OTC Clearing Hong Kong Limited ("OTC Clear")
Risk Limit Maintenance Form

To: OTC Clear Clearing Risk Management
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8 Connaught Place
Hong Kong
Tel: 2211 6753
Fax: 2427 1122

From: _____
_____
(Full name of Clearing Member)

OCASS Clearing Member ID
(If available): |__|__|__|__|__|__|__|__|__|__|__|__|

Name of Contact Person: _____
Tel: _____
Fax: _____
Email: _____

PART I – Basic Information

Account Type (Please check the box)	☐ House ☐ Client
Purpose	☐ New Limit ☐ To revise existing limit
Account Name (applies if account type is "client")	
Risk Limit Type[1]	☐ Delta_01 ☐ FX_delta ☐ Net Notional ☐ Absolute Notional

Please note that (i) OTC Clear reserve the right to revise/amend the Limit Amount, and

PART II – Risk Limit Amount[2]

Delta_01 (in million)

	Limit Currency	1Y	3Y	5Y	10Y	15Y
☐ **All products below**	USD					
☐ USD IRS[3]	USD					N/A
☐ EUR IRS[4]	USD					N/A
☐ CNH IRS	USD					N/A
☐ HKD IRS[5]	USD					
☐ CNY NDIRS	USD				N/A	N/A
☐ TWD NDIRS	USD					N/A
☐ INR NDIRS	USD					N/A
☐ KRW NDIRS	USD					N/A
☐ MYR NDIRS	USD					N/A
☐ THB NDIRS	USD					N/A
☐ USD/CNH CCS	USD					N/A
☐ USD/HKD CCS	USD					N/A

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[1] Clearing Members must set up at least one applicable Risk Limit Type for any product(s) selected on "Request for Change of Products Accepted for Clearing" form ("Applicable Products"), and fill in the corresponding figure(s) for all tenors in Part II. Submitted form will be rejected if otherwise.

[2] If a Clearing Member intends to allocate risk limit for a particular Risk Limit Type among the group of "All IR products" and/or "All FX products", they should specify relevant risk limit amount on each Applicable Product under the same group. For all tenors of "All IR products" and/or "All FX products", the risk limit amount(s) of which must be equal to the sum of risk limit(s) for the products among the same group.

[3] Including USD single currency IRS and USD basis swap.

[4] Including EUR single currency IRS and EUR basis swap.

[5] Including HKD single currency IRS and HKD basis swap.

FX_Delta (in million)

	Limit Currency	1M	3M	6M	2Y	5Y	10Y	*All tenors*[6]
☐ **All products below**	USD							
☐ USD/CNY NDF	USD					N/A	N/A	
☐ USD/TWD NDF	USD					N/A	N/A	
☐ USD/INR NDF	USD					N/A	N/A	
☐ USD/KRW NDF	USD					N/A	N/A	
☐ USD/CNH CCS	USD							
☐ USD/HKD CCS	USD							
☐ USD/CNH FXForward[7]	USD						N/A	
☐ USD/HKD FXForward[7]	USD						N/A	
☐ USD/CNH FXSwap	USD						N/A	
☐ USD/HKD FXSwap	USD						N/A	

Net Notional (in million)

	Limit Currency	1Y	3Y	5Y	10Y	15Y
☐ **All IR products below**	USD					
☐ USD IRS[8]	USD					N/A
☐ EUR IRS[9]	USD					N/A
☐ CNH IRS	USD					N/A
☐ HKD IRS[10]	USD					
☐ CNY NDIRS	USD				N/A	N/A
☐ TWD NDIRS	USD					N/A
☐ INR NDIRS	USD					N/A
☐ KRW NDIRS	USD					N/A
☐ MYR NDIRS	USD					N/A
☐ THB NDIRS	USD					N/A
☐ USD/CNH CCS	USD					N/A
☐ USD/HKD CCS	USD					N/A

	Limit Currency	1M	3M	6M	2Y	5Y[11]
☐ **All FX products below**	USD					
☐ USD/CNY NDF	USD					N/A
☐ USD/TWD NDF	USD					N/A
☐ USD/INR NDF	USD					N/A
☐ USD/KRW NDF	USD					N/A
☐ USD/CNH FXForward[7]	USD					
☐ USD/HKD FXForward[7]	USD					
☐ USD/CNH FXSwap	USD					
☐ USD/HKD FXSwap	USD					

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[6] CM can fill either "individual tenors" or "All tenors"
[7] Including FXSpot
[8] USD Basis Swap is excluded.
[9] EUR Basis Swap is excluded.
[10] HKD Basis Swap is excluded.
[11] The actuality tenor pleaes refer to the CMs' application of eligible product. Eg. FXD is 3Y.

Absolute Notional (in million)

	Limit Currency	1Y	3Y	5Y	10Y	15Y
☐ **All IR products below**	USD					
☐ USD IRS	USD					N/A
☐ EUR IRS	USD					N/A
☐ CNH IRS	USD					N/A
☐ HKD IRS	USD					
☐ CNY NDIRS	USD					N/A
☐ TWD NDIRS	USD					N/A
☐ INR NDIRS	USD					N/A
☐ KRW NDIRS	USD					N/A
☐ MYR NDIRS	USD					N/A
☐ THB NDIRS	USD					N/A
☐ USD/CNH CCS	USD					N/A
☐ USD/HKD CCS	USD					N/A
	Limit Currency	1M	3M	6M	2Y	5Y[11]
☐ **All FX products below**	USD					
☐ USD/CNY NDF	USD					N/A
☐ USD/TWD NDF	USD					N/A
☐ USD/INR NDF	USD					N/A
☐ USD/KRW NDF	USD					N/A
☐ USD/CNH FXForward[7]	USD					
☐ USD/HKD FXForward[7]	USD					
☐ USD/CNH FXSwap	USD					
☐ USD/HKD FXSwap	USD					

Authorized Signature(s)

(Name of Signatories:)

Authorized Signature(s)

(Name of Signatories:)

For Office Use Only	
Reviewed by: *Date:*	*Approved by:* *Date:*

Disclaimer

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Appendix 1: Explanatory Notes on Delta_01 Risk Limit Set Up

Firstly, the delta_01 refers to the change in Net Present Value (NPV) of the IRS or CCS position when yield curve(s) is shocked by 1 basis point.

Secondly, the denominated limit currency will be **in USD**.

Thirdly, the limit can be specified for each IRS, NDIRS or CCS product individually or in aggregate, which means:

- By each IRS product : USD, EUR, CNH, HKD; or
- By each NDIRS product : CNY, KRW, INR, TWD, THB, MYR; or
- By each CCS product : USD/CNH; or
- All Interest Rate products clearable via OTC Clear.

Finally, as delta_01 calculated by OCASS can be a positive or a negative value the risk limit specified by Clearing Members represents the maximum and minimum delta_01 limit. For example if a Clearing Member specifies 5 million delta_01 limit for all IRS products, then actual delta_01 for all of the Clearing Member's IRS product cannot exceed **+5 million** or fall behind **-5 million** USD respectively. In OCASS[12]:

- Clearing members' receive-fixed IRS position(s) will have positive delta_01;
- Clearing members' pay-fixed IRS position(s) will have negative delta_01;

How Delta_01 risk limit works

Assume Clearing Member XYZ specifies a risk limit as follows and has no trade in the portfolio. If XYZ submits the two USD IRS trades:

- Trade 1 – 1.5Y maturity and receive fix with delta_01 of 0.25 million USD
- Trade 2 – 6.5Y maturity and paying fix with delta_01 of -0.75 million USD

Table 1

Product	Tenor	Risk limit (in million USD)	Used(in million USD)
USD IRS	1Y	5	0
	3Y	4	0.25
	5Y	3	0
	10Y	2	-0.75

Figure in the table is for illustration purpose only.

- Delta_01 of trade 1 will be aggregated into the 3Y tenor (trade maturity is between 1 year and 3 years) and compare the amount with risk limit into the 3Y bucket (i.e. 4 million USD).

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[12] Assume the position is a par trade. However please note that the delta_01 will change subject to market data and/or trade terms.

- Delta_01 of trade 2 will be aggregated into the 10Y tenor (trade maturity is between 5 year and 10 years) and compare the amount with risk limit into the 10Y bucket (i.e. 2 million USD)

With the information in table 1, once the limit utilization (i.e. used divided by Risk limit reaches 100%) in the 3Y tenor bucket equal to or exceeds ±4 million USD, for each subsequent USD IRS trade[13]:

- The trade will not pass limit check if (i) its remaining maturity falls into the 3Y tenor bucket and (ii) it cannot reduce the limit utilization (below 100%).

- The trade will pass limit check if (i) its remaining maturity falls into other tenor buckets (i.e.1Y, 5Y, 10Y) or (ii) its remaining maturity falls into the 3Y tenor bucket but it can reduce limit utilization (below 100%).

Assume one year of time has passed and portfolio does not change at all i.e. trade 1 and 2 are only two trades in member XYZ's portfolio, then OCASS will show the information below[14]:

Table 2

Product	Tenor	Risk limit (in million USD)	Used(in million USD)
USD IRS	1Y	5	0.25
	3Y	4	0
	5Y	3	0
	10Y	2	-0.75

Figure in the table is for illustration purpose only.

As the remaining maturity of trade 1 becomes 0.5 year, the delta_01 of trade 1 will be aggregated into the 1Y tenor bucket instead of the 3Y tenor bucket, while remaining maturity of trade 2 is 5.5 years so the trade is still in the 10Y tenor bucket. Please note that the Delta_01 for both trades may change according to various market factors such as rates movement, remaining maturity, etc.

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[13] See 4.6.2 and 4.6.3, Chapter 4 –Margin and Valuation of OTC Clearing Hong Kong Limited Clearing Procedures.
[14] Assume no decay in delta_01 for easier understanding.

Appendix 2: Explanatory Notes on FX_delta Risk Limit Set Up

Firstly, the FX_delta refers to the change in Net Present Value (NPV) of the Non Deliverable Forward (NDF) or Cross Currency Swap (CCS) position when the forward curve is shocked in parallel by 1 pip[15] (0.0001).

Secondly, the denominated limit currency will be **in USD**.

Thirdly, the limit can be specified for each NDF or CCS product or in aggregate, which means:

- By each NDF product : USD/CNY, USD/KRW, USD/INR, USD/TWD; or
- By each CCS product : USD/CNH; or
- All FX products clearable via OTC Clear.

Finally, as FX_delta calculated by OCASS can be a positive or a negative value the risk limit specified by Clearing Members represents the upper and lower bound of FX_delta limit. For example if a Clearing Member sets FX_delta limit to 2 million for all NDF products, then actual FX_delta for all of the Clearing Member's NDF product cannot exceed **+2 million** or fall behind **-2 million** USD respectively. In OCASS:

- Clearing members' long primary currency i.e. USD position(s) will have positive FX_delta;
- Clearing members' short primary currency i.e. USD position(s) will have negative FX_delta;

How FX_delta risk limit works

Assume Clearing Member XYZ specifies a risk limit as follows and has no trade in the portfolio. If XYZ submits the two USD/CNY NDF trades:

- Trade 1 – 5M maturity long USD position with FX_delta of 0.1 million USD
- Trade 2 – 1Y maturity short USD position with FX_delta of -0.3 million USD

Table 3

Product	Tenor	Risk limit (in million USD)	Used(in million USD)
USD/CNY NDF	1M	5	0
	3M	4	0
	6M	3	0.1
	2Y	2	-0.3

Figure in the table is for illustration purpose only.

- FX_delta of trade 1 will be aggregated into the 6M tenor (trade maturity is between 3 months and 6 months) and compare the amount with risk limit in bucket (i.e. 3 million USD).

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[15] It is an acronym for Percentage in Point.

- FX_delta of trade 2 will be aggregated into the 2Y tenor (trade maturity is between 6 months and 2 years) and compare the amount with risk limit into the 2Y bucket (i.e. 2 million USD)

With the information in table 3, once the limit utilization (i.e. used divided by Risk limit reaches 100%) in 6M tenor bucket equals to or exceeds ±3 million USD, for each subsequent USD/CNY NDF trade[16]:

- The trade won't pass limit check if (i) its remaining maturity falls into 6M tenor bucket and (ii) it cannot reduce the limit utilization (below 100%).

- The trade will pass limit check if (i) its remaining maturity falls into other tenor buckets (i.e.1M, 3M, 2Y) or (ii) its remaining maturity falls into 6M tenor bucket but it can reduce limit utilization (below 100%).

Assume three months of time has passed and portfolio doesn't change at all i.e. trade 1 and 2 are only two trades in member XYZ's portfolio, then OCASS will show the information below[17]:

Table 4

Product	Tenor	Risk limit (in million USD)	Used(in million USD)
USD/CNY NDF	1M	5	0
	3M	4	0.1
	6M	3	0
	2Y	2	-0.3

Figure in the table is for illustration purpose only.

As the remaining maturity of trade 1 becomes 2 months, the FX_delta of trade 1 will be aggregated in the 3M tenor bucket instead of the 6M tenor bucket, while remaining maturity of trade 2 is 9 months so the trade is still in the 2Y tenor bucket. Please note that the FX_delta for both trades will change according to various market factors such as spot/forward rates movement, remaining maturity, etc.

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[16] See 4.6.2 and 4.6.3, Chapter 4 –Margin and Valuation of OTC Clearing Hong Kong Limited Clearing Procedures.
[17] Assume no decay in FX_delta for easier understanding.

Appendix 3: Explanatory Notes on Net Notional Risk Limit Set Up

Firstly, net notional risk limit refers to the net notional value of combining the long and short eligible products' positions according to the defined criteria e.g., denominated in the same currency and/or within the same tenor bucket. For example, 1 million USD quarterly pay-fixed IRS and 1 million USD monthly receive-fixed IRS within the same tenor bucket e.g., less than 1 year will be netted i.e. 0 in net notional risk limit calculations. Hence this limit serves as a cap on the net direction notional exposure, especially for clients' position.

Secondly, the denominated limit currency for net notional risk limit will be **in USD**.

Thirdly, except for USD basis swap and EUR basis swap, theoretically the limit can be specified for each IRS /NDIRS /NDF /CCS products individually or in aggregate, which means:

- By each IRS product : USD, EUR, CNH, HKD
- By each NDIRS product : CNY, KRW, INR, TWD, THB, MYR
- By each NDF product : USD/CNY, USD/KRW, USD/INR, USD/TWD
- By each CCS product : USD/CNH
- All IR products (included IRS, NDIRS & CCS, but except for USD basis swap and EUR basis swap) clearable via OTC Clear.
- All FX products (included NDF) clearable via OTC Clear.

Finally, as the net notional can be a positive or a negative value, the risk limit specified by Clearing Members represents the upper and lower bound of net notional limit. For example if a Clearing Member sets net notional limit to 2 million for all NDF products, then actual net notional for all of the Clearing Member's NDF product cannot exceed **+2 million** or fall behind **-2 million** USD respectively. In OCASS:

For IRS products

- Clearing members' pay-fixed IRS position(s) will have positive notional;
- Clearing members' receive-fixed IRS position(s) will have negative notional;

For NDF Products

- Clearing members' long primary currency i.e. USD position(s) will have positive notional;
- Clearing members' short primary currency i.e. USD position(s) will have negative notional;

How Net Notional risk limit works

Assume Clearing Member XYZ specifies a risk limit as follows and has no trade in the portfolio. If XYZ submits 3 USD IRS trades:

- Trade 1 – 2Y maturity and quarterly pay fix with notional of 20 million USD
- Trade 2 – 2.5Y maturity and semi-annually receive fix with notional of 15 million USD
- Trade 3 – 7Y maturity and annually pay fix with notional of 10 million USD

Then the OTC Clearing System will show the information below:

Table 5

Product	Tenor	Risk limit (in million	Used (in million USD)
USD IRS	1Y	300	0
	3Y	200	5
	5Y	150	0
	10Y	100	10

Figure in the table is for illustration purpose only.

- Notional of trade 1 and 2, both are USD IRS trades within the same tenor bucket. Regardless of the relevant economic terms e.g., coupon frequency, will be netted into the 3Y tenor (trade maturity is between 1 year and 3 years) and compared against the amount with risk limit in the 3Y bucket (i.e. 200 million USD).
- Notional of trade 3 will be counted in to the 10Y tenor (trade maturity is between 5 year and 10 years) and compared against the amount with risk limit in the 10Y bucket (i.e. 100 million USD)

With the information in table 5, once the limit utilization (i.e. used divided by Risk limit reaches 100%) in 3Y tenor bucket equal to or exceeds ±200 million USD, for each subsequent USD IRS trade[18]:

- The trade won't pass limit check if (i) its remaining maturity falls into the 3Y tenor bucket and (ii) it cannot reduce the limit utilization (below 100%).
- The trade will pass limit check if (i) its remaining maturity falls into other tenor buckets (i.e.1Y, 5Y, 10Y) or (ii) its remaining maturity falls into the 3Y tenor bucket but it can reduce limit utilization (below 100%).

Assume one year of time has passed and portfolio does not change i.e. trade 1 and 2 are only two trades in member XYZ's portfolio, then OCASS will show the information below:

Table 6

Product	Tenor	Risk limit (in million USD)	Used (in million USD)
USD IRS	1Y	300	20
	3Y	200	-15
	5Y	150	0
	10Y	100	10

Figure in the table is for illustration purpose only.

As the remaining maturity of trade 1 becomes 1 year, the notional of trade 1 will be aggregated into the 1Y tenor bucket instead of the 3Y tenor bucket, while remaining maturity of trade 2 is 1.5 years the notional of the trade will be counted into the 3Y tenor bucket. The notional of trade 3 will still be counted into the 10Y bucket as its remaining maturity is 6 years.

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[18] See 4.6.2 and 4.6.3, Chapter 4 –Margin and Valuation of OTC Clearing Hong Kong Limited Clearing Procedures.

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Appendix 4: Explanatory Notes on Absolute Notional Risk Limit Set Up

Firstly, absolute notional risk limit refers to the notional value of combining the long and short positions. For example, 1 million USD pay-fixed IRS and 1 million USD receive-fixed IRS will be counted as 2 million USD in absolute notional risk limit calculations i.e. no netting.

Secondly, the denominated limit currency for absolute notional risk limit will be **in USD**.

How Absolute Notional risk limit works

Assume Clearing Member XYZ sets up a risk limit as follows and has no trade in the portfolio. If XYZ submits the two USD IRS trades:

- Trade 1 – 2Y maturity and receive fix with notional of 20 million USD
- Trade 2 – 7Y maturity and pay fix with notional of 10 million USD

Then OCASS will show the information below:

Table 7

Product	Tenor	Risk limit (in million USD)	Used (in million USD)
All IR products	1Y	300	0
	3Y	200	20
	5Y	150	0
	10Y	100	10

Figure in the table is for illustration purpose only.

- Notional of trade 1 will be aggregated into the 3Y tenor (trade maturity is between 1 year and 3 years) and compare the amount with risk limit into the 3Y bucket (i.e. 200 million USD).
- Notional of trade 2 will be aggregated into the 10Y tenor (trade maturity is between 5 year and 10 years) and compare the amount with risk limit into the 10Y bucket (i.e. 100 million USD)

With the information in table 7, once the limit utilization (i.e. used divided by Risk limit reaches 100%) in 3Y tenor bucket equal to or exceeds 200 million USD notional, for each subsequent IRS trade[19]:

- The trade will not pass limit check if its remaining maturity falls into the 3Y tenor bucket, or
- The trade will pass limit check if its remaining maturity falls into other tenor buckets (i.e.1Y, 5Y, 10Y).

Assume one year of time has passed and portfolio does not change i.e. trade 1 and 2 are only two trades in member XYZ's portfolio, then OCASS will show the information below:

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[19] See 4.6.2 and 4.6.3, Chapter 4 –Margin and Valuation of OTC Clearing Hong Kong Limited Clearing Procedures.

Table 8

Product	Tenor	Risk limit (in million USD)	Used (in million USD)
All IR products	1Y	300	20
	3Y	200	0
	5Y	150	0
	10Y	100	10

Figure in the table is for illustration purpose only.

As the remaining maturity of trade 1 becomes 1 year, the notional of trade 1 will be aggregated into the 1Y tenor bucket instead of the 3Y tenor bucket, while the remaining maturity of trade 2 is 6 years so the trade is still in the 10Y tenor bucket.