



WRITTEN NOTICE
COMMODITY OPTION DELTA PERMISSION

To: Morgan Stanley International Limited (FRN 218356) (the 'company')

Of: 25 Cabot Square, London, E14 4QA

Date: 20/12/2021

DECISIONS

- (1) In accordance with the discretions afforded to the PRA by Article 358(3) of Regulation 575/2013 of the European Parliament and of the Council of 26th June 2013 on prudential requirements for credit institutions and investment firms as it forms part of retained EU law (the "CRR"), the PRA has decided to grant the company the permission to use its own calculations of delta in its calculation of own funds requirements for market risk in respect of options and warrants on commodities or commodity derivatives on the terms and conditions set out in Annex 1 (the "Commodity Option Delta Permission").
- (2) If the company ceases to comply with the conditions for grant of this Commodity Option Delta Permission set out in Article 358(3) of the CRR, the terms and conditions of the Commodity Option Delta Permission set out in Annex 1, the PRA will re-consider the terms and conditions of the Commodity Option Delta Permission and the requirements relevant to it, including a revocation of the Commodity Option Delta Permission in whole or in part.
- (3) The Commodity Option Delta Permission takes effect on 20/12/2021.

PROCEDURAL MATTERS

- (4) If you wish to challenge the decisions taken by the PRA in relation to the Commodity option Delta Permission, you may refer the matter to the Upper Tribunal.
- (5) Details of the Commodity Option Delta Permission will be published. The full text of this Written Notice will be published.



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PRA contacts

6. For more information concerning this matter generally, the company should contact its usual supervisory contact.

Talib Idris

**Head of Division – Major Overseas Banks
Prudential Regulation Authority**



ANNEX 1
THE COMMODITY OPTION DELTA PERMISSION

Definition

1. The Commodity Option Delta Permission means that the company may use its own calculation of delta to calculate, on a consolidated basis, the own funds requirements for market risk in relation to the exposures described in paragraph 2 of this Annex.
2. In accordance with Article 358(3) of the CRR, the company may use the Commodity Option Delta Permission to calculate the exposure value for the products set out in Annex 2, which are either (i) OTC options or (ii) products traded on an exchange and for which no delta is available from the exchange concerned.

ANNEX 2

Table A

	Categories of Position (see Supervisory Statement SS13/13, para 9.4)			
Risk Categories	Category (1)	Category (2)	Category (3)	Category (4)
Equity Instruments (CRR Article 329)	N/A	Yes	Yes	Yes
Debt Instruments (CRR Article 329)	N/A	Yes	Yes	Yes
Foreign-exchange Risk (CRR Article 352(1))	N/A	Yes	Yes	Yes
Commodities Risk (CRR Article 358)	N/A	Yes	Yes	Yes

Table B

Payoff groups	PRA SS 13/13 Category	Modelling Framework
Accumulator	4	Local Volatility (with or without Stochastic Rates)
American	2	Black-Scholes
Asian	3	Local Volatility (with or without Stochastic Rates)
Autocall	4	Local Volatility (with or without Stochastic Rates)
Barrier	3	Local Volatility (with or without Stochastic Rates)
Basket Option	4	Local Volatility (with or without



		Stochastic Rates)
Callable	4	Local Volatility (with or without Stochastic Rates)
Correlation	4	Local Volatility (with or without Stochastic Rates)
Digital	2	Local Volatility (with or without Stochastic Rates)
Dynamic Index	4	Local Volatility (with or without Stochastic Rates)
Dynamic Momentum Portfolio Insurance	4	Local Volatility (with or without Stochastic Rates)
European	2	Black-Scholes
Exchange Traded Products	2	Local Volatility (with or without Stochastic Rates)
Look-back	3	Local Volatility (with or without Stochastic Rates)
Memory coupon	4	Local Volatility (with or without Stochastic Rates)
Range Accrual	3	Local Volatility (with or without Stochastic Rates)
Target Redemption Note	4	Local Volatility (with or without Stochastic Rates)
Var Swap	4	Local Volatility (with or without Stochastic Rates)
Vol Swap	4	Stochastic Volatility

Table C

Modelling Framework	BU Specific Market Model Implementation	Business Unit	Short description
Black-Scholes	Black Scholes	IED	A constant volatility model developed by Black and Scholes (1960). It is a market standard model for pricing vanilla European options.
Local Volatility (with or without Stochastic Rates)	Local Volatility	IED	Initially derived by Dupire (1994), local volatility is derived from implied (BS) volatility surface. It is used for path dependent products and has become the main workhorse for pricing equity derivatives; in line with wider market practice
	Uncertain Local Volatility	IED	Model developed to price derivatives where underlying volatility mark has some degree of uncertainty. It relies on min/max estimated volatility



			and is guaranteed to produce conservative pricing as long as realised volatility is within the specified bounds. Used for dynamic indices such as voltargets.
	PseudoLocalVol-HullWhite	IED	Is an extension of local volatility model that introduces interest rate stochasticity. It is typically used for calculation of VAs for product groups with significant sensitivity to IR uncertainty. It is approved for and can be used directly for booking though such usage is rare.
	CommodityLV_IRPowerFSV	FID - COM	Local Volatility (Commodity underlying) and Stochastic IR, used for structured products (can be as part of a note)
	FXLocalVol_CommodityLV_IRPowerFSV	FID - COM	Local Volatility (Commodity underlying) and Stochastic IR and FX. Used for structured products with quanto/compo feature or FX hybrid.
	EquityLNPDLSVTypeI_FXLocalVol_IRPowerF	FID - IR	Local Vol with stochastic vol component for commodity underlying, also with Stochastic IR and FX. For cases where the hybrid includes FX underlying, LV is used.
	EquityLNPDLSVTypeI_FXLogNormal_FutureBondStatic_FutureEquityStatic_IRPowerF	FID - IR	Multiple underlying model with Local Stoch Vol component for commodity underlying, also with Stochastic IR and FX. Used for ETF Swaps.
Stochastic Volatility	Stochastic Variance	IED	A market model developed for risk management of simple convex volatility derivatives such as volatility swap, capped variance swap etc.
OIS Discounting	OISVA	All	Adjustments to the trade mark-to-market to reflect OIS discounting.



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ANNEX 3

VERSION CONTROL SCHEDULE

Version	Comment	Authorisation	Date
1	Commodity Option Delta Permission granted	Laura Winchester Head of Division Major Overseas Banks Prudential Regulation Authority	4 December 2020
2.	Granting permission to the Financial Holding Company	SRPC	20 December 2021