

# Cross Product Margining at Eurex Clearing

Generating Margin Efficiencies for the  
Buy Side and Sell Side across ETD and  
OTC IRS

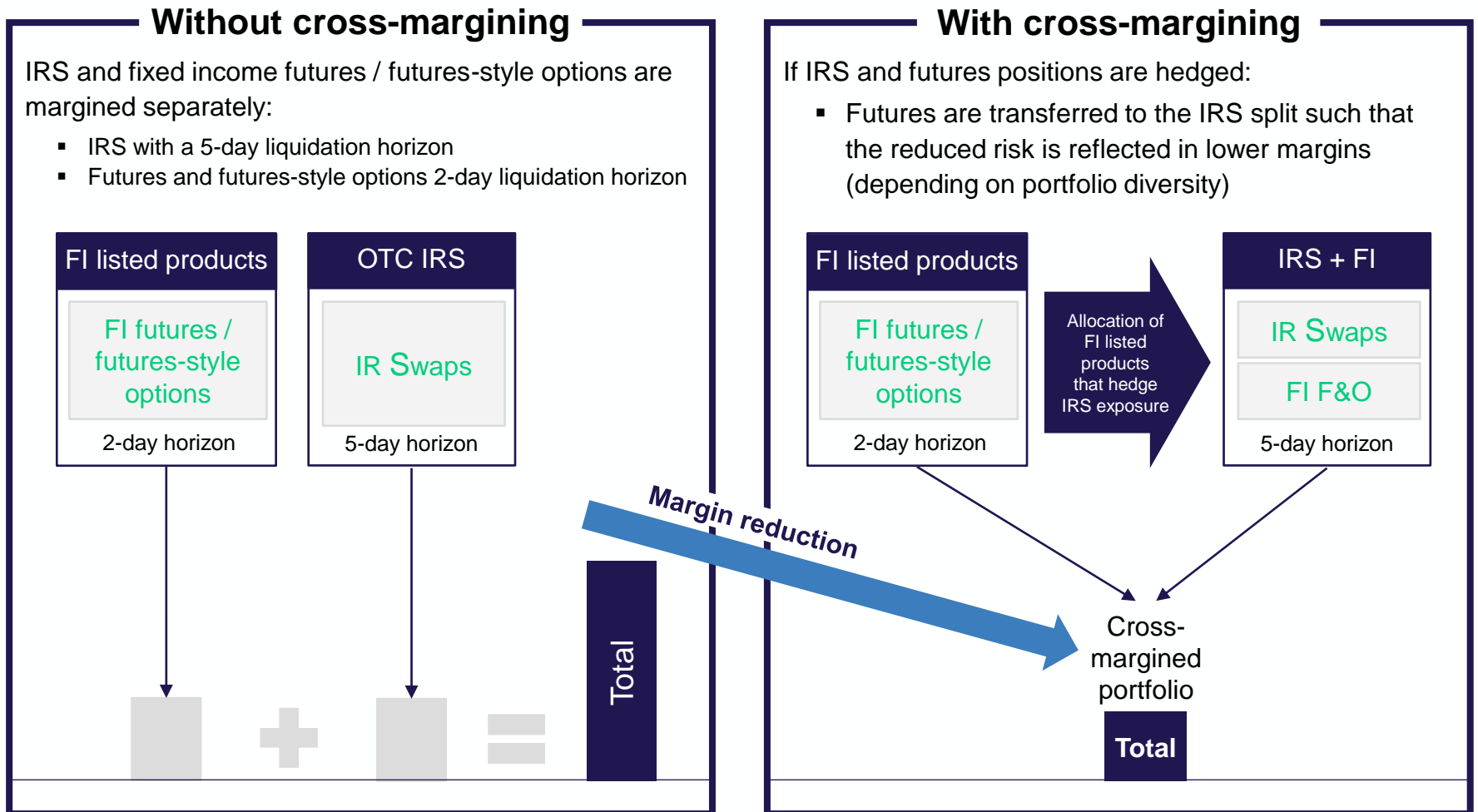
12 May 2022



# 1 Methodology

# Prisma Cross-Margining

- Optimal allocation of positions delivers lowest cost through cross-margining of OTC & ETD
- Portfolio simulations and what-if scenarios available



# Comprehensive Fixed Income Liquidation Group

- A liquidation group combines cleared products across markets cleared by Eurex Clearing that share similar risk profiles.
- They serve as a cornerstone of the Prisma portfolio-based risk management method and offer full margin offsetting capabilities per group.

## Eurex Clearing's Fixed Income liquidation group combines:

Money Market  
F&O

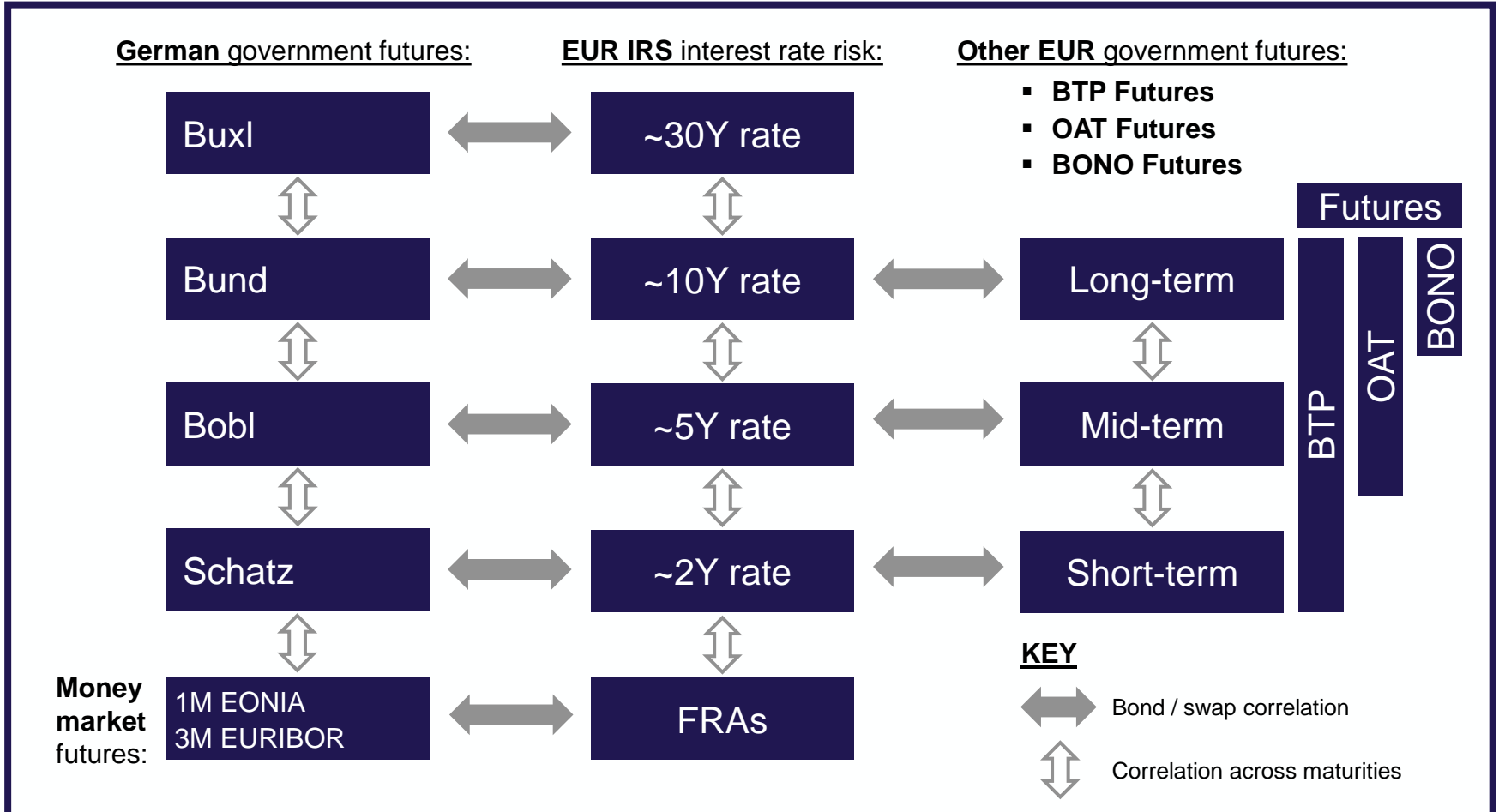
Fixed Income  
F&O

OTC IRS

- Liquidation groups are pre-defined; they exist irrespective of a clearing member default.
- Each liquidation group has a fixed holding period that reflects the time estimated to analyse, hedge and auction the respective products.
- An expected holding period can be between two to five days, depending on the liquidation group, and is the basis for margin calculation at the same time.
- Listed Fixed Income are calculated with 2 days and OTC products, for regulatory reasons, with 5 days.

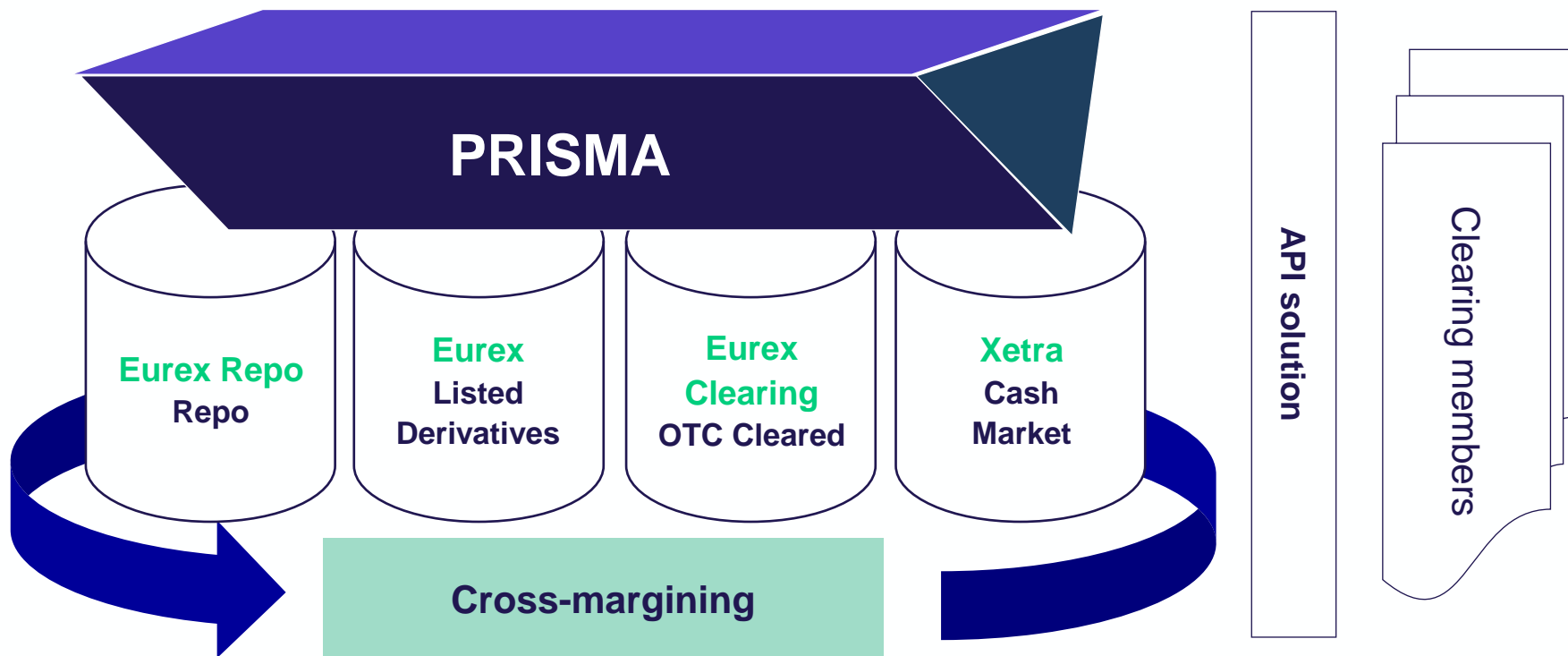
# Cross Product Margining – ETD & OTC IRS

- **Reduced margining** from offsets between European Government Bond Futures and EUR OTC IRS
- Eurex Clearing is **the only CCP** that offers cross-margins **between EUR Listed Government Bond Derivatives and EUR OTC IRS**



# 2 Roadmap

# Overview of PRISMA development roadmap to complete delivery of the Eurex full value proposition around margin efficiencies



## Priorities for the mid-term PRISMA cross-margining roadmap

- Margin Calculator: API extension to cover for ETD portfolio margining and ETD v. OTC cross-margining – **LIVE NOW**
- OTC IRS vs. Fixed Income ETD cross-margining algorithm enhancements – **LIVE NOW**
- Portfolio Margining enhancements on the repo risk system.
  - Margining between single ISINs and GC pooling
  - Correlation matrix optimisation
- Inclusion of Repo into the PRISMA risk management system
- Cross-margining across OTC IRS, FI ETD and repo

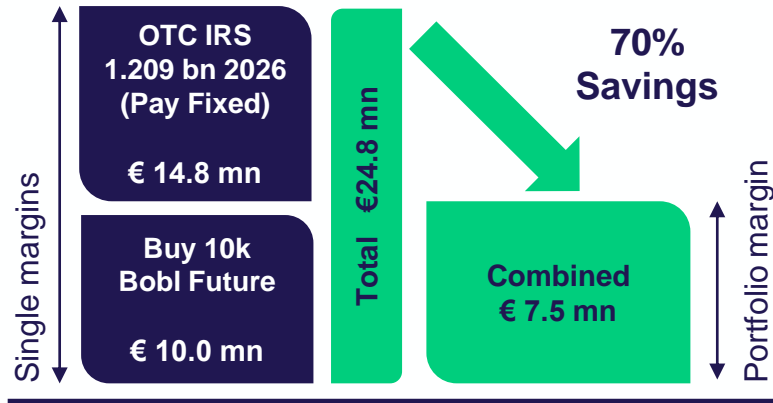
# 3 Examples & Analysis of Cross Product Margining



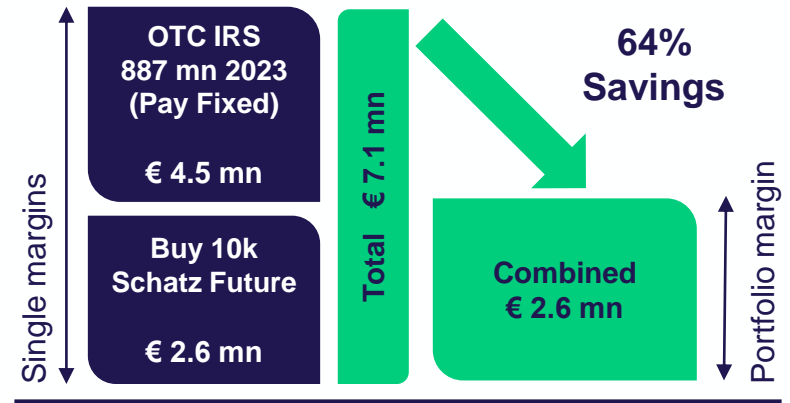
# Additional EUR Asset Swap Examples

Margin savings clearing both transactions through Eurex Clearing between 53% and 72%

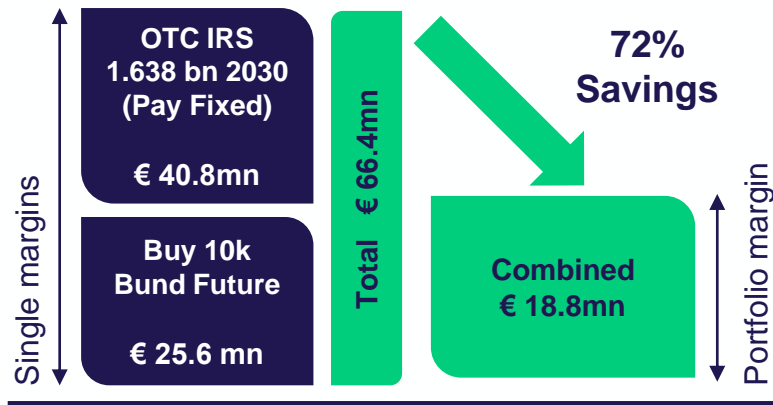
## Bobl Asset Swap



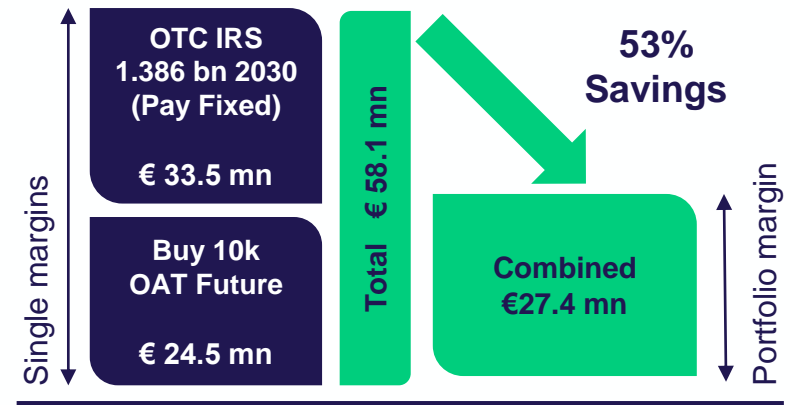
## Schatz Asset Swap



## Bund Asset Swap



## OAT Asset Swap



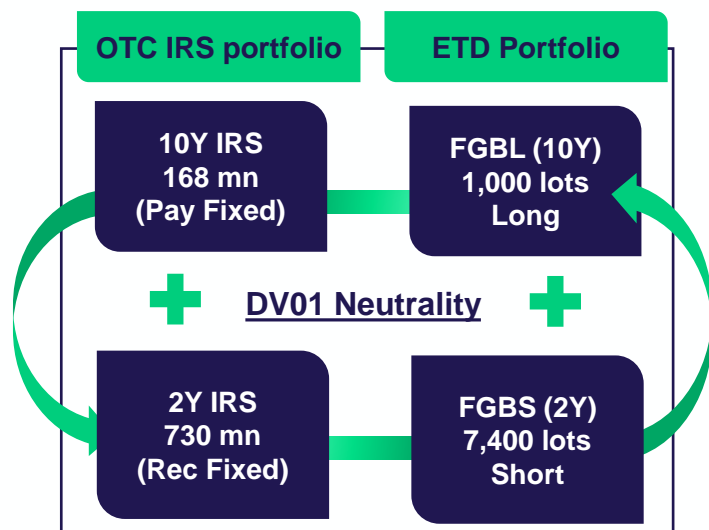
Calculation date used: 6<sup>th</sup> July 2021

**EUREX**

# The enhancements delivered in June allow for a more efficient cross-margining of ETD vs. OTC IRS strategies

## Simulation of margins on Ad-Hoc strategies

### Box trade between futures and IRSs



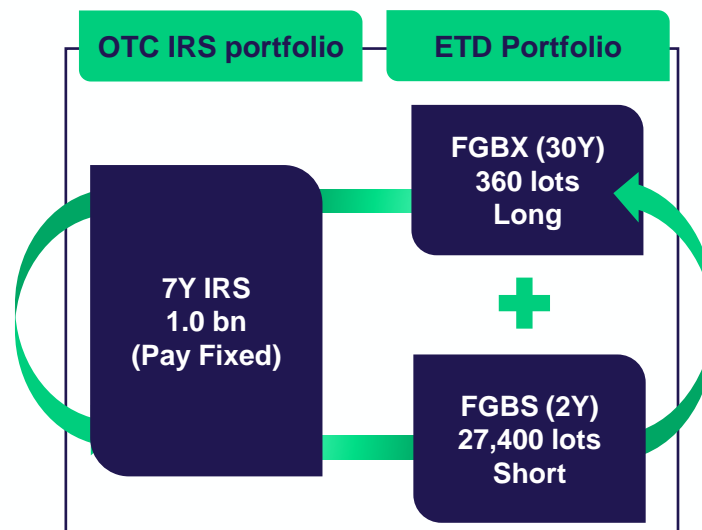
**XM environment prior to June 2021**

Initial Margins: 4.5 mn  
Benefit\* in %: 0%

**Enhanced XM environment**

Initial Margins: 2.25mn  
Benefit\* in %: 50%

### Futures barbell vs. IRS



**XM environment prior to June 2021**

Initial Margins: 24.4 mn  
Benefit\* in %: 17%

**Enhanced XM environment**

Initial Margins: 11.4mn  
Benefit\* in %: 61%

\* The benefits of XM are checked on a simulation based on the cross-margining functionality switched off

# OTC IRS Margin Components

## IRS Margin Components in Terms of Trade Notional

- This table indicates that IM increases with an increase in tenor
- Furthermore, IM notably increases with an increase in notional for 20 yr, 30 yr and 50 yr tenors

Currency	Notional (in million)	Margin Component	Receive Fix						Pay Fix					
			Maturity in Years						Maturity in Years					
			2	5	10	20	30	50	2	5	10	20	30	50
EUR	10	Market Risk	0.25%	0.87%	1.93%	3.99%	7.03%	12.48%	0.45%	1.21%	2.65%	6.13%	11.83%	27.44%
		Liquidity Adjustment	0.01%	0.04%	0.06%	0.16%	0.26%	0.58%	0.01%	0.03%	0.06%	0.16%	0.26%	0.58%
		<b>Total IM</b>	<b>0.26%</b>	<b>0.91%</b>	<b>1.99%</b>	<b>4.15%</b>	<b>7.29%</b>	<b>13.06%</b>	<b>0.45%</b>	<b>1.24%</b>	<b>2.71%</b>	<b>6.28%</b>	<b>12.09%</b>	<b>28.02%</b>
	100	Market Risk	0.25%	0.87%	1.93%	3.99%	7.03%	12.48%	0.45%	1.21%	2.65%	6.13%	11.83%	27.44%
		Liquidity Adjustment	0.01%	0.04%	0.06%	0.16%	0.29%	0.66%	0.01%	0.03%	0.06%	0.16%	0.29%	0.68%
		<b>Total IM</b>	<b>0.26%</b>	<b>0.91%</b>	<b>1.99%</b>	<b>4.16%</b>	<b>7.32%</b>	<b>13.14%</b>	<b>0.45%</b>	<b>1.24%</b>	<b>2.71%</b>	<b>6.29%</b>	<b>12.12%</b>	<b>28.11%</b>
	1,000	Market Risk	0.25%	0.87%	1.93%	3.99%	7.03%	12.48%	0.45%	1.21%	2.65%	6.13%	11.83%	27.44%
		Liquidity Adjustment	0.01%	0.04%	0.08%	0.25%	0.56%	1.54%	0.01%	0.04%	0.07%	0.26%	0.58%	1.59%
		<b>Total IM</b>	<b>0.26%</b>	<b>0.91%</b>	<b>2.01%</b>	<b>4.25%</b>	<b>7.60%</b>	<b>14.02%</b>	<b>0.46%</b>	<b>1.24%</b>	<b>2.72%</b>	<b>6.38%</b>	<b>12.41%</b>	<b>29.03%</b>

Calculation date used: 6<sup>th</sup> July 2021

**Thank you!**

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