Mercer

Eurozone Mercer Yield Curve – Refinements from 31 August 2021

This paper is addressed to users of the Eurozone Mercer Yield Curve (MYC), and provides details of two refinements to the MYC which were introduced on 31 August 2021, and their impact on the MYC.

The MYC is created to support Mercer consultants who are advising clients on assumptions to use for accounting valuations. The data and methodology used to create the MYC are reviewed periodically to ensure that the best use is made of available resources. A review was recently completed and two refinements made:

1. The bond inclusion criteria has been refined by increasing the minimum issue size from €50m to €60m. This addresses liquidity concerns about longer dated bonds and improves consistency with the minimum issue size in the UK MYC of £50m allowing for currency conversion.

2. The way in which 'outliers' are excluded has been refined to improve day-to-day curve stability. Previously bonds within two standard deviations of the curve were included while bonds outside two standard deviations were excluded; following the refinement, a weighting is now applied to bonds close to the two standard deviation boundary.

In addition to this paper, we will estimate the impact of the refinements at key future accounting dates.

Our view is that the refined approach is **acceptable under all main accounting standards** and (assuming that the refined and unrefined curves remain similar at year end), the refinements **should not require material additional disclosures**. Auditor feedback has been generally supportive of this view.

Sebastian Bleasdale
September 2021

Liquidity issues with longer term Eurozone MYC bonds

The Eurozone MYC is based on corporate bond data until the average maturity term for the last five available corporate yields, with a maximum of thirty years.
After this transition point we extrapolate the curve holding a constant spread with the AA rated government bond curve.

Long dated corporate bonds tend to be held by financial institutions and pension schemes for matching purposes, and so might be less liquid than their issue size suggests, which may cause volatility in the yield information. This can be seen in the movement of the longest dated bond (maturing in 2044) whose yield dropped materially in August 2021.

Following investigation into this matter, we decided to increase the issue size requirement from 50m to 60m. Allowing for currency conversion, this makes the Eurozone MYC broadly consistent with the UK issue size requirement of £50m.

At the 31 August 2021, the impact of making this change was minimal (see ***Impact on the MYC*** below). However, the impact has been greater at key previous accounting dates, and it is possible that it will be greater in the future. We will therefore be producing estimates of the impact of the refinements at key future accounting dates. Assuming that the refined and unrefined curves remain similar at year end, our view is that the refinements should not require material additional disclosures.

Determining outliers

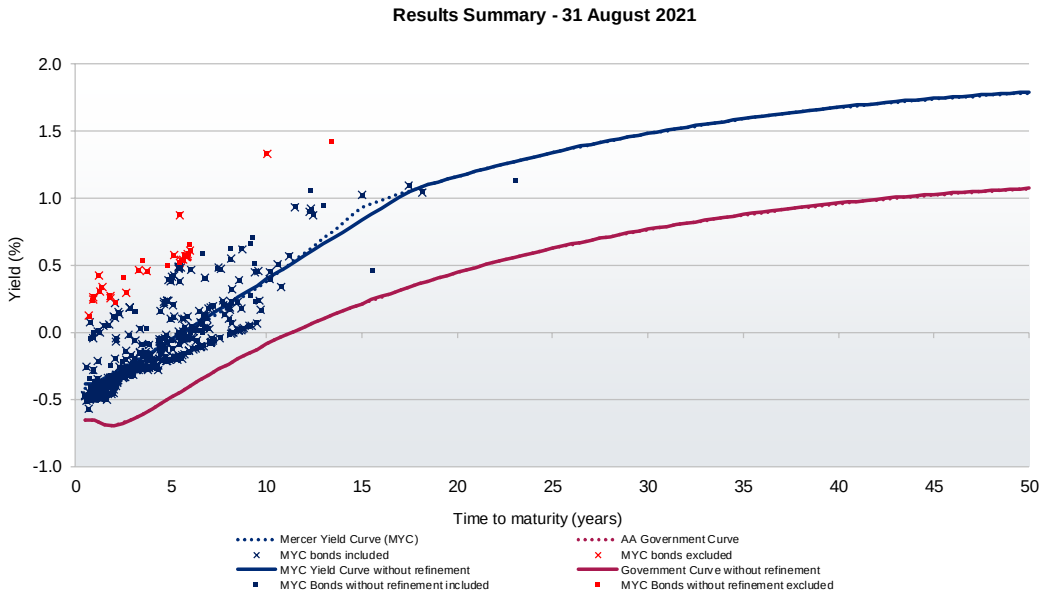
Previously, the MYC production process involved generating an initial curve, excluding bonds with yields more than two standard deviations from the initial curve ("outliers"), and then generating the curve without outliers. This ensured that bonds with distorted yield information didn't have an undue impact on the curve.

Bonds moving across the two standard deviation boundary (and so entering or being excluded from the curve) can cause the curve to move more than would be justified by market movements. This is particularly visible when comparing yields calculated on a day-to-day basis. For example, from one day to the next yields on all bonds might rise slightly overall. We would therefore expect a corresponding rise in the MYC. Using the unrefined methodology, if a bond to which the curve is particularly sensitive increases in yield such that it crosses the boundary and is excluded, the MYC could move downward overall.

In order to mitigate this issue we have chosen to remove bonds close to the two standard deviation boundary from the curve more gradually. Bonds within 1.9 standard deviations now receive a 100% weighting, bonds outside 2.1 standard deviations now receive a 0% weighting, and bonds within a 1.9 and 2.1 range now receive a weighting that varies linearly from 100% to 0%. This reduces MYC movements when bonds are on the edge of entering or leaving the curve – however it has a minimal effect on the MYC.

Impact on the MYC

We have illustrated the impact of both refinements as at 31 August 2021 below, and shown the impact on single equivalent rates for schemes with Mercer's typical scheme profiles.



Source: Bond data provided by Refinitiv. The bonds shown exclude bonds with embedded options

Scheme profile	Single equivalent rate before refinement	Single equivalent rate after refinements	Impact
Very Short	-0.16%	-0.16%	0.00%
Short	0.25%	0.25%	0.00%
Retiree	1.02%	1.03%	0.01%
Shorter Intermediate	1.22%	1.22%	0.00%
Intermediate	1.41%	1.41%	0.00%
Longer Intermediate	1.49%	1.49%	0.00%
Long	1.57%	1.57%	0.00%

Although the changes have minimal impact at 31 August 2021, the impact has been greater at key previous accounting dates, as can be seen in the table below (shown for Short and Intermediate cashflow profiles, as these are representative).

	Single Equivalent rates - Short			Single Equivalent rates - Intermediate		
	MYC	Issue >= 60m	Impact	MYC	Issue >= 60m	Impact
31/12/2019	0.51%	0.49%	-0.02%	1.61%	1.56%	-0.05%
31/12/2020	0.23%	0.19%	-0.04%	1.29%	1.09%	-0.20%
30/06/2021	0.42%	0.38%	-0.04%	1.74%	1.55%	-0.19%
31/08/2021	0.25%	0.25%	-0.00%	1.41%	1.41%	-0.00%

We will be producing estimates of the impact of the refinements at key future accounting dates. Assuming that the refined and unrefined curves remain similar at year-end, our view is that the refinements should not require material additional disclosures.