

Asset Class Return Forecasts

Quarterly Update

Medium and Long-Term Return Forecasts | Q4 - 2020

Finalised in October 2020

As noted in our previous reports the much-awaited global recovery from the onset of Covid-19 is facing significant headwinds. As the fallout from the crisis becomes clearer in scope and view, ensuing challenges remain daunting. The interplay between the factors will continue to evolve having an effect in the short and medium-term, the monitoring of these relationships will remain at the forefront of future communications.

Since our last update, monetary authorities have taken the task of maintaining the ultra-low rates in the near future and have reinforced it by projecting low rates in the medium term, while leaving the door open for further interventions pending upcoming events. On the fiscal side, speculations regarding the relief packages are not considered in our assumptions.

Rates have remained stable while spreads look to tighten further due to the balance sheet expansion. Returns for sovereign bonds have improved over the medium term as the adjustment dynamic has been postponed. The expectations on credit assets have been revised slightly downward as there is limited room for spread tightening, while the uncertainty of the default risk is still contributing to increased volatility throughout our forecasting horizon. The equity outlook has remained steady confirming medium to long-term expected returns in the same range (5.5% to 7.5%).

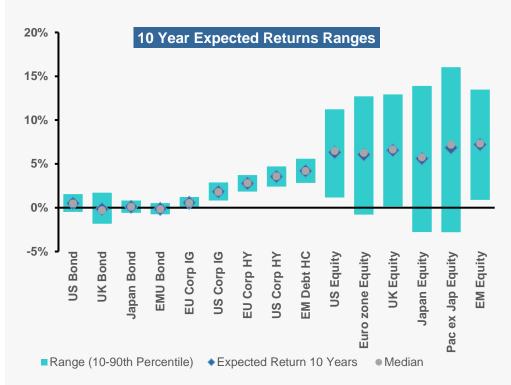
In the table below we present the simulated forward-looking statistics over the 10-year horizon (expected returns, volatility, and CVaR) compared with historical statistics calculated on 20-year sample. Here CVaR and max drawdown represent the expected and historical shortfall respectively.

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	0.5%	4.8%	8.6%	4.8%	4.7%	5.3%
UK Bond	-0.1%	7.6%	15.3%	5.8%	6.0%	7.7%
Japan Bond	0.1%	3.6%	7.3%	1.9%	2.1%	4.5%
EMU Bond All Maturity	-0.1%	3.9%	6.8%	4.9%	4.0%	5.8%
Credit Investment Grade						
Euro Corporate IG	0.6%	3.8%	6.6%	4.5%	3.6%	7.2%
US Corporate IG	1.8%	6.1%	9.9%	6.1%	5.6%	16.1%
Credit High Yield & EMBI						
Euro Corporate HY	2.8%	12.4%	28.5%	5.6%	11.9%	37.7%
US Corporate HY	3.6%	11.1%	24.8%	7.0%	9.5%	33.2%
EM Hard Currency Debt*	4.2%	12.3%	29.8%	8.3%	8.6%	21.8%
Equities						
US Equity	6.3%	16.9%	37.8%	5.9%	15.1%	51.1%
Euro zone Equity	6.1%	20.3%	45.5%	1.4%	17.6%	56.6%
UK Equity	6.6%	15.5%	33.0%	3.2%	13.6%	40.3%
Japan Equity	5.6%	20.5%	41.8%	2.0%	17.6%	57.4%
Pacific ex-Japan Equity	6.8%	20.4%	45.1%	6.0%	13.9%	49.6%
Emerging Markets Equity	7.2%	19.1%	39.6%	10.1%	16.9%	51.9%

Source: Amundi Asset Management CASM Model, Amundi Asset Management Institutional Advisory and Research Teams, Bloomberg. Data as of the 23rd of October 2020. Local currency. CVaR 95% is the average of the returns below the 5th percentile taking into consideration the annualized simulated distribution over 10 years. Max drawdown is the max loss from peak to trough considering 20 yr horizon sample, monthly frequency.



Asset Class Return Forecasts



Expected 10-year returns are substantially unchanged versus last quarter.

Fixed-income returns incorporate the new medium term forward guidelines delivered by central banks. These result in returns a bit lower or unchanged. Moving from government to credit, asset returns are moderating: in fact, most of the expected tightening has been already consolidated in current figures and the carry is lower.

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

In the chart, we represent the ranges for the expected returns at 10 yr horizon where we excluded the tail scenarios.

As highlighted in the previous publication, we need to evaluate carefully the structural impact of the crisis and the inflationary risk in the medium to long term and further investigation and analysis are required on long-term assessment. For the time being, we confirm that our long-term scenario assumes lower growth rates (related to decreasing population growth and stagnant productivity), lower short-term interest rates, less steep curves than historically, inflation rates close to the range of central bank targets and lower long-term earnings growth



Since our last update, monetary authorities have reinforced the task of maintaining the ultra-low rates in the near future. This has had an impact of postponing the normalization path for government yields. When interest rates start increasing (slowly), they will generate negative capital gains that will partially offset the increase in yields.

This quarter's starting prices incorporate progresses in credit tightening. The picture on **credit is less benign** than last quarter **from a valuation standpoint.** The medium and long -term evolution are substantially aligned.

Equity returns are **quite homogenous** from a medium and long term perspective, as an evolution towards a more neutral stance is predominant.

Source: Amundi Asset Management CASM Model, Amundi Asset Management Institutional Advisory and Research Teams, Bloomberg. Data as of the 23rd of October 2020. Macro figures as of last release. Data updated as of the 30th of September 2020. Equity returns based on MSCI indices. Reference duration are average figures. Local Currency. Returns on credit asset are comprehensive of default losses.

Forecast and fair values up to 3 years 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.

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



Asset Class Return Forecasts

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).

	Reference Index	Duration	Average Annualised Expected Returns		2000-2020 Historical	2000-2020
Assets in local currency			5 year Expected Returns	10 year Expected Returns	Returns (annualised)	Volatility (annualised)
Cash						
Euro Cash	JPCAEU3M index	0.3	-0.4%	0.0%	1.8%	0.5%
US Cash	JPCAUS3M index	0.2	0.2%	0.8%	2.2%	0.5%
Government Bonds						
US Bond	JPMTUS Index	6.4	0.4%	0.5%	4.8%	4.7%
UK Bond	JPMTUK Index	11.5	-0.6%	-0.1%	5.8%	6.0%
Japan Bond	JPMTJP index	9.8	0.1%	0.1%	1.9%	2.1%
Emu Bond - Core	JPMTWG index	7.6	-1.1%	-0.7%	4.5%	4.0%
Emu Bond - Semi Core (France)	JPMTFR index	8.0	-0.9%	-0.4%	4.9%	4.3%
Italy Bond	JPMTIT index	6.8	0.4%	0.7%	5.4%	5.8%
Spain Bond	JPMTSP index	7.1	-0.2%	0.3%	5.4%	5.2%
EMU Bond All Maturity	JPMGEMUI Index	7.5	-0.5%	-0.1%	4.9%	4.0%
Barclays Global Treasury	BTSYTRUU Index	7.8	0.1%	0.2%	4.6%	6.5%
Credit Investment Grade						
Euro Corporate IG	ER00 index	5.1	0.3%	0.6%	4.5%	3.6%
US Corporate IG	C0A0 index	7.2	2.1%	1.8%	6.1%	5.6%
Barclays Euro Aggregate	LBEATREU Index	6.6	-0.4%	0.0%	4.7%	3.4%
Barclays US Aggregate	LBUSTRUU Index	5.8	1.1%	1.0%	5.0%	3.4%
Barclays Global Aggregate	LEGATRUU Index	6.8	0.7%	0.7%	4.8%	5.5%
Credit High Yield						
Euro Corporate HY	HE00 index	3.6	2.2%	2.8%	5.6%	11.9%
US Corporate HY	H0A0 index	4.1	3.0%	3.6%	7.0%	9.5%
Emerging Market Debt						
EM Hard Currency Debt*	JPGCCOMP Index	7.0	4.5%	4.2%	8.3%	8.6%
EM-Global Diversified**	JGENVUUG Index	5.4	3.2%	4.1%	6.1%	11.9%
Convertible Bond						
Europe Index (Eur Hedged)	UCBIFX20 Index		2.7%	3.1%	4.1%	8.8%
Equities						
US Equity	NDDLUS Index		6.2%	6.3%	5.9%	15.1%
Europe Equity	NDDLE15 index		5.8%	6.2%	2.7%	14.9%
Euro zone Equity	NDDLEMU Index		5.7%	6.1%	1.4%	17.6%
UK Equity	NDDLUK Index		6.0%	6.6%	3.2%	13.6%
Japan Equity	NDDLJN Index		5.6%	5.6%	2.0%	17.6%
Pacific ex-Japan Equity	NDDLPXJ Index		6.3%	6.8%	6.0%	13.9%
Emerging Markets Equity***	NDLEEGF index		6.1%	7.2%	10.1%	16.9%
World Equity	NDDLWI index		6.1%	6.3%	4.5%	14.2%
AC World Equity	NDLEACWF Index		6.1%	6.4%	4.7%	14.2%

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)

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).

Our medium/long-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 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 modelled ones.

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