

Asset Class Return Forecasts

Quarterly Update

Medium and Long-Term Return Forecasts | Q2 - 2021

Finalised in April 2021

ASSET MANAGEMENT

With vaccination programs worldwide well underway, the spotlight has shifted now to the nature of the economic recovery. The combination of the fiscal packages in the pipeline together with the impending release of pent-up demand has brought forth the possibilities of economies overheating. In response, monetary authorities remain vigilant providing grounds for steady growth in the shadow of the uneven and lingering pandemic risk.

In many ways, the markets have anticipated the recovery as evinced by a sharp increase in rates over the last months. US has led the way, with a recovery projected to be the strongest in decades and a sharp steepening of the curve, with the Fed committed to not raising rates in the short term. ECB has followed suit in maintaining the cautionary stance. While concerns remain due to hiccups in the vaccination programs within EU, inflation expectations have crept up as well. Compared to Q1, sovereign bonds reflect the increased term premium across all regions in our investment universe resulting in higher expected returns.

The prospects in the credit sector remain as last quarter, where spreads are set to slightly tighten across all regions and ratings. We maintain a watchful eye on the uncertainties of the default risk particularly in the HY sectors. While equity index have continued to trend higher supported by EPS growth readings, we anticipate some marginal improvements with expectations in the range 5% to 7%.

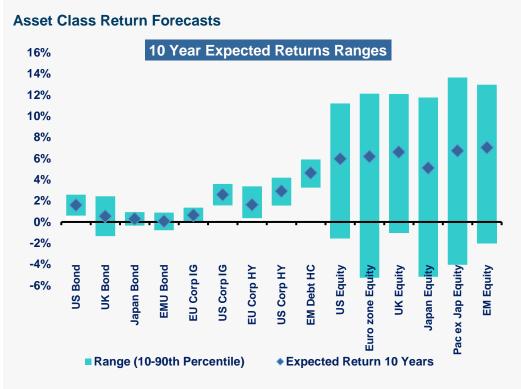
In the table below we present the simulated forward-looking statistics over the 10-year horizon (expected returns, volatility, and CVaR) compared with historical statistics calculated on 20-year sample. Here CVaR and max drawdown represent the expected and historical shortfall respectively.

Assets in local currency 10 yr Simulated Expected Returns		10 yr Simulated Volatility	10 yr Simulated CVaR 95%	2000-2020 Historical Returns (annualised)	2000-2020 Volatility (annualised)	2000-2020 Max Drawdown
Government Bonds						
US Bond	1.6%	4.4%	7.7%	4.2%	4.7%	6.5%
UK Bond	0.5%	7.3%	14.8%	5.2%	6.2%	8.6%
Japan Bond	0.3%	3.7%	7.4%	1.7%	2.1%	4.8%
EMU Bond All Maturity	0.0%	4.4%	8.7%	4.6%	4.0%	5.8%
Credit Investment Grade						
Euro Corporate IG	0.6%	3.7%	6.6%	4.3%	3.6%	7.2%
US Corporate IG	2.6%	4.7%	7.4%	5.6%	5.7%	16.1%
Credit High Yield & EMBI						
Euro Corporate HY	1.6%	12.2%	27.0%	6.3%	11.3%	37.7%
US Corporate HY	2.9%	10.4%	23.1%	7.4%	9.3%	33.2%
EM Hard Currency Debt*	4.6%	8.5%	21.5%	8.1%	8.6%	21.8%
Equities						
US Equity	6.0%	17.0%	38.2%	7.9%	15.0%	51.1%
Euro zone Equity	6.2%	19.6%	50.3%	3.3%	18.0%	56.2%
UK Equity	6.6%	15.2%	32.0%	4.4%	13.9%	40.3%
Japan Equity	5.1%	19.9%	39.5%	3.6%	17.8%	57.4%
Pacific ex-Japan Equity	6.7%	20.1%	44.0%	7.4%	13.9%	49.6%
Emerging Markets Equity	7.0%	19.0%	39.8%	10.6%	16.7%	51.9%
Real and Alternatives*						
EU Real Estate	4.5%	10.0%	22.2%	7.5%	3.1%	10.7%
EU Private Equity	8.2%	23.6%	56.2%	5.7%	26.8%	77.1%
US Real Estate	5.6%	11.5%	32.8%	8.1%	4.6%	23.9%
US Private Equity	8.3%	23.1%	54.1%	5.4%	29.8%	77.3%
Global Infrastructure	6.0%	11.8%	24.1%	13.7%	11.9%	13.8%
Global Private Debt (Direct Lending)	5.4%	9.6%	22.7%	na	3.7%	na

^{*}Historical figures on real and alternatives calculated on a quarterly sample.

Source: Amundi Asset Management CASM Model, Amundi Asset Management Quant Solutions and Research Teams, Bloomberg. Data as of 20 April 2021 Macro figures as of last release. Data updated as of 31 March 2021. Figures shown are in local currency. Returns on credit asset are comprehensive of default losses. Regarding real assets, the table represents the modelling of core (moderate risk) real estate and direct lending on the private debt side. The expected returns do not consider the potential alpha, generated by portfolio management that can be significant above all for real and alternative assets.

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.



Slight **general upgrade** on the expected 10-year returns versus last quarter.

Expected returns on **government** are again **in the positive area across all the regions**, while keeping **differences** between more and less dynamic regions.

Moving from government to **credit**, asset returns consolidate the **preference vs government**.

On equities, we confirm they can deliver normalized returns on a 10 yr horizon.

In the chart, we represent the ranges for the expected returns where we excluded the tail scenarios.

Over the long-term, we confirm the low trend observed for all macro and financial variables Despite some temporary pick-up, we are outlining a convergence to a weak growth potential, slightly lower when compared to the past, while inflation remains under control around central bank targets (even if showing some more dynamism in the short to medium term).

This will imply some downside adjustments to equilibrium yields and the earnings growth trend.



Monetary authorities have reiterated the intention of maintaining the low rates in the near future, notwithstanding the interest rate market evolution which resulted in steeper curve and higher yields by registering inflationary expectations and volatility.

Thanks to higher starting level for yields, the normalization of interest rates will be less painful and we can **expect returns to move back in the positive territory on the 10 year horizon** across the regions.

The picture on **credit is almost unchanged** vs last quarter **from a valuation standpoint**, while some **improvements** are factored in **on default rates**.

Improving valuations also for equity. Expected returns are quite homogenous from a medium to long-term perspective, as an evolution towards a more neutral stance is predominant.

Source: Amundi Asset Management CASM Model, Amundi Asset Management Quant Solutions and Research Teams, Bloomberg. Data as of 20 April 2021. Macro figures as of last release. **Data updated as of 31 March 2021**. Equity returns based on MSCI indices. Reference duration are average figures. Figures shown are in local currency. Returns on certification are average figures.

Forecast and fair values up to 3 year horizon provided by Research team (macro, yields, spread and equity). 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.

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In the following table, we present our annualised return forecasts across different asset classes, calculated as the average of simulated returns, on different forward-looking horizons (at 5 and 10 years). We also report historical figures for annualised returns and volatility calculated on the last 20 years, a sample including the two big crises (GFC and Covid -19).

			Average Annualised Expected Returns		2001-2021 Historical	2001-2021	
Assets in local currency	Reference Index	Duration	5 year Expected Returns	10 year Expected Returns	Returns (annualised)	Volatility (annualised)	
Cash							
Euro Cash	JPCAEU3M index	0.3	-0.6%	0.0%	1.6%	0.5%	
US Cash	JPCAUS3M index	0.2	0.4%	1.4%	2.0%	0.5%	
Government Bonds							
US Bond	JPMTUS Index	6.4	1.0%	1.6%	4.2%	4.7%	
UK Bond	JPMTUK Index	11.6	0.1%	0.5%	5.2%	6.2%	
Japan Bond	JPMTJP index	10.0	0.1%	0.3%	1.7%	2.1%	
Emu Bond - Core	JPMTWG index	7.6	-1.1%	-0.5%	4.1%	4.1%	
Emu Bond - Semi Core (France)	JPMTFR index	8.0	-0.8%	-0.2%	4.5%	4.3%	
Italy Bond	JPMTIT index	6.9	-0.3%	0.5%	5.3%	5.8%	
Spain Bond	JPMTSP index	7.2	-0.3%	0.3%	5.1%	5.2%	
EMU Bond All Maturity	JPMGEMUI Index	7.5	-0.6%	0.0%	4.6%	4.0%	
Barclays Global Treasury	BTSYTRUU Index	8.0	0.5%	0.8%	4.5%	6.5%	
Credit Investment Grade							
Euro Corporate IG	ER00 index	5.2	-0.1%	0.6%	4.3%	3.6%	
US Corporate IG	C0A0 index	7.2	1.6%	2.6%	5.6%	5.7%	
Barclays Euro Aggregate	LBEATREU Index	6.7	-0.5%	0.1%	4.3%	3.4%	
Barclays US Aggregate	LBUSTRUU Index	5.8	1.2%	2.0%	4.5%	3.4%	
Barclays Global Aggregate	LEGATRUU Index	6.9	0.7%	1.3%	4.6%	5.5%	
Credit High Yield							
Euro Corporate HY	HE00 index	3.6	0.5%	1.6%	6.3%	11.3%	
US Corporate HY	H0A0 index	4.1	1.5%	2.9%	7.4%	9.3%	
Emerging Market Debt							
EM Hard Currency Debt*	JPGCCOMP Index	6.9	4.3%	4.6%	8.1%	8.6%	
EM-Global Diversified**	JGENVUUG Index	5.3	4.8%	5.4%	6.2%	11.8%	
Convertible Bond							
Europe Index (Eur Hedged)	UCBIFX20 Index		2.2%	2.6%	4.6%	8.8%	
Equities							
US Equity	NDDLUS Index		5.7%	6.0%	7.9%	15.0%	
Europe Equity	NDDLE15 index		6.1%	6.3%	4.3%	15.2%	
Euro zone Equity	NDDLEMU Index		6.0%	6.2%	3.3%	18.0%	
UK Equity	NDDLUK Index		6.3%	6.6%	4.4%	13.9%	
Japan Equity	NDDLJN Index		4.6%	5.1%	3.6%	17.8%	
Pacific ex-Japan Equity	NDDLPXJ Index		6.2%	6.7%	7.4%	13.9%	
Emerging Markets Equity***	NDLEEGF index		6.4%	7.0%	10.6%	16.7%	
World Equity	NDDLWI index		5.7%	6.0%	6.4%	14.2%	
AC World Equity	NDLEACWF Index		5.8%	6.1%	6.6%	14.2%	
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EM sovereign index are EMBI Global Diversified and EM-GBI Global diversified: * Hard Currency USD, ** USD Unhedged, including the USD currency expectation towards EM currencies. EM Local starting date is 31/12/2002. *** EM equity starting date is 29/12/2000.

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Cascade Asset Simulation Model (CASM)





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g-Term Return Forecasts | Q2 - 2021

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

In order to determine possible interest rate scenarios, we analysed the changes in the major economic DM regions and EM aggregate. We used a cascade-style modelling technique to simulate the different term structures, 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 focused 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 together with the macroeconomic pillars of the model (the economic and inflation cycle).

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g-term model, known as CASM, is updated on a quarterly basis to incorporate new starting points, the change in our short-term outlook and medium term expectations 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 change over the medium to long-term; the resulting forecasts look at the comparison between current and medium to longterm 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 modelled

Authors

Monica Defend

Global Head of Research

Viviana Gisimundo

Head of Quant Solutions

Jung Hun Kim Moon CFA, Senior Quantitative Analyst

Lorenzo Portelli

Head of Cross Asset Research

Contributors

Alessia Berardi

Head of EM Macro & Strategy Research

Federico Cesarini

Head of DM FX Research, Cross Asset Research

Debora Delbò

Senior EM Macro Strategist

Delphine Georges

Senior Fixed Income Research Strategist

Annalisa Usardi

CFA, Senior Economist, Cross Asset Research

Tom Walsh

Senior Quantitative Analyst

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