

# Derivatives Simulator User Manual

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## **1. Sign Up**

To log into the Simulator, participants must fill in the Sign Up form with real personal data in the “*Registro*” section, because at the end of the Tournament the information of the 3 resulting winners of prizes will be verify with official identifications.

Participants will receive all the tournament-related notifications (margin calls, close position...), if any, to their registered email address.

## **2. Sending the Password**

Once the participant’s data is registered by RiskMathics, a temporary password will be sent, which can be modified at any time with the “*Cambio Passw*” button, as shown in the image below.

## **3. Platform**

### **a. Default Profile**

Once the participants log in with their Username, they would see the Default Profile with the following windows: Futures (*Futuros*), Options (*Opciones*), Orders (*Órdenes*), Position (*Posición*), and Historical Graph (*Gráfica Histórica*).

## **b. Record**

The record of all the trades made since the account was opened can be consulted. Just click the *Historial* button and choose the consultation period: start and end dates (*fecha inicial* and *fecha final*), in the dialog box and all movements done would be shown of the selected period.

## **c. Top 10**

This section shows the top 10 places of all participants.

## **d. Updated Data**

In the upper-right corner of the screen there is a symbol constantly changing from plus “+” to minus “-”, meaning that the data received and observed at the screen is updated from second to second, if not, be aware that the internet connection isn’t sufficiently stable.

## **e. Logout**

To log out from the platform click the Logout button. For security reasons it isn’t possible to have two open sessions of the same user at the same time, so when a user logs in the other open session would be automatically closed.

## **4. Profile Setting**

To personalize a profile, just add or remove the desired windows and click on the *Perfil* button. A dialog box will be opened with the following options:

- **Discard the changes made (*Descartar los cambios realizados*):** changes to the profile won’t be saved.

- **Make changes to this profile (*Sobre escribir este perfil*):** the profile will be updated with the changes made.
- **Save as a new profile (*Guardar el perfil como*):** create a new profile with a personalized name.
- **Delete profile (*Borrar este perfil*):** once this operation is done, the deleted profile can't be retrieved.

## 5. Windows (Futures)

The desired underlying asset (*Subyacente*) should be selected to display the corresponding information.

By default this window contains the following columns (in order of appearance) for any given underlying asset that is selected:

**Code (*Código*):** name for identifying the underlying asset of which participants have futures contracts in their portfolio.

**My Short Position (*Mi Pos Corta*):** number of sold futures contracts.

**BID Size:** total number of contracts being offered for purchase in the market.

**BID:** highest price at which buyers are willing to pay, and the price at which participants can sell.

**Last:** last trade price reported in the market.

**ASK:** Price that a seller is willing to accept, and the price at which participants can buy.

**ASK Size:** total number of contracts that sellers are offering in the market.

**My Long Position (*Mi Pos Larga*):** number of bought futures contracts.

**Theoretical Price (*Precio Teórico*):** theoretical price of the underlying asset.

### a. Futures Operation Criteria

If Last<sup>(1)</sup> is valid then,

$$\text{Transaction Price} = \text{Last Trade Price}$$

If there are bid and ask prices then,

$$\text{Transaction Price} = (\text{BID} + \text{ASK}) / 2$$

If there is only either a bid or an ask price then,

If it is a purchase transaction then,

$$\text{Transaction Price} = \text{ASK}$$

If it is a selling transaction then,

$$\text{Transaction Price} = \text{BID}$$

If none of the above cases apply then,

$$\text{Transaction Price} = \text{Theoretical Price}^{(2)}$$

(1) The definition of “valid” corresponds to the predetermined time (e.g. 10 minutes) following the last carried out trade. This lapse of time can be changed by the committee.

(2) Theoretical price defined by RiskMathics for the purposes of this simulator.

## **b. Windows Functioning**

### **i. Buy**

Once the underlying asset is selected, if participants want to buy a future contract they have to double click in the intersection between the ASK column and the expiration date of the selected underlying asset, for example IPC JN17.

The following dialog box “*Envío de Ordenes*” will appear:

Participants should verify the information, number of contracts, expiration date, if it is a buy or a sell order... and if everything is correct the order will be confirmed when clicking the “*Enviar Orden*” button.

To verify that the transaction is done the “*Totalmente Satisfecha*” status should appear in the “*ÓRDENES*” window.

Likewise, participants can verify in the Futures window that they actually have a long position:

### **ii. Sell**

Once the underlying asset is selected, if participants want to sell a future contract they have to double click in the intersection between the BID column and the expiration date of the selected underlying asset, for example IPC JN17.

The following dialog box “*Envío de Ordenes*” will appear:

Participants should verify the information, number of contracts, expiration date, if it is a buy or a sell order... and if everything is correct the order will be confirmed when clicking the “*Enviar Orden*” button.

To verify that the transaction is done the “*Totalmente Satisfecha*” status should appear in the “*ÓRDENES*” window.

Likewise, participants can verify in the Futures window that they actually have a short position:

**Note:** The US Dollar can be traded 24 hours a day, while the trading hours for the futures on stocks are from 8:30 to 15:00.

## 6. Windows (Options)

The desired underlying asset (*Subyacente*) should be selected to display the corresponding information, as well as the required expiration date.

This window contains the following columns (in order of appearance) for any given underlying asset that is selected:

### - For Calls

**Theoretical Price (*Precio Teórico*):** theoretical price of the corresponding option.

**My Short Position (*Mi Pos Corta*):** number of sold options contracts.

**BID Size:** total number of contracts being offered for purchase in the market.

**BID:** price that buyers are willing to pay, and the price at which participants can sell.

**Last:** the last trade price reported in the market.

**ASK:** price that a seller is willing to accept, and the price at which participants can buy.

**ASK Size:** total number of contracts that sellers are offering in the market.

**My Long Position (*Mi Pos Larga*):** number of bought options contracts.

**Strike:** the strike price is the price at which a specific option contract can be exercised. In a call option, the strike price is the price at which the underlying asset can be bought. In a put option, the strike price is the price at which the underlying asset can be sold. The strike prices are available for the corresponding underlying assets and expiration dates.

**- For Puts**

**My Short Position (*Mi Pos Corta*):** number of sold options contracts.

**BID Size:** total number of contracts being offered for purchase in the market.

**BID:** price that buyers are willing to pay, and the price at which participants can sell.

**Last:** the last trade price reported in the market.

**ASK:** Price that a seller is willing to accept, and the price at which participants can buy.

**ASK Size:** total number of contracts that sellers are offering in the market.

**My Long Position (*Mi Pos Larga*):** number of bought options contracts.

**Theoretical Price (*Precio Teórico*):** theoretical price of the corresponding option.



## **b. Options Operation Criteria**

In all cases transactions will be made at theoretical price. There won't be outstanding orders; the orders will be assigned immediately after they are sent, provided that the required margins are fulfilled to carry out the transactions.

### **b. Windows Functioning**

#### **i. Buy**

If participants want to buy a specific option, they have to double click in the intersection between the ASK column and the corresponding Strike of the desired Call or Put. For example, a participant wants to buy a call option on IPC with a strike price of 49000, as in the following image:

The following dialog box "*Envío de Ordenes*" will appear after double clicking in the corresponding position:

Participants should verify the information, number of contracts, expiration date, if it is a buy or a sell order... and if everything is correct the order will be confirmed when clicking the "*Enviar Orden*" button.

To verify that the transaction is done the "*Totalmente Satisfecha*" status should appear in the "*ÓRDENES*" window.

Likewise, participants can verify in the Options window that they actually have a long position:

## ii. Sell

If participants want to sell a specific option, they have to double click in the intersection between the BID column and the corresponding Strike of the desired Call or Put. For example, a participant wants to sell a put option on IPC with a strike price of 48500, as in the following image:

The following dialog box “*Envío de Ordenes*” will appear after double clicking in the corresponding position:

Participants should verify the information, number of contracts, expiration date, if it is a buy or a sell order... and if everything is correct the order will be confirmed when clicking the “*Enviar Orden*” button.

To verify that the transaction is done the “*Totalmente Satisfecha*” status should appear in the “*ÓRDENES*” window.

Likewise, participants can verify in the Options window that they actually have a short position:

Note: The US Dollar can be traded 24 hours a day, while the trading hours for the options on stocks are from 8:30 to 15:00.

## 7. Position Window

This window has 3 sections:

Value of the Portfolio (*Valor del Portafolio*), Futures (*Futuros*) and Options (*Opciones*)

### **a. Value of the Portfolio:**

- **Cash (*Efectivo*):** shows the available cash to buy and sell contracts (at the beginning of the tournament all participants will have the amount of 10,000,000 virtual pesos in their accounts).
- **Futures (*Futuros*):** shows the unrealized P&L on the transactions made via futures contracts.
- **Options (*Opciones*):** shows the unrealized P&L on the transactions made via options contracts.
- **Margin Accounts (*Cuentas de Margen*):** shows the total cash that participants have in all their margin accounts.
- **Total Value of the Portfolio (*Valor Total del Portafolio*):** shows the total value of the portfolio considering all positions on Futures and Options contracts.

### **b. Futures**

This section shows the following columns (in order of appearance):

**Class (*Clase*):** underlying asset.

**Series (*Serie*):** class code and maturity date.

**Short Position (*Pos Corta*):** number of sold contracts.

**Long Position (*Pos Larga*):** number of bought contracts.

**Expiration Date (*Fecha de Vencim*):** the final day that a contract is valid.

**Days to expiration (*Días a Vencim*):** number of days left before the expiration of the contract.

**Transaction Price (*Prec Adquisición*):** price at which the contract was acquired.

**Last Price (*Precio Último*):** the last trade price reported in the market.

**Profit or Loss (*Ganancia o Pérdida*):** real-time gain and loss on transactions.

**Required Margin (*Margen Requerido*):** amount of cash per contract asked by the Clearing House, plus an extra margin asked by the Clearing Members, to hedge daily fluctuations of the asset.

**Margin Account (*Cuenta de Margen*):** shows the amount of cash that participants have based on their current positions in the different underlying assets, discounting and adding, as the case may be, the movements of the contracts values.

**Adequacy / Inadequacy (*Suficiencia / Insuficiencia*):** difference between the required margin and the margin account. If it is adequate, the surplus can be withdrawn from the margin account to the cash account. If it is inadequate, the margin account should be refunded by transferring from the cash account.

### **c. Options**

This section shows the following columns (in order of appearance):

**Class (*Clase*):** underlying asset.

**Series (*Serie*):** class code and maturity date.

**Strike:** the strike price is the price at which a specific option contract can be exercised.

**Call or Put:** C or P depending on the acquired contract.

**Short Position (*Pos Corta*):** number of sold contracts.

**Long Position (*Pos Larga*):** number of bought contracts.

**Expiration Date (*Fecha de Vencim*):** the final day that a contract is valid.

**Days to expiration (*Días a Vencim*):** number of days left before the expiration of the contract.

**Intrinsic Value (*Valor intrínseco*):** The difference between the underlying price and the strike price of an options contract.

**Transaction Price (*Prec Adquisición*):** price at which the contract was acquired.

**Last Price (*Precio Último*):** the last trade price reported in the market.

**Profit or Loss (*Ganancia o Pérdida*):** real-time gain and loss on transactions.

**Required Margin (*Margen Requerido*):** amount of cash per contract asked by the Clearing House, plus an extra margin asked by the Clearing Members, to hedge daily fluctuations of the asset.

**Margin Account (*Cuenta de Margen*):** amount of cash that participants have based on their current positions in the different underlying assets, discounting and adding, as the case may be, the movements of the contracts values.

**Adequacy / Inadequacy (*Suficiencia / Insuficiencia*):** difference between the required margin and the margin account. If it is adequate, the surplus can be withdrawn from the

margin account to the cash account. If it is inadequate, the margin account should be refunded by transferring from the cash account.

## 8. Orders Window

This section shows the following columns (in order of appearance):

**Time (*Hora*):** shows the exact time when the transaction was carried out.

**Instrument (*Instrumento*):** code of the contracts acquired.

**Order Type (*Tpo Ord*):** indicates if the sent order is a sale or purchase, as the case may be.

**Requested Contracts (*Contratos Solicitados*):** the number of selected contracts in the order submitted.

**Requested Price (*Precio Solicitado*):** the selected price in the order submitted.

**Assigned Contracts (*Contratos Asignados*) :** the number of contracts that were carried out successfully.

**Assigned Price (*Precio Asignado*):** price at which the contracts were acquired.

**Status:** describes the status of all the orders sent.

**OUT (*FUERA*) button:** For cancelling orders with the “*Pendiente envío*” (Sending Pending) status. Click the *FUERA* button after selecting the corresponding order.

When clicking the arrow on the left side of the window next to the time, the status is displayed with all the detailed steps that followed the order after being sent.

## 9. Windows

The Futures, Options and Position windows can be personalized. When clicking the tools icon in the upper-right corner of each window, the following options are displayed:

- **Add or remove columns:** To add a column, drag the selected one from the left to the right field. To remove columns, it is the other way around, drag the unwanted column from the right to the left field.
- **Change the columns order:** Select the column name on the right field that you want to change and drag it up or down according to the position where you want it to be placed.
- **Add a divider (*Agregar Separador*):** a space will be added after the selected column in the Futures and Options windows.
- **Change the background and font color (*Color del Fondo y Color de la Letra*):** In the right field select the column name that you want to personalize. Select a color for both: the font and the background.
- **Set the default number of contracts (*Num. Contratos default*):** the default number of contracts that appears in the transaction dialog box can be modified in this section.

### a. Sending Orders

#### Futures and Options

In order to close immediately all positions, the participant has to double click on the number of open contracts, shown in the columns: “My Short Position” or “My Long Position”, as the case may be. A dialog box will appear with all the open contracts of the participant so the order can be sent.

## **10. Graphics**

The platform counts with Daily Graphs and Historical Graphs. Just select the issuer, the desired period and the type of graph.

## **12. Margins**

### **a. Futures Margin**

It is referred to the initial margin plus/minus the profit/loss from the movements on the acquired contracts.

### **b. Options Margin**

Solely short options positions require margins, because they have the obligation to buy or sell an underlying asset at a predefined price. Long options positions don't require margins, because a premium is paid in exchange of the right to buy or sell an underlying asset at a predefined price; this situation is considered in the margin calculation methodology to reduce the margin requirements.

For the purposes of the tournament and for simplicity, the Premium Margin will only be considered in the options contracts, and will be calculated as follows:

## **14. Margin Call**

If the margin inadequacy of any class reaches 20% or more of the required margin, the simulator will send a margin call, via email, informing participants that they must restore their margin account to 100%. If the margin inadequacy reaches 60%, the position will be closed immediately. In both cases participants will be notified via email.



## **14. Margin Restitution**

The restitution of the margin has to be done manually; just double click on the value of the required margin column in the Position (*Posición*) window.

## **15. Fees**