

MiFID II Algo Testing

Overview

MiFID II enacts a range of organisational requirements on trading venues that also impact Participants. Cboe requires Participants to test algorithms and must provide some facility to support that testing. Cboe implements this requirement on Participants through its rules. Cboe facilitates Participant testing by simulating a number of conditions as accurately as possible in its UAT environment, including disorderly market conditions.

Specifically, the below conditions are configured on a range of symbols as listed in the table on the following page:

- **Low Load:** These symbols will be configured with a regular load throughout the entire day of one order per second.
- **Medium Load:** These symbols will be configured with a load alternating between one order per second and twenty orders per second, with the higher load having a one-minute interval and five-second duration.
- **High Load:** These symbols will be configured with a load varying between one order per second and one hundred orders per second, with the higher load having a three-minute interval and a three-second duration.
- **Burst Load:** These symbols will have a base load of one order per second and periodically spike to one thousand orders per second, with the higher load having a ten-minute interval and a one-second duration.
- **Dark and Lit Order Book Loaded:** These symbols will have liquidity available in both lit and dark order books, which will be periodically refreshed on execution.
- **Amended Executions (Trade Reports):** Confirmed trade reports will have their price and/or size amended up to a maximum of a half hour after confirmation.
- **Cancelled Executions (Orders):** Order book executions will be cancelled up to a maximum of a half hour after execution.
- **Cancelled Executions (Trade Reports):** Confirmed trade reports will be cancelled up to a maximum of 30 minutes after confirmation.
- **Halted All Day:** These symbols will be halted simulating a regulatory halt for the entire day.
- **Halt State Toggling:** These symbols will toggle between halted and unhalted states on a periodic basis.
- **Cboe Closing Cross (3C):** Crossing periods available on BXE platform for 25 minutes after the specific official market closing times as per <https://markets.cboe.com/newsroom/hours/europe/>.

Behaviour																			Supported Symbols BXE, CXE & DXE (DXE will not have London or Zurich Market Centres)																		
	Amsterdam	Brussels	Copenhagen	Frankfurt	Madrid	Helsinki	Dublin	Praque	London	Milan	Oslo	Paris	Stockholm	Budapest	Lisbon	Vienna	Warsaw	Zurich																			
Low Load	ACCELa	VANb	PNDORc	SIX3d	TLGOe	FIA1Sh	T70i		HSTGI	IFm	SSOo	POXELp	BRAVvs		NVGUu	DOCv		SKINz ZPALz																			
Medium Load	BOLSA	XIORb	SPKSJc	LNSXd	PSGe	ALMAh	ILOAi		RSWI	BSSm	ARCHEo	BX4p	NDAs		SONCU	ATRSv		CSSMZz																			
High Load	ACOMOA	VANb	HHc	MDG1d	ENCE	ENENTh	GRPi		TATEI	LDm	B2Ho	ONXEOp	LUNDBs		SONIU	POSV		SKINz																			
Burst Load	BGHLA	MONTB	HARTc	DBAND	CIEe	BAS1Vh	APGNi		JLGI	PROm	MULTIo	ATEMEp	KLEDs		RENEu	SEMV		GSCIDz																			
ETR Amended*	VALUEa	OPTIb	CBRAIc	VZLAd	ZOTE	PON1Vh	FLTRI	ERBAGk	GYMI SMTI UTIPi	IKGm	NPROo	ABIOp USTP	MYCRs	TAKART	INAU		ENGW	PLUAUz																			
Order Execution Cancelled*	TGETa	RESb	UIEc	ADLd VOWd	GCOe	SCANFh	EG7i	KOFOLk	HEDSI SAGAI WEIRI	RWAYm	NANOo	TNGp VIRPp	WIHLs	MTELET	GPAu	STRv	EURw	C2MVz																			
ETR Cancelled*	ROODa	RETB	SPGc	VNAd WUWd	LREe	PON1Vh SUY1Vh	T70i	MONETk	HEFTI SMIFI UDVDI	CEm	WALWIo	TRIp VCTP	INDUAs	WABERT	SLBENU	EVNV	JSWw	DCGBAz																			
Dark and Lit Book Loaded	NEDAPa	UCBb	CHEMMc	LBRAd	CAFe	ALTIAh	GL9i		LKODI	IGDm	DNOo	ATEMEp L100p	INVEAs		IBSU	PALv		GSCIDz																			
Halted All Day	STRNa	QFGb	VWSc	CBKd LPKd	ALBe	PIHLIh	A5Gi	VIGk	ROSNI TYMNI ULEI	ACEm	GIGo	ETLp WLNp	MYCRs	RABAT	INAU	UBSV	LTSw	VHYLz																			
Halted*	KARDa	COMBb	MATASc	ADSD UZUd	TUBe	FORTMh	MLCI	PEGASK	HFELI REDDI SGROI	DANRm	SBOo	RINp	NOBIs	RICHTt	ALTRu	PYTV	TPEw	SGLDz																			
Active Trading	AGNa DSMa HEIAa INGAa KPNa UNAA VEURa VUSAa	ABIB COFBb COLRb PICb TNETb VANb	DANSKc DSVc HHc NOVOBc RLBc TOPc	BAYNd BMWd CONd DBKd DPWd DTEd EXX1d FMEd IFXd LHAD MUV2d OD7Ld OD7Sd RWEd SIEd	ACSe CABKe FERe IBEe SANE TEFe	ENENTh MOCORh NDAh NESTEH OUT1Vh STERVh	APGNi CRGi GRPi KRZi SK3i T70i	AVSTk CETVk CEZk ERBAGk KOFOLk KOMBk	3NGLI AALI ANTOI AZNI BARCI BHPI DGEI GSKI IAGI IIII ISFI LGENI LLOYI NGI PRUI RELI RIOI SBIDI VODI WPPI	3NGLm BMPsm ENELm FCAm ISPm SRGm SRSm	AKSOo B2Ho DNBo NELO ORKo TELo	ACAp ACp ALOp BNPp CAP FPP GLEp MCP ONXEOp RNOp SANp VKp	ATCOAs HMBs NDAs SANDs SEBAs SHBAs SKABs VOLVBs XACR2s XACTOs	4IGt ANYt CIGPat MOLT OTPt PANNET	BCPU EDPU GALPU NVGU RENEu SONIU SONU	ATRSv CAIv EBSv IIAv POSV SEMV	ALRw CCCW CDRW CPSW PKOW PZUw	AUSAUz CBUS5z JPSRTz ZPALz																			
Open/Close Auctions									MVOLI XMLDI			MSEp																									
Periodic Auctions	PHARMa	PROXB	ATHENC	EVKd FNTNd	SGREe	ROVIOh	IR5Bi		AJBI INPPI NETWI	ENIm	YARo	EDFP TCHp	ATCOBs		PHRU	KTCGv		JBGAUz																			
3C	TOM2a		NEWCAc	DTEd O2Dd	BBVAe	FIA1Sh	IRESi		BARCI GLENi WPPI	UCGm	EQNRo	BX4p KNp	ERICBs TELIAs		RENEu	KTCGv	PKOW	JBGAUz																			

* Every 30 minutes