PIMCO

WTP and the impact on the bond and swap markets

ALM Conferentie – CFA Society Netherlands

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Biographical information

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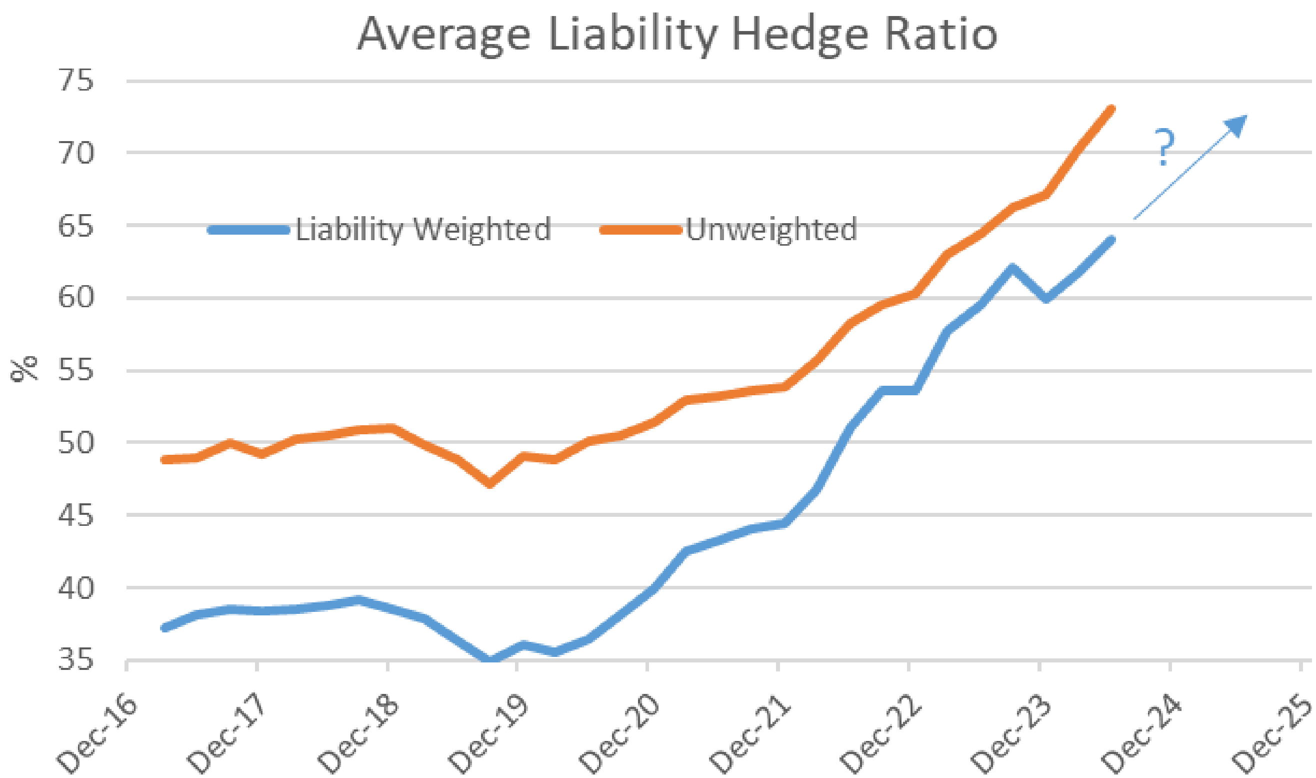
Mr. van Bezooijen is an executive vice president and account manager in the London office, focusing on Benelux clients. Previously, he was a strategist in the client solutions and analytics group. Prior to joining PIMCO in 2008, he worked in the pensions and insurance strategy group at Goldman Sachs, the pensions strategy group at Morgan Stanley, and at Mercer Investment Consulting. He has 28 years of investment experience and holds master's degrees in economics and econometrics from Erasmus University Rotterdam.

Agenda

1	Market Impact of the Wtp Transition
2	Changes in Matching Following the Wtp Transition
3	Wrap Up

Significant increase in liability hedging since 2021

Liability weighted hedge ratio increased from 44% to 64%

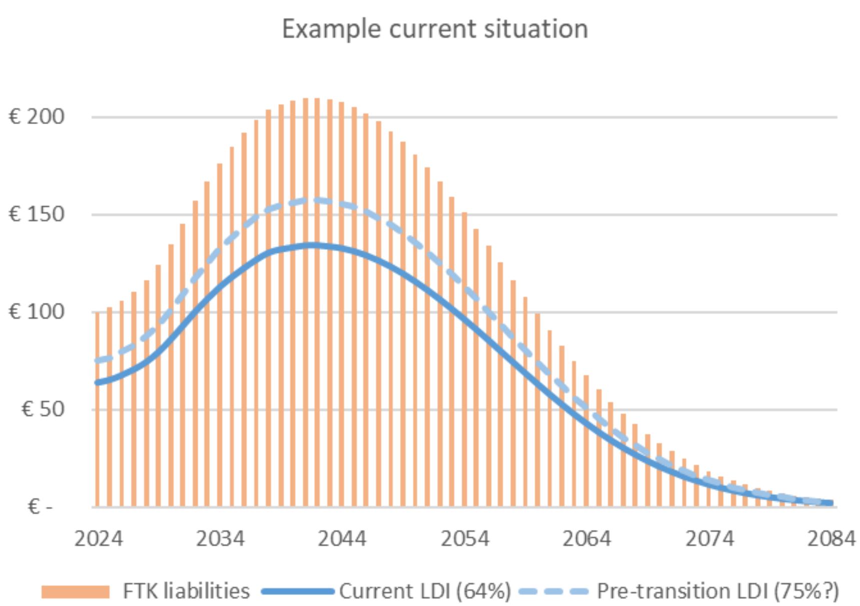


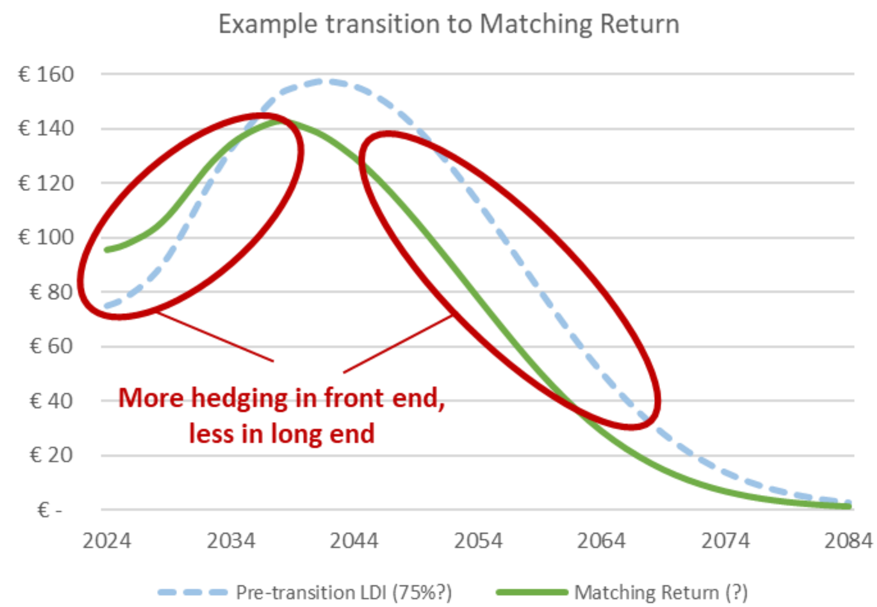
Initially driven by higher interest rates and improved coverage ratios
Increasingly also by desire to stabilize coverage ratios

Source: PIMCO, DNB, as at 30-Jun-24. **For illustrative purposes only.**
Statements concerning financial market trends are based on current market conditions which will fluctuate.
Refer to Appendix for additional chart, outlook and risk information.

But hedging needs will change after pension reforms

Potentially hedging more shorter dated and less longer dated cashflows





More low duration, less high duration hedging

Source: PIMCO, as at October 2024. **For illustrative purposes only.**
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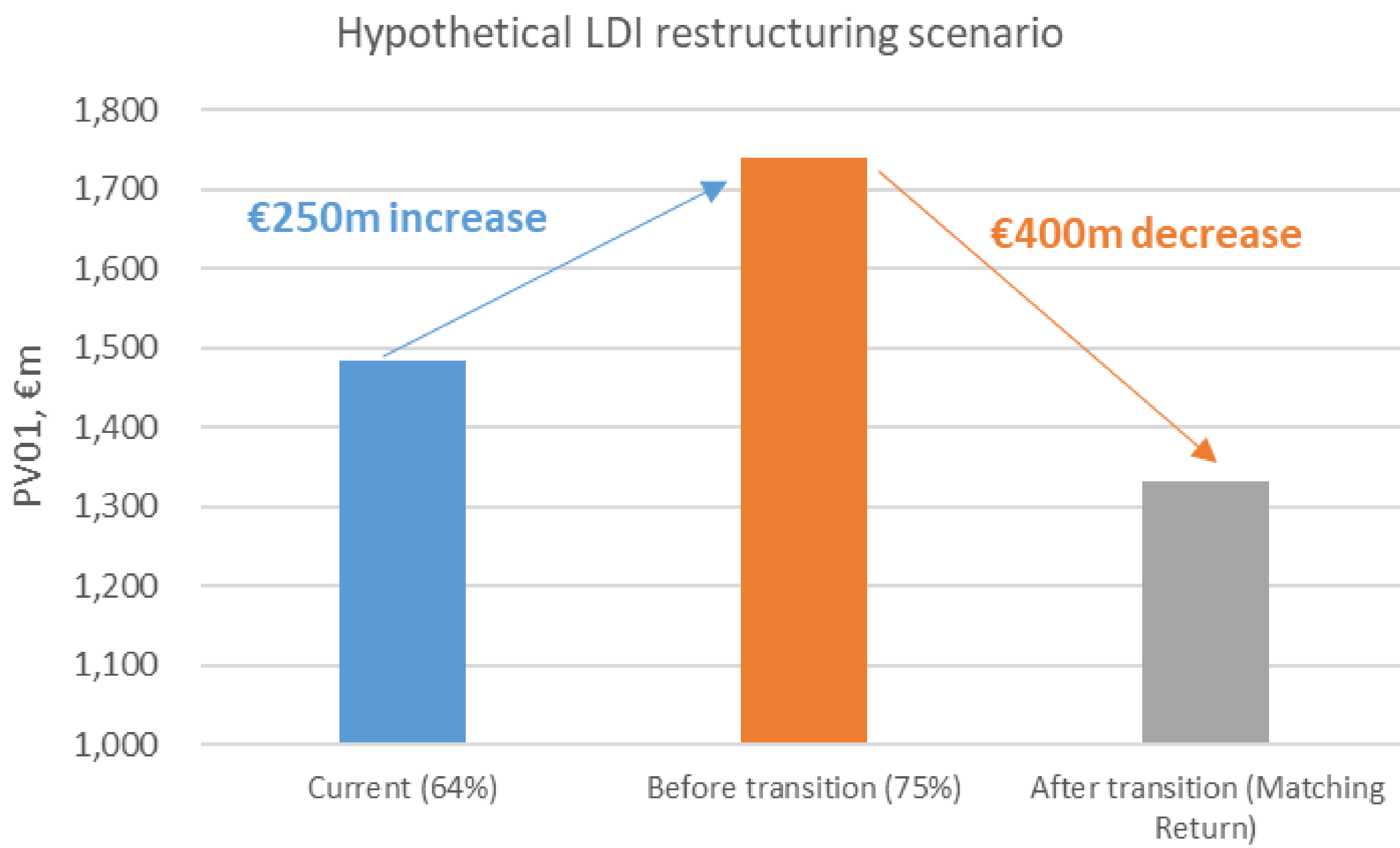
Net effect could be (significantly) less duration (PV01)

Especially in the long end



What is potential market impact of this shift?

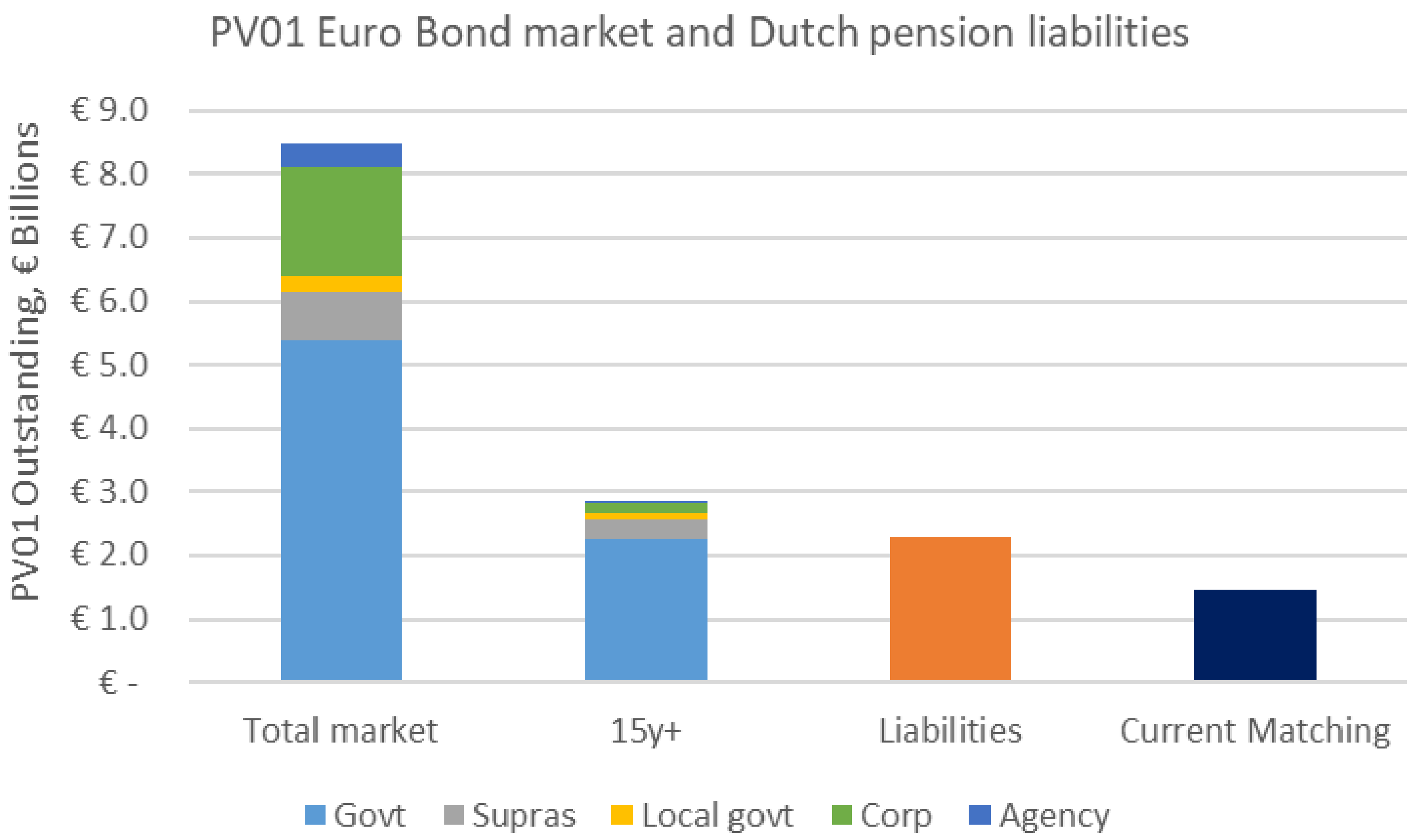
Source: PIMCO, as at October 2024. **Hypothetical example for illustrative purposes only. Hypothetical examples are not based on actual results, have certain inherent limitations and should not be relied upon as the sole basis for making an investment decision. Investors should carefully review the appendix for additional, important information about hypothetical performance**

Refer to Appendix for additional hypothetical example, chart and risk information.

Dutch pension hedging demand in context of Euro bond market

Less than 20% of total issuance, over half of long end

31-Aug-24	Value (€bn)	Est PV01 (€m)
Pension assets	1,631	1,484
Liabilities	1,364	2,319
Coverage ratio	118%	



Source: PIMCO, FTSE, DNB. As at 31-Aug-24 and 30-Jun-24. **For illustrative purposes only**
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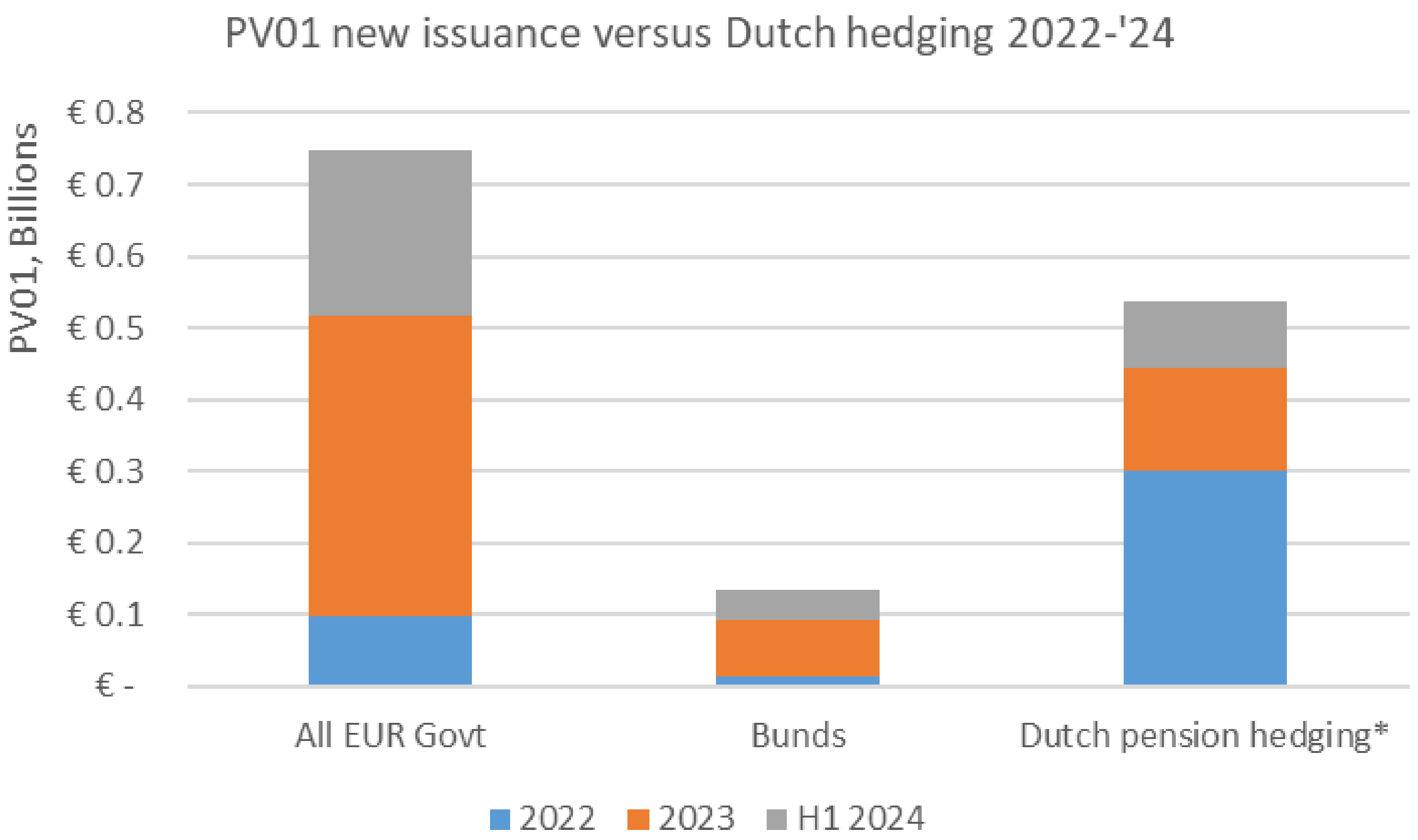
Dutch pension hedging demand in context of Euro bond market (cont'd)

2022-'24 hedging large relative to net new issuance, especially in 2022



* Estimate based on increase in published hedge ratios and reported pension indexation
Source: PIMCO, Goldman Sachs, DNB. As at 30-Jun-24. **For illustrative purposes only.**
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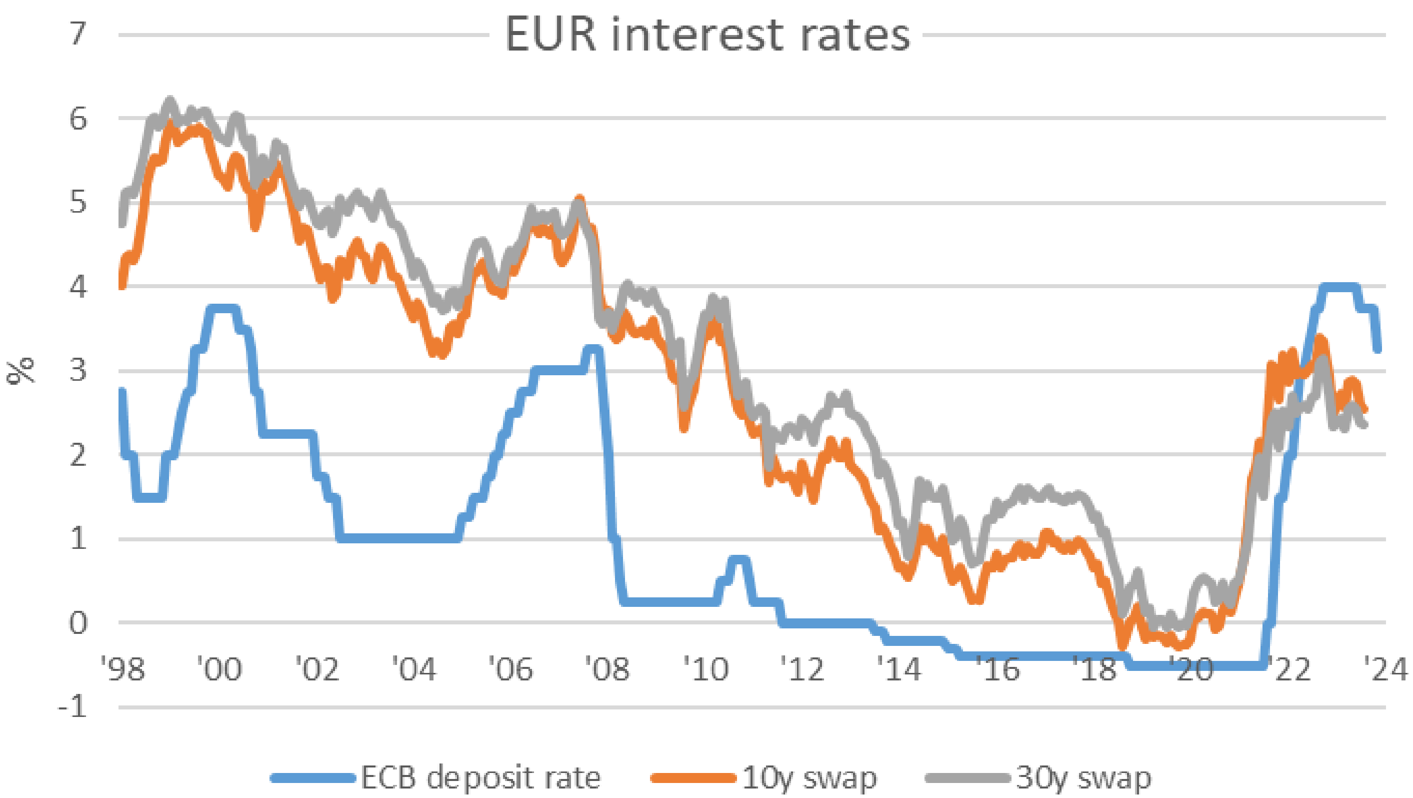
Refer to Appendix for additional chart, outlook and risk information..

Market impact: Unlikely to affect (swap) interest rate *levels*

But could impact *relative* pricing: shape of swap curve, swaps vs government bonds

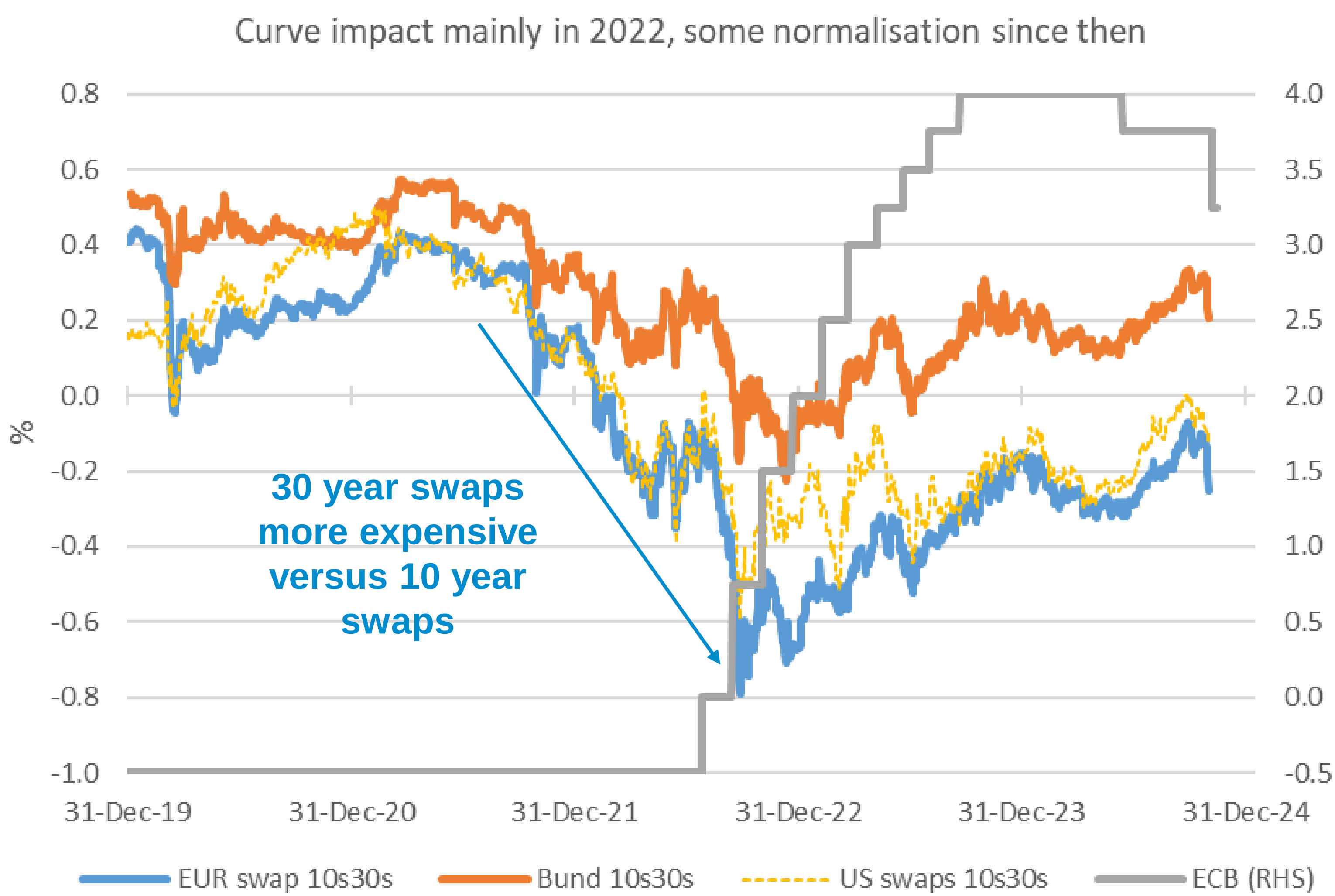


Interest rate levels are driven by macroeconomics and central bank monetary policy

Source: PIMCO, Bloomberg, as at October 2024. **For illustrative purposes only.**
Refer to Appendix for additional chart, forecast, outlook and risk information

Impact 2022-24: Additional hedging may have contributed to swap curve flattening

The largest flattening happened in 2022 while the ECB was hiking fast



Source: PIMCO, Bloomberg. Data as of October 2024. **For illustrative purposes only.**

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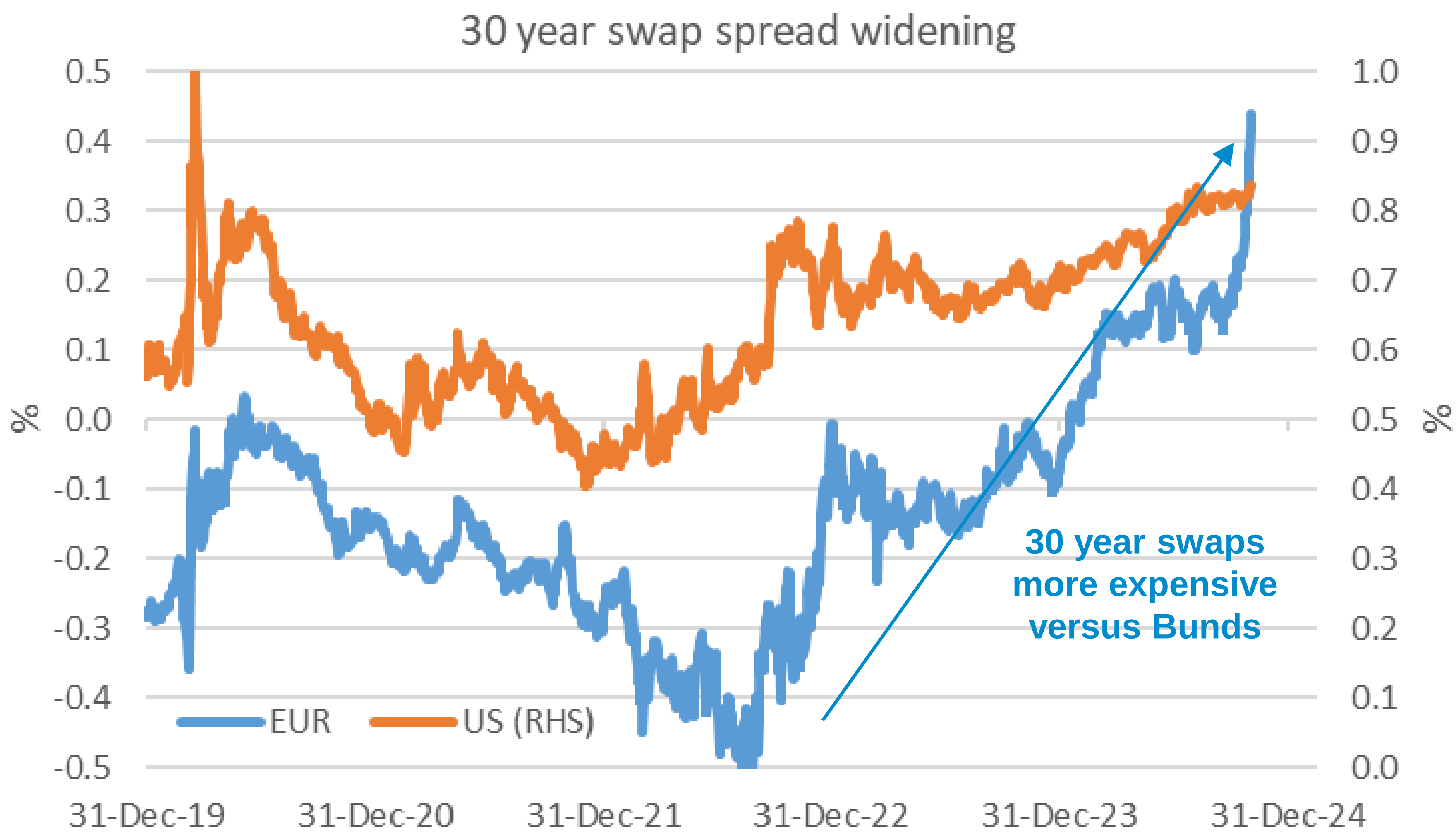
Refer to Appendix for additional chart, outlook and risk information

2023-'24 impact seems mainly on asset swap (ASW) levels

ASW: difference between government bond yields and swap rates



Source: PIMCO, Bloomberg. As of October 2024**. For illustrative purposes only.**

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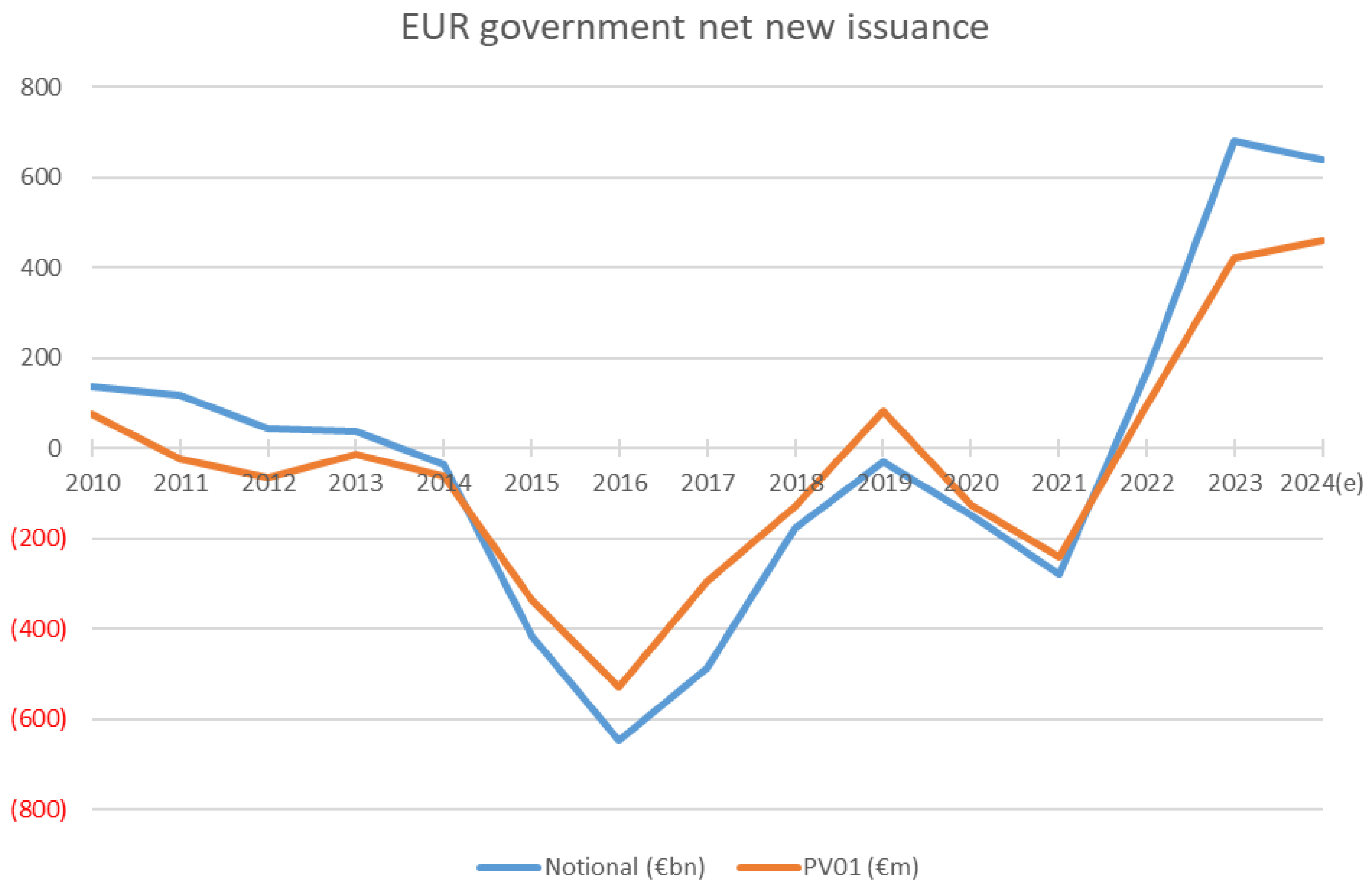
And this happened against a back drop of record new net issuance

So market was able to absorb additional demand for duration



Source: PIMCO, Goldman Sachs. As at October 2024. F**or illustrative purposes only.**
Statements concerning financial market trends are based on current market conditions which will fluctuate.
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How will Matching change with Wtp transition?

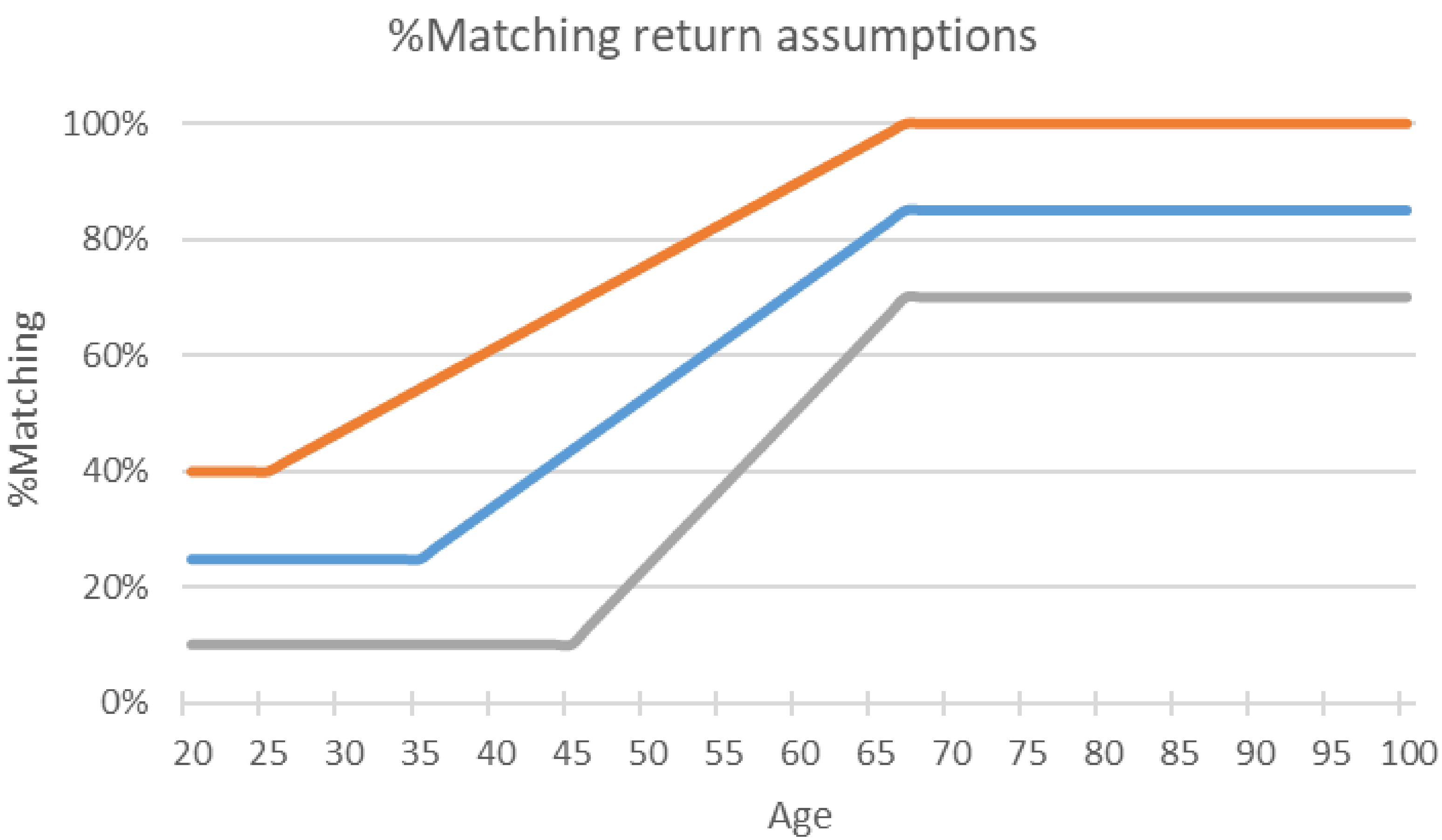
Scenario analysis based on five main factors

- Liability hedge ratio going into transition – expected to go up from 64% currently as funds reduce ALM risk to smooth transition
- Pensioner Matching Return allocation
- Non-pensioner Matching Return allocation
  - minimum level, and
  - start age of increase to pensioner level
- Coverage ratio at transition – expected Wtp pensions will depend on available surplus at transition

Scenarios modelled	Base	Smaller change	Larger change
Pre transition hedge ratio	75%	70%	90%
%Matching Return pensioners	85%	100%	70%
Minimum %Matching Return non-pensioners	25%	40%	10%
Start age increase %Matching Return	35	25	45
Coverage Ratio at transition	115%	125%	105%

Source: PIMCO. **For illustrative purposes only.**
Refer to appendix for additional chart, forecast and risk information

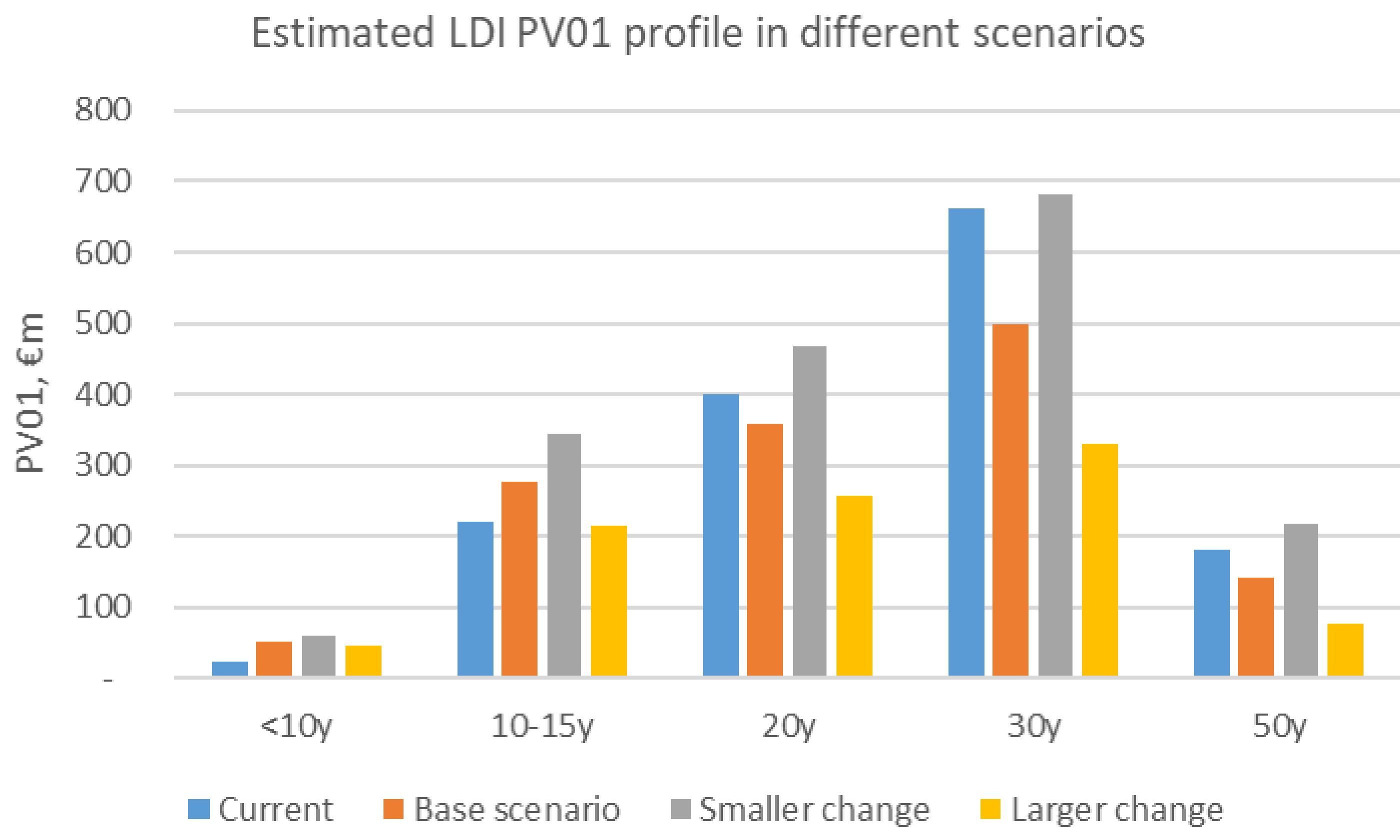
Scenarios %Matching Return



Source: PIMCO. **For illustrative purposes only.**
Refer to Appendix for additional chart, scenario analysis and risk information

Scenario analysis curve profiles (PV01 ladders)

More PV01 in short end, and less in long end



And each scenario assumes increase in hedging before transition
From 65% to 75, 70 and 90%

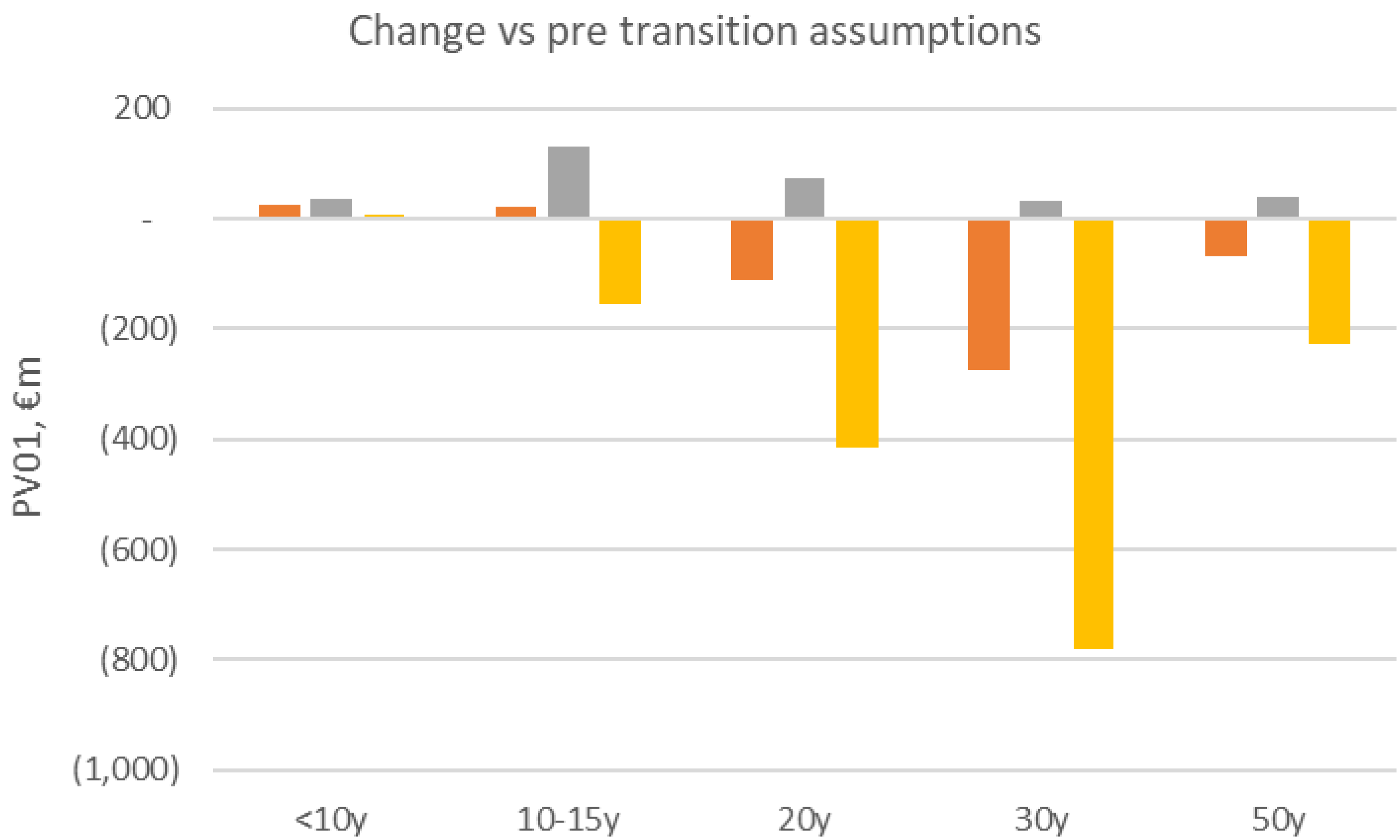
Source: PIMCO. **Hypothetical example for illustrative purposes only. Hypothetical examples are not based on actual results, have certain inherent limitations and should not be relied upon as the sole basis for making an investment decision. Investors should carefully review the appendix for additional, important information about hypothetical performance**

PV01 captures the sensitivity of a portfolio of assets to a one basis point change in interest rates.

Refer to Appendix for additional chart, hypothetical example, scenario analysis and risk information.

Change in PV01 versus pre transition hedge ratios

Base scenario: €400m PV01 decrease, with large range between scenarios



Estimated LDI hedging reduction	Total PV01	PV01 20y+	Estimated 30y equivalent
Base case scenario	€400m	€450m	€200bn
Smaller change	€(300)m	€(150)m	€(150)bn
Larger change	€1.5bn	€1.4bn	€750bn

Source: PIMCO. **For illustrative purposes only.**
Refer to Appendix for additional chart, scenario analysis and risk information.

So change in LDI portfolios could potentially be large

How much time does the market have to absorb this?

Before Transition Date

- Coverage ratio key driver for expected Wtp pension
- FTK continues to apply

Risky to restructure LDI portfolio before transition date

After Transition Date

- Theoretical Matching Return method most popular
- Any mismatch between LDI portfolio and Matching Return allocation falls into Excess Return and will therefore be distributed unevenly over age cohorts

LDI portfolio needs be restructured before, or very soon after transition date

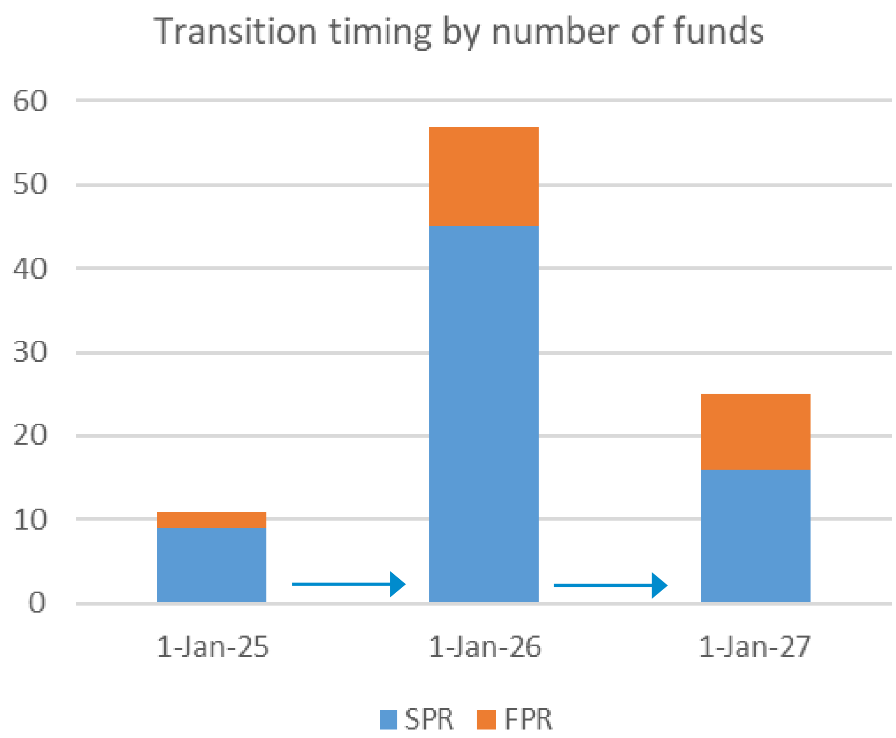
Trading needs to happen on or very close to the transition date?

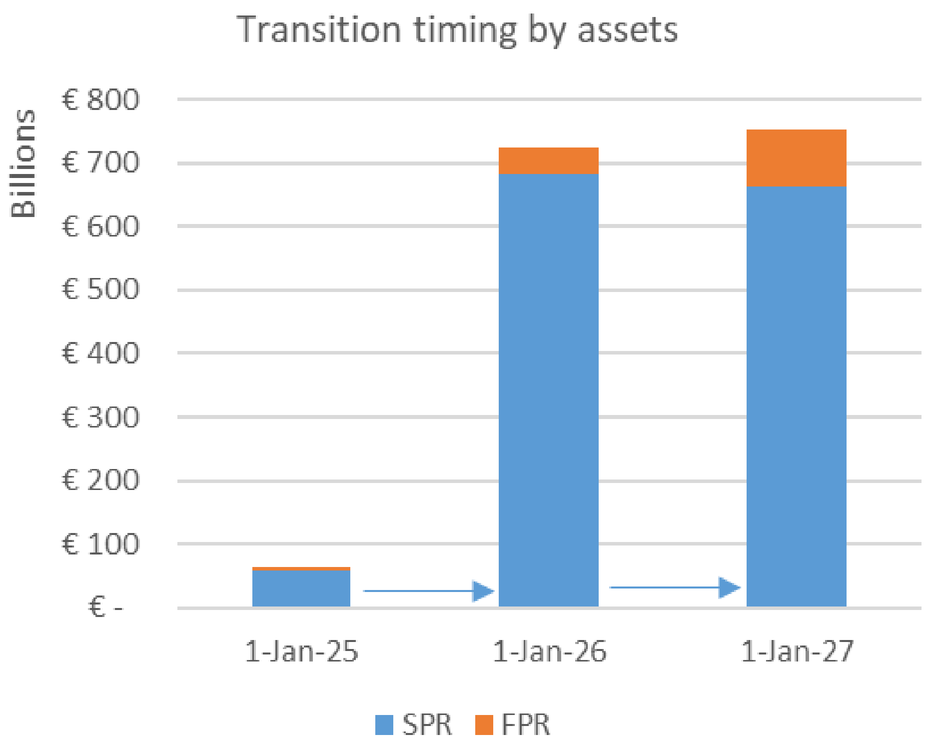
Source: PIMCO. **For illustrative purposes only.** The FTK states how the liabilities of pension funds must be calculated, the required amounts for the buffers and the contributions for a pension fund and the risks that pension funds must take into account. The views and expectations represent those of PIMCO. Statements concerning financial market trends are based on current market conditions which will fluctuate.

Refer to appendix for additional outlook and risk information

And transitions are concentrated on two dates...

...at a time of year when liquidity tends to be at a low

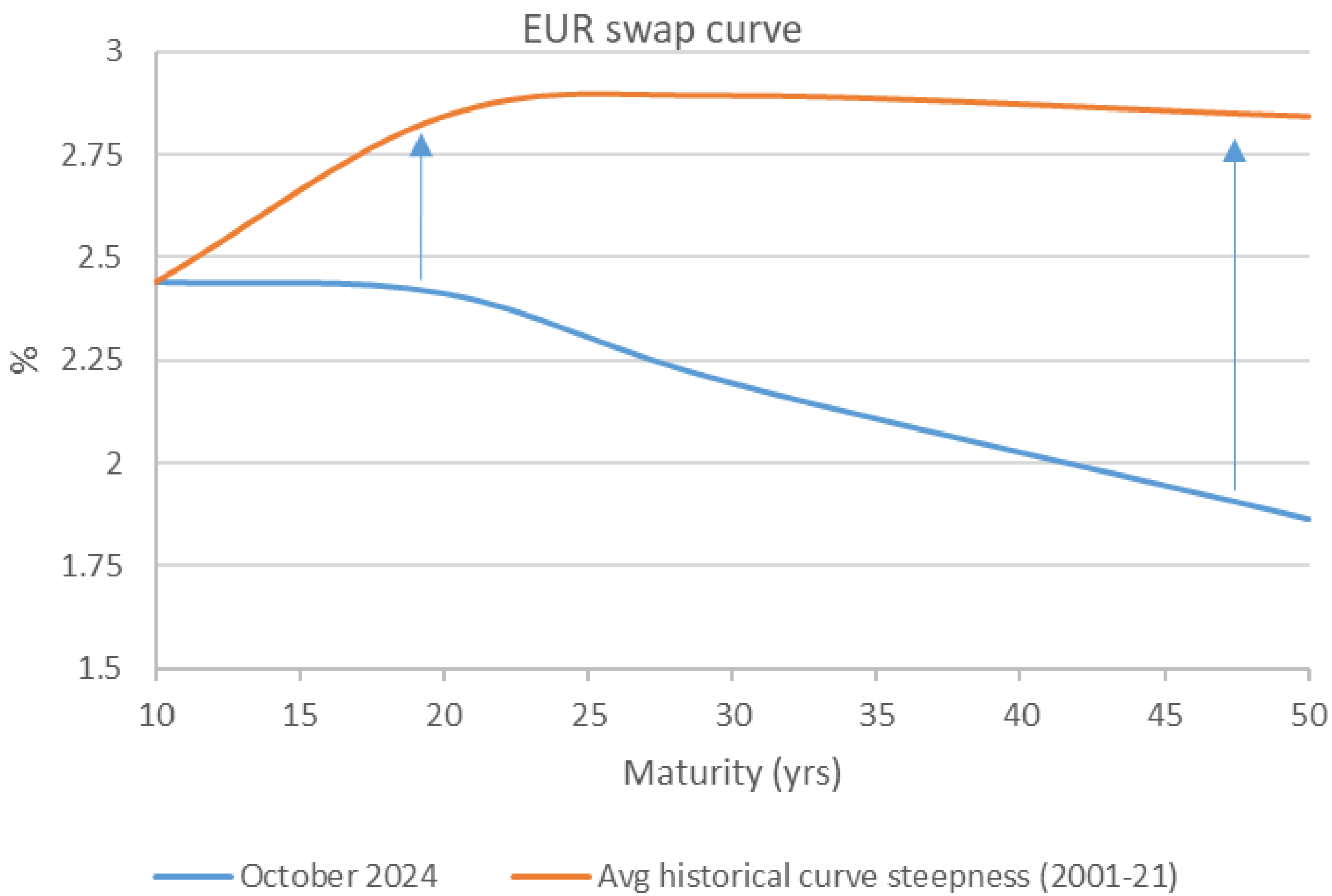




Source: PIMCO, Exelerating. **For illustrative purposes only.**
Refer to appendix for additional chart and risk information

How big could impact be?

Reversion to historical averages would mean 70 and 100bp sell off in 30y and 50y rates



Source: PIMCO, Bloomberg, As of October 2024. **For illustrative purposes only.**
Refer to appendix for additional chart, forecast and risk information

Wrap up

Hard to predict flows and their market impact, but...

Could Dutch LDI restructuring trigger market disruption?

- Hedging flows since end of 2021 appear to have impacted long end of the swap curve
  - Despite high net new issuance supply helping to absorb the flows

- Risk transfer resulting from LDI restructuring could be large
  - And could be concentrated around two dates (1-Jan-2026, 1-Jan-2027)
  - When liquidity tends to be at a low
  - And in a period where the market already expects a large supply of duration

Source: PIMCO, DNB, Morgan Stanley, Exelerating As of August 2024. **For illustrative purposes only**
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Appendix

Past performance is not a guarantee or a reliable indicator of future results.

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Asset allocation is the process of distributing investments among various classes of investments (e.g., stocks and bonds). It does not guarantee future results, ensure a profit or protect against loss.

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HEDGE RATIO
Duration Hedge Ratio = asset duration exposure / liability duration exposure. Credit Spread Duration Hedge Ratio (Beta-Adjusted) = asset duration exposure / credit spread duration exposure.

CHART
Performance results for certain charts and graphs may be limited by date ranges specified on those charts and graphs; different time periods may produce different results.

CREDIT QUALITY
The credit quality of a particular security or group of securities does not ensure the stability or safety of the overall portfolio.

DEFINED BENEFIT GLIDE PATH
De-risking strategy based on a function of plan funded status. As plan funded status improves, clients may be interested in reducing their plan funded status volatility by shifting out of risk assets and into liability hedging fixed income.

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ESTIMATED RETURN
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VOLATILITY
We employ a block bootstrap methodology to calculate volatilities. We start by computing historical factor returns that underlie each asset class proxy from January 1997 through the present date. We then draw a set of 12 monthly returns within the dataset to produce an annual return number. This process is repeated 25,000 times to have a return series with 25,000 annualized returns. The standard deviation of these annual returns is used to model the volatility for each factor. We then use the same return series for each factor to compute covariance between factors. Finally, volatility of each asset class proxy is calculated as the sum of variances and covariance of factors that underlie that particular proxy. For each asset class, index, or strategy proxy, we will look at either a point in time estimate or historical average of factor exposures in order to determine the total volatility. Please contact your PIMCO representative for more details on how specific proxy factor exposures are estimated.

Appendix

HYPOTHETICAL EXAMPLE

No representation is being made that any account, product, or strategy will or is likely to achieve profits, losses, or results similar to those shown. Hypothetical or simulated performance results have several inherent limitations. Unlike an actual performance record, simulated results do not represent actual performance and are generally prepared with the benefit of hindsight. There are frequently sharp differences between simulated performance results and the actual results subsequently achieved by any particular account, product, or strategy. In addition, since trades have not actually been executed, simulated results cannot account for the impact of certain market risks such as lack of liquidity. There are numerous other factors related to the markets in general or the implementation of any specific investment strategy, which cannot be fully accounted for in the preparation of simulated results and all of which can adversely affect actual results.

INDEX

It is not possible to invest directly in an unmanaged index.

INVESTMENT STRATEGY

There is no guarantee that any investment strategies discussed will work under all market conditions or are suitable for all investors and each investor should evaluate their ability to invest long-term, especially during periods of downturn in the market. No representation is being made that any account, product, or strategy will or is likely to achieve profits, losses, or results similar to those shown.

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Appendix

RISK

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