Contents

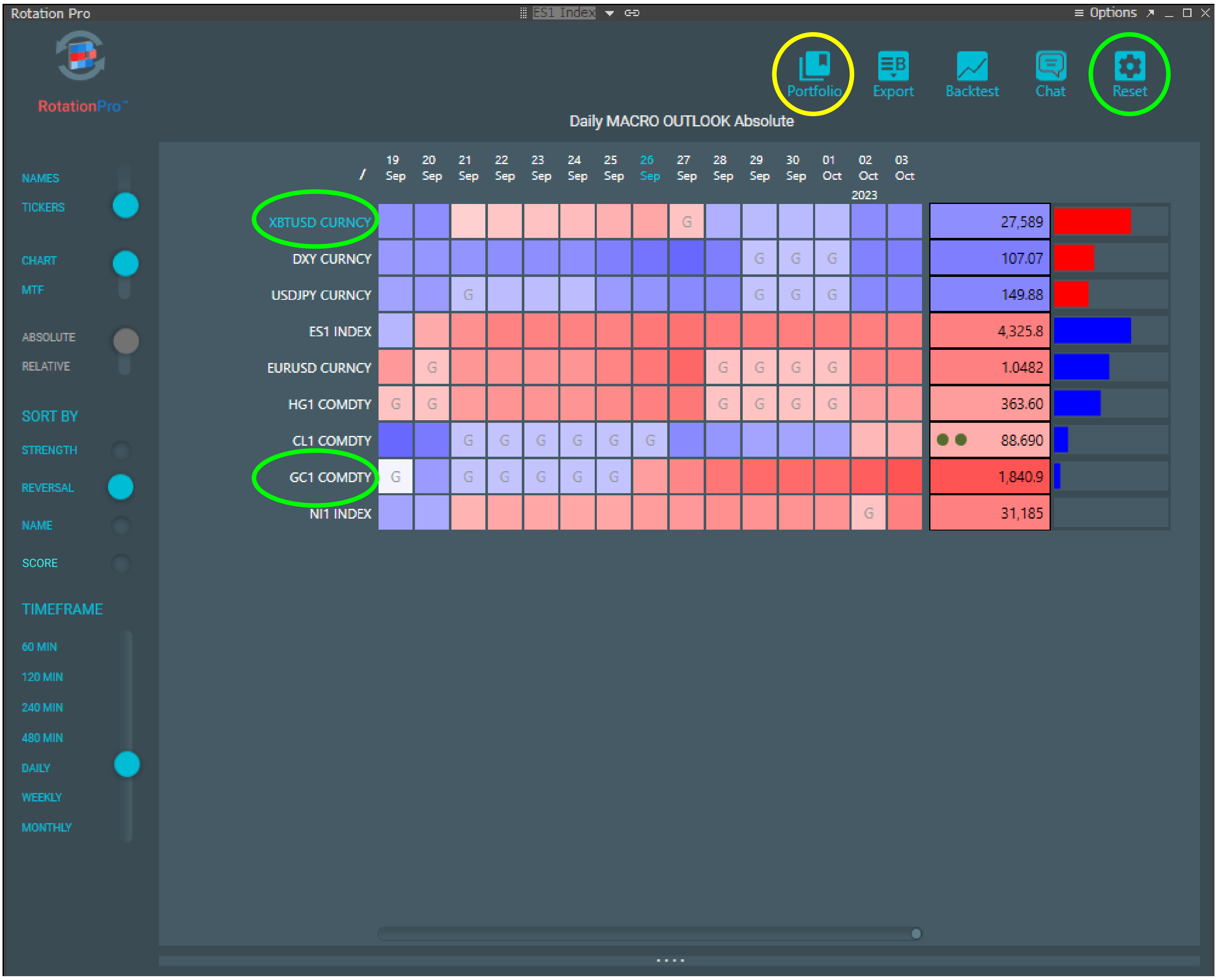
Dynamic heatmaps - introduction to the concept

- The RPRO heatmap lets you scan the trend status of multiple instruments on any timeframe at a glance. It also lets you see how a trend has been developing over time for context. This is useful for changes in trend power and exhaustion set ups.

- It uses blue for uptrends and red for downtrends. Darker colour tones mean more trend power (momentum) in the direction of the colour. Lighter colour tones mean trend power is weakening. Pale cells with a light G mean range bound.

- In the heatmap below, XBTUSD (Bitcoin) at the top has shifted from light blues to stronger blues over the last two sessions indicating that the uptrend has accelerated. GC1 (Gold) second from bottom shows reds getting steadily darker, indicating that a downtrend is getting stronger.

- This is the most basic heatmap, but there are more detailed displays too. You can decide what configuration suits you best in settings on the Reset page.

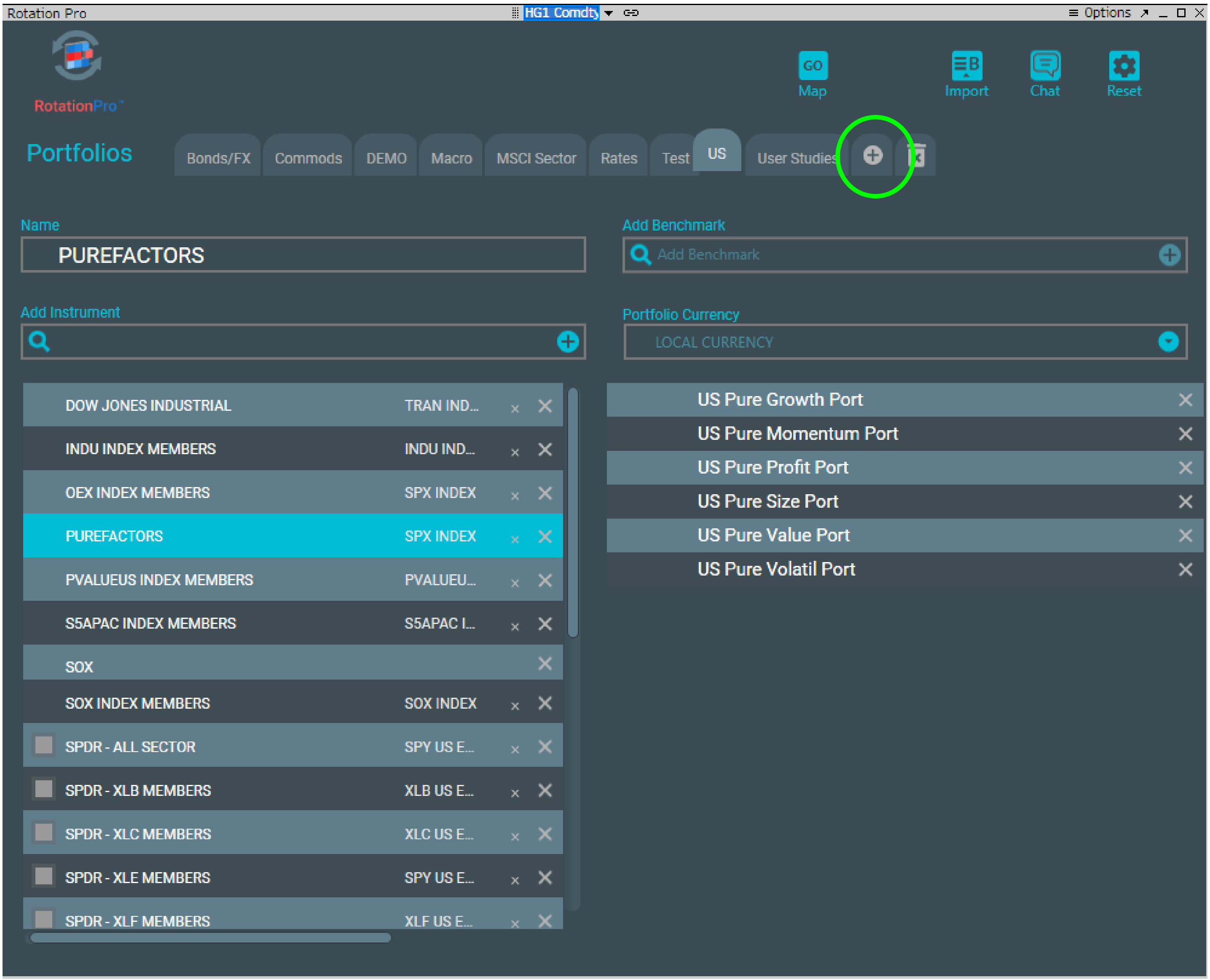


Creating a new tab in Portfolio page view - setting up lists of assets

- The Portfolio icon in the top toolbar (circled in yellow on the previous page) accesses list management. To create a new tab to store your lists, click the plus button.

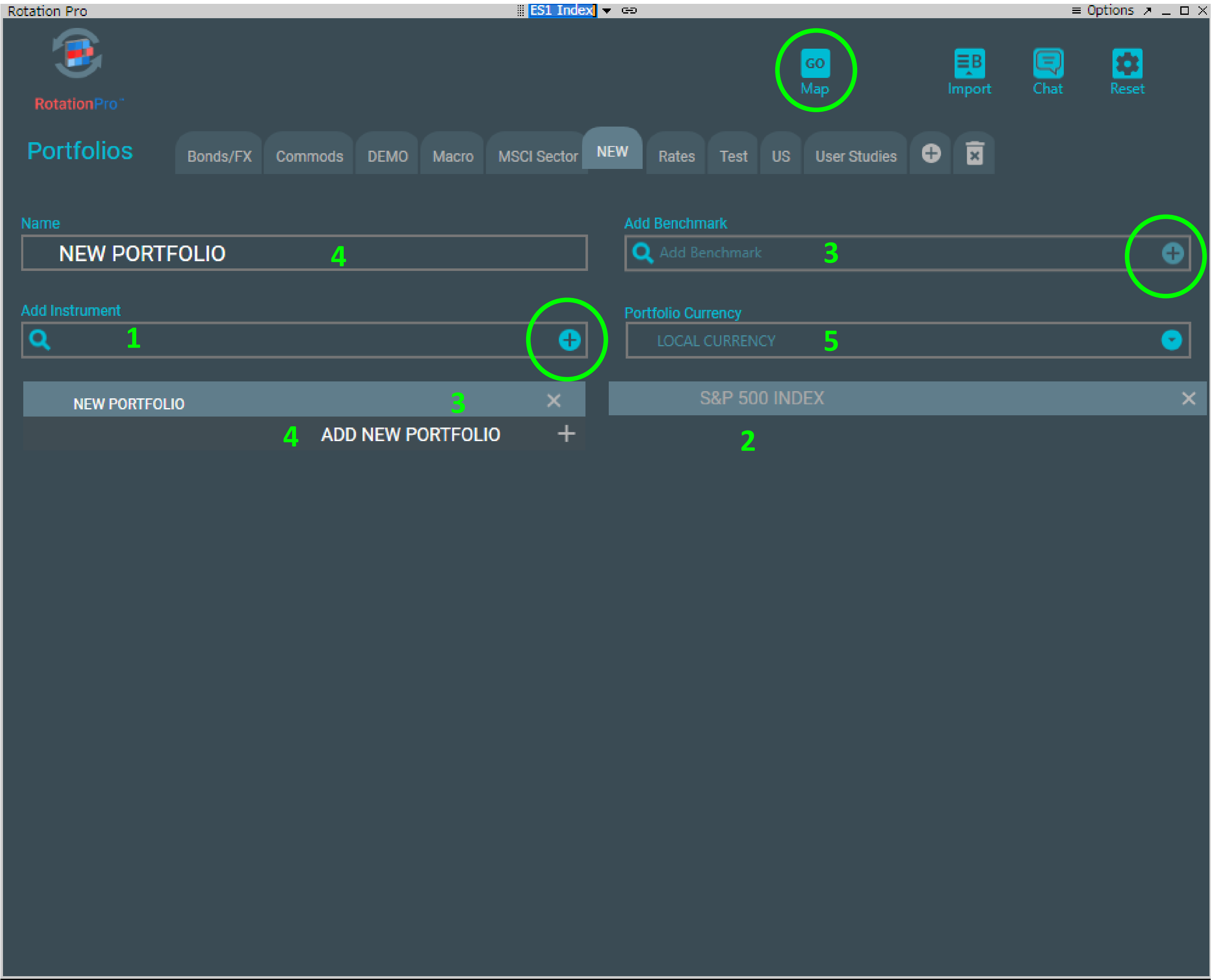
- A new tab will appear called 'New Tab'. Rename to suit by overwriting and then Enter to save.

- To delete a tab click the x within the bin icon and then delete using x again in the 'are you sure' dropdown that appears.



Creating a new list in your new tab

1. In the Add Instrument textbox start typing the instrument's name or ticker. A dropdown menu will be generated. Choose from the list and click the plus sign.
2. The instrument will appear in the right panel (here SPX Index was selected). You can manually add as many instruments as you need.
3. To add a benchmark repeat the process for add instrument, but in this textbox instead. The benchmark ticker will display in the list title in the left panel (here NEW PORTFOLIO). To delete hit the mini x next to it.
4. Rename NEW PORTFOLIO by overwriting in the Name textbox above. Create a new list using ADD NEW PORTFOLIO plus button.
5. Choose portfolio currency in the dropdown or leave as Local if you don't need to change. Hit Map icon in the top toolbar to run the heatmap.



Reset page - manipulating settings

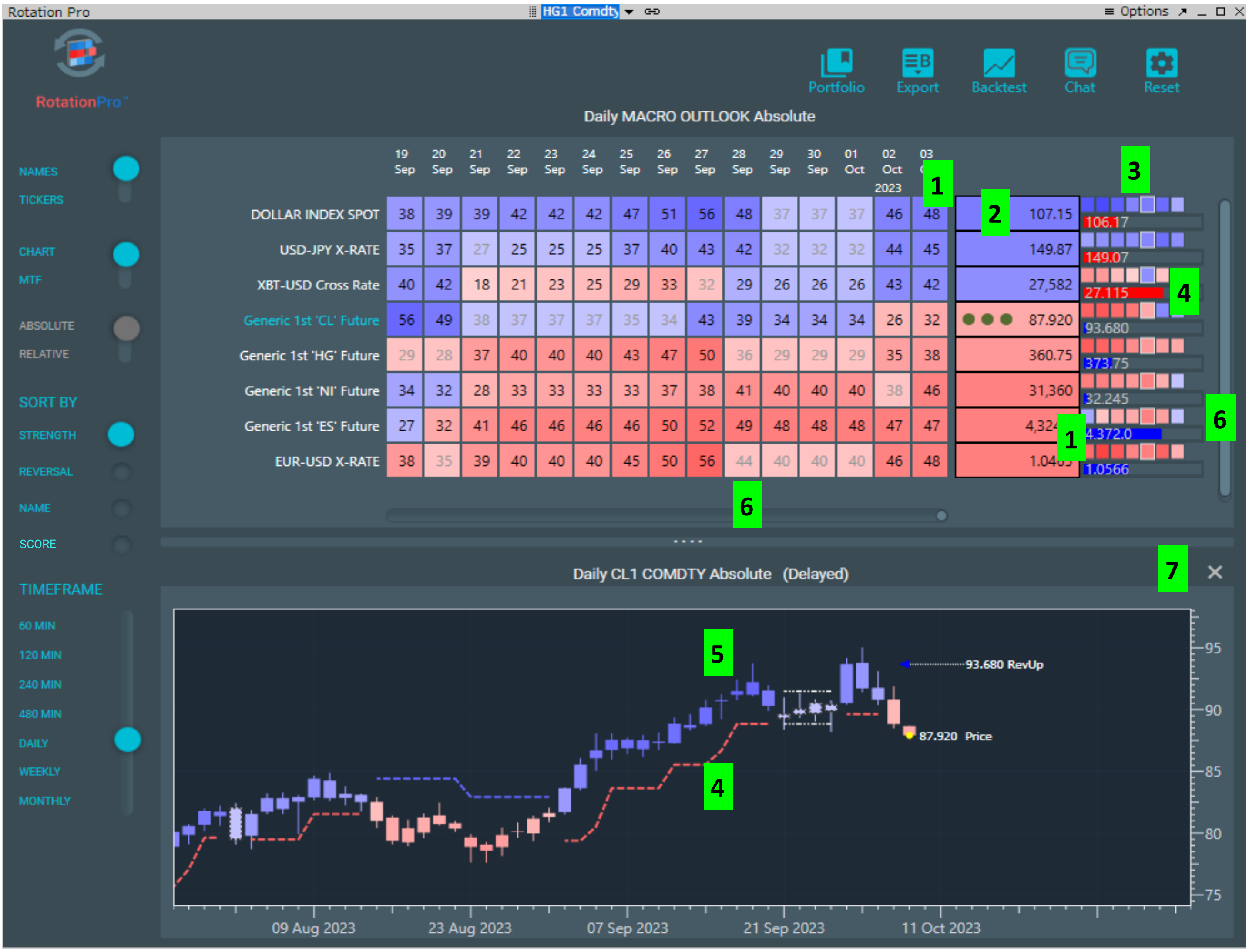
- There are a variety of different settings for heatmap display. You can choose to show: momentum numbers in the heatmap cells; colour change reversal levels; momentum numbers on the chart; the price line across the chart; mini multiple timeframes display. You can also switch from Investor mode (monthly to daily bar timeframes) to Trader mode (5 minute to daily bar timeframes).

- All of the elements will be explained in this guide, but for now just experiment with settings and see how the heatmap display changes.

- RPRO allows you access Bloomberg G charts with a right click on the heatmap. You can list your favourite custom charts in the custom functions box (yellow circled). Hit Close top right to exit page.

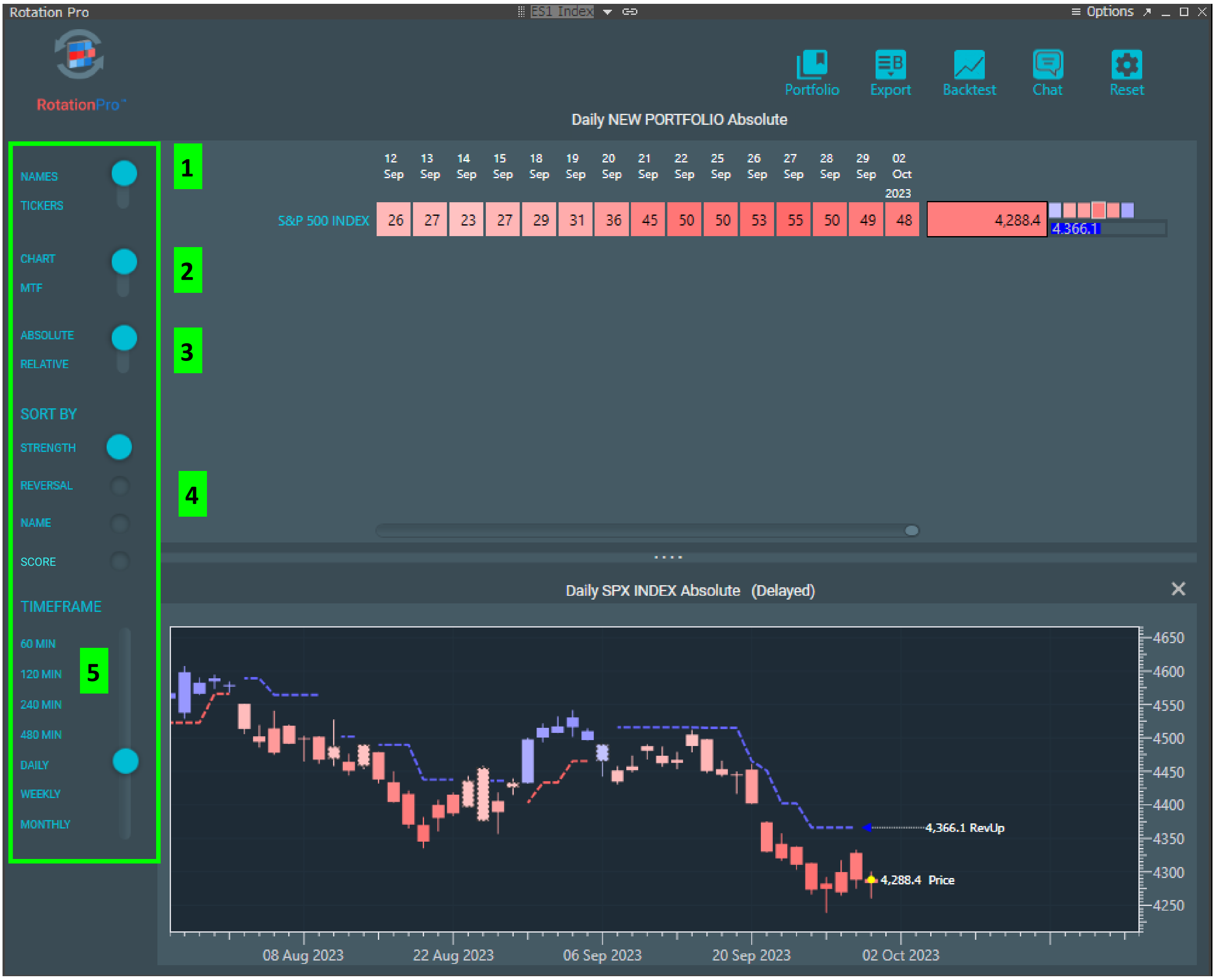
More display functions - beefing up the heatmap display

1. Momentum values are shown in the heatmap cells and correspond to colour strength. Higher numbers mean more trend power and vice versa. Greyed out numbers in pale red or blue cells indicated non-trend ranges.
2. The rectangle to the right of the heatmap is the same colour as the cell at the last date and contains current price as well as signal strength dots where appropriate.
3. The coloured grid furthest to the right shows trend strength and direction on other timeframes - from very short to very long.
4. The red or blue progress bar indicates how close price is to the colour change reversal level (4 on the chart). Full means close to reversal, empty the opposite.
5. The chart candles colours correspond to the heatmap at each date/time.
6. Scroll bars allow you to move up and down the list or back in time.
7. Hit the x in the top right of the chart sub-window to remove it.



Left toolbar - manipulating heatmap functionality

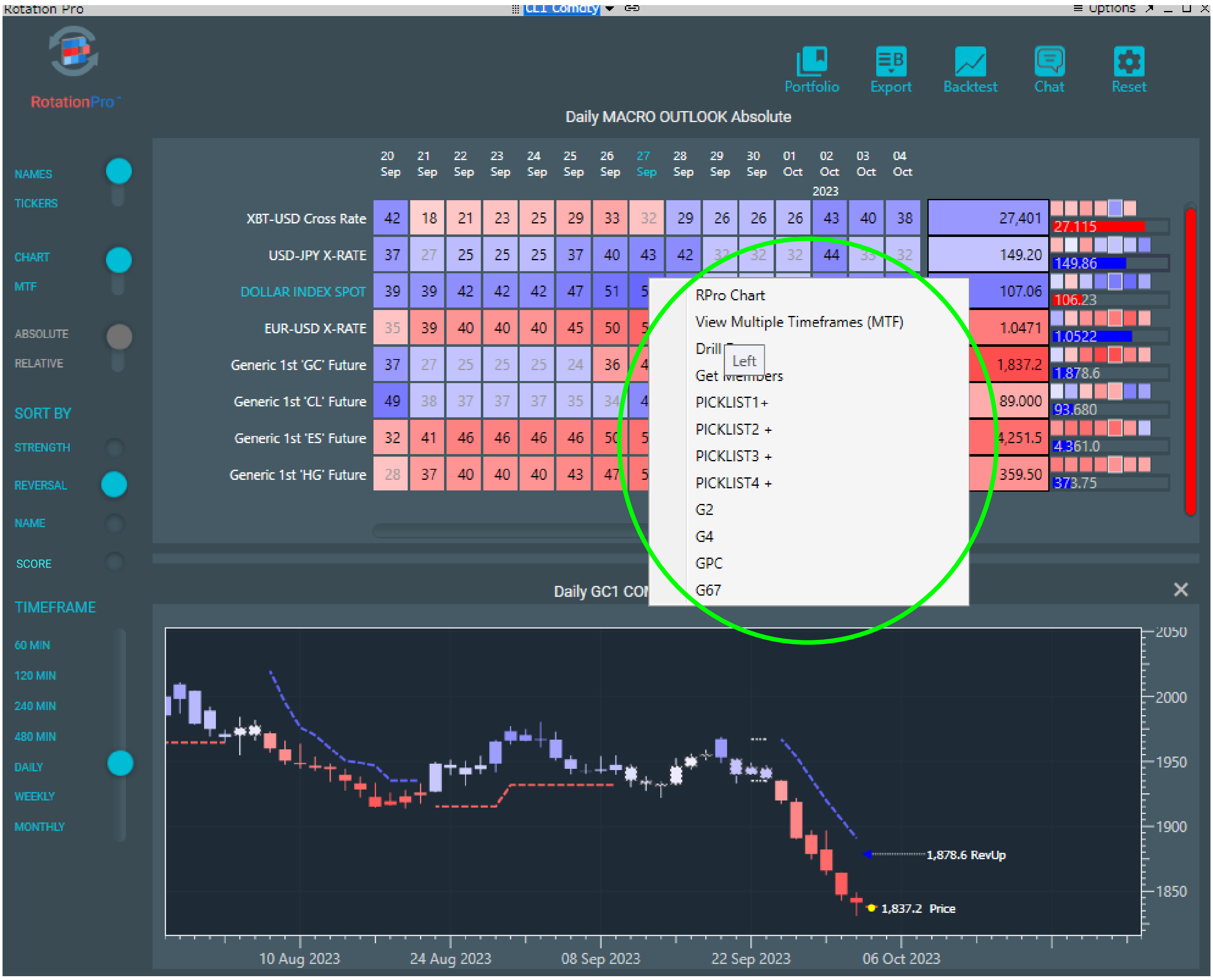
1. You can display tickers or names.
2. Toggled to chart you can left click row by row on any heatmap cell and display the chart. Set to MTF (multi timeframe window) you can do the same for this function, which we will come to shortly.
3. View absolute or relative data. To see relative you must first set the benchmark in portfolio view.
4. Sort a list by strength (strongest blue at top to strongest red at bottom); Reversal (proximity to colour change); Name (alphabetically); Score (signal strength).
5. Choose timeframe from daily to monthly in investor mode on Reset page, or 5 minute to daily in trader mode.



Heatmap right click - drilling down into additional features

- You have access to additional functionality by right clicking any cell in the heatmap and revealing a dropdown menu.

- Here you can select: the RPRO chart sub-window if its not present; the multiple timeframe sub-window; drill down to generate a list of sectors in an index; get constituent members of an index or sector; select names from a list to populate a watchlist; access your Bloomberg G charts direct from the app.

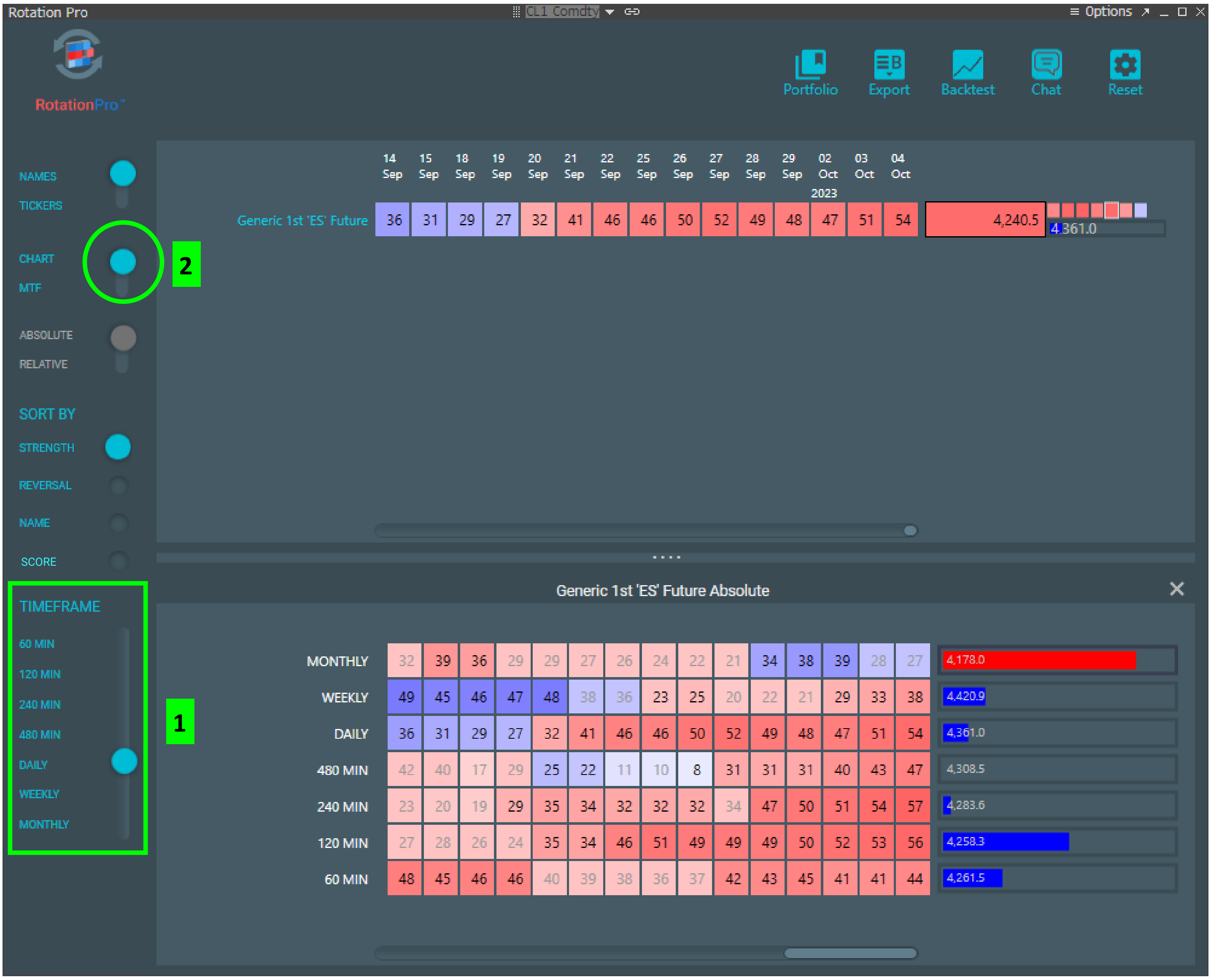


Multi timeframe sub-window - viewing heatmaps across multiple timeframes (1)

- We look at the heatmap status of different timeframes to see what's going on above or below our target timeframe. For example a weak blue daily uptrend regime against a strong red weekly downtrend regime is much less compelling than blue daily and against blue weekly and so on.

There are three ways to look at the heatmap status across different timeframes.

1. With the main heatmap up, choose a different timeframe from the left toolbar. However, there is a way to view the heatmap status across all timeframes at once.
2. With the main heatmap up, toggle from Chart to MTF in the left toolbar and left click through heatmap rows to change the sub-window to multi timeframes.
3. *3.* Right click a cell in the main heatmap, this pulls up the dropdown menu we saw on the previous page and choose View Multiple Timeframes (MTF).

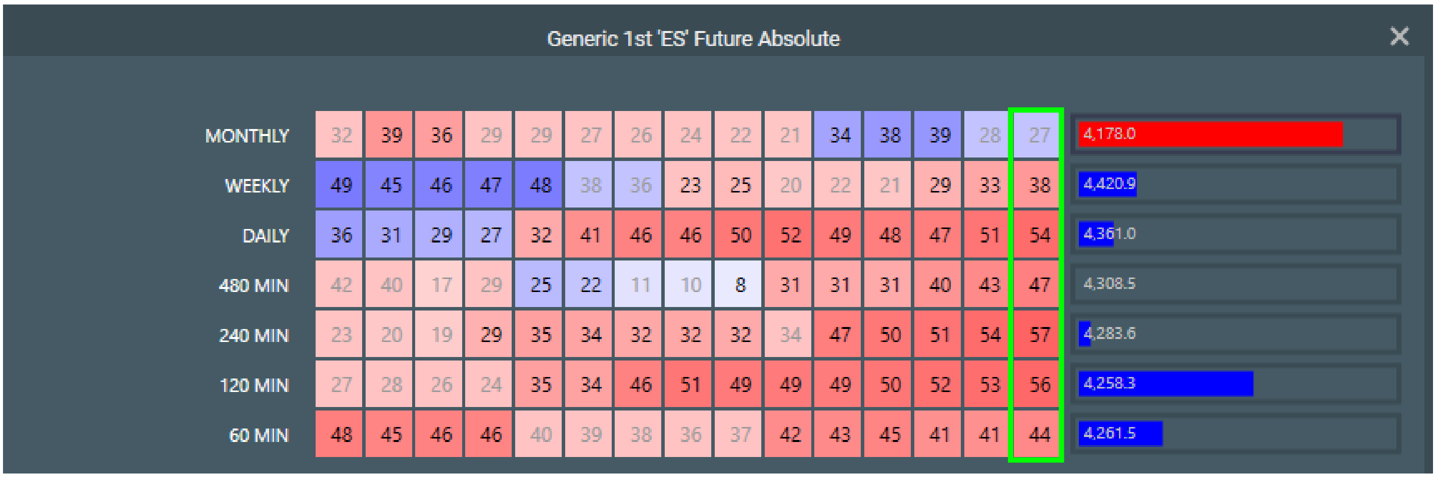


Multi timeframe sub-window - viewing heatmaps across multiple timeframes (2)

- The rows in the multiple timeframe (MTF) sub-window represent the trend on each timeframe. After a bit of practice its very easy to get an instant sense for what trend forces are at work around your target timeframe. Its more art than science, but it can add valuable nuance to your analysis.

- The last date/time cell lines up, but the lookback periods do not, which is why no date/time axis. Read each row as a standalone feeding into last date/time per row.

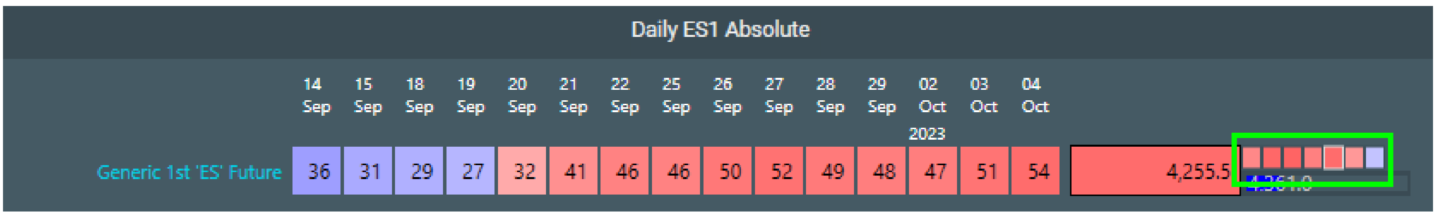
- For example, here we see ES1 Index red across all timeframes from weekly down, which would make you hesitate to step in front of it with a Buy order. You can generate a chart for each timeframe in the upper window by left clicking the relevant row.


Generic 1st 'ES' Future Absolute

MONTHLY	32	39	36	29	29	27	26	24	22	21	34	38	39	28	27	4,178.0
WEEKLY	49	45	46	47	48	38	36	23	25	20	22	21	29	33	38	4,420.9
DAILY	36	31	29	27	32	41	46	46	50	52	49	48	47	51	54	4,361.0
480 MIN	42	40	17	29	25	22	11	10	8	31	31	31	40	43	47	4,308.5
240 MIN	23	20	19	29	35	34	32	32	32	34	47	50	51	54	57	4,283.6
120 MIN	27	28	26	24	35	34	46	51	49	49	49	50	52	53	56	4,258.3
60 MIN	48	45	46	46	40	39	38	36	37	42	43	45	41	41	44	4,261.5

Snapshot MTF in heatmap pane

- To the far right of the main RPRO heatmap is a snapshot of the multi timeframe sub-window.   Whereas the main multi timeframe is arranged in vertical rows, the snapshot is arranged horizontally and only shows the colour and tone at the last date. So from left to right it's: 60, 120, 240, 480 minute, Daily, Weekly, Monthly. You can see from the main MTF above and the snapshot MTF that at the last date the colours and tones match. The colour box for the timeframe you are actually on in the heatmap is slightly emphasised.


Daily ES1 Absolute

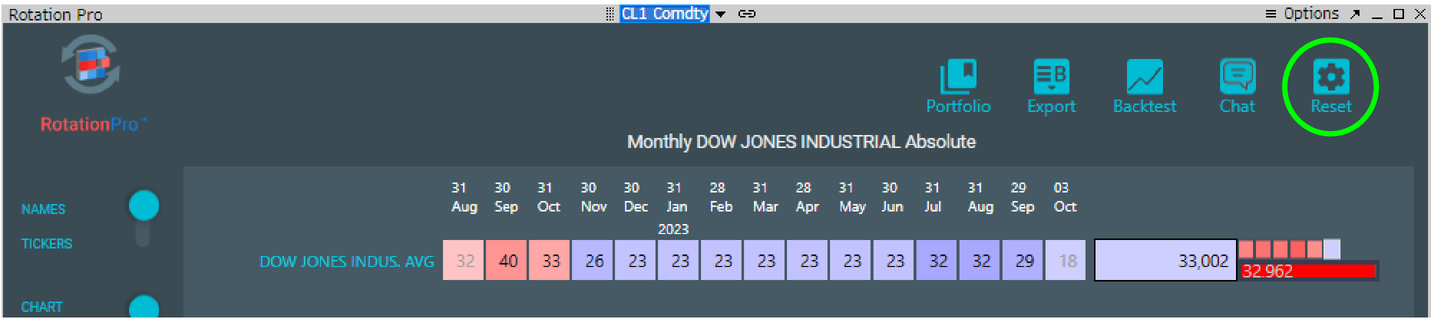
	14 Sep	15 Sep	18 Sep	19 Sep	20 Sep	21 Sep	22 Sep	25 Sep	26 Sep	27 Sep	28 Sep	29 Sep	02 Oct 2023	03 Oct	04 Oct	
Generic 1st 'ES' Future	36	31	29	27	32	41	46	46	50	52	49	48	47	51	54	4,255.5

Get members - pulling lists of constituents out of equity indices and sectors (1)

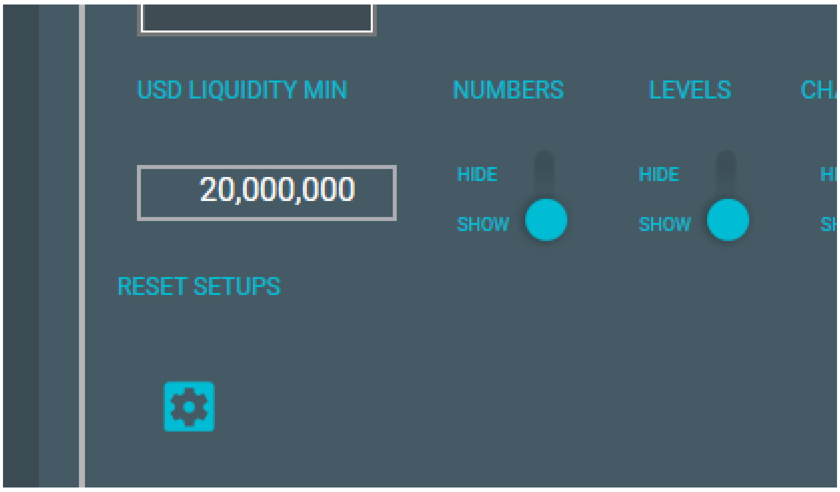
- For equity indices and sectors you have the ability to extract all constituents in one click and then generate a heatmap of that list.

- Pull up the index or sector, right click on a cell in the heatmap row and from the drop down menu click Get Members. You will then automatically be taken to the portfolio page where the members will be listed up and the benchmark of the index or sector already added.

- You may want to screen a list by size, say for example only list everything that trades above $20 million per day. To set this up you need to go to the Reset page first.

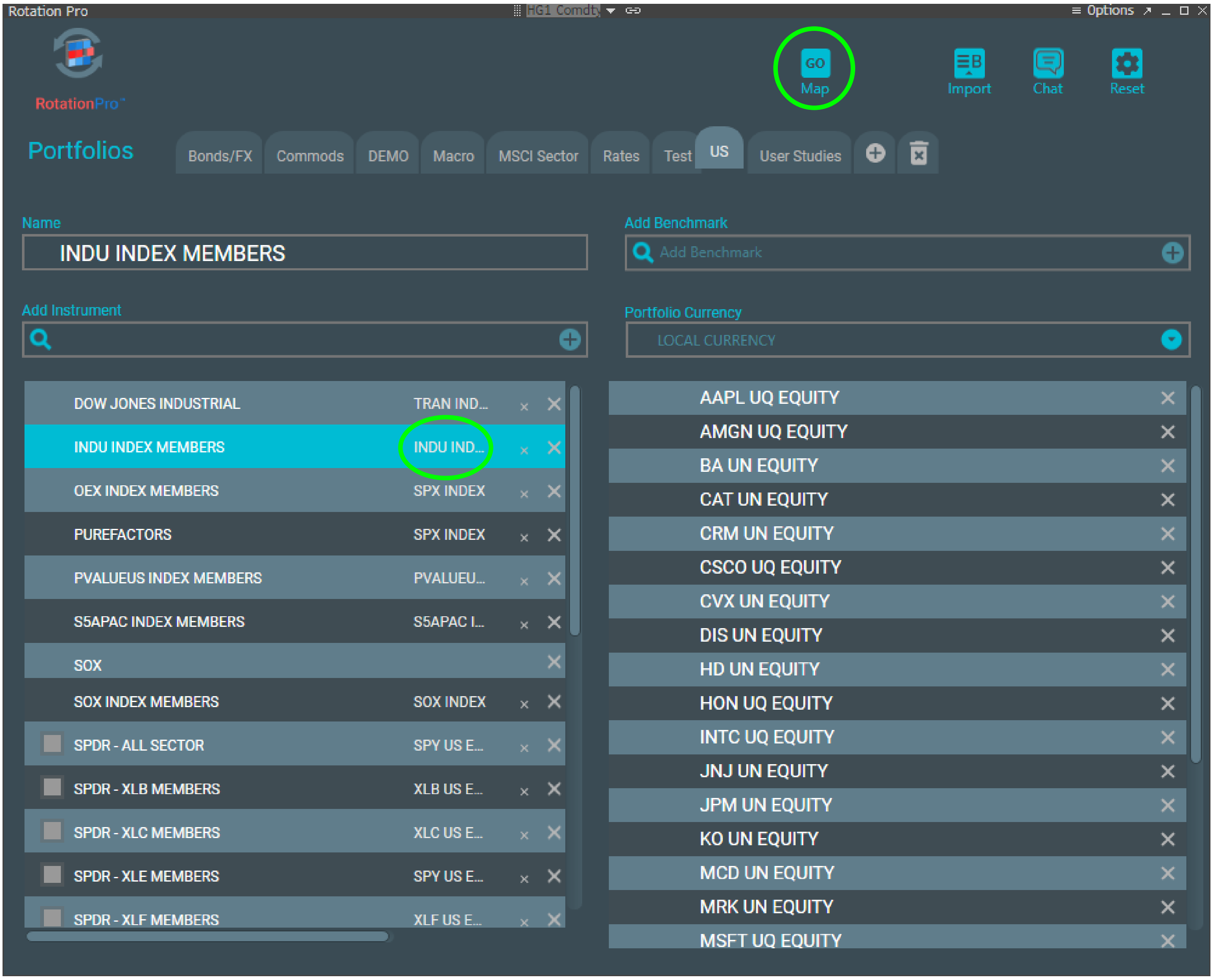


- In the Reset page you will see a text box named USD LIQUIDITY MIN. Simply type the minimum amount there. You need commas and to write the full amount: so here 20 million is to be written 20,000,000. Once typed in just left click away on the screen to save.



Get members - pulling lists of constituents out of equity indices and sectors (2)

- Here is the list automatically generated in the portfolio page. Notice that the bench-mark is already set by default. Hit Map in the top toolbar to run the heatmap.

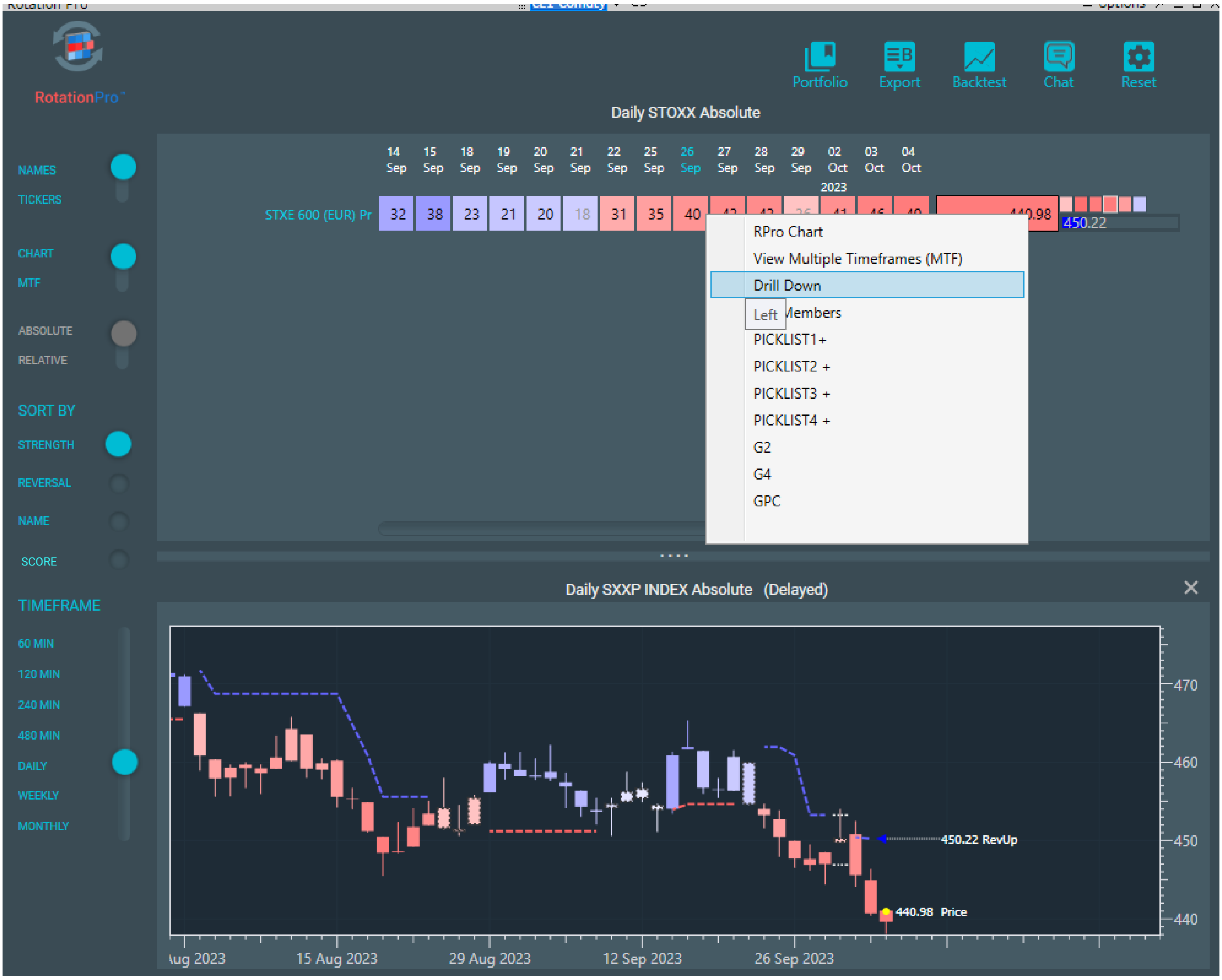


Drill down - pulling lists of sectors out of equity indices (1)

- For indices that Bloomberg associates sectors with, you can right click the heatmap cell for the index and call the sectors using right click Drill Down.

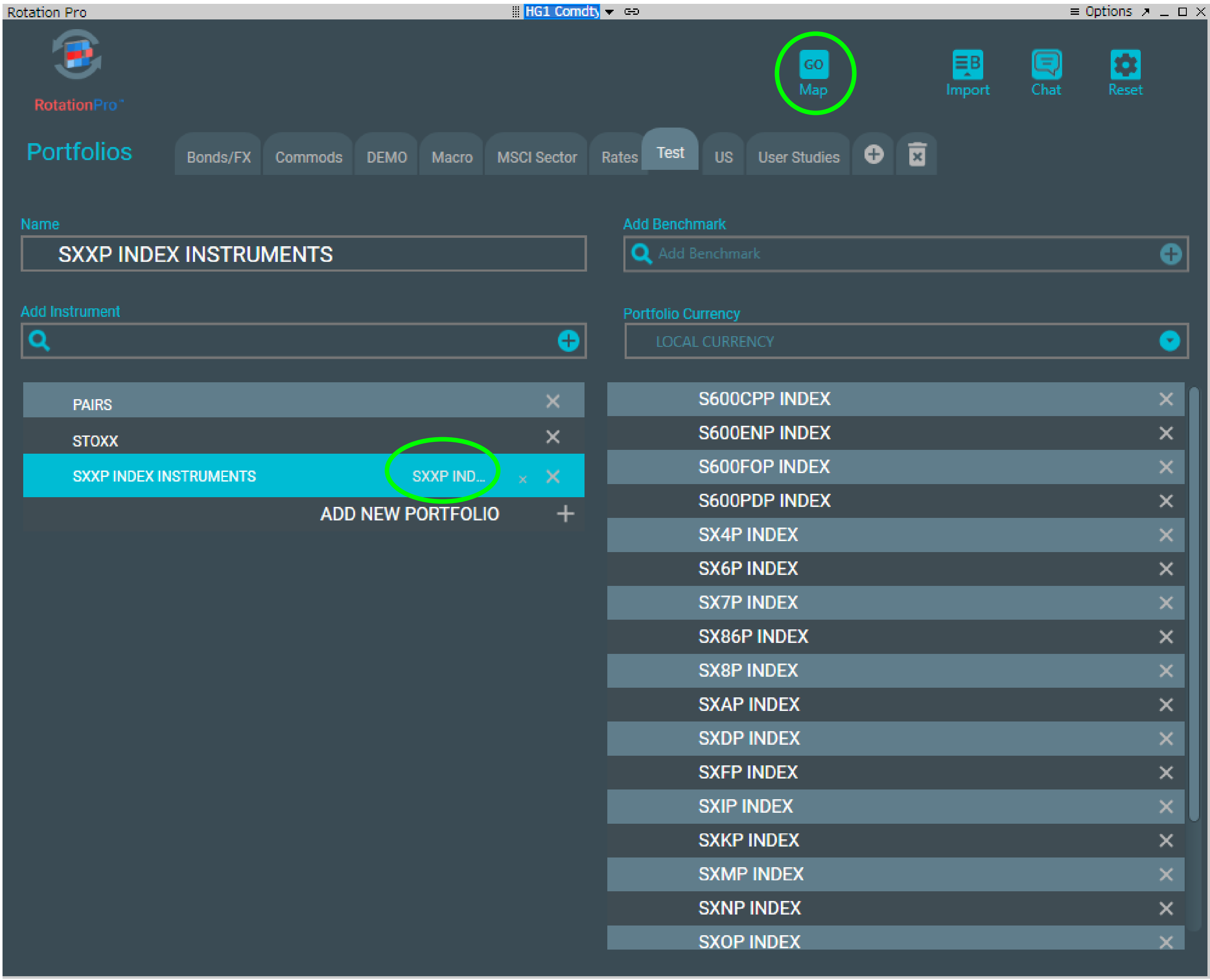
- Then it's the same as Get Members, the list gets automatically sent to the portfolio page from where you can run the heatmap.

- Remember once you run the sectors list heatmap you can then run Get Members on individual sectors for the stock constituents.



Drill down - pulling lists of sectors out of equity indices (2)

- Here is the sectors list automatically generated in the portfolio page. Notice that the benchmark is already set by default. Hit Map in the top toolbar to run the heatmap.



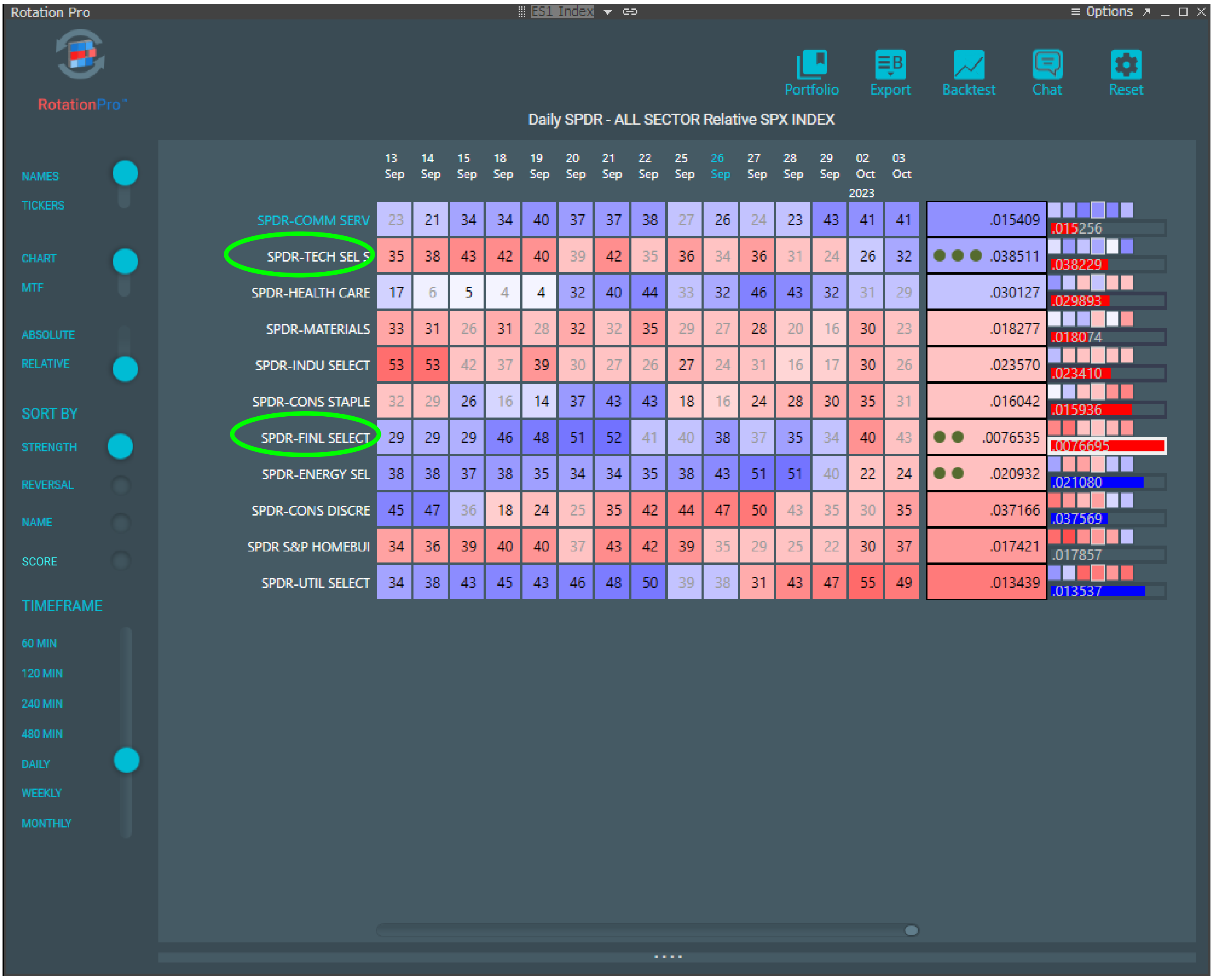
Relative benchmark - setting securities against benchmarks for relative views

- You were shown how to set the benchmark in the portfolio page.

- Here is the US SPDRs list relative SPX Index in heatmap form. You can see for example that the Tech ETF has just put in a good upside reversal outperformance signal by turning blue with three signal strength dots and that the MTF snapshot to the right is all blues.

- Conversely the Financials ETF turned red indicating underperformance initiation and has two downside signal strength dots and the MTF snapshot is all reds.

- This gives you an instant sense for what is going on in terms of relative rotation which is hard to do outside RPRO.



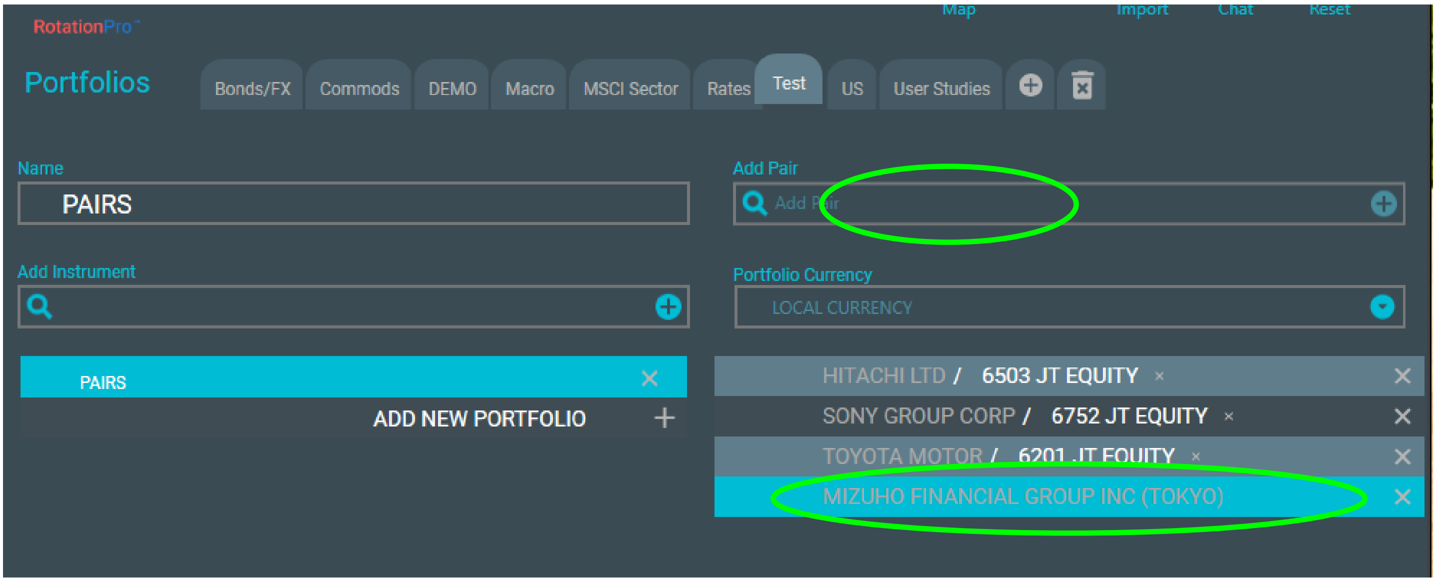
	13 Sep	14 Sep	15 Sep	18 Sep	19 Sep	20 Sep	21 Sep	22 Sep	25 Sep	26 Sep	27 Sep	28 Sep	29 Sep	02 Oct 2023	03 Oct		
SPDR-COMM SERV	23	21	34	34	40	37	37	38	27	26	24	23	43	41	41	.015409	.015256
SPDR-TECH SEL S	35	38	43	42	40	39	42	35	36	34	36	31	24	26	32	.038511	.038229
SPDR-HEALTH CARE	17	6	5	4	4	32	40	44	33	32	46	43	32	31	29	.030127	.029893
SPDR-MATERIALS	33	31	26	31	28	32	32	35	29	27	28	20	16	30	23	.018277	.018074
SPDR-INDU SELECT	53	53	42	37	39	30	27	26	27	24	31	16	17	30	26	.023570	.023410
SPDR-CONS STAPLE	32	29	26	16	14	37	43	43	18	16	24	28	30	35	31	.016042	.015936
SPDR-FINL SELECT	29	29	29	46	48	51	52	41	40	38	37	35	34	40	43	.0076535	.0076695
SPDR-ENERGY SEL	38	38	37	38	35	34	34	35	38	43	51	51	40	22	24	.020932	.021080
SPDR-CONS DISCRE	45	47	36	18	24	25	35	42	44	47	50	43	35	30	35	.037166	.037569
SPDR S&P HOMEBUI	34	36	39	40	40	37	43	42	39	35	29	25	22	30	37	.017421	.017857
SPDR-UTIL SELECT	34	38	43	45	43	46	48	50	39	38	31	43	47	55	49	.013439	.013537

Pairs - creating pairs (1)

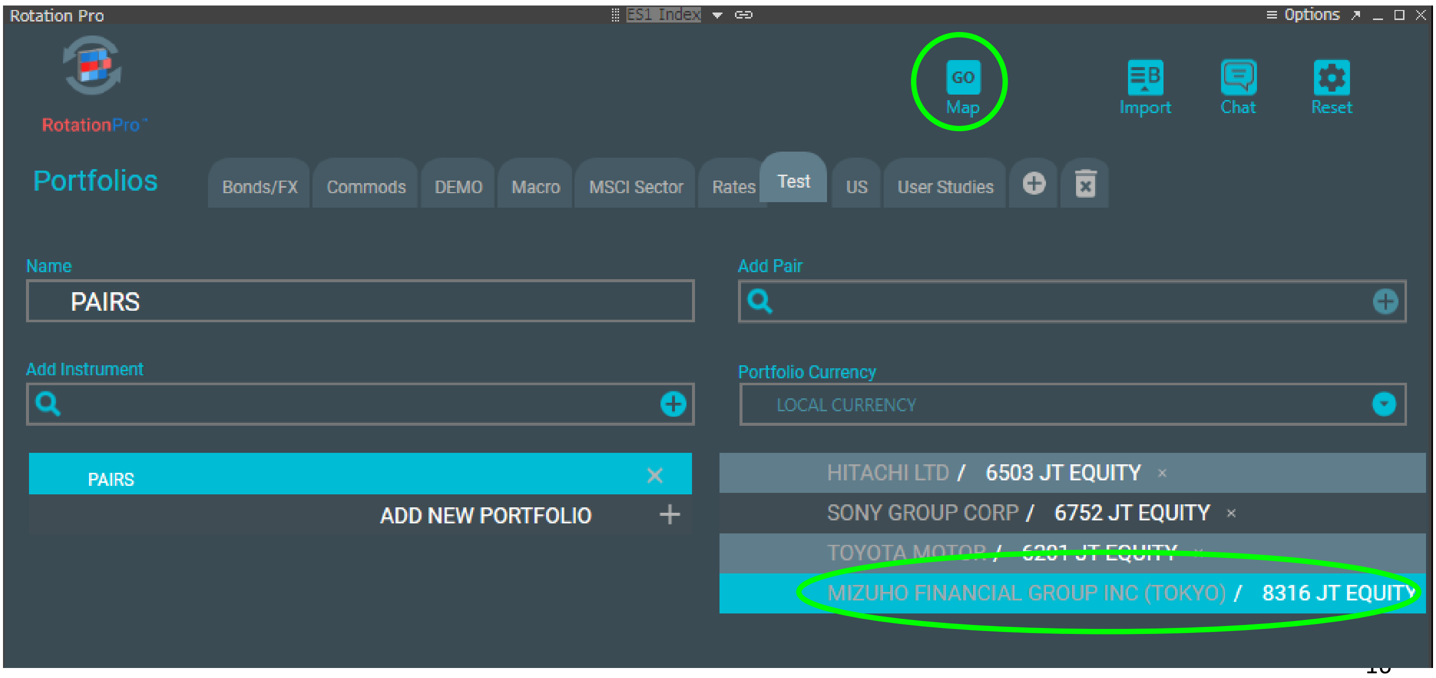
- In the same way as you can create relative heatmaps you can also manually build lists of pairs.

- Go to the portfolio page and enter the numerator of the pair. Three have already been created in this list and we have Mizuho waiting to become a pair. Mizuho was added using Add Instrument textbox above the left panel and then plus.

- Left click on Mizuho in the right panel and the box that was labelled Change Benchmark becomes Add Pair. Type in the denominator and pick from the dropdown menu and hit plus.

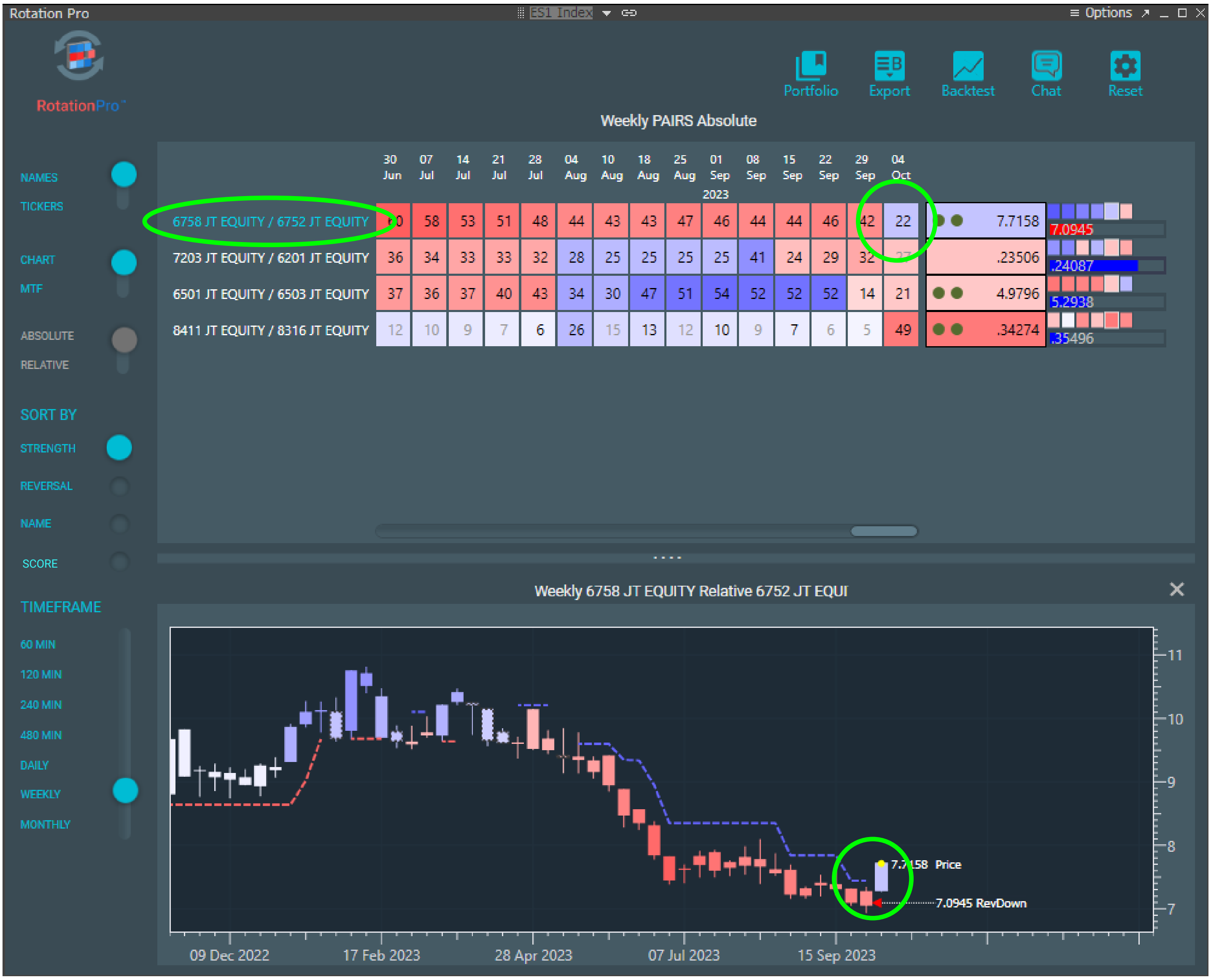


- 8316 JT Equity was added and it appears next to Mizuho. Hit Map in the top toolbar to run the heatmap. To kill the benchmark just click the x to the right of it.



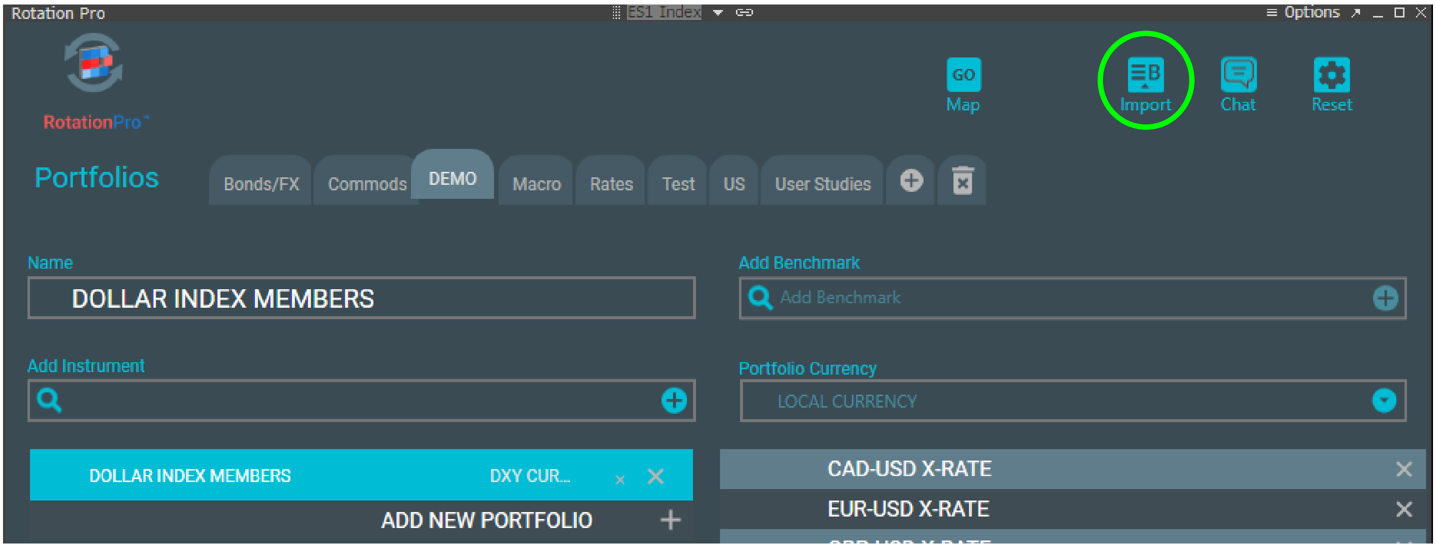
Pairs - creating pairs (2)

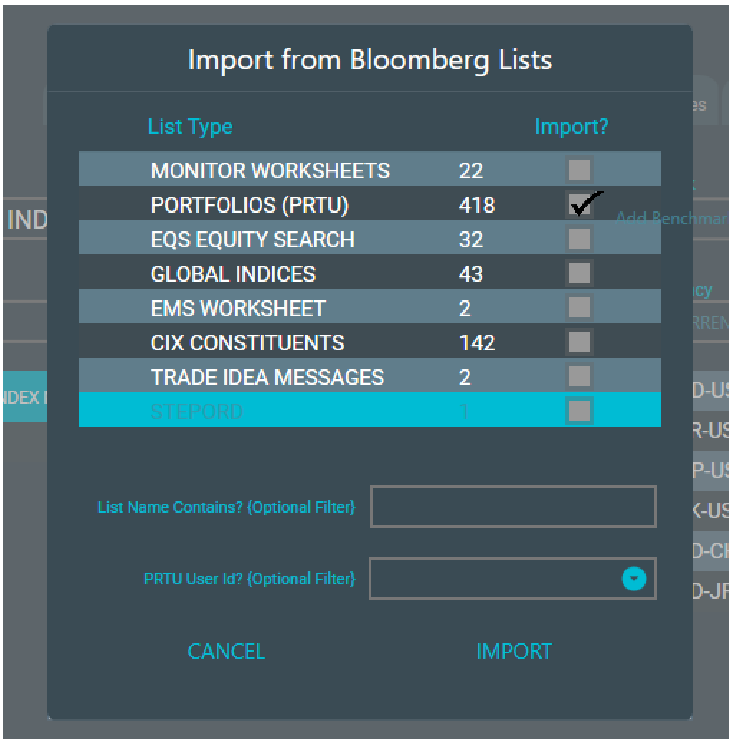
- Here is the list of four example pairs in weekly heatmap view sorted by strength. Notice that Sony versus Panasonic has just inflected to a weak blue indicating that the pair may be uptrend ready.



Importing lists - drawing lists from Bloomberg

- As an alternative to manually creating lists you can import existing lists from Bloomberg. Left click Import in the top toolbar in portfolio page.





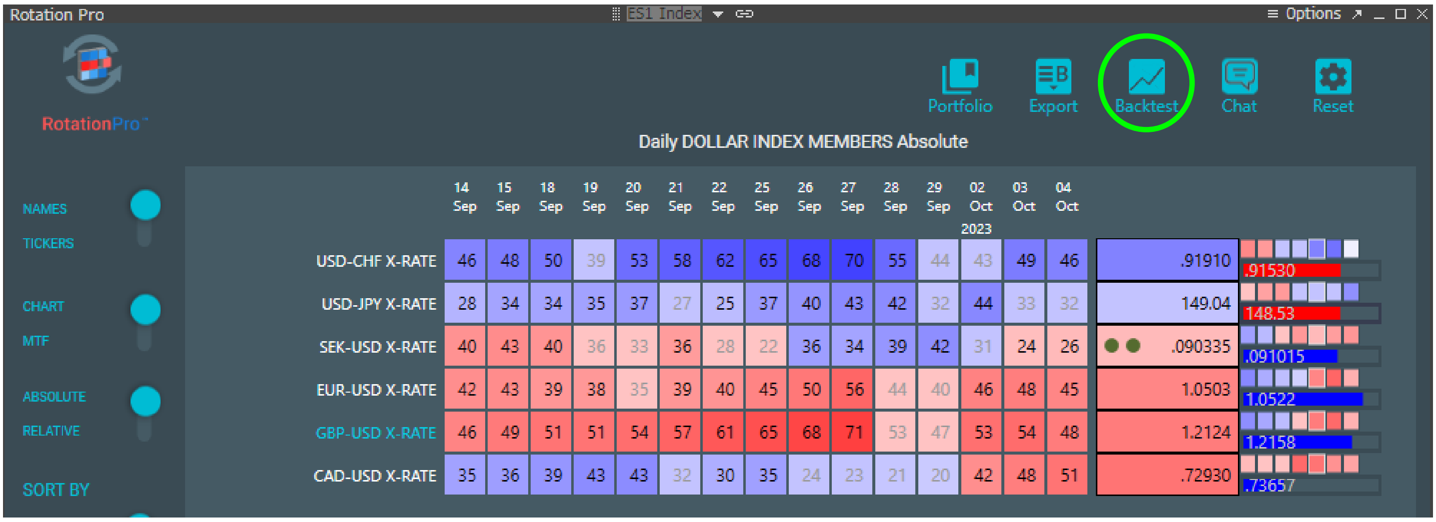
- Tick the box of the location of the list PRTU, EQS, BLP monitors and so on.

-If you have hundreds of lists in each category you can zero in by typing a clue in the List name contains text-box.

- Hit Import and the list ready for heatmapping will appear in a new Imported tab in the portfolio page.

Backtests - how the basic system performs (1)

- You can run backtests of your list by left clicking the icon in the top toolbar. These simply test the robustness by security of red to blue and blue to red colour changes. There is no position sizing, its just a vanilla trend following system to give you a sense of the system's viability and which instruments RPRO favours. You can run absolute or relative price as well as pairs and on any timeframe.



- Performance statistics for each security are displayed with an averaged summary.

Performance Window

Long | Short | Annual

Daily DOLLAR INDEX MEMBERS Absolute

Ticker	Pair	Avg Days	Avg Win	Avg Loss	Max Win	Max Loss	Trades	Win/Lose	Expectancy
SEKUSD CURNCY		13.8	2.6%	- 0.7%	7.2%	- 1.0%	49	71.3%	1.67%
GBPUSD CURNCY		12.5	1.9%	- 0.8%	8.2%	- 1.2%	43	63.0%	0.90%
CADUSD CURNCY		11.4	1.7%	- 0.4%	3.5%	- 1.4%	45	50.2%	0.64%
EURUSD CURNCY		16.9	1.8%	- 0.4%	6.3%	- 1.0%	49	66.0%	1.04%
USDJPY CURNCY		13.8	1.4%	- 0.4%	10.8%	- 1.3%	47	85.2%	1.12%
USDCHF CURNCY		12.3	1.8%	- 0.6%	7.3%	- 1.2%	44	64.5%	0.94%

Start	End	Avg Days	Avg Win	Avg Loss	Max Win	Max Loss	Trades	Win/Lose	Expectancy
06 Dec 2019	04 Oct 2023	13.4	1.9%	- 0.6%	10.8%	- 1.4%	46	66.7%	1.06%

- You can also view annualised performance statistics.

Year	Avg Days	Avg Win	Avg Loss	Max Win	Max Loss	Trades	Win/Lose	Expectancy
2019	6.0	0.5%	0.0%	2.0%	0.0%	0	100.0%	0.54%
2020	13.6	1.8%	- 0.5%	7.2%	- 1.2%	12	67.7%	1.06%
2021	14.2	1.1%	- 0.4%	4.2%	- 1.1%	11	74.1%	0.72%
2022	13.1	2.1%	- 0.6%	10.8%	- 1.4%	12	70.8%	1.29%
2023	16.2	2.0%	- 0.5%	4.9%	- 1.2%	8	63.9%	1.10%

Backtests - how the basic system performs (2)

- Within the Long or the Short backtest windows, you can click on a security to view the trade history.

- If you click on a specific trade row it will show the trade in the chart below.

Reversal lines - progress bars and reversal lines for heatmap colour changes (1)

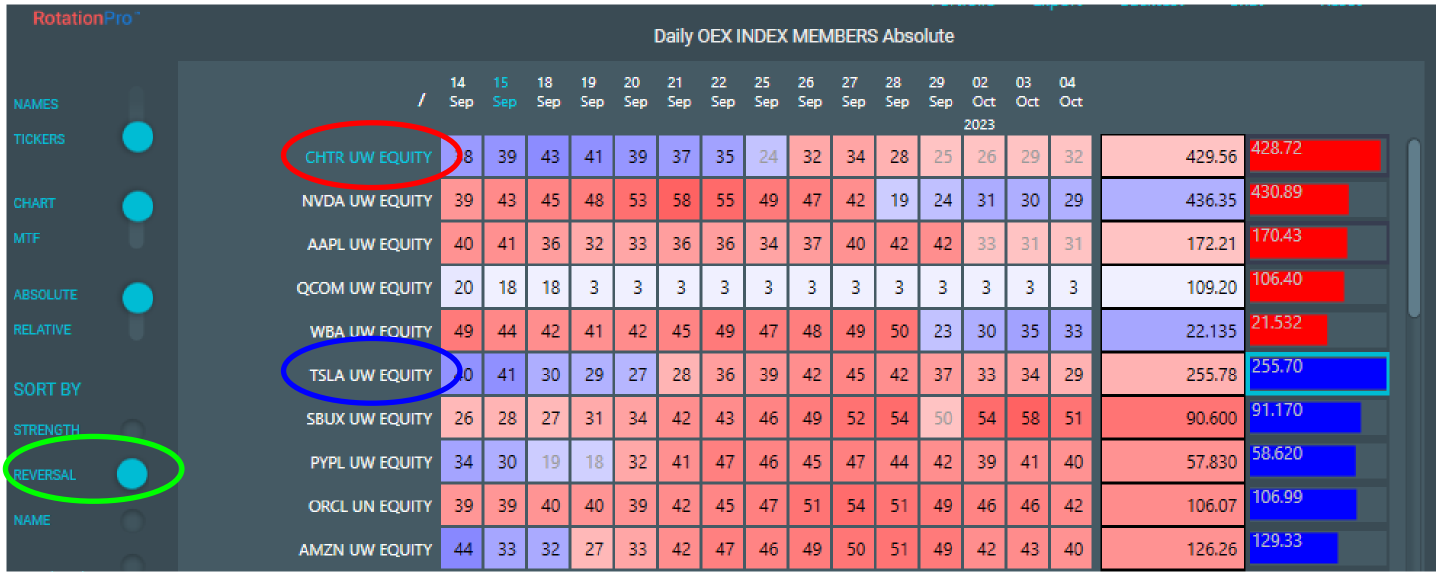
-The red and blue progress bars to the far right of the heatmap graphically represent how close a colour change "reversal" is. The snapshot mini MTFs are hidden for clarity here (you can toggle to this in the Rest page under SHOW ROW MTF) .

- RPRO knows the distance to colour change reversal at any given time. The delta between price and the reversal line on the chart is represented by the fullness of the progress bar on the heatmap page.

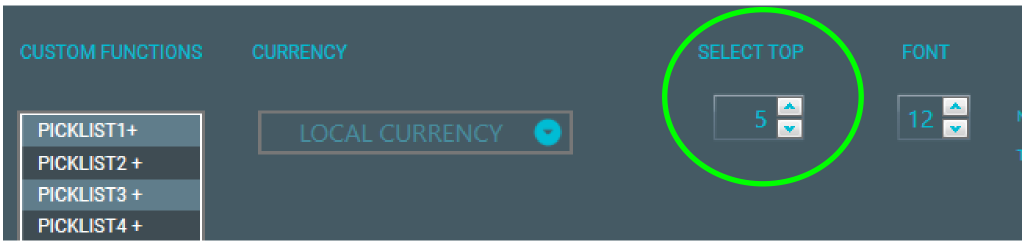
- If the progress bar is full red then the reversal or risk line is near and below price. If the progress bar is full blue then the risk line is near and above price. The former suggests an upside resolution and the latter a downside resolution.

- If the progress bar is empty or more or less so, then the risk level is distant and less important to know about.

- If there is a blue or white frame around the progress bar, then price is passing through the reversal line in real time.



- The list above is sorted by Reversal in the left toolbar. It shows the top five fullest red progress bars and then the top five fullest blue. You can set this number in the Reset page. The number should be around 10% of the list length, e.g. 100 names and Select Top would be 10.



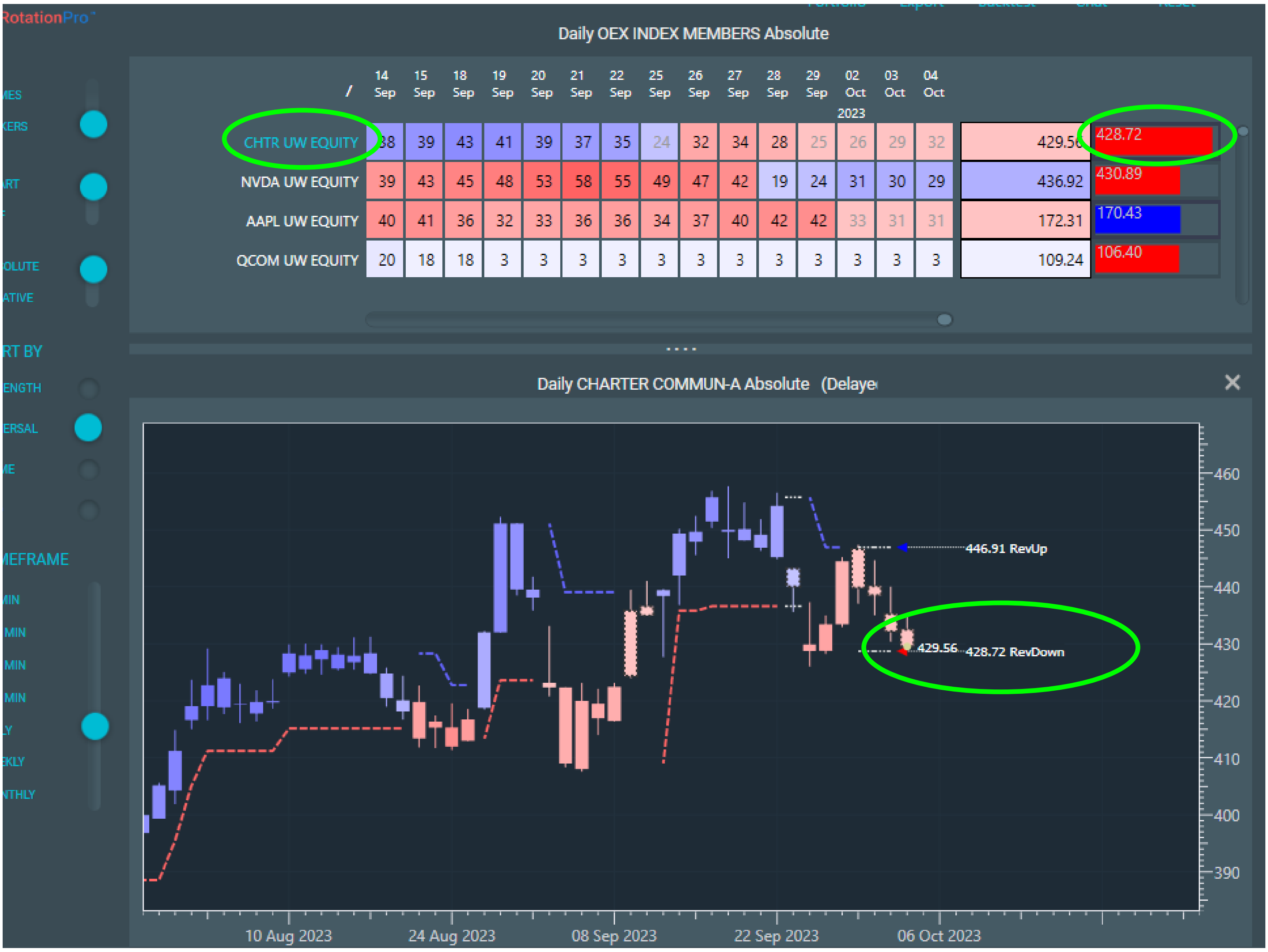
Reversal lines - progress bars and reversal lines for heatmap colour changes (2)

-CHTR US (Charter) has been selected from the previous page's Sort by Reversal as having the fullest red progress bar in the list.

-The number 428.72 written within it is the downside reversal level and with last price of 429.56 (pink box to the left) it means that price is very close to potential breakdown level. However, reversal levels can also act as support, we will get into this later.

-The chart shows price touching the lower reversal line and the same price and reversal levels shown in the heatmap view.

-You can see the reversal lines in past time on the chart. A red line is plotted beneath blue candles and shows the downside reversal level and a blue line is plotted above red candles to show the upside reversal level. Grey lines above and below price represent a range. Reversal levels are always known in advance and as the spread widens and narrows so will the progress bar fill up and empty out.

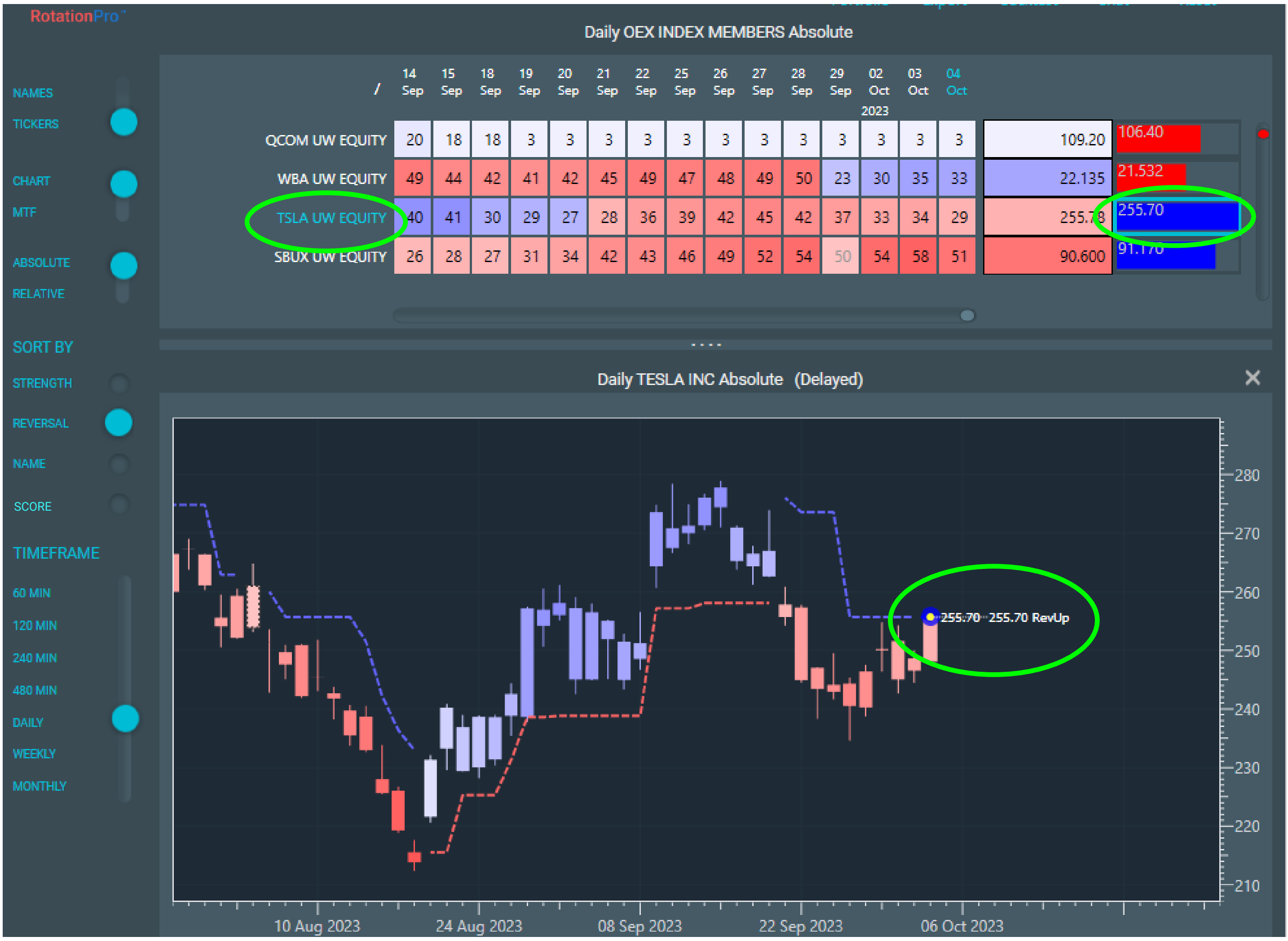


Reversal lines - progress bars and reversal lines for heatmap colour changes (3)

-TSLA US (Tesla) has been selected from the Sort by Reversal list as having the fullest blue progress bar.

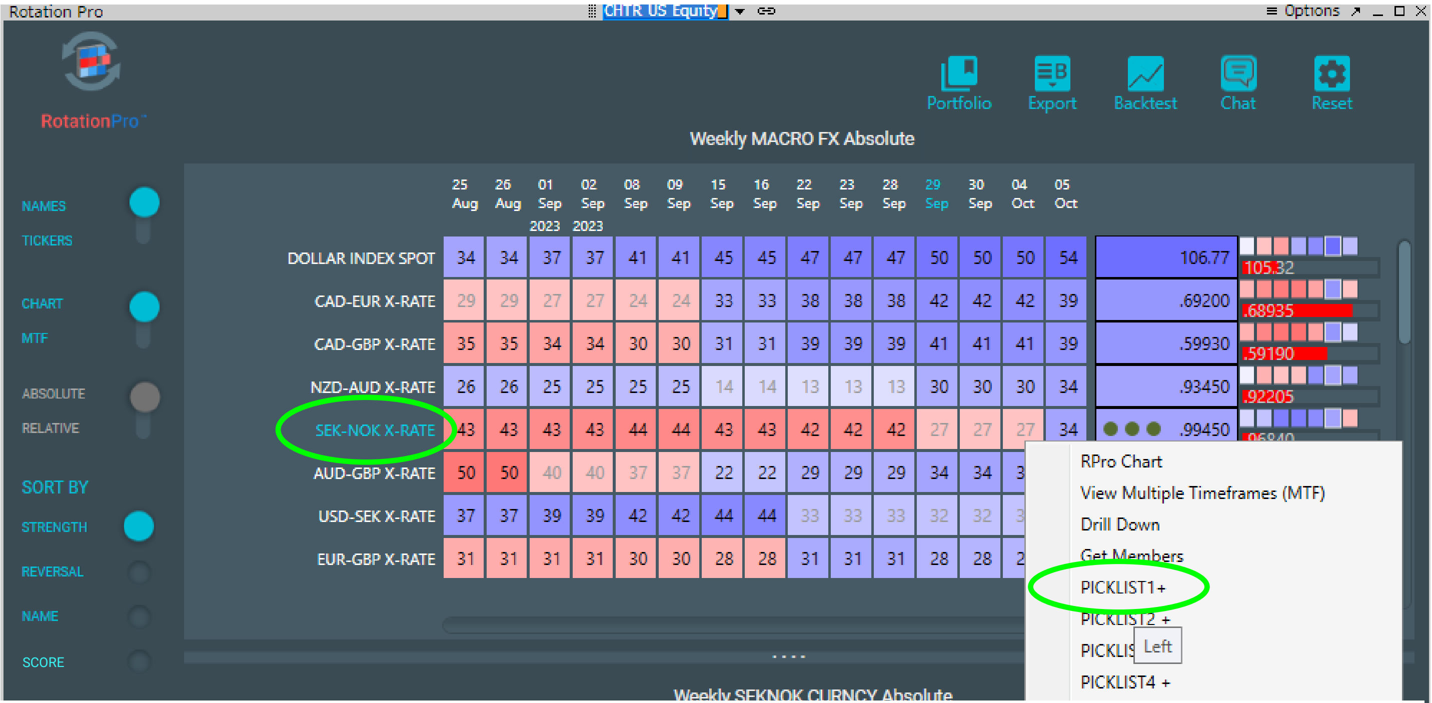
-The number 255.70 written within it is the upside reversal level and with a last price of 255.78 (pink box to the left) it means that price is actually testing the reversal level in real time (which is why the progress bar has a light blue frame).

-The chart shows price testing the upper reversal line and the same levels shown in the heatmap view.

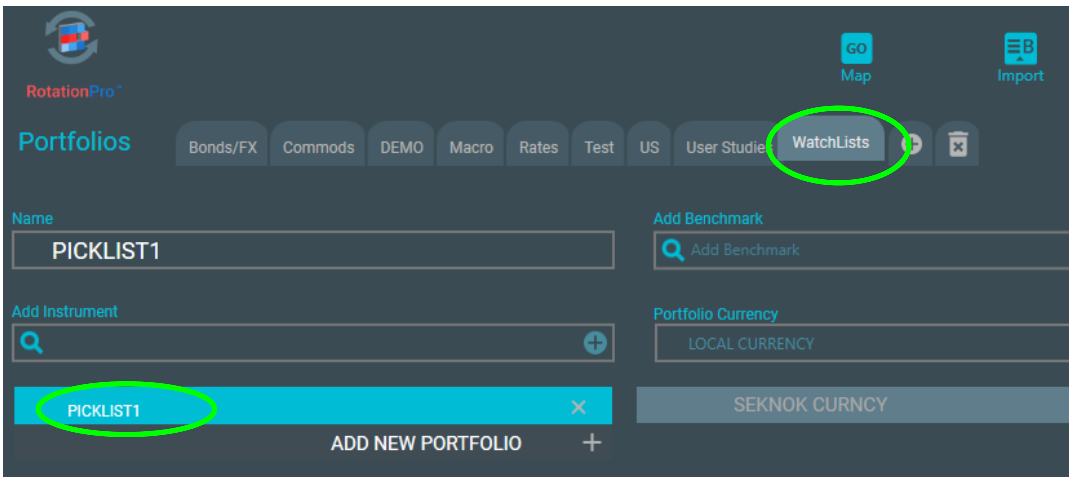


Shortlisting names - using Picklist function to create candidate watchlists

- If you are scanning a list you can select trade candidates using right click PICKLIST on the row of interest. This FX heatmap set to weekly shows a downtrend deceleration and then breakout to blue in SEKNOK. We would like to watchlist it as a momentum trade. You can create up to four different Picklists and pick as many names as you like.



- When you have picklisted the security of interest it copies over to another list off screen, your workflow is not interrupted. Once you have created your lists, for example Long ideas to PICKLIST 1, Short ideas to PICKLIST 2 etc. go to portfolio page and you will find the names in the Watchlist tab.



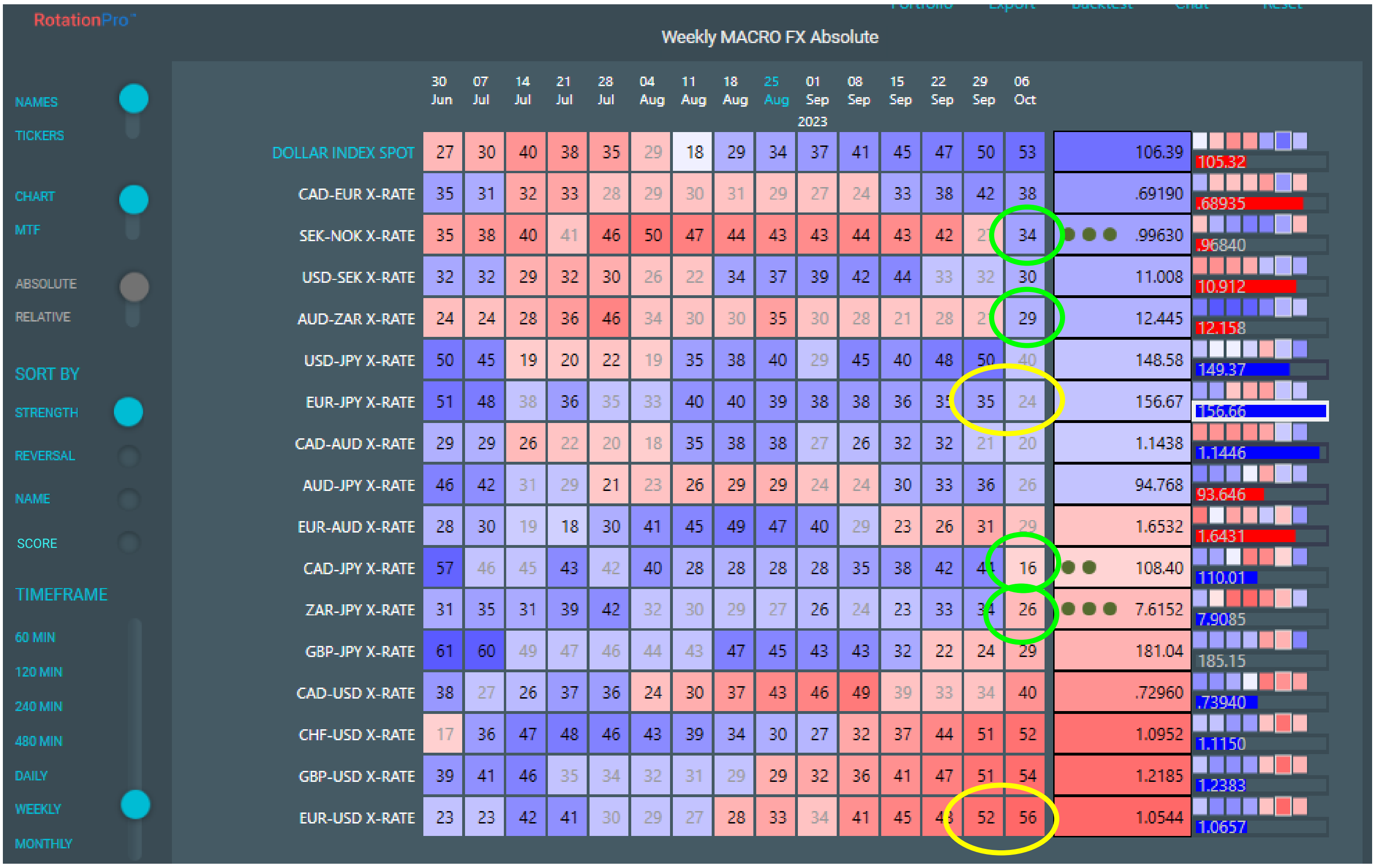
Scanning - how to perform fast scans to search out opportunities - by Strength (1)

- Faced with a long list heatmap for the first time can be intimidating, but there several ways to quickly extract the names you need to focus on.

- The first pass is to ***Sort by Strength*** and run your eye down the right edge of the heatmap. Start with blues and then move on the reds. You are looking for names that show:

1. At the last date colour changes - has anything just put in an RPRO reversal signal on the timeframe of interest?
2. Build up in trend power - is anything accelerating?
3. Fade out in trend power- is anything decelerating?
4. Drop off in extremely high numbers - is anything shifting out of an overbought or oversold condition?

- In the list below SEKNOK and AUDZAR just turned blue and CADJPY and ZARJPY just turned red. EURJPY uptrend has decelerated and EURUSD downtrend has accelerated. Nothing shows extreme momentum numbers (e.g. >60). Notice that three of the colour changers have signal strength dots associated with them.



Scanning - how to perform fast scans to search out opportunities - by Reversal (2)

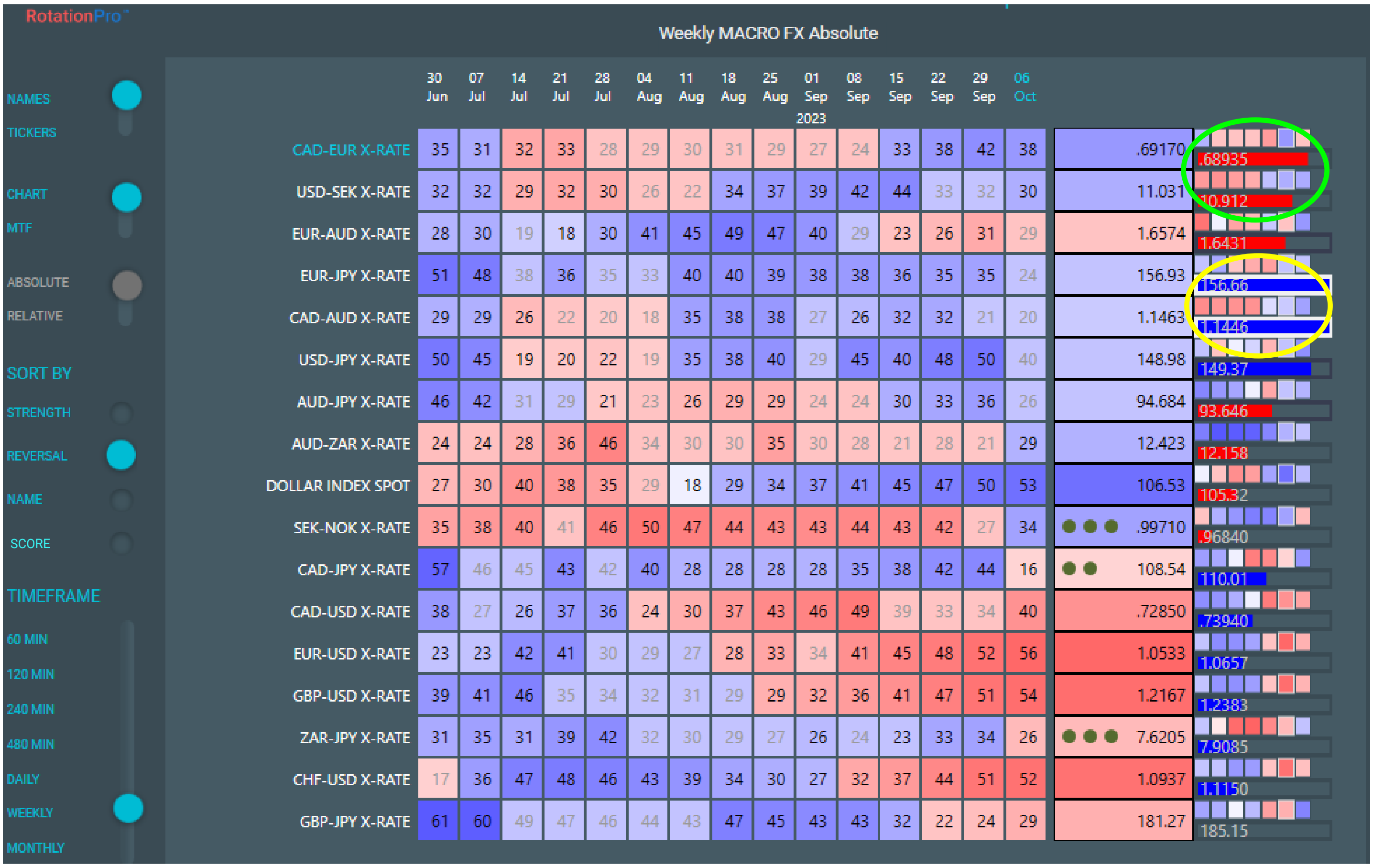
- Having done the Sort by Strength scan as the first pass, we now focus on names closest to colour change reversal level.

- Sort by Reversal and look at the fullest red progress bars and then the fullest blue progress bars. Full progress bars tell you how close price is to the reversal level. Remember, you can choose how many fullest progress bars show in order in the Reset page by changing the SELECT TOP value. The list below is set to 'show top three'.

- So the scanning question is: at the last date is anything very close to reversal?

- Fullest red progress bars, those closest to their downside risk edge, are CADEUR and USDSEK. Fullest blue progress bars, those closest to their upside risk edge, are EURJPY and CADAUD. The white frames around the progress bars tell us they are actually up through the upside risk edge intra week.

-You saw on page 25 how to shortlist names using the PICKLIST function and this is one of the times we use that to send selected names from the scans to a Watchlist for further analysis. These first pass scans should be almost instant and you should be super quick, we can ask more questions of the candidates in the next round after they are watchlisted.



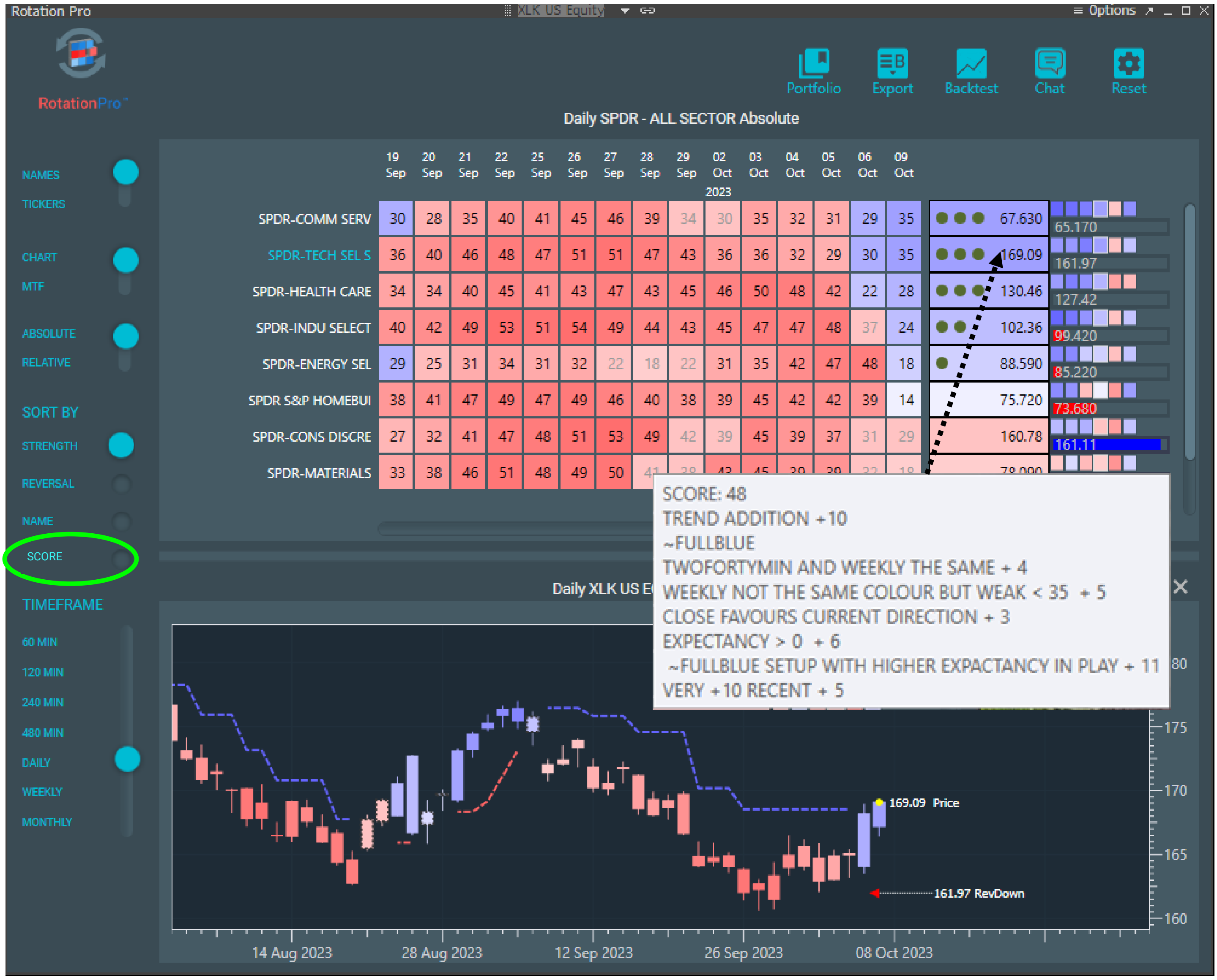
	30 Jun	07 Jul	14 Jul	21 Jul	28 Jul	04 Aug	11 Aug	18 Aug	25 Aug	01 Sep 2023	08 Sep	15 Sep	22 Sep	29 Sep	06 Oct		
CAD-EUR X-RATE	35	31	32	33	28	29	30	31	29	27	24	33	38	42	38	.69170	.68935
USD-SEK X-RATE	32	32	29	32	30	26	22	34	37	39	42	44	33	32	30	11.031	10.912
EUR-AUD X-RATE	28	30	19	18	30	41	45	49	47	40	29	23	26	31	29	1.6574	1.6431
EUR-JPY X-RATE	51	48	38	36	35	33	40	40	39	38	38	36	35	35	24	156.93	156.66
CAD-AUD X-RATE	29	29	26	22	20	18	35	38	38	27	26	32	32	21	20	1.1463	1.1446
USD-JPY X-RATE	50	45	19	20	22	19	35	38	40	29	45	40	48	50	40	148.98	149.37
AUD-JPY X-RATE	46	42	31	29	21	23	26	29	29	24	24	30	33	36	26	94.684	93.646
AUD-ZAR X-RATE	24	24	28	36	46	34	30	30	35	30	28	21	28	21	29	12.423	12.158
DOLLAR INDEX SPOT	27	30	40	38	35	29	18	29	34	37	41	45	47	50	53	106.53	105.32
SEK-NOK X-RATE	35	38	40	41	46	50	47	44	43	43	44	43	42	27	34	.99710	.96840
CAD-JPY X-RATE	57	46	45	43	42	40	28	28	28	28	35	38	42	44	16	108.54	110.01
CAD-USD X-RATE	38	27	26	37	36	24	30	37	43	46	49	39	33	34	40	.72850	.73940
EUR-USD X-RATE	23	23	42	41	30	29	27	28	33	34	41	45	48	52	56	1.0533	1.0657
GBP-USD X-RATE	39	41	46	35	34	32	31	29	29	32	36	41	47	51	54	1.2167	1.2383
ZAR-JPY X-RATE	31	35	31	39	42	32	30	29	27	26	24	23	33	34	26	7.6205	7.9085
CHF-USD X-RATE	17	36	47	48	46	43	39	34	30	27	32	37	44	51	52	1.0937	1.1150
GBP-JPY X-RATE	61	60	49	47	46	44	43	47	45	43	43	32	22	24	29	181.27	185.15

Scanning - how to perform fast scans to search out opportunities - by Signal Dots (3)

- Signal dots appear in the price box when more favourable conditions than a simple red to blue / blue to red colour change are satisfied. Essentially they represent more conviction up to a maximum of three dots. Toggle to ***Score*** in left toolbar.

- For example XLK the US Technology ETF scores the second highest in the Score of the full list of ETFs with 48 points. The score and breakdown are revealed by hovering over the cell with the dots.

- The scoring system looks across multiple factors including: the RPRO performance expectancy of the asset; that same metric ranked against its peers; whether it is emerging from overbought/oversold conditions; recent momentum signature and recent price action; current price action; RPRO trend status of target timeframe as well as status above and below and so on.



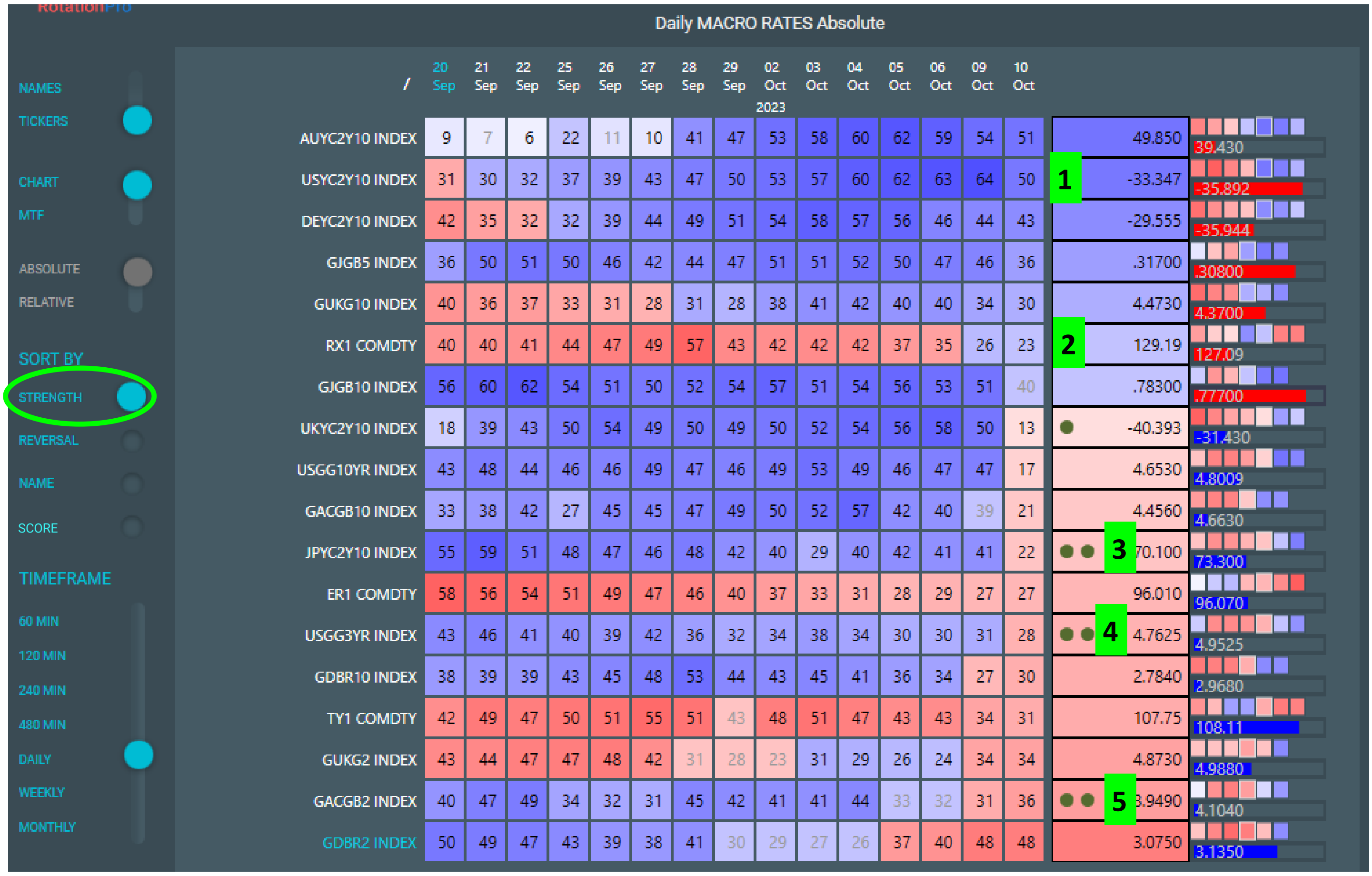
Scanning - how to perform fast scans … - Drill down by Strength (4)

- This is a heatmap of macro rates set at daily timeframe. The first pass is to take the overall temperature of the space. Just look at the heatmap with an open mind.

- There are more reds than blues. The reds are largely paler with lower momentum numbers - teens to early 30s - with some early starters blue to red.

- The blues are generally stronger with higher momentum numbers, but there is a noticeable shift to lower trend power suggesting that an overall downward rotation is in the offing.

- The list is sorted by ***Strength*** (left toolbar). We start with blues and quickly scan down the list asking these questions in order: 1. Has anything just turned blue; 2. Has anything built in upside momentum in a new uptrend; 3. Has anything dropped in up momentum, especially from very high numbers (60+). 4. Are there any dots. Then we right click the relevant row and ***Picklist1*** the names we want to look at more to Buy.
- Next we move to reds and do the same thing: 1. Has anything just turned red; 2. Has anything built in downside momentum in a new downtrend; 3. Has anything dropped in down momentum, especially from very high numbers (60+). Are there any dots.. Then we right click ***Picklist2*** the names we want to look at more closely to Sell.



/	20 Sep	21 Sep	22 Sep	25 Sep	26 Sep	27 Sep	28 Sep	29 Sep	02 Oct 2023	03 Oct	04 Oct	05 Oct	06 Oct	09 Oct	10 Oct		
AUYC2Y10 INDEX	9	7	6	22	11	10	41	47	53	58	60	62	59	54	51	49.850	39.430
USYC2Y10 INDEX	31	30	32	37	39	43	47	50	53	57	60	62	63	64	50	-33.347	-35.892
DEYC2Y10 INDEX	42	35	32	32	39	44	49	51	54	58	57	56	46	44	43	-29.555	-35.944
GJGB5 INDEX	36	50	51	50	46	42	44	47	51	51	52	50	47	46	36	.31700	.30800
GUKG10 INDEX	40	36	37	33	31	28	31	28	38	41	42	40	40	34	30	4.4730	4.3700
RX1 COMDTY	40	40	41	44	47	49	57	43	42	42	42	37	35	26	23	129.19	127.09
GJGB10 INDEX	56	60	62	54	51	50	52	54	57	51	54	56	53	51	40	.78300	.77700
UKYC2Y10 INDEX	18	39	43	50	54	49	50	49	50	52	54	56	58	50	13	-40.393	-31.430
USGG10YR INDEX	43	48	44	46	46	49	47	46	49	53	49	46	47	47	17	4.6530	4.8009
GACGB10 INDEX	33	38	42	27	45	45	47	49	50	52	57	42	40	39	21	4.4560	4.6630
JPYC2Y10 INDEX	55	59	51	48	47	46	48	42	40	29	40	42	41	41	22	70.100	73.300
ER1 COMDTY	58	56	54	51	49	47	46	40	37	33	31	28	29	27	27	96.010	96.070
USGG3YR INDEX	43	46	41	40	39	42	36	32	34	38	34	30	30	31	28	4.7625	4.9525
GDBR10 INDEX	38	39	39	43	45	48	53	44	43	45	41	36	34	27	30	2.7840	2.9680
TY1 COMDTY	42	49	47	50	51	55	51	43	48	51	47	43	43	34	31	107.75	108.11
GUKG2 INDEX	43	44	47	47	48	42	31	28	23	31	29	26	24	34	34	4.8730	4.9880
GACGB2 INDEX	40	47	49	34	32	31	45	42	41	41	44	33	32	31	36	3.9490	4.1040
GDBR2 INDEX	50	49	47	43	39	38	41	30	29	27	26	37	40	48	48	3.0750	3.1350

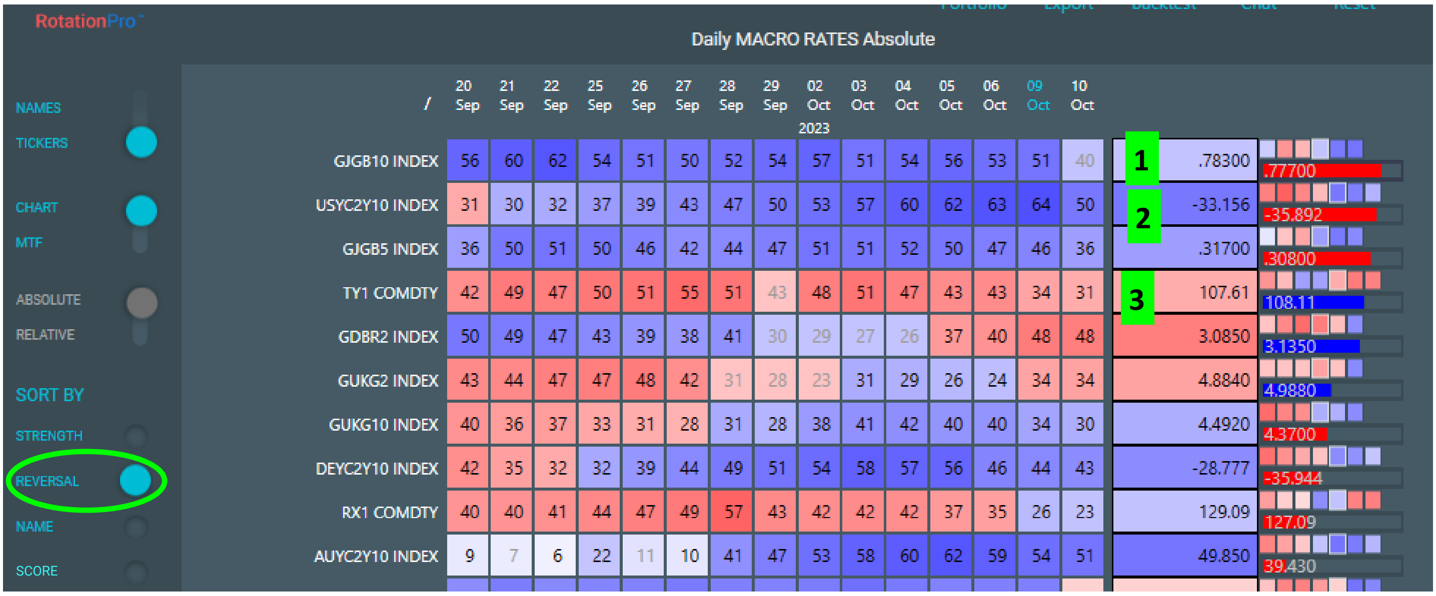
Scanning - how to perform fast scans ... - Drill down by Reversal (4)

- Now toggle to ***Reversal*** in the left toolbar and make sure your SELECT TOP in Reset is set to around 10 to 20% of the length of the list. In this list 3 was chosen, such that the top three closest to downside reversal level are shown, followed by the top three closest to upside reversal.

-The fuller the progress bar, the closer the instrument is to the upside or downside risk edge. Which one it is, is determined by the colour of the progress bar.

- Its best to limit yourself to the fullest bars, this is a quick scan and you don't want a smorgasbord of tickers in your Picklists, it defeats the object.

- For names about to turn blue (potential Buys) right click and ***Picklist1***. For names about to turn red (potential Sells) ***Picklist2***.



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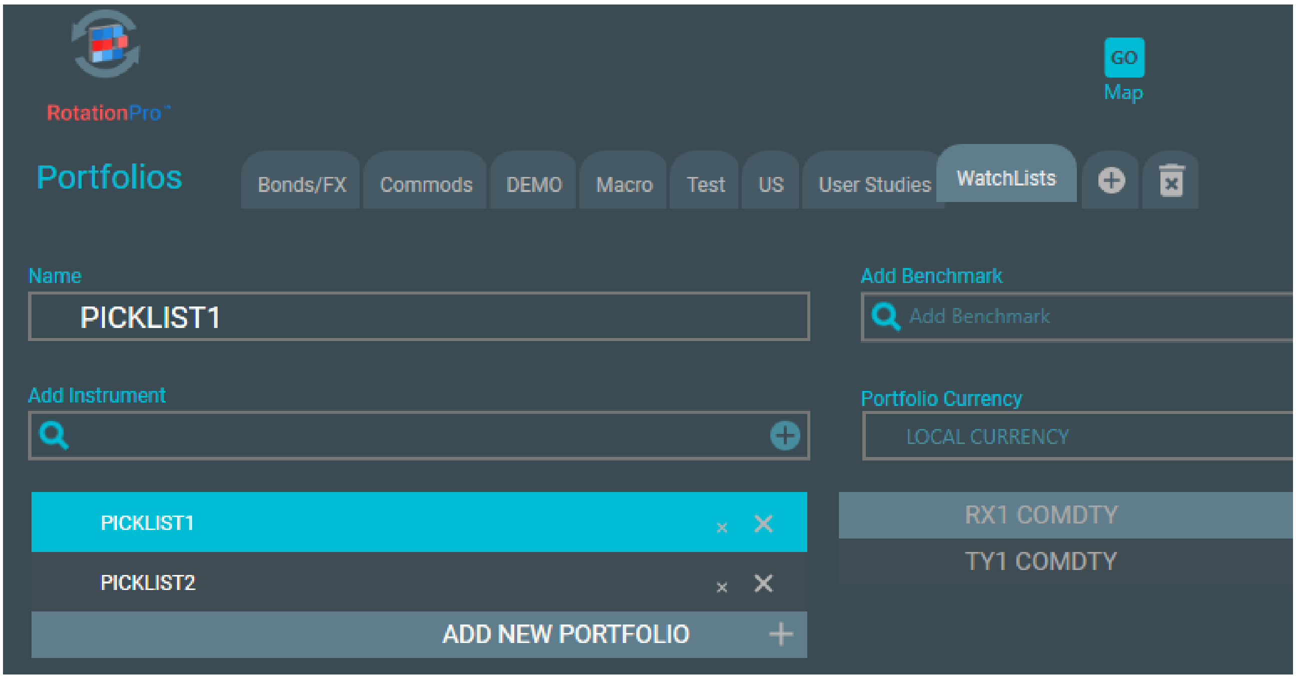
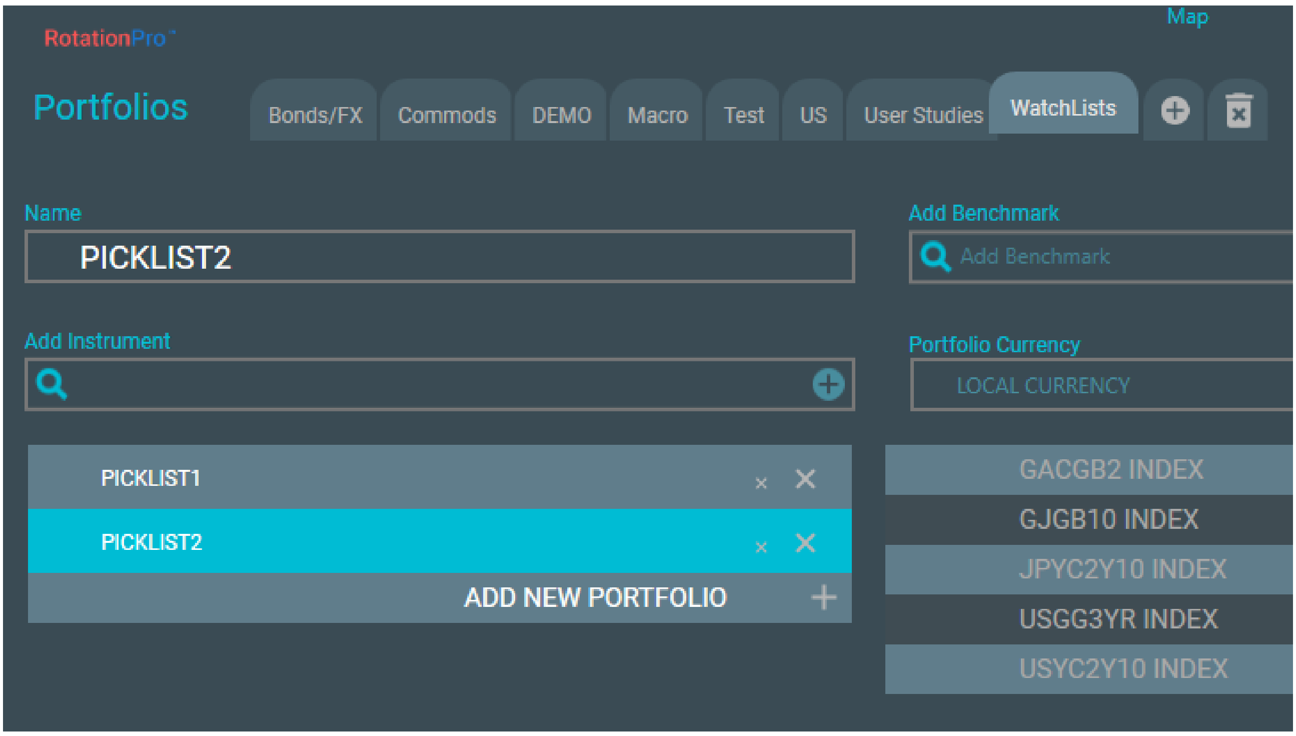
USYC2Y10 INDEX	31	30	32	37	39	43	47	50	53	57	60	62	63	64	50	-33.156	-35.892
GJGB5 INDEX	36	50	51	50	46	42	44	47	51	51	52	50	47	46	36	.31700	.30800
TY1 COMDTY	42	49	47	50	51	55	51	43	48	51	47	43	43	34	31	107.61	108.11
GDBR2 INDEX	50	49	47	43	39	38	41	30	29	27	26	37	40	48	48	3.0850	3.1350
GUKG2 INDEX	43	44	47	47	48	42	31	28	23	31	29	26	24	34	34	4.8840	4.9880
GUKG10 INDEX	40	36	37	33	31	28	31	28	38	41	42	40	40	34	30	4.4920	4.3700
DEYC2Y10 INDEX	42	35	32	32	39	44	49	51	54	58	57	56	46	44	43	-28.777	-35.944
RX1 COMDTY	40	40	41	44	47	49	57	43	42	42	42	37	35	26	23	129.09	127.09
AUYC2Y10 INDEX	9	7	6	22	11	10	41	47	53	58	60	62	59	54	51	49.850	39.430

Scanning - how to perform fast scans … - Watchlisted names (6)

- We now go to our Watchlist tab in the ***Portfolio page*** where the Picklisted names were sent during the quick scan. They are arranged at two separate lists.

- You can run each heatmap and then conduct further analysis. It should not take more than a few minutes to do an initial quick scan a list of 100 securities and then another few minutes to eliminate candidates from the picklists.





Scanning - how to perform fast scans ... - Watchlisted names (6)

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- When doing further analysis look at the mini snapshot multi timeframe to get a quick sense for overall flow, for example is the daily timeframe sell idea working against an uptrend on the weekly. Look for a decline in blue uptrend strength ahead of a new red signal. Look for a decline in red downtrend strength ahead of a new blue signal and so on.

- Run the chart and then the multi timeframe window to get a more granular view.

- More nuances of heatmap analysis will be presented in a separate document.