Report on the calculation of the UFR for 2025

RFR Methodology

European Insurance and
Occupational Pensions Authority

CONTENTS

EXECUTIVE SUMMARY

EIOPA has calculated the ultimate forward rate (UFR) for 2025 in accordance with the methodology to derive the UFR.

For the euro, the applicable UFR for 2025 equals **3.30%,** i.e., **no change** compared to its current level.

For 19 other currencies the UFR does not change either as demonstrated in paragraph 1.3. This paragraph also demonstrates that for 9 of the 10 remaining currencies the applicable UFR decreases with 15bp in 2025, while for the final remaining currency (MYR) the applicable UFR increases with 15bp.

For all currencies there is small decrease in the respective calculated UFRs because of a slightly negative average real rate observed over 2023. Inflation rates have dropped quite substantially over 2023, while short term nominal rates have increased quite substantially. Nevertheless, inflation rates are still higher than the short-term nominal rates leading to an average negative real rate for 2023. An eventual change in the applicable UFR for 2025 is a result of the observed difference between the updated calculated UFRs and the applicable UFRs for 2024 being smaller or greater than respectively ±15bp.

Previous impact assessments by EIOPA have demonstrated that changes in the level of the UFR only have a limited impact in terms of solvency. This is due to the ultimate nature of the UFR, only affecting the part of the technical provisions made up of the present values of the cash flows beyond the last liquid point. Next to that, the affected 10 currencies are mainly less relevant currencies in terms of the size of technical provisions denoted in these respective currencies. As a result, EIOPA believes the solvency impact of the changes in applicable UFRs for 2025 are non-material and as such, do not require a further impact assessment.

The new ultimate forward rates will be applicable for the calculation of the risk-free interest rates from 1 January 2025 onwards.[1]

---

[1] Please note that the EC Delegated act published by the Commission on the 8th of March 2019 introduced additional provisions concerning EIOPA's work on the risk-free technical information, including that the technical information shall be modified by EIOPA at the request of the European Commission (http://ec.europa.eu/finance/docs/level-2-measures/solvency2-delegated-regulation-2019-1900_en.pdf).

1. METHODOLOGY TO DERIVE THE UFR

1.1. EXPECTED REAL RATE

The UFR is the sum of an expected real rate and an expected inflation rate. The expected real rate is the same for all currencies. It is calculated as a simple average of the past real rates of a basket of representative countries since 1961. For the calculation of the expected real rate, a new observed real rate for 2023 enters the calculation. This new observed real rate equals -1.04% (2022: -6.55%). The resulting expected real rate for 2023 equals 1.20% (2022: 1.25%). Annex 1 sets out the intermediate results of the calculation.

1.2. EXPECTED INFLATION RATE

The expected inflation rate is currency specific. It is based on the inflation target of central banks and can take the values 1%, 2%, 3% or 4%.

The expected inflation rates remain unchanged for all currencies. The following table sets out the expected inflation rate per currency. Annex 2 and Annex 3 set out the underlying inflation targets and the determination of the expected inflation rate for currencies without inflation target.

	Currency	Expected inflation rate
EUR	Euro	2%
CZK	Czech koruna	2%
GBP	Pound sterling	2%
HUF	Forint	3%
PLN	Zloty	2%
RON	Leu	2%
SEK	Krona	2%
CHF	Swiss franc	1%
ISK	Króna	2%
NOK	Norwegian krone	2%
AUD	Australian dollar	2%
BRL	Real	3%
CAD	Canadian dollar	2%
CLP	Chilean peso	3%
CNY	Renminbi-yuan	3%
COP	Colombian peso	3%
HKD	Hong Kong dollar	2%
INR	Indian rupee	4%
JPY	Yen	2%
KRW	South Korean won	2%
MYR	Ringgit	3%
MXN	Mexican peso	3%
NZD	New Zealand dollar	2%
RUB	Russian ruble	4%
SGD	Singapore dollar	2%
THB	Baht	2%
TRY	Turkish lira	4%
TWD	New Taiwan dollar	2%
USD	US dollar	2%
ZAR	Rand	4%

1.3. ULTIMATE FORWARD RATE

The following table sets out the changes in applicable UFRs going from 2024 to 2025.

Currency Code	Currency	UFR applicable in 2024	Calculated UFR for 2025	UFR applicable in 2025	Change in UFR
EUR	Euro	3.30%	3,20%	3,30%	-
CZK	Czech koruna	3.30%	3,20%	3,30%	-
GBP	Pound Sterling	3.30%	3,20%	3,30%	-
HUF	Forint	4.35%	4,20%	4,20%	↓ -0,15%
PLN	Zloty	3.30%	3,20%	3,30%	-
RON	Leu	3.30%	3,20%	3,30%	-
SEK	Krona	3.30%	3,20%	3,30%	-
CHF	Swiss franc	2.30%	2,20%	2,30%	-
ISK	Króna	3.30%	3,20%	3,30%	-
NOK	Norwegian krone	3.30%	3,20%	3,30%	-
AUD	Australian dollar	3.30%	3,20%	3,30%	-
BRL	Real	5.05%	4,20%	4,90%	↓ -0,15%
CAD	Canadian dollar	3.30%	3,20%	3,30%	-
CLP	Chilean peso	4.35%	4,20%	4,20%	↓ -0,15%
CNY	Renminbi-yuan	4.35%	4,20%	4,20%	↓ -0,15%
COP	Colombian peso	4.35%	4,20%	4,20%	↓ -0,15%
HKD	Hong Kong dollar	3.30%	3,20%	3,30%	-
INR	Indian rupee	5.35%	5,20%	5,20%	↓ -0,15%
JPY	Yen	3.35%	3,20%	3,20%	↓ -0,15%
KRW	South Korean won	3.30%	3,20%	3,30%	-
MYR	Ringgit	3.60%	4,20%	3,75%	↑ +0,15%
MXN	Mexican peso	4.30%	4,20%	4,30%	-
NZD	New Zealand dollar	3.30%	3,20%	3,30%	-
RUB	Russian ruble	5.25%	5,20%	5,25%	-
SGD	Singapore dollar	3.30%	3,20%	3,30%	-
THB	Baht	3.30%	3,20%	3,30%	-
TRY	Turkish lira	5.35%	5,20%	5,20%	↓ -0,15%
TWD	New Taiwan dollar	3.30%	3,20%	3,30%	-
USD	US dollar	3.30%	3,20%	3,30%	-
ZAR	Rand	5.35%	5,20%	5,20%	↓ -0,15%

ANNEX 1 CALCULATING THE EXPECTED REAL RATE

The following table sets out the time series of real rates used for the calculation of the expected real rate. Real rates in the table are rounded to two decimal digits for presentational reasons.

Year	Real rates	Year	Real rates	Year	Real rates
1961	1.58%	1989	5.66%	2018	-1.65%
1962	0.09%	1990	5.61%	2019	-1.32%
1963	0.01%	1991	4.87%	2020	-0.89%
1964	0.46%	1992	5.53%	2021	-2.98%
1965	1.09%	1993	3.90%	2022*	-6.55%
1966	1.64%	1994	3.11%	2023	-1.04%
1967	1.89%	1995	3.56%		
1968	1.82%	1996	2.25%		
1969	2.08%	1997	2.73%		
1970	2.50%	1998	3.12%		
1971	-0.23%	1999	2.23%		
1972	-0.91%	2000	2.74%		
1973	0.81%	2001	1.77%		
1974	-1.11%	2002	1.21%		
1975	-4.82%	2003	0.49%		
1976	-0.94%	2004	0.47%		
1977	-1.66%	2005	0.57%		
1978	0.78%	2006	1.61%		
1979	1.45%	2007	2.58%		
1980	1.05%	2008	1.18%		
1981	3.71%	2009	0.58%		
1982	3.34%	2010	-0.94%		
1983	3.48%	2011	-1.61%		
1984	4.35%	2012	-1.79%		
1985	4.48%	2013	-1.28%		
1986	5.83%	2014	-0.60%		
1987	5.01%	2015	-0.21%		
1988	4.74%	2016	-0.74%		

(*) Compared to last years' report the value for 2022 changed from -6.67% to -6.55%, due to the following observed retroactive changes in the source data:

1. AMECO database: the 3-month money market interest rate for the euro for 2022 was changed from 0.3552% to 0.34883%
2. The OECD inflation rate for Germany for 2022 was changed from 7.90% to 6.87% due to a methodological change. For more info (in German only):
   https://www.destatis.de/DE/Presse/Pressekonferenzen/2023/vpi/pm-vpi.pdf?__blob=publicationFile

It should be noted that these retroactive changes did not impact the applicable UFR's of last year.

Expected real rate before rounding

= Average of real rates over period [1961, 2023]

= 1.19035% (2022: 1.22635% (1.22436% before retroactive changes mentioned above)).

Expected real rate after rounding

= **1.20%** (2022: 1.25% with no impact from retroactive changes)

ANNEX 2   INFLATION TARGETS

The following table sets out the inflation targets. The information was derived from the specified sources during January 2024. If no specific source was available, Refinitiv has been used as alternative source. For currencies for which no information was available at all, and for currencies where exchange rate targeting is used instead of inflation targeting, see Annex 3.

	Currency	Inflation target	Source
	Euro	2%	https://www.ecb.europa.eu/ecb/tasks/monpol/html/index.en.html
CZK	Czech koruna	2% ± 100bps	https://www.cnb.cz/en/monetary-policy/
GBP	Pound sterling	2%	https://www.bankofengland.co.uk/monetary-policy/inflation
HUF	Forint	3% ± 100bps	http://www.mnb.hu/en/monetary-policy/monetary-policy-framework/inflation-targeting
PLN	Zloty	2.5% ± 100bps	https://nbp.pl/en/monetary-policy/
RON	Leu	2.5% ± 100bps	http://bnr.ro/Inflation-Targets-3241.aspx
SEK	Krona	Around 2%	https://www.riksbank.se/en-gb/monetary-policy/the-inflation-target/
CHF	Swiss franc	Less than 2 %	https://www.snb.ch/en/services-events/digital-services/faq-overview/qas/qas_gp_strat#t04
ISK	Króna	2.50% ± 150bps	http://www.cb.is/monetary-policy/inflation-target/
NOK	Norwegian krone	Close to 2%	https://www.norges-bank.no/en/topics/Statistics/Inflation/
AUD	Australian dollar	2 - 3%	http://www.rba.gov.au/inflation/inflation-target.html
BRL	Real	3.0% ± 150bps	https://www.bcb.gov.br/en/monetarypolicy/historicalpath
CAD	Canadian dollar	2% ± 100bps	https://www.bankofcanada.ca/2021/12/joint-statement-of-the-government-of-canada-and-the-bank-of-canada-on-the-renewal-of-the-monetary-policy-framework/
CLP	Chilean peso	3%	Monetary Policy Meeting January 2023 - Banco Central de Chile (bcentral.cl)
CNY	Renminbi-yuan	3%	https://english.www.gov.cn/statecouncil/ministries/202303/06/content_WS6405a081c6d0a757729e7cc4.html
COP	Colombian peso	3% ± 100bps	https://www.banrep.gov.co/en/monetary-policy
HKD	Hong Kong dollar	No IT	https://www.hkma.gov.hk/eng; Exchange rate HKD/USD target.
INR	Indian rupee	4% ± 200bps	https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=1253
JPY	Yen	2%	https://www.boj.or.jp/en/mopo/outline/qqe.htm#p01
KRW	South Korean won	2%	https://www.bok.or.kr/eng/main/contents.do?menuNo=400015

	Currency	Inflation target	Source
MYR	Ringgit	3%-4%	Refinitiv
MXN	Mexican peso	3% ± 100bps	https://www.banxico.org.mx/publications-and-press/announcements-of-monetary-policy-decisions/%7B7D376C26-0D56-D9D9-88BC-36872FDE3877%7D.pdf
NZD	New Zealand dollar	2% ± 100bps	https://www.rbnz.govt.nz/monetary-policy/about-monetary-policy
RUB	Russian rouble	4%	Monetary policy goals and principles | Bank of Russia (cbr.ru)
SGD	Singapore dollar	No IT	What is the objective of monetary policy in Singapore? (mas.gov.sg)
THB	Baht	1%-3%	https://www.bot.or.th/en/home.html
TRY	Turkish lira	5% ± 200bps	https://www.tcmb.gov.tr/wps/wcm/connect/EN/TCMB+EN/Main+Menu/Core+Functions/Monetary+Policy/PRICE+STABILITY+AND+INFLATION/Inflation+Targets
TWD	New Taiwan dollar	No IT	https://www.cbc.gov.tw/en/cp-448-160568-c2665-2.html
USD	US dollar	2%	https://www.federalreserve.gov/monetarypolicy/review-of-monetary-policy-strategy-tools-and-communications-statement-on-longer-run-goals-monetary-policy-strategy.htm
ZAR	Rand	3%-6%	https://www.resbank.co.za/en/home/what-we-do/monetary-policy/inflation-targeting-framework

ANNEX 3 EXPECTED REAL RATES FOR CURRENCIES WITHOUT INFLATION TARGET

For currencies without an inflation target the expected inflation rate is derived from a projection based on historic inflation rates. The following table sets out for the affected currencies the average inflation over the last 10 years and the projected inflation rate in 2058 (in 35 years) according to an ARMA[2] model.

Currency	Average inflation rate over the last 10 years	Projection
Hong Kong dollar	2.13%	2.36%
New Taiwan dollar	1.28%	1.62%
Singapore dollar	1.52%	2.48%

According to the UFR methodology, the expected inflation rate for currencies without inflation target is 2%, unless both the 10-year average and the projection clearly indicate that the inflation is expected to be at least one percentage point different from 2%. All currencies therefore fall in the 2% bucket.

---

[2] Auto Regressive Moving Average model

EIOPA

Westhafen Tower, Westhafenplatz 1
60327 Frankfurt – Germany
Tel. + 49 69-951119-20
info@eiopa.europa.eu
https://www.eiopa.europa.eu