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**Amundi**  
ASSET MANAGEMENT

# Asset Class Return Forecasts

Medium and Long-Term Return Forecasts | Q3 - 2018

Finalized on July 2018

The current global expansion is set to run until 2020, with above potential growth in most countries in 2018 and 2019. However, the global GDP growth has started to decelerate and we expect it to slow further in 2020. At this stage, the main driving force behind the expansion is domestic demand. Global trade, which lost momentum in H1 with uncertainty about tariffs, is not expected to drive growth in 2019. However, with the output gap progressively closing, global inflation is expected to continue picking up; this is particularly true in the US where the economy is reaccelerating. While in the Eurozone, signs of upside pressure on core inflation are still to be seen.

This quarter, our return expectations on US cash have risen on stronger US growth. On the other hand, for equities, and core Eurozone bonds, our expected returns were revised slightly downwards relative to Q1 on the 3 to 5-year horizons, due to disappointing earnings on European equities and stretched valuations on the bond side. The risk-adjusted returns for the equity class across the major regions remain significantly higher than for the fixed income class in the medium and long-term.

## GOVERNMENT BONDS

Our strategic view on government bonds is for rising yields and we see a confirmation of this trend on both short and medium-term horizons. The interest rate normalization and unsustainably low term premia are weighing on expected returns on government bonds.

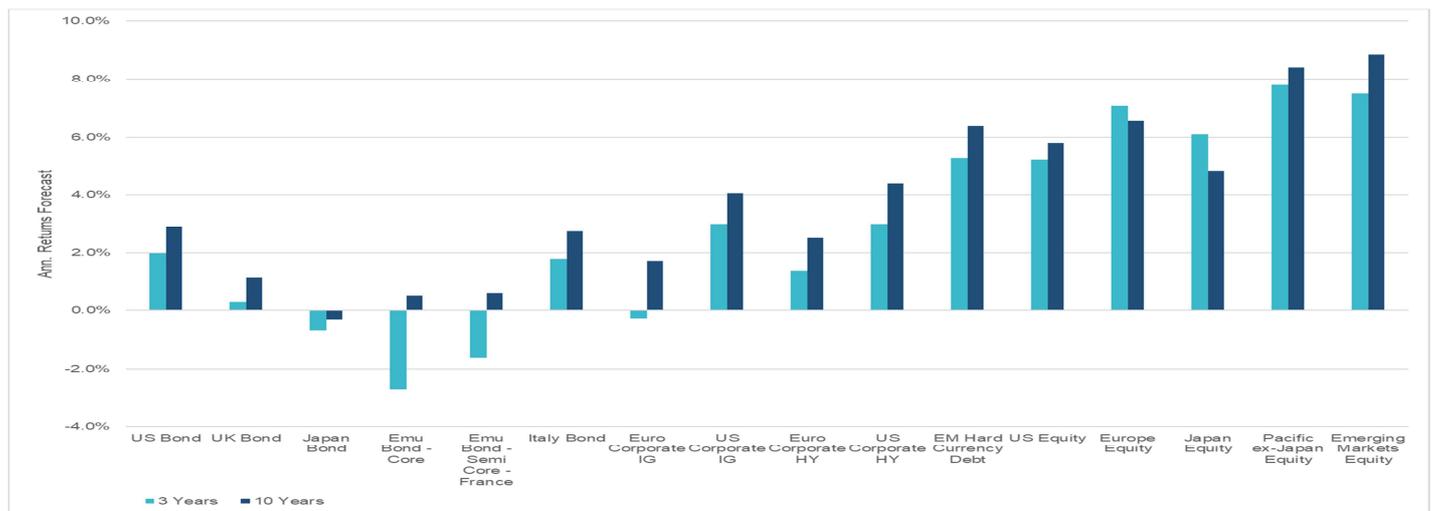
## CREDIT

The returns on credit will be depressed by the evolution of interest rates and by the normalization of spreads and default rates. On the High Yield segment, we expect a moderate credit premium on the 3- year horizon as spreads are tight.

## EQUITIES

Europe retains the highest potential amongst developed countries as there is more upside to European profitability if the expansion continues. US equities are expected to outperform bonds but returns should be lower than historical averages.

## Annualized Return Forecasts



Source: Amundi Asset Management CASM Model, Amundi Asset Management Institutional Advisory and Strategy and Economic Research Teams, Bloomberg. Finalized on the 20<sup>th</sup> of July 2018. Macro figures as of last release. Interest rates and spread levels updated as of the 29<sup>th</sup> June. Equity returns updated as of the 29<sup>th</sup> June based on MSCI indices. One year forward views and fair values provided by Research team (macro, yields, spread and equity). Please see page 9 of this document for methodology of CASM Model. Forecasts for annualised returns are based upon estimates and reflect subjective judgments and assumptions. These results were achieved by means of a mathematical formula and do not reflect the effect of unforeseen economic and market factors on decision making. **The forecast returns are not necessarily indicative of future performance, which could differ substantially.**

## Asset Class Expected Returns

In the following table, we present our annualized return forecasts across different asset classes, calculated as the average of simulated returns, on different forward looking horizons (from 3 Years to 10 Years).

Assets in local currency	Reference Index	Duration	3 Years	5 Years	10 Years
<b>Cash</b>					
Euro Cash	JPCAUEU3M index	0.3	-0.2%	0.1%	0.8%
US Cash	JPCAUS3M index	0.2	2.8%	2.9%	2.8%
<b>Government Bonds</b>					
		0.0			
US Bond	JPMTUS Index	6.4	2.0%	2.5%	2.9%
UK Bond	Customized Index	9.0	0.3%	0.4%	1.2%
Japan Bond	Customized Index	8.8	-0.7%	-0.8%	-0.3%
Emu Bond - Core	JPMTWG index	7.3	-2.7%	-0.9%	0.5%
Emu Bond - Semi Core - France	Customized Index	8.7	-1.6%	-0.6%	0.6%
Italy Bond	JPMTIT index	6.7	1.8%	2.1%	2.7%
Spain Bond	Customized Index	9.1	-0.2%	0.5%	1.4%
EMU Bond All Maturity	JPMGEMUI Index	7.1	-1.1%	0.2%	1.4%
Barclays Global Treasury	BTSYTRUU Index	8.0	0.2%	0.6%	1.3%
<b>Credit Investment Grade</b>					
Euro Corporate IG	ER00 index	5.2	-0.3%	0.9%	1.7%
US Corporate IG	C0A0 index	7.0	3.0%	3.6%	4.1%
Barclays Euro Aggregate	LBEATREU Index	6.9	-0.6%	0.4%	1.3%
Barclays US Aggregate	LBUSTRUU Index	6.1	2.4%	2.9%	3.3%
Barclays Global Aggregate	LEGATRUU Index	7.1	0.9%	1.4%	2.0%
<b>Credit High Yield</b>					
Euro Corporate HY	HE00 index	4.1	1.4%	2.1%	2.5%
US Corporate HY	H0A0 index	4.2	3.0%	3.9%	4.4%
<b>Emerging Market Debt</b>					
EM Hard Currency Debt	JPEGCOMP Index	7.0	5.3%	6.2%	6.4%
<b>Equities</b>					
US Equity	NDDLUS Index		5.2%	5.5%	5.8%
Europe Equity	NDDLE15 index		7.1%	6.8%	6.6%
Euro zone Equity	NDDLEMU Index		7.6%	7.0%	6.6%
UK Equity	NDDLUK Index		6.2%	6.4%	6.5%
Japan Equity	NDDLJN Index		6.1%	5.4%	4.8%
Pacific ex-Japan Equity	NDDL PXJ Index		7.8%	8.1%	8.4%
Emerging Markets Equity	NDLEEGF index		7.5%	8.5%	8.8%
World Equity	NDDLWI index		5.8%	5.9%	6.0%
AC World Equity	NDLEACWF Index		6.1%	6.3%	6.4%

Source: Amundi Asset Management CASM Model, Amundi Asset Management Institutional Advisory and Strategy and Economics Teams, Bloomberg. Finalized on the 20<sup>th</sup> of July 2018. Macro figures as of last release. Interest rates and spread levels updated as of the 29<sup>th</sup> June. Equity returns updated as of the 29<sup>th</sup> June based on MSCI indices. One year forward views and fair values provided by Research team (macro, yields, spread and equity). Please see page 9 of this document for methodology of CASM Model. Forecasts for annualised returns are based upon estimates and reflect subjective judgments and assumptions. These results were achieved by means of a mathematical formula and do not reflect the effect of unforeseen economic and market factors on decision making

**The forecast returns are not necessarily indicative of future performance, which could differ substantially.**

## Macroeconomic outlook

*Above potential global growth in 2018 and 2019 but growth is likely to decelerate further in 2020*

The current expansion is set to run at least until 2020. The main driver behind it remains domestic demand. Global growth accelerated 0.6 percentage point to 3.8% in 2017, the best performance since 2011. It is projected to pick up another 0.1 percentage point to 3.9% this year on improvements in both advanced and emerging economies. Nevertheless this year will be the peak of the cycle, with global growth slowing marginally to 3.8% in 2019 due to decelerations in developed economies and China. In 2020, we expect a further slowdown of global GDP growth towards its potential. Despite large cross-country differences, 2017 was the year in which growth became more broad-based, both geographically and in terms of its components.

*Global economic expansion but with some clouds*

While the global outlook continues to point to broad-based momentum, the prospect of trade restrictions and counter restrictions threatens to undermine confidence and to impact plans for hiring and investing, thereby dampening medium-term prospects. The downside risks to our global growth scenario have increased.

*Stronger US growth in 2018 but deceleration in 2019 and in 2020*

The pro-cyclical US tax policy and the recent approval of a budget providing for nearly \$300 billion in additional discretionary spending in fiscal years 2018 and 2019 has generated a stronger than expected upturn in domestic growth in H1 2018. Optimism remains strong : it had seemed to slacken lately but it remains close to its highs.

*The longest post war economic cycle in the US*

The stimulus from corporate tax cuts and increased fiscal spending have lengthened the cycle and led to higher interest rates. There are drivers in place which could allow growth to speed up without causing the economy to overheat: (1) a further cyclical increase in the labour force participation rate (2) a pick-up in productivity growth and (3) the multi-year dollar upcycle continuing to put downward pressure on inflation. The absence of significant imbalances also suggests the cycle will run longer. Having said that, we expect fiscal stimulus to fade by mid-2019 and GDP growth to return to potential hardly above 2%.

*The Eurozone has decelerated*

Growth in the Eurozone has clearly peaked in 2017, but it can nonetheless continue at an above-trend pace. The Eurozone recovery only started in 2013 (well after its US and UK counterparts) and the output gap has only started to become positive. Our central scenario is a

continuation of the recovery at an above-potential growth pace (2.1% in 2018, 1.8% in 2019) driven by domestic demand - both household consumption and domestic investment. We expect GDP growth to slow further in 2020.

*The global output gap is progressively closing. As a result, global inflation is expected to pick up.*

This is particularly true for the US, where the economy is reaccelerating, we see inflation pressures building up both on wages, albeit gradually, and on the cost of goods and commodities. After having fallen short of the Fed's target for 10 years core inflation should return to the 2% target in 2018 and rise to 2.2% in 2019. However even in economies operating at full employment like the US, Germany or Japan, inflation should remain below the level of past cycles.

*In the Eurozone, signs of upside pressure on core inflation are still to be seen*

Core inflation is expected to continue to surprise to the downside, and only modest increases are to come. While headline inflation was pushed higher by oil prices to 2.0% YoY in June, core inflation increased slightly to 1.1% YoY (vs. 0.9% in June). Cyclical factors should push core inflation upwards, but powerful structural factors will limit the rise. The ECB's 1.9% core inflation forecast for 2020 (1.6% for 2019) looks ambitious.

*In the medium term, inflation is expected to remain low by historical standards for structural reason*

### Assumptions on GDP Growth and Inflation

REAL GDP	Long Run Level	2018	2019
Germany	1.4%	2.0%	1.9%
US	1.8%	2.9%	2.7%
Italy	1.0%	1.3%	1.2%
Japan	0.7%	1.0%	1.2%
UK	1.7%	1.3%	1.6%
France	1.3%	2.0%	1.7%
EMU	1.4%	2.1%	1.8%

CPI	Long Run Level	2018	2019
Germany	1.7%	1.5%	1.6%
US	2.0%	2.5%	2.2%
Italy	2.0%	1.1%	1.5%
Japan	1.5%	0.9%	1.3%
UK	2.0%	2.6%	2.4%
France	1.7%	1.4%	1.5%
EMU	1.7%	1.6%	1.6%

## Monetary Policy and Expected Returns on Cash

Policy rates are rising in the US, UK and Canada and they will begin rising in Australia and the Eurozone next year. Only in Japan will rates remain unchanged through to the end of 2019. Meanwhile in EMs, central banks are becoming more hawkish.

*Central banks will continue to remove monetary accommodation at a gradual pace, with different speeds*

The Fed should continue to raise its key interest rates (we anticipate 2 more hikes in 2018 and 2 hikes in 2019), to reach 3% in 2019. A low neutral real rate (at around 2.75 %-2.9.% according to the Fed), stable core inflation at around 2% in our scenario and central banks not being in a hurry to move rates into restrictive territory explain our assumption of four more hikes by the end of 2019. The Federal Reserve will also continue reducing its balance sheet at the announced pace, with a gradual non-replacement of securities reaching maturity.

The European Central Bank has announced the end of the asset purchase programme but introduced a commitment to leave rates unchanged until the summer 2019, in order to anchor expectations of low rates for an extended period of time. Starting in October, the monthly pace of the Asset purchase programme (APP) will be reduced from €30 bn to €15 bn, and purchases will stop at the end of the year. The ECB maintains its policy of reinvesting the principal payments from maturing securities purchased under the APP for an extended period of time after the end of the APP.

We expect the rate hike cycle to begin in Q3 2019 at a very gradual pace as the ECB will maintain ample monetary accommodation to ensure the convergence of inflation towards levels that are below, but close to, 2% over the medium term. Core inflation is currently very low at 1.1%.

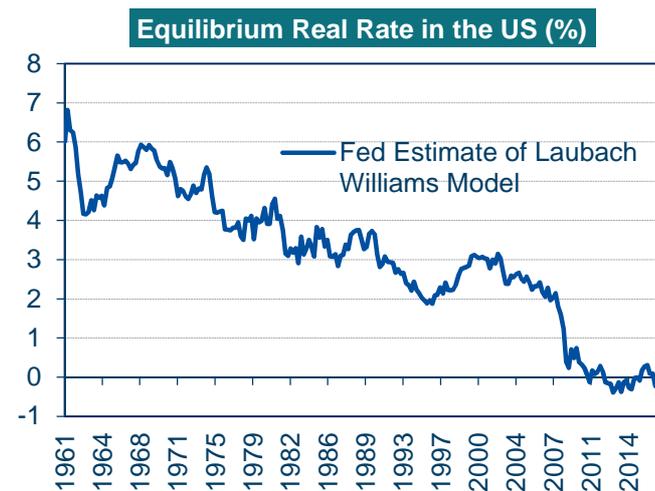
### Low long run equilibrium interest rates

The estimation of an equilibrium (neutral) real policy rate (defined as the real rate that is consistent with full employment and stable inflation in the medium-term) is crucial to calculate the expected return on cash as it anchors where short-term interest rates will tend to be in the future. As seen on the graph the real equilibrium interest rate continues to be very low in the US.

The widely used Laubach Williams model puts it at 0.25% today (according to the Fed's calculation) while the Fed communicates on an equilibrium real rate of 0.8% in the medium term which we use. Assuming

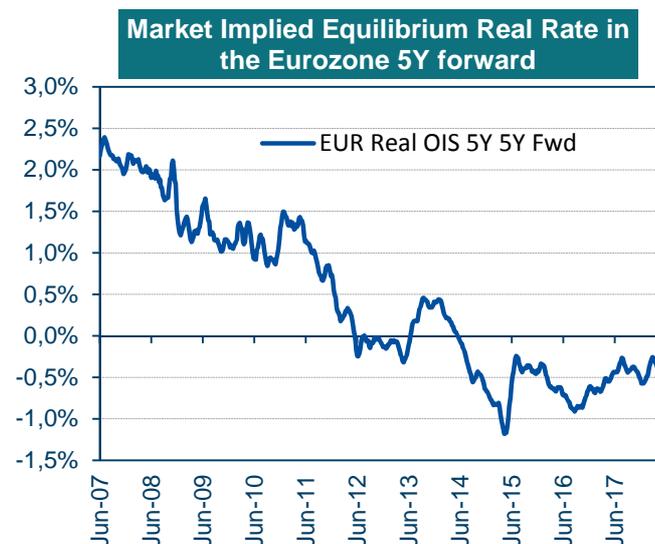
inflation is running at the central bank's goal of 2 percent, that means the typical, or normal short-term interest rate is 2.5 - 3% percent.

When put into a historical context, it stands at an extremely low level, 2 percentage points below what the neutral interest rate was at the end of the 90s and accordingly the expected returns on cash is therefore low. While a central bank sets short-term interest rates, the real equilibrium rate is a result of longer-term economic factors that go beyond the scope of central banks and monetary policy.



Source: US Federal Reserve, Laubach Williams Model

For the Eurozone, we consider a neutral real rate of -1% since 2009 (close to the ECB estimate) versus 1% before 2009 and we make the assumption of a 0-0.5% range in the longer-run. We are more optimistic than the market which still anticipates a negative equilibrium real rate 5 year forward at -0.38%.



Source: Bloomberg, Amundi Research

Market implied real interest rates are calculated using the differences between nominal overnight index swap (OIS) rates and inflation linked swap rates with five and ten-year maturities.

*Very slow normalization of inflation in the Eurozone*

After defining the real policy rate trajectory, our model incorporates our inflation forecast to obtain a nominal interest rate trajectory. Our projections are for core Eurozone inflation at 1.7% over 10 years and 2% for US inflation. Core inflation remains low at this stage in the cycle (especially in advanced economies) and should recover gradually in 2018. That said, the slowdown in inflation over recent years is primarily structural (tied to supply factors), while the cyclical component of inflation has weakened (flattening of the Phillips curve). While the rise in core inflation promises to be limited, the likelihood of an “inflation surprise” is nonetheless increasing as surplus capacities disappear around the world. The risk is easier to spot in the US (we expect wages to continue to accelerate), given how close the economy is to full employment.

*Expected returns on cash : assumption on US cash revised upwards*

The expected returns from rolling an investment in cash over the different holding periods are derived from our projected trajectory of policy rates over the medium to longer-term. The monetary policy trajectory is defined by the estimate of an equilibrium real policy rate and by the projection of a path of normalization towards the equilibrium real rate. Our assessment of the optimal short-rate normalization path is based on central bank guidance and enhanced Taylor rules which captures central bank policy reactions to different growth and inflation environments.

In US, the nominal expected return on cash over 10 years is 2.8%. It has increased on the 3 to 5 year horizons, since last quarter due to better than expected economic growth. Meanwhile, in the Eurozone it remains low at 0.8% as a result of the very slow normalization of inflation and our cautious view on long-term growth prospects. One implication of rising cash rates in the US is the higher hedging costs for non-US investors in US dollar assets.

**Interest Rates Assumptions**

3M YIELD	29/06/2018	Medium Term Level	Long Run Level
Germany	-0.6%	-0.2%	1.7%
US	1.9%	2.7%	2.8%
Japan	-0.1%	0.1%	1.3%
UK	0.6%	0.8%	2.0%

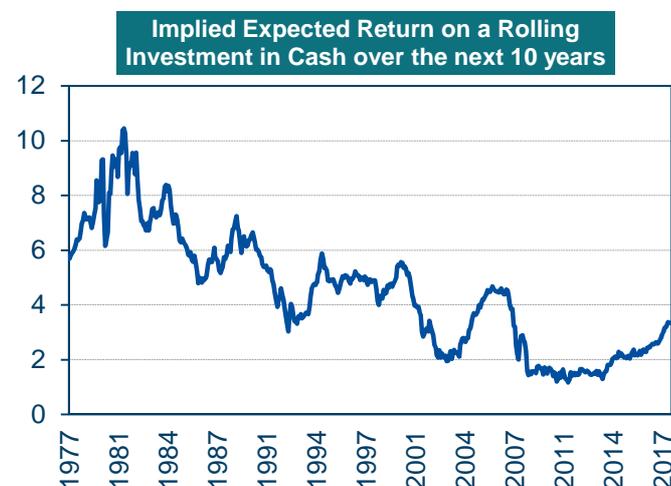
10YR YIELD	29/06/2018	Medium Term Level	Long Run Level
Germany	0.3%	1.2%	2.4%
US	2.9%	3.1%	3.5%
Italy	2.7%	2.9%	3.7%
Japan	0.0%	0.4%	1.5%
UK	1.3%	2.0%	2.8%
France	0.7%	1.7%	2.9%

Medium term level= Average level till 3 years incorporating the 1 year outlook and some adjustment dynamics to the long run.

**Government Bonds**

*The US fixed income market has revised upwards its expectations for future Fed rate hikes but they remain below Fed's guidance*

Using term structure models, the bond yield can be broken down into an expectation component and a term premium component. As seen on the graph below, the expectation component, which reflects the market expectation of the future path of short-term interest rate, has risen sharply since the beginning of 2017 reflecting stronger growth and the commitment by the central bank to normalize rates.

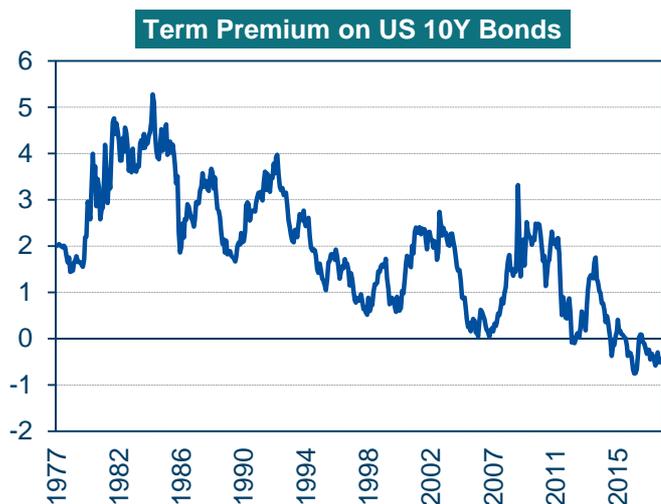


Source: NY Federal Reserve, Amundi Research

*The expectation component can be interpreted as the market expectation for the average yield for 1Y bonds over the next 10 years.*

*But the term premia is at unsustainably low levels, now US inflation has normalized*

The term premium remains extremely low, even negative, according to the latest New-York Fed estimate (-0.43 bps). While this premium is usually low when growth is strong, it is currently at unsustainable levels. Especially since US inflation has normalized, it should reflect higher inflation and inflation uncertainty.



Source: NY Federal Reserve data, Amundi Research

The term premium is the compensation that investors require for bearing the risk that short-term treasury yields do not evolve as they expect because of inflation, real interest rate risk and supply and demand factors.

*A shrinking Fed balance sheet and an increase in treasury supply will drive the term premium higher*

According to the Fed's calculations, the 10-year term premium is currently depressed by the Fed's large balance sheet by 85 bps. As the Federal Reserve continues reducing its balance sheet at the announced pace, with the gradual non-replacement of securities reaching maturity, we see the term premium rising. The increase in net supply of US debt should also be a contributing factor.

In the longer-run, we see the 10-year yield approaching 3.50% with the 10-year term premium gradually normalizing to around 70 bp in the medium term.

*The return of political risk in the Eurozone created some volatility on bond markets*

In the Eurozone, political risk has made a come-back with the situation in Italy, pushing German bond yield down and peripheral spreads up. We expect lower returns on core Eurozone bonds than in the last quarter due to lower starting yields. In the meantime expected returns were revised upwards in Italy and Spain where we anticipate a gradual reduction in risk premia from their current high levels.

The rise of core EMU interest rate is expected to be slower, indeed, the 10-year Bund (0.5% bps) is currently far from its long-term projected level (2.4%). We expect a gradual convergence in line with the monetary policy stance.

*Interest rate normalization and compressed term premia are weighing on expected returns on government bonds*

Expected returns on US Treasuries stands at .25 % per year over the next 5 years, up versus last quarter. Our framework projects a return of 2.9% over the next decade only 10 bps above the return expected on US cash due to the compressed term premium.

Eurozone government bonds should return 1.4% per annum over the next 10 years, a low nominal return given extended valuations and depressed starting yields.

These assumptions are based on a scenario of a moderate rise in bond yields. Our framework for forecasting nominal rates has 2 components:

1. the short-term interest rate expectation based on an equilibrium real rate, an optimal monetary policy path and expected inflation levels over the holding period and
2. a nominal term premium which we assume will remain low leading to moderate rises in bond yields in our scenario. The term premium corresponds to the additional return that investors require to hold a long-term bond as opposed to rolling over a short-term bond. It can be broken down into the inflation premium and the real term premium, both of which will remain fairly moderate because of our projected outlook for low real rates and inflation.

## EM Bonds

*Our scenario on EM hard currency bonds is slightly negative to stable.*

The major risks are a further deterioration in global macro end growth conditions and the fact that the risk appetite for EM assets has probably peaked since financial market instability has increased. The topic of most concern is the potential collateral damage from the US-China trade war.

As for the macro outlook in DM, the widening EM-DM economic growth differential is countered by the fallout from the initial rounds of US-China tariffs and their effects on the global supply chain, particularly for EM Asia. The timing of the tariff wars, coupled with central bank tightening, is seen to have a significant detrimental effect on the respective economies.

*In the short to medium term, the EM spread is expected to remain flat with the bulk of the total expected return to originate from the carry*

We expect volatility, triggered by further developments on the various fronts. Given the context of US rate hikes

and widening spreads, we believe the bulk of the total expected return will originate from the carry. With a duration of over 7, EM hard currency bonds are expected to yield 5.3% in the short term, increasing to 6.2% in the medium term.

## Corporate Bonds

*The slowing macro outlook resulting from trade wars and Italian political risk has had a dampening effect on corporate spreads during the last quarter, particularly in the EU area.*

During that time period, both IG and HY spreads in the EU have widened considerably (25 and 73 bps respectively). However, we believe the ECB's ongoing accommodative monetary policy will have a stabilising effect on EU corporate spreads in the short to medium term, resulting in spreads being flat in the short term and even tightening moderately further ahead.

Despite the positive short-term impact of the fiscal stimulus on US corporate earnings, we expect the US HY to widen in the short to medium term as the US economy is seen to be near its peak, being close to full employment. In contrast, the US IG is seen to be mostly flat for the short to medium term as the spread is already level with the long run equilibrium.

### *Default rates to normalize towards long term average*

Over the medium term, we expect US HY and EU HY default rates to steadily move away from their historically low levels as the first casualties of the aforementioned trade wars and geo-political risks. We expect the fiscal stimulus to have a positive effect on the US IG sector.

### *Lower expected returns in Europe relative to their US counterparts.*

In the EU, low starting rates coupled with our interest rate increase scenario will generally lead to lower expected returns relative to their US counterparts. In particular, for EU IG the short-term return is still expected to be negative and not expected to return to positive territory until the medium term. For EU HY, our expectation of moderate spread tightening in the short term is set to counter the negative effect of rising rates, which, coupled with the lower duration, will enable the asset class to yield 1.4% in a 3 year horizon, increasing to 2.1% in the medium term.

For US IG, the expected return is driven mostly by the carry effect and is only partially diminished by the rising interest rates scenario, already in a mature phase. The flat evolution of the spread is expected to produce a

medium-term expected return of 3.6%. Although the US HY expected return benefits from the shorter duration, the widening spread lowers its expected return in the short term, though it recovers to 3.9% in the medium term.

## Assumptions on Credit

OAS SPREAD	29/06/2018	Medium Term Level	Long Run Level
Euro IG	1.2%	1.1%	1.1%
Euro HY	3.8%	3.7%	3.5%
US IG	1.3%	1.3%	1.3%
US HY	3.6%	4.2%	4.5%
EMBI GLOBAL	3.9%	4.0%	3.4%

Medium term level= Average level till 3 years incorporating the 1 year outlook and some adjustment dynamics to the long run.

DEFAULT LOSS	Default Short Term	Default Long Term	Recovery
Euro IG	0.1%	0.2%	43.1%
Euro HY	1.3%	3.4%	37.7%
US IG	0.1%	0.2%	43.1%
US HY	2.6%	4.2%	37.7%
EMBI GLOBAL	1.0%	0.012	0.65

## Equities

*Risk-adjusted returns for the equity class across the major regions remain significantly higher than for the fixed income class*

The global scenario remains supportive for equity markets as GDP growth is still expected to be above potential in 2019. In addition, central banks should only very gradually remove their excessively accommodative monetary policies.

### *Global equity valuations unlikely to improve much further*

In recent years, equity returns have been boosted by rising EPS and higher valuations. Equity valuations are stretched in the US in relation to the historical average, but not elsewhere. Nevertheless, globally, there should be little potential for further re-ratings of valuation multiples as the factors that have supported absolute valuations in recent years will reverse with the global cycle maturing.

Fundamental equity metrics

	US	UK	FR	DE	IT	ES	CH	JP
PE	14.8	17.6	13.7	14.7	13.3	11.8	12.7	15.7
PBV	1.9	3.4	1.3	1.7	1.7	1.2	1.4	2.4
PS	1.2	2.2	0.8	1.1	0.9	0.7	1.2	2.1
PCF	8.2	14.3	8.7	6.8	10.9	2.5	3.2	21.2
DY	3.4	1.8	2.0	3.1	3.0	3.5	4.0	3.4
PEBITDA	8.0	11.9	6.7	8.5	5.9	3.9	5.9	12.1

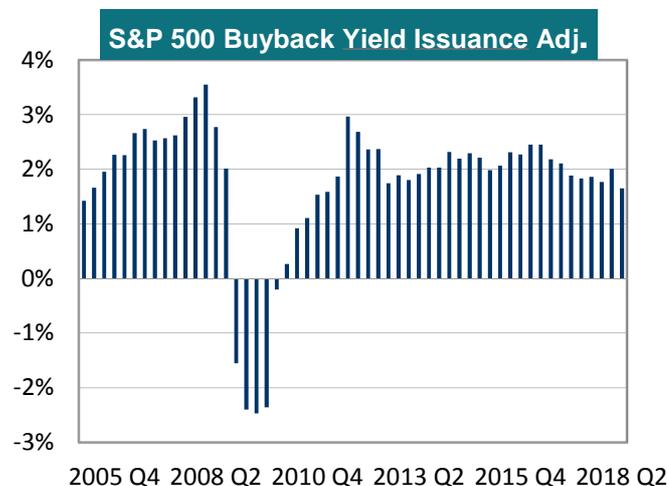
● Very Expensive 
 ● Expensive 
 ● Neutral 
 ● Cheap 
 ● Very Cheap

Source : Bloomberg, Amundi Research

The focus very much remains on EPS growth

In the US, corporate earnings estimates have enjoyed solid upgrades. Actual and announced buybacks have also continued to surge. As seen on the graph, this trend made a very sizeable contribution to the strong performance of US earnings per share together with rising profitability and strong economic growth

The share buybacks yield net of issuances has added an average of 2% to annual returns on US equities over the last 5 years. Meanwhile, the equivalent in the Eurozone was negative on average over the last 10 years due to a negative dilution effect



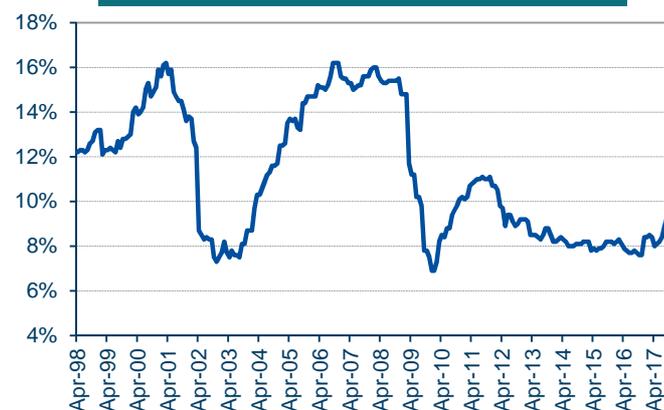
Source : Bloomberg, Amundi Research

The US economy is further ahead in the cycle than the Eurozone economy and EM, which implies different problematics and drivers of returns. US equities posted a strong performance, with buoyant corporate earnings growth providing support despite the more hawkish Fed, some concerns regarding the late stage of the business cycle and high valuations. But the pace of EPS growth is set to slow, and valuations should contract against a backdrop of Fed tightening. The resulting return dynamic in the US is preventing medium-term returns from reaching the long run level of 6%.

More upside to European profitability than elsewhere if the economic cycle continues

The Eurozone economy is in the middle phase of the expansion cycle and it is earlier in the economic and earnings cycles than most other regions. Indeed there is potentially more upside to European profitability than elsewhere if the economic cycle continues; ROE, at 9.5%, is the lowest of all and has further room to improve. Europe is the only region where EPS is not close to an all-time high and currently stands 22% lower than the previous peak.

Return on Equity of the Eurozone equity market



Source: Datastream, Amundi Research

The ECB has the most dovish monetary policy of any central bank, leaving room for an improvement in relative valuations, which are currently attractive.

These dynamics are the reasons why the Eurozone retains the highest expected returns amongst developed countries over 1, 3 and 5 years. However, we have revised downwards our expected returns with a slightly less favourable scenario on earnings.

For Japanese equities, we expect a total return of 6.3% on average over the next 3 years. On a positive note, the macroeconomic momentum has been improving thanks to continued progress on economic and corporate reform. In the long-term, total return is not looking high compared to other regions for the following reasons: lower GDP growth potential, lower dividend yield and lower inflation (4.9% overall total return p.a. over the next 10 years).

On GEM equity we expect earnings to remain positive, but below average. Tensions surrounding trade disputes are affecting all regions and particularly EM market valuations, which will probably be capped by rising volatility. At a macro area level, valuations are more favourable for EM Europe, while EM Asia is fairly valued.

### Cascade Asset Simulation Model (CASM)

This long-term return forecast report intends to provide some guidance for investor expectations. The time horizon under consideration is 10 years, a period deemed to be an appropriate timeframe, during which long-term trend factors and issues can reasonably be expected to play out, and thus, market returns should accurately reflect this information. We use a Monte-Carlo methodology in order to generate the possible evolutions of different risk-factors for the time horizon considered, representing the future states of these factors under objective measures. The resulting model is then used to price the instruments in line with these factor scenarios.

In order to determine possible interest rate scenarios, we analyse the evolution of the major economic DM regions. With regards to EU, we use Germany as representative of EU Core and Italy as representative of the EU periphery. We used a cascade-style modelling technique for simulating the different term structure, using risk factors such as the GDP cycle, inflation, real rates and slope for each of the economic regions in question..

Moving into spread-related assets (EM bonds and corporate bonds), we focus on implied volatility, quality,

default and recovery rates, together with economic cycles, to estimate a forward looking path for EM bonds (hard currency), EU corporate (IG and HY) and US corporate (IG and HY).

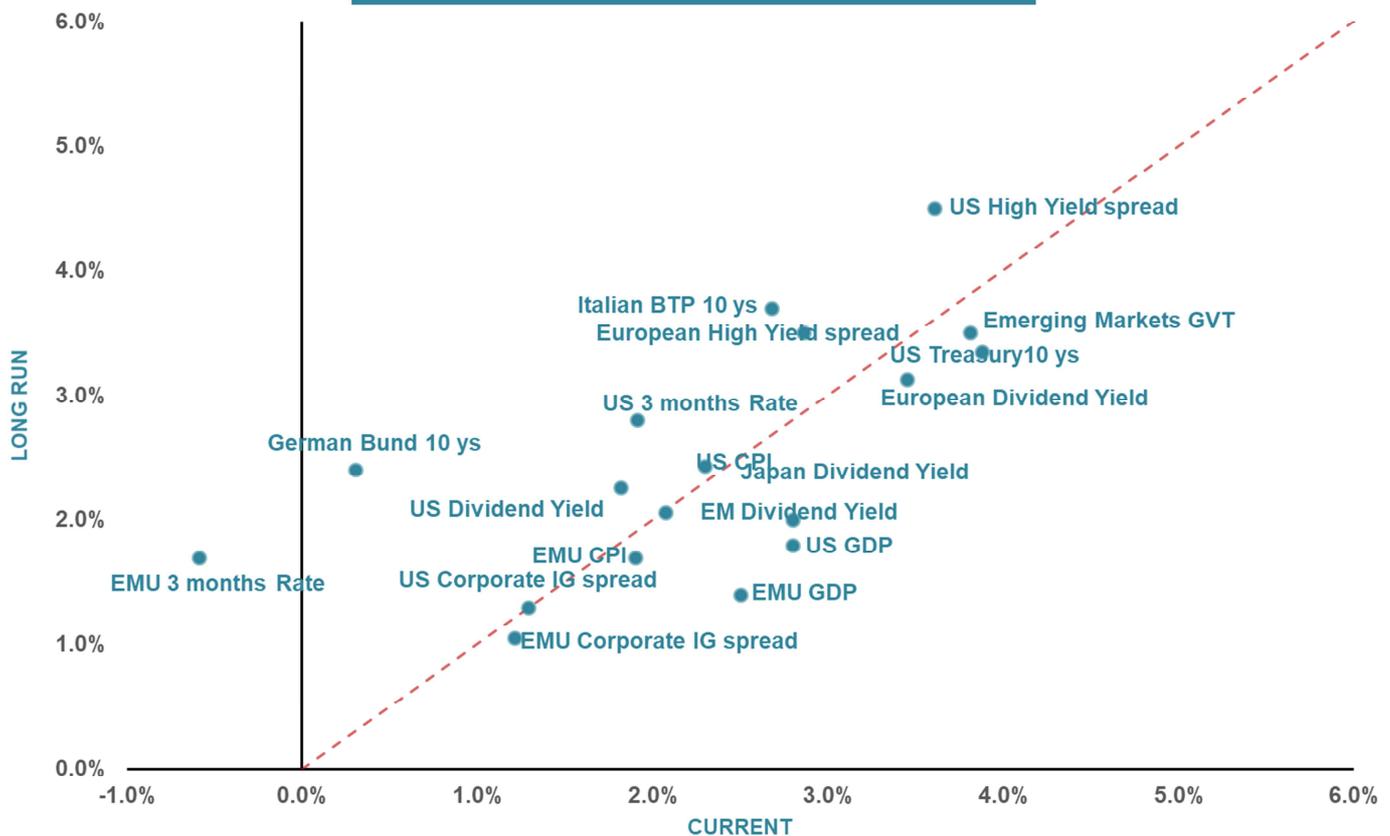
Our framework on equity focuses on earnings growth and price earnings, as a determinant of capital gains and dividend yields, to represent the income effect; these variables are analysed with the macroeconomic pillars of the model (the economic and inflation cycle).

Our medium/long-term model, known as CASM, is updated on a quarterly basis to incorporate new starting points, our short-term outlook along with long-term trends, the significance of which is verified on an annual basis.

Our CASM model focuses on key factors, which drive this evolution over the medium to long-term; the resulting forecasts look at the comparison between current and long term readings for the key factors included in the model.

Note that these are simulated figures only and may not represent actual asset class returns. Actual returns are based on many factors, and may vary substantially from modeled ones.

#### KEY Factors - CURRENT vs LONG RUN



Source: Amundi Asset Management CASM Model, Amundi Asset Management Institutional Advisory and Strategy and Economic Research Teams, Bloomberg.

Data as of the 20<sup>th</sup> of July 2018

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