

LTD - Margin Collateral Haircut Schedule			15-May-17	
Government Securities (Description & Bloomberg Code)		Term	Haircut (Conventional Bonds)	Haircut (Inflation Linked Bonds)
Australia	Australian Treasury Bill (ACTB) Australian Government Bond (ACGB) Australian Government I/L (ACGB)	11 business days <= 1yr	5.88%	5.88%
		> 1yr <= 3yrs	6.25%	6.25%
		> 3yrs <= 7 yrs	7.50%	7.50%
		> 7yrs <= 11yrs	8.00%	8.00%
		> 11yrs <= 30yrs	11.25%	11.25%
		> 30yrs	NA	NA
Austria	Austrian Treasury Bill (RATB) Austrian Government Bond (RAGB)	4 business days <= 1yr	5.50%	
		> 1yr <= 3yrs	6.25%	
		> 3yrs <= 7 yrs	8.00%	
		> 7yrs <= 11yrs	8.25%	
		> 11yrs <= 30yrs	11.50%	
		> 30yrs	13.63%	
Belgium	Belgian Treasury Bill (BGTB) Belgian Government Bond (BGB)	4 business days <= 1yr	6.13%	
		> 1yr <= 3yrs	7.00%	
		> 3yrs <= 7 yrs	8.75%	
		> 7yrs <= 11yrs	10.00%	
		> 11yrs <= 30yrs	13.25%	
		> 30yrs	17.13%	
Canada	Canadian Treasury Bill (CTB) Canadian Government Bond (CAN) Canada Government Real Return Bond (CAN)	10 calendar days <= 1yr	5.50%	5.50%
		> 1yr <= 3yrs	6.13%	6.13%
		> 3yrs <= 7 yrs	6.88%	6.88%
		> 7yrs <= 11yrs	7.50%	7.75%
		> 11yrs <= 30yrs	9.25%	11.63%
		> 30yrs	10.50%	11.63%
Denmark	Danish Treasury Bill (DGTB) Danish Government Bond (DGB) Danish Government I/L (DGBI)	6 business days <= 1yr	5.63%	5.63%
		> 1yr <= 3yrs	6.25%	6.25%
		> 3yrs <= 7 yrs	7.25%	7.25%
		> 7yrs <= 11yrs	7.88%	7.88%
		> 11yrs <= 30yrs	11.13%	NA
		> 30yrs	NA	NA
Finland	Finnish Treasury Bill (RFTB) Finnish Government Bonds (RFGB)	4 business days <= 1yr	5.50%	
		> 1yr <= 3yrs	6.25%	
		> 3yrs <= 7 yrs	7.25%	
		> 7yrs <= 11yrs	8.00%	
		> 11yrs <= 30yrs	11.50%	
		> 30yrs	NA	
France	Bons du Trésor à Taux Fixe et Intérêt Précompté (BTF) Bons du Trésor à Taux Fixe et Intérêt Annuel (BTNS) Bons du Trésor à Taux Fixe et Intérêt Annuel I/L (BTNS) Obligations Assimilables du Trésor (FRTR) Obligations Assimilables du Trésor I/L (FRTR)	4 business days <= 1yr	5.75%	5.75%
		> 1yr <= 3yrs	6.25%	6.25%
		> 3yrs <= 7 yrs	7.25%	8.25%
		> 7yrs <= 11yrs	7.75%	10.50%
		> 11yrs <= 30yrs	11.75%	12.25%
		> 30yrs	13.88%	NA
Germany	German Treasury Bill (BUBILL) Bundesschatzanweisungen (BKO) Bundesobligationen (OBL) Bundesobligationen I/L (OBLI) Deutsche Bundesrepublik (DBR) Deutschland I/L (DBRI)	3 business days <= 1yr	5.50%	5.50%
		> 1yr <= 3yrs	6.13%	6.13%
		> 3yrs <= 7 yrs	7.25%	8.00%
		> 7yrs <= 11yrs	8.00%	8.50%
		> 11yrs <= 30yrs	12.25%	12.25%
		> 30yrs	12.75%	12.75%
Italy	Buoni Ordinari del Tesoro (BOTS) Buoni del Tesoro Poliennali (BTPS) Buoni del Tesoro Poliennali I/L (BTPS) Certificati di Credito del Tesoro (CCTS)	3 business days <= 1yr	8.00%	8.50%
		> 1yr <= 3yrs	10.50%	11.25%
		> 3yrs <= 7 yrs	14.13%	14.50%
		> 7yrs <= 11yrs	15.88%	20.50%
		> 11yrs <= 30yrs	19.75%	23.25%
		> 30yrs	21.63%	NA
Japan	Japanese Treasury Bill (JGTB) Japanese Treasury Discount Bill (JTDB) Japanese Government Bond (JGB)	6 business days <= 1yr	6.88%	
		> 1yr <= 3yrs	7.50%	
		> 3yrs <= 7 yrs	8.38%	
		> 7yrs <= 11yrs	8.38%	
		> 11yrs <= 30yrs	12.00%	
		> 30yrs	13.63%	

Government Securities (Description & Bloomberg Code)		Term	Haircut (Conventional Bonds)	Haircut (Inflation Linked Bonds)
Luxembourg	Luxembougois Government Bonds (LGB)	5 business days <= 1yr	5.88%	
		> 1yr <= 3yrs	6.50%	
		> 3yrs <= 7 yrs	7.38%	
		> 7yrs <= 11yrs	8.13%	
		> 11yrs <= 30yrs	11.38%	
		> 30yrs	13.63%	
Netherlands	Dutch Treasury Certificate (DTB) Dutch Government Bond (NETHER)	10 business days <= 1yr	5.50%	
		> 1yr <= 3yrs	6.13%	
		> 3yrs <= 7 yrs	7.25%	
		> 7yrs <= 11yrs	7.50%	
		> 11yrs <= 30yrs	11.63%	
		> 30yrs	12.38%	
Norway	Norwegian Treasury Bill (NGTB) Norwegian Government Bond (NGB)	9 business days <= 1yr	5.50%	
		> 1yr <= 3yrs	6.50%	
		> 3yrs <= 7 yrs	7.50%	
		> 7yrs <= 11yrs	8.88%	
		> 11yrs <= 30yrs	NA	
		> 30yrs	NA	
Spain	Spanish Letras del Tesoro (SGLT) Spanish Government Bond (SPGB)	3 business days <= 1yr	7.88%	
		> 1yr <= 3yrs	10.63%	
		> 3yrs <= 7 yrs	14.38%	
		> 7yrs <= 11yrs	16.63%	
		> 11yrs <= 30yrs	22.38%	
		> 30yrs	23.88%	
Sweden	Swedish Treasury Bill (SWTB) Swedish Government Bond (SGB) Swedish Government I/L (SGBI)	4 business days <= 1yr	5.38%	6.00%
		> 1yr <= 3yrs	6.25%	6.88%
		> 3yrs <= 7 yrs	7.50%	7.50%
		> 7yrs <= 11yrs	8.13%	8.13%
		> 11yrs <= 30yrs	11.88%	11.88%
		> 30yrs	NA	NA
Switzerland	Swiss Treasury Bill (SWISTB) Swiss Government Bond (SWISS)	3 business days <= 1yr	5.88%	
		> 1yr <= 3yrs	6.13%	
		> 3yrs <= 7 yrs	7.00%	
		> 7yrs <= 11yrs	7.75%	
		> 11yrs <= 30yrs	12.75%	
		> 30yrs	14.63%	
United Kingdom	United Kingdom Treasury Bill (UKTB) United Kingdom Gilt (UKT) United Kingdom Index Linked Gilt (UKTI)	9 business days <= 1yr	5.50%	5.50%
		> 1yr <= 3yrs	6.25%	7.00%
		> 3yrs <= 7 yrs	7.50%	8.50%
		> 7yrs <= 11yrs	8.25%	10.00%
		> 11yrs <= 30yrs	10.75%	13.13%
		> 30yrs	11.88%	14.13%
United States	United States Treasury Bill (B) United States Treasury Bond (T) United States Treasury Inflation Indexed Bond (TII)	3 business days <= 1yr	5.50%	6.00%
		> 1yr <= 3yrs	6.63%	7.63%
		> 3yrs <= 7 yrs	8.00%	8.25%
		> 7yrs <= 11yrs	8.75%	10.00%
		> 11yrs <= 30yrs	12.50%	16.00%
		> 30yrs	NA	NA

Mortgage Backed Securities (Description & Bloomberg Code)		Term Since Issue	Haircut
US MBS	General National Mortgage Association (GNMA)	New (0 - 30 months)	17.25%
		Medium (30- 60 months)	19.75%
		Seasoned (> 60 months)	NA

Government Agencies (Description & Bloomberg Code)		Term	Haircut
EUR Agencies	Kreditanstalt für Wiederaufbau (KFW) FMS Wertmanagement (FMSWER)	3 business days <= 1yr	5.88%
		> 1yr <= 3yrs	6.13%
		> 3yrs <=7 yrs	7.00%
		> 7yrs <= 11yrs	7.88%
		> 11yrs <= 30yrs	14.63%
		>30yrs	NA
US Agencies	Federal National Mortgage Association (FNMA) Federal Home Loan Mortgage Corporation (FHLMC) Federal Home Loan Banks (FHLB)	3 business days <= 1yr	6.00%
		> 1yr <= 3yrs	6.75%
		> 3yrs <=7 yrs	8.38%
		> 7yrs <= 11yrs	9.25%
		> 11yrs <= 30yrs	12.50%
		>30yrs	NA

Securities issued under Government Credit Guarantee Schemes		Term	Haircut
Australia	Government Guaranteed Bonds	3 business days <= 1yr	6.50%
		> 1yr <= 3yrs	8.25%
		> 3yrs <=7 yrs	
Austria	Government Guaranteed Bonds	3 business days <= 1yr	6.25%
		> 1yr <= 3yrs	8.50%
		> 3yrs <=7 yrs	
France	Government Guaranteed Bonds	3 business days <= 1yr	6.25%
		> 1yr <= 3yrs	9.25%
		> 3yrs <=7 yrs	
Germany	Government Guaranteed Bonds	3 business days <= 1yr	6.00%
		> 1yr <= 3yrs	8.00%
		> 3yrs <=7 yrs	
Netherlands	Government Guaranteed Bonds	3 business days <= 1yr	6.00%
		> 1yr <= 3yrs	8.00%
		> 3yrs <=7 yrs	
Sweden	Government Guaranteed Bonds	3 business days <= 1yr	6.00%
		> 1yr <= 3yrs	9.75%
		> 3yrs <=7 yrs	

FX Haircuts (Cash & Non-cash) & Other Stipulations																																																	
Haircuts	FX (Cash & Non-Cash)	<p>A 5.25% incremental FX haircut has been applied to all non-cash securities in the schedule above, regardless of the currency of the asset.</p> <p>Using the grid below, LCH will apply a further incremental FX haircut in any instances where (i) there is a mismatch between the main currency of risk on the cleared positions and currency of collateral (cash and non-cash) and (ii) the implied FX haircut using the grid is greater than the 5.25% already applied to the non-cash securities.</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="3">Liability Currency</th> </tr> <tr> <th>USD</th> <th>EUR</th> <th>GBP</th> </tr> </thead> <tbody> <tr> <th>USD</th> <td>0.0%</td> <td>4.0%</td> <td>4.8%</td> </tr> <tr> <th>EUR</th> <td>4.1%</td> <td>0.0%</td> <td>3.7%</td> </tr> <tr> <th>GBP</th> <td>5.0%</td> <td>3.8%</td> <td>0.0%</td> </tr> <tr> <th>AUD</th> <td>6.5%</td> <td>5.5%</td> <td>5.5%</td> </tr> <tr> <th>CHF</th> <td>5.2%</td> <td>4.2%</td> <td>5.9%</td> </tr> <tr> <th>JPY</th> <td>4.4%</td> <td>5.9%</td> <td>8.0%</td> </tr> <tr> <th>SEK</th> <td>5.0%</td> <td>3.3%</td> <td>5.4%</td> </tr> <tr> <th>DKK</th> <td>4.1%</td> <td>0.1%</td> <td>3.7%</td> </tr> <tr> <th>NOK</th> <td>5.0%</td> <td>3.9%</td> <td>4.6%</td> </tr> <tr> <th>CAD</th> <td>4.1%</td> <td>4.3%</td> <td>4.2%</td> </tr> </tbody> </table>		Liability Currency			USD	EUR	GBP	USD	0.0%	4.0%	4.8%	EUR	4.1%	0.0%	3.7%	GBP	5.0%	3.8%	0.0%	AUD	6.5%	5.5%	5.5%	CHF	5.2%	4.2%	5.9%	JPY	4.4%	5.9%	8.0%	SEK	5.0%	3.3%	5.4%	DKK	4.1%	0.1%	3.7%	NOK	5.0%	3.9%	4.6%	CAD	4.1%	4.3%	4.2%
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Additional	Certain collateral can at times be subject to additional haircuts above those stated. Members lodging this collateral will be contacted directly as appropriate, and further detail can be obtained by contacting LCH.																																																
Market of Issue	<p>Government securities must be issued in the home country of the issuer and be denominated in the domestic currency to be acceptable.</p> <p>Government agencies and securities issued under Government Credit Guarantee Schemes must both be issued in the home country of the issuer and be denominated in the domestic currency to be acceptable. These instrument categories are maintained using ISIN lists.</p>																																																

<b>Maximum Term Maturity</b>	<p>Haircuts have been set appropriately to reflect the current maximum term maturity for each issuer. Any new issuances of maturity greater than the existing will need to be assessed before being accepted as margin collateral.</p> <p>Conventional Bonds maximum eligible term:  Australia: 25 yrs  Denmark: 25 yrs  Finland: 30 yrs  Germany: 32 yrs  Norway: 11 yrs  Sweden: 30 yrs  United States: 30 yrs</p> <p>Inflation Linked Bonds maximum eligible term:  Australia ILB: 25 yrs  Denmark ILB: 11 yrs  France ILB: 30 yrs  Italy ILB: 30 yrs  Sweden ILB: 30 yrs  United States ILB: 30 yrs</p>
<b>Excluded Instruments</b>	Zero coupon bonds, stripped bonds and perpetual bonds Japanese Govt FRNs and Japanese Govt ILBs
<b>Concentration Controls</b>	In addition to the concentration limits in place upon particular asset types as noted above, LCH reserves the right to manage specific concentrations in margin collateral in all circumstances. Where positions are considered to be excessively concentrated, members will be contacted directly with a view to re-alignment of their portfolio.
<b>Swiss Bonds</b>	Swiss Bonds can currently only be accepted via the tri-party service offered at EuroClear and Clearstream.