

**Operational Trading Procedures for Options Trading Exchange Participants**

**APPENDIX H: CLIENT MARGINING USING THE PRiME CALCULATION ALGORITHM**

**H1. Margin Required in Respect of Client, NCP or Options Broker Exchange Participant**

Options Exchange Participants should margin their clients, NCPs or Options Broker Exchange Participants using the same algorithm as that employed by SEOCH but ~~with a wider margin interval multiplied by a factor~~ as prescribed by SEOCH from time to time. ~~The corresponding Risk Parameters File will be provided by SEOCH to SEOCH Participants to facilitate their calculation of margin requirements. Please refer to the PRiME Margining Guide for illustration of the calculation.~~

In exceptional cases, an Options Exchange Participant may margin a client, NCP or Options Broker Exchange Participant without adopting the above-mentioned factor as prescribed by SEOCH ~~using the same margin interval as SEOCH~~. To qualify for such margining, the Options Officer of the Options Exchange Participant must make a determination in writing that the financial resources and the margin payment arrangement made by the client, NCP or Options Broker Exchange Participant justify such treatment. The Options Exchange Participant must notify the Exchange in writing directly in respect of every such determination made.

**H3. [Repealed] EXAMPLE**

**~~H3.1 Writing an uncovered out-of-the-money Call~~**

~~An investor writes one uncovered HKZ Jun 50 Call. The Currency of the Contract is Hong Kong dollars and the lot size is 1,000 shares. The current premium is HK\$5. The current market price of the underlying share, HKZ, is HK\$48.~~

Basic Requirement

Current premium	HK\$ 5,000	
+ 20% x HK\$48,000	<u>+ 9,600</u>	
	-14,600	
— Out of the money amount		
i.e. (HK\$50 - HK\$48) * 1,000	<u>- 2,000</u>	
Margin required	HK\$12,600	(i)

Minimum Requirement

Current premium	HK\$ 5,000	
+10% x HK\$48,000	<u>+4,800</u>	
Margin required	HK\$ 9,800	(ii)

The margin required is the greater of (i) and (ii) i.e. HK\$12,600.

**H3.2 Writing an uncovered in-the-money Put**

An investor writes one uncovered CHX Mar 60 Put. The Currency of the Contract is Hong Kong dollars. Its current premium is HK\$11.00. The current market price of CHX is HK\$50. The lot size is 500.

Basic Requirement

Current premium (500 x HK\$11)	HK\$ 5,500	
+ 20% x HK\$25,000	<u>+ 5,000</u>	
	10,500	
— Out-of-the-money amount	<u>— 0</u>	
Margin required	-HK\$10,500	(i)

Minimum Requirement

Current premium	HK\$ 5,500	
+10% x HK\$25,000	<u>+ 2,500</u>	
Margin required	HK\$ 8,000	(ii)

The margin required is the greater of (i) and (ii), i.e., HK\$10,500.

**H3.3 Writing a Covered Call**

A client is considered to have written a covered call if he owns the underlying stock.

The number of shares held must not be less than the number of shares over which the call options are granted. Any options written in excess of the shares held will not be considered covered. The securities covering the option must have been lodged with SEOCH as coverage and must be deposited into the A1 account.

The writer of a covered call need not deposit margin for the option.

### ~~H3.4 Pending Stock Delivery~~

~~An investor is required to deliver 10 lots of stock HKZ at an exercise price of HK\$100 as a result of assignment. The board lot size of HKZ is 1,000.~~

~~If the underlying price is HK\$110, the margin required from him is the maximum of:~~

- ~~1.  $((120\% * \text{HK\$}110) - \text{HK\$}100) * 10 * 1,000 = \text{HK\$}320,000$~~
- ~~2. 0~~

~~which is HK\$320,000.~~

~~If the underlying price is HK\$83, the margin required from him is the maximum of:~~

- ~~1.  $((120\% * \text{HK\$}83) - \text{HK\$}100) * 10 * 1,000 = \text{HK\$}4,000$~~
- ~~2. 0~~

~~which is HK\$0.~~

### ~~H3.5 Pending Stock Receipt~~

~~An investor is required to pay for 10 lots of stock HKZ at an exercise price of HK\$100 as a result of assignment. The board lot size of HKZ is 1,000.~~

~~If the underlying price of HKZ is HK\$90, the margin required from him is the maximum of:~~

- ~~1.  $(\text{HK\$}100 - (80\% * 90)) * 10 * 1,000 = \text{HK\$}280,000$~~
- ~~2. 0~~

~~which is HK\$280,000.~~

~~If the underlying price is HK\$127, the margin required from him is the maximum of:~~

- ~~1.  $(\text{HK\$}100 - (80\% * \text{HK\$}127)) * 10 * 1,000 = \text{HK\$}16,000$~~
- ~~2. 0~~

~~which is HK\$0.~~

### ~~H3.6 Short a Straddle or a Strangle~~

~~An investor sells the following straddle on CHZ, with Hong Kong dollars as its Currency of the Contract and a board lot size of 100:~~

~~Sell 10 CHZ May 50 Puts  
Sell 10 CHZ May 50 Calls~~

To determine the margin for the position, first calculate whether the short calls or short puts have the greater margin requirement.

If the current premium for the put is HK\$3 and the call is HK\$7, and CHZ is currently worth HK\$52, then

<u>Margin for Calls</u>		<u>Margin for Puts</u>	
Current premium	HK\$ 7,000	Current premium	HK\$ 3,000
+ 20% x HK\$52 x 10 x 100	<u>+10,400</u>	+ 20% x HK\$52 x 10 x 100	<u>+10,400</u>
	17,400		13,400
-Out-of-the-money	<u>0</u>	-Out-of-the-money	<u>-2,000</u>
Margin requirement	HK\$17,400	Margin requirement	HK\$11,400

The margin required for the calls is greater than that for the puts. Therefore, the put premium (HK\$3,000) is added to the call margin (HK\$17,400) resulting in a total margin requirement of HK\$20,400.

### **H3.7 Short a Covered Spread**

An investor writes the following covered spread:

Buy 10 HKZ Jul 50 Call  
Sell 10 HKZ Jun 55 Call

The margin requirement is zero as the long is more in the money and expires later than the short.

### **H3.8 Short a Hedged Spread**

An investor writes the following hedged spread on HKZ, with Hong Kong dollars as its Currency of the Contract and a board lot size of 1,000:

Sell 10 HKZ Jun 50 Call  
Buy 10 HKZ Jul 55 Call

(1) Difference between the strike prices of the spread:  $\text{HK\$}5 \times 10 \times 1,000 = \text{HK\$}50,000$

(2) If the current premium for the Jun 50 Call is HK\$5, and the stock HKZ is now at HK\$48, then by H3.1, the margin requirement on the short position alone is  $\text{HK\$}12,600 \times 10 = \text{HK\$}126,000$ .

~~The margin requirement for a hedged spread is the lesser of (1) i.e. HK\$50,000 and (2) i.e. HK\$126,000, which is HK\$50,000.~~

### ~~H3.9 Short an Unhedged Time Spread~~

~~An investor writes the following unhedged time spread on HKZ, with Hong Kong dollars as its Currency of the Contract and a board lot size of 1,000:~~

~~Sell 10 HKZ Jun 50 Call~~

~~Buy 10 HKZ Mar 55 Call~~

~~If the current premium for the Jun 50 Call is HK\$5 and HKZ is now at HK\$48, then the margin requirement is that for the short position alone, which, as given in H3.1, is  $\text{HK\$}12,600 \times 10 = \text{HK\$}126,000$ .~~