Global Macro Strategy
Theme #3: European Impulse

Strategy

Global

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The Euro-area is recovering...

We forecast upside risks to consensus estimates of Euro-area growth in 2016. Fiscal policy is loosening. Lower energy prices are boosting disposable incomes for households. Past currency weakness coupled with tame wage growth support competitiveness. Crucially, credit dynamics are recovering, albeit at a gradual pace.

...but the market remains sceptical

The market has not yet fully appreciated or reflected the Euro-area recovery. In particular, we show that, despite strong performance since 2012, equities and corporate credit have not yet fully priced the improvement in the Euro-area credit cycle. Core government bonds and currencies have not reflected it at all.

This is likely because markets tend to misread the "credit impulse"

Market participants and academic researchers tend to focus on the fact that credit growth in the Euro-area is near zero and infer that this has a neutral impact on future real growth. But this may be an incomplete way of looking at credit; the key driver of real GDP growth is not credit growth per se. We show that it is the change in credit growth – the credit impulse – that matters.

Forecasting the credit impulse; the Euro-area credit cycle has room to expand

We create a leading indicator for the credit impulse, based on the ECB's Bank Lending Survey, which gauges supply and demand conditions in the Euro-area banking sector. While expectations need to be measured, our work confirms there are upside risks to Euro-area growth vs consensus.

The market has largely lagged the current stage of the credit cycle

Our modelling work shows that, relative to past relationships, assets have significantly lagged the ongoing improvements in Euro-area credit dynamics. We also find that, throughout a full credit cycle, asset price moves can be very large (much larger than what we have so far observed). In that vein:

- Stocks and corporate credit are the asset classes that move first. So it is not surprising we have already seen strong returns there. But there is still ample room for these assets to perform further. Consistently with our European equity strategy views, we find that financials outperform the index during the credit cycle. Investors should be overweight.
- The EUR as well as core Euro-area yields tend to lag risky assets. But within a full credit cycle, one should expect core yield levels to increase significantly from current levels and the Euro to gain ground on a trade-weighted basis. Monetary policy will remain loose in the near term, so these moves should be gradual at first.
- Peripheral sovereign credit spreads have more-or-less traded in-line with credit dynamics (if not slightly stronger than one would expect). However, as we argue above, there is value in corporate credit – particularly against EM credit, an asset class that faces headwinds from deteriorating macro balance sheets.

Euro area cyclical upturn underappreciated in markets

*The authors would like to thank **Jeremy Chalder** for his research assistance*

After last year's extreme cyclical divergence, growth in the Euro area has started to re-synchronize with the rest of the world. Although this improvement has not gone unnoticed by investors, we think it is not yet fully appreciated or reflected in asset prices either. Many investors view last year's economic divergence as the norm, and this year's Euro area upturn as temporary. We think both views are incorrect, and create market opportunities.

First, last year's divergence was extremely unusual. For instance, US growth bested Euro area growth by more than 300bp annualized in Q2 and Q3. This is the first time that has happened since the peaks of the Euro-area crisis, and was bound to reverse. The US and Euro area economies are the two largest, and divergence is the exception, not the rule - a theme we've been highlighting ("EUR/USD: How high can it go?" – May 2015).

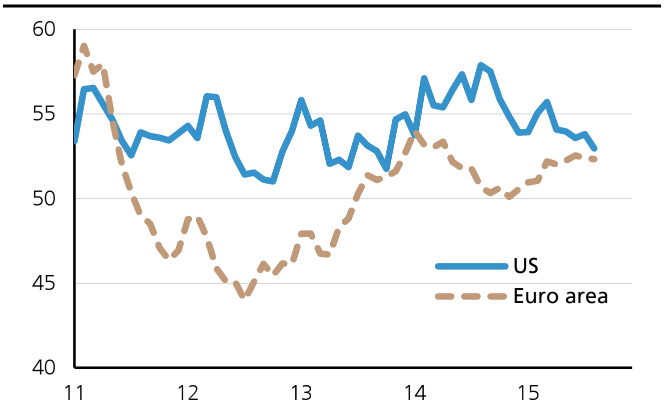
Second, although structural problems in the Euro area remain, the underpinnings of the growth pickup – including monetary stimulus, pass-through from lagged euro weakness, and lower energy prices – are significant. This has resulted in a broad-based growth acceleration that includes both business and consumer activity. The 7-point gap between the US and Euro area manufacturing PMI that had opened up a year ago is now essentially closed (Figure 1).

Re-synchronisation is happening *within* the Eurozone as well (Figure 2). Although steady expansion has pushed German unemployment to its lowest rate since reunification, suggesting one of the smallest output gaps in G10, improvement in the periphery makes the growth pick-up all the more durable.

Spain stands out as one of the few advanced economies where 2015 growth expectations continue to be revised higher, and growth for the year is likely to exceed 3%. Unemployment is falling, consumers and businesses are increasingly optimistic, and lower borrowing rates are adding to the boost from energy and FX.

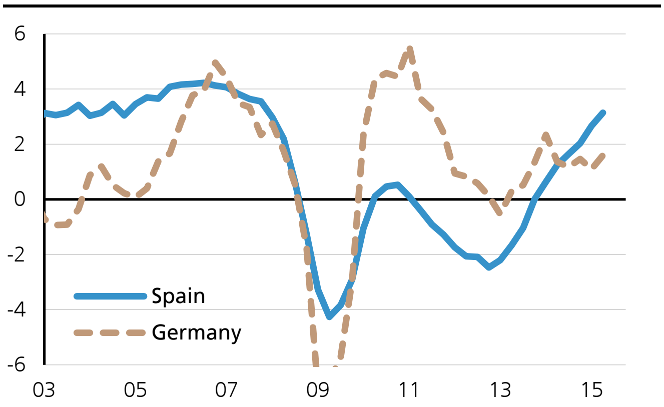
Plenty of issues remain unresolved in Europe, and many of them are structural, but for asset markets in the coming quarters, it is the ongoing cyclical upturn that matters most. Risks from politics and China/EM aren't going away, but equities reflect assumptions that seem too pessimistic (see "China risks for Europe: What is priced in?"), and we think there are opportunities here, as well as in FX and rates.

Figure 1: Manufacturing PMI (Purchasing Managers Index) levels



Source: Markit, UBS.

Figure 2: Real GDP YoY %



Source: Haver Analytics

The drivers behind a Euro-area recovery

In our view, there are four primary drivers currently behind a continued recovery in the Euro-area (also see European Economic Perspectives; "Constructive on Europe despite small downgrades", from 24 August 2015). Out of these four factors, the positive contribution from the credit impulse, is less understood and even less widely followed by markets:

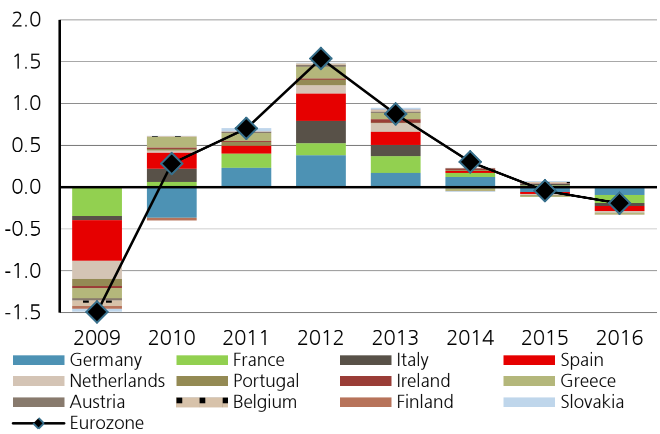
1. There are early signs of a revival in credit growth: Markets have witnessed the recovery of credit growth from deeply negative levels to flat, with muted interest. But, as we argue, what is key for GDP growth is not credit growth but the change in credit growth, also known as the credit impulse. Using the ECB's lending survey and modelling a credit impulse signal from its subcomponents, we show that credit dynamics point to upside risks in Euro-area growth. We also show that there is room for asset markets to price the euro-area growth recovery further.

2. Fiscal policy is loosening: Fiscal conditions have become neutral in 2014 and 2015, from contractionary levels in the previous 4 years (Figure 3). In 2016, we expect the fiscal impulse, the shift in the ex-ante fiscal effort from sovereigns, to become moderately expansionary, adding a further tailwind to growth.

3. Lower energy prices benefit household incomes: Persistent low energy prices continue to provide a boost to consumption and output, with little sign of a prices rising back to 2014 levels. Our Economist's Real GDP forecasts for the Euro area (Figure 4) rely substantially on domestic demand recovering over the coming year. They expect GDP to expand by 1.4% in 2015 and 1.9% in 2016 (above Bloomberg consensus of about 1.7%). And ongoing declines in energy prices raise the odds of that happening. Figure 5 shows the likely impact of the recent oil price decline based on the ECB's estimates (these estimates are subject to downside risks since they were last ran in 2010).

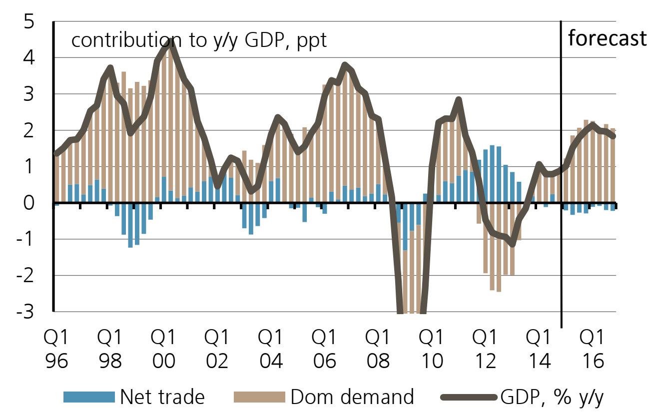
4. A weak EUR (coupled by tame wage growth) supports competitiveness: Although we anticipate part of the EUR decline to reverse, we do not expect it to rise above 1.20 vs the USD. Coupled with competitiveness gains in relative wages (Figure 6), we expect the strength in export growth to persist.

Figure 3: "Fiscal effort"* in Eurozone (% of EZ GDP)



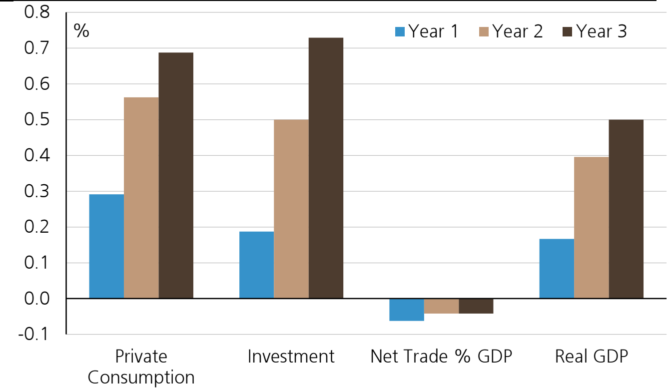
Source: Haver, European Commission, IMF, UBSe. *Reduction in structural budget deficit. Contributions from individual countries are GDP-weighted.

Figure 4: Eurozone real GDP and contributions (percentage points)



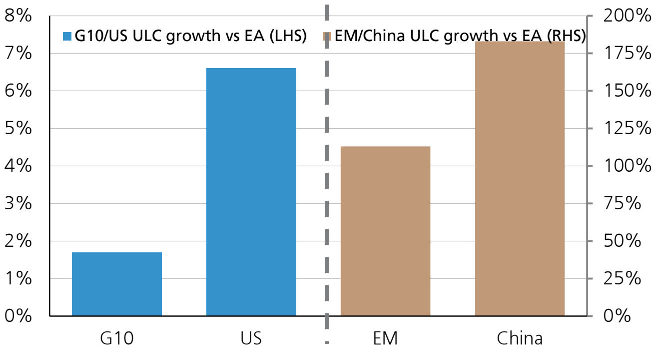
Source: Haver, UBS estimates

Figure 5: Expected impact of recent 20% decline in Brent Crude (July 2015) on Euro-Area economy; cumulative deviation from baseline



Source: UBS calculations, based on ECB study of effects of a 10% oil price move. (ECB Monthly bulletin, August 2010 'Oil prices – their determinants and impact on euro area inflation and the economy').

Figure 6: Relative increase in Unit Labour Costs (ULCs) in DM and EM (in Euro terms) vs Euro-Area ULCs, '05-'14



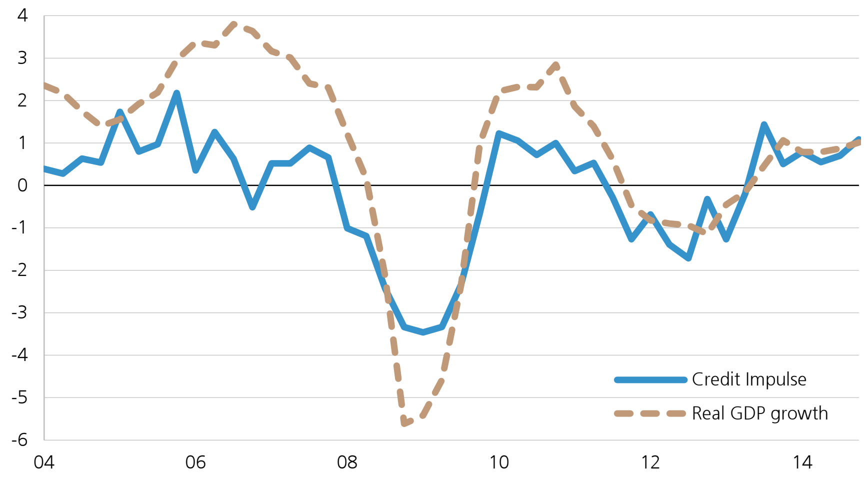
Source: Haver, OECD, UBS calculations

The credit impulse reinforces the recovery story

Although the market broadly comprehends the impact of a weaker exchange rate, lower oil prices and looser fiscal policy on growth, it often tends to misread the dynamics in credit. This is because both market participants and academic researchers often focus on net credit growth (to the business sector), which currently hovers near zero, and infer that this has a neutral impact on future real growth. But this is the wrong way to look at credit, in our view.

The key driver of real GDP growth is not credit growth *per se.* It is in fact the change in credit growth – the credit impulse. The level of GDP represents income flow and needs to be compared with a flow variable i.e. the growth in the stock of credit. Thus, when we look at GDP growth we need to compare it with the change in credit growth (credit impulse). Figure 7 demonstrates this relationship, with the Euro-area credit impulse and real GDP growth tracking closely together for the past 10 years. From the chart, one can also infer that shifts in credit impulse tend to lead GDP growth.

Figure 7: Euro-area real GDP growth and credit impulse* track closely together



Source: UBS calculations, Haver, ECB. *Credit impulse: YoY change in QoQ credit stock growth; where credit stock measures total outstanding nonfinancial corporations credit.

As can be seen, the credit impulse in the Euro-area is now recovering and it is followed by an uptick in GDP growth too. Importantly, there are simple ways to model shifts in credit impulse on a forward looking basis. This is by utilising the information that the ECB's lending survey provides.

In an attempt to build a leading credit signal, we model our own credit impulse indicator based on the ECB's Bank Lending Survey, which gauges supply and demand conditions in the euro area credit markets.

First, in order to capture the full set of signals from the sub-components in the lending survey, we use PCA (Principal Component Analysis) to derive the first principal component from the data. This captures 73% of the variation of the complete survey. Our Leading Credit Index (LCI) in Figure 8 is therefore our gauge of the combined expectations of credit supply and demand in this survey. The index appears to be a strong leading indicator to economic growth.

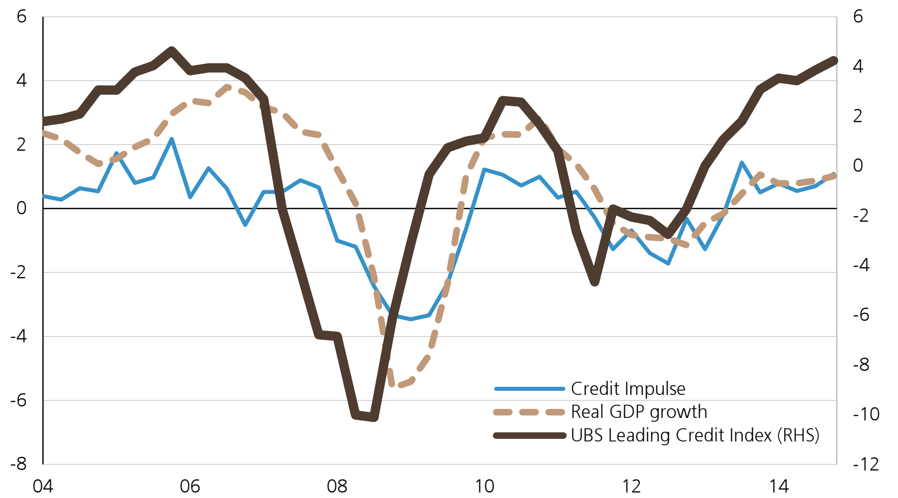
The most recent survey results (Q2) show expectations for increased credit demand from non-financial corporates in Q3. We would expect the observed credit stock growth to accelerate in the coming months, in line with these results, and real GDP growth to follow. The nuance here is that this credit cycle may be more protracted and gradual compared to past credit cycles as our Euro-area Economics team discusses in "European Economic Comment; ECB: credit improving (but don't expect miracles)." That said, gradual as the credit recovery may be, the main point of the analysis is that it is much more about the second derivative of credit – the momentum in credit growth. And given the low base in credit growth rates, that second derivative is likely to remain growth supportive.

Moreover, as we will discuss here, the market has lagged the credit and ultimately GDP growth dynamics that the credit impulse data currently implies.

Euro-area assets reflect credit cycles with a lag

The environment for Euro-area growth is complex and one needs to be cautious in terms of forward looking assessments. But at the very least, our work shows that, relative to consensus, there are upside risks to Euro-area real GDP growth stemming from Euro-area credit dynamics, and this may not be something fully appreciated by markets.

Figure 8: ECB Bank lending survey leads credit impulse

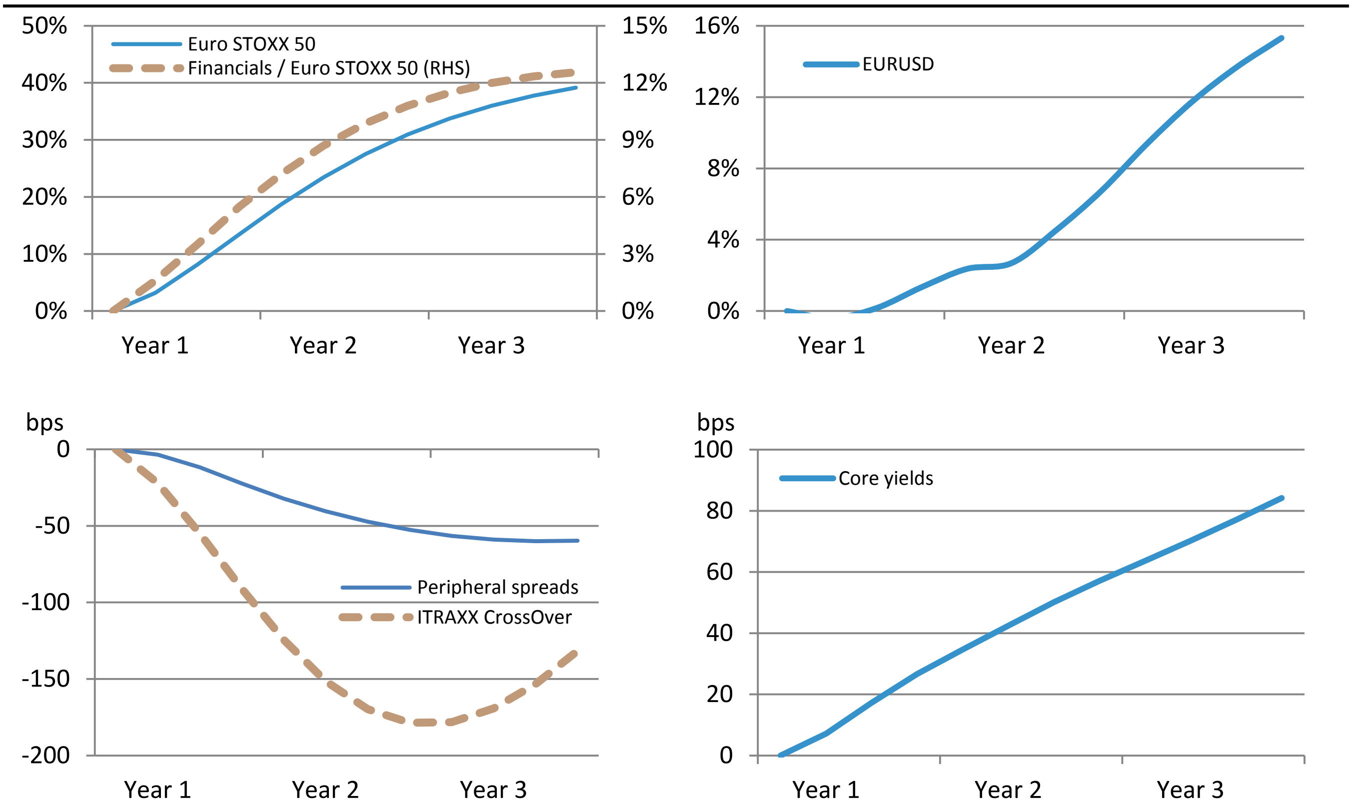


Source: UBS calculations, Haver, ECB.

That last point needs further discussion. After all, the revival in the Euro-area credit cycle started in 2012 and has gone a long way. Within this time-frame, growth sensitive assets, such as peripheral credit spreads and equities, have rallied significantly. So markets may already be pricing the underlying Euro-area credit growth dynamics to some, potentially significant extent.

Our task is clear – we need to model the magnitude of potential moves in key Euro-area assets within a full credit cycle. To do this we run a simple vector autoregression (VAR) exercise estimating the impact of shifts in our Euro-area LCI on 1) Euro-stoxx returns (including relative returns on financial stocks vs the Index), 2) Itraxx-Crossover shifts (corporate credit spreads), 3) shifts in EUR/$, peripheral 10y spreads (averaging Spain and Italy) and 4) core Euro-area yields (averaging France and Germany). We need to control for the market impact of third factors, such as shifts in the global cycle, risk aversion spikes and shifts in commodity prices. We introduce relevant proxies to our VAR model in the form of 5y US yields, VIX and Energy/Industrial metals shifts. Figure 9 presents the response of different assets to 1 standard deviation shocks in our LCI. We note that the average credit cycle (trough to peak in credit impulse) roughly corresponds to a 2 standard deviation credit shock.

Figure 9: Long-term asset price shifts to a 1 st. dev. shock in our credit LCI (leading credit index)



Source: UBS calculations

In line with economic intuition, we find that:

1. During the course of a full credit cycle, equities tend to rally significantly, bonds tend to sell off, the EUR tends to accelerate and spreads typically tighten, all in a large and sizeable fashion. The relevant charts in Figure 9 make this exact point; during a full credit cycle, pro-cyclical assets can run significantly.

2. Typically the bulk of the move takes place earlier in equities (and potentially spreads too), while it may take a longer period of time for rates and FX to reflect credit cycle dynamics, which is likely due to the lags in monetary policy responses.

3. We also find that a sizeable shock in credit conditions may transcend deep into time, with the full effect taking three years (or more) to be fully reflected in the price. This adds to evidence that the markets tend to reflect underlying credit boosts to output with a lag.

Quantifying the upside in Euro-area assets

We use various specifications of our model to estimate a fair range of expected price moves, ex-ante. We use Q4 2012, the inflection point for our forward looking credit indicator as the starting point. Since then our LCI has risen by nearly 2 standard deviations; a move typically associated with a full trough-to peak move in credit dynamics. However, Euro-area deleveraging dynamics during the 2012 crisis imply the starting point is low enough to permit such a move to happen without compromising its sustainability through time.

Figure 10 shows the range of model implied estimates for key Euro-area assets. The range reflects the fact that there is uncertainty involved in such modelling approaches (in terms of specifications, variable ordering and optimal lags). And arguably, in an environment of uncertainty, a range of estimates can capture relevant outcomes more appropriately than a point estimate.

Some interesting results emerge:

1. Although equities have rallied significantly since late 2012, this rally is well within the scope of the moves one would expect in the context of the Euro-area credit cycle deepening. In fact we may even be at the lower end of the expected range of the return. In line with our sector recommendations, there is ample room for financials to outperform the index going forward.

2. FX and rates have reacted the least – in fact they have moved in the opposite direction than the one implied by our modelling work. It will take the markets to start speculating about the end of the ECB QE, at a much more mature stage of the credit cycle, for these assets to fully materialize their potential. But even until then there may be room for upside in Euro-area yields and the EUR/$ with each marginal improvement in growth data, particularly given the low starting point from a valuation aspect.

3. The narrowing of sovereign credit spreads over the cycle has been considerable already. Even by standards of a full credit cycle, the upside seems limited going forward. In contrast, corporate credit spreads have further room to compress.

Figure 10: Scope for EUR assets to further reflect recovery in the credit cycle.

Assets	Model estimate	Actual market move
Euro Stoxx 50	+ 35 to 77%	+27.4%
Financials / Euro STOXX 50	+ 12 to 25%	+9.4%
EURUSD	+ 19 to 29%	-15.5%
Core yields	+ 115 to 211 bps	-67 bps
Peripheral spreads	- 96 to -135 bps	-189 bps
Itraxx XOVER	- 250 to -307 bps	-156 bps

Source: UBS calculations, Bloomberg

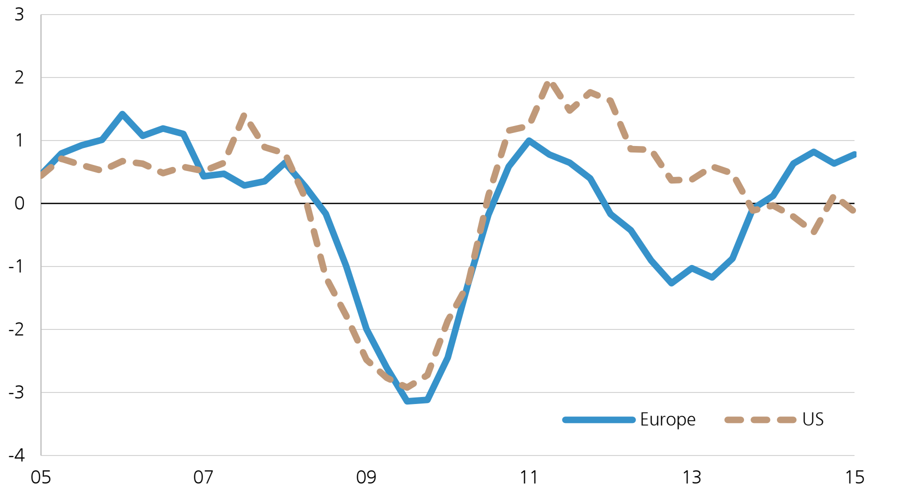
It is important to note that our analysis relies on model estimates, which are naturally subject to model uncertainty. Therefore, the actual model moves should be viewed as a directional signal rather than a forecast. However, two key points are well supported by our results. (1) As the credit cycle continues to extend we should expect risky assets to be supported, peripheral spreads to tighten, and (potentially) the EUR and core yields to start rising in line with stronger European growth prospects. (2) European assets have consistently lagged our credit impulse model and, thus, have the potential for further rallies to catch up with the recent credit acceleration in Europe.

Asset market implications

- **Equities: The return of credit and earnings growth**

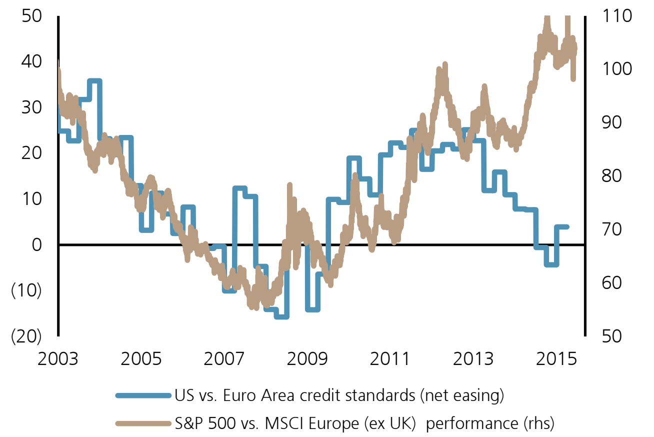
From an equity market perspective, we have been arguing for some time that one of the key reasons for the huge underperformance of European equities relative to the US (down 45% relative since 2007 in USD terms) has been the inability of Europe to get credit going again. The US "fixed" the banks back in 2009 with the injection of capital. It could be argued that it took Europe until November 2014 for the ECB to become the overall regulator for Europe to be fully "fixed". We can see this relationship in the relative performance of Europe and the US equity markets and the relative credit availability; as shown in regional credit impulse data (Figure 11), and in the surveys from the Fed and the ECB (Figure 12; also *see:* Macro Keys - Early days for Europe: 5 crisis gaps left to buy 16 March 2015).

Figure 11: Europe overtakes the US: Regional credit impulse 4Q moving average



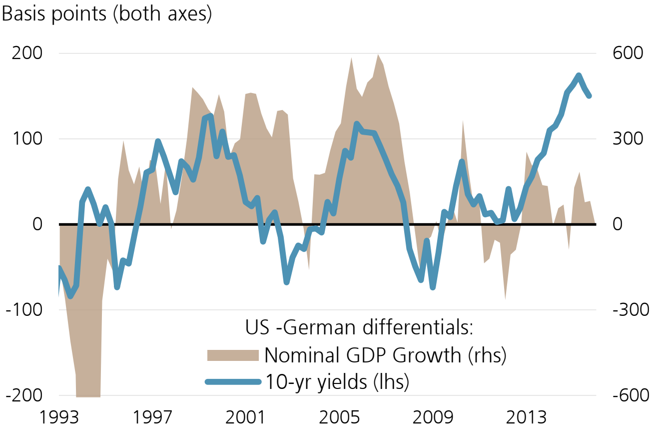
Source: UBS calculations, Haver, ECB, Federal Reserve Board

Figure 12: Credit conditions caught up, will equities?



Source: Bloomberg, Haver Analytics, UBS calculations

Figure 13: US-Germany: no growth gap, yet wide spread



Source: Bloomberg, Haver Analytics, UBS calculations

Where are Europe's equity valuations now? At first sight, valuations look simply neutral – we are trading on 14.3x 12m forward earnings, in line with the long run average of 14x. But this is on super-depressed earnings: we have had no earnings growth for nearly 5 years and are still some 21% below the previous peak of 2007. We think investors should look to adjust valuations for the stage of the cycle and when we do that, either by looking at a trend earnings series or the cyclically adjusted P/E (CAPE), we find European equities have c.20% upside to fair value. For more on valuations, the profit cycle and risks to European equities please see our recent report: Back to School: China, US Rates and Earnings… 7 September 2015.

- **Rates: Yields should also reflect more synchronized growth**

With growth re-synchronizing, the 150bp gap between US and German 10-year yields stands out as too wide. The spread is nearly two standard deviations from the 41bp averaged since 2000, and is inconsistent with relative economic positions. Indeed, it is possible that the German output gap is actually nearer to being closed than the US output gap, and an acceleration in credit growth would further support the re-synchronization between the Euro area and US economies.

Inflation expectations may be playing a role in keeping back-end yield differentials wide as well, with markets pricing significantly more disinflation in the Euro area than in the US. While inflation swaps are pricing US inflation reaching 2% in three or four years, they are only pricing Euro area inflation reaching this level in nine or 10 years. With Euro area growth re-synchronizing, and inflation having a large global component, we expect a smaller differential between the two. (See Global Macro Strategy: Disinflation - felt locally, spread globally, 9 September 2015).

- **FX: Further support for our constructive view in euro**

Growth re-synchronization has been the key driver of our constructive, and out-of-consensus, view on EUR/USD, and regardless of the timing of the first Fed hike, we think it will remain so (see "EUR/USD: How Low Can It Go?"). We remain skeptical of the view that even if markets are properly priced for relative monetary policies between the US and Euro area, the very act of Fed hiking will be bullish for the USD. The correlation between EUR/USD and relative central bank rates is low, and the argument relies partly on 'carry' as a driver. Although there is empirical evidence that higher-yielding currencies outperform lower-yielding ones over time, we don't think 'carry' will push EUR/USD lower. Rate differentials between the two

are not wide, and even when the Fed does begin to tighten, the rate differential is unlikely to become wide enough to make it a 'carry' trade.

It is also worth noting in this regard that the most recent hiking cycle (2004), provides a significant counter argument to the idea that Fed hikes will lead to a sharp dollar rally. From the start of its June 2004 hiking cycle through December 2006, the Fed raised rates by 325bp, while the ECB remained on hold. Yet, EUR/USD actually appreciated 10% during the first six months of Fed hikes.

An acceleration in Euro area credit growth would provide further support to our view, and suggests some potential upside to our EUR/USD call, though we think it will be difficult for EUR/USD to move aggressively through the 1.17/1.18 level. Such a move, especially if it occurred quickly, could result in the ECB reducing its 2017 inflation forecast, and signalling additional QE. In its September Macroeconomic Projections, the ECB forecasted HICP reaching 1.7% in 2017, using a baseline EUR/USD assumption of 1.10. All else equal, an appreciation to 1.17 or 1.18 would likely be enough to trigger a reduction in that inflation forecast, which could then necessitate the signalling of additional QE.

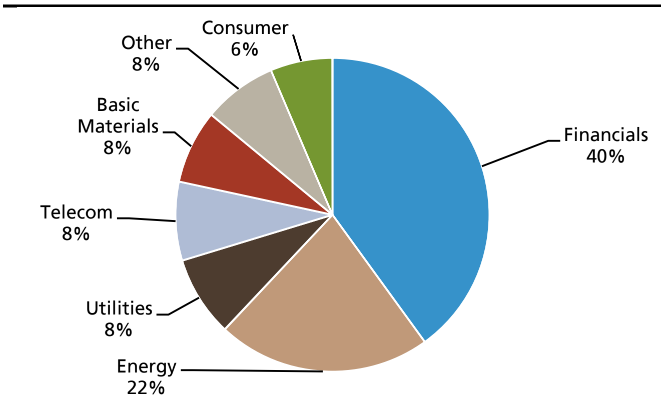
Although the ECB's reaction function may lean against significant further upside in EUR/USD, we continue to believe that risk-reward remains good for euro crosses such as EUR/AUD, which should continue to benefit from favourable valuation and improving Euro area growth.

- **Corporate credit: Euro-area to outperform Emerging Markets**

As discussed in Theme #1: EM enters a new, dangerous phase, the nature of the EM selloff is likely to change in important ways going forward. Persistent weakness in growth has now accrued to EM sovereign balance sheets. One of the major asset market implications of this trade is that EM credit is likely to underperform DM credit. As we note below, the real Achilles' heel in EM is the corporate credit space, where the bulk of issuance has taken place. However, given lack of products, in order to express this view, most investors with little prior exposure to EM corporate bonds may need to stick with EM sovereign credit indices.

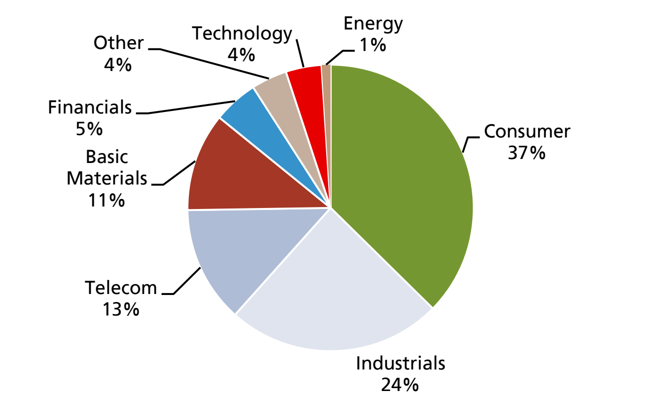
We prefer playing the developed market leg through a long position in European credit given that the external sector in Europe, has improved considerably, both in terms of liquidity and competitiveness. Also, should their own credit markets come under strain, it is highly probable that European market policy makers will adjust monetary policy levers to limit any damage. EM doesn't have a similar backstop.

Figure 14: EM Corporate Bond: Industry Exposure (Jun 15)



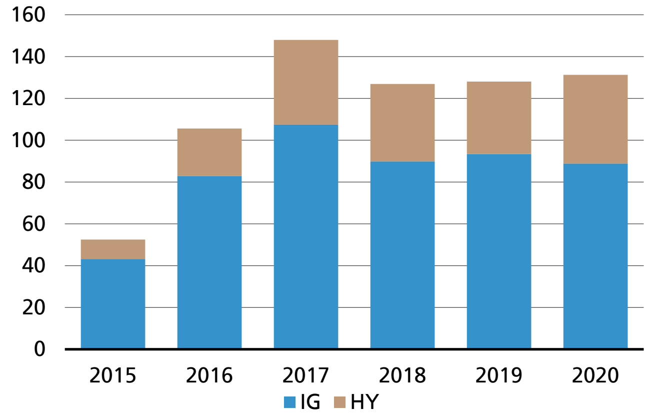
Source: UBS, IIF

Figure 15: EUR HY (Itraxx Xover) Industry Exposure



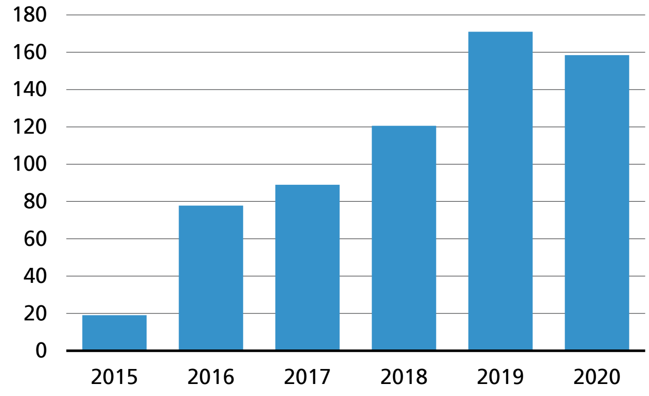
Source: UBS, Markit

Figure 16: EM Corporate Bond Maturity Wall ($bn)



Source: UBS, S&P

Figure 17: EUR HY Corporate Bond Maturity Wall ($bn)



Source: UBS, S&P

One of the primary reasons we like the short EM/ long Europe credit idea is the difference in corporate sector exposure. EM corporate bond exposure is centred on commodity related names (30%, of which 22% is energy) and financials (40%) (Figure 14). We don't believe current EM spreads are pricing in the current low commodity prices persisting, let alone further declines in commodity price. The financial sector will also experience headwinds from weak growth driving rising NPLs as our global banks analyst **Philip Finch** has noted. This is corroborated by a recent IIF Q2 survey that illustrated how EM banks already expected a significant increase in Q3 NPLs, even before the CNY devaluation and accompanying volatility of recent weeks.

In contrast, EUR HY (proxied by Itraxx Xover) is mainly exposed to the European economy, with consumer (37%) and industrial names (24%) making up the majority of the universe. Commodity related exposure is 12%, and only 1% is energy related (Figure 15). This sector breakdown will allow investors to play the expected improvement in European growth and earnings without fears of stagnant or falling commodity prices derailing the trade.

In addition, EM corporate borrowers face an upcoming maturity wall that peaks at $140bn in 2017 (Figure 16). By contrast, the EUR HY maturity wall does not max out until 2019 (Figure 17). Note also that even as the majority of EM corporate debt is rated investment-grade, this is not a panacea. Much of this is BBB-rated, at roughly 46% of total IG debt. Fallen angel risk is a real concern. At an aggregate (EMBI+ weighted) EM level, our balance sheet risk score is already consistent with a sub investment grade rating.

Statement of Risk

Risks of multi-asset investing include but are not limited to market risk, credit risk, interest rate risk, and foreign exchange risk. Correlations of returns among different asset classes may deviate from historical patterns. Geopolitical events and policy shocks pose risks that can reduce asset returns. Valuations may be adversely affected during times of high market volatility, thin liquidity, and economic dislocation.)

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UBS Investment Research: Global Equity Rating Definitions

12-Month Rating	**Definition**	**Coverage**[1]	**IB Services**[2]
Buy	FSR is > 6% above the MRA.	45%	36%
Neutral	FSR is between -6% and 6% of the MRA.	42%	32%
Sell	FSR is > 6% below the MRA.	13%	20%
Short-Term Rating	**Definition**	**Coverage**[3]	**IB Services**[4]
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%

Source: UBS. Rating allocations are as of 30 June 2015.
1:Percentage of companies under coverage globally within the 12-month rating category. 2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.
3:Percentage of companies under coverage globally within the Short-Term rating category. 4:Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

KEY DEFINITIONS: Forecast Stock Return (FSR) is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months. **Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium). **Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation. **Short-Term Ratings** reflect the expected near-term (up to three months) performance of the stock and do not reflect any change in the fundamental view or investment case. **Equity Price Targets** have an investment horizon of 12 months.

EXCEPTIONS AND SPECIAL CASES: UK and European Investment Fund ratings and definitions are: Buy: Positive on factors such as structure, management, performance record, discount; **Neutral:** Neutral on factors such as structure, management, performance record, discount; **Sell:** Negative on factors such as structure, management, performance record, discount. **Core Banding Exceptions (CBE):** Exceptions to the standard +/-6% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Company Disclosures table in the relevant research piece.

UBS Global Credit Strategy and Research: Rating Definitions
UBS ranks potential investment opportunities within non-government fixed income markets and sectors. Issuers are rated on one or both criteria shown below, and specific securities may be recommended as well.

	UBS Terminology	**Time Horizon**	**Definition**
		Issuer Ratings	
Credit Rating	AAA, AA, A, BBB, BB, B, CCC, CC, C (+/-)	Up to 12 months	UBS' assessment of a company's creditworthiness
Outlook	Positive; Stable; Negative	Up to 6 months	UBS' expected trend in a company's creditworthiness
		Security Recommendations	
Bond Recommendation	Outperform; Marketperform; Underperform	Up to 3 months	A corporate bond's expected relative performance versus a defined reference
CDS Recommendation	Buy Protection; Sell Protection	Up to 3 months	Recommendation to hedge a company's creditworthiness

Note: Credit Ratings (Issuer) are only used in the evaluation of Swiss corporates. Recommendations may be defined as 'Tactical', as in Tactical Outperform or Tactical Underperform, where there is a near term catalyst(s) taken into account. The UBS credit rating may be modified by the addition of a plus (+) or minus (-) sign where applicable to show relative standing within the major categories.
Source: UBS

Company Disclosures

Issuer Name	**Credit Rating**	**Outlook**
Federal Republic of Germany[2, 4]	-	-
UNITED STATES TREASURY[22]	-	-

Source: UBS. Ratings in this table are the most current published ratings prior to this report.

2. UBS AG, its affiliates or subsidiaries has acted as manager/co-manager in the underwriting or placement of securities of this company/entity or one of its affiliates within the past 12 months.
4. Within the past 12 months, UBS AG, its affiliates or subsidiaries has received compensation for investment banking services from this company/entity or one of its affiliates.
22. UBS AG, its affiliates or subsidiaries held other significant financial interests in this company/entity as of last month`s end (or the prior month`s end if this report is dated less than 10 working days after the most recent month`s end).

Unless otherwise indicated, please refer to the Valuation and Risk sections within the body of this report.

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