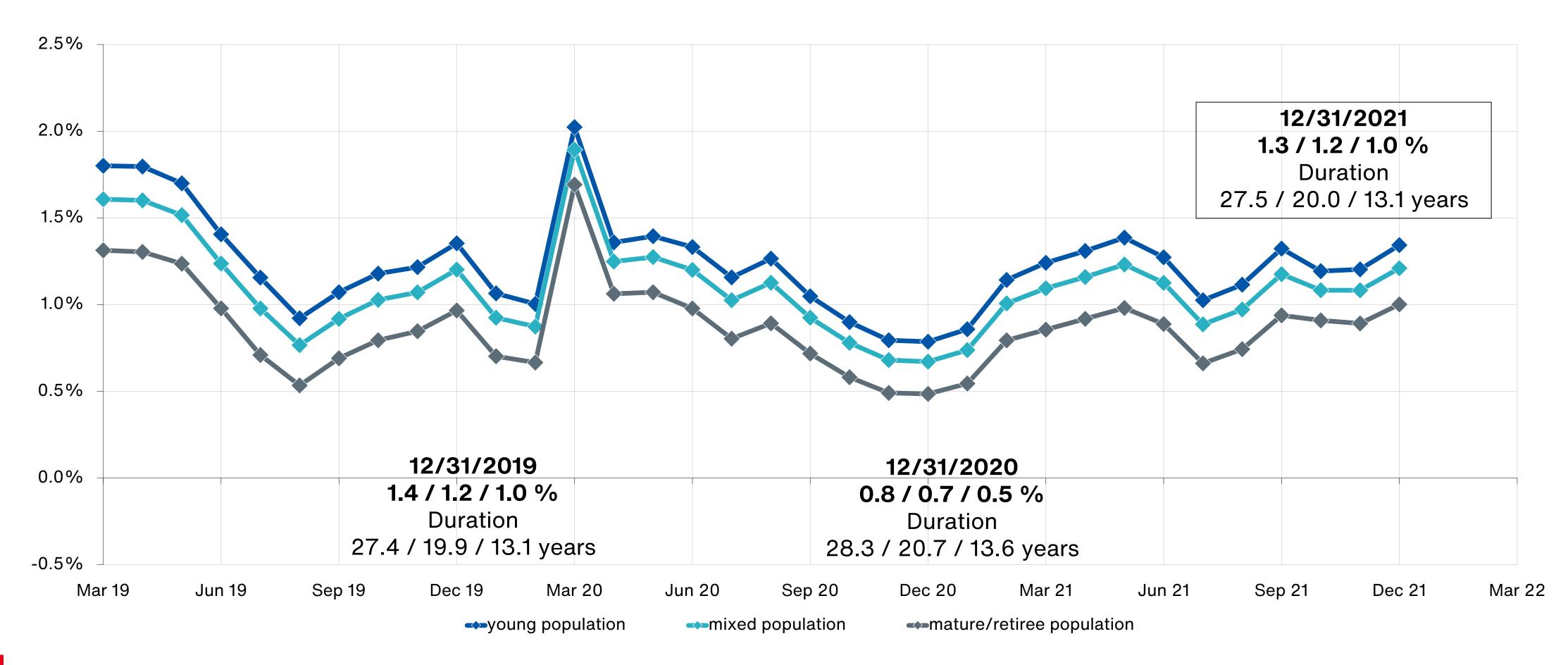
Development of Discount Rates for Sample Populations - Last Updated 12/31/2021

(further information on following page)





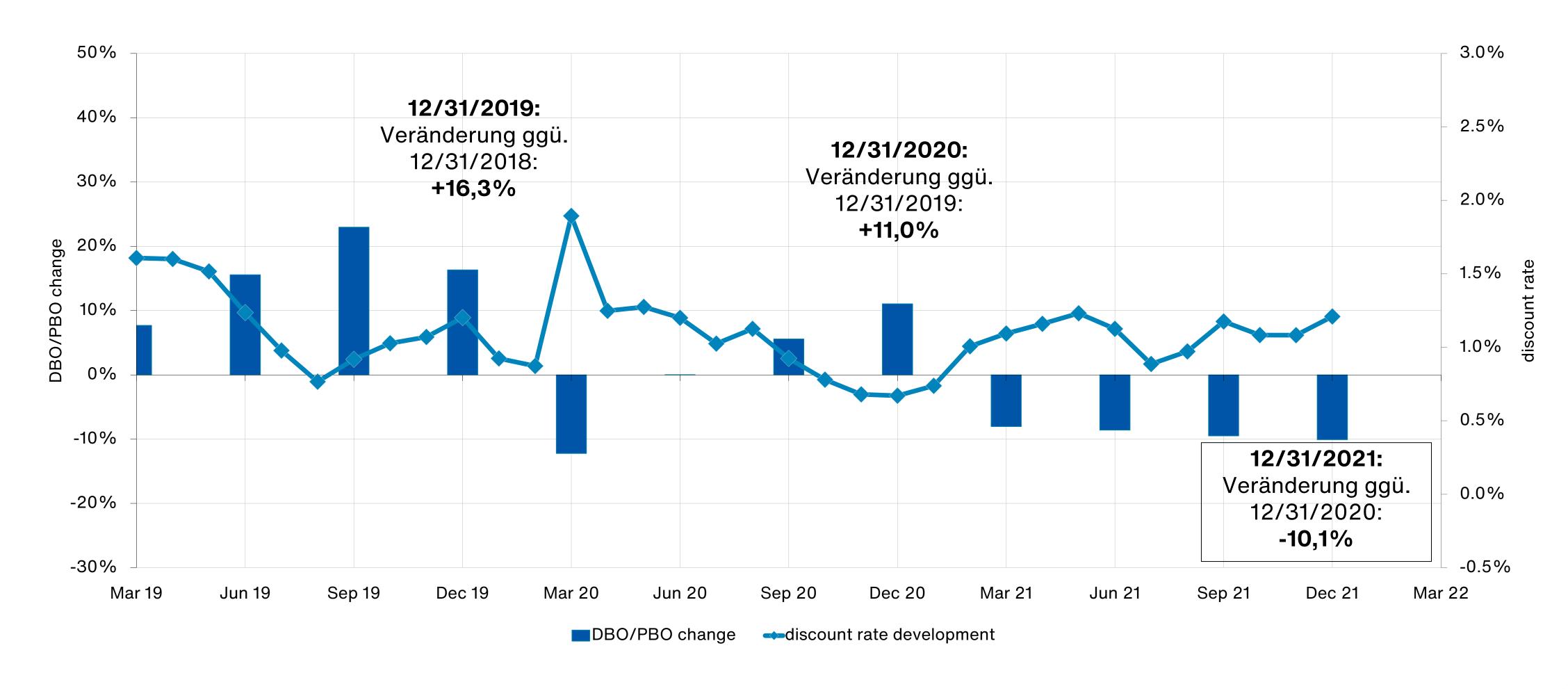
Details on Development of Discount Rates

- Our discount rate recommendation is based on a standardized yield curve for the entire Eurozone, the Aon Eurozone Yield Curve.
- The graph on page 1 shows historical and current discount rates for the valuation of pension liabilities according to IFRS and US-GAAP for three sample populations (young population consisting of active and deferred members, mixed population (actives, deferreds and retirees), mature or retiree population).
- The discount rates are based on sample cash flows of those three sample populations for a typical German pension plan which provides benefits in form of annuities at retirement, disability and death where 60% of the member's (disability) benefit are payable to the spouse following the member's death.
- The Aon Eurozone Yield Curve is developed based on pricing and yield information for AA corporate bonds denominated in Euros as provided by Markit iBoxx (excluding those corporate bonds whose average rating changed from that of the index during the month). This curve is obtained by adding a credit spread curve based on Cairns model to a swap curve. The model parameters are fit by minimizing the weighted sum of square differences between the bond prices deduced from the fitted curve and their market prices. The extrapolation of the Aon Eurozone Yieldcurve is based on AA rated government bonds.
- The discount rates recommendations may not be suitable for non-standard pension plans (e.g. with lump sum payments) or for very young or very mature populations.



Liability Change (DBO/PBO)

(change in percent since prior year-end for mixed population)





Details on Liability Change

- The graph on page 3 shows the changes (in percent) to the DBO/PBO for a sample mixed population due to movements in the discount rate. The bars depict the DBO/PBO percentage change since the prior year-end (12/31).
- The DBO/PBO is calculated for the same sample cash flow which is used for determining the discount rate for the sample mixed population (details see page 2).
- The actual DBO/PBO changes for a specific plan due to movements in the discount rate may differ from the values shown in the graph. The difference can be caused by various reasons, such as a non-standard plan design (e.g. with lump sum payments) or a younger/more mature plan population.



Cash Flow for Mixed Population and Yield Curve

(Valuation date 12/31/2021)

