



# iTraxx Swaptions Restructuring

ICE Clear Credit

February 2022

V1.0

## An option with underlying index undergoing a restructuring event delivers a combination of Single Name and cash payment, contingent on triggering outcomes of the associated Single Name

- The restructured index-derived Single Name (SN) notional amount,  $N_{RS}$ , can be expressed

$$N_{RS} = \tilde{\omega}_{SN} \times \hat{N}_{OP} \times I_{P/R},$$

where  $\tilde{\omega}_{SN}$  is the index weight of the restructured constituent,  $\hat{N}_{OP}$  is the signed option notional amount exercised or assigned, and  $I_{P/R}$  is +1 for a payer and -1 for a receiver

- Generally, an exercised/assigned option may deliver 2 components associated with a restructured name

(a) SN physical position with notional amount  $N_{RS} \times \omega_{UT}$

(b) Auction cash payment  $[N_{RS} \times \omega_{BT} \times (1 - P_{BT})] + [N_{RS} \times \omega_{ST} \times (1 - P_{ST})]$

where  $\omega_{UT}$ ,  $\omega_{BT}$  and  $\omega_{ST}$  are weights for SN, buyer-triggered cash and seller-triggered cash components, respectively, and  $\omega_{UT} + \omega_{BT} + \omega_{ST} = 1$ .

- Weights are determined based on observed triggered/untriggered notional amounts associated with the SN restructuring event, in general<sup>1</sup>, according to

$$\omega_j = \frac{N_j}{N_{UT} + N_{BT} + N_{ST}},$$

where  $j = UT, BT, ST$ ,  $N_{BT}$  is the buyer-triggered notional amount<sup>2</sup>,  $N_{ST}$  is the seller-triggered notional amount<sup>2</sup>, and  $N_{UT}$  is the untriggered notional amount

- In the interests of simplicity, when  $N_{UT}$  is below a predefined threshold of 20% of  $N_{UT} + N_{BT} + N_{ST}$ , then  $N_{UT}$  is considered zero for determining the weights and the option delivers only the auction cash payment component (b) above.

<sup>1</sup> If expiry date falls within the triggering or movement periods then  $\omega_{UT} = \frac{N_{UT}^E}{N_{UT}^E + N_{BT}^E + N_{ST}^E}$ , where superscript E denotes the last available triggering outcomes at expiry, and  $\omega_j = (1 - \omega_{UT}) \frac{N_j}{N_{BT} + N_{ST}}$ , where  $j = BT, ST$ , and notional amounts without superscripts denote triggering outcomes after triggering and movement periods are complete.

<sup>2</sup> Triggered notional amount that is adhered to an auction bucket for which an auction was held, i.e., excluding triggered notional that, because a movement option was not invoked, remains adhered to a maturity bucket for which an auction was not held.

# EXAMPLE

## The 2016 Norske event can be used to illustrate the behavior of ICC cleared options related to restructuring

