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Year of the Underdog: FX carry is cheap going into 2018

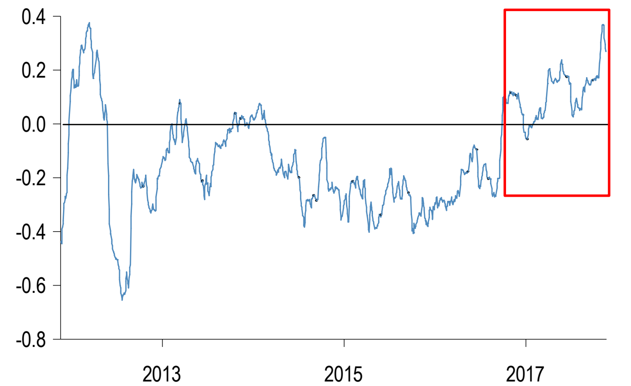
- **Growth momentum and valuations proved to be strong signals for currencies in 2017. Both delivered a similar magnitude of returns year-to-date (~5%), while FX carry lagged.**
- **FX carry is attractive with valuations approaching their cheapest levels in nearly two decades…**
- **...historically, average monthly returns and hit rates from risk-adjusted carry baskets are better than usual when valuations are cheap as they are currently (of 0.9% and near 80%).**
- **Global growth is getting upgraded at its quickest pace in six years and should still be relevant for performance…**
- **…but the currencies suggested by our economic momentum framework are no longer cheap and carry poorly. This modestly lowers attractiveness on the framework for now.**
- **There is hardly any value left in FX markets. Dispersion in G10 and EM is plumbing near decade lows. FX investors would be better served focusing on other factors.**

2017 saw the largest growth upgrades in six years

The year 2017 was a difficult for FX markets. A year ago when the last annual outlook was authored, markets were grappling with the surprise US Presidential outcome with the seemingly two relevant but non-modelable themes for markets—US reflation on expectation of possible regulatory changes on the one hand and elevated political uncertainty with possibility of a trade war on the other.

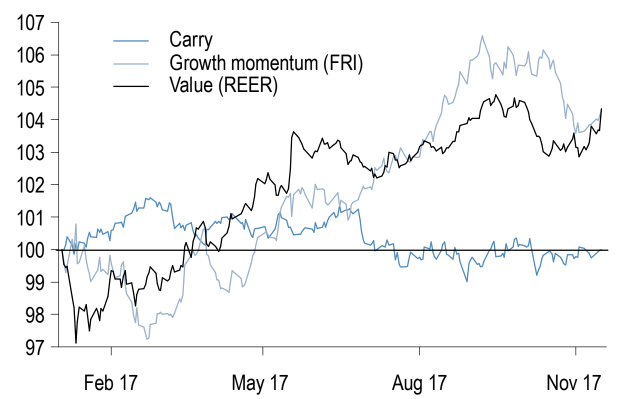
A year on, neither theme has yet panned out and instead FX markets have ended up by being driven by a stealth but more fundamental development—growth. This has surprised to the upside consistently through out the year with different regions leading at various points in time. The end result is that our global economic activity surprise index has spent most of the year in positive territory and our preferred measure of economic momentum for currencies—our economists' growth forecast revision index (FRI)—shows that their **global growth outlook got upgraded at its highest pace in six years** during the year (chart 1).

Chart 1: Surprise! Global growth forecasts were upgraded at their quickest pace in six years in 2017
J.P. Morgan global growth forecast revision index (FRI; 3m rolling change; %pts)



Source: J.P. Morgan

Chart 2: FX growth and value have outperformed, while carry lagged in 2017
Total return indices of select FX risk factors[1]



Source: J.P. Morgan

Growth and value explained FX returns in 2017, carry underperformed

Against this backdrop, the performance of the three medium-term FX single factors we typically track has diverged. **Growth momentum and value have outperformed, while carry has lagged**[5] (chart 2). When we introduced the **growth momentum** framework in the beginning of the year, we highlighted that **the strategy delivers positive returns when the growth outlook is being reassessed** (*How EASI is it to trade economic momentum in FX? An evaluation of three growth metrics*). So positive returns from this strategy in 2017 given the

[5] Growth momentum buys (sells) currencies where our economists growth forecast revision index increases (decreases) by more than 1 sigma. Value buys (sells) currencies whose J.P. Morgan PPI REERs are the lowest (highest) relative to their 15-year average. Carry is a 50:50 G10:EM basket comprising currencies with the highest risk adjusted carry. Details in *Daily FX Alpha chartpack*.

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magnitude and breadth of growth upgrades shouldn't be surprising. **Value** outperformed in 2017 after a substantial drawdown in December and January when already-cheap currencies such as TRY and MXN weakened even further. This had pushed **dispersion in FX valuations to the upper end of its 4-year range and signaled high odds of mean reversion**, giving the factor an edge early on in the year (*How cheap is FX value? Wider dispersion in valuations and benign carry warrants closer inspection*). However, the underperformance of **carry** is notable since it has come amid strong growth which would normally be supportive of positive returns.

Low yielders outshone the rooster in 2017

The answer to what drove carry underperformance lies in growth divergences between low and high yielders. As it turns out, with the exception of TRY, **the lowest yielding currencies were also the where growth was upgraded the most** (chart 3; top left quadrant). On a currency-level basis, the importance of divergent growth backdrops for FX performance is evident in chart 4, which shows that **currencies where growth outlook was upgraded the most were also the ones that strengthened the most in 2017** (again, TRY excepting).

The outlook in a nutshell: FX carry is cheap, growth relevant but less attractive

What is the outlook going forward? We discuss the individual factors in more detail below but in a nutshell, find that:

(a) following the recent underperformance, **FX carry looks to be approaching their cheapest levels in nearly two decades**. This typically results in above-average returns and hit rates from the factor;

(b) **growth will still be relevant but has become less attractive**—currencies recommended by the strategy carry negatively and are not as cheap; and finally,

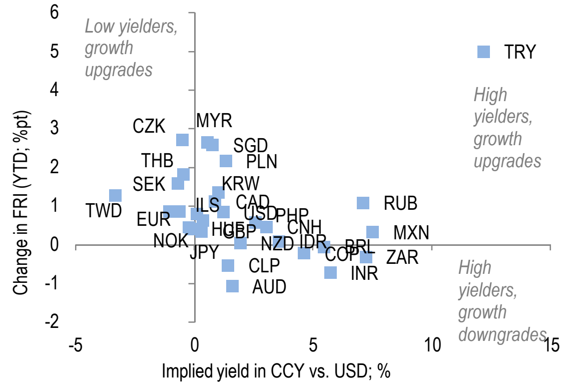
(c) **FX value offers little room for further compression** suggesting that these signals should be downplayed.

Carry is cheap…

First, **FX high yielders are cheap** after having lagged the global growth upgrade cycle. This is observable from multiple metrics. Chart 5 shows valuations of global carry baskets as measured by the deviation of REERs from their long-run average. The valuations from two separate global carry baskets are shown—that based on the highest outright yielders and the second based on risk-adjusted carry. Both show that REER valuations of carry baskets are approaching their lowest in nearly two decades (chart 5).

Chart 3: Low-yielders saw the largest growth upgrades in 2017, while high-yielders ex-TRY lagged…

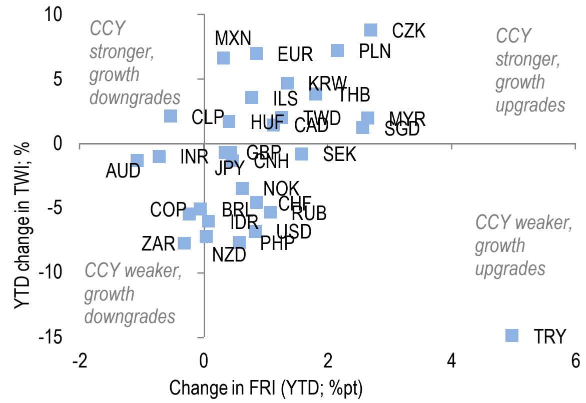
Year-to-date change in J.P. Morgan global growth FRI (%pts) vs. currency implied yields vs. USD (%)



Source: J.P. Morgan

Chart 4: …which drove their outperformance in 2017

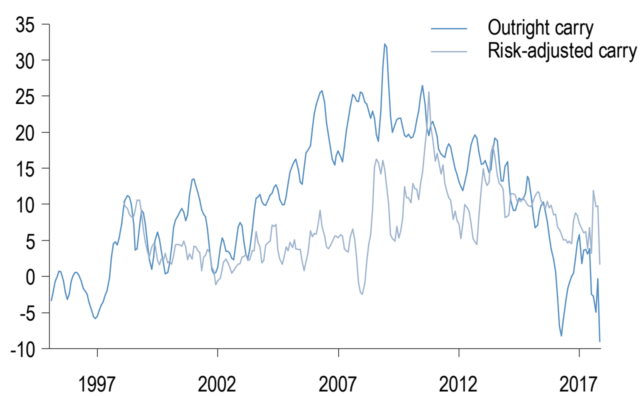
Year-to-date change: TWI (%) vs. J.P. Morgan global growth FRI (%pts)



Source: J.P. Morgan

Chart 5: FX carry baskets are approaching their cheapest levels in nearly two decades, in part driven by commodity prices…

Valuations metrics on dynamic global FX carry portfolios*; % deviation of REER from 15-year average



* Valuations of two carry portfolios are presented. One in which 20% of the currencies are bought (sold) on a simple ranking of implied yields vs. USD. Second, in which the risk-adjusted carry (implied yield/realized vol) is used per the *Daily FX Alpha chartpack*. 3mma except 2017.
Source: J.P. Morgan.

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Yields on carry baskets are admittedly not stellar, but still in line with post-GFC averages.

This has been partially driven by lower commodity prices. Since FX high yielders often comprise commodity currencies, worsening terms of trade will cheapen the carry basket. However, our strategists now think oil will average at a higher price of $58/bbl in 2018. Moreover, valuations of carry look cheap even accounting for lower oil prices. Even setting these factors aside, valuations of this magnitude on the carry basket have historically been meaningful for returns from the strategy, with returns and hit rates higher than usual when ex-ante valuations are cheap (chart 6). Specifically, **average monthly returns and hit rates from risk-adjusted carry baskets are 0.9% and near 80% when valuations are cheap as they are currently**, larger than the usual 0.5% and 68%, respectively, when the ex-ante mispricing of the basket is less than 3% (it is -4% currently; chart 6).

While cheap valuations bear favorably for carry going into 2018, an important ongoing dimension is going to be how growth momentum will evolve for these currencies since this was the clear drag on performance in 2017. **Which high yielders are currently cheap and have positive economic momentum?** The top left quadrant in chart 7 (highlighted in green) isolates the currencies that are cheap on a REER basis and have positive economic momentum. Among the high yielders in this subset (ZAR, COP, TRY where economic moment is neutral rather than outright positive), **our EM strategists are bullish on only COP** (bearish on ZAR and TRY). It is also worth noting **that our EM strategists are also bullish on RUB and BRL** (see *Emerging Markets* section, Goulden, Christovova, Carranza et al). REERs are slightly above average for these currencies as shown in chart 7, but nonetheless economic momentum is positive. Among the low yielders, we are short/ bearish on JPY, CHF and NOK.

Also note that we have been recommending selectively being long EM high yielders vs. G10 high yielders/ commodity currencies in our long-term portfolio recommendations since early 2016 (*Trade opportunities for long term investors*, Panigirtzoglou et al). Among the G10 commodity currencies, the Antipodean forecasts continue to be bearish and in particular, NZD continues to look rich on a REER basis (chart 7) and given the valuations divergence from EM high-yielders (chart 8; also see *AUD and NZD*, Sally Auld et al and *Emerging Markets*, Goulden et al).

Chart 6:...and carry tends to deliver better returns when valuations are cheap
Monthly returns from FX global carry for a range of ex-ante mispricing in carry basket (1m lagged REER deviation from 15y average; %); current regime highlighted in red

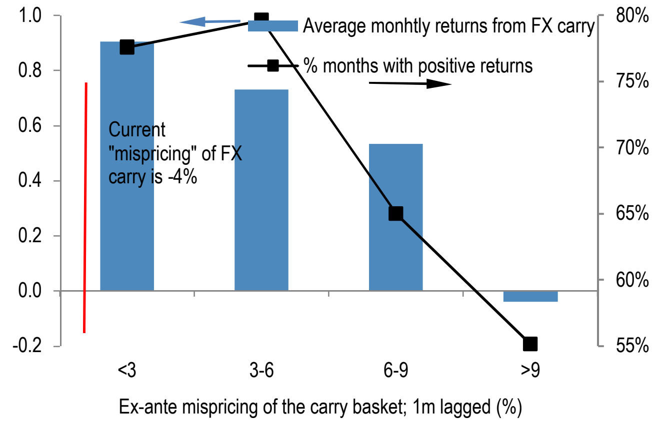


Chart 7: Which currencies are cheap with positive economic momentum?
Econonc momentum vs. value; current ranking

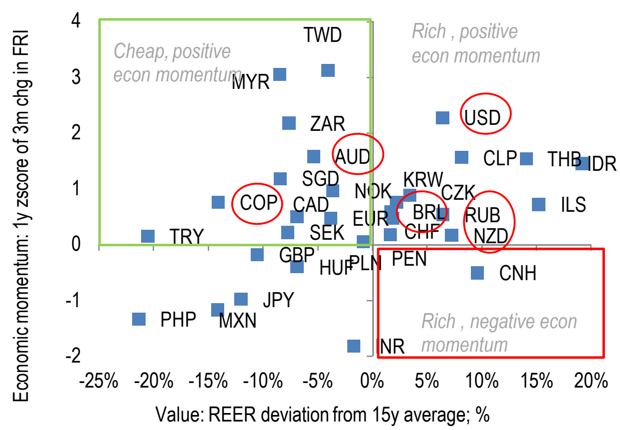
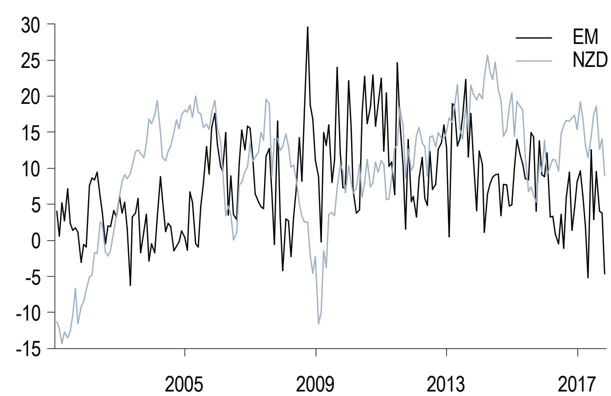


Chart 8: Among G10 "high-yielders", NZD continues to look rich vs. EM high-yielders
Deviation of REERs fron their 15-year average; %



Source: J.P. Morgan

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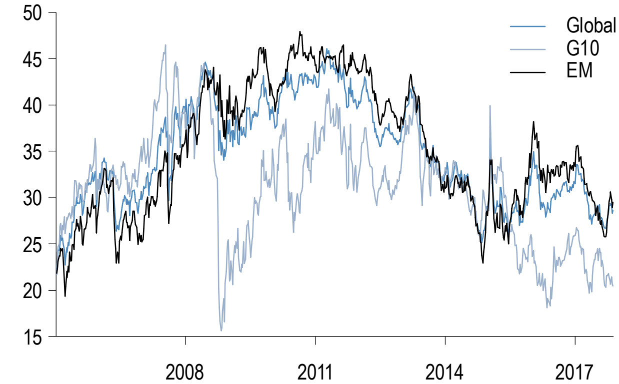
…value is not

Second, while FX carry is cheap, long-term value based on REERs[6] is not. In our recent publications, we have been using the dispersion in valuations as a metric to measure the attractiveness of this factor. Specifically, dispersion is defined as the gap between average mispricing of rich and cheap baskets. We have noted that, historically, high dispersion is usually followed by better-than-average returns from the value strategy and that **low dispersion near current levels is consistent with average returns and hit rates of 57% from the strategy** (*How cheap is FX value? Wider dispersion in valuations and benign carry warrants closer inspection)*. This was particularly relevant in early 2017 when the dispersion had increased on the back of political concerns.

Unfortunately, **dispersion has declined to decade-lows and indicates that there is hardly any value left in FX markets**. This is the case in the global portfolio, as well as on a sectoral basis for G10 and EM (chart 9). The take-away is that FX investors are likely better off focusing on other factors till value returns to FX.

Chart 9: There is hardly any value left in FX markets

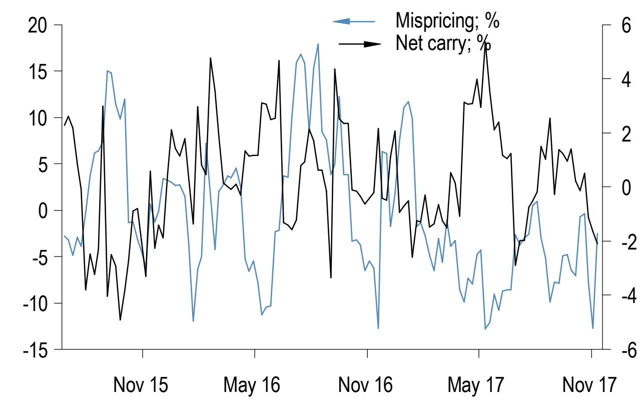
Dispersion between the richest and cheapest 20% of the currencies ranked on deviation of REERs from their 15-year average; %



Source: J.P. Morgan

Chart 10: Growth momentum is no longer picking high carry and cheap currencies

Net carry and REER mispricing of FX portfolio suggested by the economic momentum framework; %



Source: J.P. Morgan

Growth: still relevant, but not as attractive

In January this year, we released a research note in which we evaluated three measures of economic momentum for currencies (*How EASI is it to trade economic momentum in FX? An evaluation of three growth metrics*). In that note we concluded that our preferred measure of economic momentum was our economists' growth forecast revision index (FRI) which tracks their 1-year growth forecast by country on a weekly frequency. Recall that the specific rule was the 1-year z-score of the 3-month change in the index (i.e. the normalized quarterly growth revision). Top (bottom) 20% of the currencies in the universe were bought (sold) when ranked on this metric subject to a 1.0 sigma threshold. In the event the threshold wasn't met, the residual positions were filled with the dollar. This meant that the strategy ended up being long the dollar in a global recession but short the dollar in a broad-based global upgrade cycle, such as the one experienced in 2017.

In that research note we also highlighted that this **framework performs well when the growth outlook is being reassessed**. Given that the macro environment over the past year had been characterized by better than anticipated activity data and resultant broad-based growth upgrades, the strategy has performed well since inception and had been one of the best performing strategies among the ones we track in the *Daily FX Alpha Chartpack* with year-to-date returns of nearly 5%. This despite the strategy having giving back nearly third of its returns in October as several commodity currency longs being suggested by the framework underperformed substantially.

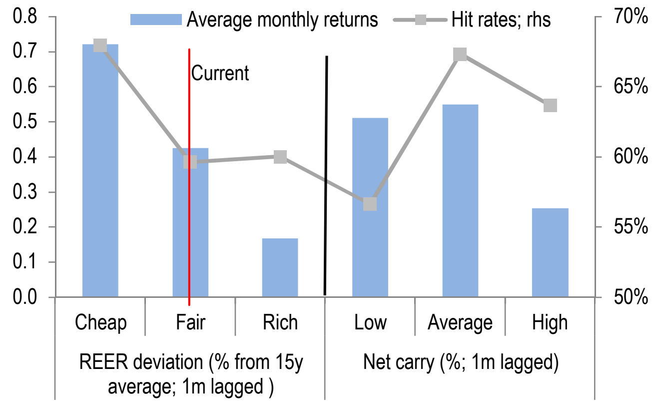
Growth momentum suggested dollar shorts 65% of the times in 2017…

When examining the returns of this strategy in 2017, **a key conclusion from the framework was that global cyclical conditions would be supportive of dollar shorts**. Specifically, the strategy has been short the dollar for 65% of the year and neutral 26% of the times; USD longs were limited to only a couple of weeks at the beginning of the year and only because the outcome of the US elections had resulted in downgrades in the rest of the world. **These short signals on the dollar were a result of stronger economic**

[6] Signal is deviation of PPI REER from its 15-year average. 20% of the universe is bought and 20% is sold based on this ranking.

Chart 11: Current valuations are typically associated with average subsequent returns and hit rates; carry is low currently but has not been as relevant ex-ante

Average monthly returns from the economic momentum strategy for various ex-ante levels of net carry and value *; %



Average monthly returns from the economic momentum strategy for various ex-ante levels of net carry and value *; %

Net carry (%; 1m lagged)	REER deviation (% from 15y avg; 1m lagged) <-3.58	-3.58-3.83	>3.83	Total
<-1.27	1.00	0.59	-0.94	0.51
-1.27-0.78	0.41	0.71	0.48	0.55
>0.78	0.46	-0.10	0.37	0.25
Total	0.72	0.42	0.17	0.43

* 1-month lagged value and carry measures of the recommended portfolio are divided into tertiles. Data starting January 2004 has been used. Hit rates measured as percent of months that delivered positive returns. Source: J.P. Morgan

momentum in the rest of the world rather than soft activity data idiosyncratic to the US. In other words, stronger growth momentum globally meant that the growth forecast for virtually no country was getting downgraded materially leaving the strategy short the dollar on the expectation that strong global cyclical conditions would be favorable of high beta currencies at the expense of the dollar. The implicit dollar short added nearly 2% to the year-to-date returns from the strategy, so comprised 40% of the total returns.

Carry is negative and valuations not cheap any more

We discuss the main take-aways from the framework below, but also note that currently, **the composition of the recommended currencies by this factor has become less attractive on carry and valuations**. Specifically, chart 11 shows that for most of the year, the strategy has recommended a net portfolio that carries positively and has been cheap on a REER basis, but that more recently, the carry has turned negative and valuations are attractive either. Historically, **we have found valuations to be more relevant and as it stands currently, these are consistent with average (but still positive) returns from the strategy** (chart 11; *Three isn't always a crowd: Economic momentum joins the FX value and carry party*).

Chart 12: More growth upgrades than downgrades: growth for 20% of the countries has been upped by more than 1 sigma in the past quarter

% of countries where growth was upgraded minus % where growth was downgraded by more than 1.0 sigma in the past quarter; %

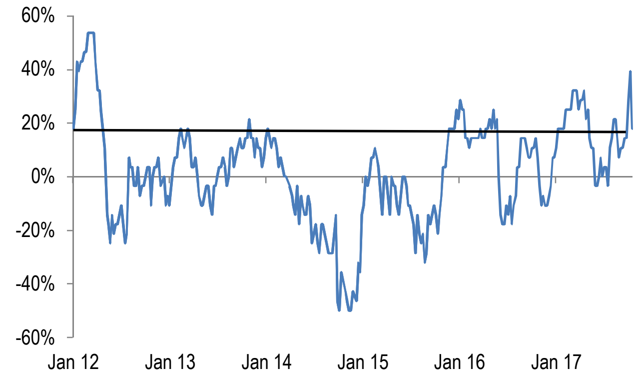
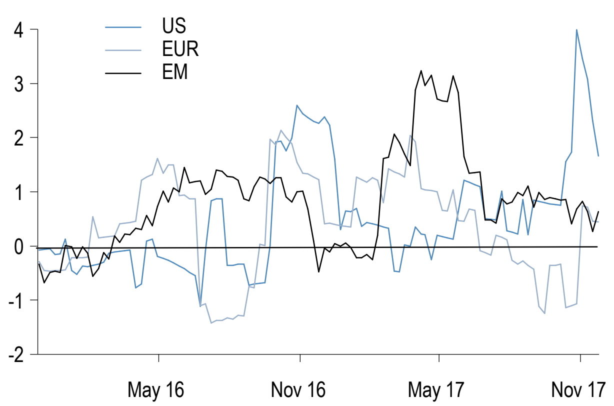


Chart 13: The growth outlook in the US has recently been upgraded at a larger pace than that in the Euro area of EM

1-year z-score of the 3-month change in J.P. Morgan forecast revision indices



Setting this aside, the key takeaways from the economic momentum framework are:

(a) **the global economy is still getting net upgraded**. Over the past quarter, the countries where growth was upgraded materially exceed those where growth was downgraded by 20% (chart 12);

(b) **the US dollar has become better ranked on this framework relative to 2Q**. There are two components that drive the dollar view on the framework. First, the US-only growth forecast which became outright USD bullish for the first time in 2017 in October (chart 13). Second, the global growth view which is still modestly bearish USD since there are hardly any countries where the growth forecasts are getting downgraded materially. At a minimum, these developments indicate that pressures stemming from US lagging global growth

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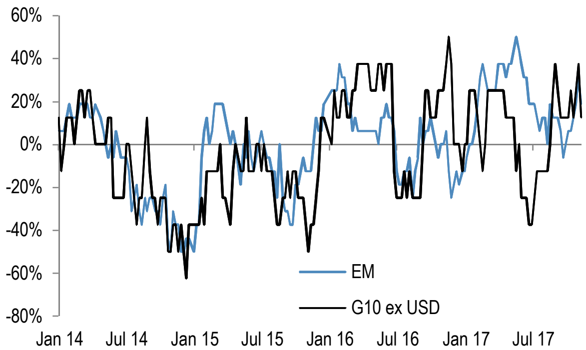
have become less USD-bearish (also see *USD creeps into bullish territory: Growth momentum is more treat than trick for the dollar*).

(c) **DM growth momentum which had been outright negative for the sector in 2Q has now improved.** Meanwhile **economic momentum has come off the boil and become narrower in EM** (although it is still positive)—50% of the countries were seeing large growth upgrades in 2Q, but this is now down to 20%.

Chart 14: DM growth momentum is not negative anymore, while EM growth momentum has come off the boil

% of countries getting material upgraded on a net basis (1.0 sigma threshold)



Source: J.P. Morgan

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