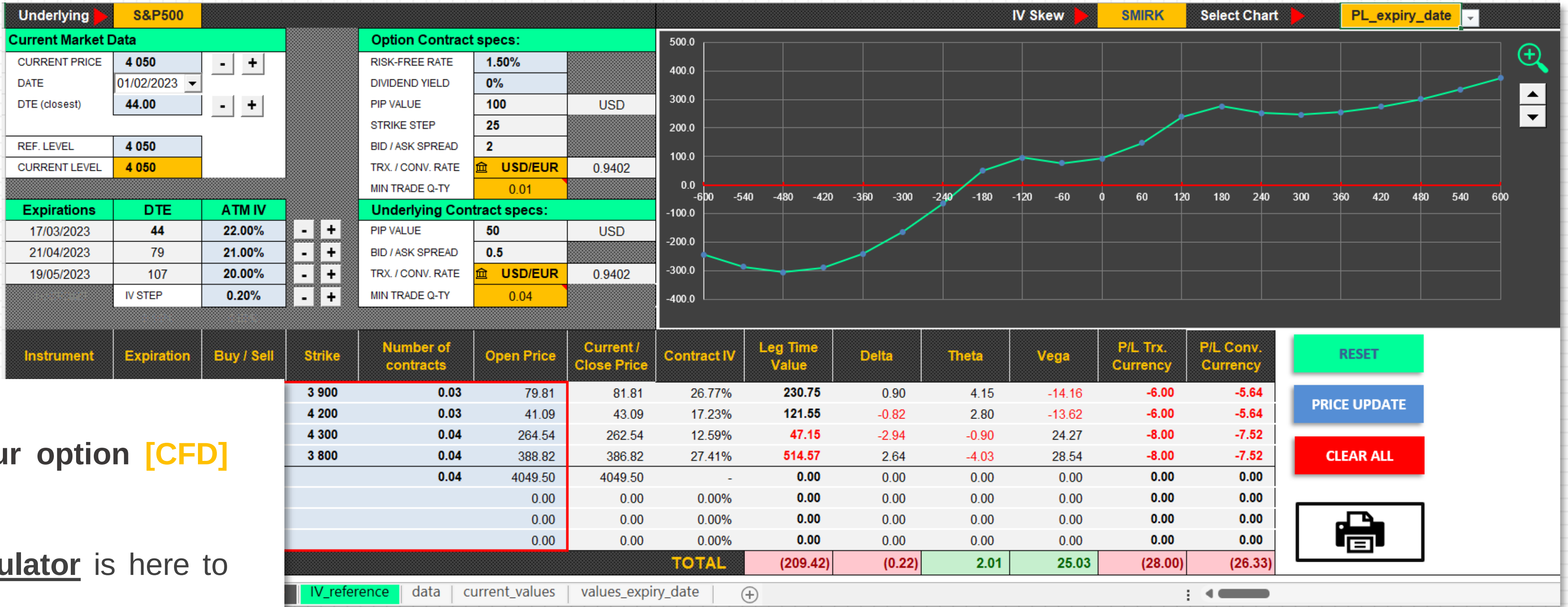
OPTION [CFD] STRATEGIES SIMULATOR

EXCEL-BASED APPLICATION

www.ixquant.com

INTRODUCTION



Are you ready to take your option [CFD] trading to the next level?

Our <u>**Option Strategies Simulator**</u> is here to change your trading experience with its comprehensive Excel-based suite. With this powerful and intuitive option analysis tool, you can quickly build, forward test and accurately predict what will happen under various market conditions.

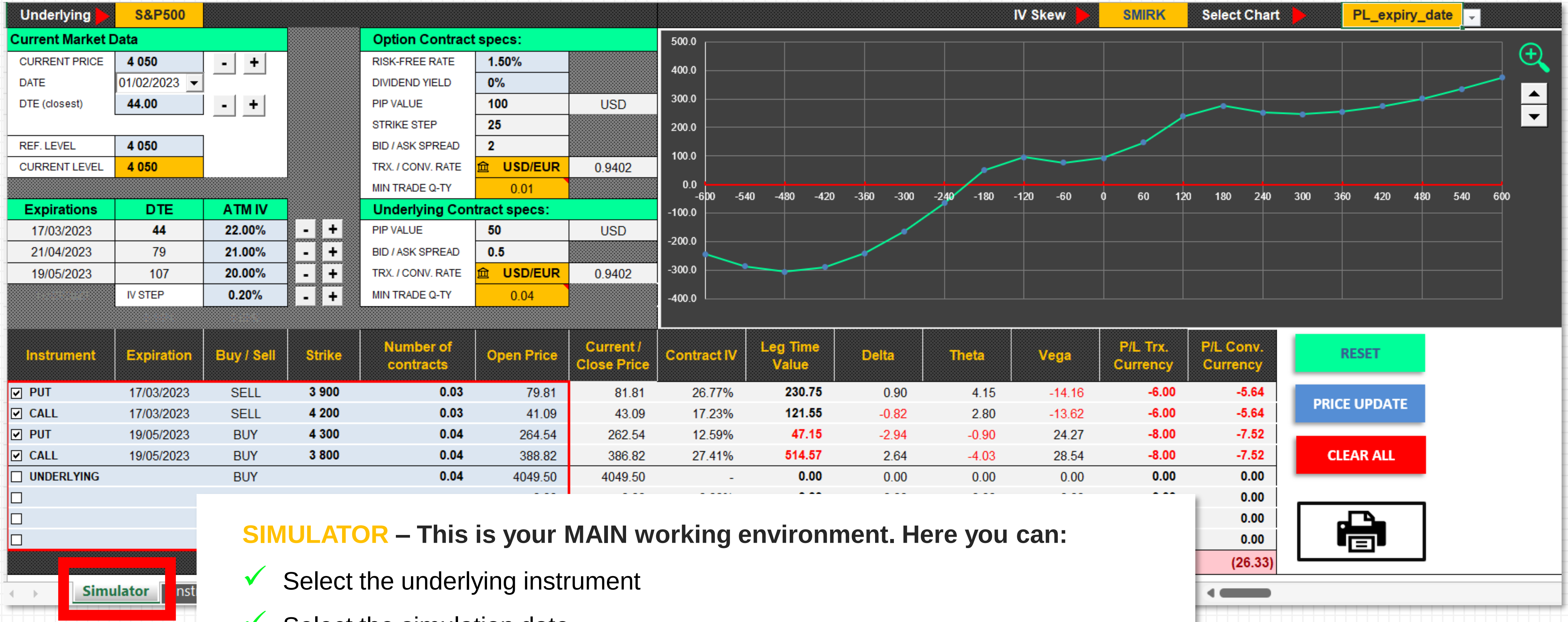
Stop guessing and start trading smarter today with Option Strategies Simulator!

Main Features:

- ✓ Make quick and unlimited **forward testing** of your option [CFD] trading strategies
- ✓ Create **multi-leg** and **multi-expiration** setups
- ✓ Combine in one setup instruments traded in **different currencies**
- ✓ Make simulations with **fractional contract sizes**
- ✓ Visualize results with the **Payoff chart** and **Greek** values charts

SIMULATOR COMPONENTS

SIMULATOR COMPONENTS – 1 SIMULATOR / Main Screen



SIMULATOR – This is your MAIN working environment. Here you can:

- ✓ Select the underlying instrument
- ✓ Select the simulation date
- ✓ Define the **implied volatility** levels for each expiration date
- ✓ Add up setup legs (option contracts) and build strategies
- ✓ Visualize charts

SIMULATOR COMPONENTS – 2 INSTRUMENTS_TABLE / Instruments Data Base

Instrument	opt_trx	_pip_value	strike_step	pread_optio	min_qty_opt	instrument_ticker	derlying_	r_pip_valu	ad_under	ent_price_	in_qty_und	current_level	current_ATM_IV	EXP1	EXP2	EXP3	iv_skew_pattern
DAX40	EUR	5	50	6.00	0.20	GDAXI	EUR	1	2.00	100	0.5	15 500	16.50%	17/03/2023	21/04/2023	16/06/2023	SMIRK
AEX	EUR	100	25	1.00	0.20	AEX	EUR	40	0.10	50	0.2	750	15.00%	17/03/2023	21/04/2023	19/05/2023	SMIRK
CAC40	EUR	10	50	5.00	0.50	FCHI	EUR	1	1.00	50	0.5	7 100	15.50%	17/03/2023	21/04/2023	19/05/2023	SMILE
FTSE100	GBP	10	25	6.00	0.10	FTSE	GBP	2	1.00	50	0.5	7 700	11.00%	17/03/2023	21/04/2023	19/05/2023	SMIRK
DJIA	USD	50	100	10.00	0.10	🏛 DOW JONES IN	USD	2	3.00	200	0.5	33 391	16.00%	17/03/2023	21/04/2023	19/05/2023	SMIRK
S&P500	USD	100	25	2.00	0.01	GSPC	USD	50	0.50	25	0.04	4 050	18.50%	17/03/2023	21/04/2023	19/05/2023	SMIRK
Nasdaq	USD	100	50	10.00	0.10	NASDAQ 100	EUR	1	2.00	100	0.5	12 300	24.00%	17/03/2023	21/04/2023	19/05/2023	SMIRK
ASX	AUD	10	50	16.00	0.20	AORD	AUD	5	3.00	50	1	7 700	12.00%	16/03/2023	20/04/2023	18/05/2023	SMIRK
N225	YEN	500	125	16.00	0.20	🏛 NIKKEI 225 INDI	USD	1	7.00	100	0.5	27 927	14.00%	09/03/2023	13/04/2023	11/05/2023	SMIRK
HSI	HKD	10	200	12.00	0.50	HSI	HKD	10	8.00	100	0.5	22 600	20.00%	28/02/2023	31/03/2023	29/04/2023	SMIRK
Crude Oil	USD	10	50	10.00	0.50	CL	USD	5	6.00	50	1	7 700	36.50%	16/03/2023	17/04/2023	17/04/2023	SMILE
Gold	USD	100	5	1.20	0.05	GC	EUR	1	0.30	10	1	1 850	14.60%	29/03/2023	26/05/2023	27/07/2023	SMILE
Silver	USD	50	50	3.00	0.05	SI	USD	5	2.00	10	0.5	2 150	26.50%	25/04/2023	27/06/2023	29/08/2023	SMILE
USDJPY	JPY	1000	100	14.00	0.50	🏛 USD/JPY	JPY	100	0.01	50	1	136	14.00%	16/03/2023	22/06/2023	22/06/2023	SMIRK
EURJPY	JPY	1000	100	17.00	0.50	🏛 EUR/JPY	JPY	100	0.02	50	1	144	12.50%	16/03/2023	22/06/2023	22/06/2023	SMIRK
GBPJPY	JPY	1000	100	30.00	0.50	🏛 GBP/JPY	JPY	100	0.03	50	1	164	13.00%	16/03/2023	22/06/2023	22/06/2023	SMIRK

Option contracts related data	Contracts specs - entered once
Underlying instrument data	Market data - regular updates required

IMPORTANT NOTICE :
For the purpose of an example, the option and underlying instruments contract specifications presented in this table are taken from those of IG Bank Switzerland (CFD broker).
If you trade with another platform, you will have to adjust this data to the contract specifications of your broker.

Instruments Table annotations (ungroup to see) :

Instrument	The name of the **underlying instrument** as it will appear in
opt_trx	**Transaction currency** of the option contracts on the selecte
opt_pip_value_trx	The **currency value of one pip** of the option contract, expre
strike_step	The **minimum distance in points** between the two closest s
spread_option	**Bid / Ask spread (in number of points) of the option con**
min_qty_opt	**Minimum tradable quantity** of an option contract. For the r

Simulator | Instruments_table | IV_reference | data | current_values | value

INSTRUMENTS_TABLE – Instruments configuration table. Here you can:

- ✓ Configure the specifications of option and underlying contracts
- ✓ Define the list of instruments you work with
- ✓ Update the expiration dates and current IV levels for option contracts
- ✓ Update the current level (price) of underlying instruments
- ✓ Define the instruments transaction currency

SIMULATOR COMPONENTS – 3 DATA / Auxiliary Data tables and menus

currency_pair	rate
USD/EUR	$ 0.94020
GBP/EUR	$ 1.13200
AUD/USD	$ 0.67680
AUD/EUR	$ 0.64080
JPY/EUR	$ 0.00692
JPY/USD	$ 0.00736
GBP/EUR	$ 1.13200
AUD/USD	$ 0.67680
HKD/EUR	$ 0.11980
EURO	1
GBPOUND	1
HKDOLLAR	1
JPYEN	1
AUDOLLAR	1
USDOLLAR	1
GBP/JPY	163.58
JPY/GBP	0.006111

transaction
Operation
BUY
SELL

iv_skew
iv_skew
SMILE
SMIRK

instrument
Option
-
PUT
CALL
UNDERLYING

expiration	iv_atm	iv_step
17/03/2023	22.00%	0.79%
21/04/2023	21.00%	0.77%
19/05/2023	20.00%	0.74%

data_element	step_units
IV Step	37
Chart Step	60
DTE Step	3

strike
4800
4775
4750
4725
4700
4675
4650
4625
4600
4575
4550
4525
4500
4475
4450
4425
4400
4375
4350
4325
4300
4275
4250
4225
4200
4175
4150
4125
4100

price_change	PL_current	PL_expiry_date	Delta	Theta
-600	-244	-244	-0.79	-0.09
-540	-265	-287	-0.50	-0.59
-480	-254	-305	-0.16	-1.04
-420	-219	-290	0.06	-1.05
-360	-175	-241	0.14	-0.67
-300	-135	-164	0.10	-0.17
-240	-102	-65	0.02	0.29
-180	-79	50	-0.10	0.80
-120	-65	95	-0.20	1.35
-60	-49	77	-0.24	1.78
0	-26	92	-0.22	2.01
60	5	147	-0.18	2.08
120	45	239	-0.14	2.03
180	90	276	-0.10	1.89
240	141	252	-0.06	1.70
300	194	247	-0.02	1.47
360	251	255	0.01	1.23
420	310	274	0.04	0.98
480	372	301	0.07	0.74
540	435	335	0.09	0.49
600	500	374	0.12	0.26

Annotations to FX rates table:

The exchange rates for the above currency pairs are imported through the Excel **Data => Currencies** function. In case this function is not available in your Excel version, it is also possible to enter the rates manually.

Those exchange rates are used in the **"Simulator"** tab to make the conversion from the transaction to conversion currencies.

Read more about the use of the currency conversion in the **"Getting Started"** section.

Simulator | Instruments_table | IV_reference | data | urrent_values | values_e

DATA – Set of configuration tables for auxiliary data:

- ✓ FX Rates table
- ✓ Chart visualization settings table
- ✓ Menus tables

SIMULATOR COMPONENTS – 4 CURRENT_VALUES / Option Data Calculation

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	Instrument	Reference (current) Date	Closest Expiration	Expiration Date	Transaction	Strike Price	Underl. Price	TRX QTY	Risk Free	Div	Reference IV	Step strike	Spread Option	Spread Underl.	Pip Val. Option	Pip Val. Underl.	FX Option	FX Underl.	t (days)	t (years)	IV Step	Leg IV	Buy / Sell Sign	Q-ty Short	Q-ty Long	Delta
2	CALL	01/02/2023	17/03/2023	17/03/2023	SELL	4 400	4 050	0.02	1.5%	0 $	18.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	44	0.1205	0.79%	6.99%	-1.00	1.00	0.00	0.00
3	PUT	01/02/2023	17/03/2023	19/05/2023	BUY	4 200	4 050	0.02	1.5%	0 $	17.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	107	0.2932	0.76%	12.44%	1.00	0.00	1.00	-1.26
4	UNDERLYING	01/02/2023	17/03/2023	00/01/1900	BUY	0	4 050	0.04	1.5%	0 $	0.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	-44958	-	-	-	1.00	0.00	1.00	1.88
5	0	01/02/2023	17/03/2023	00/01/1900	0.00	0	4 050	0.00	1.5%	0 $	0.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	-44958	-123.1726	0.00%	0.00%	0.00	1.00	0.00	0.00
6	0	01/02/2023	17/03/2023	00/01/1900	0.00	0	4 050	0.00	1.5%	0 $	0.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	-44958	-123.1726	0.00%	0.00%	0.00	1.00	0.00	0.00
7	0	01/02/2023	17/03/2023	00/01/1900	0.00	0	4 050	0.00	1.5%	0 $	0.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	-44958	-123.1726	0.00%	0.00%	0.00	1.00	0.00	0.00
8	0	01/02/2023	17/03/2023	00/01/1900	0.00	0	4 050	0.00	1.5%	0 $	0.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	-44958	-123.1726	0.00%	0.00%	0.00	1.00	0.00	0.00
9	0	01/02/2023	17/03/2023	00/01/1900	0.00	0	4 050	0.00	1.5%	0 $	0.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	-44958	-123.1726	0.00%	0.00%	0.00	1.00	0.00	0.00
10	TOTAL	0																								0.62
19	TOTAL	500																								0.10
28	TOTAL	450																								0.15
37	TOTAL	400																								0.21
46	TOTAL	350																								0.29
55	TOTAL	300																								0.39
64	TOTAL	250																								0.51
73	TOTAL	200																								0.64
82	TOTAL	150																								0.75
91	TOTAL	100																								0.80
100	TOTAL	50																								0.75
109	TOTAL	0																								0.62
118	TOTAL	-50																								0.44
127	TOTAL	-100																								0.26
136	TOTAL	-150																								
145	TOTAL	-200																								
154	TOTAL	-250																								
163	TOTAL	-300																								
172	TOTAL	-350																								
181	TOTAL	-400																								
190	TOTAL	-450																								
199	TOTAL	-500																								
200																										
201	Entered data																									
202	Calculated data (formulas)																									

Simulator | Instruments_table | IV_reference | data | current_values | val

CURRENT VALUES – Calculation table for the current option values and Greeks

- ✓ Black-Scholes model is used for values calculation
- ✓ Data is calculated for a number of price levels of the underlying instrument
- ✓ Calculated data represents the values on the **DTE** (days to expiration) as shown in the cell **"B5"** of the **"Simulator"** tab

SIMULATOR COMPONENTS – 5 VALUES_EXPIRY_DATE / Option Data Calculation

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	Instrument	Reference (current) Date	Closest Expiration	Expiration Date	Transaction	Strike Price	Underl. Price	TRX QTY	Risk Free	Div	Reference IV	Step strike	Spread Option	Spread Underl.	Pip Val. Option	Pip Val. Underl.	FX Option	FX Underl.	t (days)	t (years)	IV Step	Leg IV	Buy / Sell Sign	Q-ty Short	Q-ty Long	Delta
2	PUT	01/02/2023	17/03/2023	17/03/2023	SELL	3 900	4 050	0.03	1.5%	0 $	22.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	0	0.0000	0.79%	26.77%	-1.00	1.00	0.00	0.00
3	CALL	01/02/2023	17/03/2023	17/03/2023	SELL	4 200	4 050	0.03	1.5%	0 $	22.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	0	0.0000	0.79%	17.23%	-1.00	1.00	0.00	0.00
4	PUT	01/02/2023	17/03/2023	19/05/2023	BUY	4 300	4 050	0.04	1.5%	0 $	20.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	63	0.1726	0.74%	12.59%	1.00	0.00	1.00	-3.23
5	CALL	01/02/2023	17/03/2023	19/05/2023	BUY	3 800	4 050	0.04	1.5%	0 $	20.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	63	0.1726	0.74%	27.41%	1.00	0.00	1.00	0.00
6	UNDERLYING	01/02/2023	17/03/2023	00/01/1900	BUY	0	4 050	0.04	1.5%	0 $	0.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	-45002	-	-	-	1.00	0.00	1.00	0.00
7	0	01/02/2023	17/03/2023	00/01/1900	0.00	0	4 050	0.00	1.5%	0 $	0.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	-45002	-123.2932	0.00%	0.00%	0.00	1.00	0.00	0.00
8	0	01/02/2023	17/03/2023	00/01/1900	0.00	0	4 050	0.00	1.5%	0 $	0.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	-45002	-123.2932	0.00%	0.00%	0.00	1.00	0.00	0.00
9	0	01/02/2023	17/03/2023	00/01/1900	0.00	0	4 050	0.00	1.5%	0 $	0.00%	25	2.0	0.5	100.0	50.0	0.9	0.9	-45002	-123.2932	0.00%	0.00%	0.00	1.00	0.00	0.00
10	TOTAL	0																								-3.23
19	TOTAL	600																								-3.73
28	TOTAL	540																								-3.81
37	TOTAL	480																								-3.92
46	TOTAL	420																								-4.05
55	TOTAL	360																								-4.21
64	TOTAL	300																								-4.40
73	TOTAL	240																								-4.64
82	TOTAL	180																								
91	TOTAL	120																								
100	TOTAL	60																								
109	TOTAL	0																								
118	TOTAL	-60																								
127	TOTAL	-120																								
136	TOTAL	-180																								
145	TOTAL	-240																								
154	TOTAL	-300																								
163	TOTAL	-360																								
172	TOTAL	-420																								
181	TOTAL	-480																								
190	TOTAL	-540																								
199	TOTAL	-600																								

Entered data

Calculated data (formulas)

Simulator | Instruments_table | IV_reference | data | current_values | values_expiry_date

VALUES EXPIRY DATE – Calculation table for the option values and Greeks at the closest expiration date

- ✓ Black-Scholes model is used for values calculation
- ✓ Data is calculated for a number of price levels of the underlying instrument
- ✓ Calculated data represents the values on the **closest** expiry in the cells **“A11 – A13”** of the **“Simulator”** tab

SIMULATOR COMPONENTS – 6 IV_REFERENCE / Links to IV Data

SOURCES FOR VOLATILITY DATA

DJIA S&P500 NASDAQ

ASX INDEX (ALL ORDINARIES)

AEX INDEX (NETHERLANDS)

NIKKEI (N225) INDEX

HANG SENG INDEX

DAX40 INDEX

FTSE100 INDEX

CRUDE O GOLD SILVER

CURRENCIES

Simulator | Instruments_table | IV_reference | data | current_values | values_expiry_date

IV REFERENCE – For your convenience, here is the selection of **Links** to web resources where you can find **IV (implied volatility)** information for some underlying instruments – major market indices, commodities, and currencies.

GETTING STARTED

GETTING STARTED – 1 INSTRUMENTS TABLE CONFIGURATION

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Instrument	opt_trx	_pip_value	strike_step	pread_optio	min_qty_opt	instrument_ticker	derlying_	r_pip_valu	ad_under	ent_price_	in_qty_und	current_level	current_ATM_IV	EXP1	EXP2	EXP3	iv_skew_pattern
2	DAX40	EUR	5	50	6.00	0.20	GDAXI	EUR	1	2.00	100	0.5	15 500	16.50%	17/03/2023	21/04/2023	16/06/2023	SMIRK
3	AEX	EUR	100	25	1.00	0.20	AEX	EUR	40	0.10	50	0.2	750	15.00%	17/03/2023	21/04/2023	19/05/2023	SMIRK
4	CAC40	EUR	10	50	5.00	0.50	FCHI	EUR	1	1.00	50	0.5	7 100	15.50%	17/03/2023	21/04/2023	19/05/2023	SMILE
5	FTSE100	GBP	10	25	6.00	0.10	FTSE	GBP	2	1.00	50	0.5	7 700	11.00%	17/03/2023	21/04/2023	19/05/2023	SMIRK
6	DJIA	USD	50	100	10.00	0.10	DOW JONES IN	USD	2	3.00	200	0.5	33 391	16.00%	17/03/2023	21/04/2023	19/05/2023	SMIRK
7	S&P500	USD	100	25	2.00	0.01	GSPC	USD	50	0.50	25	0.04	4 050	18.50%	17/03/2023	21/04/2023	19/05/2023	SMIRK
8	Nasdaq	USD	10[illegible]	50	10.00	0.10	NASDAQ 100	EUR	1	2.00	100	0.5	12 300	24.00%	17/03/2023	21/04/2023	19/05/2023	SMIRK
9	ASX	AUD	10	50	16.00	0.20	AORD	AUD	5	3.00	50	1	7 700	12.00%	16/03/2023	20/04/2023	18/05/2023	SMIRK

Infos

US 500 4050 CALL APR-23

Document d'information clé

Caractéristiques des ordres

Quantité minimum	0.01 Contract(s)
Taille du contrat (par Pip)	USD 100
Un Pip correspond à	1 Index Point
Un Pip correspond à	USD 100 (EUR 94.02)

Echéance

Echéance	21/04/23
Dernières Date et Heure de négociation	20/04/23 22:15
Liquidation	Trading in SPX options will cease on the day preceding the settlement day. The settlement, SET, is calculated using the opening price in the primary

Option contract specs

Infos

US 500 (50$) MAR-23

Document d'information clé

Caractéristiques des ordres

Quantité minimum	0.04 Contract(s)
Taille du contrat (par Pip)	USD 50
Un Pip correspond à	1 Index Point
Un Pip correspond à	USD 50 (EUR 47.01)
Couverture	0.5%
Ecart min. au Stop	2
Ecart min. au Stop Garanti.	2.0%
Facteur de slippage	50.0%

Codes

Code Reuters	.SPX

Ec

Underlying contract specs

1 Fill in the contract specs data

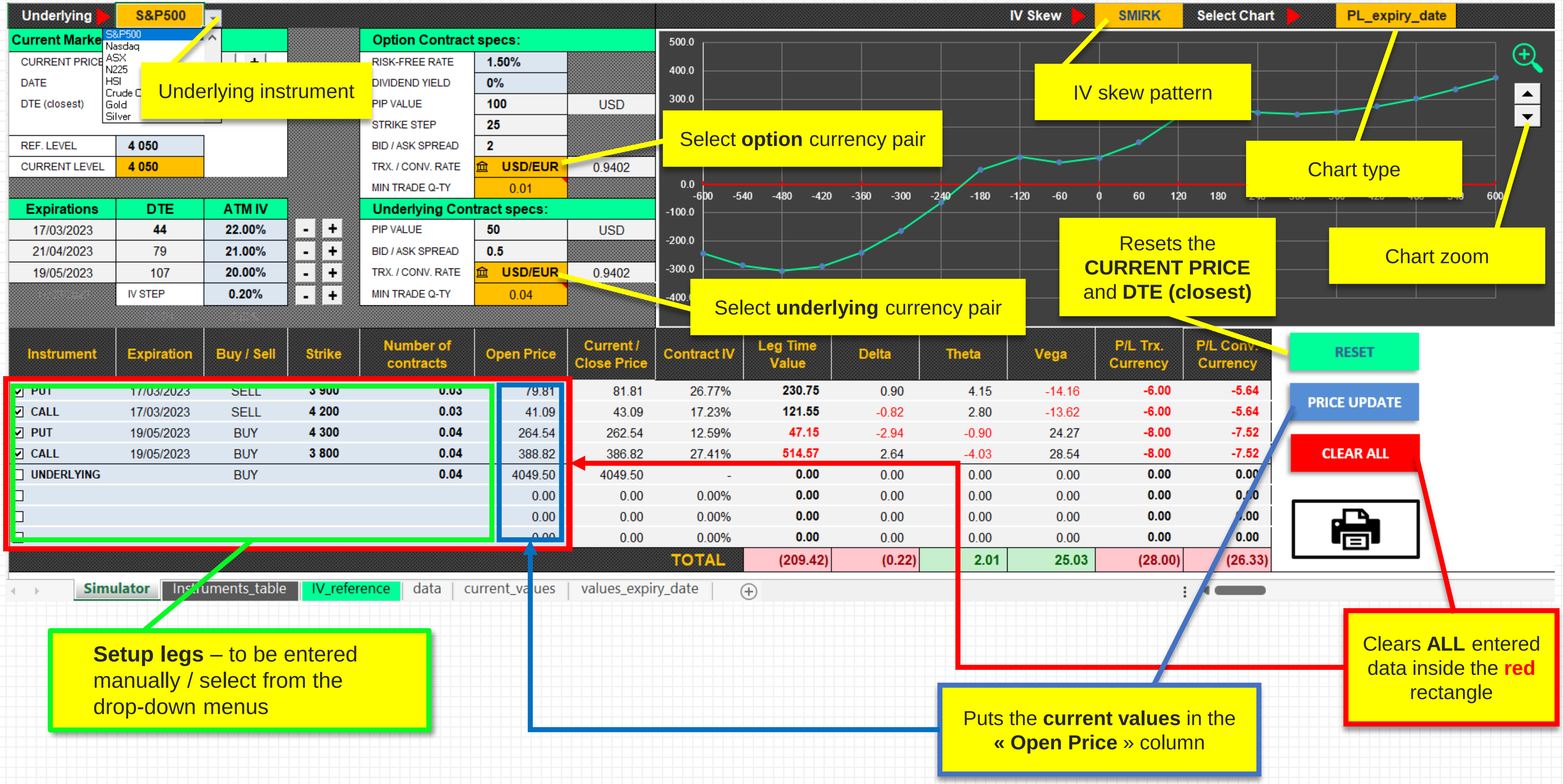
To show the process, we took the data for **S&P500** index (as underlying instrument) and its option specs as they are traded on **IG Bank** Switzerland platform. See the contract specs screenshots on the left.

You will have to use the contract specifications of your broker / trading platform.

Additionally, the description of each column of the **“Instruments_table” is available** in the same tab of the **Excel** file.

It is possible to **Add** or **Delete** the **instruments** (rows) in this table to match your needs.

GETTING STARTED – 2 SIMULATOR – MAIN COMMANDS



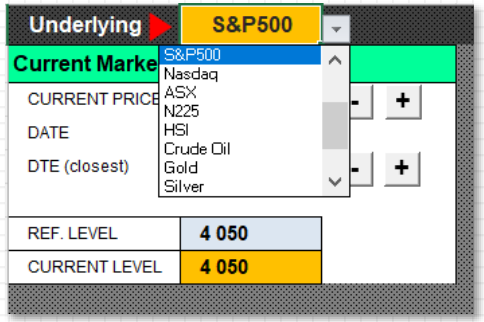
GETTING STARTED – 3 STEP-BY-STEP SETUP BUILDING

1

Select Underlying Instrument

From the **drop-down menu**, select the underlying instrument you will be building simulation for. In our example, we select **S&P500** index.

Once underlying is selected, the following cells, marked with **yellow dots** on the screenshot just below, will be **automatically filled in** (data will be imported from the **Instruments_table**):



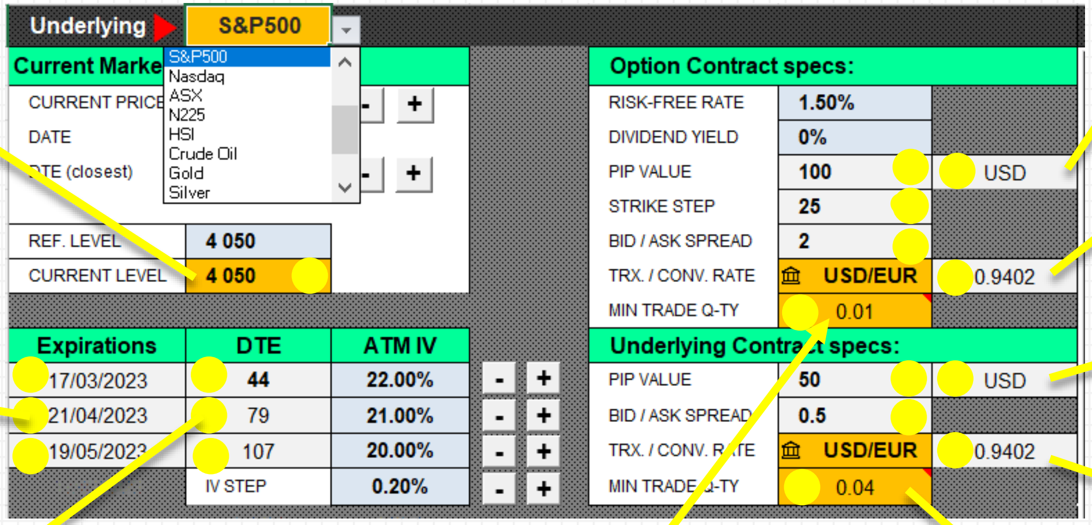
Approximate **current level** of the underlying instrument.

It is imported from the **Instruments_table**.

We will use this value as a reference to enter **REF. LEVEL – B7 cell.**

Pre-set expiration dates

DTE – Days to expiration



MIN tradable quantities

(TRX) Transaction currency – **option** contracts

FX rate **TRX** to **(CONV)** Conversion currency

Transaction currency – **underlying** instrument

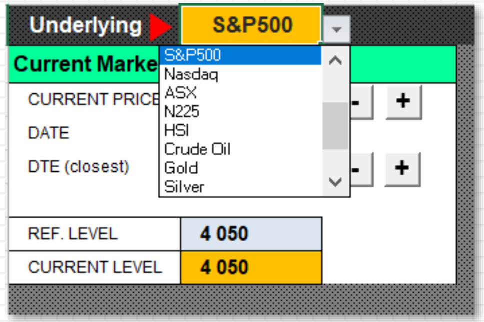
FX rate **TRX** to **CONV**

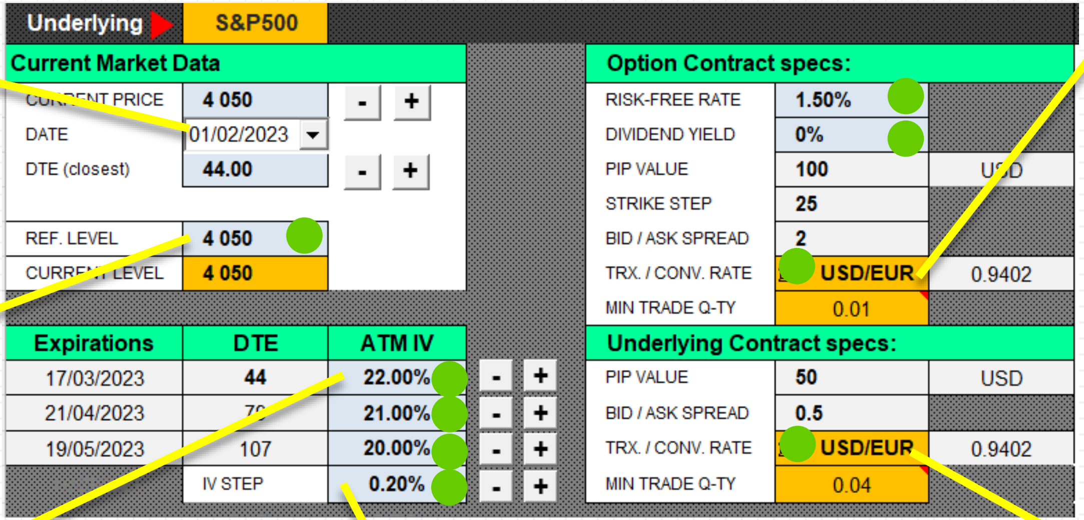
GETTING STARTED – 3 STEP-BY-STEP SETUP BUILDING

2

Fill in manually the required cells

The next step is to populate manually the cells marked with **green dots**.
The data in these cells is not automatically imported from the **Instruments_table**:





1 **Select** the simulation date.

2 **REF.LEVEL –** round number, close to **CURRENT LEVEL** value.

It must be **divisible** by the strike_step value from the **Instruments_table** for a given underlying instrument.

It is used to form the list of available strikes in the drop-down menu.

3 **ATM IV** for each expiry date. Can be either current market volatility or the desired level of volatility for testing purposes.

4 Average **IV increment** between the IVs of two closest strike prices. It is used for IV adjustment and better simulation result.

5 **Select** the **TRX./CONV.** currency pairs for the options and underlying contracts.

Conversion currency could be, for instance, the currency of your trading account.

The options and underlying contracts of your setup may have different transaction currencies. In order to see the meaningful **overall P&L**, it is more convenient to convert it to the same currency.

6 **Hit the "Reset"** button.

- REF.LEVEL value copied into the **CURRENT PRICE**

- DTE (closest) cell is set according to the selected date

RESET

GETTING STARTED – 3 STEP-BY-STEP SETUP BUILDING

3

Build the trading setup – Add legs

The next step is to actually build your trading **SETUP**. It is possible to add up to **8 legs** in one setup. All the combinations of options, underlying instrument, different expiration dates are possible.

1 **Check** the box to **activate** the leg

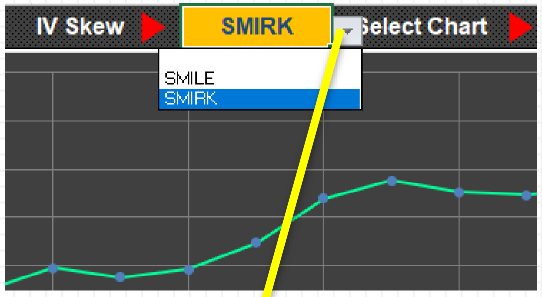
2 **Select** the instrument

3 **Select** the trade direction

4 **Select** or type the strike price

Instrument	Expiration	Buy / Sell	Strike	Number of contracts	Open Price
☑ PUT	7/03/2023	SELL	3 900	0.03	79.81
- / PUT / CALL / UNDERLYING	7/03/2023	SELL	4 200	0.03	41.09
	19/05/2023	BUY	4 300	0.04	264.54
☑ CALL	19/05/2023	BUY	3 800	0.04	388.82
☐ UNDERLYING		BUY		0.04	4049.50
☐					0.00
☐					0.00
☐					0.00

Simulator | Instruments_table | IV_reference | data | current_values



6 **Select** the **IV Skew** pattern – **Smile** or **Smirk**.

Generally, **Smile** pattern is observed in implied volatility of commodities (Gold, Silver, Crude Oil).

Whereas the **Smirk** pattern can be seen in the implied volatility of major indices and currencies, among the others.

5 **Type** number of contracts

7 Hit **"Price Update"** button. Thus, the model will update the **"Open Price"** column and you will be able to see the chart representation of your strategy.

PRICE UPDATE

4

Strategies Simulation and Chart Analisys

Once the **trading setup** is built, you are ready to **forward test** your strategy and make your analysis to see how the strategy will perform under different market conditions:

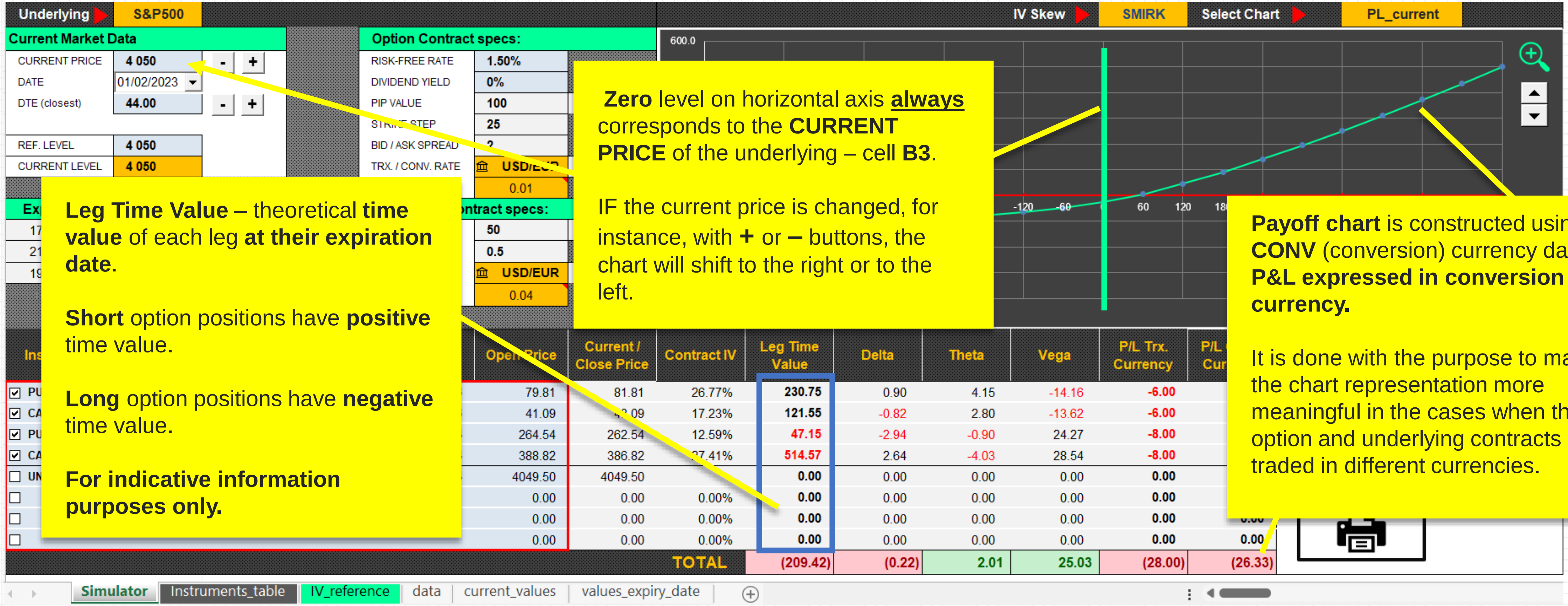
- Analyse different charts – Current chart (on the simulation date), Chart at the closest expiration date, Greek charts.
- Change underlying instrument level and volatility level to see how this will impact your overall position.
- Activate or deactivate legs.
- Make simulations for different volatility levels to find out which setup is the best use under specific market conditions.
- **REAL positions simulation** – if you have open option positions on your **REAL** trading account, you can add them into the **SIMULATOR** and in the column **Open Price** just type your actual open prices. This will allow you to test different **"what-if"** scenarios OR use the **SIMULATOR** as your **REAL** positions **management and decision making tool**.

GETTING STARTED – 3 STEP-BY-STEP SETUP BUILDING

5

Additional Information

Few more details you should know to better understand the functioning of the simulator.



Leg Time Value – theoretical **time value** of each leg **at their expiration date**.

Short option positions have **positive** time value.

Long option positions have **negative** time value.

For indicative information purposes only.

Zero level on horizontal axis **always** corresponds to the **CURRENT PRICE** of the underlying – cell **B3**.

IF the current price is changed, for instance, with **+** or **–** buttons, the chart will shift to the right or to the left.

Payoff chart is constructed using the **CONV** (conversion) currency data – **P&L expressed in conversion currency.**

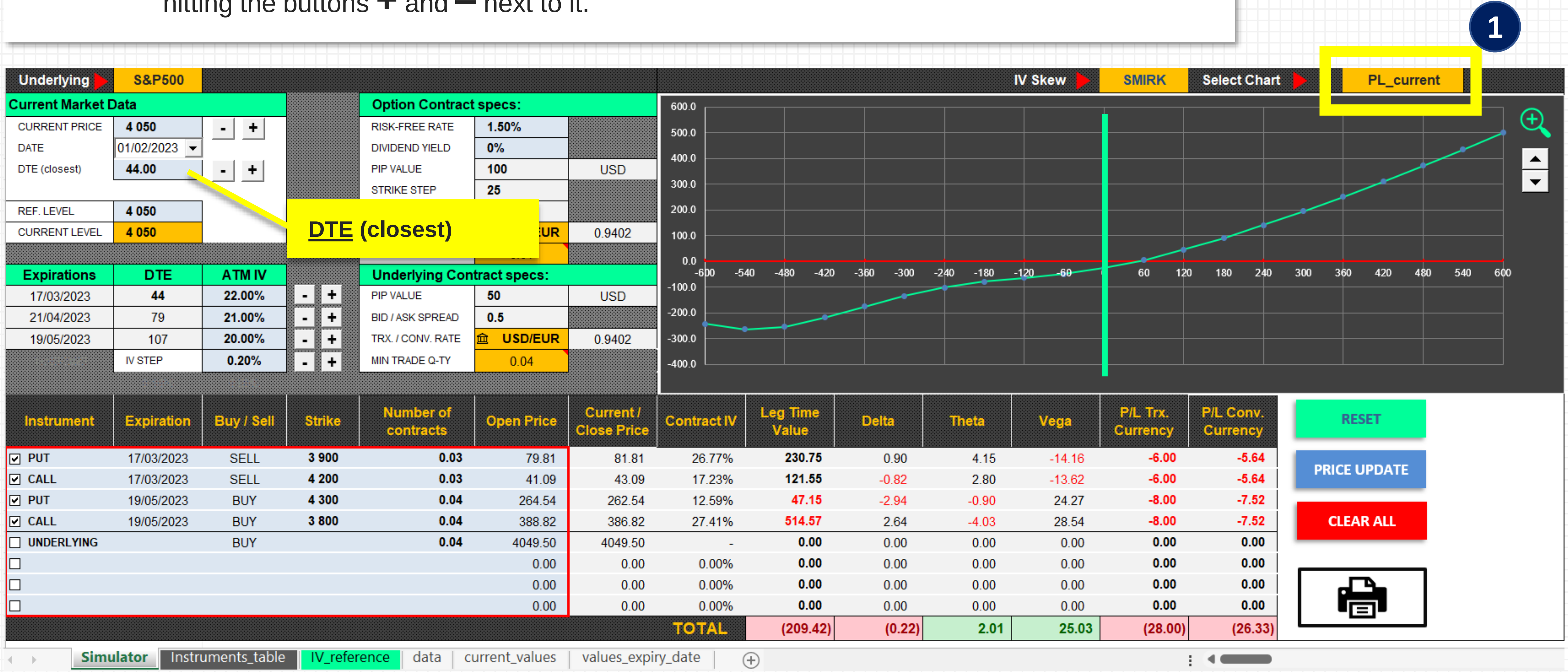
It is done with the purpose to make the chart representation more meaningful in the cases when the option and underlying contracts are traded in different currencies.

GETTING STARTED – 3 STEP-BY-STEP SETUP BUILDING

6

Chart Samples

PL_current – **Payoff chart** presenting the setup **P&L** at the **DTE** (days-to-expiration) as shown in the cell **B5**. The value of **B5** cell can be changed either manually or by hitting the buttons **+** and **–** next to it.

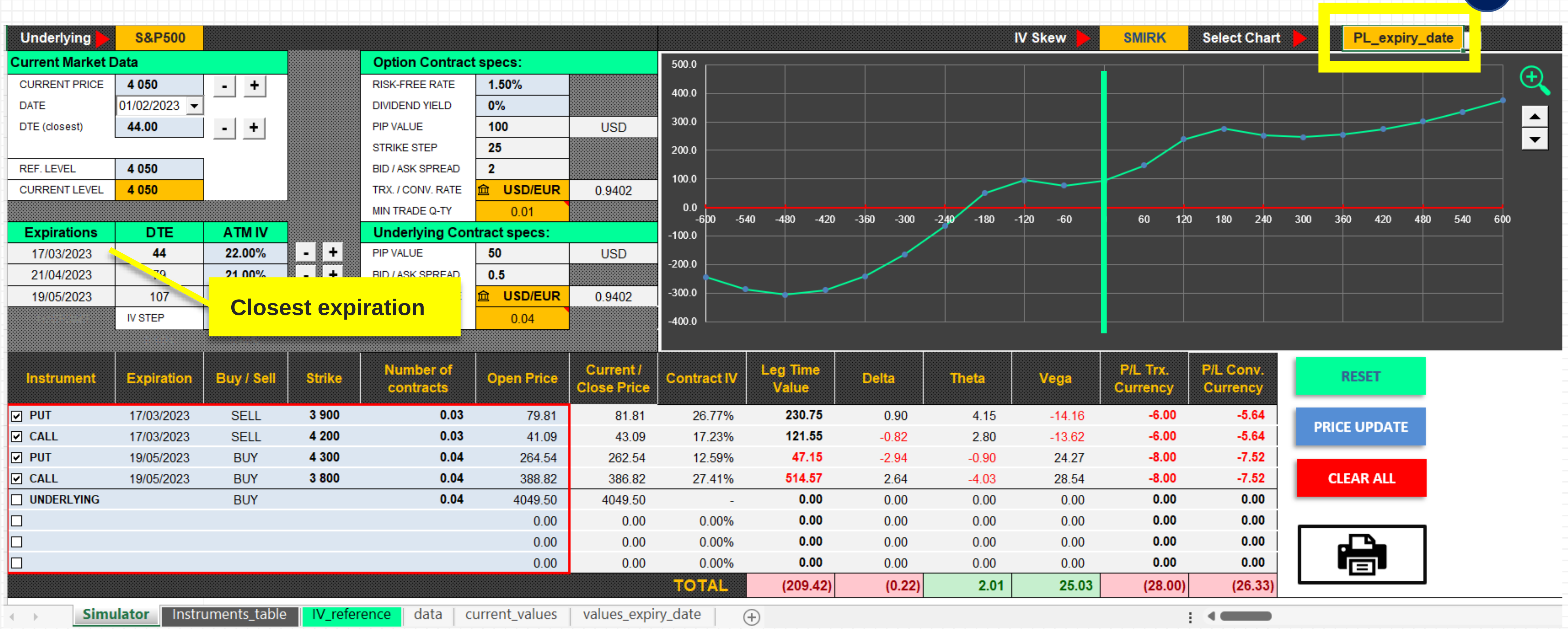


GETTING STARTED – 3 STEP-BY-STEP SETUP BUILDING

6

Chart Samples

PL_expiry_date – **Payoff chart** presenting the setup **P&L** at the **closest expiry date** (from the list of expirations). Even if this **date was not used** in the setup. In other words, this is **P&L** for **DTE (closest)** when it would be equal **0**.



Instrument	Expiration	Buy / Sell	Strike	Number of contracts	Open Price	Current / Close Price	Contract IV	Leg Time Value	Delta	Theta	Vega	P/L Trx. Currency	P/L Conv. Currency
☑ PUT	17/03/2023	SELL	3 900	0.03	79.81	81.81	26.77%	230.75	0.90	4.15	-14.16	-6.00	-5.64
☑ CALL	17/03/2023	SELL	4 200	0.03	41.09	43.09	17.23%	121.55	-0.82	2.80	-13.62	-6.00	-5.64
☑ PUT	19/05/2023	BUY	4 300	0.04	264.54	262.54	12.59%	47.15	-2.94	-0.90	24.27	-8.00	-7.52
☑ CALL	19/05/2023	BUY	3 800	0.04	388.82	386.82	27.41%	514.57	2.64	-4.03	28.54	-8.00	-7.52
☐ UNDERLYING		BUY		0.04	4049.50	4049.50	-	0.00	0.00	0.00	0.00	0.00	0.00
☐					0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
☐					0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
☐					0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
						TOTAL		(209.42)	(0.22)	2.01	25.03	(28.00)	(26.33)

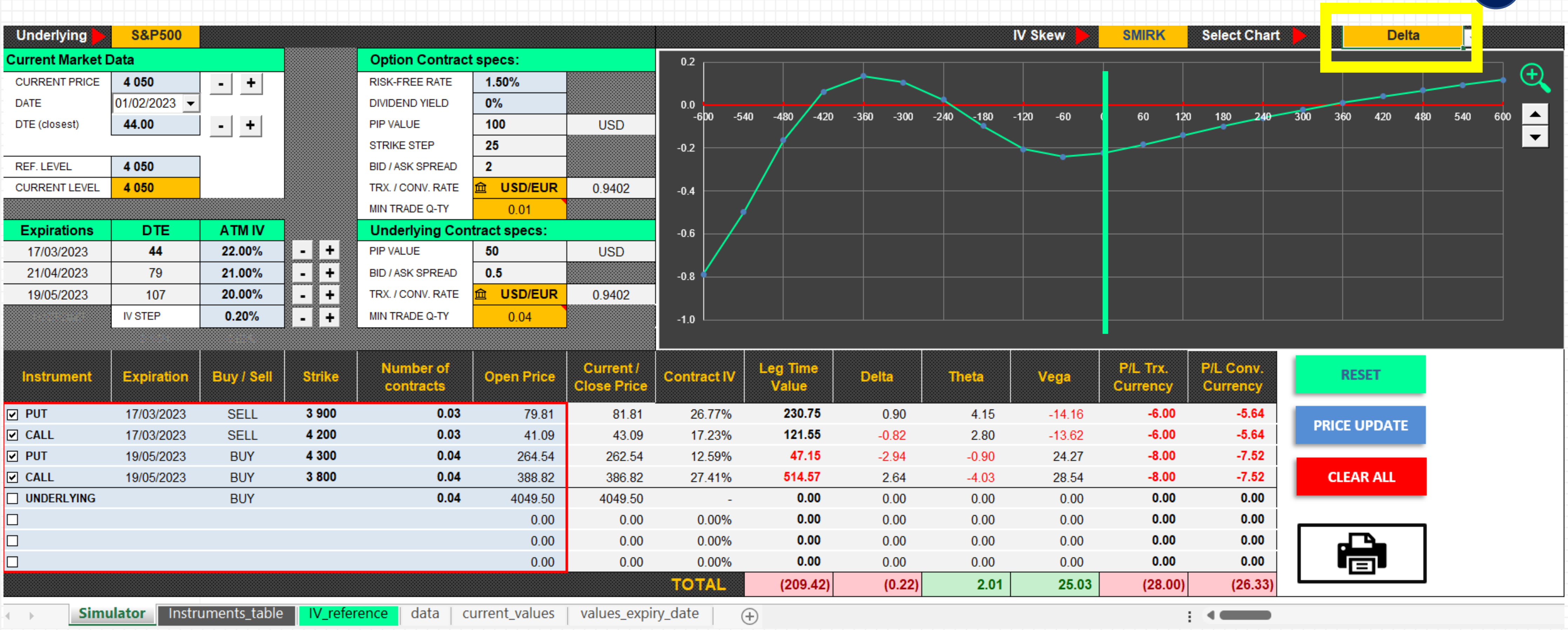
GETTING STARTED – 3 STEP-BY-STEP SETUP BUILDING

6

Chart Samples

Delta – Delta chart shows the evolution of Delta along the shift of the underlying instrument. It can be very useful to detect the underlying price levels where the Delta sign starts to change (i.e. goes from positive to negative or vice versa).

3



GETTING STARTED – 3 STEP-BY-STEP SETUP BUILDING

6

Chart Samples

Theta – Theta chart shows the evolution of Theta along the shift of the underlying instrument. It is also very useful and shows us at which price level of the underlying instrument the position becomes more sensitive to the **time decay**.

4

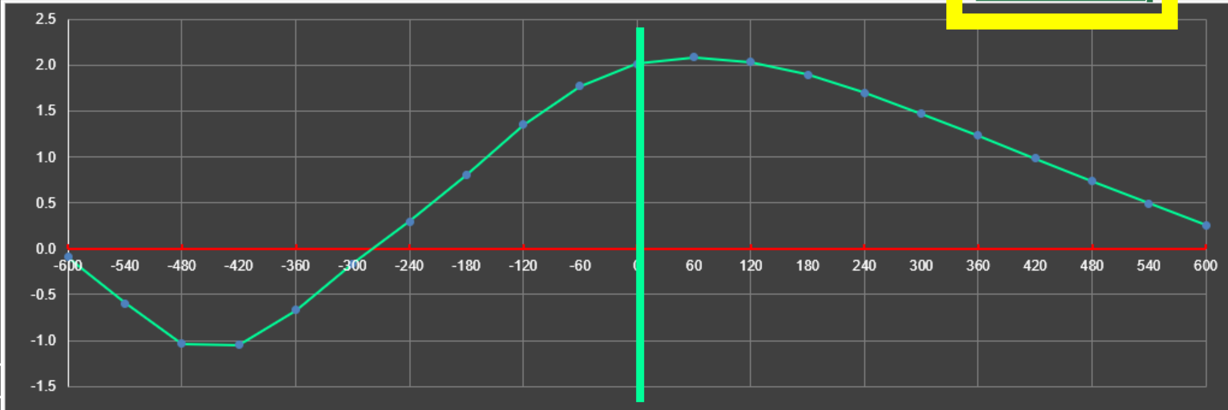
Underlying	S&P500	IV Skew	SMIRK	Select Chart	Theta

Current Market Data			
CURRENT PRICE	4 050	-	+
DATE	01/02/2023		
DTE (closest)	44.00	-	+
REF. LEVEL	4 050		
CURRENT LEVEL	4 050		

Option Contract specs:		
RISK-FREE RATE	1.50%	
DIVIDEND YIELD	0%	
PIP VALUE	100	USD
STRIKE STEP	25	
BID / ASK SPREAD	2	
TRX. / CONV. RATE	USD/EUR	0.9402
MIN TRADE Q-TY	0.01	

Expirations	DTE	ATM IV		
17/03/2023	44	22.00%	-	+
21/04/2023	79	21.00%	-	+
19/05/2023	107	20.00%	-	+
	IV STEP	0.20%	-	+

Underlying Contract specs:		
PIP VALUE	50	USD
BID / ASK SPREAD	0.5	
TRX. / CONV. RATE	USD/EUR	0.9402
MIN TRADE Q-TY	0.04	



Instrument	Expiration	Buy / Sell	Strike	Number of contracts	Open Price	Current / Close Price	Contract IV	Leg Time Value	Delta	Theta	Vega	P/L Trx. Currency	P/L Conv. Currency
☑ PUT	17/03/2023	SELL	3 900	0.03	79.81	81.81	26.77%	230.75	0.90	4.15	-14.16	-6.00	-5.64
☑ CALL	17/03/2023	SELL	4 200	0.03	41.09	43.09	17.23%	121.55	-0.82	2.80	-13.62	-6.00	-5.64
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☑ CALL	19/05/2023	BUY	3 800	0.04	388.82	386.82	27.41%	514.57	2.64	-4.03	28.54	-8.00	-7.52
☐ UNDERLYING		BUY		0.04	4049.50	4049.50	-	0.00	0.00	0.00	0.00	0.00	0.00
☐					0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
☐					0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
☐					0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
							TOTAL	(209.42)	(0.22)	2.01	25.03	(28.00)	(26.33)

RESET

PRICE UPDATE

CLEAR ALL

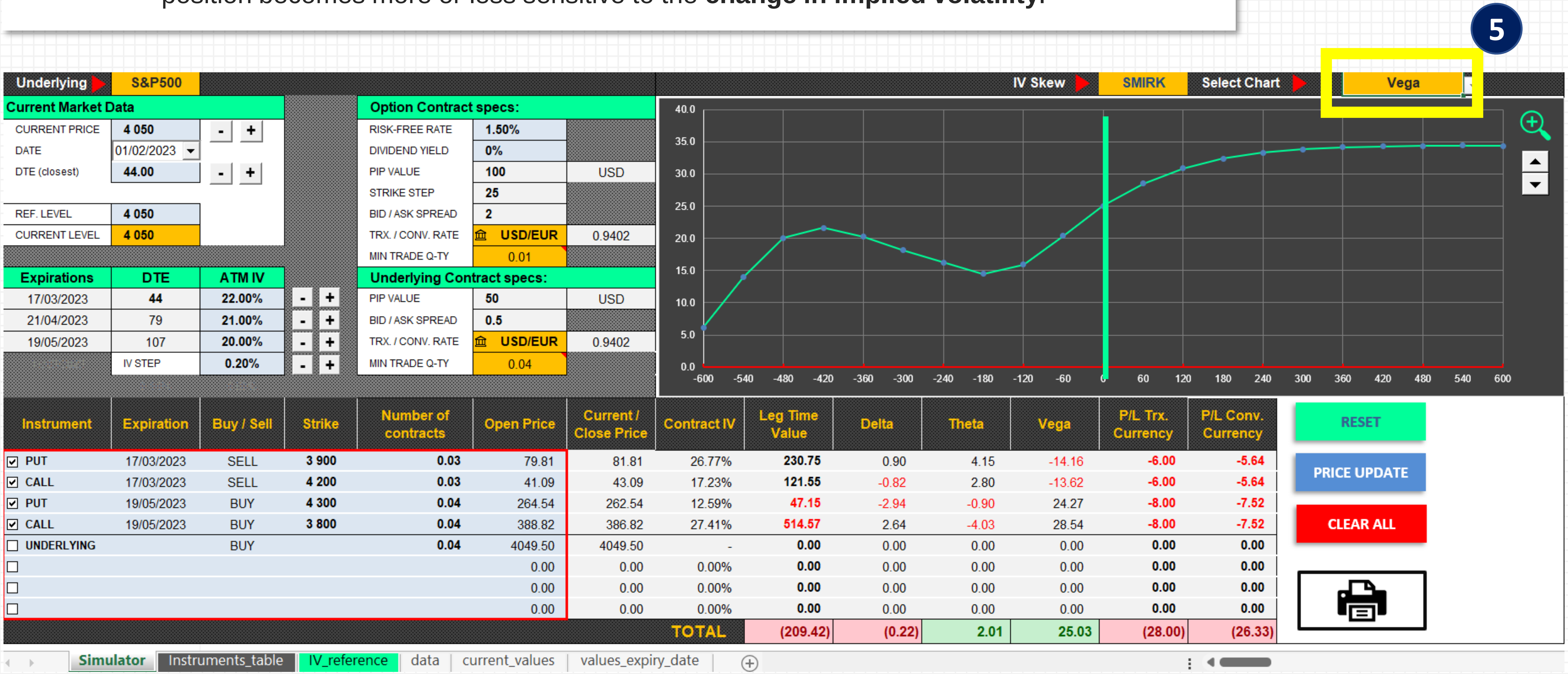
Simulator | Instruments_table | IV_reference | data | current_values | values_expiry_date

GETTING STARTED – 3 STEP-BY-STEP SETUP BUILDING

6

Chart Samples

Vega – Vega chart shows the evolution of Vega along the shift of the underlying instrument. This chart shows us at which price level of the underlying instrument the position becomes more or less sensitive to the **change in implied volatility**.



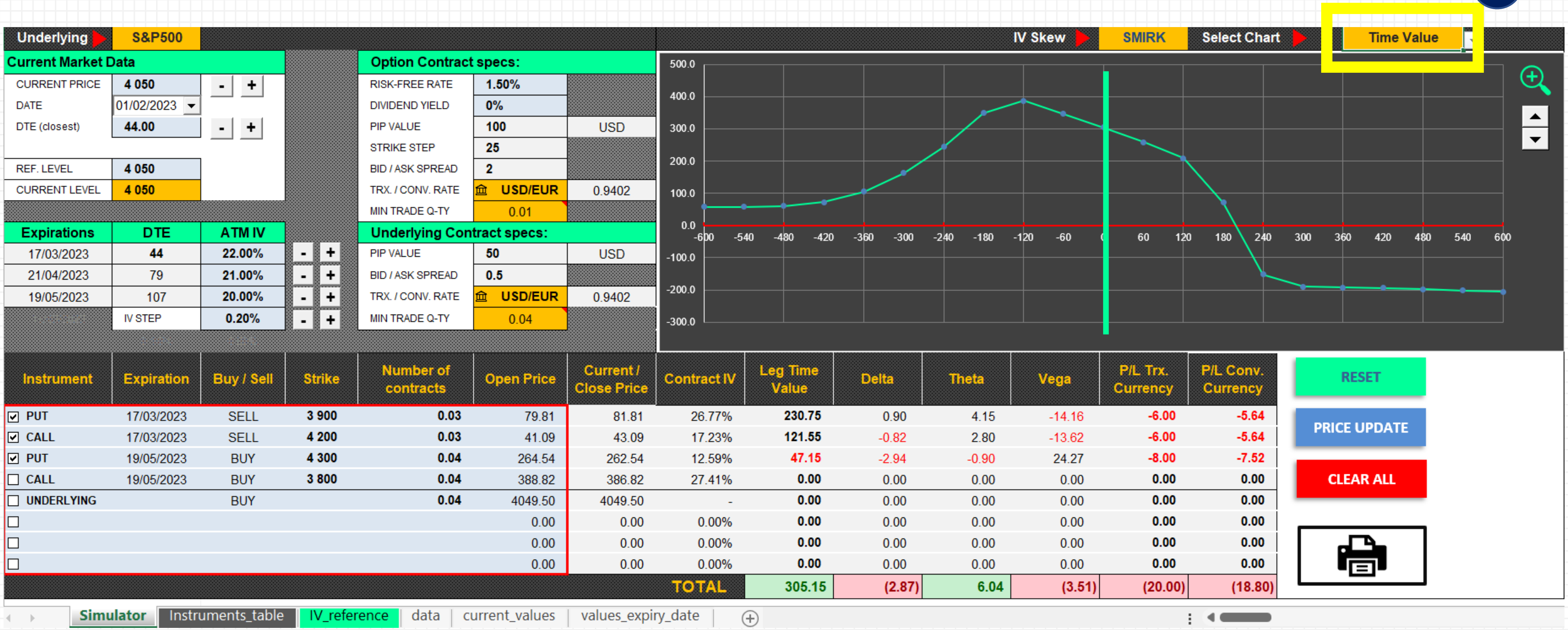
GETTING STARTED – 3 STEP-BY-STEP SETUP BUILDING

6

Chart Samples

Time Value – Time Value chart shows the evolution of the remaining time value along the shift in the underlying instrument and the DTE.

6



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