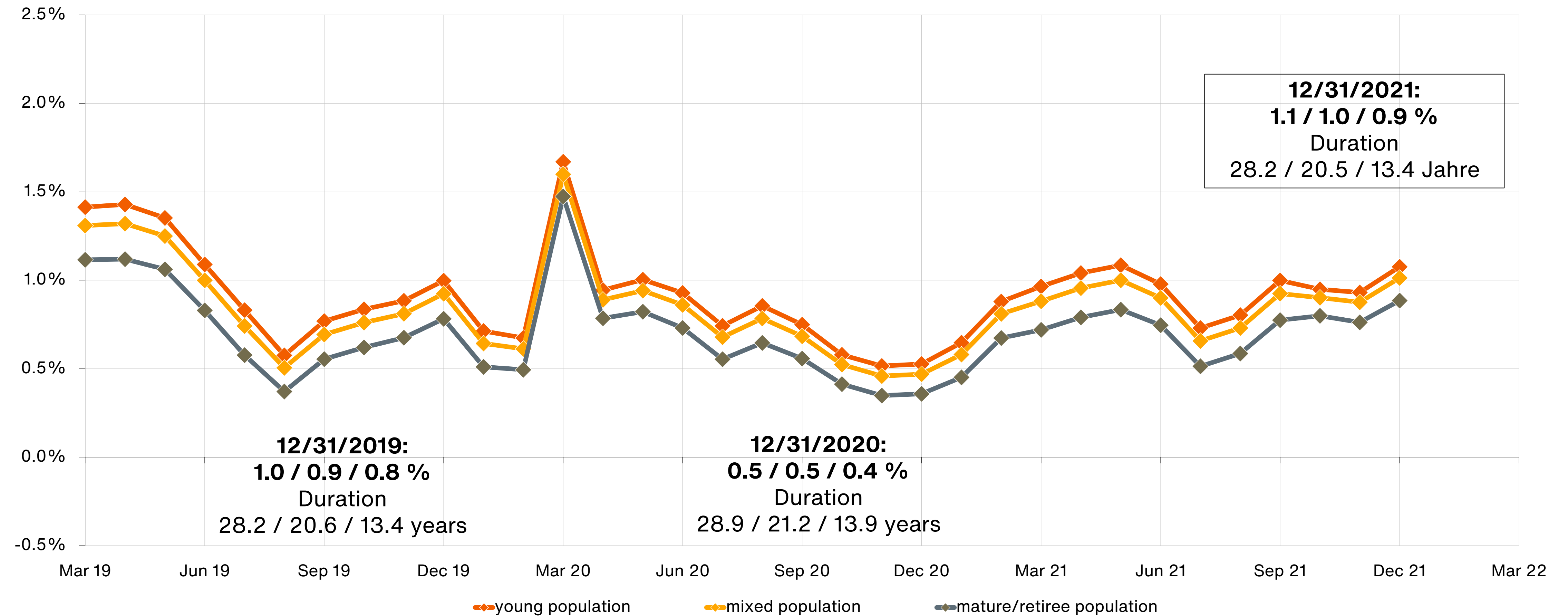


Discount Rate (IFRS / US-GAAP) – Subindex Method

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

(further information on following page)



Discount Rate (IFRS / US-GAAP) – Subindex Method

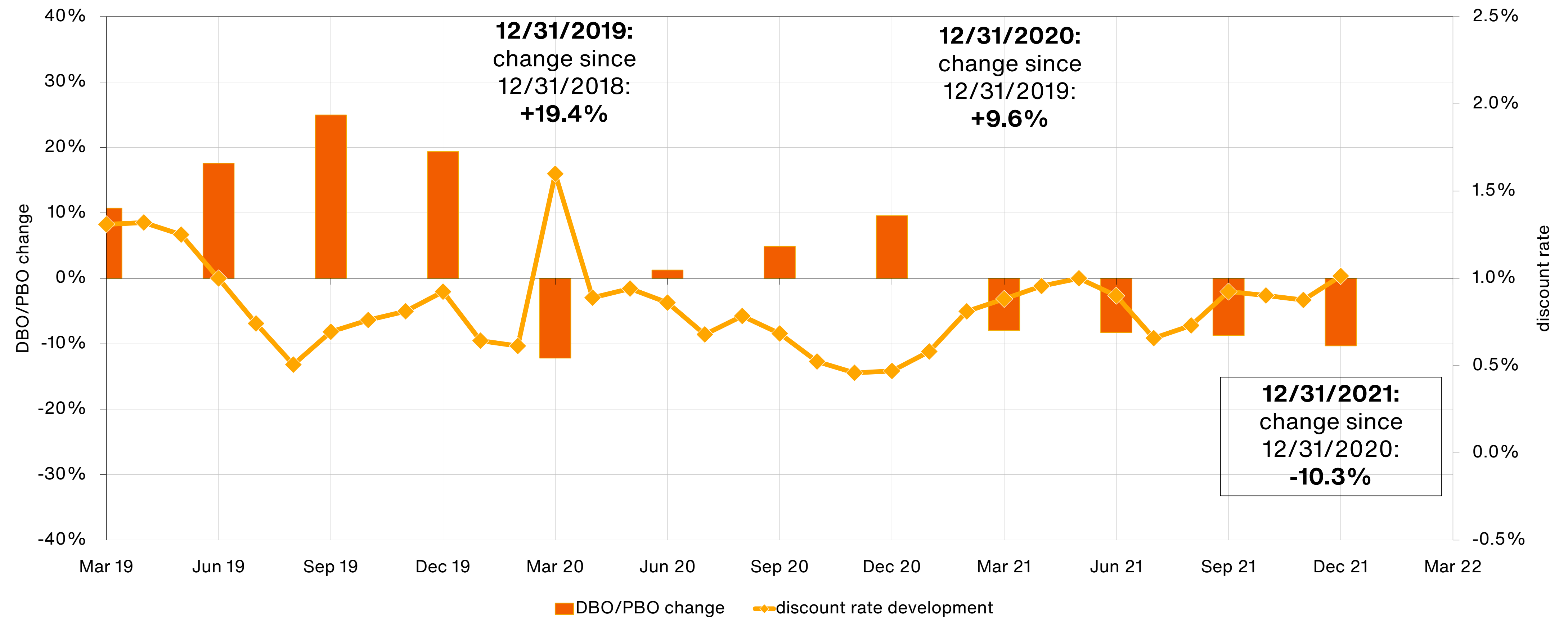
Details on Development of Discount Rates

- The discount rate recommendation is based on the Subindex Method.
- 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 underlying discount rate structure is derived from the iBoxx € Corporate AA sub-indices for several classes of maturity by approximation through a polynomial curve. For maturities higher than the duration of the last iBoxx € Corporate AA sub-index (comprising bonds with maturities of more than 10 years), the curve is extrapolated along the zero-bond yield curve for fictitious German government bonds without credit default risk (Source: Deutsche Bundesbank). The yield curve is deemed to be flat for maturities of more than 30 years.
- 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.

Discount Rate (IFRS / US-GAAP) – Subindex Method

Liability Change (DBO/PBO)

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



Discount Rate (IFRS / US-GAAP) – Subindex Method

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.

Discount Rate (IFRS / US-GAAP) – Subindex Method

Cash Flow for Mixed Population and Yield Curve

(Valuation date 12/31/2021)

