

RISK NOTICE 2014-009

28th February 2014**NOTICE MARGIN PARAMETERS**

Pursuant to Instruction IV.3-1, LCH.Clearnet SA hereby publishes the calculation method and parameters of the Default Fund contribution for transactions registered in the Cash & Derivatives Clearing System.

This notice concerns enhancements of Default Fund parameters on:

- **Equity, index and currency derivatives contracts listed on Euronext markets (Paris, Brussels, Amsterdam and Lisbon)**

These parameters shall come into effect with the margin call on the morning of 4th **March 2014**, for the positions at the close of 3rd **March 2014**.

The changed SPAN[®] algorithm parameters are printed **in bold** in the appendix.

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ALGORITHM AND PARAMETERS USED FOR UNCOVERED RISKS CALCULATIONS

SECURITIES MARKETS

On Securities markets, the uncovered risk is given by the following formula:

$$\text{Uncovered risk}_D = \text{Stress liquidation risk}_D - (\text{regular liquidation risk}_{D-1} - \text{Min}(\text{negotiation risk}_{D-1}, 0)) - \text{negotiation risk}_D$$

The stress-test, providing stress liquidation risk is performed with the SPAN[®] Cash algorithm and a set of parameters as follows:

- **For stocks:**

Specific risk parameters: X = 24% (for all liquidity classes)

General risk parameter: Y

Liquidity Class	Parameter Y
Liq01	11.2 %
Liq02	29.2 %
Liq03	15%
Liq04	50%

Inter-classes parameters: same as daily Initial Margin

- **For bonds:**

	Duration classes		
	DUR4ZZ [0-1[year	DUR5ZZ [1-4[year	DUR6ZZ [4-30[year
Specific risk parameters X	1.17%	1.34%	2.31%
General risk parameter Y	0.38%	0.39%	0.55%

Intra and inter classes parameters: same as the ones used for daily Initial Margin calculation.

DERIVATIVES MARKETS

The uncovered risk is given by the following formula:

$$\text{uncovered risk}_D = \text{stress risk}_D - \text{Initial Margin}_{D-1} - \text{Variation Margin}_D$$

The stress-test is performed with the SPAN[®] Derivatives algorithm with the following parameters:

- **For equity options and futures**

Range of underlying equity: cf. Appendix 1

Volatility scan range parameters: cf Appendix 1

- **For equity index Derivatives: (Futures and Options)**

Range of underlying index variation and volatility scan range parameters:

Product / Index	Combined Commodity	Underlying Price Scan Range	Volatility scan range
CAC 40	FCE	23%	50%
BEL 20	BXF	24%	50%
AEX	AEX	25%	50%
AEX Light	AEL	25%	50%
AMX	AMX	20%	50%
PSI 20	PSI	22%	-
FTSE Eurofirst 80	FEF	25%	-
FTSE Eurofirst 100	FEO	26.5%	-
FTSE EPRA Euro zone	EPE	22.5%	-
FTSE EPRA Europe	EPR	19%	-
Dividend CAC 40	XFC	24%	-
Dividend AEX	AXF	24%	-
Tracker CAC	CAC	23%	50%
Tracker MSE and ISX	MSE - ISX	24%	50%
DJ STOXX 600 Banks	BNK	25%	41%
DJ STOXX 600 Oil & Gas	LOG	20.5%	41%
DJ STOXX 600 Basic Resources	BRE	33.5%	50%
DJ STOXX 600 Telecom	TEL	16.5%	50%
ETF China Entrepise	ASI	40.5%	50%

- **For currency derivatives:**

Product / Index	Combined Commodity	Underlying Price Scan Range	Volatility scan range
USD/EUR	DEX	11 pb	21%
EUR/USD	EDX	11 pb	21%
GBP/EUR	PEX	10%	20%
GBP/USD	PDX	10%	20%

- **For commodities Derivatives:**

Product / Index	Combined Commodity	Underlying Price Scan Range	Volatility scan range
WHEAT	EBM	18%	21%
RAPESEED	ECO	11%	24%
CORN	EMA	18%	31%
MALTING BARLEY	EOB	17%	49%
SKIMMED MILK Powder	EPL	19%	-

DATE OF CALCULATION AND DATE OF CONTRIBUTION CALL

- **Monthly reviews of the Default Fund**

The date of calculation, i.e. the latest day of the 60 Clearing Days period used for monthly review of the contribution is:

- the latest clearing business day of each month (position at end of day).

- **Date of contribution calls**

The contributions are called on the morning of the 4th Clearing Day of each month.

APPENDIX 1
EQUITY DERIVATIVES LISTED ON EURONEXT PARIS

Combined commodity	Contract code	Name	UPSR* +/-	VSR +/-
ACA	CR1 / AC3	CREDIT AGRICOLE	40%	48%
ACCB	AC1 / AC2	EDENRED	25%	50%
AF	AF1 / AF2 / AFA	AIR FRANCE	27%	43%
AHA	AH1 / AH2	ACCOR	25%	50%
AI	AI1 / AI2	AIR LIQUIDE	20%	41%
AK	AK1	ARKEMA	26%	28%
AL1	AL1	ALTRAN TECHNOLOGIES	25%	34%
ALS	AS1 / AS3	ALSTOM	34%	50%
ATO	AT1	ATOS ORIGIN	28%	35%
BN	DA1 / BN2	GROUPE DANONE	20%	46%
BNP	BN1 / BN3	BNP PARIBAS	41%	50%
CA	CA1 / CA2	CARREFOUR	25%	39%
CAP	CP1 / CA3	CAP GEMINI	34%	40%
CDI	CD1 / CD3	CHRISTIAN DIOR	24%	36%
CGE	CG1 / CG3	ALCATEL - LUCENT	35%	40%
CNP	CN1	CNP ASSURANCES	19%	33%
CO	CO1 / CO2	CASINO GUICHARD	24%	43%
CS	CS1 / CS9	AXA	47%	50%
DG	DG1 / DG2	VINCI	35%	46%
DSY	DS1 / DS3	DASSAULT SYSTEMES	23%	50%
EAD	EA1 / EA3	AIRBUS GROUP	29%	40%
EDF	DF1 / DF3	EDF	24%	46%
EF	EF1	ESSILOR INTERNATIONAL	21%	36%
EN	EN1 / EN9	BOUYGUES	30%	40%
EO	EO1	FAURECIA	31%	50%
EX	EX1 / EX2	VIVENDI	24%	40%
FP	TO1 / TO2	TOTAL	22%	50%
FPCB	FP1 / FP2	TOTAL ARKEMA	22%	50%
FR	FR1 / FR2	VALEO	29%	40%
FTE	FT1 / FT3	ORANGE	23%	45%
GAZ	GA1 / GA3	GDF SUEZ	28%	50%
GLE	GL1 / GL3	SOCIETE GENERALE	41%	50%
HAV	HA1	HAVAS	25%	50%
HO	HO1 / HO2	THALES	22%	28%
KER	KR1 / KR2 / PP1 / PP2	KERING	31%	49%
KN	KN1 / KN2	NATIXIS	50%	50%
LG	LG1 / LG2	LAFARGE	30%	46%
LR1	LR1	LEGRAND	20%	33%
MC	MC1 / MC2	LVMH	26%	45%
ML	ML1 / ML2	MICHELIN	37%	36%
MMB	MM1 / MM3	LAGARDERE SCA	33%	46%
MMT	MT1	M6 METROPOLE TELEVISION	22%	50%
NYX	NY1 / NX1	NYSE EURONEXT INC	36%	50%
OR	OR1 / OR2	L'OREAL	20%	38%
PUB	PU1	PUBLICIS GROUPE	26%	39%
RI	RI1 / RI2	PERNOD-RICARD	29%	39%
RMS	RM1 / RMS	HERMES INTERNATIONAL	25%	50%
RNO	RN1 / RN3	RENAULT	45%	43%
SAG	SM1	SAFRAN	24%	50%
SAN	SA1 / SA3 / AV3	SANOFI-AVENTIS	22%	44%

* UPSR : Underlying Price Scan Range

VSR : Volatility Scan Range

Rate used : Euribor corresponding to maturity, reviewed weekly

Combined commodity	Contract code	Name	UPSR* +/-	VSR +/-
SCR	SC1	SCOR	29%	33%
SE	SE1 / SE2	SUEZ ENVIRONNEMENT	23%	50%
SGO	SG1 / SG3	SAINT-GOBAIN	31%	43%
STM	ST1 / ST3	STMICROELECTRONICS	28%	33%
SU	SU1 / SU2	SCHNEIDER ELECTRIC SA	29%	40%
SW	SW1 / SW2	SODEXO	23%	34%
SZECB	SZ1 / SZ3	COMBO SUEZ	23%	50%
TEC	TE1 / TE3	TECHNIP	27%	38%
TF1	TF1 / TF3	TF1	26%	44%
TMS	TM1 / TM3	TECHNICOLOR	50%	50%
UG	UG1 / UG2	PEUGEOT SA	32%	48%
UL	UL1 / UBL	UNIBAIL RODAMCO	20%	46%
VIE	VI1 / VI3	VEOLIA ENVIRONNEMENT	28%	44%
VK	VA1 / VA2	VALLOUREC	29%	40%

EQUITY OPTIONS LISTED ON EURONEXT BRUSSELS

Combined commodity	Contract code	Name	UPSR* +/-	VSR +/-
AG	AGA / AGB / AGX / AXB	AGEAS New	50%	50%
AGE	AGE	AGFA-GEVAERT	36%	46%
AVH	AVH	ACKERMANS & VAN HAAREN	18%	50%
BAR	BAR	BARCO (NEW)	38%	50%
BEK	BEK	BEKAERT	26%	50%
BLG	BLG	BELGACOM	15%	50%
BPO	BPO	BPOST SA	25%	48%
COL	COL	COLRUYT	15%	31%
DEL	DEL	DELHAIZE GROUP	21%	50%
DXB	DXB / DX1 / DX2	DEXIA	50%	50%
FRB	FRB / FOR / FOO	AGEAS	50%	50%
GBL	GBL	GPE BRUXEL.LAMBERT	20%	50%
GLS	GLS	GALAPAGOS	37%	50%
INT	INT	ANHEUSER-BUSCH INBEV	38%	48%
KBC	KBC	KBC GROEP NV	50%	50%
MOB	MOB	MOBISTAR	32%	50%
NYR	NYR	NYRSTAR	50%	50%
RCU	RCU	ARSEUS NV	25%	30%
RTL	RTL	RTL GROUP	25%	30%
SOL	SOL	SOLVAY	22%	50%
THR	THR	THROMBOGENICS NV	24%	50%
TLN	TLN	TELENET GROUP HOLDING NV	30%	50%
TOTCB	TOT	TOTAL SA	22%	50%
UCB	UCB	UCB SA	31%	50%
UMC	UMC	UMICORE	50%	50%

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EQUITY DERIVATIVES LISTED ON EURONEXT AMSTERDAM

Combined commodity	Contract code	Name	UPSR [*] +/-	VSR +/-
AAI	AAI	AALBERTS INDUSTRIES NV	38%	50%
AGN	AGN / 1AG / 2AG / 4AG / 5AG	AEGON	50%	50%
AH	AH / AHO	KON AHOLD	25%	50%
AKZ	AKZ	AKZO NOBEL	29%	50%
AMG	AMG	AMG ADVANCED METALLURGICAL	34%	44%
AP	AP	APERAM	26%	50%
ARC	ARC	ARCADIS	27%	39%
ASL	ASL / ASO / ALO	ASML HOLDING	28%	50%
ASM	ASM	ASM INTERNATIONAL	44%	50%
BAM	BAM	KONINKLIJKE BAM GROEP	39%	50%
BCK	BCK / BCO	BINCKBANK	35%	50%
BI	BI	BRUNEL INTERNATIONAL	25%	50%
BOS	BOS	BOSKALIS WESTMINSTER NV	28%	41%
CIO	CIO	CORIO NV	22%	50%
CSM	CSM	CORBION NV	27%	50%
DE	DE	DE MASTER BLENDERS	27%	50%
DL	DL	DELTA LLOYD	19%	50%
DSM	DSM	KONINKLIJKE DSM	26%	44%
FUR	FUR	FUGRO	34%	50%
GT1	GT1	GEMALTO	25%	36%
HEI	HEI / HEX	HEINEKEN	20%	36%
HEY	HEY / HMO	HEIJMANS NV	50%	45%
IHC	IHC / SBM	SBM OFFSHORE NV	33%	50%
IM	IM	ROYAL IMTECH NV	48%	50%
ING	ING / INO / 1IN / 2IN / 4IN / 5IN	ING GROEP	50%	50%
KPN	KPN / KPO / 1KP / 2KP / 4KP / 5KP	KON KPN	23%	50%
LC	LC / LCX	LOGICACMG PLC	50%	50%
MDQ	MDQ	MEDIQ	50%	50%
MT	MT / MI3 / 1MT / 2MT / 4MT / 5MT	ARCELOR MITTAL	47%	50%
MTCB	MTZ / MI1	ARCELOR MITTAL COMBO	47%	50%
NSI	NSI	NSI	39%	50%
NUO	NUO / NUC / NXO	NUTRECO HOLDING	24%	50%
NYE	NYE	NYSE EURONEXT INC	36%	50%
OCI	OCI	OCI NV	25%	30%
ORD	ORD / ORO	ORDINA	42%	50%
PHI	PHI / 1PH / 2PH / 4PH / 5PH	KON PHILIPS ELECTRONICS	27%	45%
PNL	PNL	POST NL	50%	50%
RD	RD / 1RD / 2RD / 4RD / 5RD	ROYAL DUTCH SHELL PLC (A)	27%	50%
REN	REN	REED ELSEVIER	24%	48%
RND	RND	RANDSTAD HOLDING	31%	50%
SR	SR	SNS REAAL	50%	50%
TCT	TCT	TEN CATE	20%	45%
TKG	TKG	TKH GROUP	20%	50%
TNE	TNE	TNT EXPRESS	50%	50%
TPGCB	TPO / TPG	COMBO TNT	50%	50%
TTM	TTM	TOMTOM N.V.	50%	50%
UN	UN / UOO	UNILEVER	22%	43%
UNT	UNT	UNIT4 NV	29%	50%
USG	USG	USG PEOPLE NV	31%	50%
VPK	VPK	VOPAK	20%	49%
WAV	WAV / WVX	WAVIN NV	50%	50%
WES	WES	KON WESSANEN	35%	50%
WHV	WHV	WERELDHAVE NV	19%	50%
WKL	WKL	WOLTERS KLUWER	26%	50%
ZGO	ZGO	ZIGGO NV	20%	50%

* UPSR : Underlying Price Scan Range
VSR : Volatility Scan Range
Rate used : Euribor corresponding to maturity, reviewed weekly

FUTURE ON EQUITY LISTED ON EURONEXT LISBON

Combined commodity	Contract code	Name	UPSR* +/-
MBC	MBC	BANCO COMERCIAL PORTUGUES	31%
ESS	ESS	BANCO ESPIRITO SANTO	29%
BBP	BBP	BANCO PORTUGUES DE INVESTIMENTO	34%
BRS	BRS	BRISA AUTO ESTRADAS PORTUGAL	26%
EDR	EDR	EDP RENOVEIS SA	33%
EPM	EPM	ENERGIAS DE PORTUGAL	24%
GAL	GAL	GALP ENERGIA SGPS SA	42%
JMT	JMT	JERONIMO MARTINS	24%
PTS	PTS	PORTUGAL TELECOM	23%
PTA	PTA	ZON OPTIMUS	22%
RNA	RNE/ RNA	REDES ENERGETICAS NACIONAIS	45%
SNA	SNA	SONAE	37%
SNC	SNC	SONAECOM SGPS	29%