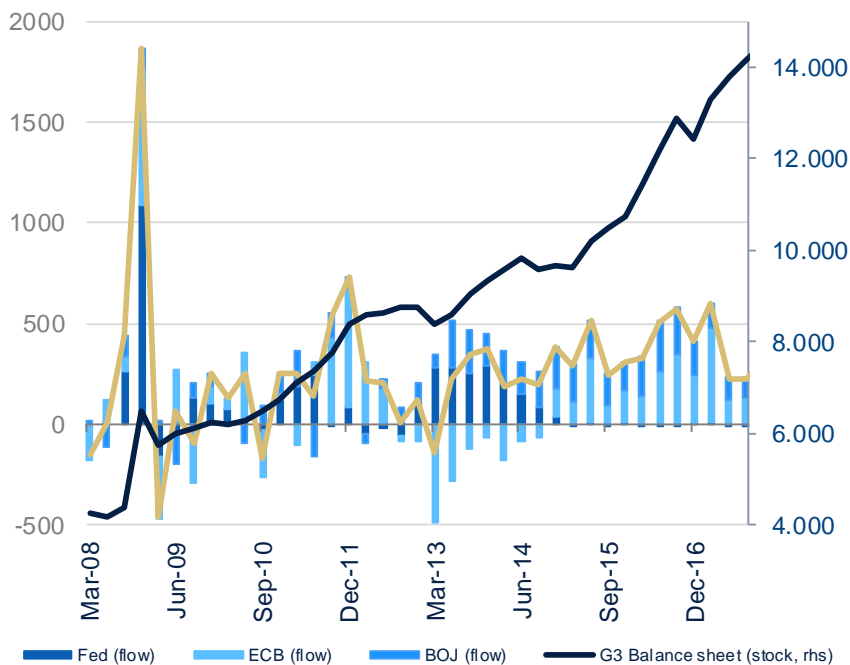
Over 2017, EM have accumulated positive GIF inflows, reverting the sudden outflow right after the 2016 US presidential election. The recovery has been supported by abundant global liquidity and subdued US interest rates – supports that are gradually subsiding.



# Global liquidity remained well managed by major central banks, despite crucial distinctions among them.

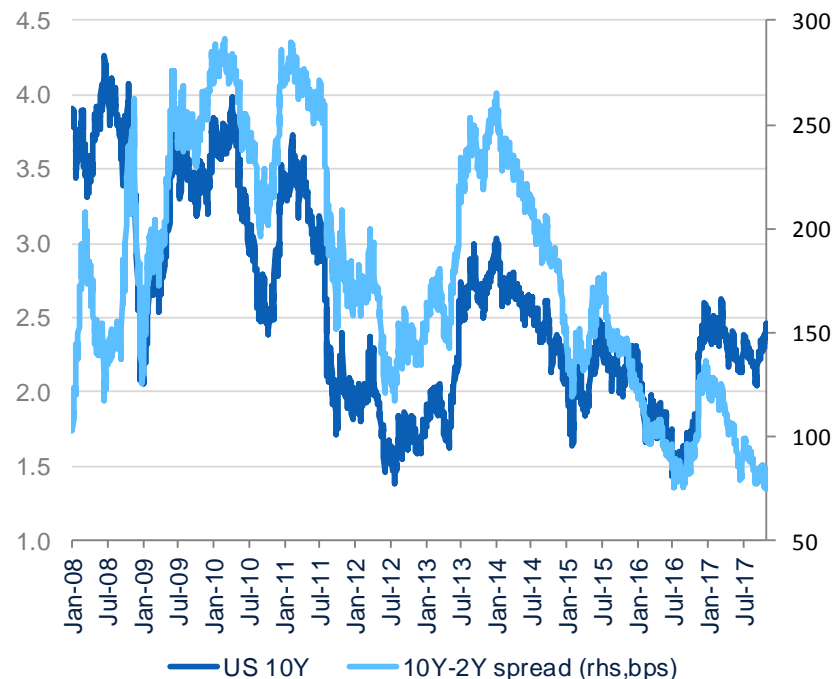
## Central banks balance sheet

(quarterly changes and stock, bn USD)



## US 10y bond yield and 10y-2y spread

(% and bps)



Source: BBVA Research, Bloomberg

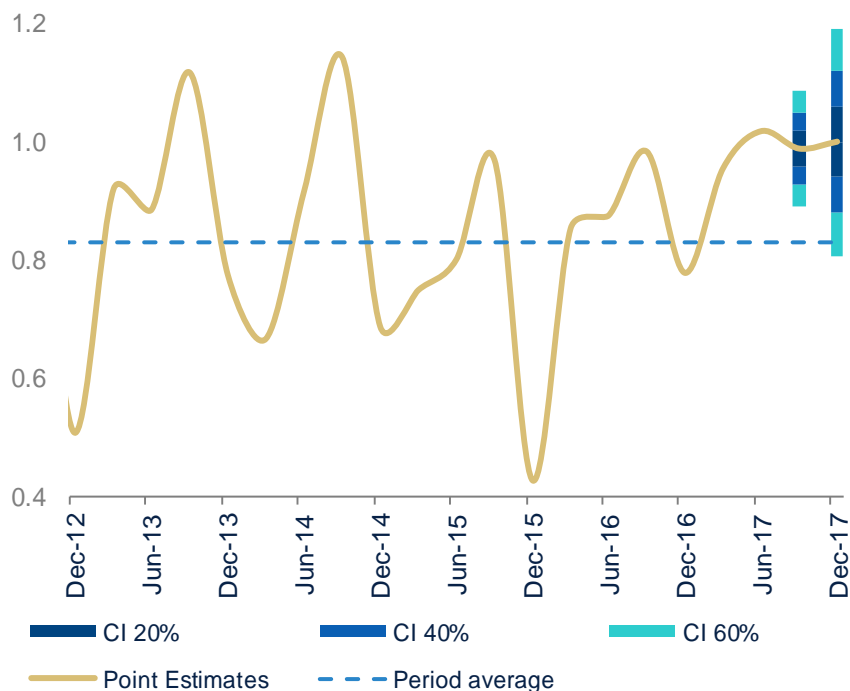
The mounting balance sheets of both the ECB and BoJ continued to inflate global liquidity and to curb financial volatility across assets.

The Fed has already hiked rates and started to cut its balance sheet, the ECB is downsizing its monetary stimulus while the BoJ has yet to start any normalization.

# An improved economic outlook across regions further facilitated financial stability.

## World GDP growth

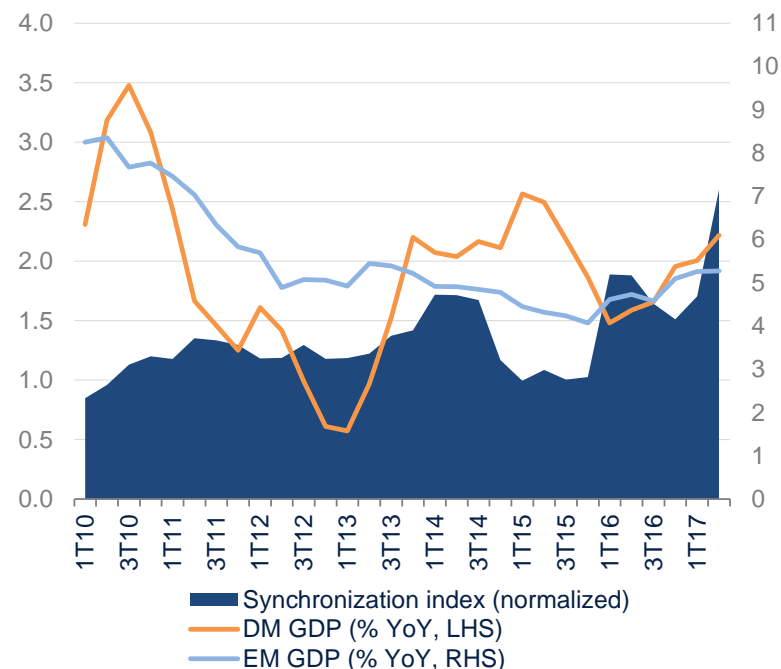
Forecast based on BBVA-GAIN (% , QoQ)



Source: BBVA Research, Bloomberg

## GDP growth and synchronicity index

(based on the time variance of GDP)

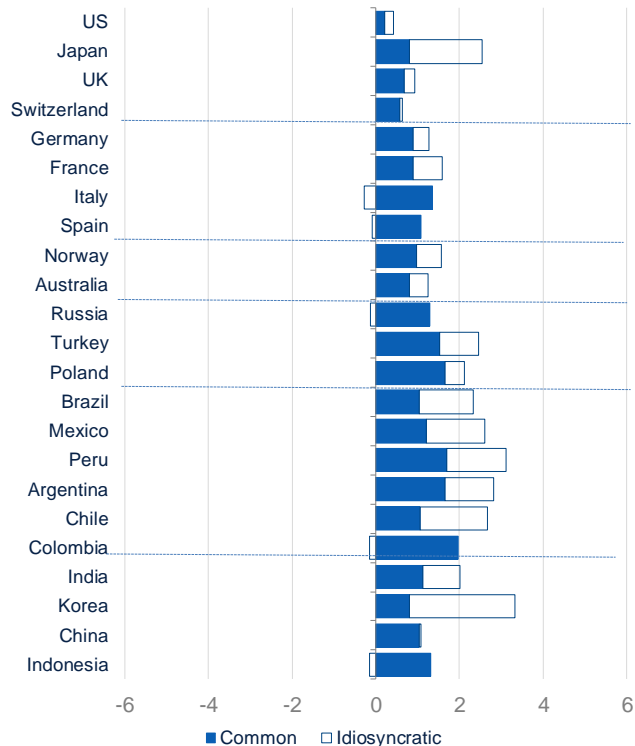


Global growth accelerated slightly in 2Q17, while recent data suggest that it could maintain its dynamism in 2H17 (of around 1% QoQ)

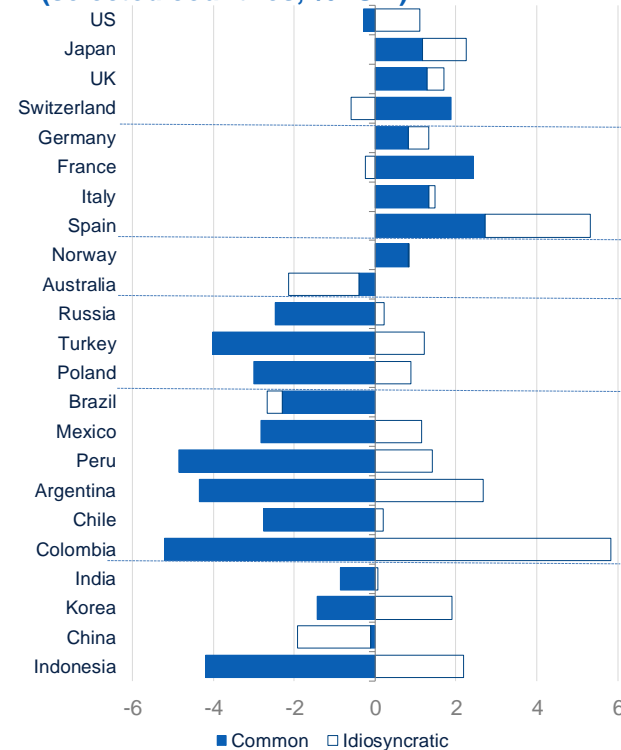
Synchronicity rose across economic areas while investment accelerated once again.

# “Sound policy” and a “confident outlook” both helped keep tantrums at bay.

**Decomposition of GIF inflows, 3Q17**  
(selected countries, %AUM)



**Decomposition of GIF inflows, 2Q13**  
*“Taper tantrum”*  
(selected countries, %AUM)



**Normalization process: Graduality and an effective forward guidance have been key for success**

## Investor sentiment

We develop a set of indicators, which combine asset prices and GIF flows 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).

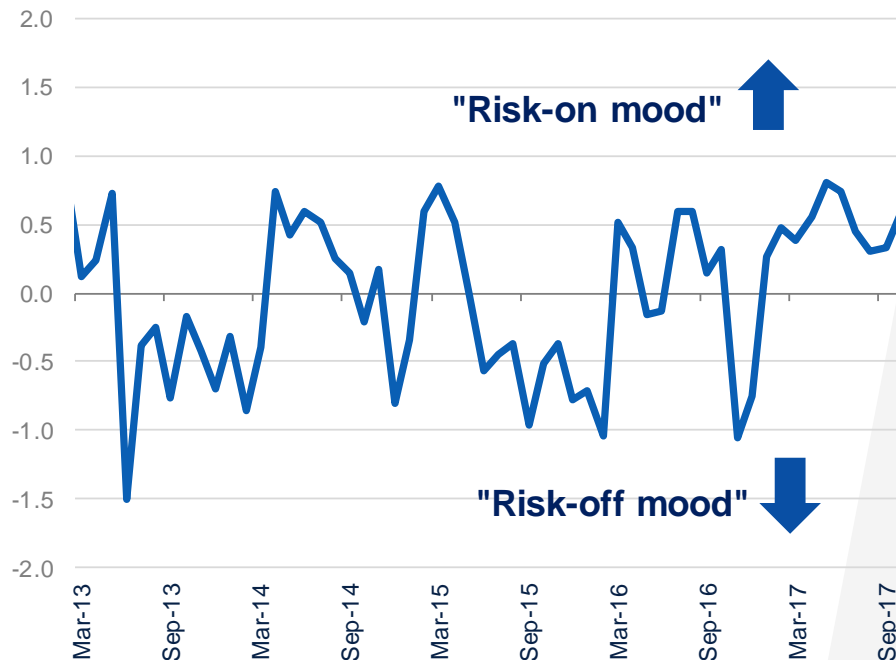
Furthermore, we assess investors' appetite towards funds in emerging markets vs. developed markets or to equity vs. bonds.





# The investor mood recovered after incipient angst over the summer.

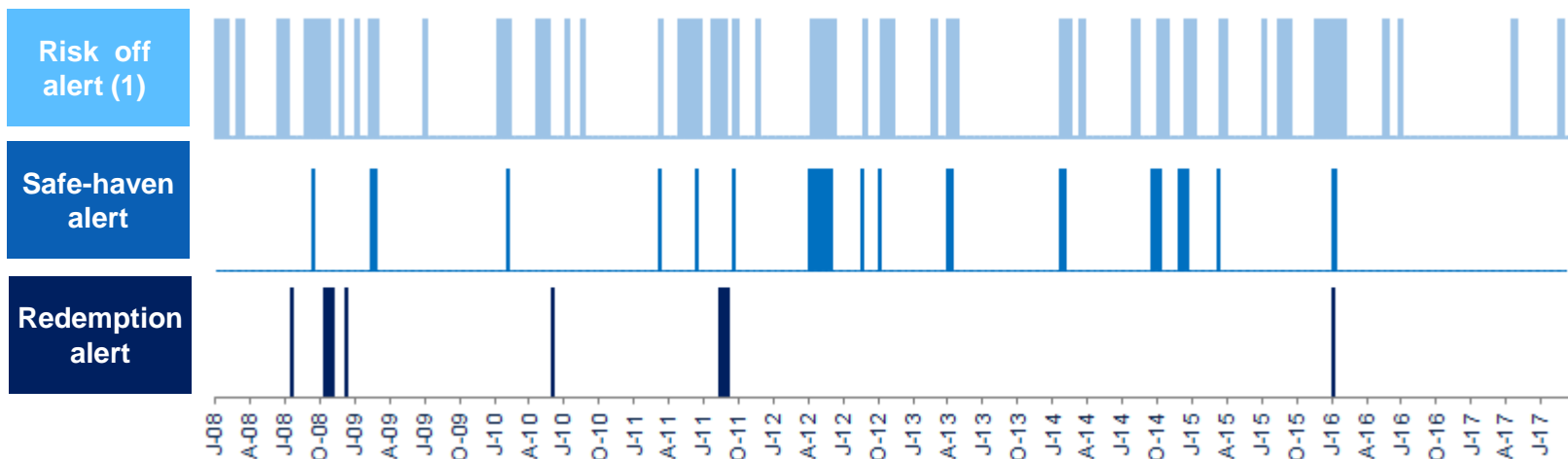
## Investment mood index



GIF inflows suggest that **the risk-on mood of global investors persists after a whole year.** The peak was observed in 2Q17 and, after a mild moderation over the summer, it has strengthened to near its 4-year highs.

# Angst about North Korea rose some alarm in asset prices but not in actual GIF flows.

“Risk-off” alerts (colored areas indicate outbreaks)

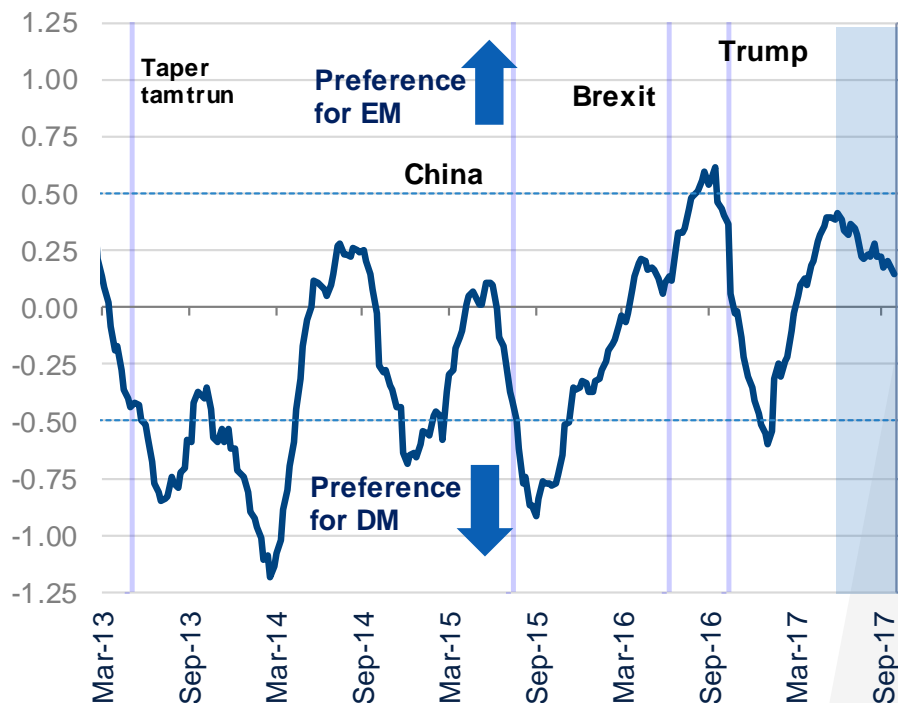


Source: BBVA Research

The “Risk off” alert is based on asset price movements (rates and VIX); while the “Safe-haven” and “Redemption” alerts are contained within the “Risk off” alert but focus on abrupt movement in GIF flows (“Safe haven” is linked to abrupt movements from EM to DM assets, while “Redemption” is linked to overall reductions in GIF assets towards other (probably more liquid) assets.

# Preference for EM assets continued to fade away ...

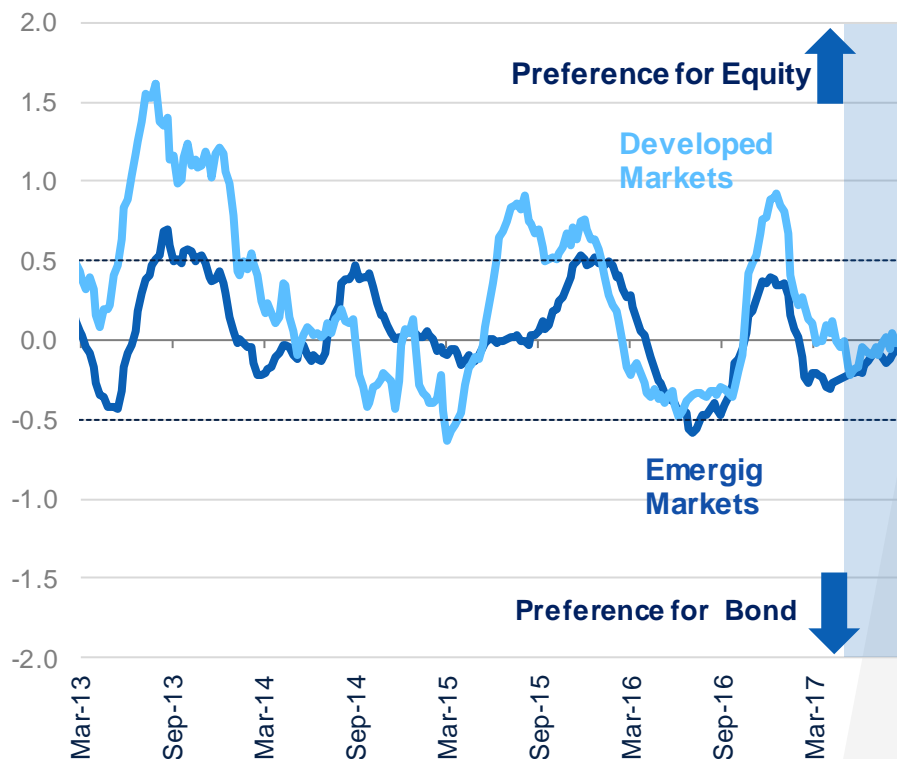
## Investor appetite for DM vs EM



- ◆ In early 2017, once the “worst Trump scenario” did not materialize, preferences swung back towards EM – a shift supported by subdued yields in DM.
- ◆ In June a bias in favor of EM maxed out, and it has been gradually stabilizing since then.

## ... especially with regards to EM bonds.

### Investor appetite for bonds vs equity



- ◆ Likewise, fund flows allow to evaluate the investor's preference for type of assets. In particular, it is worth considering the dynamics of flows between equities and bonds as proxy of risk/return strategies.
- ◆ According to this indicator, the preference for equity, following expectations of reflation in the US economy ("reflation trade") after the elections was diluted in a few months.
- ◆ The preference for bonds in EM was more clearly perceived than in DM during recent months. Currently, there is not any bias despite DM's Central banks are engaged in a normalization process especially in the US (Fed is decreasing its balance sheet).



What's next?



# Baseline macro economic outlook

## Improved activity

- Steady **global growth** for 2017-18.
- **Sustained growth in the US** despite the impact of hurricanes and political uncertainty.
- An improved **outlook for China in the short-term**, but growth will moderate next year due to a reduction of policy support.
- **Higher growth in the Eurozone** thanks to the strength of domestic demand

## Tighter monetary policy

- **Major central banks are moving towards a very gradual normalization** under a still-subdued inflation.
- The Fed shall continue its balance sheet reduction, and it shall rates rates in Dec17 and two more times in 2018.
- The ECB shall reduce net asset purchases starting in Jan18, ending QE by 3Q18, and shall announce a first rate hike by June 2019.
- The BoJ shall remain on hold over 2018.

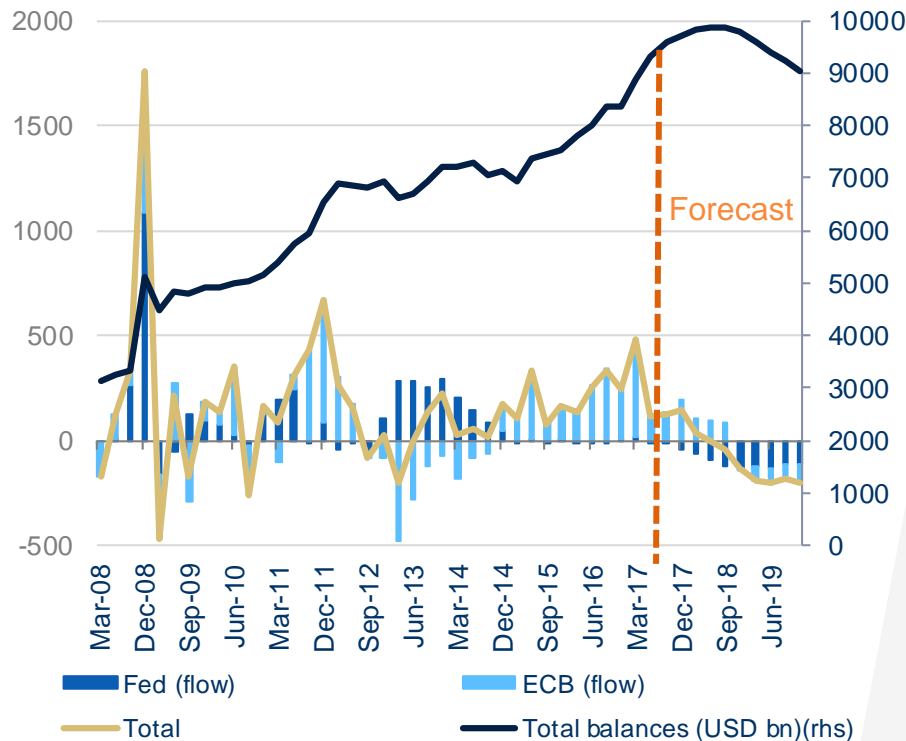
## Marginally higher volatility

- Financial volatility shall remain contained, yet it will likely rise from recent record-low levels.
- A rise is warranted on the back of global risks that are downward biased and on global financial conditions that shall be less accomodative.

# In 2018, policy-driven global liquidity shall reach a turning point.

## Fed and ECB balance sheets

(level and quarterly changes, Total balance in stock, USDbn)

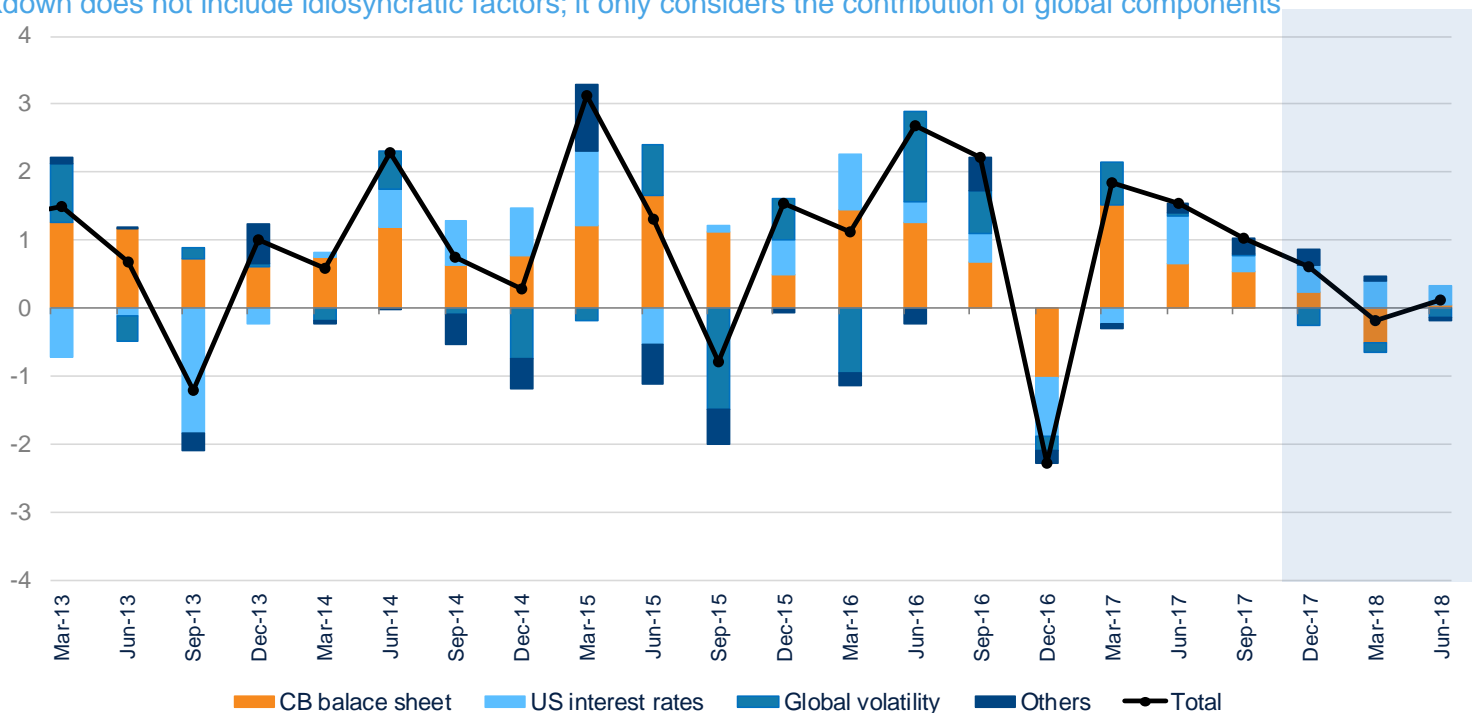


- ◆ In 2018, the ongoing reduction in the Fed’s balance sheet combined with the expected downsizing of the ECB’s QE will mark a turning point on global liquidity (despite ongoing purchases by other central banks such as the BoJ).
- ◆ Liquidity withdrawal shall be gradual and long-lasting. Eventually, central-bank balance sheets shall settle above pre-crisis levels.
- ◆ Consequently, global liquidity shall also remain higher than pre-crisis averages.

# Consequently, global factors shall continue tempering GIF flows to EM.

## Global Investment Fund Flows to EM

(The breakdown does not include idiosyncratic factors; it only considers the contribution of global components)



Source: BBVA Research, EPFR

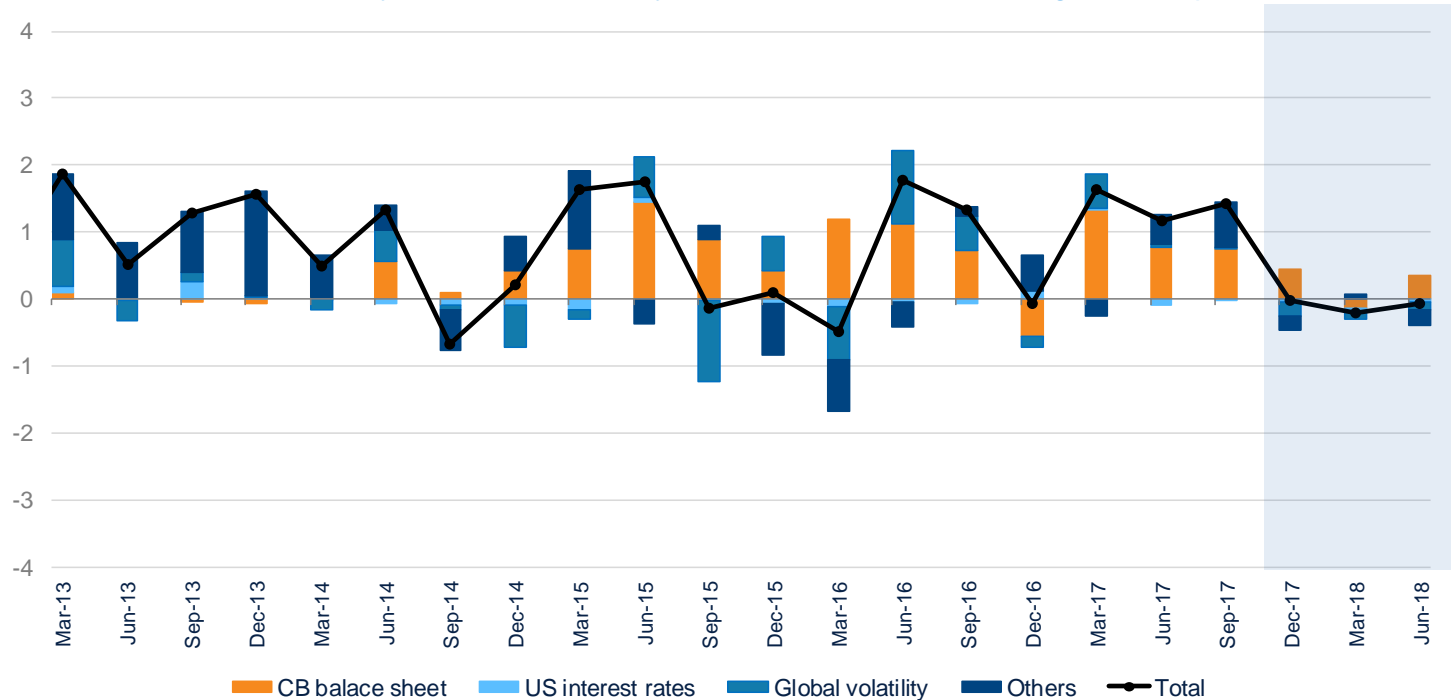
The Fed’s balance sheet reduction, the BCE’s QE downsizing and the BOJ’s “on-hold” stance shall lead to the tempering of inflows, which shall remain gradual as global rates stay supportive.



# GIF flows to DM shall follow suit.

## Global Investment Fund Flows to DM

(The breakdown does not include idiosyncratic factors; it only considers the contribution of global components)



Source: BBVA Research, EPFR

**Total GIF flows shall gradually fall as global liquidity adjusts down from current abnormal levels.**

## Glossary

- ◆ **GIF: Global Investors Funds:** Is the amount of funds gathered by EPFR database in “Country flows” allocation, in million of US Dollars. This database includes the flows in Country-denominated funds and the proportional amount in global or supranational labeled funds.
- ◆ **AUM:** Assets under management in EPFR database
- ◆ **DM:** Developed markets included in our sample are Austria, Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Honk Kong, Ireland, Italy, Japan, Netherlands, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, United Kingdom and 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, Venezuela.

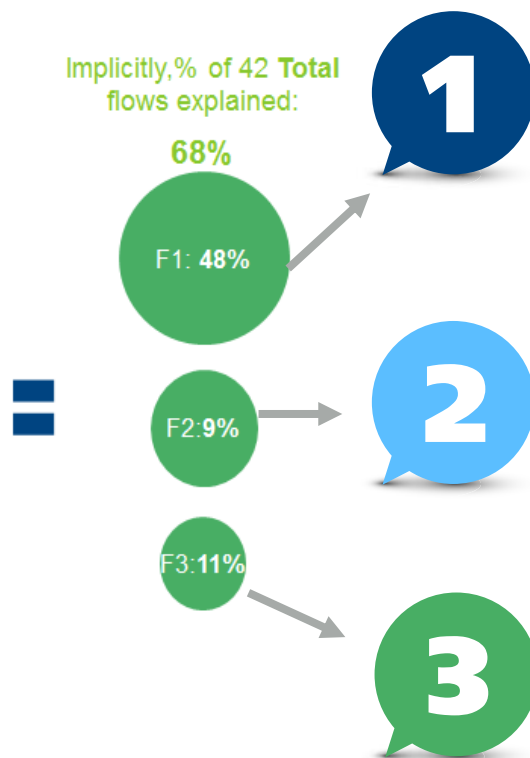
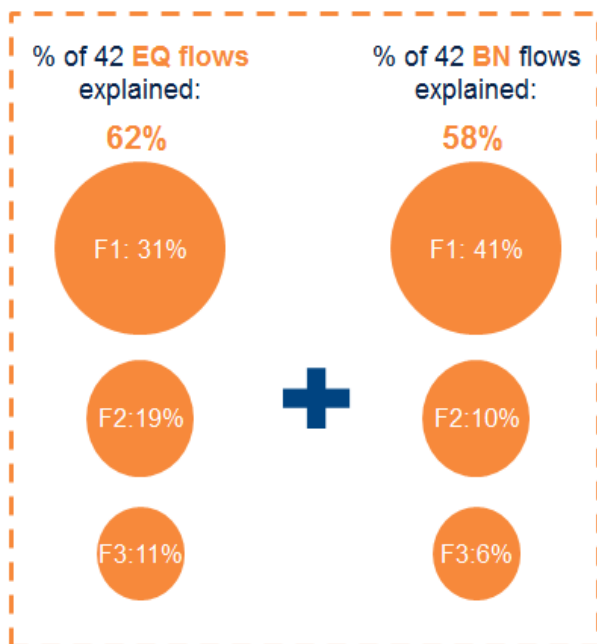


# Methodological annex

November 2017

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

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



- 1 Global:** It captures common movements across all countries (same direction), for instance due to changes in markets' risk appetite.

**Assets reallocation** (Bonds and equity) Variation explained by the reallocation between assets within a geography. The effect on each country will vary according to the composition of its stock between equity and bonds. Positive factor for Equity preference over Bonds
- 2 Regional reallocation** (EM vs DM) Explains the variation caused by the appetite towards one area versus the other. Inverse effect between DM and EM.
- 3**



# Macro-Financial Determinants of EPFR Flows

**01** Methodology: Panel data GLS

**02** Sample: 42 countries, quarterly data from Oct-2005 to June-2017

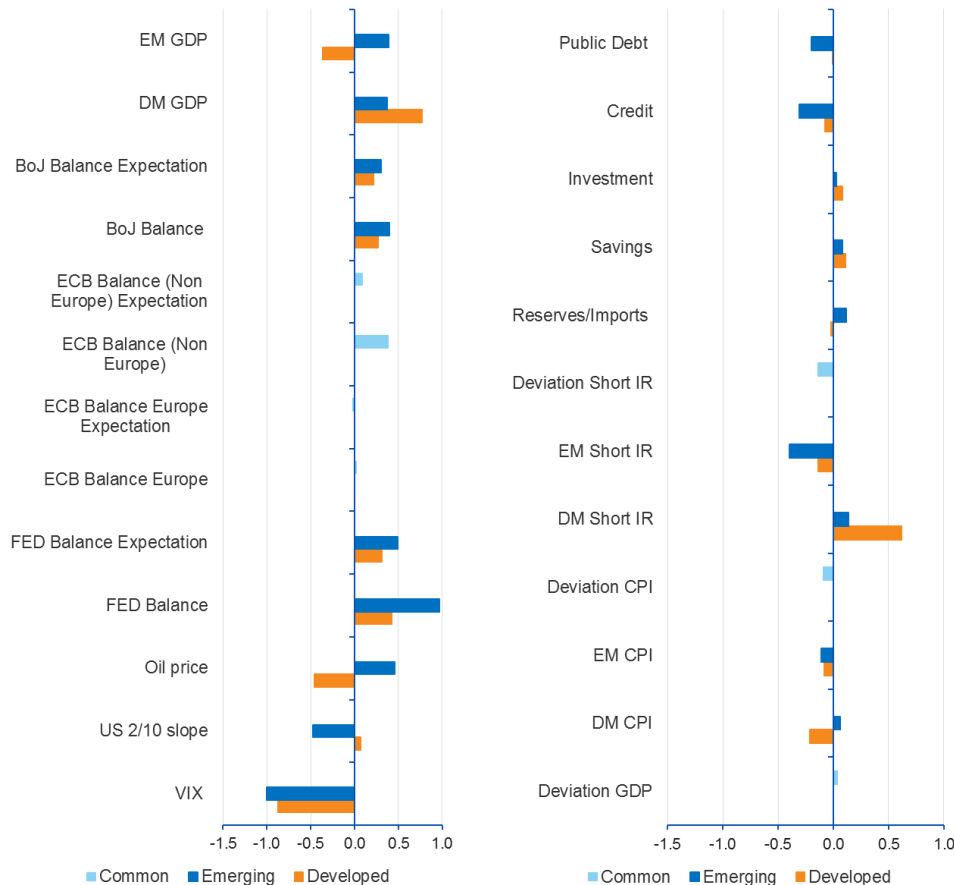
**03** Dependent Variables: Equity (EQ), Bonds (BN) and Total flows to each country.

**04** We allow 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
- 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 & bonds flows.

◆ Idiosyncratic variables play a limited role

◆ Markets seem to strongly differentiate between Emerging and Developed countries, but differentiation between countries seems quite limited

•  $R^2 = 0.54$

(\*) Coefficients of standardized variables

# Safe-haven indicator

The starting point to develop the indicator is to identify periods of risk aversion in financial markets. We determine these periods based on relevant movements on 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:

- $\Delta T10$  refers to the weekly change of the 10Y Treasury YTM
- $\Delta GER10$  refers to the weekly change of the 10Y German government bond YTM
- $\Delta VIX$  refers to the weekly change of the VIX index
- $\Delta EquityEM$  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

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

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 safe haven but for liquidity. In short, we define redemption episodes as follows:

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

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 along the 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 capturing 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 let us identify easily the regions that suffered the most and allows measuring 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 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)

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

- **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

- **Weighted the moving average by its relative weight in EPFR database**

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

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

W: is the weight of each country or area in the assets under management in each area (DM or EM)

X: is the 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:**

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

## Weight of each country in the region

Region	Country	Weight	
DM	United States	73%	100%
	Eurozone	13%	
	Japan	6%	
	United Kingdom	5%	
	Switzerland	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) along the 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 capturing 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 let us identify easily the type of assets that suffered the most and allows measuring the relative impact.

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

The previous step is to create a indicator for Bonds or Equity. Those indices are obtained by **smoothing** (moving average 3M) **the normalized flows to each type of asset** (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 that 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)**

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

- **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

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

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

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

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:**

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

## Weight of each country in the region

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

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