Insurance Europe's views on EIOPA's alternative extrapolation methodology

April 2021

No need for a change

Insurance Europe supports the continued use of the existing Smith-Wilson (S-W) Extrapolation methodology and parameters, including a 20-year last liquid point for the Euro, to derive the EIOPA RFR curves.

EIOPA's proposals to change the extrapolation of the RFR curve are based on the perception that the current approach results in under-reserving, risk management disincentives and potential issues of financial stability. Insurance Europe rejects these as sufficient or valid justifications for a change. Furthermore, EIOPA's changes would result in significant reductions in, and increased volatility of, solvency ratios. Also, EIOPA's proposed implementation mechanism would not resolve the negative impacts of their proposal... Further information on why no change is needed can be found in the Insurance Europe position paper, *Views on EIOPA's opinion on the 2020 review* (page 6).

However, recognising that discussions on this topic may not result in a binary choice between accepting or rejecting EIOPA's advice, Insurance Europe sets out below its views on how to remedy the shortcomings of EIOPA's proposed alternative extrapolation methodology.

Insurance Europe views if EIOPA's proposals are to be further considered

A key objective of EIOPA's proposal was to ensure that Euro RFR curve incorporates market data beyond the 20-year point. To achieve this ambition while mitigating the negative aspects, Insurance Europe proposes the following changes to EIOPA's proposal:

1. **The convergence parameter (alpha) is set to 20% for all currencies (except t the Swedish Krona for which a parameter of 70% should apply).**

2. **Requirements to calculate and publicly disclose the results of a sensitivity analysis of the convergence parameter should be removed.**

These changes would:

- Avoid increasing the value of long-term liabilities which would create further and unnecessary restrictions on insurers' capacity to invest on behalf of their customers and the economy.
- Reduce the volatility of the curves created by the new extrapolation methodology. The volatility can add to the need to hold capital buffers and sets strong incentives to reduce investments in the real economy.
- Mitigate incentives for short-term investment behaviours which would be introduced by EIOPA's alternative methodology which are not in the interests of policyholders or the wider economy.
- Avoid additional reporting which would confuse the public as to which valuations are actually required under Solvency II

Convergence parameter (alpha) of 20% would be appropriate (70% for SEK)

Using a 20% parameter (70% for SEK) would result in risk-free rate curves which are broadly similar to the current curves. This is consistent with the industry view that the current curves do not result in an underestimation of the value of the liabilities or give rise to financial instability risks and there is no need for changes which lower them. It would also reduce the solvency volatility compared to a 10% convergence parameter which is consistent with the objectives of the Solvency II risk-free rate curves, as set out in the recitals of the Solvency II Directive.[1]

The annex shows comparisons of different risk-free curves under the current extrapolation S-W methodology and EIOPA's alternative methodology using a 20% convergence parameter. The analysis shows that 20% calibration would work well to avoid significant change in the risk free curves for the Euro and a range of other currencies and under a range of interest rate conditions (ie 2007 "higher" rates, 2016 "lower rates" and 2020 "extremely low rates").

A 70% convergence parameter is needed for the SEK because under the current S-W methodology, the convergence speed for the SEK is much greater than for other currencies. This means the forward rates converge to the UFR sooner for the SEK than for other currencies.

No need to lower the risk-free curves from current levels

The current RFR curves already incorporate negative and low interest rates and there is no compelling evidence demonstrating that using them creates financial instability risks or puts customers at risk from under-reserving. Euro rates used for Solvency II at year-end 2020 were as low as -0.4%, -0.1% and 1.4% at 10yr, 20yr and 40yr points respectively.

On the contrary, multiple EU-wide stress test exercises (in 2016 and 2018) and the experience of the COVID-19 pandemic have shown the industry to be resilient to the impact of further decreases in risk-free rates and very low for very long scenarios.

The Ultimate Forward Rate (UFR) methodology was introduced in 2018 in order to ensure that if interest rates really do stay low going forward then the Solvency II RFR curves will keep lowering every year. The UFR has already reduced from 4.2% in 2016 and will be 3.45% in 2022.

In addition, the risk of interest rates being even lower than the current curves used in Solvency II will be appropriately covered by an updated interest rate risk SCR module, an update which the industry supports in general (but not as currently proposed by EIOPA)..

EIOPA's proposed convergence parameter not based upon on economic evidence

The choice of convergence parameter is not based upon any detailed economic analysis. Instead, EIOPA's proposed convergence parameter of 10% is based upon a report by the Dutch government's UFR Committee in 2013 which was established to make recommendations for the Dutch pension fund industry.

In its report, the Dutch UFR Committee noted;

[1] Recital 30 of the Omnibus II Directive states "The relevant risk-free interest rate term structure should avoid artificial volatility of technical provisions and eligible own funds and provide an incentive for good risk management."

1. *"No unequivocal evidence can be found in economic empirical literature for a given value of the convergence factor."*
2. *It did not recommend making changes which would "result in a significant increase in the technical provisions of pension funds and could have a major market impact, which the Committee does not consider desirable"*

The Dutch UFR committee, also noted that Solvency II framework had other elements such as a capital requirement and "*the entire intended framework is different for insurers than for pension funds (e.g. in relation to the confidence level of 99.5% which applies to insurers)..*"and that "*it would not be appropriate to take an element from the Solvency II framework out of context* ".

There should be no additional valuations with different calibrations disclosed

EIOPA's proposal to require the most materially affected insurers to publicly disclose their solvency position under a 5% convergence parameter scenario would lead to confusion and undermine the agreed regulatory risk-free curves and official Solvency II valuations. This requirement would also risk creating an additional supervisory intervention point (effectively a shadow capital requirement) which is not needed given that the extensive data available and the SCR which already provides a very early intervention point significantly far from the real minimum capital (MCR).

The required sensitivity analysis would also create significant additional burden for insurers without commensurate benefit as it only serves to scenario test the Solvency II legalisation and not the market environment. In addition, under its implementation mechanism proposal EIOPA add even further sensitivities to be calculated and published.

Finally, the impact of a 5% convergence parameter is extreme and for some markets would result in testing RFR curves which are over 1% lower at long-dated maturities. Further analysis of the impact of the 5% convergence parameter is shown in the annex.

Other parameters

EIOPA's proposed calibration for the First Smoothing Point (FSP) is consistent with the current Last Liquid Point (LLP) and appropriate if the convergence parameter is set at 20%. (Although we note that the actual data would justify discussion on whether the LLP should be even lower than 20). EIOPA's approach to determine the Last Liquid Forward Rate (LLFR) is reasonable.

It is important that the RFR curves remain stable and avoid ongoing changes. It is imperative that the chosen parameters are included in the Solvency II Directive and not left to the discretion of EIOPA.

Implementation mechanism if convergence parameter would be lower than 20%

A convergence parameter lower than 20% would create a major impact and as explained above is not necessary or appropriate. If this nevertheless was the outcome, then a transition mechanism would be needed. However, EIOPA has proposed a complex implementation mechanism which is both time dependent and rate dependent and operationally burdensome. A simpler approach would be better.

If changes to the extrapolation methodology were to be implemented, then a transition approach should be fully transparent and create predictable RFR curves. Reducing the initial convergence parameter of 20% by 1% each year until the ultimate convergence parameter is reached would be a

far simpler approach, increase stability of the long-term valuations and provide greater certainty for insurers on implementation of the changes.

Annex

1. Comparison of Smith Wilson (S-W) methodology with Alternative methodology using 20% convergence parameter.

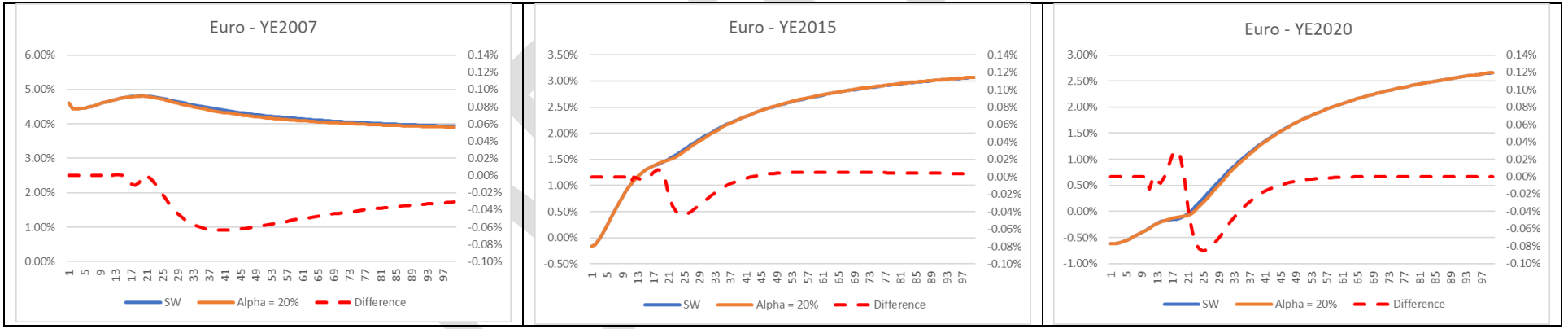
The charts below show a comparison under three different market environments

- YE2007 –characterised by "high" interest rates
- YE2015 – Solvency II implementation
- YE2020 – characterised by "very low" rates.

Note that all parameters are kept constant. UFR is set to 3.6% and LLP/FSPs are based on those detailed in the EIOPA advice. The left vertical axis shows the scale for the RFR curves and the right vertical axis the scale for the difference between the two RFR curves.

Euro RFR curves

As shown below, using a convergence parameter of 20% results produces RFR curves which are very close to the existing S-W methodology.

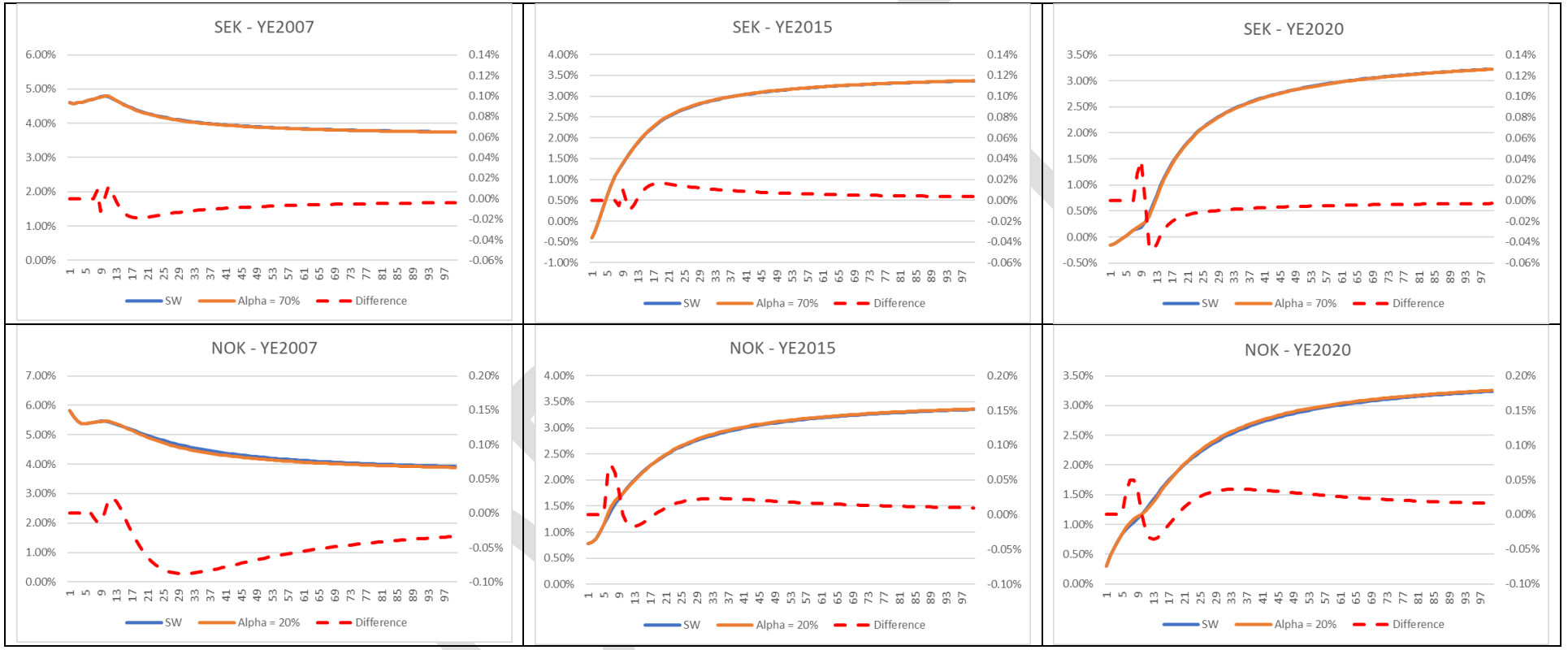


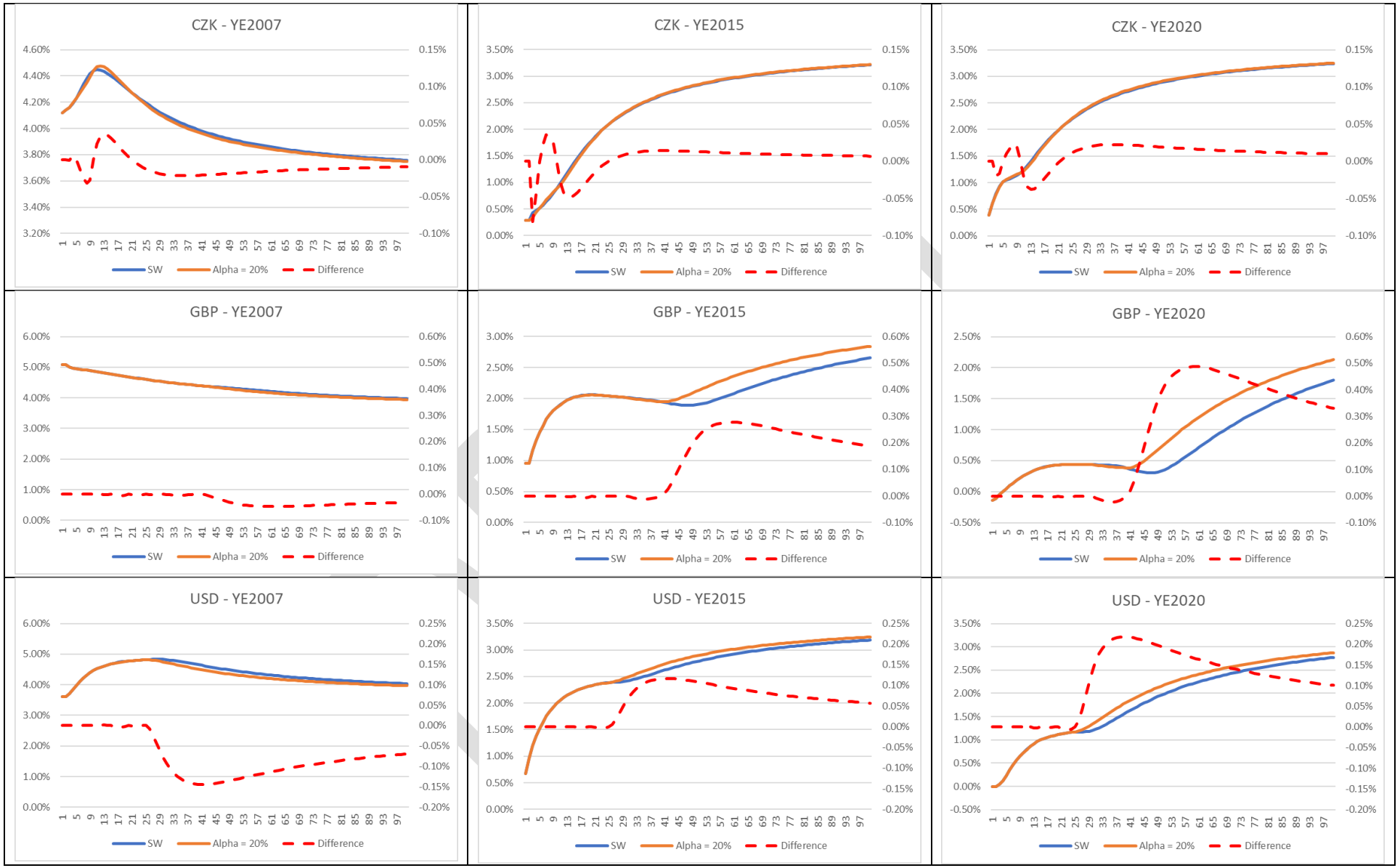
2. Non-euro RFR curves

The charts below provide the same comparison for selected non-euro currencies (SEK, NOK, CZK, GBP and USD). A similar result is obtained for the SEK, NOK and CZK currencies as for the Euro.

For the GBP and USD curves, it should be noted that:

- The more significant deviations in these curves arise because the extrapolation begins at an earlier point under the alternative extrapolation methodology due to the introduction of the First Smoothing Point (FSP).
- The LLP for these (and other currencies) will be altered from their existing values due to a reassessment of the DLT criteria.

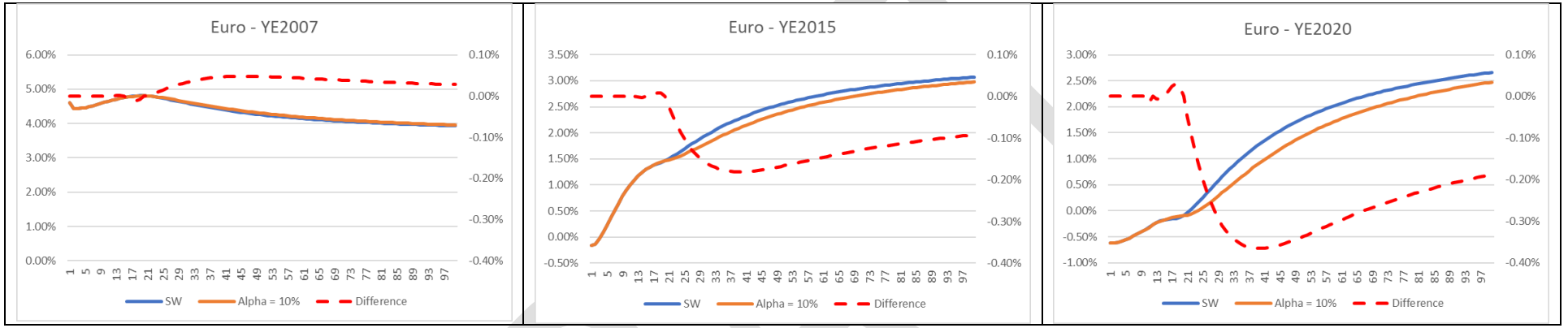



CZK - YE2007
CZK - YE2015
CZK - YE2020
GBP - YE2007
GBP - YE2015
GBP - YE2020
USD - YE2007
USD - YE2015
USD - YE2020
SW
Alpha = 20%
Difference

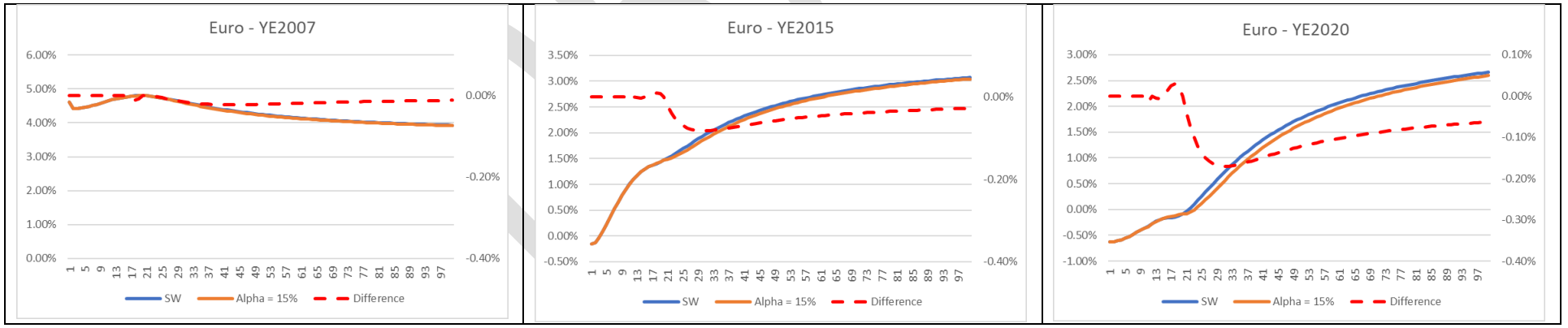
3. Comparison of 10% and 15% convergence parameters

The charts below show the impact of EIOPA's proposals relative to the S-W methodology as well as a 15% convergence parameter for the Euro curve.

EIOPA proposal – 10% convergence parameter



15% convergence parameter

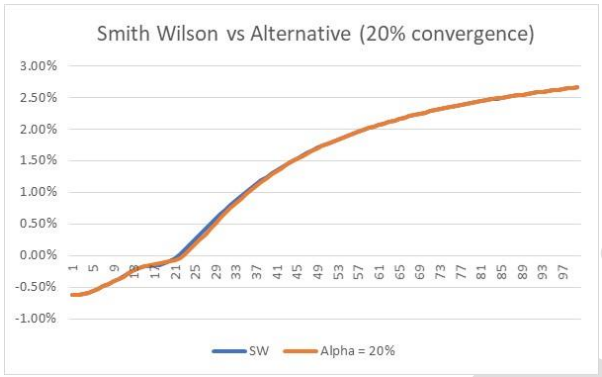


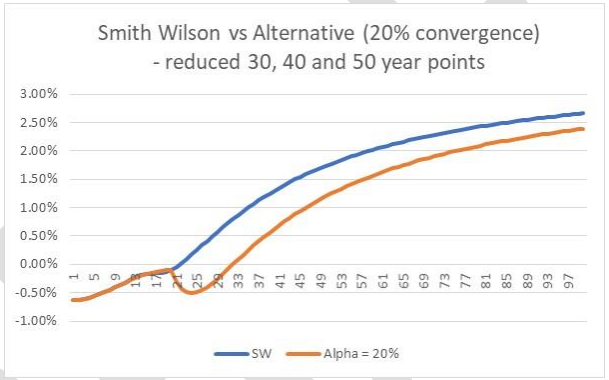
4. Instances where the alternative methodology with 20% convergence parameter can create different curves

As shown above, differences in the RFR curves generated using Smith Wilson and Alternative with 20% convergence can arise due to the introduction of the FSP for some currencies.

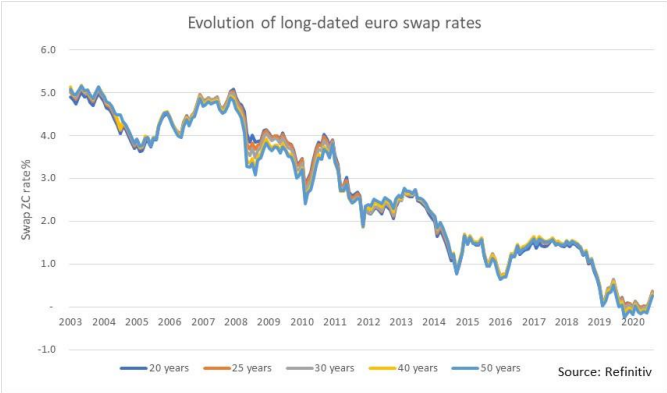
While for the Euro curve, a 20% calibration works well when back-testied based on 2007, 2015 and 2020 market conditions, very unusual market conditions could lead to significant differences between the S-W and alternative extrapolation methodology. For example, if the yield curve was strongly inverted after the FSP (year 20).

To illustrate this, consider the example below where the 30, 40- and 50-year swap rates are reduced by 2% compared to market conditions at YE2020 (all other parameters are per above analysis).



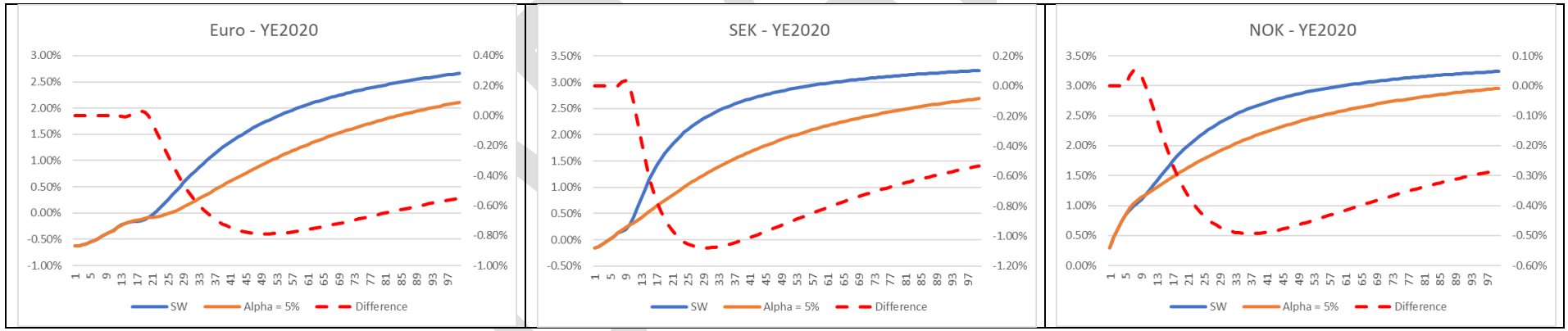


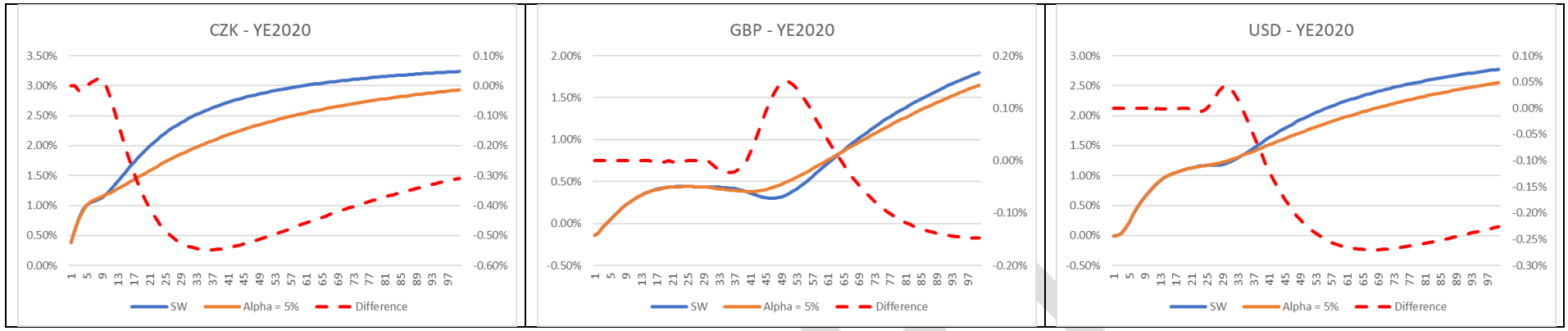
However, such curves can be considered extremely unlikely. The chart below shows that the long-dated part of the Euro swap curve has remained relatively flat since 2003.



5. Impact of a 5% convergence parameter

The charts below show the significant impact of a 5% convergence parameter on the RFR curves at YE2020.




CZK - YE2020
3.50%
3.00%
2.50%
2.00%
1.50%
1.00%
0.50%
0.00%
0.10%
0.00%
-0.10%
-0.20%
-0.30%
-0.40%
-0.50%
-0.60%
SW
Alpha = 5%
Difference
GBP - YE2020
2.00%
1.50%
1.00%
0.50%
0.00%
-0.50%
0.20%
0.10%
0.00%
-0.10%
-0.20%
SW
Alpha = 5%
Difference
USD - YE2020
3.00%
2.50%
2.00%
1.50%
1.00%
0.50%
0.00%
-0.50%
0.10%
0.05%
0.00%
-0.05%
-0.10%
-0.15%
-0.20%
-0.25%
-0.30%
SW
Alpha = 5%
Difference