Analysis 16b
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V 1.0

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Topics:

- The Workflow GBPJPY H1 form the StrategyLab
- Try to improve this GBPJPY H1 Workflow
- Try EURJPY H1-Workflow
- Try GBPJPY M15-Workflow

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-1 Disclaimer:

All information including workflow settings and example strategies shared in this document is intended solely for the purpose of studying topics related to the usage of StrategyQuant software and is in no way intended as a specific investment or trading recommendation.
The Document writer is not an investment advisers or brokers.
If specific financial products, commodities, shares, forex or options are mentioned on this document, it is always and only for the informational purposes.
The document writer is not responsible for the specific decisions of individual users.

0 Introduction

How have I always gone about finding profitable strategies?

We have built a workflow or copied it from somewhere and would like to use it to generate strategies and then use them on a demo account. Of course, a workflow not only includes generation but also extensive robustness testing. We use the workflow to generate many strategies and then run them on a demo account. We select only the best strategies at regular intervals and trade them on a real account. Strategies that reach the maximum drawdown are immediately deactivated and no longer used.

The way I described it here, it may or may not work. In my opinion this is pure gambling. It all depends on how good the workflow is. It could also be that a workflow we use is bad, but we still make profits. It could be that the market is right somehow and we are still making profits.

I would like to take a closer look at the entire process of strategy generation and use. I would like to examine the workflow used and see how profitable it is in different situations. In my opinion, a workflow is only profitable if it survives a workflow analysis. For example I examined a workflow by moving it into the past X times and see how profitable it is.

But some readers will now say that the whole thing is far too complicated. The strategies that don't work are filtered out on the demo account, so that in the end only the most profitable ones end up on the real account.

That's true, but "filtering the bad strategies out" doesn't work. You can only filter it out if you use special tests. We don't have such tests and I don't know how they should work.

I only use the strategies on a real account once I have done a workflow analysis for a walkflow and this is also successful for the current market phase.

Unfortunately, only one workflow has so far passed this test.

The secret of a profitabel workflow

There is a secret that I would like to tell you. This secret is very important if you want to build a functioning and therefore profitable workflow. It's not the currency pair or the trial period. It's also not a special robustness test that I have to do with special settings. There is also no special composition of the building blocks. Or determines trading times.

The secret is the generator. Yes, exactly I mean the **“BUILD STRATEGIES”** module. The module must be good. When generating it, it must produce more profitable strategies than bad ones. If this is not the case, then the workflow will not be successful. To build such a profitable module you need a lot of Forex knowledge. Of course you can also just try it out. And test the whole thing with a workflow analysis. Of course that's a lot of work.

History of this Document:

In this analysis, I will review the Workflow Q86 for GBPJPY on the H1 timeframe for the second time. I previously conducted an analysis for this workflow two years ago. (Q86 GBPJPY H1 Analyse Thomas Nickel V1.4 2.12.2022). You can download this document under https://c.gmx.net/@329881123612003410/AXjh2A75Rm-xTLKwpAVWSA.

I would also like to point out my homepage https://monitortool.jimdofree.com/

Now it is two years later. Many things have happened. I have improved the toolbox for the workflow analysis. The workflow generation process is 10 times faster, and we have more accurate results in the overview. Additionally, I implemented a graphical result view as an additional feature.

Target of this Document:

Why am I actually writing this document here? Of course I didn't find the Golden Grail. The Workflow Q86 GBPUSD H1 is very good. This will be seen in the analyses here. However, it has a small problem. At the moment (Actual date 7.3.2024), the system is in a sideways phase.

I'm looking for people who would like to work to improve this workflow. If anyone has any ideas about what filters or rules I could add to the workflow to improve it, I would be very grateful. I would then use the ideas to improve the setting and do a workflow analysis. Then you can accurately predict whether the workflow is profitable. Or whether the whole thing is over-optimized. Maybe someone would like to join in. Or someone can just try out a few filters and see how it affects the current market phase. If someone finds something good, we could collect ideas and improve the workflow.

This is just a suggestion from me.

Of course, you can also just read it, generate strategies and enjoy the profits. Improve the workflow and not share the knowledge.

But that's not how we reach our goal.

I have been working with StrategyQuantX for over 10 years. The whole matter is simply too complicated. We can only move forward if we work together.

The workflows of this Document

I put all Workflows of this document in the GMX-Drive

https://c.gmx.net/@329881123612003410/AXjh2A75Rm-xTLKwpAVWSA.

What I'm looking for:

Looking for people who take the information out of this document and make some improvements of this workflow. In this document are some Analysis of the different Filters of this Workflow. You can take this information and combine this to make an improved workflow. Make some backtests and optimize the workflow so that the workflow works for the current market situation. Send me your results to tnickel@gmx.de. I will use this information for new Walkflow-Analysis.

What is in this Document?

In **Chapter1** I checked each individual step of the workflow for the generation period January 1, 2009-August 31, 2018. Here I generated over 50,000 strategies. I tested the individual filters. I found out that the filters and robustness tests used essentially work (SQ 4.138). (At this point I would like to thank the developers from the SQX team, they have worked very hard. This finally seems to be running stable). The filters all work differently. With this large strategy set you can make quite good, statistically relevant statements.

In **Chapter2** I did a walkflow-analysis for the workflow. I examined each individual filter step in more detail here. The reader can see exactly how efficient the individual filter steps are.

In **Chapter3** I did some stability tests for the different filters. I want to see how stable the results of the different filters are. In the last part of Chapter3 I found out some interesting things about the Robustnesstests.

In the **Appendix** I added an additional Workflow-Analysis for the modified GBPJPY M15 strategy workflow. You can see the difference between a working and a not working workflow. I did a second Workflow Analysis for the Workflow GBPJPY H1 with a different currency pair EURJPY H1. But this analysis fails too.

Conclusion

We analysed the GBPJPY H1 workflow and showed that it essentially works like this. You can make money with it. I hope many users here in the forum have already earned a lot of money with this?

But be careful: I would like to point out the disclaimer again at this point. This is not intended to be a call to use real accounts. I am not responsible for any losses.

You can't just take a workflow and generate strategies. The two workflow analyses in the appendix showed us that this doesn't work. We simply modified the working workflow a little. Once the currency pair was exchanged from GBPJPY to EURJPY and once the time frame was changed from H1 to M15. Both attempts ended in losses.

This shows you once again how difficult it is to find a working workflow.

I would like to point out again that the "working workflow GBPJPY H1" is in a sideways phase. It's going to be a bit difficult to make money at the moment.

1 Q86 GBPJPY H1 (Check this workflow in 2024 again)

I traded the Strategies from this workflow GBPJPY from the StrategyLab since Okt 2021 on some demo and life accounts.

https://strategyquant.com/shared/gbpusd-strategylab-workflow/

Recently there have been some new findings regarding robustness tests. I tried to check this strategy generation with different Robustnesstests.

Abbildung 1: After I generated strategies with this workflow I installed this Strategies on Demoaccount. This is the tradingresult on the Demoaccount for Q86 GBPJPY H1. The Equity curve is from one year Trading on demo account. The Equity looks nice.

The Q86 GBPJPY H1 portfolio has been running quite successfully for over 3 years. See the following graphic.

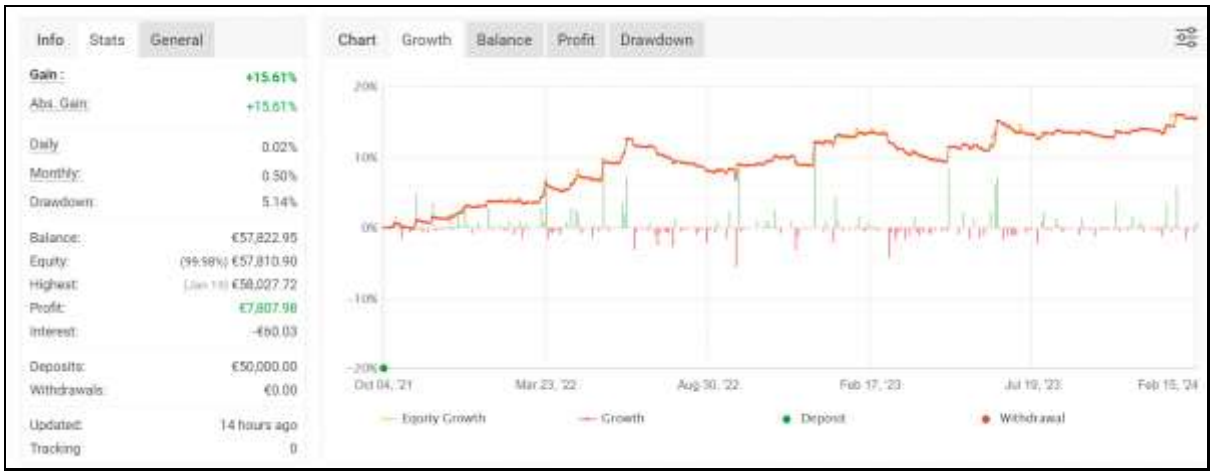


Abbildung 2: This Portfolio contains 39 Strategies at the moment. The Strategies are running on demo account. I trade the best strategies on real account.

I have generated this Portfolio 2021. If we take a closer look, the performance of this portfolio looks in the beginning better as in actual time period.

The reason can be that the market condition has changed? It is possible that a generated portfolio running with best performance only a limited time. I have to recalibrate the portfolio from time to time. But I don´t did this recalibration in the past.

At first we have to recheck the Q86 GBPJPY H1 workflow.

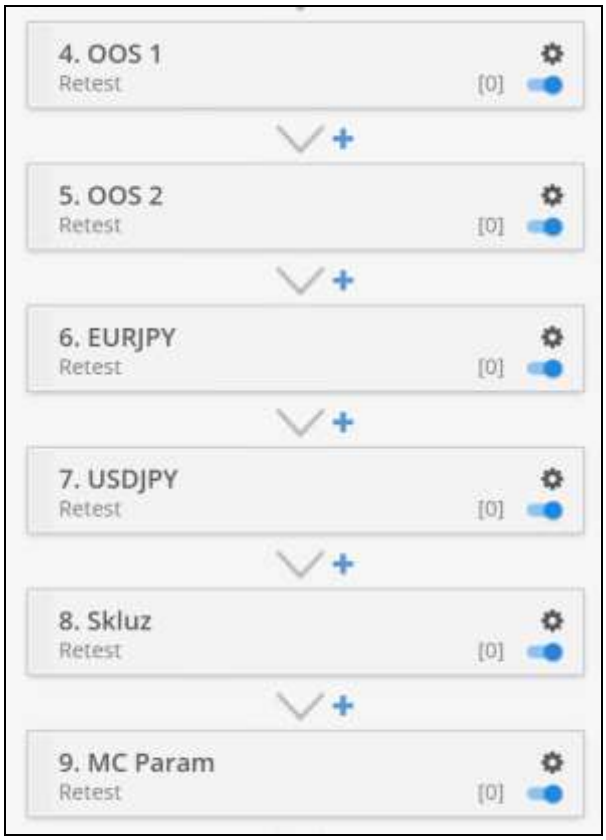


Abbildung 3: Der Workflow Q86 contains two OOS Tests and two additional currency test. The MC Param-Test filter out all the generated strategies. I think the parameter of the MC Param Test are too hard. Or I have generated too few Strategies?

I would also like to note that this q86 workflow was created with a much older version of SQX. I think it was still version 4.X.old Version 4.138 includes much better robustness testing. I think you could get a lot of performance out of the Q86 workflow with these.

I won't do a complete workflow analysis with Q86 because in this first step, this is very time-consuming. But I would still like to use this new knowledge from this workflow to take a look at other workflows.

A Strategy Generation

In the first Step we need some Strategies. I generated overnight 20980 strategies without filtering. I use only the Build Strategy Setting.

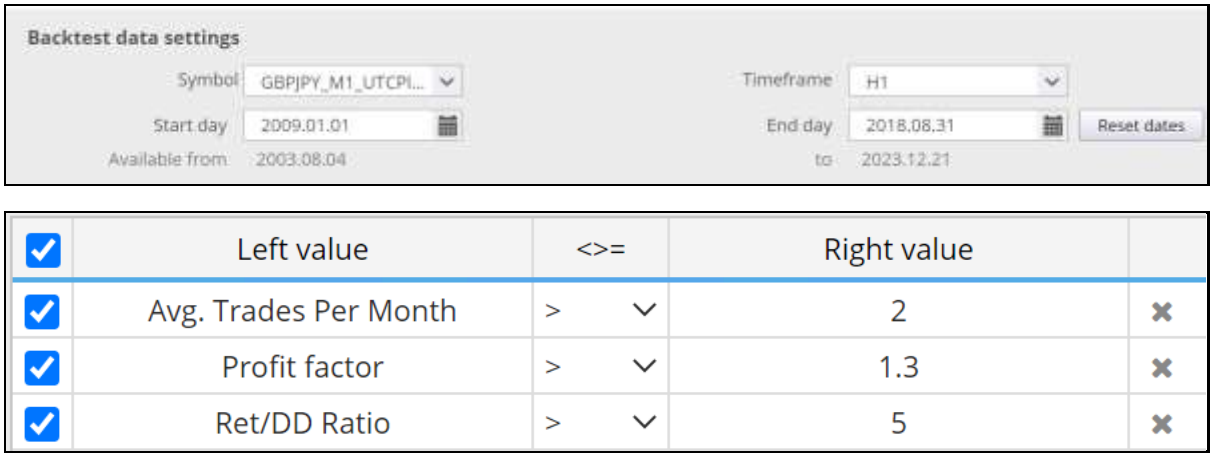


Abbildung 4: Some Settings for the Generation. This is a very simple Setting. But this Setting was very effective.

In the first step, I would like to assess the quality of the generated strategies without a robustness filter. To do this, I left the computer running overnight and generated 20,800 strategies.

To see whether these strategies are good, you have to do a final test and then create a portfolio from them. If the equity curve in the portfolio looks good, then the settings for generating the strategies are good. Unfortunately, you cannot build a portfolio from 20800 strategies. For this you would need a super-fast computer. With my 7850X I can create a maximum of 5000 strategies in the foreseeable future. So when analysing strategy quantities > 5000, I will always build a portfolio with a maximum size of 5000 strategies. A series of tests has shown that the results of these smaller portfolios still have good significance.

I made a backtest of one year and build a portfolio of 500, 1000, 2000,…. 5000 Strategies.

I compared the results in a table.

Strategy Name	F	Note	F	Symbol (Po...	Tim	Net profit (Port...	Profit facto...	Ret/DD Rati...	Mini equity cha...	# of trad...
Merged portfolio	!	500, 134 Euro/Strategy	C	Portfolio	H...	$ 67 181.13	1.1	0.86		19049
Merged portfolio(1)	!	500,	C	Portfolio	H...	$ 67 181.13	1.1	0.86		19049
Merged portfolio(2)	!	1000, 112 Euro/Strategy	C	Portfolio	H...	$ 112 103.64	1.08	0.71		39150
Merged portfolio(3)	!	2000, 131 Euro	C	Portfolio	H...	$ 263 333.53	1.09	0.88		77940
Merged portfolio(4)	!	3000, 136 Euro	C	Portfolio	H...	$ 409 248.19	1.1	0.93		116468
Merged portfolio(5)	!	4000, 134 Euro	C	Portfolio	H...	$ 539 957.25	1.1	0.92		154378
Merged portfolio(6)	!	5000, 137 Euro/Strategy	C	Portfolio	H...	$ 686 757.63	1.1	0.95		192373

I will calculate an average Profit per Strategy out of my Merged portfolios. This value represents an approximation because I cannot form a complete portfolio from the 20,800 strategies.

- ⇨ 134+112+131+136+134+137=784/6=**130 Euro/per Strategy** Profit.

The average Profit per Strategy is 130 Euro per year. The Equity of the Portfolio looks good.

Fazit: We yield 130 Euro per Strategy if we make an easy endtest without any additional filter.

The Result looks good. But I know this is only one Time Period.

In order to evaluate the strategy generation well, we would have to do a complete walkflow analysis. But we're not doing that now. I only check all the filters used at this one time period.

We use for the Endtest only one year of data.

Abbildung 5: The Endtest is from 9.4.21-9.4.22

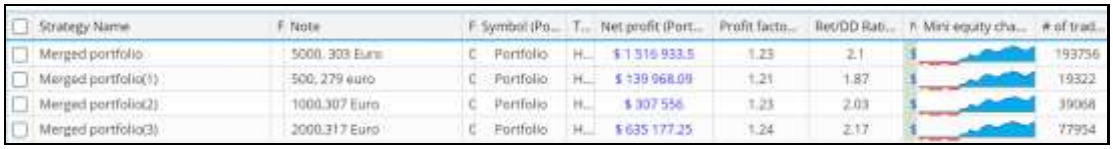
130 Euro/per Strategy is the Challenge

B Filter OOS1

Abbildung 6: The Filter OOS is very simple.

14350 Strategies passed OOS1-Filter

Result:



Strategy Name	F. Note	F. Symbol (Po...	T...	Net profit (Port...	Profit facto...	Ret/DD Rati...	Mini equity cha...	# of trad...
Merged portfolio	5000. 303 Euro	C Portfolio	H...	$ 1 516 933.5	1.23	2.1		193756
Merged portfolio(1)	500. 279 euro	C Portfolio	H...	$ 139 968.09	1.21	1.87		19322
Merged portfolio(2)	1000.307 Euro	C Portfolio	H...	$ 307 556	1.23	2.03		39068
Merged portfolio(3)	2000.317 Euro	C Portfolio	H...	$ 635 177.25	1.24	2.17		77954

Abbildung 7: 14350 Strategies are too much for a Portfolio, so I generated some small portfolios and calculated an average value for the profit per strategy.

303+279+307+317/4=**301 Euro**/Strategy Profit

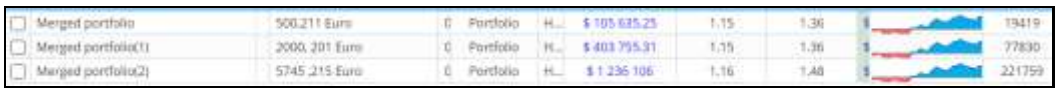
- ⇨ This Filter works fine and won the challenge.

C Filter OOS2

Left value	<>=	Right value
Avg. Trades Per Month	>	2
Profit factor	>	1.1
Ret/DD Ratio	>	5

Abbildung 8: The Filter OOS2 has Profit factor > 1.1 as the only condition.

5745 Strategies passed this OOS2-Filter

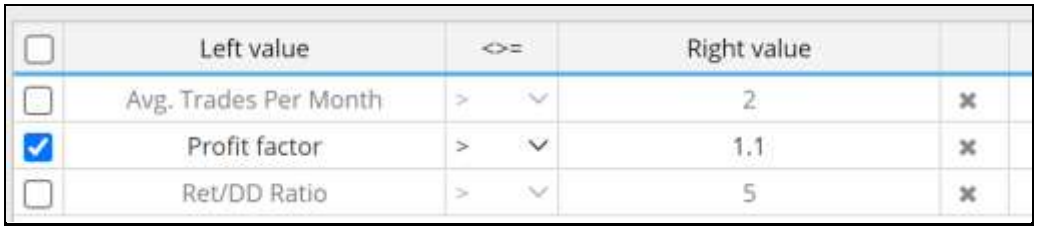


Merged portfolio	500.211 Euro	C	Portfolio	H...	$ 105 635.25	1.15	1.36	19419
Merged portfolio(1)	2000. 201 Euro	C	Portfolio	H...	$ 403 755.31	1.15	1.36	77830
Merged portfolio(2)	5745 .215 Euro	C	Portfolio	H...	$ 1 236 106	1.16	1.48	221759

Abbildung 9: The Profit is 215 Euro. Merged portfolio2 contains all Strategies.

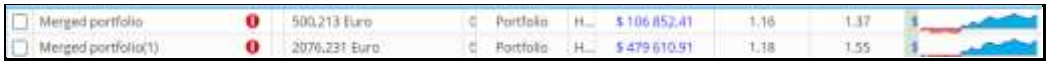
- ⇨ **215 Euro**/Strategy Profit. This filter works fine and won the challenge.

D Filter EURJPY



Left value	<>=	Right value
Avg. Trades Per Month	>	2
Profit factor	>	1.1
Ret/DD Ratio	>	5

2076 Strategies passed this EURJPY-Filter



Merged portfolio	0	500.213 Euro	C	Portfolio	H...	$ 106 852.41	1.16	1.37
Merged portfolio(1)	0	2076.231 Euro	C	Portfolio	H...	$ 479 610.91	1.18	1.55

Abbildung 10: The Filter EURJPY yield a profit of 231Euro/Strategy.

231 Euro/Strategy won the challenge

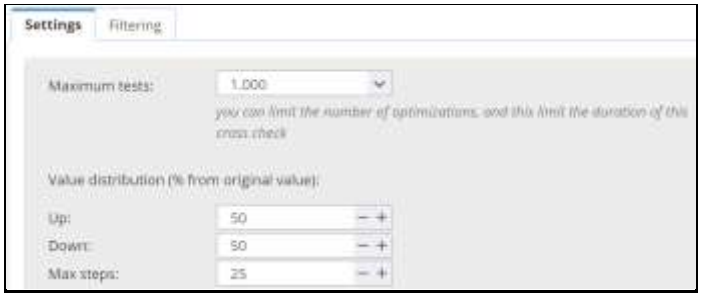
E Filter USDJPY-Filter

	Left value	<>=	Right value	
☐	Avg. Trades Per Month	>	2	✖
☑	Profit factor	>	1	✖
☐	Ret/DD Ratio	>	5	✖

5853 Strategies left

⇨ 180Euro/Strategy => passed challenge

RT3a Sys-Permutation-Test (1000)



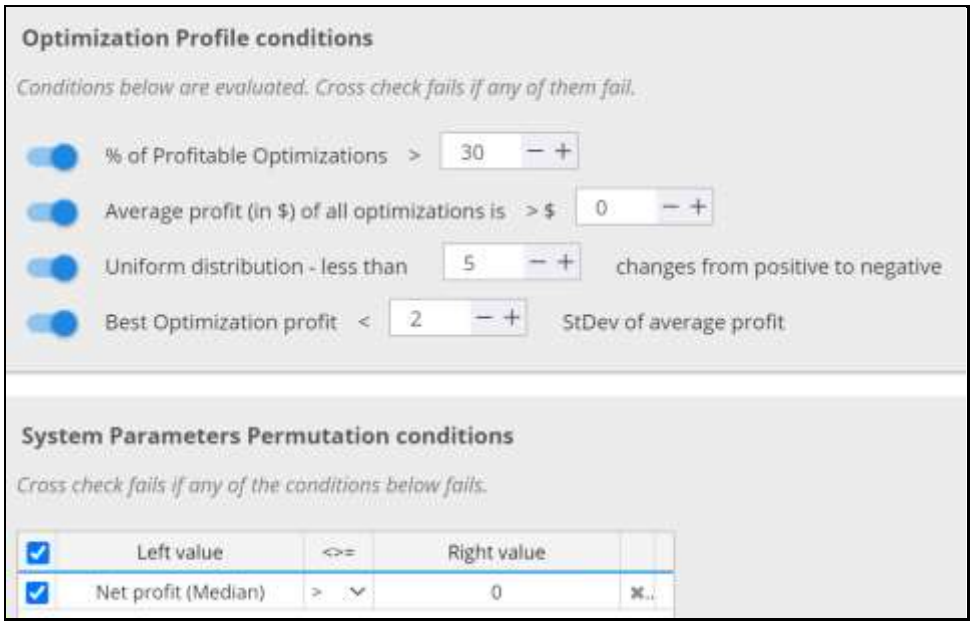


Abbildung 11: The condition „Best Optimization profit <2" is a very hard condition.

The test is done with ticksimulation.

Only one Strategy of 424 Strategies passed this test.

But the Equitycurve of this Strategy looks very good.

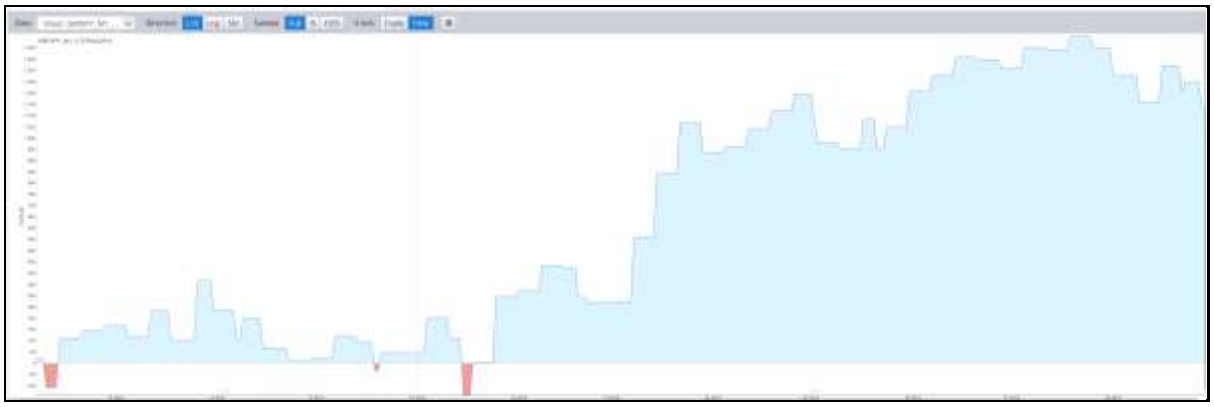


Abbildung 12: This is the Portfolio of the Endtest of "RT3a Sys-Permutation-Test (1000)"-Robustnessfilter. It looks good. In this case, the Portfolio contains only one Strategy.

RT3b Sys-Permutation-Test (300)

Use Permutation Test for N=300

Selected-Timeframe

Best Optimization profit <2

Up/down 50%

- ⇨ The Result is in the overview table.

RT3c Sys-Permutation-Test (1.8) (300)

Use Permutation Test for N=300

Selected-Timeframe

Best Optimization profit <1.8

Up/down 50%

- ⇨ The Result is in the overview table.

RT3c Sys-Permutation-Test (1.7) (300)

Use Permutation Test for N=300

Selected-Timeframe

Best Optimaziation profit <1.7

Up/down 50%

- ⇨ The Result is in the overview table.

RT3c Sys-Permutation-Test (1.6) (1000)

Use Permutation Test for N=1000

Selected-Timeframe

Best Optimaziation profit <1.6

Up/down 50%

I will make some different Robustnesstests on this datarange

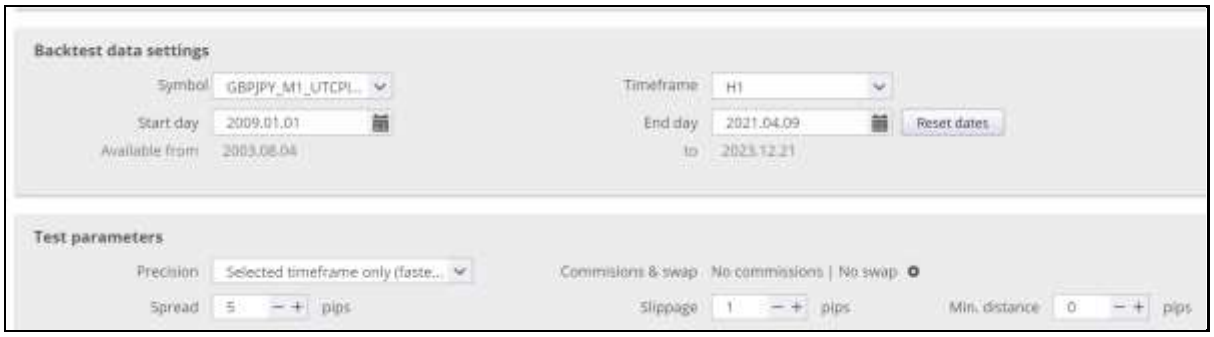
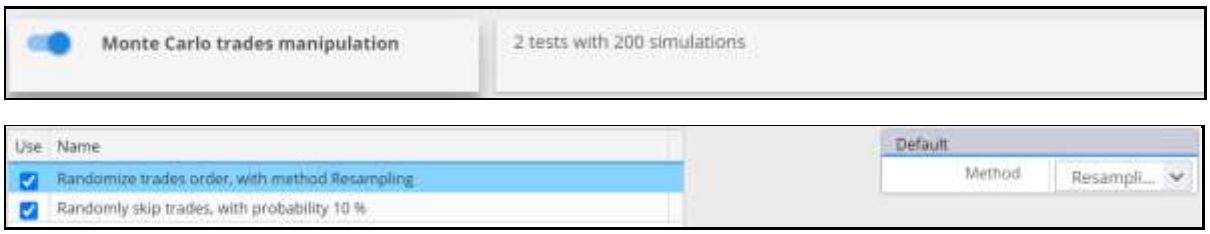


Abbildung 13: the following robustnesstests will be made on this datarange.

⇨ The Result is in the overview table.

R1: Rand Trades Order

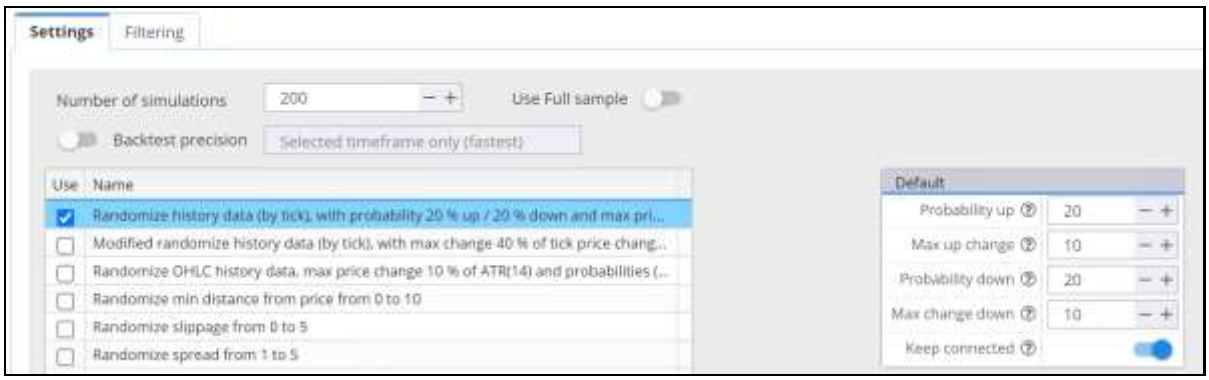
Selected Timeframe



⇨ The Result is in the overview table.

R2:Rand history data by tick

Selected Timeframe



⇨ The Result is in the overview table.

R3: Modified randomize history data by tick

Selected Timeframe

MaxChange=5%, 10%

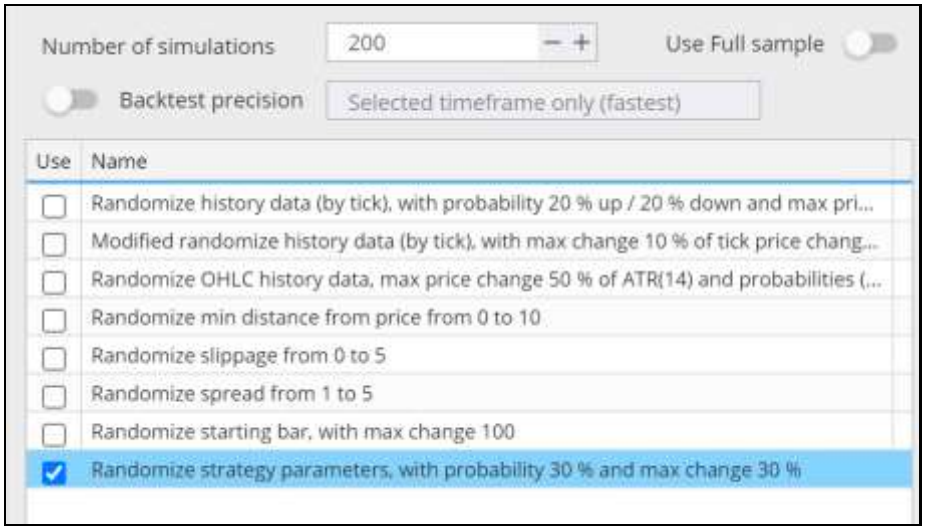
⇨ The Result is in the overview table.

R4: Randomize OHLC history data, max price change 40% of ATR

MaxChange=40%

⇨ The Result is in the overview table.

R5: Randomize Parameter

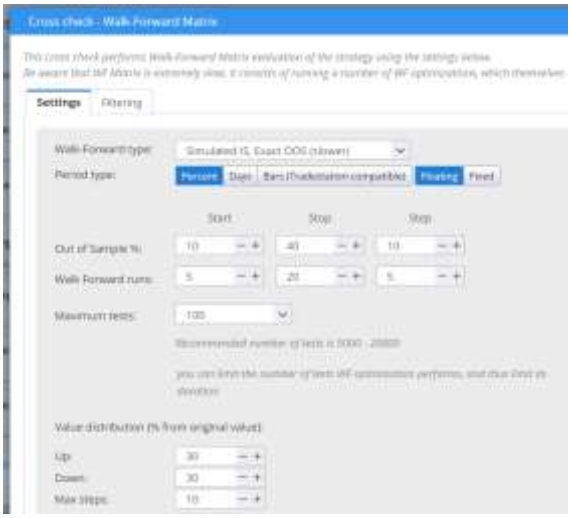


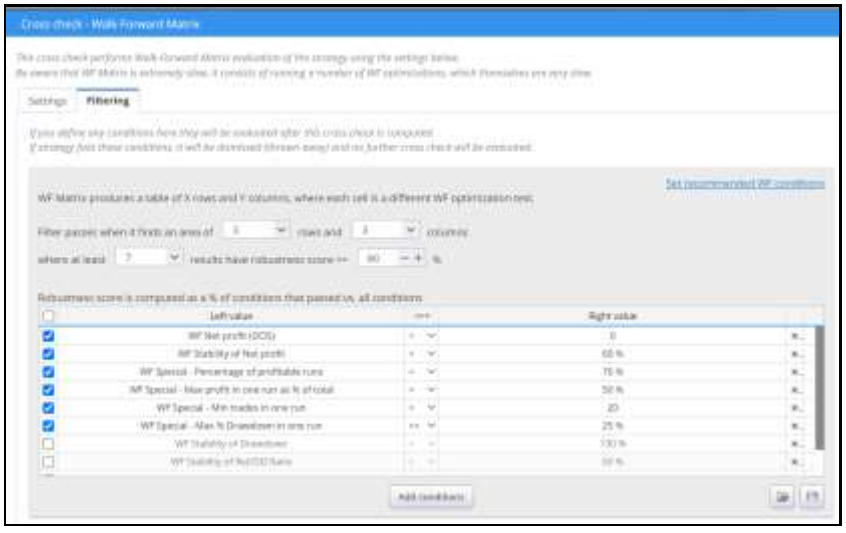
⇨ The Result is in the overview table.

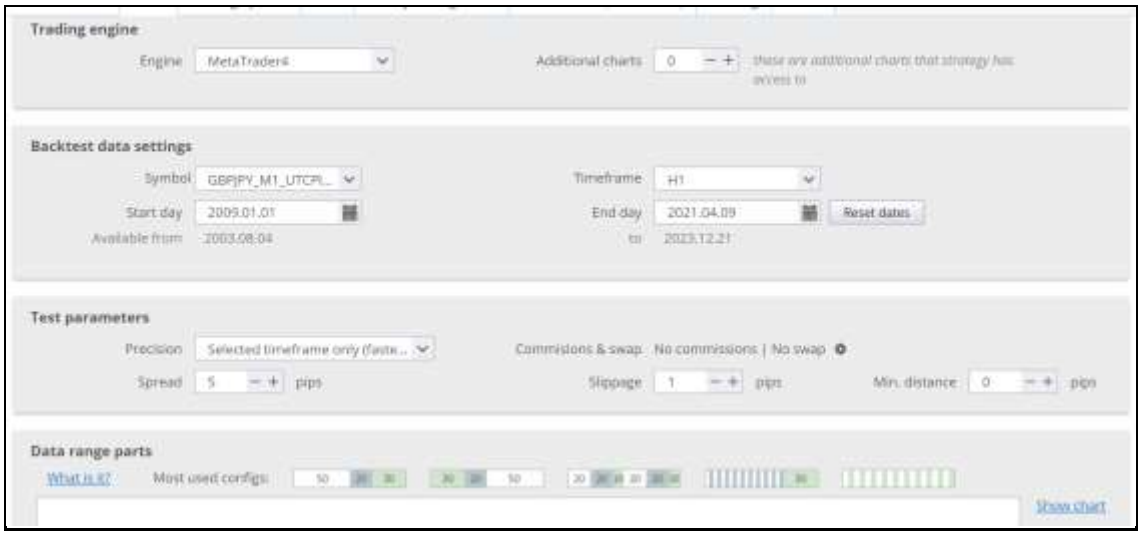
R6 WFA-Matrix

N=100

3x3







⇨ The Result is in the overview table.

CombinationTest B+C+D+E

I use 50000 Strategies as input.

⇨ The Result is in the overview table.

Overview

Filter	Result	#Strategies	Remark
A-without filter	130 EUR/Strategy	20800[1]	This is the challenge
B OOS1	301 EUR/Strategy	14350	passed
C OOS2	215 EUR/Strategy	5745	passed
D EURJPY	231 EUR/Strategy	2076	passed
E USDJPY	180 EUR/Strategy	5853	Passed
B+C+D+E	424 Euro/Strategy	243	Passed
B+C+D+E +RT3a	1100 Euro	1	Passed, but only one Strategy left
RT3b(1.8) N=300	200 Euro/Strategy	1487	passed
RT3b +RT3c(1.8)N=300	223 Euro/Strategy	277	passed
RT3b +RT3c(1.7) N=300	174 Euro/Strategy	182	passed
RT3b +RT3c(1.6) N=300	262 Euro/Strategy	102	passed
RT3b +RT3c(1.6)N=1000	403 Euro/Strategy	26	passed
RT3b +RT3c(1.5)N=1000	496Euro/Strategy	10	passed
R1	338Euro/Strategy	5000*	passed
R2	290Euro/Strategy	1765*	passed
R3 5%	213Euro/Strategy	475*	passed
R3 10%	127Euro/Strategy	401*	failed
R4 40%	297EUR/Strategy	324*	passed
R4 50%	251EUR/Strategy	2282*	passed
R5 10%	193 EUR/Strategy	3861*	passed
R5 20%	212EUR/Strategy	1345*	passed
R5 30%	251EUR/Strategy	1681*	passed
R5 40%	208EUR/Strategy	1020*	passed
R6 N=100	387EUR/Strategy	201*	passed
R6 N=1000	444EUR/Strategy	249*	passed
R6 N=2000	444EUR/Strategy	427*	passed

(*) means that I have stopped the filtering according to this number of strategies. I don´t need to filter all strategies to check the Robustnessfilter.

[1] In the Beginning I generated only 20800 Strategies. Later, I generated more Strategies because I found out, that we need more strategies for then intensive filtering. So I added more Strategies to the counter of 50000. I used this additional Strategies in the R1-R6-Filter.

2 Workflow-Analysis of Workflow GBPJPY – StrategyLab Workflow

I got a Workflow for GBPJPY-H1-Strategies form the StrategyQuantX Webside. I have generated with this workflow 90 Strategies and traded this on demo and on real account.

Source: https://strategyquant.com/shared/gbpjpy-strategylab-workflow/

I will call this workflow Q89 GBPJPY H1 from now on. I Traded the Strategies from this workflow GBPJPY from the Strategy lab since Oct. 2021 on some demo and life accounts. The name of this Strategies had the prefix Q86 GBPJPY H1.

I will make an Walkflow-Analysis for this workflow. This means I take this existing workflow and set this workflow more times in the past and more times in the future. So at the end I have many workflows.

I run this generated workflows parallel in a SQX and check the results of the End tests. Endtest means, I generate for every workflow an backtest of unseen data. The data period of this unseen data is one year.

To show the result in a convenient form. I generate with a toolbox an equity curve of the endtest data periods.

If the Equity curve (red lines) goes up, then the workflow is successful. If the red line goes down, it is not successful.

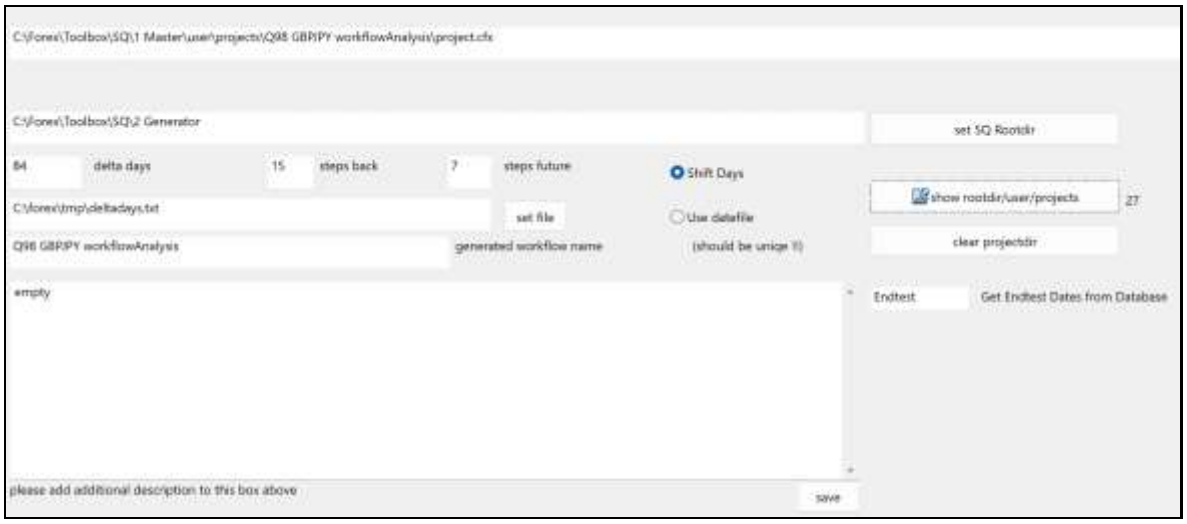


Abbildung 14: With the workflow-generator of the Toolbox I generated 15+7=22 Workflows.

I shifted the generated workflows 84 days in the past and the future. I shifted it 15 times of 84 days in the past and 7 times of 84 days in the future.

At the end I got 23 Endtests. From this Endtests I generated the Equitycurve of the profits.

In the following Table you can see the periods of the Endtest. You can see, I have done for every period an Endtest of one year.

Endtest
0
0
0
0
0
2022.11.18-2023.11.18
2022.08.26-2023.08.26
2022.06.03-2023.06.03
2022.03.11-2023.03.11
2021.12.17-2022.12.17
2021.09.24-2022.09.24
2021.07.02-2022.07.02
2021.04.09-2022.04.09
2021.01.15-2022.01.15
2020.10.23-2021.10.23
2020.07.31-2021.07.31
2020.05.08-2021.05.08
2020.02.14-2021.02.13
2019.11.22-2020.11.21
2019.08.30-2020.08.29
2019.06.07-2020.06.06
2019.03.15-2020.03.14
2018.12.21-2019.12.21
2018.09.28-2019.09.28
2018.07.06-2019.07.06
2018.04.13-2019.04.13
2018.01.19-2019.01.19
2017.10.27-2018.10.27

Abbildung 15: This are the Periods for the endtests of the different Workflows.

Walkflow-Analysis without Robustnesstests

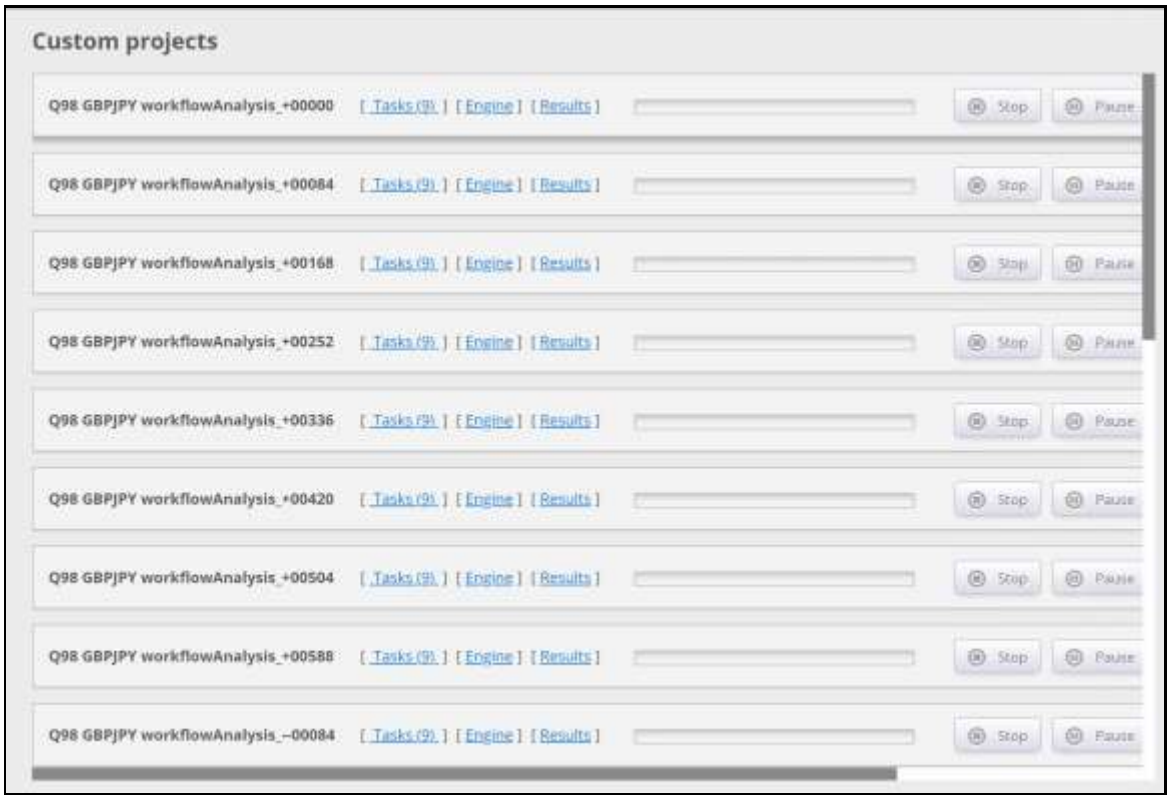


Abbildung 16: The Walkflow-Generator generated 23 Workflows for the StrategyQuantX. After the generation the workflows are all in the StrategyQuantX. You can see here a part of this.

Now it is Time for starting all these workflows.

Every Workflow generate 5000 Strategies and made a Endtest of it. If the first walkflow is ready, the next workflow will be started automatically in the SQX.

At the end we have 23 Pools of Strategies. Every pool contains 5000 Strategies.

I did this all, without Robustnesstests or special Filtering.

In the first Step I will see the quality of Strategy generation only with the Generationmodul and the Endtest

Abbildung 17: In the first Step of this Analysis only Build strategies and Endtest is activated. I will see the result without filtering or Robustnesstests.

What is the reason why I don't use Robustnesstests in the first step?

The reason is, that Robustnesstests are only able to filter 10%-30% of the curvefitted strategies out of the generation. The generation should produce good strategies. If the Buildingblocks and the settings are not good the result will be bad.

1 Walkflow-Analysis without Robustnesstest and 5000 Generated Strategies

Workflow=Q98 GBPJPY workflowAnalysis	0.0	0.0	0.0	0.0	0.0	0	0
Portfolioorg15	0.0	0.0	0.0	0.0	0.0	0	0
Norm n=5	0.0	0.0	0.0	0.0	0.0	0	0
average results	0.0	0.0	0.0	0.0	0.0	0	0
average results <"Q98 GBPJPY workflowAnalysis_+00588>=	-594.35	-594353.50	0.94	-0.57	-0.28	5000	2022.11.18-2023.11.18
average results <"Q98 GBPJPY workflowAnalysis_+00504>=	1241.47	1241470.00	1.12	0.64	0.93	5000	2022.08.26-2023.08.26
average results <"Q98 GBPJPY workflowAnalysis_+00420>=	-1014.15	-1014154.94	0.91	-0.66	-0.52	5000	2022.06.03-2023.06.03
average results <"Q98 GBPJPY workflowAnalysis_+00336>=	2073.37	2073374.88	1.20	0.56	1.18	5000	2022.03.11-2023.03.11
average results <"Q98 GBPJPY workflowAnalysis_+00252>=	2058.93	2058925.50	1.22	0.52	1.20	5000	2021.12.17-2022.12.17
average results <"Q98 GBPJPY workflowAnalysis_+00168>=	2907.36	2907356.50	1.38	0.74	1.64	5000	2021.09.24-2022.09.24
average results <"Q98 GBPJPY workflowAnalysis_+00084>=	2995.67	2995670.00	1.46	0.68	3.66	5000	2021.07.02-2022.07.02
average results <"Q98 GBPJPY workflowAnalysis_+00000>=	1309.20	1309204.88	1.21	0.43	1.25	5000	2021.04.09-2022.04.09
average results <"Q98 GBPJPY workflowAnalysis_--00084>=	1014.37	1014371.19	1.18	0.62	1.33	5000	2021.01.15-2022.01.15
average results <"Q98 GBPJPY workflowAnalysis_--00168>=	-370.67	-370674.72	0.94	-0.64	-0.29	5000	2020.10.23-2021.10.23
average results <"Q98 GBPJPY workflowAnalysis_--00252>=	-205.13	-205131.33	0.97	-0.62	-0.24	5000	2020.07.31-2021.07.31
average results <"Q98 GBPJPY workflowAnalysis_--00336>=	693.04	693038.25	1.13	0.43	0.83	5000	2020.05.08-2021.05.08
average results <"Q98 GBPJPY workflowAnalysis_--00420>=	2079.05	2079047.63	1.34	0.57	2.79	5000	2020.02.14-2021.02.13
average results <"Q98 GBPJPY workflowAnalysis_--00504>=	1484.34	1484337.38	1.22	0.72	1.40	5000	2019.11.22-2020.11.21
average results <"Q98 GBPJPY workflowAnalysis_--00588>=	1746.22	1746216.50	1.24	0.78	1.58	5000	2019.08.30-2020.08.29
average results <"Q98 GBPJPY workflowAnalysis_--00672>=	943.21	943208.13	1.12	0.49	0.76	5000	2019.06.07-2020.06.06
average results <"Q98 GBPJPY workflowAnalysis_--00756>=	1216.59	1216590.25	1.16	0.74	1.18	5000	2019.03.15-2020.03.14
average results <"Q98 GBPJPY workflowAnalysis_--00840>=	2717.71	2717712.75	1.39	0.76	4.14	5000	2018.12.21-2019.12.21
average results <"Q98 GBPJPY workflowAnalysis_--00924>=	1872.85	1872853.50	1.29	0.79	3.00	5000	2018.09.28-2019.09.28
average results <"Q98 GBPJPY workflowAnalysis_--01008>=	1340.24	1340244.00	1.22	0.76	1.76	5000	2018.07.06-2019.07.06
average results <"Q98 GBPJPY workflowAnalysis_--01092>=	730.45	730454.56	1.12	0.71	0.96	5000	2018.04.13-2019.04.13
average results <"Q98 GBPJPY workflowAnalysis_--01176>=	66.69	66686.40	1.01	0.44	0.09	5000	2018.01.19-2019.01.19
average results <"Q98 GBPJPY workflowAnalysis_--01260>=	-547.28	-547281.63	0.92	-0.52	-0.46	5000	2017.10.27-2018.10.27
	0.0	0.0	0.0	0.0	0	0	0
"@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ "	0.0	0.0	0.0	0.0	0	0	0
	0.0	0.0	0.0	0.0	0	0	0
overall average results=	1119.96	0	1.16	0.36	1.21	115000	0

Abbildung 18: Walkflow without Robustnesstest and 5000 generated Strategies. The Normation is 5. I have to divide to 5 If I want to see the average profit for one Strategy. 1119/5=223 Euro average Profit.

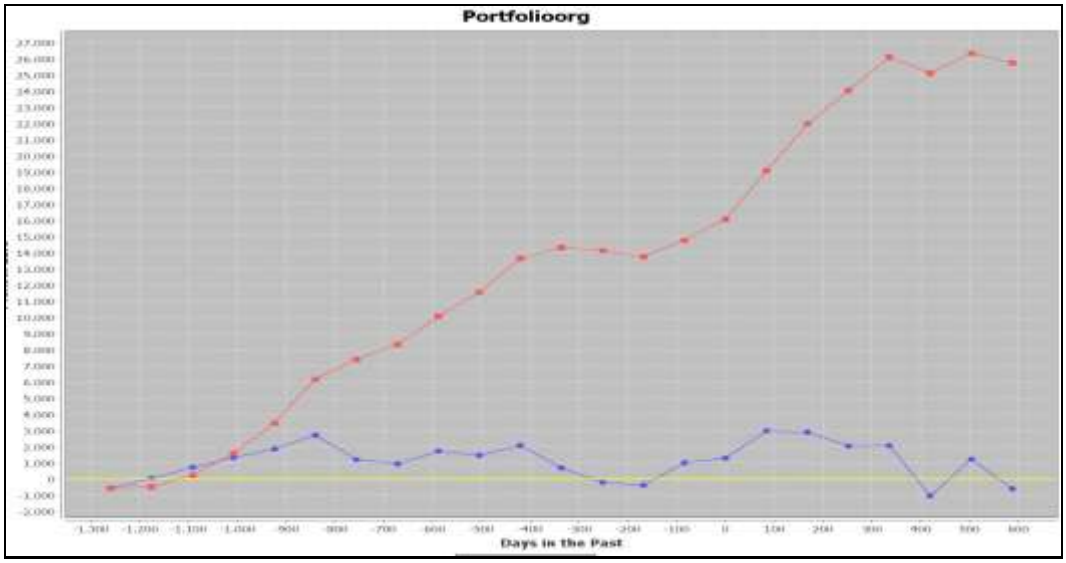


Abbildung 19: Walkflow without Robustnesstest and 5000 generated Strategies. The Equitycurve looks good. The red line is the summation of the profits.

Walkflow-Analysis with Robustnesstests 5000 Strategies

Results:

In this part I **switched on the Robustness** test filtering.

I generated in every Period 5000 Strategies.

Name	Norm NetProfit	SumNetProf	PF	Stability	RetDD	Strategies	Endtest
"@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ "	0.0	0.0	0.0	0.0	0.0	0	0
Workflow=Q98 GBPJPY workflowAnalysis	0.0	0.0	0.0	0.0	0.0	0	0
Portfolio:5	0.0	0.0	0.0	0.0	0.0	0	0
Norm n=5	0.0	0.0	0.0	0.0	0.0	0	0
average results	0.0	0.0	0.0	0.0	0.0	0	0
average results <"Q98 GBPJPY workflowAnalysis_+00588>=	-655.73	-2885.22	0.92	-0.52	-0.32	22	2022.11.18-2023.11.18
average results <"Q98 GBPJPY workflowAnalysis_+00504>=	2115.75	8886.15	1.23	0.65	0.94	21	2022.08.26-2023.08.26
average results <"Q98 GBPJPY workflowAnalysis_+00420>=	-1542.36	-5244.03	0.88	-0.57	-0.48	17	2022.06.03-2023.06.03
average results <"Q98 GBPJPY workflowAnalysis_+00336>=	3530.43	3530.43	1.43	0.58	1.23	5	2022.03.11-2023.03.11
average results <"Q98 GBPJPY workflowAnalysis_+00252>=	2246.13	2246.13	1.23	0.46	0.67	5	2021.12.17-2022.12.17
average results <"Q98 GBPJPY workflowAnalysis_+00168>=	4808.00	8654.40	1.93	0.82	2.59	9	2021.09.24-2022.09.24
average results <"Q98 GBPJPY workflowAnalysis_+00084>=	3549.51	14198.04	1.67	0.67	2.94	20	2021.07.02-2022.07.02
average results <"Q98 GBPJPY workflowAnalysis_+00000>=	970.46	1358.64	1.19	0.41	0.44	7	2021.04.09-2022.04.09
average results <"Q98 GBPJPY workflowAnalysis_--00084>=	1284.95	2312.91	1.28	0.52	1.28	9	2021.01.15-2022.01.15
average results <"Q98 GBPJPY workflowAnalysis_--00168>=	-923.22	-1846.44	0.84	-0.54	-0.42	10	2020.10.23-2021.10.23
average results <"Q98 GBPJPY workflowAnalysis_--00252>=	-1134.40	-2041.92	0.89	-0.70	-0.51	9	2020.07.31-2021.07.31
average results <"Q98 GBPJPY workflowAnalysis_--00336>=	1142.85	3428.55	1.26	0.57	1.10	15	2020.05.08-2021.05.08
average results <"Q98 GBPJPY workflowAnalysis_--00420>=	3833.05	6899.49	2.06	0.56	6.43	9	2020.02.14-2021.02.13
average results <"Q98 GBPJPY workflowAnalysis_--00504>=	1206.71	3378.78	1.20	0.69	0.79	14	2019.11.22-2020.11.21
average results <"Q98 GBPJPY workflowAnalysis_--00588>=	2707.05	4872.69	1.37	0.74	2.07	9	2019.08.30-2020.08.29
average results <"Q98 GBPJPY workflowAnalysis_--00672>=	650.25	2470.95	1.08	0.44	0.47	19	2019.06.07-2020.06.06
average results <"Q98 GBPJPY workflowAnalysis_--00756>=	2797.00	5034.60	1.36	0.65	2.01	9	2019.03.15-2020.03.14
average results <"Q98 GBPJPY workflowAnalysis_--00840>=	3902.22	7804.44	1.58	0.71	3.43	10	2018.12.21-2019.12.21
average results <"Q98 GBPJPY workflowAnalysis_--00924>=	3242.21	7132.86	1.59	0.82	4.39	11	2018.09.28-2019.09.28
average results <"Q98 GBPJPY workflowAnalysis_--01008>=	4170.79	5839.11	1.73	0.83	4.06	7	2018.07.06-2019.07.06
average results <"Q98 GBPJPY workflowAnalysis_--01092>=	1741.53	5921.19	1.25	0.73	1.23	17	2018.04.13-2019.04.13
average results <"Q98 GBPJPY workflowAnalysis_--01176>=	2754.85	28650.42	1.46	0.67	2.30	52	2018.01.19-2019.01.19
average results <"Q98 GBPJPY workflowAnalysis_--01260>=	-1384.44	-4153.32	0.83	-0.57	-0.66	15	2017.10.27-2018.10.27
	0.0	0.0	0.0	0.0	0	0	0
"@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ "	0.0	0.0	0.0	0.0	0	0	0
	0.0	0.0	0.0	0.0	0	0	0
overall average results=	1783.20	0	1.32	0.37	1.56	321	0

Abbildung 20: Walkflow-Analysis with Robustnesstst und 5000 Strategies are generated. 1783/5=356 Euro per Strategy.

⇨ With Robustnesstest this was an improvement from 223 Euro to 356 Euro per Strategy.

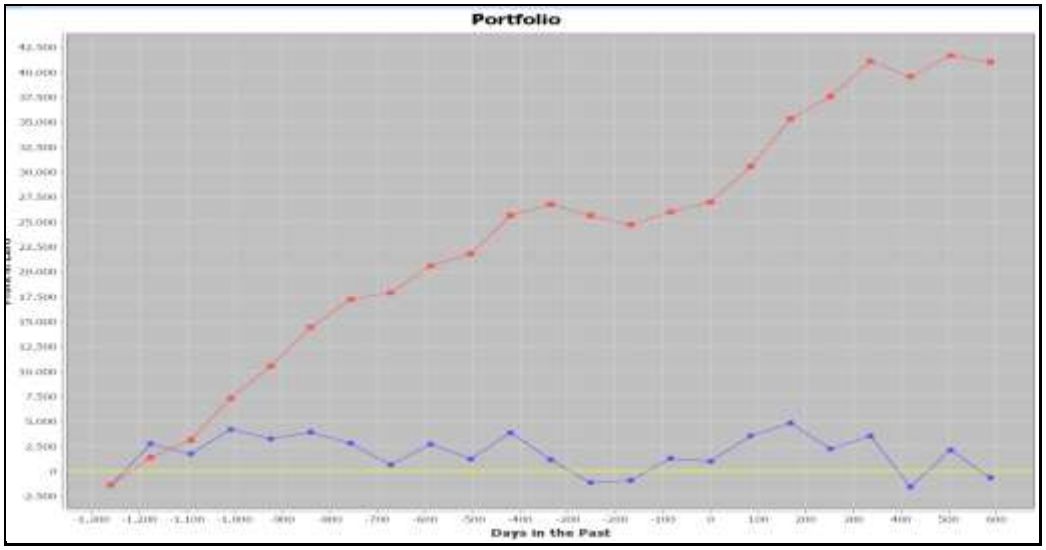


Abbildung 21: Walkflow-Analysis with Robustnesstst und 5000 Strategies are generated.

Check every Filter of the Workflow

The Looptest

In the first Step I will do a loop-Test. I will repeat the generation for period 0000 without filtering and build a portfolio of all 5000 Strategies. I will check how the different portfolios differ.

The Result:

Symbol (...	T	Net profit (Port...	Profit facto...	Ret/DD Rati...	N	Mini equity cha...	# of trad...
Portfolio	H	$ 1 298 585.38	1.23	1.26	$		180521
Portfolio	H	$ 1 439 516.38	1.26	1.39	$		185886
Portfolio	H	$ 1 280 487.5	1.23	1.34	$		184647
Portfolio	H	$ 1 441 568	1.24	1.31	$		188685
Portfolio	H	$ 1 053 861	1.19	1	$		181475
Portfolio	H	$ 1 178 985.75	1.2	1.17	$		181987
Portfolio	H	$ 1 349 903.38	1.24	1.35	$		183206
Portfolio	H	$ 1 204 051.63	1.21	1.36	$		181501
Portfolio	H	$ 1 296 138.38	1.23	1.14	$		183228
Portfolio	H	$ 1 398 115.75	1.24	1.29	$		189466
Portfolio	H	$ 1 224 868	1.21	1.39	$		184350
Portfolio	H	$ 861 136.19	1.14	0.7	$		187856
Portfolio	H	$ 962 271.06	1.17	1.02	$		184770
Portfolio	H	$ 854 544.25	1.15	0.98	$		180828
Portfolio	H	$ 1 467 491	1.25	1.2	$		188369
Portfolio	H	$ 1 215 413.5	1.22	1.27	$		178883
Portfolio	H	$ 1 512 037	1.27	1.45	$		183716
Portfolio	H	$ 1 349 280.5	1.23	1.32	$		187652
Portfolio	H	$ 1 387 065.5	1.24	1.2	$		186699
Portfolio	H	$ 738 129.5	1.12	0.84	$		183989
Portfolio	H	$ 1 506 350.25	1.26	1.48	$		187116

Abbildung 22: The results of the runs looks similar. The Nettoprofit of the portfolio varies from 738129 Euro till 1.5 Mio Euro. There is a difference, but this variation is ok.

2 OOS1 Filter

In this Step of the Analysis I will only use the OOS1 Filter after Generation, the other Filters are switched off. I will use the same Strategies from the last generation which are stored in the database. This are 5000 Strategies in every period of this Workflow-Analysis.

I will check in this step the effectiveness of the OOS1-Filter.

The Result:

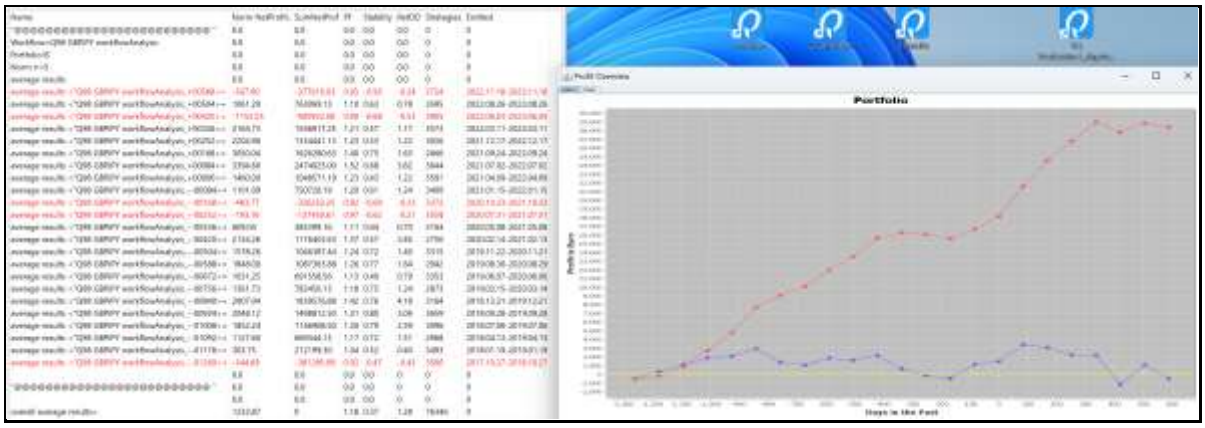


Abbildung 23: The average result is 1232/5= 246 Euro, this is an improvement. The original value without filtering was 1119/5= 223 Euro. This means that the OOS1-Filter have a positive effect.

3 OOS1+OOS2 Filter

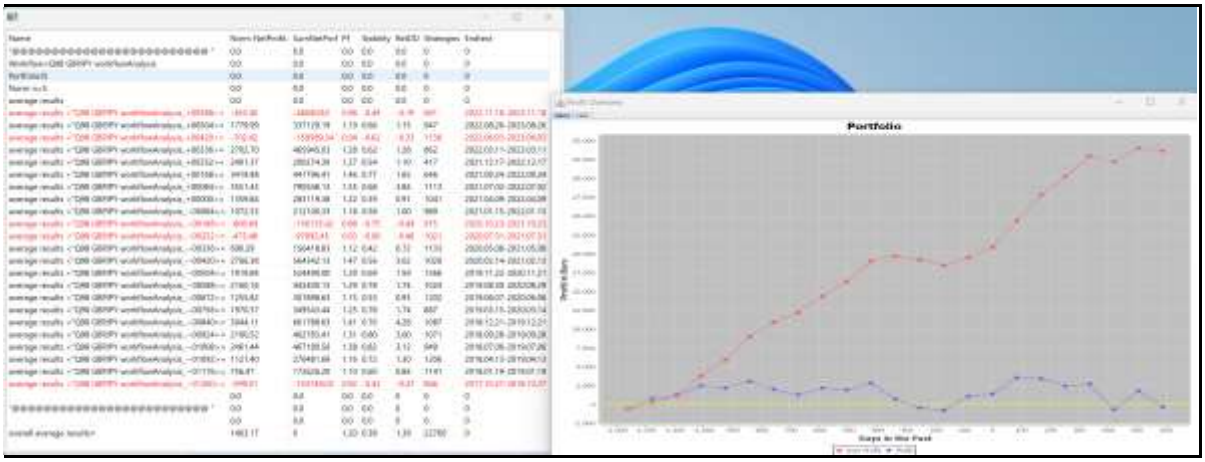


Abbildung 24: The average result is 1463/5= 292 Euro this is an improvement. The original value without filtering was 1119/5= 223 Euro. This means that the OOS2-Filter have a positive effect.

4 OOS1+OO2+EURJPY

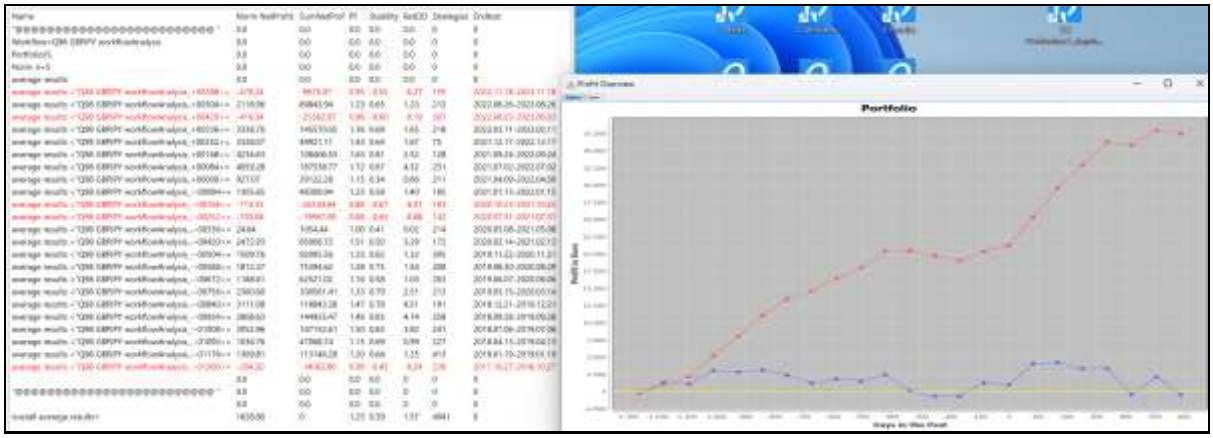


Abbildung 25: The average result is 1628/5= 325 Euro, this is an improvement. The original value without filtering was 1119/5=223 Euro. This means that the OOS1+OOS2+EURJPY-Filter have a positive effect.

5 OOS1+OO2+EURJPY+USDJPY

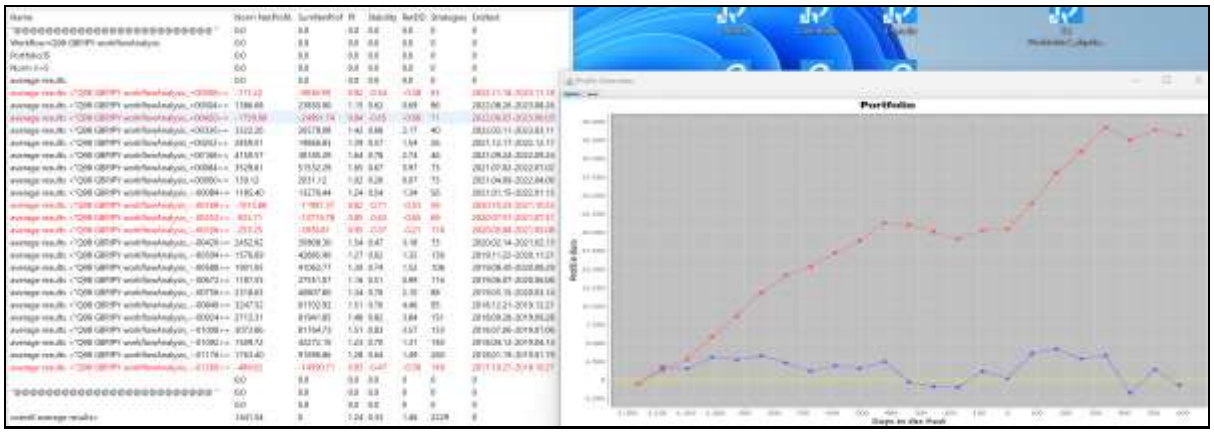


Abbildung 26: The average result is 1441/5= 288 Euro this is an improvement against without filtering, but it was a step back against the last filtering.

⇨ The USDJPY didn´t have a positive effect. We can drop this filter.

6 OOS1+OO2+EURJPY+USDJPY+Robust

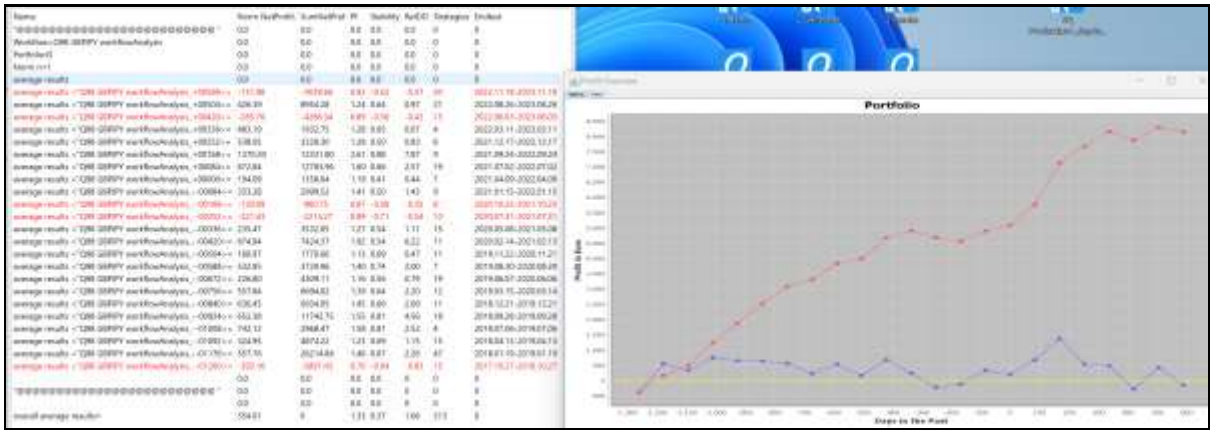


Abbildung 27: The average result is 354 Euro. => This filter works.

7 OOS1+OO2+EURJPY+USDJPY+WFa

SelectedTimeframe

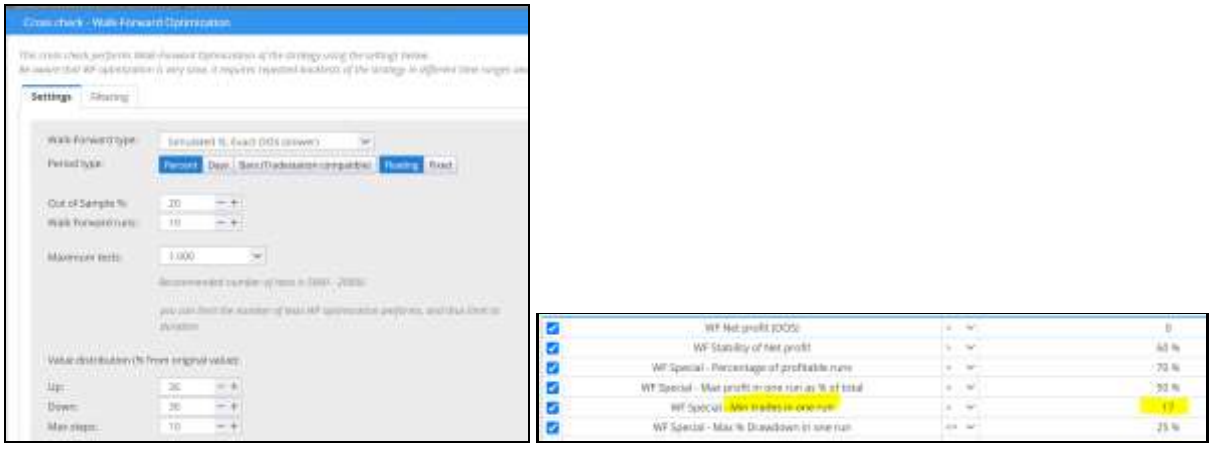


Abbildung 28: I modifed this filter in the walkforward-Filter. I decreased the Min trades in one run from 20 to 17.

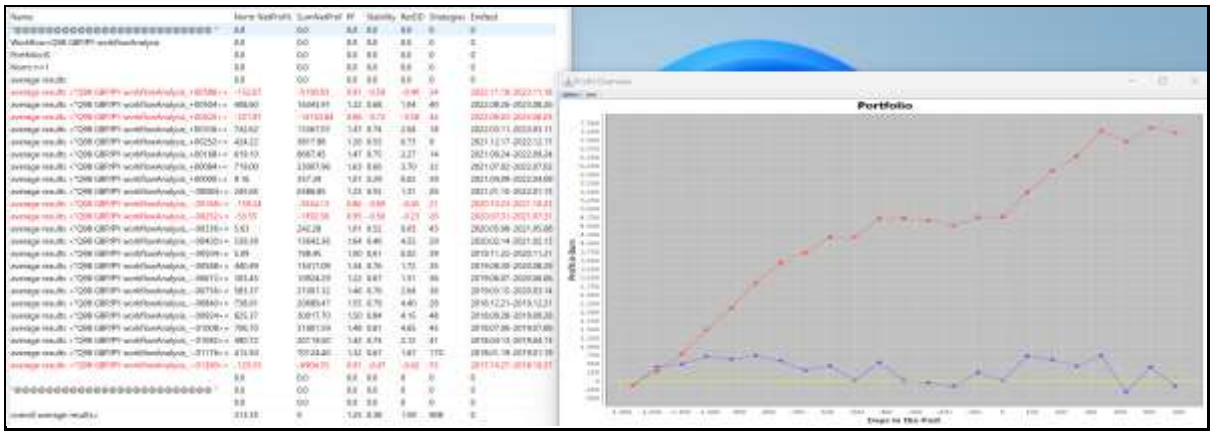


Abbildung 29: The result of 313 of the Walkforward-Analysis was not so good.

8 OOS1+OO2+EURJPY+USDJPY+WFb

SelectedTimeframe

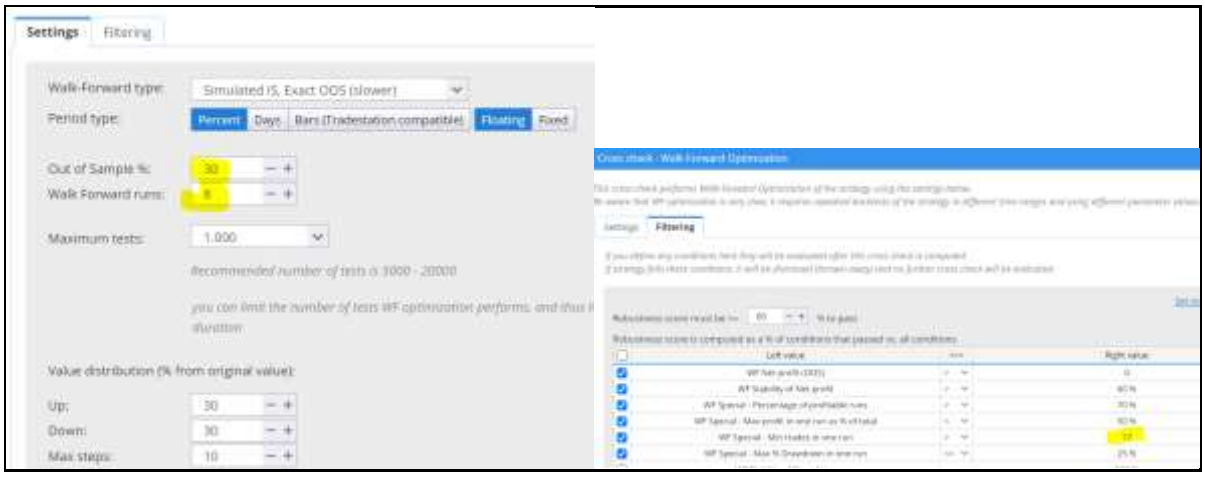


Abbildung 30: I modified the "Out of Sample %" and the Walk Forward runs.

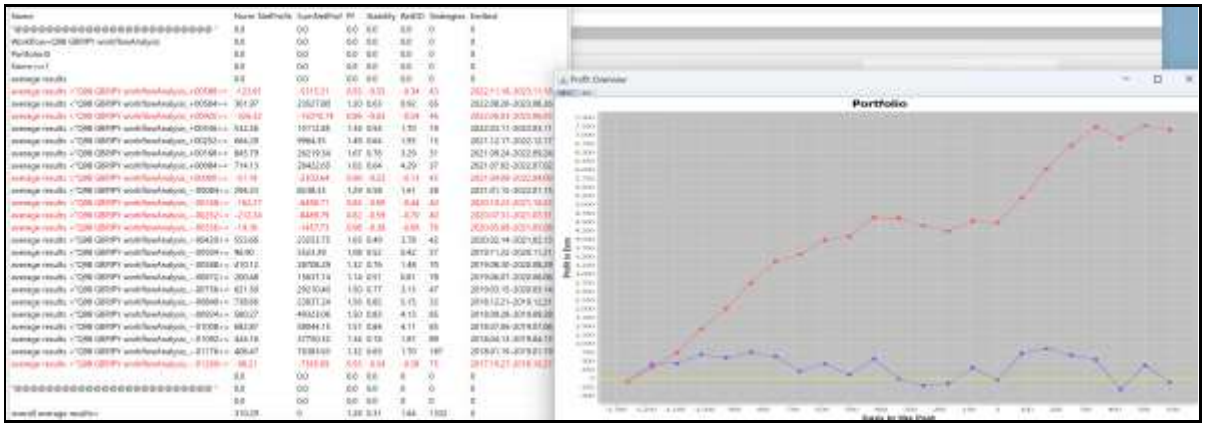


Abbildung 31: The result of this modification was 310 Euro per Strategy.

9 OOS1+OO2+EURJPY+USDJPY+WFc

SelectedTimeframe

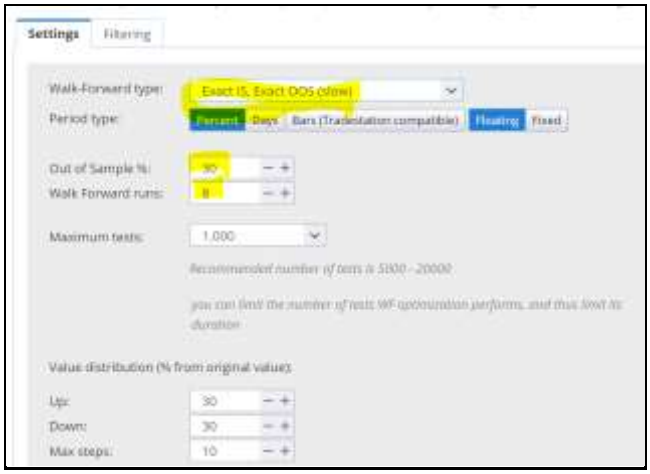


Abbildung 32: I modified the Walkforward Settings form Simulation to "Exact IS, Exact OOS(slow)"

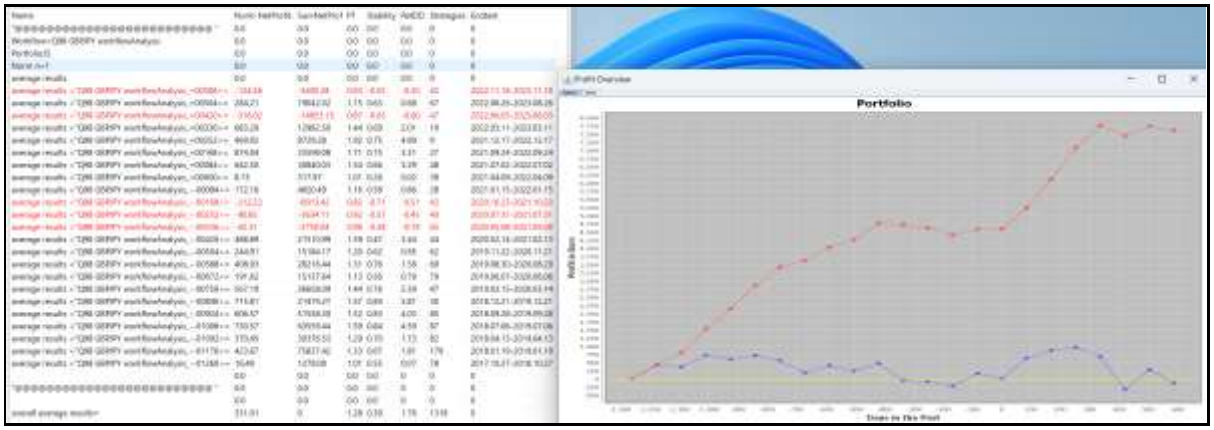


Abbildung 33: The Result of 331 Euro per Strategy was a little better, but the result was not perfect.

10 OOS1+OO2+EURJPY+USDJPY+WFd

Tick simulation

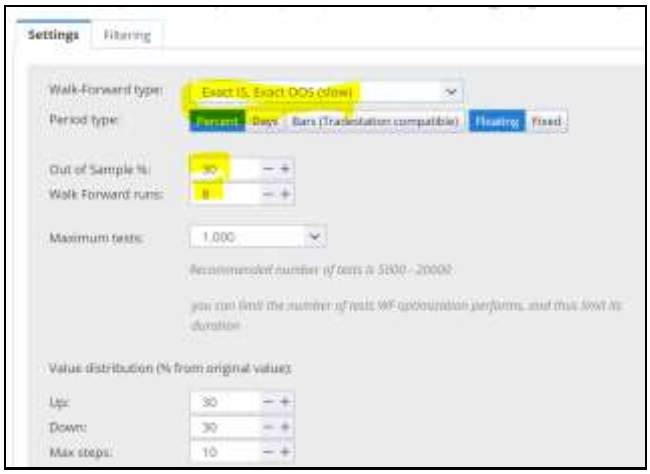


Abbildung 34: I used the same Settings as before, but I switched from "Selected Timeframe" to "Ticksimulation".

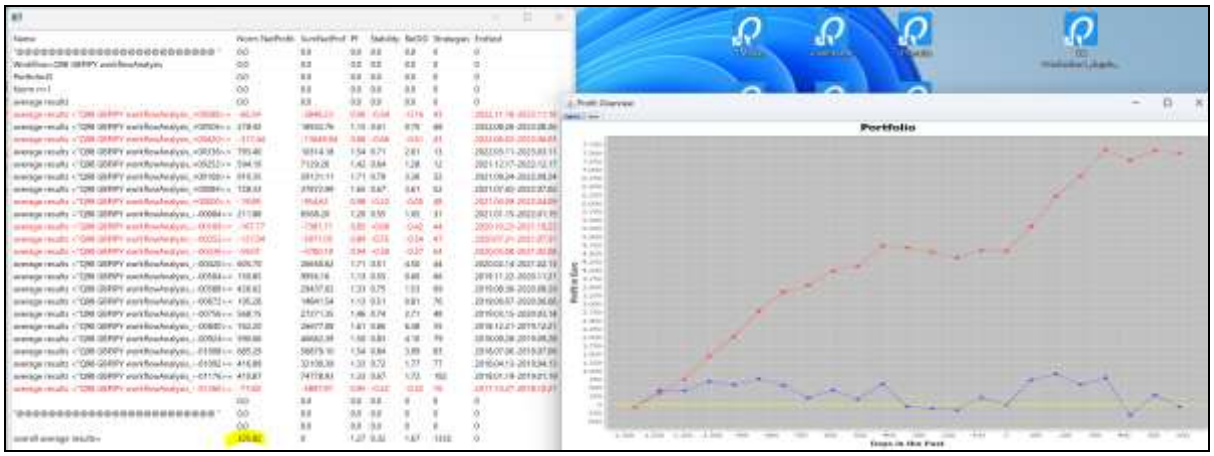


Abbildung 35: The result from switching "Selected Timeframe" to "Ticksimulation" has no big effect.

11 OOS1+OO2+EURJPY+USDJPY+SysParameterA

Selected Timeframe

In this robustnesstest I use Sys Parameter Permutation with the following Settings. I use selected Timeframe for the backtest engine.

N=1000

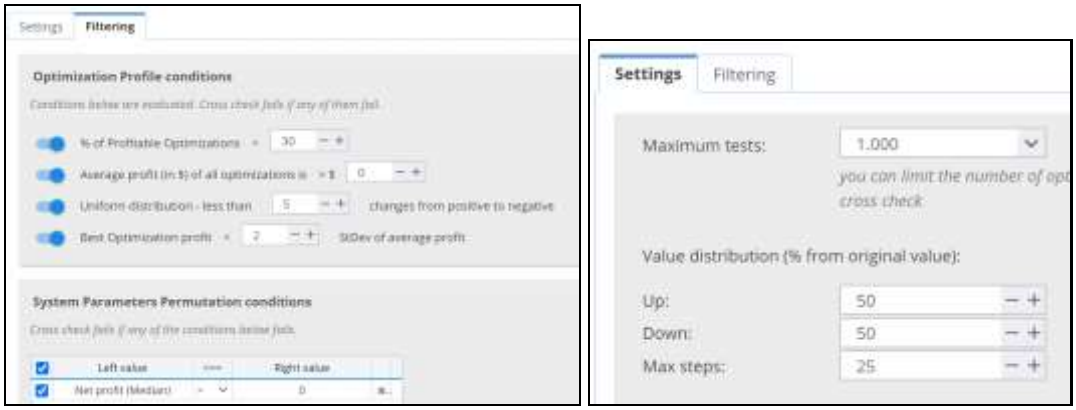


Abbildung 36: I set „Best Optimization profit <2". This parameter has the biggest effect on this filter. This condition "<2" is a very hard condition. This filter will filter out many strategies. The big question is. How effective is this filter?

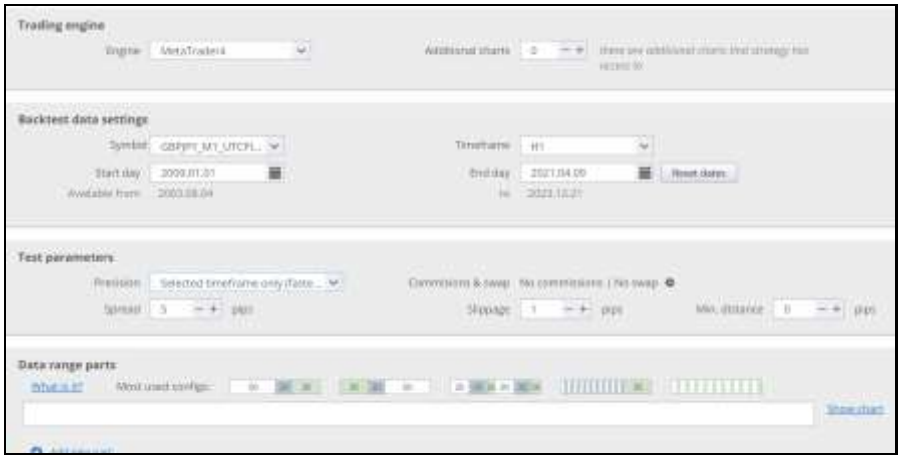


Abbildung 37: I used this Precision and this Spread and Slippage.

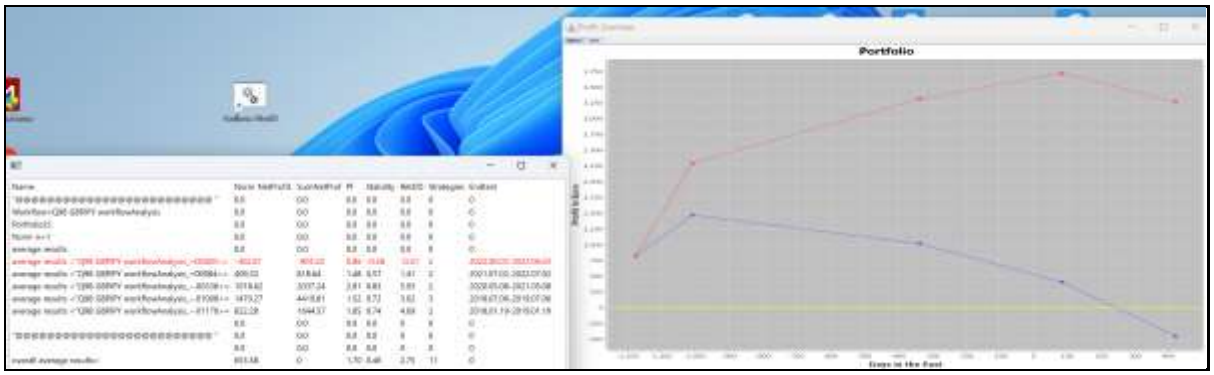


Abbildung 38: This filter seams very effective. The average profit is 653 Euro per Strategy. But this filter killed the most of the strategies. Only 11 Strategies left from over 20K Strategies. I think this is too much?

12 OOS1+OO2+EURJPY+USDJPY+SysParameterB

Selected Timeframe

Filter Best Optimization Profit <3

N=1000

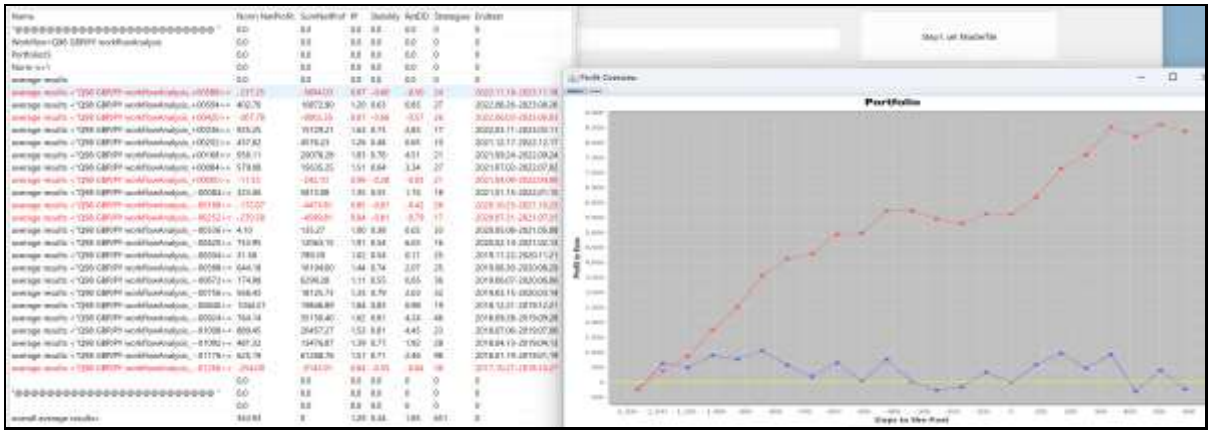


Abbildung 39: The result of this filter is very poor. 363 Euro per Strategy is not a good result. 651 Strategies passed this filter.

13 OOS1+OO2+EURJPY+USDJPY+SysParameterC

Selected Timeframe

Filter Best Optimization Profit off

N=1000

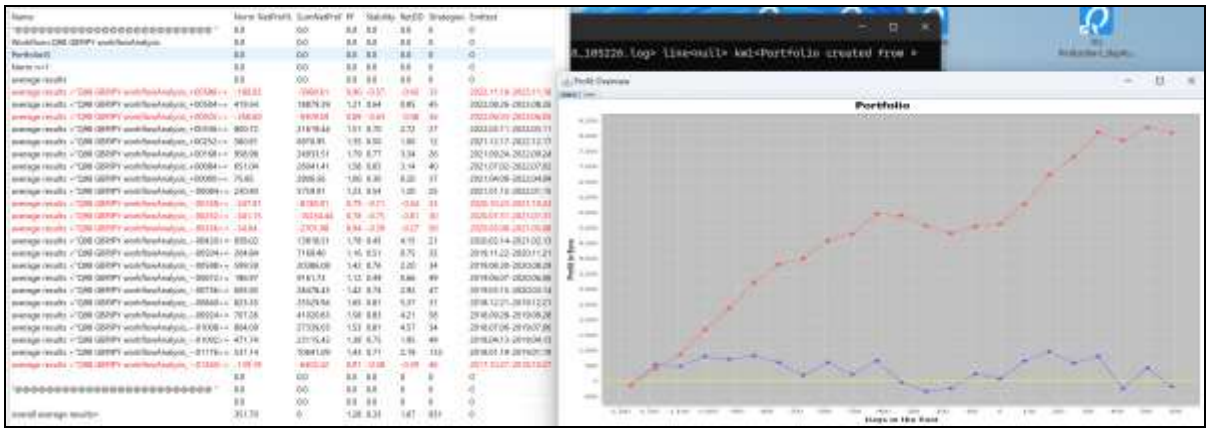


Abbildung 40: This filter result is bad. 351 Euro per Strategy is not so good. 931 strategies passed this filter.

14 OOS1+OO2+EURJPY+USDJPY+SysParameterD

Selected Timeframe

Filter Best Optimization Profit <2.5

N=1000

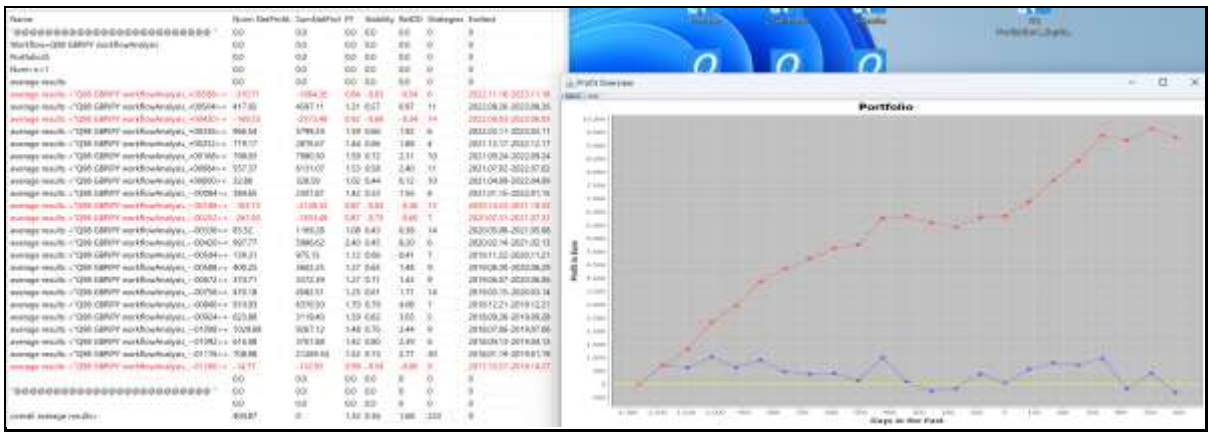


Abbildung 41: The average profit per Strategy is 404 Euro. 223 Strategies passed this filter.

15 OOS1+OO2+EURJPY+USDJPY+SysParameterE

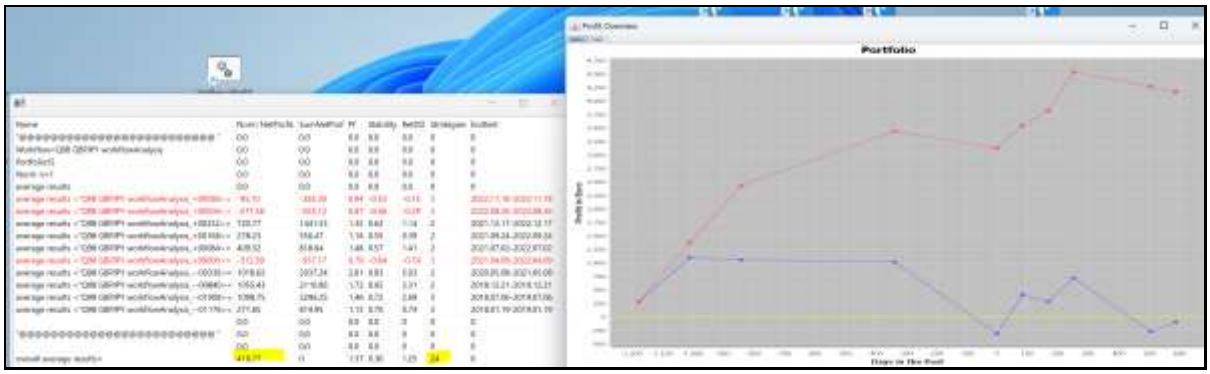
In this Walkflow-Analysis I increased the N from 1000 to 10000 in the SysParameter-Filter. I would like to investigate the effects of increasing N on the filter.

I used the following Parameters:

Selected Timeframe

Filter Best Optimization Profit <2.5

N=10000



Result Overview

Nr	Filter	Result	Sum #Strategies	Remark
1	Without filter	1119/5=223 Euro[2]	5000 each Workflow, this means 115000 #Strategies as a Sum	This is the challenge
2	OOS1	1232/5=246	76346	This filter has improved something
3	OOS1+OOS2	1463/5=292	22760	This filter has improved something
4	OOS1+OO2+EURJPY	1628/5=325	4941	This filter has improved something
5	OOS1+OO2+EURJPY+ USDJPY	1441/5=288	2229	Fail, The results gets worse with this filter.
6	OOS1+OO2+EURJPY+ USDJPY+Robust	354	313	This filter has improved something
7	OOS1+OO2+EURJPY+ USDJPY+WFa	313	908	The WF as Robust is slightly worse than the last with Montecarlo
8	OOS1+OO2+EURJPY+ USDJPY+WFb	310	1332	
9	OOS1+OO2+EURJPY+ USDJPY+WFc	331	1318	
10	OOS1+OO2+EURJPY+ USDJPY+WFd	325	1332	The result is not better if I use tick simulation instead of selected Timeframe.
11	OOS1+OO2+EURJPY+ USDJPY+SysParameterA (<2)N=1000	653	11	
12	OOS1+OO2+EURJPY+ USDJPY+SysParameterB (<3) N=1000	663	651	
13	OOS1+OO2+EURJPY+ USDJPY+SysParameterC (off) N=1000	351	931	
14	OOS1+OO2+EURJPY+ USDJPY+SysParameterD (<2.5) N=1000	404	223	
15	OOS1+OO2+EURJPY+ USDJPY+SysParameterE (<2.5)N=10000	416	24	

[2] I have to divide by 5. Because toolbox has normalized all results to 5 Strategies in the end portfolio.

3 Q86 GBPJPY H1 Some Additional Tests

In the last chapter I check the efficiency the different robustness filter. The result of this was that the most filters are working fine. In this chapter I will check the quality of this filter. How stable are the results? We will find out, that the results are not so stable.

The question is. What can we do to get more stable result?

With the Numbers here in the Workflow, I mean not the numbers from chapter2. This numbers represents the Numbers of the Workflow-Modules.

In the Loop-Robustness Stability Tests I

Here in the Loop test I will test the stability of the Robustnesstests. I mean exactly the following thing.

- First I have generated a Pool of Strategies. I generated over 100K strategies in Step1.
- Then I filtered Steps 1-9.
- 3315 Strategies have passed the Filter 9-USDJPY.

⇨ So now I have 3315 pre-filtered Strategies for following next Analysis-Steps.

Loop-Analysis:

- In the Loop-Analysis I do filter step 10-15 in a Loop.
- In every Loop, the Result is a generated Portfolio. This Portfolio of Endtest will be generated in Step 20.

To the Results:

In the Result database I have generated a pool of portfolios after a while. If the robustness test filtering is stable, the portfolios looks similar.

If the portfolios look different, then the robustness filtering is not stable.

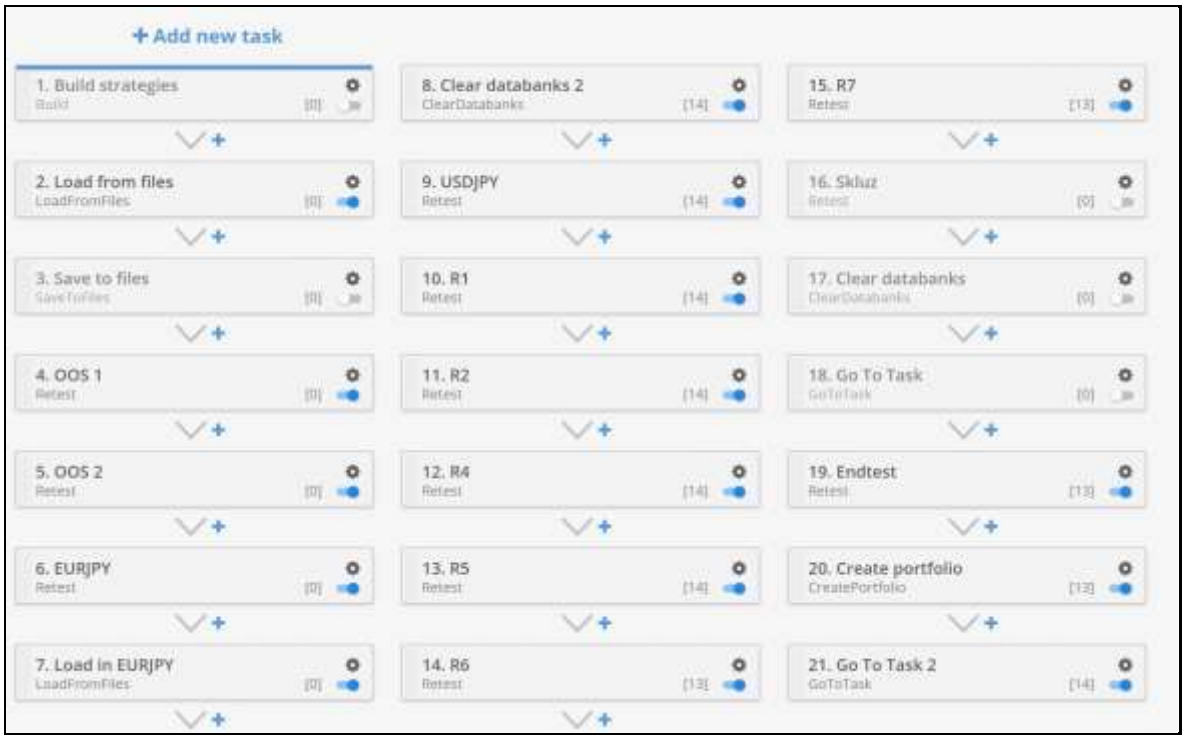


Abbildung 42: I used for my Analysis this workflow.

I run the workflow in the loop to see the stability of the results.

Net profit (Port...	Profit facto...	Ret/DD Rati...	Net profit (Port...	Mini equity cha...	# of trad...
$ 1 098.81	1.49	1.84	$ 0		68
$ 2 984.94	1.65	3.19	$ 0		151
$ 5 836.23	1.6	2.42	$ 0		308
$ 1 598.22	1.16	0.44	$ 0		253
$ 1 821.78	1.62	3.37	$ 0		113
$ 2 152.62	1.54	1.54	$ 0		124
$ 2 411.37	1.32	0.92	$ 0		209
$ 3 697.56	1.68	2.58	$ 0		180
$ 2 484.45	1.31	1	$ 0		220
$ 2 562.48	2.01	3.36	$ 0		87
$ 1 015.38	1.22	0.45	$ 0		117
$ 1 079.64	1.25	0.89	$ 0		119
$ 1 715.49	1.54	2.78	$ 0		101
$ 1 813.95	1.5	1.79	$ 0		116
$ 3 316.59	2.24	6.71	$ 0		117

Abbildung 43: I ran the workflow in the loop to see the stability of the results.

All portfolios are in profit. But the results differ. Some portfolios have perfect equity curves and other worksflows are not so good.

The results look not so stable. I think the value N in the Robustnesstests is too low.

I increase the N of the tests and check the effect.

R1-R5: increase N from 200 to 1000

R6: Increase N from 1000 to 5000

R7: Increase N from 500 to 3000

- ⇨ With bigger N, less Strategies are left. The Analysis take a very long time. I Stopped the analysis.
- ⇨ I will go on with an different Step.

Calibrate Q86er Workflow with Winner Strategies.

In Chapter "-1 Disclaimer:

All information including workflow settings and example strategies shared in this document is intended solely for the purpose of studying topics related to the usage of StrategyQuant software and is in no way intended as a specific investment or trading recommendation.
The Document writer is not an investment advisers or brokers.
If specific financial products, commodities, shares, forex or options are mentioned on this document, it is always and only for the informational purposes.
The document writer is not responsible for the specific decisions of individual users.

0 Introduction

How have I always gone about finding profitable strategies?

We have built a workflow or copied it from somewhere and would like to use it to generate strategies and then use them on a demo account. Of course, a workflow not only includes generation but also extensive robustness testing. We use the workflow to generate many strategies and then run them on a demo account. We select only the best strategies at regular intervals and trade them on a real account. Strategies that reach the maximum drawdown are immediately deactivated and no longer used.

The way I described it here, it may or may not work. In my opinion this is pure gambling. It all depends on how good the workflow is. It could also be that a workflow we use is bad, but we still make profits. It could be that the market is right somehow and we are still making profits.

I would like to take a closer look at the entire process of strategy generation and use. I would like to examine the workflow used and see how profitable it is in different situations. In my opinion, a workflow is only profitable if it survives a workflow analysis. For example I examined a workflow by moving it into the past X times and see how profitable it is.

But some readers will now say that the whole thing is far too complicated. The strategies that don't work are filtered out on the demo account, so that in the end only the most profitable ones end up on the real account.

That's true, but "filtering the bad strategies out" doesn't work. You can only filter it out if you use special tests. We don't have such tests and I don't know how they should work.

I only use the strategies on a real account once I have done a workflow analysis for a walkflow and this is also successful for the current market phase.

Unfortunately, only one workflow has so far passed this test.

The secret of a profitabel workflow

There is a secret that I would like to tell you. This secret is very important if you want to build a functioning and therefore profitable workflow. It's not the currency pair or the trial period. It's also

not a special robustness test that I have to do with special settings. There is also no special composition of the building blocks. Or determines trading times.

The secret is the generator. Yes, exactly I mean the **“BUILD STRATEGIES”** module. The module must be good. When generating it, it must produce more profitable strategies than bad ones. If this is not the case, then the workflow will not be successful. To build such a profitable module you need a lot of Forex knowledge. Of course you can also just try it out. And test the whole thing with a workflow analysis. Of course that's a lot of work.

History of this Document:

In this analysis, I will review the Workflow Q86 for GBPJPY on the H1 timeframe for the second time. I previously conducted an analysis for this workflow two years ago. (Q86 GBPJPY H1 Analyse Thomas Nickel V1.4 2.12.2022). You can download this document under https://c.gmx.net/@329881123612003410/AXjh2A75Rm-xTLKwpAVWSA.

I would also like to point out my homepage https://monitortool.jimdofree.com/

Now it is two years later. Many things have happened. I have improved the toolbox for the workflow analysis. The workflow generation process is 10 times faster, and we have more accurate results in the overview. Additionally, I implemented a graphical result view as an additional feature.

Target of this Document:

Why am I actually writing this document here? Of course I didn't find the Golden Grail. The Workflow Q86 GBPUSD H1 is very good. This will be seen in the analyses here. However, it has a small problem. At the moment (Actual date 7.3.2024), the system is in a sideways phase.

I'm looking for people who would like to work to improve this workflow. If anyone has any ideas about what filters or rules I could add to the workflow to improve it, I would be very grateful. I would then use the ideas to improve the setting and do a workflow analysis. Then you can accurately predict whether the workflow is profitable. Or whether the whole thing is over-optimized. Maybe someone would like to join in. Or someone can just try out a few filters and see how it affects the current market phase. If someone finds something good, we could collect ideas and improve the workflow.

This is just a suggestion from me.

Of course, you can also just read it, generate strategies and enjoy the profits. Improve the workflow and not share the knowledge.

But that's not how we reach our goal.

I have been working with StrategyQuantX for over 10 years. The whole matter is simply too complicated. We can only move forward if we work together.

The workflows of this Document

I put all Workflows of this document in the GMX-Drive

https://c.gmx.net/@329881123612003410/AXjh2A75Rm-xTLKwpAVWSA.

What I'm looking for:

Looking for people who take the information out of this document and make some improvements of this workflow. In this document are some Analysis of the different Filters of this Workflow. You can take this information and combine this to make an improved workflow. Make some backtests and optimize the workflow so that the workflow works for the current market situation. Send me your results to tnickel@gmx.de. I will use this information for new Walkflow-Analysis.

What is in this Document?

In **Chapter1** I checked each individual step of the workflow for the generation period January 1, 2009-August 31, 2018. Here I generated over 50,000 strategies. I tested the individual filters. I found out that the filters and robustness tests used essentially work (SQ 4.138). (At this point I would like to thank the developers from the SQX team, they have worked very hard. This finally seems to be running stable). The filters all work differently. With this large strategy set you can make quite good, statistically relevant statements.

In **Chapter2** I did a walkflow-analysis for the workflow. I examined each individual filter step in more detail here. The reader can see exactly how efficient the individual filter steps are.

In **Chapter3** I did some stability tests for the different filters. I want to see how stable the results of the different filters are. In the last part of Chapter3 I found out some interesting things about the Robustnesstests.

In the **Appendix** I added an additional Workflow-Analysis for the modified GBPJPY M15 strategy workflow. You can see the difference between a working and a not working workflow. I did a second Workflow Analysis for the Workflow GBPJPY H1 with a different currency pair EURJPY H1. But this analysis fails too.

Conclusion

We analysed the GBPJPY H1 workflow and showed that it essentially works like this. You can make money with it. I hope many users here in the forum have already earned a lot of money with this?

But be careful: I would like to point out the disclaimer again at this point. This is not intended to be a call to use real accounts. I am not responsible for any losses.

You can't just take a workflow and generate strategies. The two workflow analyses in the appendix showed us that this doesn't work. We simply modified the working workflow a little. Once the currency pair was exchanged from GBPJPY to EURJPY and once the time frame was changed from H1 to M15. Both attempts ended in losses.

This shows you once again how difficult it is to find a working workflow.

I would like to point out again that the "working workflow GBPJPY H1" is in a sideways phase. It's going to be a bit difficult to make money at the moment.

1 Q86 GBPJPY H1 (Check this workflow in 2024 again)

I traded the Strategies from this workflow GBPJPY from the StrategyLab since Okt 2021 on some demo and life accounts.

https://strategyquant.com/shared/gbpusd-strategylab-workflow/

Recently there have been some new findings regarding robustness tests. I tried to check this strategy generation with different Robustnesstests.

Abbildung 1: After I generated strategies with this workflow I installed this Strategies on Demoaccount. This is the tradingresult on the Demoaccount for Q86 GBPJPY H1. The Equity curve is from one year Trading on demo account. The Equity looks nice.

The Q86 GBPJPY H1 portfolio has been running quite successfully for over 3 years. See the following graphic.

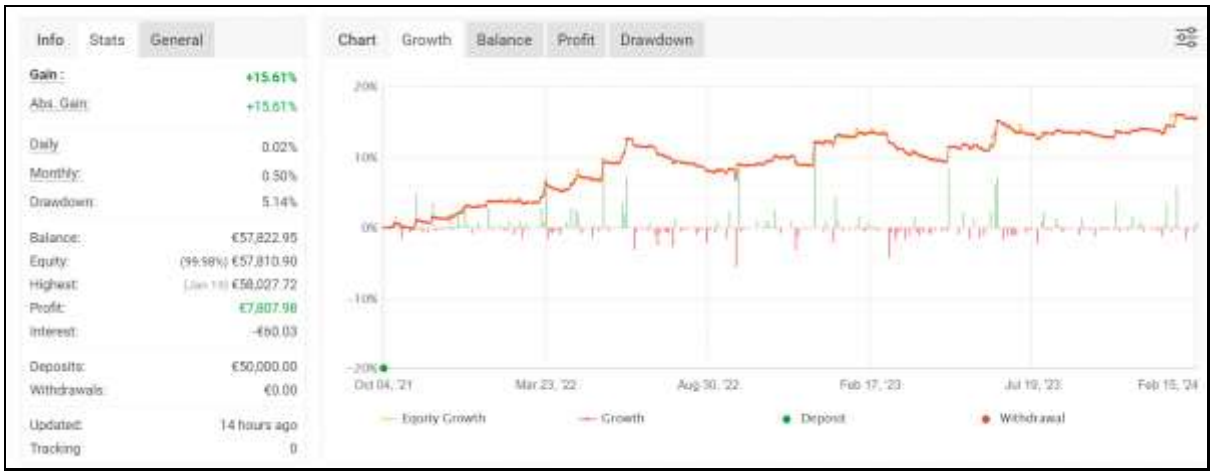


Abbildung 2: This Portfolio contains 39 Strategies at the moment. The Strategies are running on demo account. I trade the best strategies on real account.

I have generated this Portfolio 2021. If we take a closer look, the performance of this portfolio looks in the beginning better as in actual time period.

The reason can be that the market condition has changed? It is possible that a generated portfolio running with best performance only a limited time. I have to recalibrate the portfolio from time to time. But I don´t did this recalibration in the past.

At first we have to recheck the Q86 GBPJPY H1 workflow.

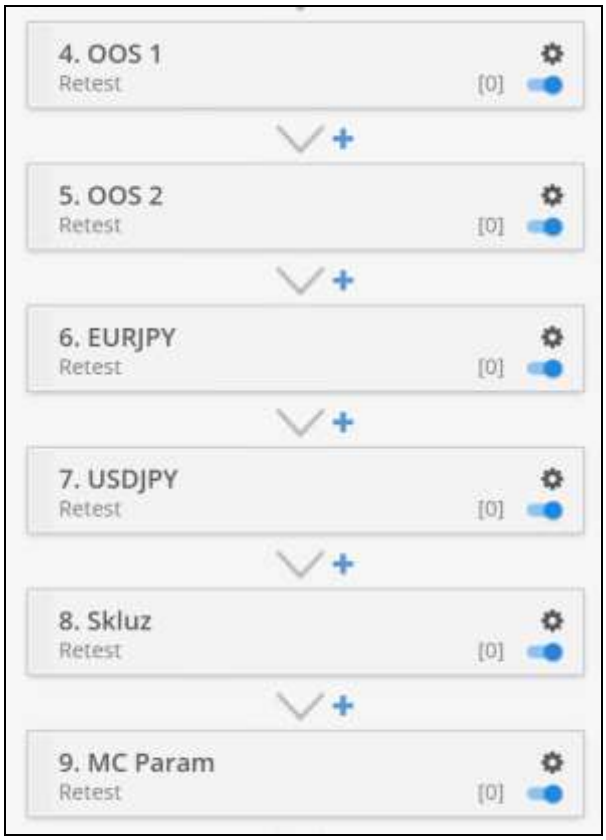


Abbildung 3: Der Workflow Q86 contains two OOS Tests and two additional currency test. The MC Param-Test filter out all the generated strategies. I think the parameter of the MC Param Test are too hard. Or I have generated too few Strategies?

I would also like to note that this q86 workflow was created with a much older version of SQX. I think it was still version 4.X.old Version 4.138 includes much better robustness testing. I think you could get a lot of performance out of the Q86 workflow with these.

I won't do a complete workflow analysis with Q86 because in this first step, this is very time-consuming. But I would still like to use this new knowledge from this workflow to take a look at other workflows.

A Strategy Generation

In the first Step we need some Strategies. I generated overnight 20980 strategies without filtering. I use only the Build Strategy Setting.

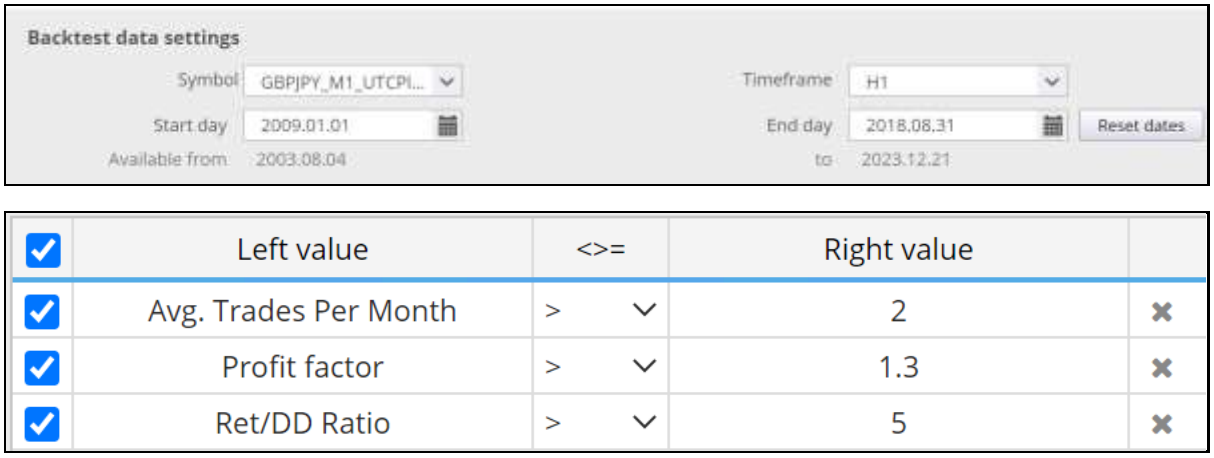


Abbildung 4: Some Settings for the Generation. This is a very simple Setting. But this Setting was very effective.

In the first step, I would like to assess the quality of the generated strategies without a robustness filter. To do this, I left the computer running overnight and generated 20,800 strategies.

To see whether these strategies are good, you have to do a final test and then create a portfolio from them. If the equity curve in the portfolio looks good, then the settings for generating the strategies are good. Unfortunately, you cannot build a portfolio from 20800 strategies. For this you would need a super-fast computer. With my 7850X I can create a maximum of 5000 strategies in the foreseeable future. So when analysing strategy quantities > 5000, I will always build a portfolio with a maximum size of 5000 strategies. A series of tests has shown that the results of these smaller portfolios still have good significance.

I made a backtest of one year and build a portfolio of 500, 1000, 2000,…. 5000 Strategies.

I compared the results in a table.

Strategy Name	F	Note	F	Symbol (Po...	Tim	Net profit (Port...	Profit facto...	Ret/DD Rati...	Mini equity cha...	# of trad...
Merged portfolio	!	500, 134 Euro/Strategy	C	Portfolio	H...	$ 67 181.13	1.1	0.86		19049
Merged portfolio(1)	!	500,	C	Portfolio	H...	$ 67 181.13	1.1	0.86		19049
Merged portfolio(2)	!	1000, 112 Euro/Strategy	C	Portfolio	H...	$ 112 103.64	1.08	0.71		39150
Merged portfolio(3)	!	2000, 131 Euro	C	Portfolio	H...	$ 263 333.53	1.09	0.88		77940
Merged portfolio(4)	!	3000, 136 Euro	C	Portfolio	H...	$ 409 248.19	1.1	0.93		116468
Merged portfolio(5)	!	4000, 134 Euro	C	Portfolio	H...	$ 539 957.25	1.1	0.92		154378
Merged portfolio(6)	!	5000, 137 Euro/Strategy	C	Portfolio	H...	$ 686 757.63	1.1	0.95		192373

I will calculate an average Profit per Strategy out of my Merged portfolios. This value represents an approximation because I cannot form a complete portfolio from the 20,800 strategies.

- ⇨ 134+112+131+136+134+137=784/6=**130 Euro/per Strategy** Profit.

The average Profit per Strategy is 130 Euro per year. The Equity of the Portfolio looks good.

Fazit: We yield 130 Euro per Strategy if we make an easy endtest without any additional filter.

The Result looks good. But I know this is only one Time Period.

In order to evaluate the strategy generation well, we would have to do a complete walkflow analysis. But we're not doing that now. I only check all the filters used at this one time period.

We use for the Endtest only one year of data.

Abbildung 5: The Endtest is from 9.4.21-9.4.22

130 Euro/per Strategy is the Challenge

B Filter OOS1

Abbildung 6: The Filter OOS is very simple.

14350 Strategies passed OOS1-Filter

Result:

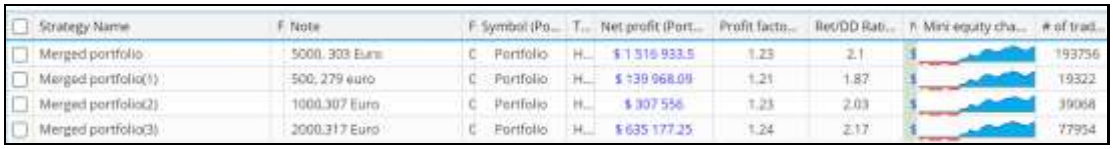


Abbildung 7: 14350 Strategies are too much for a Portfolio, so I generated some small portfolios and calculated an average value for the profit per strategy.

303+279+307+317/4=**301 Euro**/Strategy Profit

⇨ This Filter works fine and won the challenge.

C Filter OOS2

Abbildung 8: The Filter OOS2 has Profit factor > 1.1 as the only condition.

5745 Strategies passed this OOS2-Filter

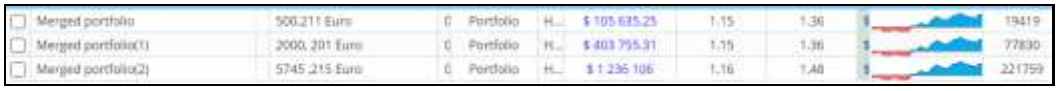
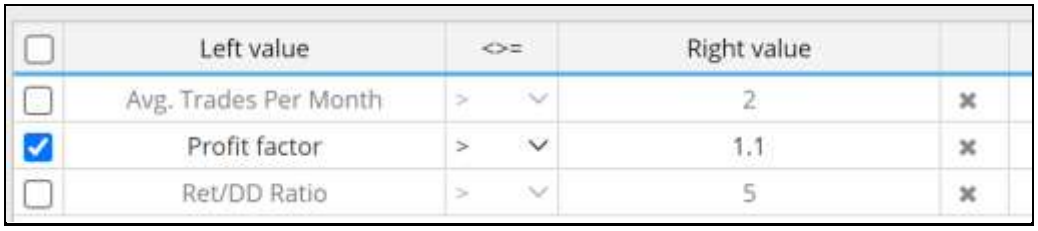


Abbildung 9: The Profit is 215 Euro. Merged portfolio2 contains all Strategies.

⇨ **215 Euro**/Strategy Profit. This filter works fine and won the challenge.

D Filter EURJPY



2076 Strategies passed this EURJPY-Filter

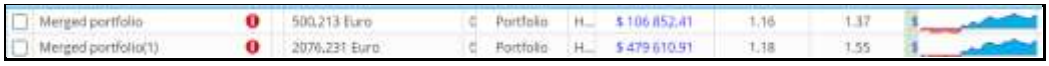


Abbildung 10: The Filter EURJPY yield a profit of 231Euro/Strategy.

231 Euro/Strategy won the challenge

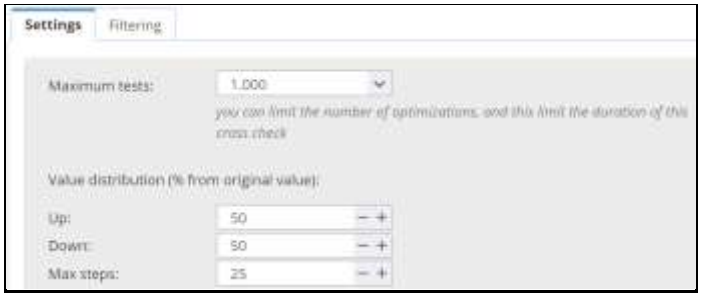
E Filter USDJPY-Filter

	Left value	<>=	Right value	
☐	Avg. Trades Per Month	>	2	✖
☑	Profit factor	>	1	✖
☐	Ret/DD Ratio	>	5	✖

5853 Strategies left

⇨ 180Euro/Strategy => passed challenge

RT3a Sys-Permutation-Test (1000)



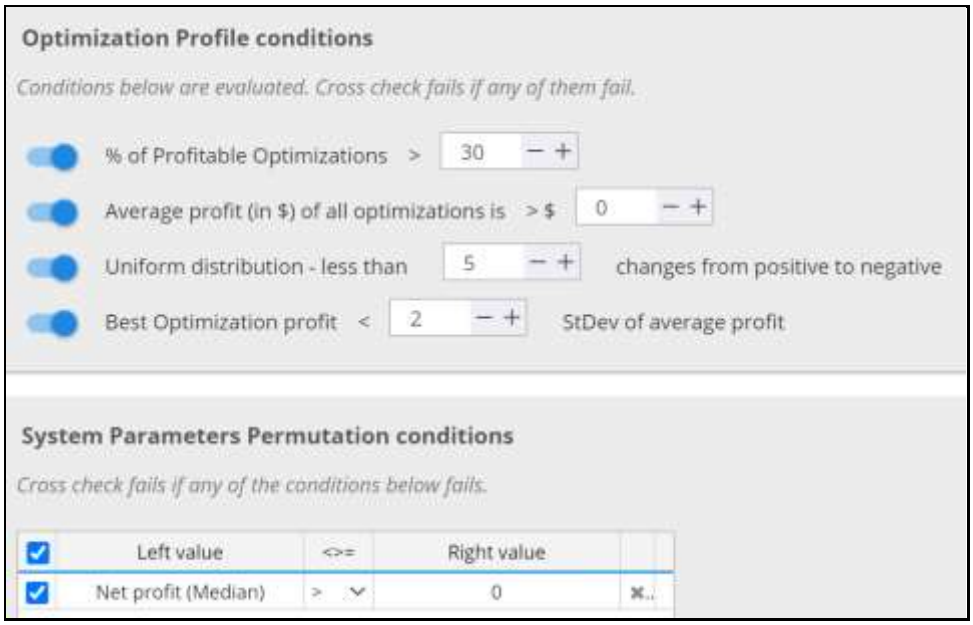


Abbildung 11: The condition „Best Optimization profit <2" is a very hard condition.

The test is done with ticksimulation.

Only one Strategy of 424 Strategies passed this test.

But the Equitycurve of this Strategy looks very good.

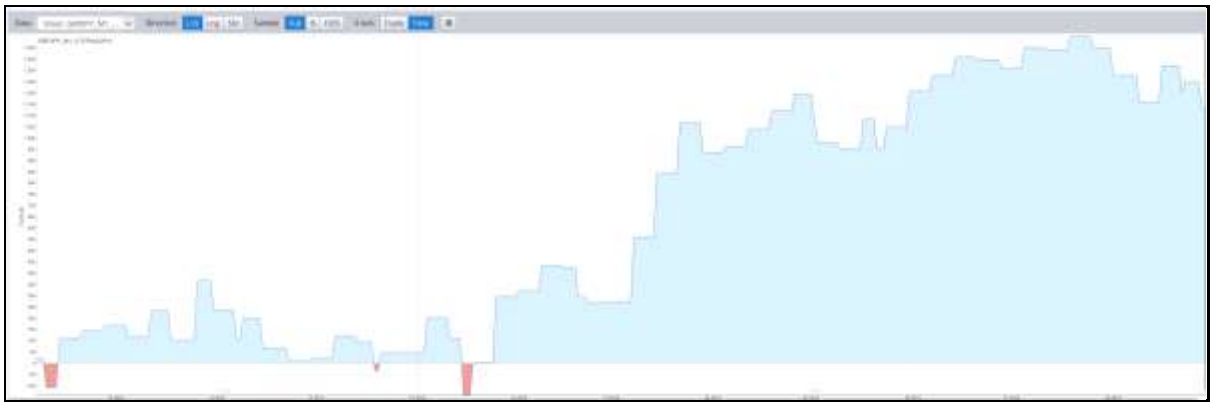


Abbildung 12: This is the Portfolio of the Endtest of "RT3a Sys-Permutation-Test (1000)"-Robustnessfilter. It looks good. In this case, the Portfolio contains only one Strategy.

RT3b Sys-Permutation-Test (300)

Use Permutation Test for N=300

Selected-Timeframe

Best Optimization profit <2

Up/down 50%

- ⇨ The Result is in the overview table.

RT3c Sys-Permutation-Test (1.8) (300)

Use Permutation Test for N=300

Selected-Timeframe

Best Optimization profit <1.8

Up/down 50%

- ⇨ The Result is in the overview table.

RT3c Sys-Permutation-Test (1.7) (300)

Use Permutation Test for N=300

Selected-Timeframe

Best Optimaziation profit <1.7

Up/down 50%

- ⇨ The Result is in the overview table.

RT3c Sys-Permutation-Test (1.6) (1000)

Use Permutation Test for N=1000

Selected-Timeframe

Best Optimaziation profit <1.6

Up/down 50%

I will make some different Robustnesstests on this datarange

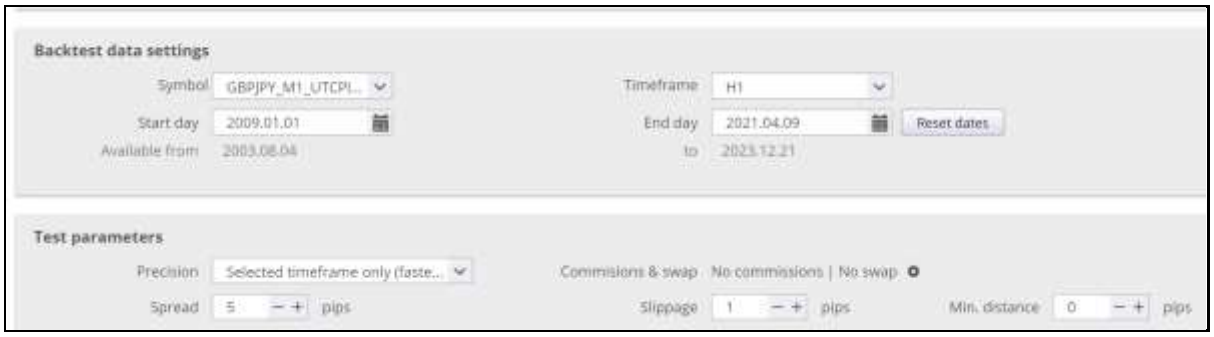
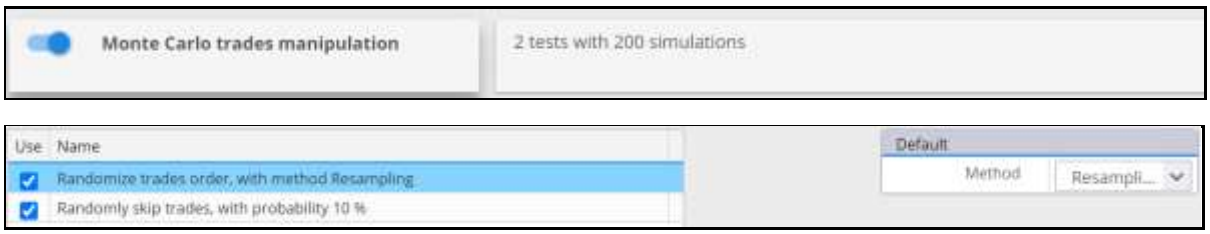


Abbildung 13: the following robustnesstests will be made on this datarange.

⇨ The Result is in the overview table.

R1: Rand Trades Order

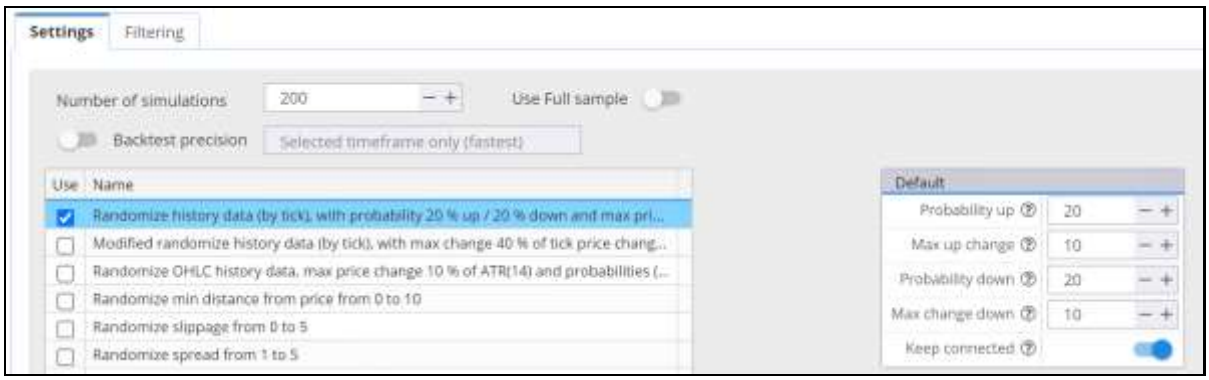
Selected Timeframe



⇨ The Result is in the overview table.

R2:Rand history data by tick

Selected Timeframe



⇨ The Result is in the overview table.

R3: Modified randomize history data by tick

Selected Timeframe

MaxChange=5%, 10%

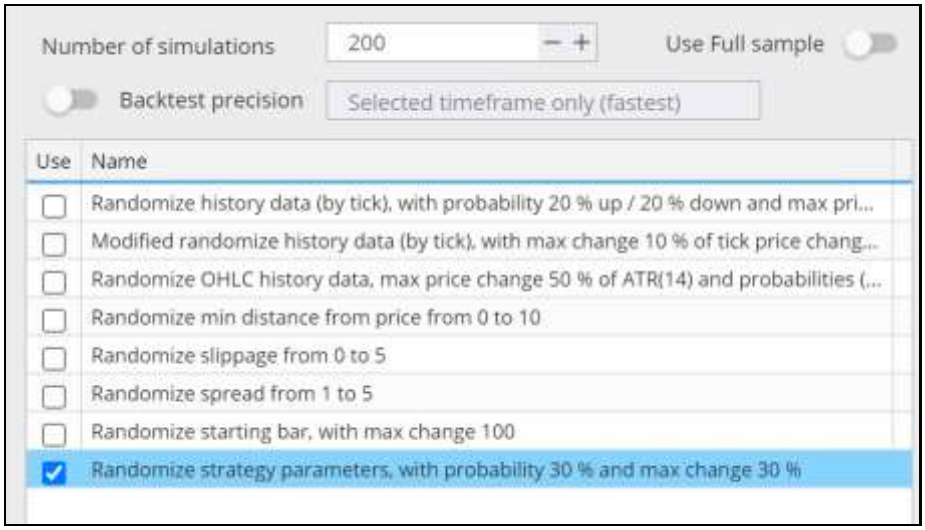
⇨ The Result is in the overview table.

R4: Randomize OHLC history data, max price change 40% of ATR

MaxChange=40%

⇨ The Result is in the overview table.

R5: Randomize Parameter

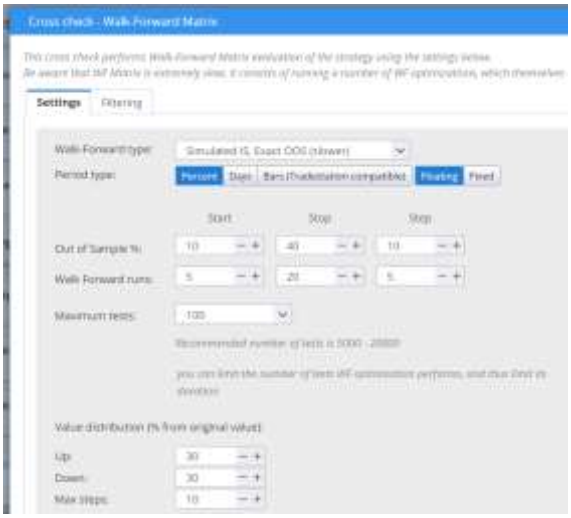


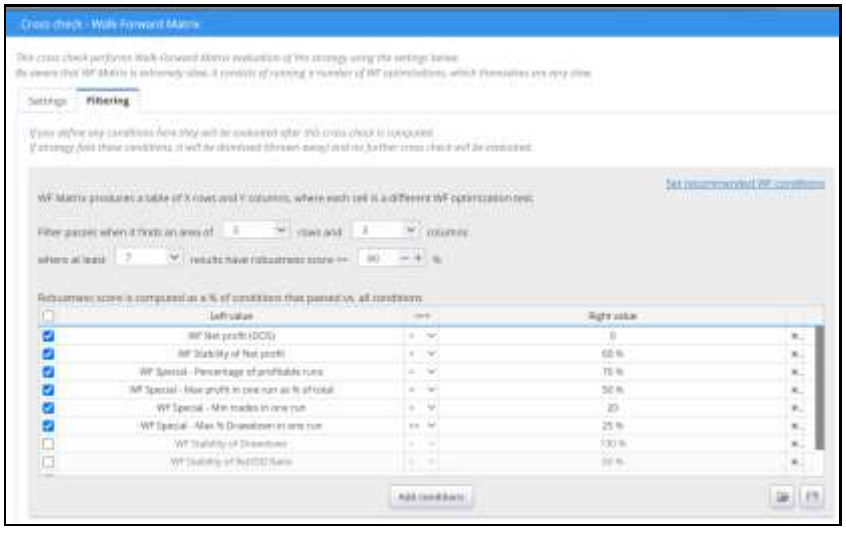
⇨ The Result is in the overview table.

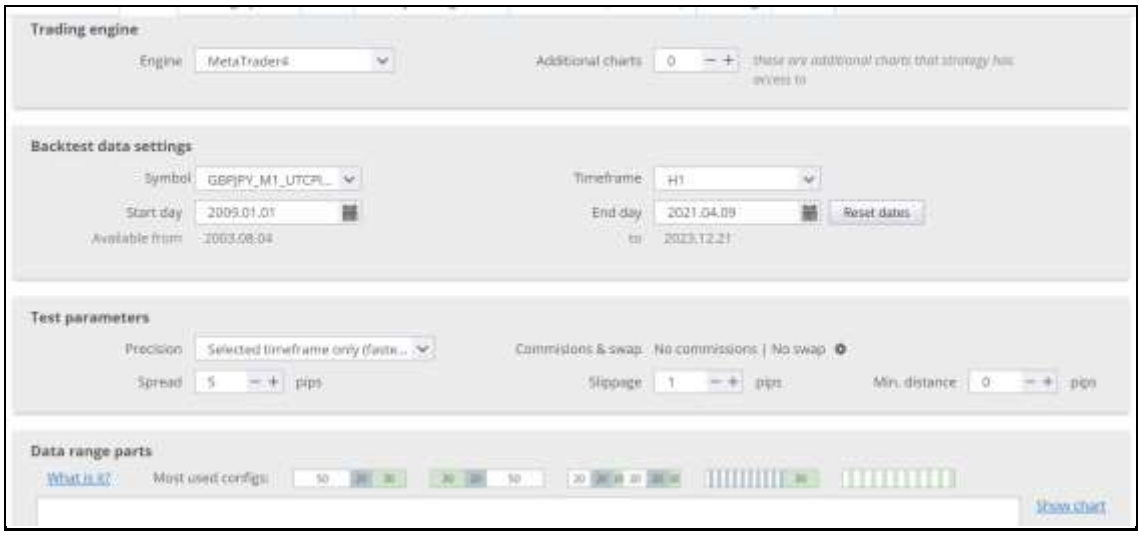
R6 WFA-Matrix

N=100

3x3







⇨ The Result is in the overview table.

CombinationTest B+C+D+E

I use 50000 Strategies as input.

⇨ The Result is in the overview table.

Overview

Filter	Result	#Strategies	Remark
A-without filter	130 EUR/Strategy	20800	This is the challenge
B OOS1	301 EUR/Strategy	14350	passed
C OOS2	215 EUR/Strategy	5745	passed
D EURJPY	231 EUR/Strategy	2076	passed
E USDJPY	180 EUR/Strategy	5853	Passed
B+C+D+E	424 Euro/Strategy	243	Passed
B+C+D+E +RT3a	1100 Euro	1	Passed, but only one Strategy left
RT3b(1.8) N=300	200 Euro/Strategy	1487	passed
RT3b +RT3c(1.8)N=300	223 Euro/Strategy	277	passed
RT3b +RT3c(1.7) N=300	174 Euro/Strategy	182	passed
RT3b +RT3c(1.6) N=300	262 Euro/Strategy	102	passed
RT3b +RT3c(1.6)N=1000	403 Euro/Strategy	26	passed
RT3b +RT3c(1.5)N=1000	496Euro/Strategy	10	passed
R1	338Euro/Strategy	5000*	passed
R2	290Euro/Strategy	1765*	passed
R3 5%	213Euro/Strategy	475*	passed
R3 10%	127Euro/Strategy	401*	failed
R4 40%	297EUR/Strategy	324*	passed
R4 50%	251EUR/Strategy	2282*	passed
R5 10%	193 EUR/Strategy	3861*	passed
R5 20%	212EUR/Strategy	1345*	passed
R5 30%	251EUR/Strategy	1681*	passed
R5 40%	208EUR/Strategy	1020*	passed
R6 N=100	387EUR/Strategy	201*	passed
R6 N=1000	444EUR/Strategy	249*	passed
R6 N=2000	444EUR/Strategy	427*	passed

(*) means that I have stopped the filtering according to this number of strategies. I don´t need to filter all strategies to check the Robustnessfilter.

2 Workflow-Analysis of Workflow GBPJPY – StrategyLab Workflow

I got a Workflow for GBPJPY-H1-Strategies form the StrategyQuantX Webside. I have generated with this workflow 90 Strategies and traded this on demo and on real account.

Source: https://strategyquant.com/shared/gbpjpy-strategylab-workflow/

I will call this workflow Q89 GBPJPY H1 from now on. I Traded the Strategies from this workflow GBPJPY from the Strategy lab since Oct. 2021 on some demo and life accounts. The name of this Strategies had the prefix Q86 GBPJPY H1.

I will make an Walkflow-Analysis for this workflow. This means I take this existing workflow and set this workflow more times in the past and more times in the future. So at the end I have many workflows.

I run this generated workflows parallel in a SQX and check the results of the End tests. Endtest means, I generate for every workflow an backtest of unseen data. The data period of this unseen data is one year.

To show the result in a convenient form. I generate with a toolbox an equity curve of the endtest data periods.

If the Equity curve (red lines) goes up, then the workflow is successful. If the red line goes down, it is not successful.

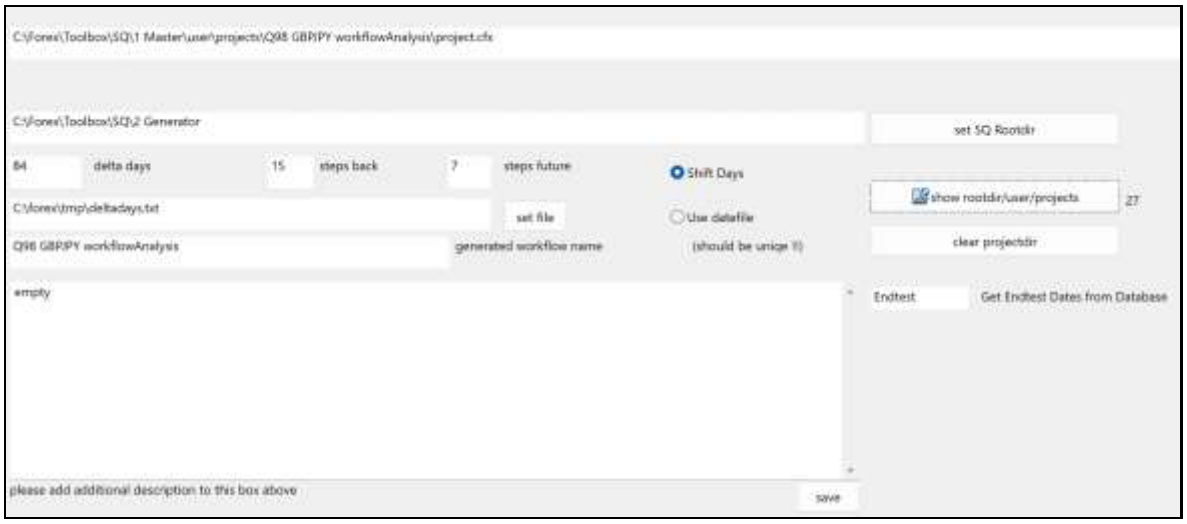


Abbildung 14: With the workflow-generator of the Toolbox I generated 15+7=22 Workflows.

I shifted the generated workflows 84 days in the past and the future. I shifted it 15 times of 84 days in the past and 7 times of 84 days in the future.

At the end I got 23 Endtests. From this Endtests I generated the Equitycurve of the profits.

In the following Table you can see the periods of the Endtest. You can see, I have done for every period an Endtest of one year.

Endtest
0
0
0
0
0
2022.11.18-2023.11.18
2022.08.26-2023.08.26
2022.06.03-2023.06.03
2022.03.11-2023.03.11
2021.12.17-2022.12.17
2021.09.24-2022.09.24
2021.07.02-2022.07.02
2021.04.09-2022.04.09
2021.01.15-2022.01.15
2020.10.23-2021.10.23
2020.07.31-2021.07.31
2020.05.08-2021.05.08
2020.02.14-2021.02.13
2019.11.22-2020.11.21
2019.08.30-2020.08.29
2019.06.07-2020.06.06
2019.03.15-2020.03.14
2018.12.21-2019.12.21
2018.09.28-2019.09.28
2018.07.06-2019.07.06
2018.04.13-2019.04.13
2018.01.19-2019.01.19
2017.10.27-2018.10.27

Abbildung 15: This are the Periods for the endtests of the different Workflows.

Walkflow-Analysis without Robustnesstests

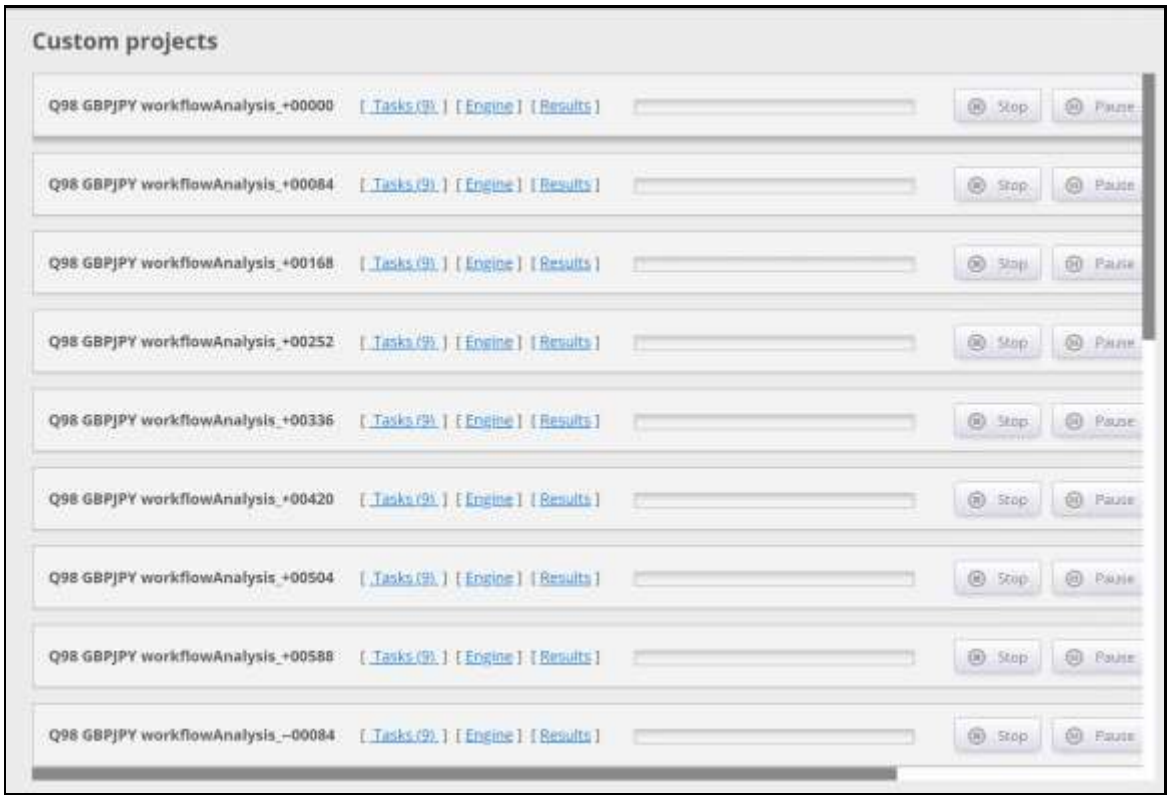


Abbildung 16: The Walkflow-Generator generated 23 Workflows for the StrategyQuantX. After the generation the workflows are all in the StrategyQuantX. You can see here a part of this.

Now it is Time for starting all these workflows.

Every Workflow generate 5000 Strategies and made a Endtest of it. If the first walkflow is ready, the next workflow will be started automatically in the SQX.

At the end we have 23 Pools of Strategies. Every pool contains 5000 Strategies.

I did this all, without Robustnesstests or special Filtering.

In the first Step I will see the quality of Strategy generation only with the Generationmodul and the Endtest

Abbildung 17: In the first Step of this Analysis only Build strategies and Endtest is activated. I will see the result without filtering or Robustnesstests.

What is the reason why I don't use Robustnesstests in the first step?

The reason is, that Robustnesstests are only able to filter 10%-30% of the curvefitted strategies out of the generation. The generation should produce good strategies. If the Buildingblocks and the settings are not good the result will be bad.

1 Walkflow-Analysis without Robustnesstest and 5000 Generated Strategies

Workflow=Q98 GBPJPY workflowAnalysis	0.0	0.0	0.0	0.0	0.0	0	0
Portfolioorg15	0.0	0.0	0.0	0.0	0.0	0	0
Norm n=5	0.0	0.0	0.0	0.0	0.0	0	0
average results	0.0	0.0	0.0	0.0	0.0	0	0
average results <"Q98 GBPJPY workflowAnalysis_+00588>=	-594.35	-594353.50	0.94	-0.57	-0.28	5000	2022.11.18-2023.11.18
average results <"Q98 GBPJPY workflowAnalysis_+00504>=	1241.47	1241470.00	1.12	0.64	0.93	5000	2022.08.26-2023.08.26
average results <"Q98 GBPJPY workflowAnalysis_+00420>=	-1014.15	-1014154.94	0.91	-0.66	-0.52	5000	2022.06.03-2023.06.03
average results <"Q98 GBPJPY workflowAnalysis_+00336>=	2073.37	2073374.88	1.20	0.56	1.18	5000	2022.03.11-2023.03.11
average results <"Q98 GBPJPY workflowAnalysis_+00252>=	2058.93	2058925.50	1.22	0.52	1.20	5000	2021.12.17-2022.12.17
average results <"Q98 GBPJPY workflowAnalysis_+00168>=	2907.36	2907356.50	1.38	0.74	1.64	5000	2021.09.24-2022.09.24
average results <"Q98 GBPJPY workflowAnalysis_+00084>=	2995.67	2995670.00	1.46	0.68	3.66	5000	2021.07.02-2022.07.02
average results <"Q98 GBPJPY workflowAnalysis_+00000>=	1309.20	1309204.88	1.21	0.43	1.25	5000	2021.04.09-2022.04.09
average results <"Q98 GBPJPY workflowAnalysis_--00084>=	1014.37	1014371.19	1.18	0.62	1.33	5000	2021.01.15-2022.01.15
average results <"Q98 GBPJPY workflowAnalysis_--00168>=	-370.67	-370674.72	0.94	-0.64	-0.29	5000	2020.10.23-2021.10.23
average results <"Q98 GBPJPY workflowAnalysis_--00252>=	-205.13	-205131.33	0.97	-0.62	-0.24	5000	2020.07.31-2021.07.31
average results <"Q98 GBPJPY workflowAnalysis_--00336>=	693.04	693038.25	1.13	0.43	0.83	5000	2020.05.08-2021.05.08
average results <"Q98 GBPJPY workflowAnalysis_--00420>=	2079.05	2079047.63	1.34	0.57	2.79	5000	2020.02.14-2021.02.13
average results <"Q98 GBPJPY workflowAnalysis_--00504>=	1484.34	1484337.38	1.22	0.72	1.40	5000	2019.11.22-2020.11.21
average results <"Q98 GBPJPY workflowAnalysis_--00588>=	1746.22	1746216.50	1.24	0.78	1.58	5000	2019.08.30-2020.08.29
average results <"Q98 GBPJPY workflowAnalysis_--00672>=	943.21	943208.13	1.12	0.49	0.76	5000	2019.06.07-2020.06.06
average results <"Q98 GBPJPY workflowAnalysis_--00756>=	1216.59	1216590.25	1.16	0.74	1.18	5000	2019.03.15-2020.03.14
average results <"Q98 GBPJPY workflowAnalysis_--00840>=	2717.71	2717712.75	1.39	0.76	4.14	5000	2018.12.21-2019.12.21
average results <"Q98 GBPJPY workflowAnalysis_--00924>=	1872.85	1872853.50	1.29	0.79	3.00	5000	2018.09.28-2019.09.28
average results <"Q98 GBPJPY workflowAnalysis_--01008>=	1340.24	1340244.00	1.22	0.76	1.76	5000	2018.07.06-2019.07.06
average results <"Q98 GBPJPY workflowAnalysis_--01092>=	730.45	730454.56	1.12	0.71	0.96	5000	2018.04.13-2019.04.13
average results <"Q98 GBPJPY workflowAnalysis_--01176>=	66.69	66686.40	1.01	0.44	0.09	5000	2018.01.19-2019.01.19
average results <"Q98 GBPJPY workflowAnalysis_--01260>=	-547.28	-547281.63	0.92	-0.52	-0.46	5000	2017.10.27-2018.10.27
	0.0	0.0	0.0	0.0	0	0	0
"@@@

Walkflow-Analysis with Robustnesstests 5000 Strategies

Results:

In this part I **switched on the Robustness** test filtering.

I generated in every Period 5000 Strategies.

Name	Norm NetProfit	SumNetProf	PF	Stability	RetDD	Strategies	Endtest
"@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ "	0.0	0.0	0.0	0.0	0.0	0	0
Workflow=Q98 GBPJPY workflowAnalysis	0.0	0.0	0.0	0.0	0.0	0	0
Portfolio:5	0.0	0.0	0.0	0.0	0.0	0	0
Norm n=5	0.0	0.0	0.0	0.0	0.0	0	0
average results	0.0	0.0	0.0	0.0	0.0	0	0
average results <"Q98 GBPJPY workflowAnalysis_+00588>=	-655.73	-2885.22	0.92	-0.52	-0.32	22	2022.11.18-2023.11.18
average results <"Q98 GBPJPY workflowAnalysis_+00504>=	2115.75	8886.15	1.23	0.65	0.94	21	2022.08.26-2023.08.26
average results <"Q98 GBPJPY workflowAnalysis_+00420>=	-1542.36	-5244.03	0.88	-0.57	-0.48	17	2022.06.03-2023.06.03
average results <"Q98 GBPJPY workflowAnalysis_+00336>=	3530.43	3530.43	1.43	0.58	1.23	5	2022.03.11-2023.03.11
average results <"Q98 GBPJPY workflowAnalysis_+00252>=	2246.13	2246.13	1.23	0.46	0.67	5	2021.12.17-2022.12.17
average results <"Q98 GBPJPY workflowAnalysis_+00168>=	4808.00	8654.40	1.93	0.82	2.59	9	2021.09.24-2022.09.24
average results <"Q98 GBPJPY workflowAnalysis_+00084>=	3549.51	14198.04	1.67	0.67	2.94	20	2021.07.02-2022.07.02
average results <"Q98 GBPJPY workflowAnalysis_+00000>=	970.46	1358.64	1.19	0.41	0.44	7	2021.04.09-2022.04.09
average results <"Q98 GBPJPY workflowAnalysis_--00084>=	1284.95	2312.91	1.28	0.52	1.28	9	2021.01.15-2022.01.15
average results <"Q98 GBPJPY workflowAnalysis_--00168>=	-923.22	-1846.44	0.84	-0.54	-0.42	10	2020.10.23-2021.10.23
average results <"Q98 GBPJPY workflowAnalysis_--00252>=	-1134.40	-2041.92	0.89	-0.70	-0.51	9	2020.07.31-2021.07.31
average results <"Q98 GBPJPY workflowAnalysis_--00336>=	1142.85	3428.55	1.26	0.57	1.10	15	2020.05.08-2021.05.08
average results <"Q98 GBPJPY workflowAnalysis_--00420>=	3833.05	6899.49	2.06	0.56	6.43	9	2020.02.14-2021.02.13
average results <"Q98 GBPJPY workflowAnalysis_--00504>=	1206.71	3378.78	1.20	0.69	0.79	14	2019.11.22-2020.11.21
average results <"Q98 GBPJPY workflowAnalysis_--00588>=	2707.05	4872.69	1.37	0.74	2.07	9	2019.08.30-2020.08.29
average results <"Q98 GBPJPY workflowAnalysis_--00672>=	650.25	2470.95	1.08	0.44	0.47	19	2019.06.07-2020.06.06
average results <"Q98 GBPJPY workflowAnalysis_--00756>=	2797.00	5034.60	1.36	0.65	2.01	9	2019.03.15-2020.03.14
average results <"Q98 GBPJPY workflowAnalysis_--00840>=	3902.22	7804.44	1.58	0.71	3.43	10	2018.12.21-2019.12.21
average results <"Q98 GBPJPY workflowAnalysis_--00924>=	3242.21	7132.86	1.59	0.82	4.39	11	2018.09.28-2019.09.28
average results <"Q98 GBPJPY workflowAnalysis_--01008>=	4170.79	5839.11	1.73	0.83	4.06	7	2018.07.06-2019.07.06
average results <"Q98 GBPJPY workflowAnalysis_--01092>=	1741.53	5921.19	1.25	0.73	1.23	17	2018.04.13-2019.04.13
average results <"Q98 GBPJPY workflowAnalysis_--01176>=	2754.85	28650.42	1.46	0.67	2.30	52	2018.01.19-2019.01.19
average results <"Q98 GBPJPY workflowAnalysis_--01260>=	-1384.44	-4153.32	0.83	-0.57	-0.66	15	2017.10.27-2018.10.27
	0.0	0.0	0.0	0.0	0	0	0
"@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ "	0.0	0.0	0.0	0.0	0	0	0
	0.0	0.0	0.0	0.0	0	0	0
overall average results=	1783.20	0	1.32	0.37	1.56	321	0

Abbildung 20: Walkflow-Analysis with Robustnesstst und 5000 Strategies are generated. 1783/5=356 Euro per Strategy.

⇨ With Robustnesstest this was an improvement from 223 Euro to 356 Euro per Strategy.

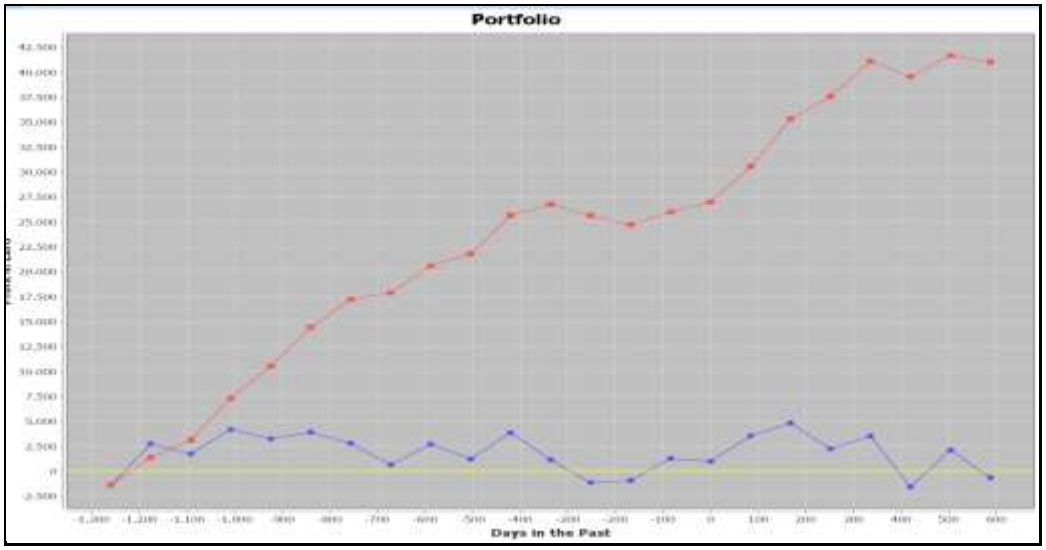


Abbildung 21: Walkflow-Analysis with Robustnesstst und 5000 Strategies are generated.

Check every Filter of the Workflow

The Looptest

In the first Step I will do a loop-Test. I will repeat the generation for period 0000 without filtering and build a portfolio of all 5000 Strategies. I will check how the different portfolios differ.

The Result:

Symbol (...	T	Net profit (Port...	Profit facto...	Ret/DD Rati...	N	Mini equity cha...	# of trad...
Portfolio	H	$ 1 298 585.38	1.23	1.26	$		180521
Portfolio	H	$ 1 439 516.38	1.26	1.39	$		185886
Portfolio	H	$ 1 280 487.5	1.23	1.34	$		184647
Portfolio	H	$ 1 441 568	1.24	1.31	$		188685
Portfolio	H	$ 1 053 861	1.19	1	$		181475
Portfolio	H	$ 1 178 985.75	1.2	1.17	$		181987
Portfolio	H	$ 1 349 903.38	1.24	1.35	$		183206
Portfolio	H	$ 1 204 051.63	1.21	1.36	$		181501
Portfolio	H	$ 1 296 138.38	1.23	1.14	$		183228
Portfolio	H	$ 1 398 115.75	1.24	1.29	$		189466
Portfolio	H	$ 1 224 868	1.21	1.39	$		184350
Portfolio	H	$ 861 136.19	1.14	0.7	$		187856
Portfolio	H	$ 962 271.06	1.17	1.02	$		184770
Portfolio	H	$ 854 544.25	1.15	0.98	$		180828
Portfolio	H	$ 1 467 491	1.25	1.2	$		188369
Portfolio	H	$ 1 215 413.5	1.22	1.27	$		178883
Portfolio	H	$ 1 512 037	1.27	1.45	$		183716
Portfolio	H	$ 1 349 280.5	1.23	1.32	$		187652
Portfolio	H	$ 1 387 065.5	1.24	1.2	$		186699
Portfolio	H	$ 738 129.5	1.12	0.84	$		183989
Portfolio	H	$ 1 506 350.25	1.26	1.48	$		187116

Abbildung 22: The results of the runs looks similar. The Nettoprofit of the portfolio varies from 738129 Euro till 1.5 Mio Euro. There is a difference, but this variation is ok.

2 OOS1 Filter

In this Step of the Analysis I will only use the OOS1 Filter after Generation, the other Filters are switched off. I will use the same Strategies from the last generation which are stored in the database. This are 5000 Strategies in every period of this Workflow-Analysis.

I will check in this step the effectiveness of the OOS1-Filter.

The Result:

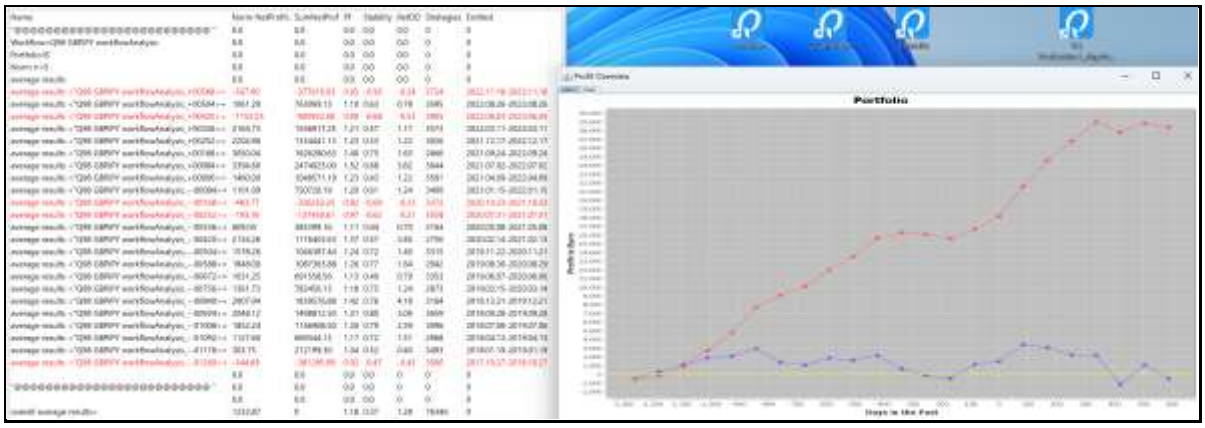


Abbildung 23: The average result is 1232/5= 246 Euro, this is an improvement. The original value without filtering was 1119/5= 223 Euro. This means that the OOS1-Filter have a positive effect.

3 OOS1+OOS2 Filter

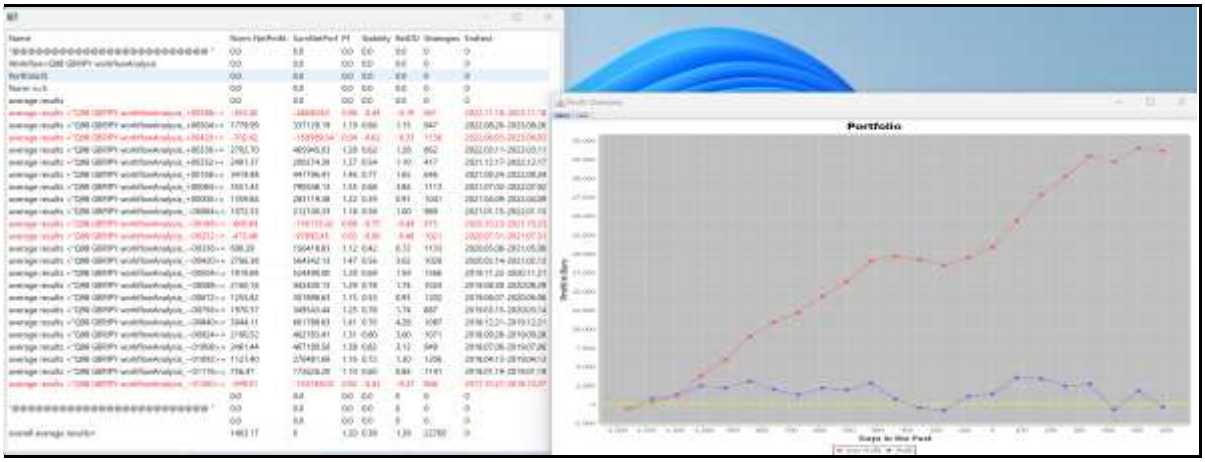


Abbildung 24: The average result is 1463/5= 292 Euro this is an improvement. The original value without filtering was 1119/5= 223 Euro. This means that the OOS2-Filter have a positive effect.

4 OOS1+OO2+EURJPY

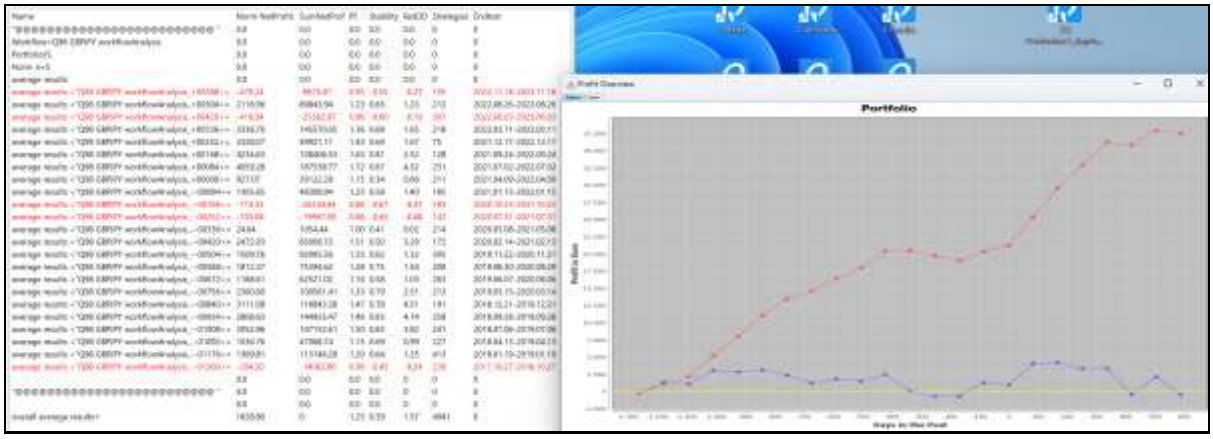


Abbildung 25: The average result is 1628/5= 325 Euro, this is an improvement. The original value without filtering was 1119/5=223 Euro. This means that the OOS1+OOS2+EURJPY-Filter have a positive effect.

5 OOS1+OO2+EURJPY+USDJPY

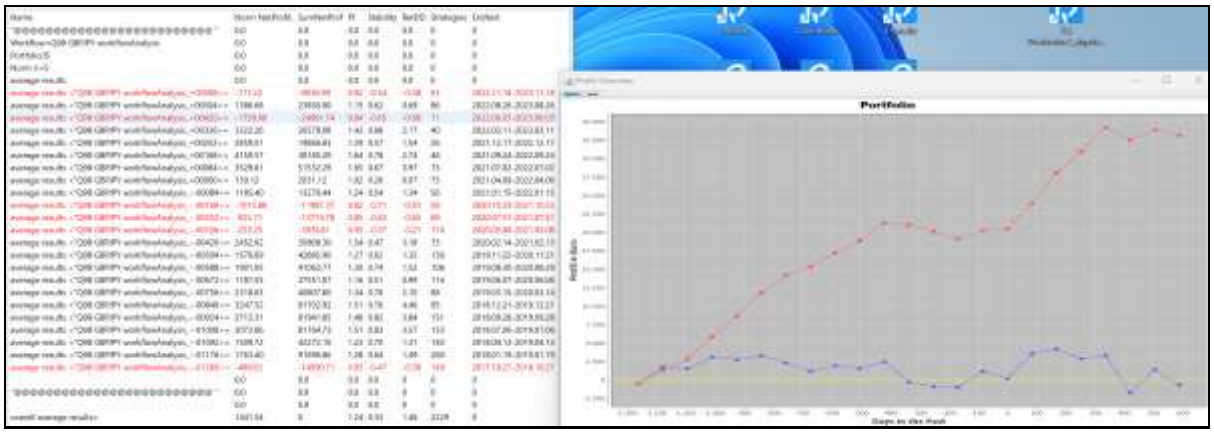


Abbildung 26: The average result is 1441/5= 288 Euro this is an improvement against without filtering, but it was a step back against the last filtering.

⇨ The USDJPY didn´t have a positive effect. We can drop this filter.

6 OOS1+OO2+EURJPY+USDJPY+Robust

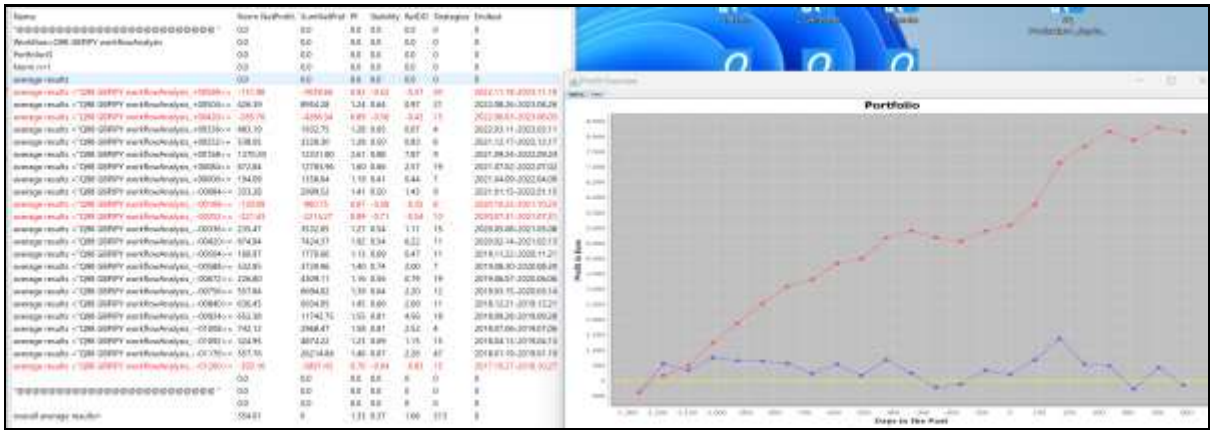


Abbildung 27: The average result is 354 Euro. => This filter works.

7 OOS1+OO2+EURJPY+USDJPY+WFa

SelectedTimeframe

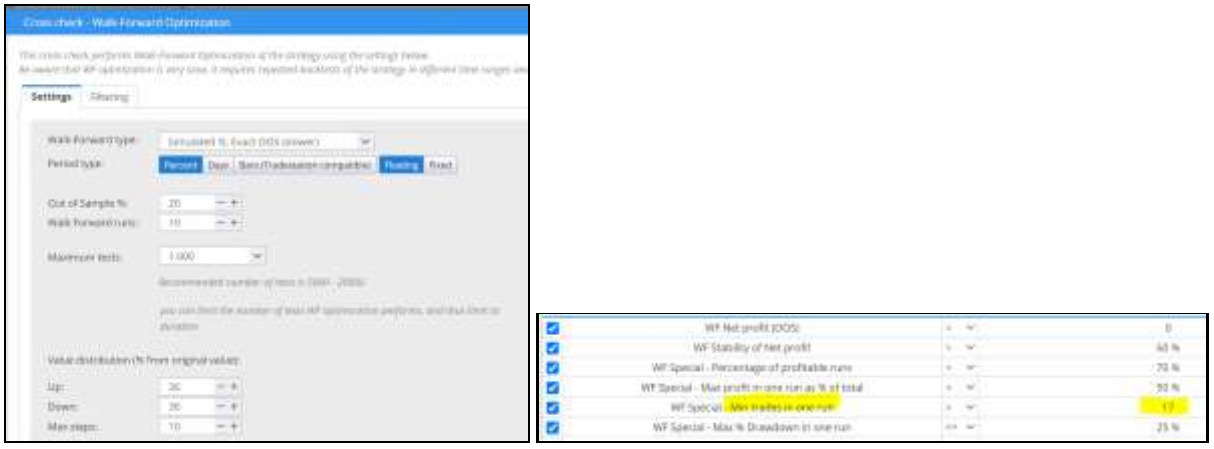


Abbildung 28: I modifed this filter in the walkforward-Filter. I decreased the Min trades in one run from 20 to 17.

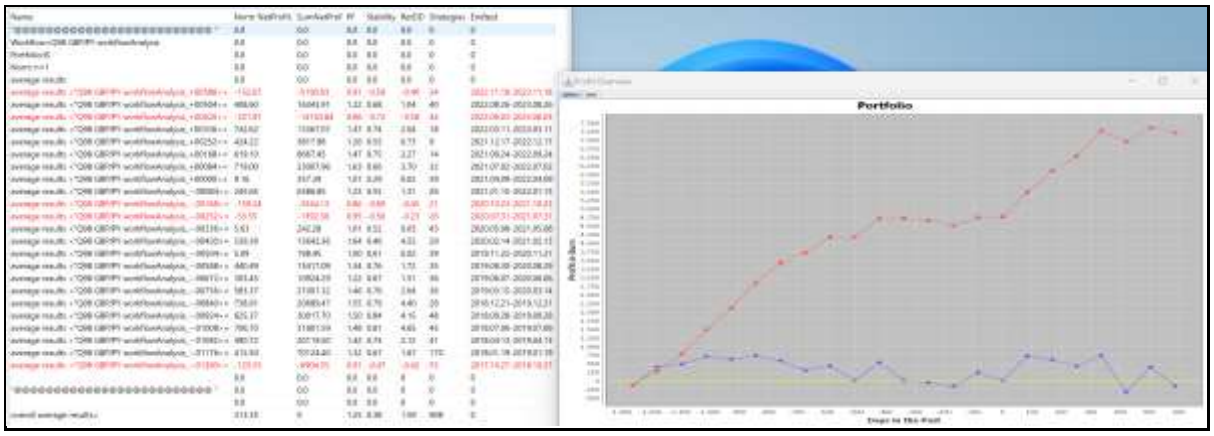


Abbildung 29: The result of 313 of the Walkforward-Analysis was not so good.

8 OOS1+OO2+EURJPY+USDJPY+WFb

SelectedTimeframe

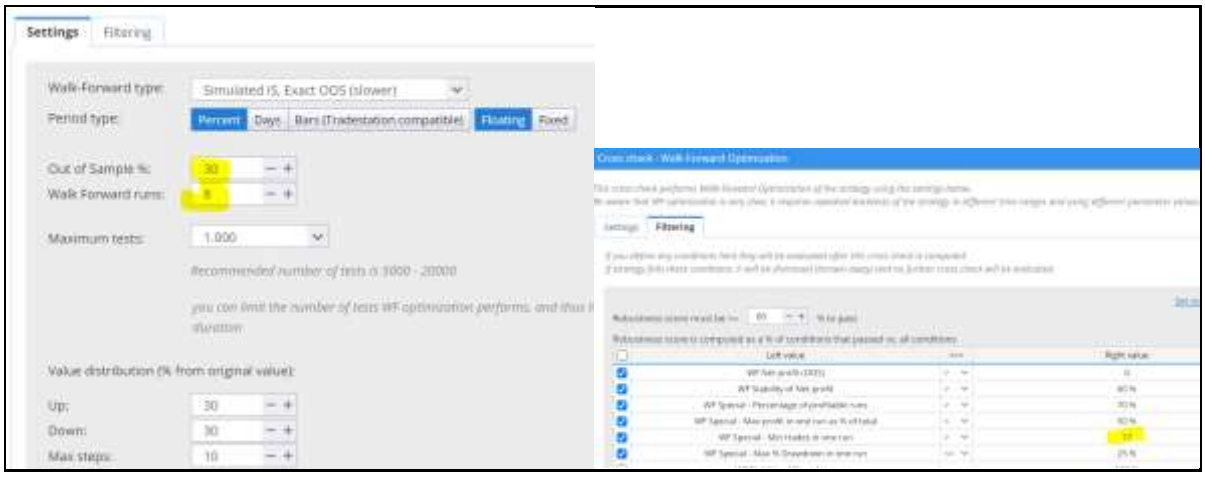


Abbildung 30: I modified the "Out of Sample %" and the Walk Forward runs.

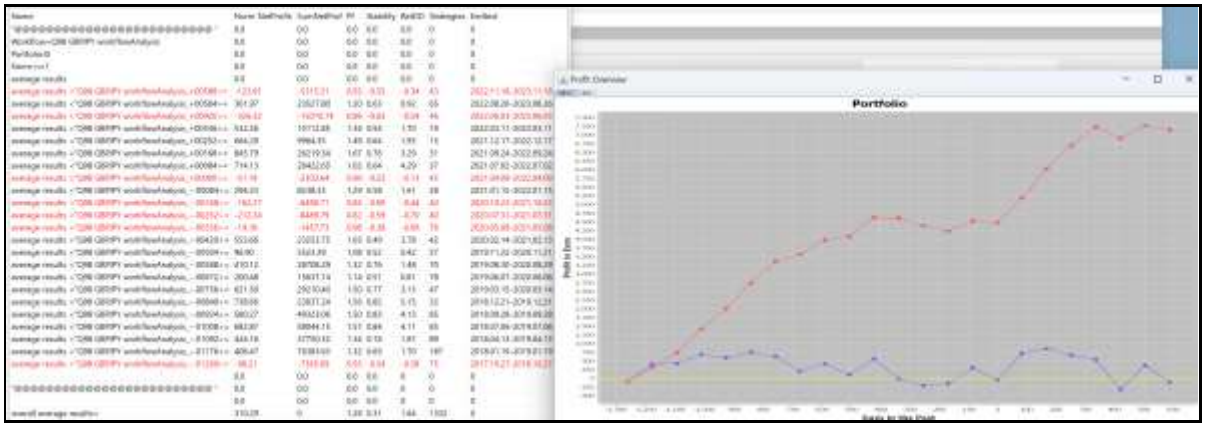


Abbildung 31: The result of this modification was 310 Euro per Strategy.

9 OOS1+OO2+EURJPY+USDJPY+WFc

SelectedTimeframe

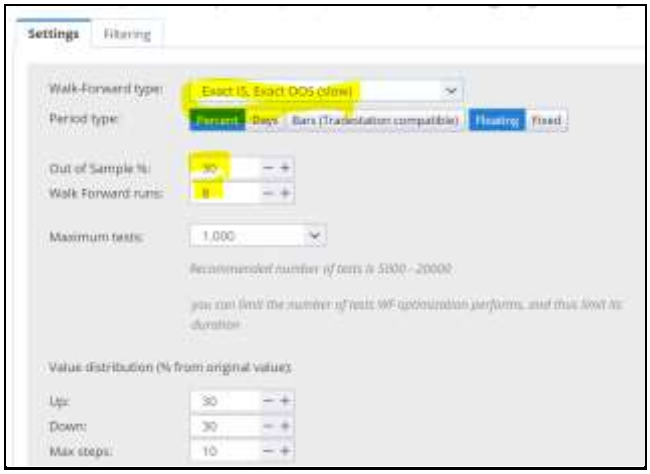


Abbildung 32: I modified the Walkforward Settings form Simulation to "Exact IS, Exact OOS(slow)"

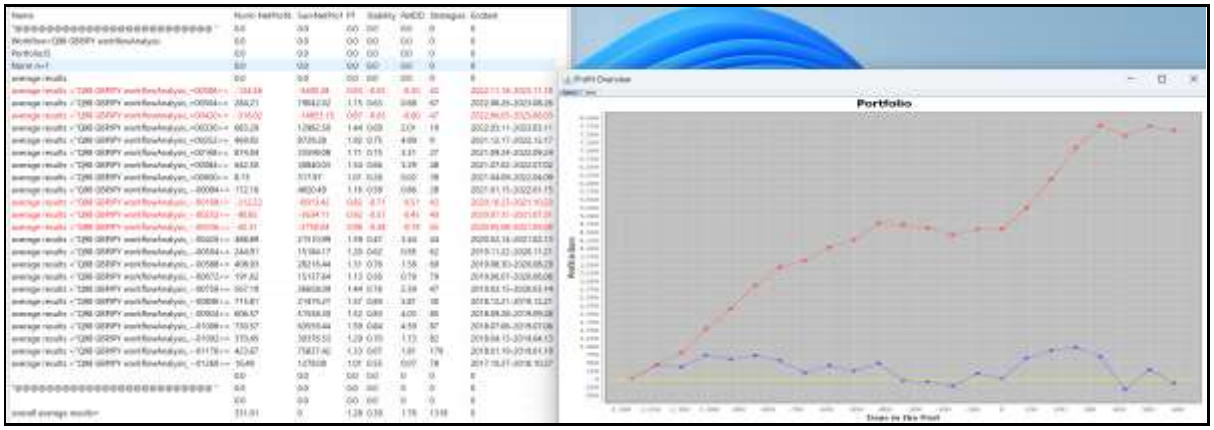


Abbildung 33: The Result of 331 Euro per Strategy was a little better, but the result was not perfect.

10 OOS1+OO2+EURJPY+USDJPY+WFd

Tick simulation

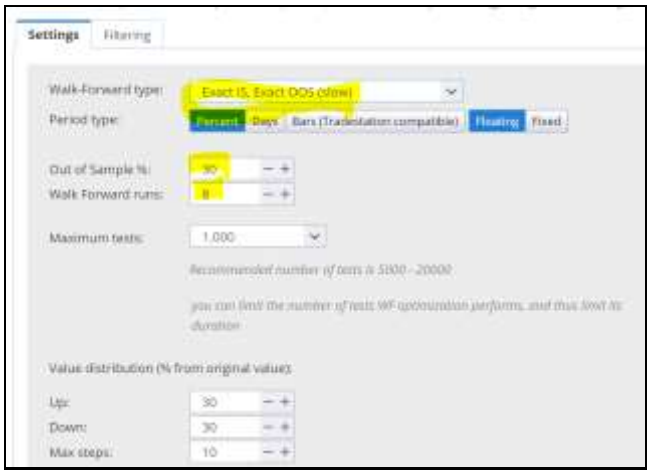


Abbildung 34: I used the same Settings as before, but I switched from "Selected Timeframe" to "Ticksimulation".

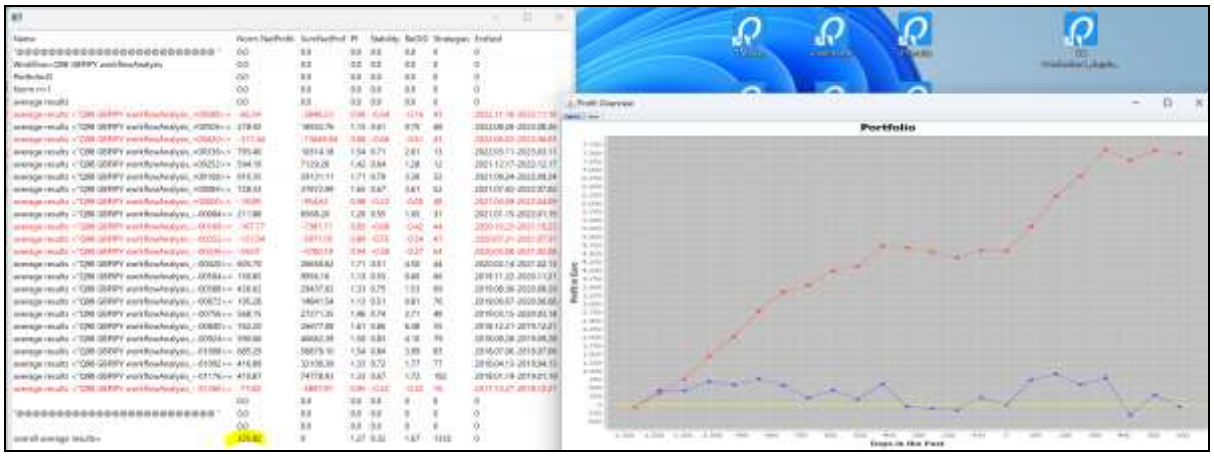


Abbildung 35: The result from switching "Selected Timeframe" to "Ticksimulation" has no big effect.

11 OOS1+OO2+EURJPY+USDJPY+SysParameterA

Selected Timeframe

In this robustnesstest I use Sys Parameter Permutation with the following Settings. I use selected Timeframe for the backtest engine.

N=1000

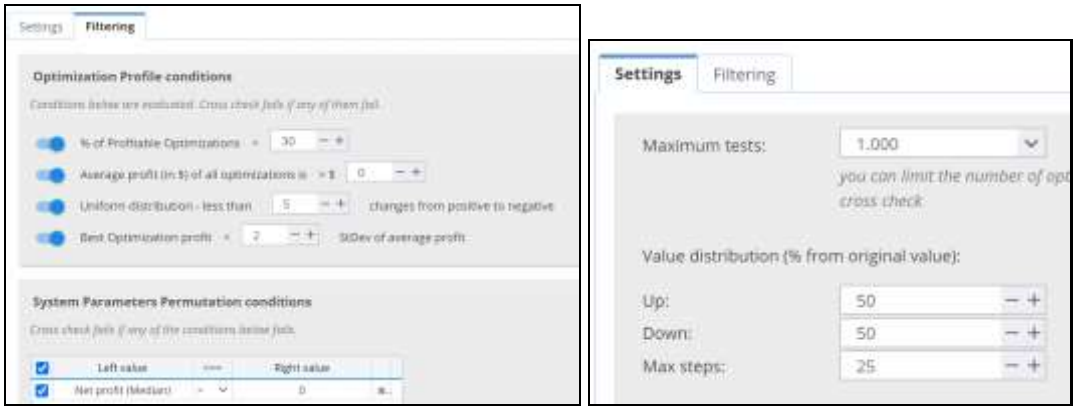


Abbildung 36: I set „Best Optimization profit <2". This parameter has the biggest effect on this filter. This condition "<2" is a very hard condition. This filter will filter out many strategies. The big question is. How effective is this filter?

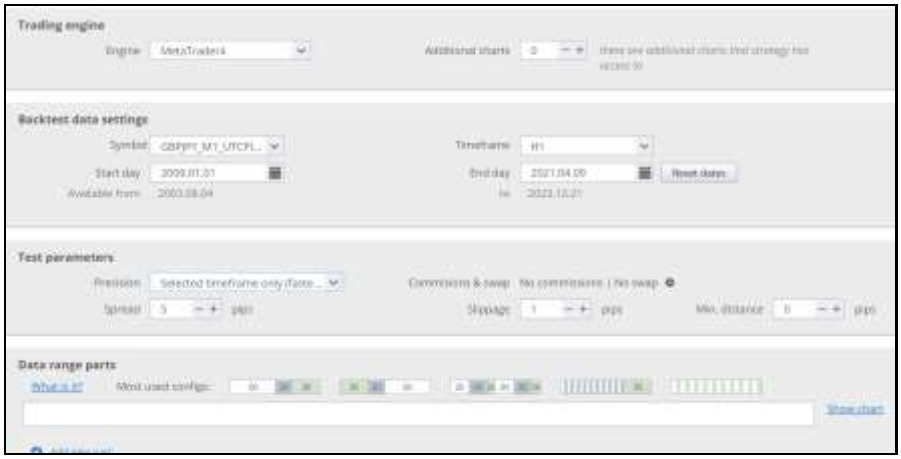


Abbildung 37: I used this Precision and this Spread and Slippage.

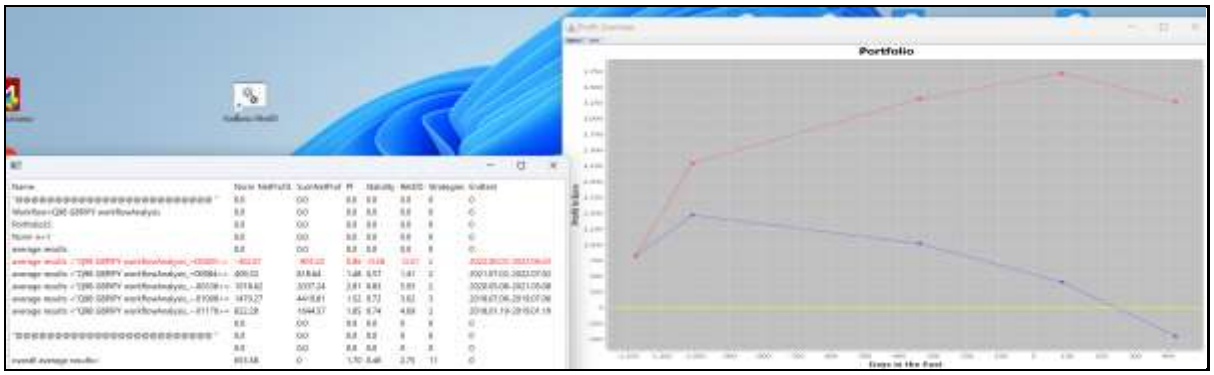


Abbildung 38: This filter seams very effective. The average profit is 653 Euro per Strategy. But this filter killed the most of the strategies. Only 11 Strategies left from over 20K Strategies. I think this is too much?

12 OOS1+OO2+EURJPY+USDJPY+SysParameterB

Selected Timeframe

Filter Best Optimization Profit <3

N=1000

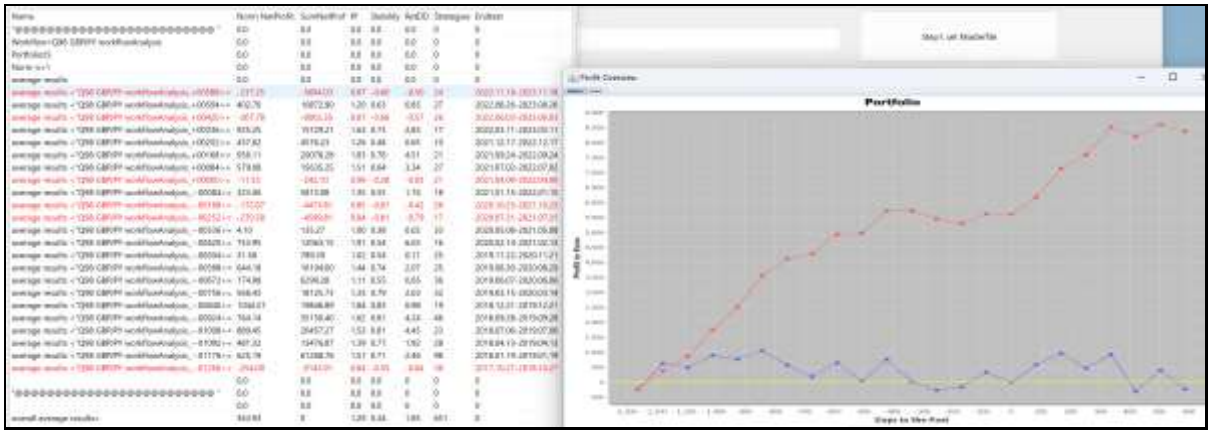


Abbildung 39: The result of this filter is very poor. 363 Euro per Strategy is not a good result. 651 Strategies passed this filter.

13 OOS1+OO2+EURJPY+USDJPY+SysParameterC

Selected Timeframe

Filter Best Optimization Profit off

N=1000

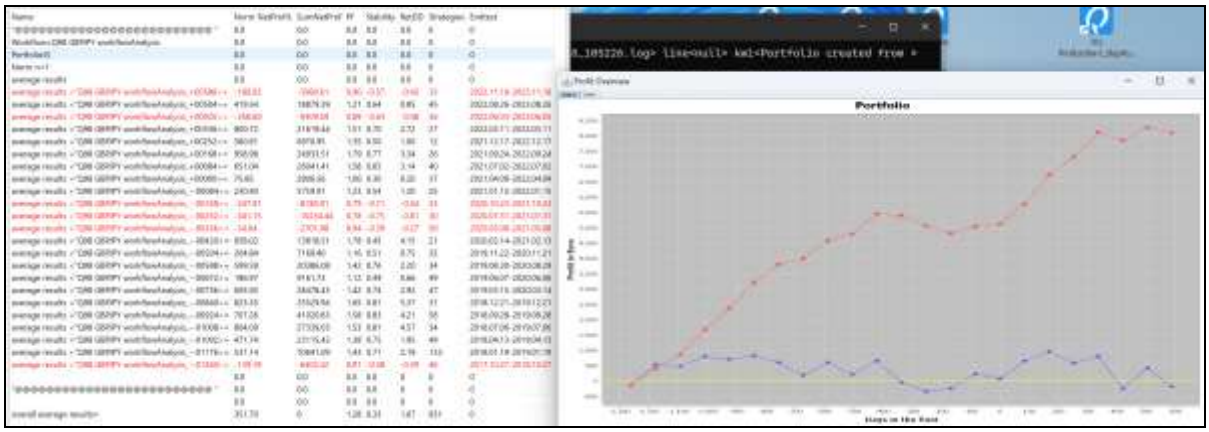


Abbildung 40: This filter result is bad. 351 Euro per Strategy is not so good. 931 strategies passed this filter.

14 OOS1+OO2+EURJPY+USDJPY+SysParameterD

Selected Timeframe

Filter Best Optimization Profit <2.5

N=1000

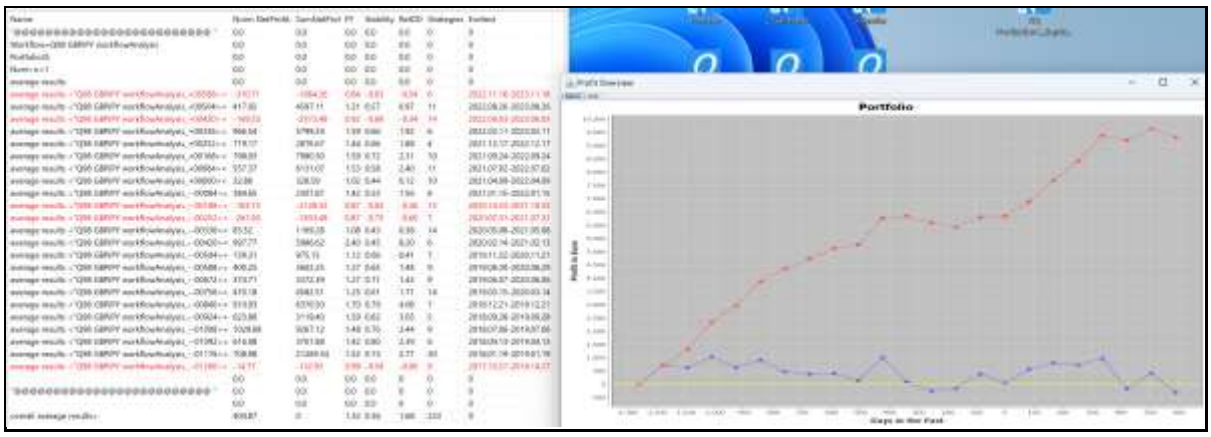


Abbildung 41: The average profit per Strategy is 404 Euro. 223 Strategies passed this filter.

15 OOS1+OO2+EURJPY+USDJPY+SysParameterE

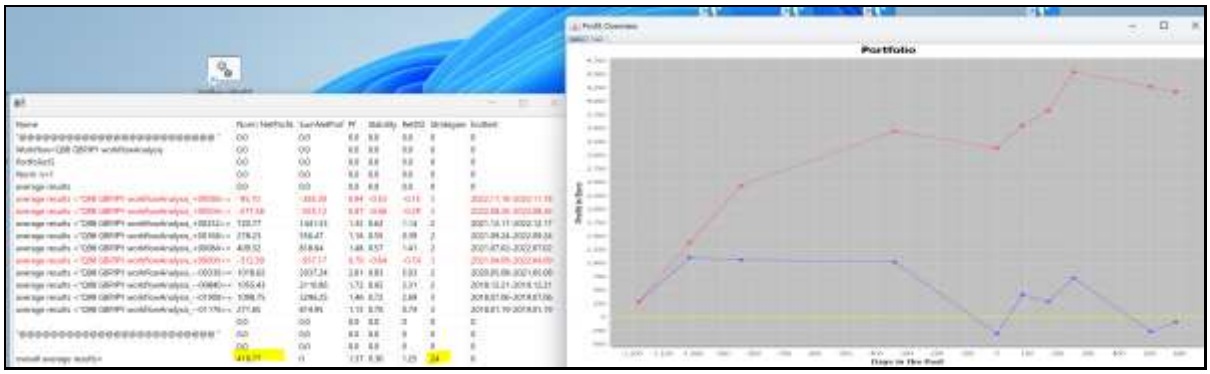
In this Walkflow-Analysis I increased the N from 1000 to 10000 in the SysParameter-Filter. I would like to investigate the effects of increasing N on the filter.

I used the following Parameters:

Selected Timeframe

Filter Best Optimization Profit <2.5

N=10000



Result Overview

Nr	Filter	Result	Sum #Strategies	Remark
1	Without filter	1119/5=223 Euro	5000 each Workflow, this means 115000 #Strategies as a Sum	This is the challenge
2	OOS1	1232/5=246	76346	This filter has improved something
3	OOS1+OOS2	1463/5=292	22760	This filter has improved something
4	OOS1+OO2+EURJPY	1628/5=325	4941	This filter has improved something
5	OOS1+OO2+EURJPY+ USDJPY	1441/5=288	2229	Fail, The results gets worse with this filter.
6	OOS1+OO2+EURJPY+ USDJPY+Robust	354	313	This filter has improved something
7	OOS1+OO2+EURJPY+ USDJPY+WFa	313	908	The WF as Robust is slightly worse than the last with Montecarlo
8	OOS1+OO2+EURJPY+ USDJPY+WFb	310	1332	
9	OOS1+OO2+EURJPY+ USDJPY+WFc	331	1318	
10	OOS1+OO2+EURJPY+ USDJPY+WFd	325	1332	The result is not better if I use tick simulation instead of selected Timeframe.
11	OOS1+OO2+EURJPY+ USDJPY+SysParameterA (<2)N=1000	653	11	
12	OOS1+OO2+EURJPY+ USDJPY+SysParameterB (<3) N=1000	663	651	
13	OOS1+OO2+EURJPY+ USDJPY+SysParameterC (off) N=1000	351	931	
14	OOS1+OO2+EURJPY+ USDJPY+SysParameterD (<2.5) N=1000	404	223	
15	OOS1+OO2+EURJPY+ USDJPY+SysParameterE (<2.5)N=10000	416	24	

” we have analysed the different robustness tests. In this chapter I will calibrate the Workflow with the Winner Strategies. With Winner Strategies I mean the Strategies which are profitable on Real accounts in the last year.

This is a completely different approach to how I approach this. Last time we had a workflow as a template. And I analyzed this workflow with a workflow analysis. The result is that certain filters work better or worse.

Here in the new approach I simply take 9 working strategies. This means that these strategies have made profits on the real account in the past. I filter these 9 strategies with the workflow optimized here and see whether these strategies survive the individual robustness tests.

These 9 strategies were certainly generated a long time ago with the Q86 workflow and should actually still be able to run through it without any problems after 2 more years and not be filtered out.

But let's take a closer look to see if that's really the case. How certain are the filters of not filtering out these strategies? How stable are the results of the various robustness filters?

Chance also plays a role in walkforward analysis or Monte Carlo analysis.

I made a Backtest for the Winner Strategies.

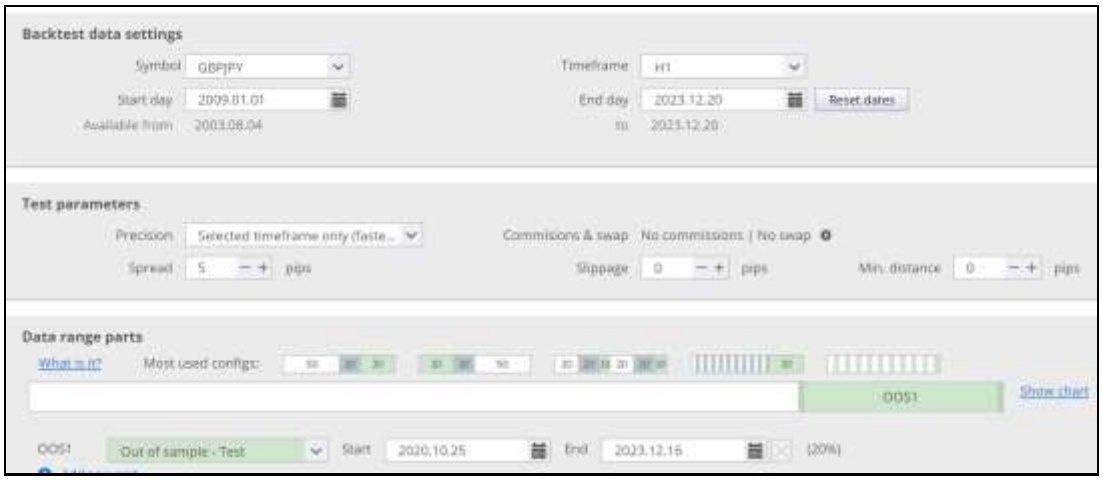


Abbildung 44: I have 9 Strategies witch are trading since 25.10.2020 on Life account. See the following Backtest with IS and OOS.

Ind	Magic	Symb	F	Info1	LOT	AUT	On	cL	pz1	tr7	prof7	tr30	prof30	trALL	profALL	PF	DD	comment
0	44153	GBPJPY.a	...		0.1	0	1	0	0	1	44.52	2	63.10	83	1719.02	1.90	419.58	Q86 GBPJPY.a H1 4.4.153
1	17120	GBPJPY.a	...		0.1	0	1	0	0	1	46.63	2	36.21	65	1404.47	1.97	405.52	Q86 GBPJPY.a H1 1.7.120
2	15152	GBPJPY.a	...		0.03	0	1	0	0	1	44.38	2	62.56	73	1318.50	1.69	636.0	Q86 GBPJPY.a H1 1.5.152
3	46108	GBPJPY.a	...		0.01	0	1	0	0	1	49.25	2	70.82	74	1075.65	1.57	563.27	Q86 GBPJPY.a H1 4.6.108
4	38133	GBPJPY.a	...		0.1	0	1	0	0	1	30.62	2	40.05	51	1012.1	1.86	281.9	Q86 GBPJPY.a H1 3.8.133
5	21123	GBPJPY.a	...		0.03	0	1	0	0	1	50.75	2	71.2	76	1004.54	1.54	689.42	Q86 GBPJPY.a H1 2.1.123
6	3599	GBPJPY.a	...		0.01	0	1	1	0	0	0.0	2	-76.10	55	958.97	1.76	206.07	Q86 GBPJPY.a H1 3.5.99
7	38113	GBPJPY.a	...		0.01	0	1	0	0	1	26.87	2	-44.22	71	947.37	1.51	536.9	Q86 GBPJPY.a H1 3.8.113
8	14149	GBPJPY.a	...		0.02	0	1	1	0	0	0.0	1	-19.06	33	699.04	2.30	156.52	Q86 GBPJPY.a H1 1.4.149

Abbildung 45: This are the 9 Winner Strategies on the Realaccount. All 9 Strategies made profit in the past.

Abbildung 46: The Trading on Life Account of this 9 Strategies was very good.

I did a SQX Backtest of this 9 Strategies.

Net profit (Port...	Mini equity cha...	# of trad...	Mini equity cha...	# of trad...
$ 1 314.81		301		66
$ 3 129.3		489		124
$ 2 384.82		391		102
$ 1 319.4		432		115
$ 1 902.96		425		111
$ 2 623.68		401		121
$ 495.09		359		102
$ 2 845.35		519		135
$ 2 323.26		461		120

Abbildung 47: The winner strategies are working fine in IS and OOS.

Now I will go through to the different Robustnesstests. And check how many of this 9 Winner strategies will pass my Robustnesstests R1-R7.

R1:

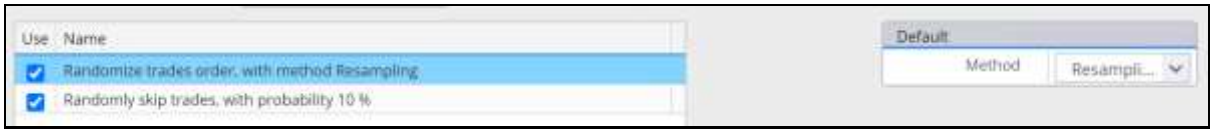
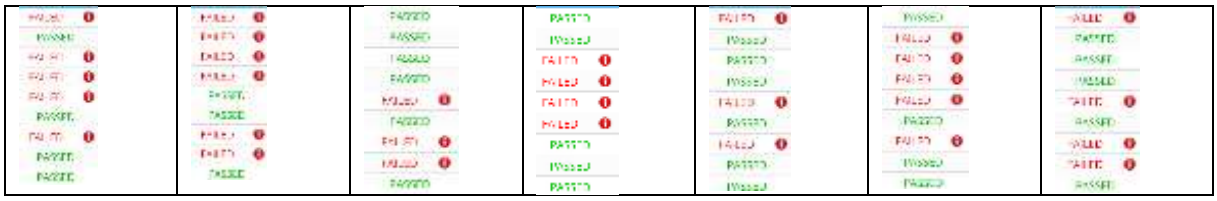


Abbildung 48: Robustnesstest R1

I do this Robustnesstest in a Loop and check how stable the results are.

Method Resampling:Results for N=20



⇨ I repeated this test 7 times. You can see the result is not stable for N=20.

Hint: In every colum of the table is the result of a Robustness.

Let's look at the first column of the table. Here, the Robustnesstest has sorted out 5 strategies as bad out of the 9 profitable strategies. That's a pretty high error rate. We remember: I classified the 9 strategies as profitable.

Abbildung 49: row1 of the table

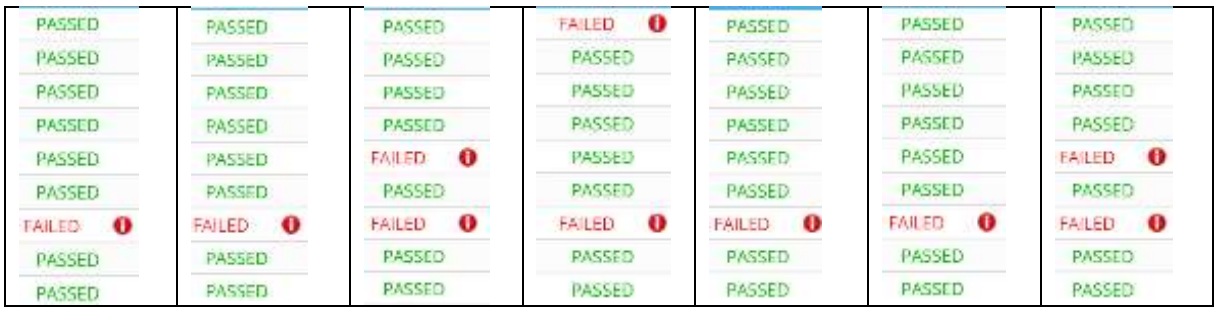
Method Resampling:Results for N=200

⇨ I repeated this test 7 times. You can see the result is not stable for N=200. But the result is better than the last test with N=20.

Method Resampling:Results for N=1000

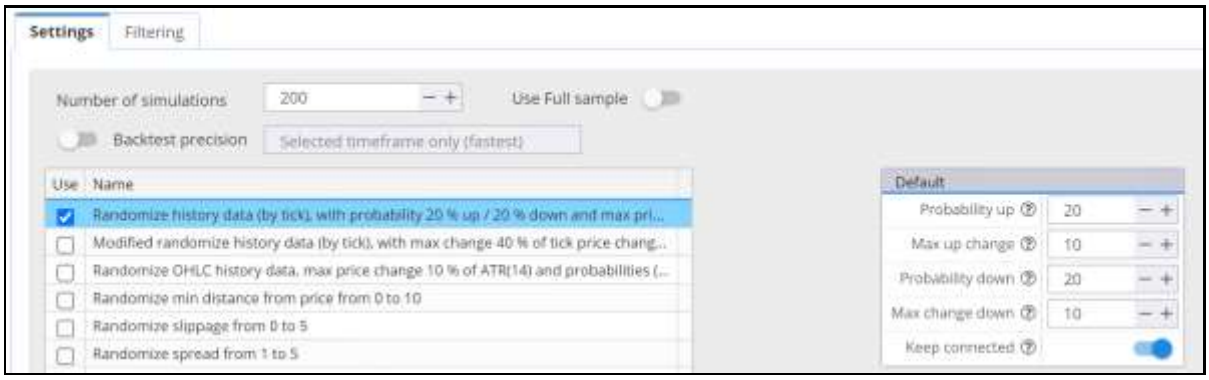
=>I repeated this test 7 times, the result looks stable.

Method Excact: Results for N=1000



- ⇨ The Method Excact with N=1000 yield the best results. I am happy with this result.
- ⇨ But the result is not perfect. This is the Reason why we should increase N to 10000. At the moment the SQX is only able to use N=1000 as maximum.

R2:



Max Up/Max Down=10%-Selected Timeframe

N=30	FAILED PASSED PASSED PASSED FAILED PASSED PASSED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED PASSED PASSED PASSED	FAILED PASSED PASSED FAILED FAILED PASSED PASSED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED PASSED PASSED PASSED	PASSED PASSED PASSED FAILED PASSED PASSED FAILED PASSED PASSED	FAILED PASSED PASSED PASSED PASSED PASSED PASSED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED PASSED PASSED PASSED
N=200	FAILED PASSED PASSED PASSED FAILED PASSED PASSED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED PASSED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED FAILED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED FAILED PASSED PASSED	FAILED PASSED PASSED FAILED FAILED PASSED FAILED PASSED PASSED	FAILED PASSED PASSED FAILED FAILED PASSED PASSED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED PASSED PASSED PASSED
N=1000	FAILED PASSED PASSED PASSED FAILED PASSED FAILED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED FAILED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED PASSED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED FAILED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED FAILED PASSED PASSED	FAILED PASSED PASSED FAILED FAILED PASSED FAILED PASSED PASSED	FAILED PASSED PASSED PASSED FAILED PASSED FAILED PASSED PASSED

Max Up/Max Down=10%-**Ticksimulation**

N=10

PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			

N=30

PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			

N=200

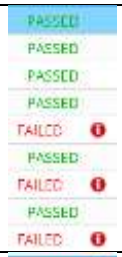
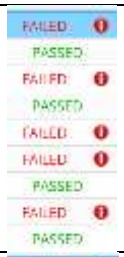
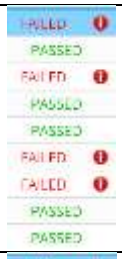
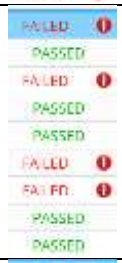
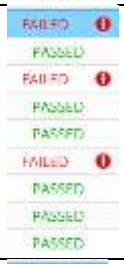
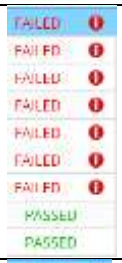
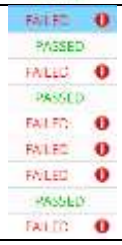
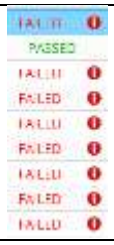
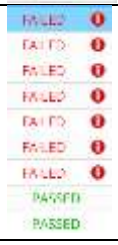
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			
PASSED	PASSED	PASSED	PASSED			

⇨ **There are big differences between Selected Timeframe and Tick simulation. I have to repeat all calibrations from the last chapter.**

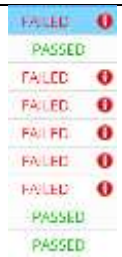
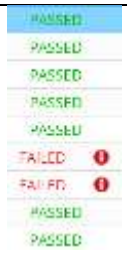
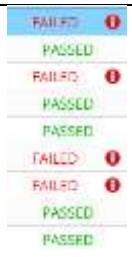
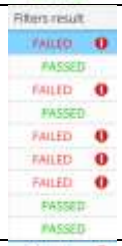
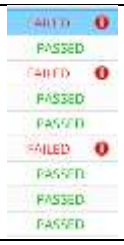
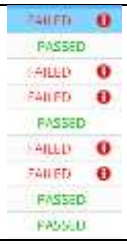
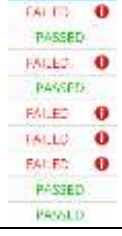
⇨ **We should do all Robustnesstests with Tick simulation, special for the Montecarlo-Analysis.**

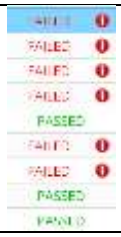
R6 WFA-Matrix

Selected Timeframe

N=100				Total random			
N=500				Total random			
N=1000				Total random			

Ticksimulation

N=100				Total random			
N=500							
N=1000							

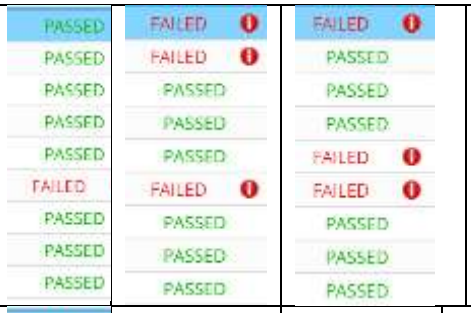
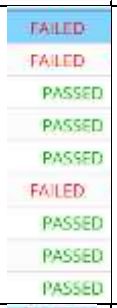
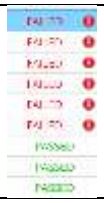
N=5000							

⇨ Filter not working for our case.

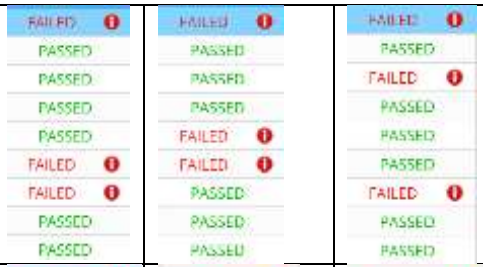
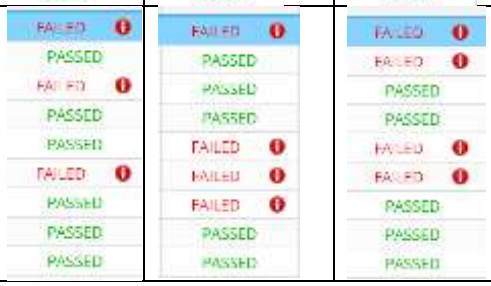
⇨

R8 WalkForward-Optimaziation

Selected Timeframe (up/down = 30%)

N=1000							
N=5000							
N=50000							

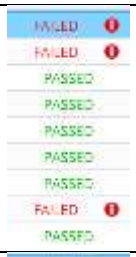
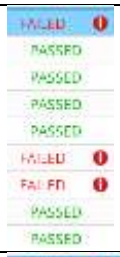
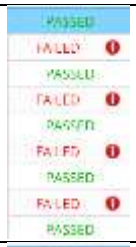
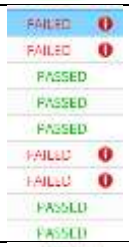
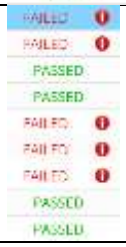
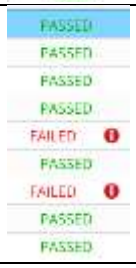
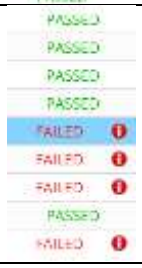
Selected Timeframe (up-down=20%) Simul/Excact

N=1000							
N=5000							

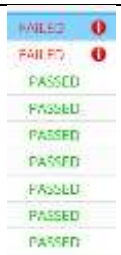
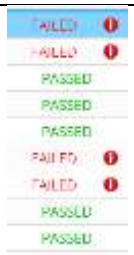
N=50000							

⇨ I am not so Happy with this results

Selected Timeframe (up-down=20%) Exact/Excact

N=1000							
N=5000							
N=100k							

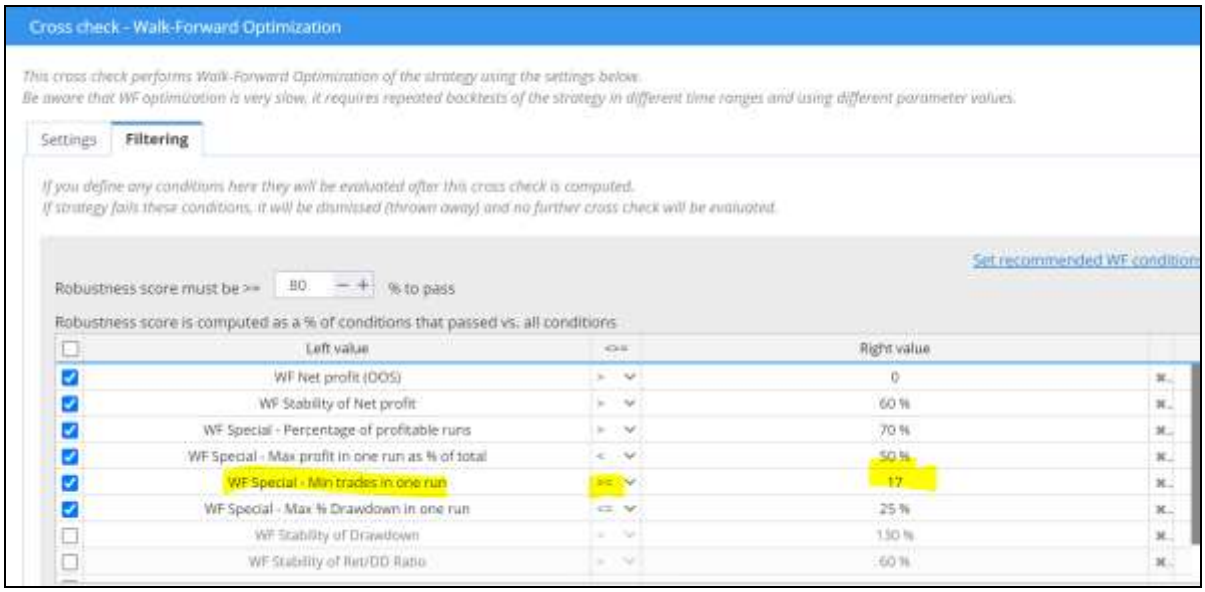
Ticksimulation (up/down =30%)

N=100							
N=500							
N=1000							
N=5000							
N=50K							

Ticksimulation (up/down =20%)

N=100							
N=500							
N=1000							
N=5000							
N=50K							

I have modified the Walkforward optimization Setting a little. I have yellow-marked the parameter.



Appendix

In the following two sections I took the working workflow GBPJPY H1 from the Strategylab and modified the Timeframe in the first case and I changed the currency pair in the second try.

Q99 GBPJPY M15

In this part I will take the Q86 GBPJPY workflow and change the timeframe to M15. Make some modifications and make a Workflow-Analysis. I will check, if the workflow of Q86 GBPJPY H1 is able to produce good Strategies for the M15 Strategies.

I will show the new Settings first.

I will name this Project “Q99 GBPJPY workflowAnalysis M15”

I generated in every workflow 2000 Strategies in Result.

Settings for the generation period

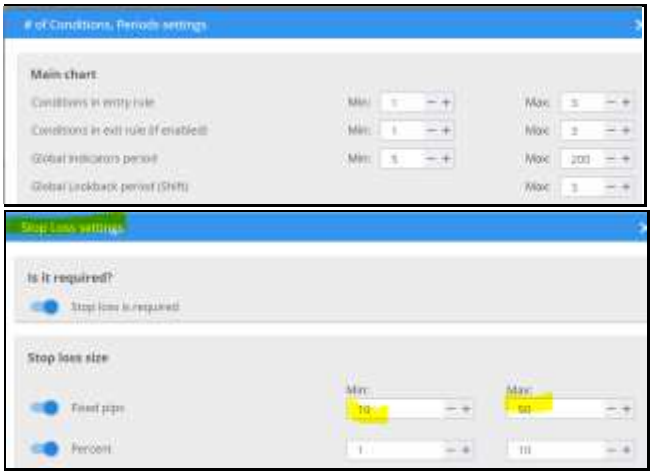


Abbildung 50: I modified SL because, the timeframe has changed from H1 to M15.

Abbildung 51: I modified TP because the Timeframe has changed from H1 to M15.

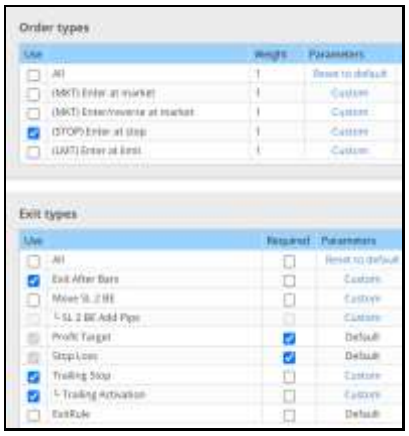


Abbildung 52: The settings for the buildingblocks are without modifications. I took the setting from the SQ-Forum.

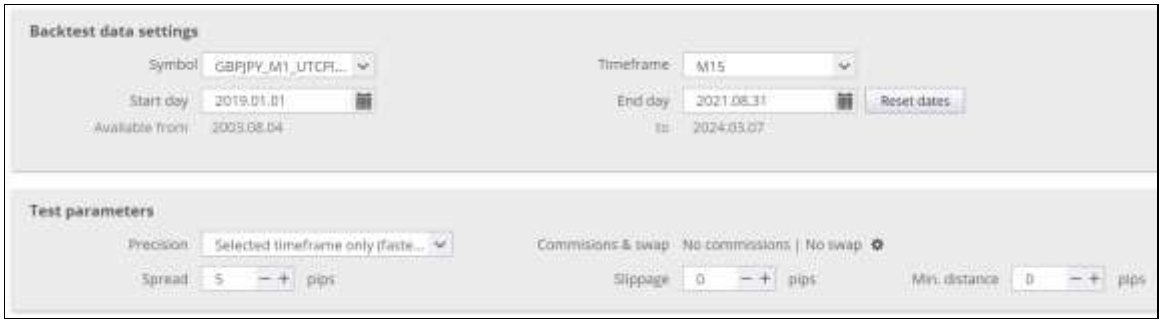


Abbildung 53: This is the setting for the generation period. The generation period is shorter, because the timeframe is lower. We have 4 time more bars available. So we are able to divide the period through 4.

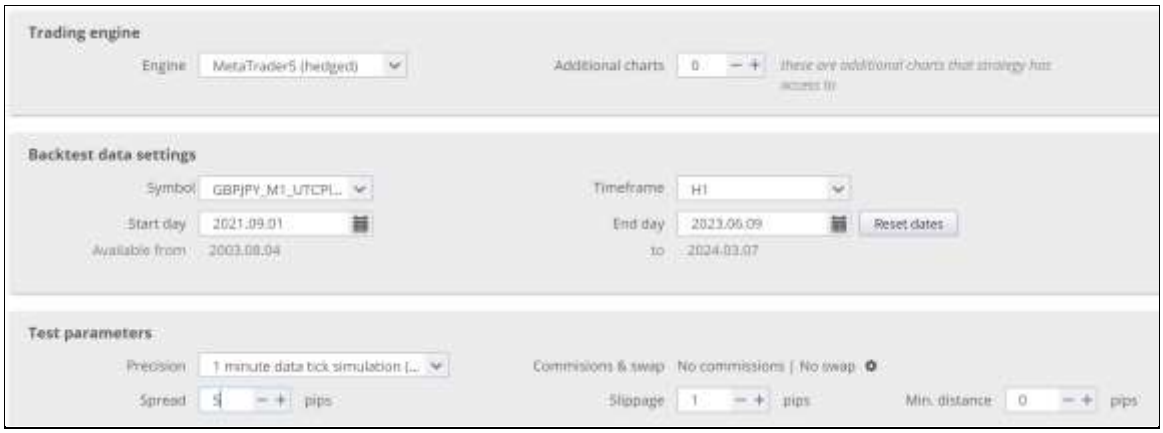


Abbildung 54: I use only this OOS1 test.

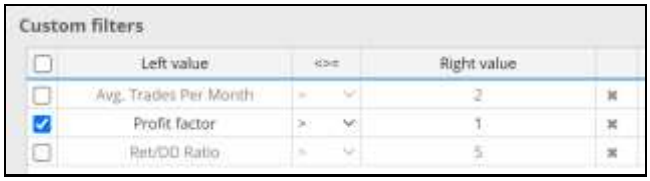


Abbildung 55: The filter for the OOS1 period

The settings for the Endtest period.

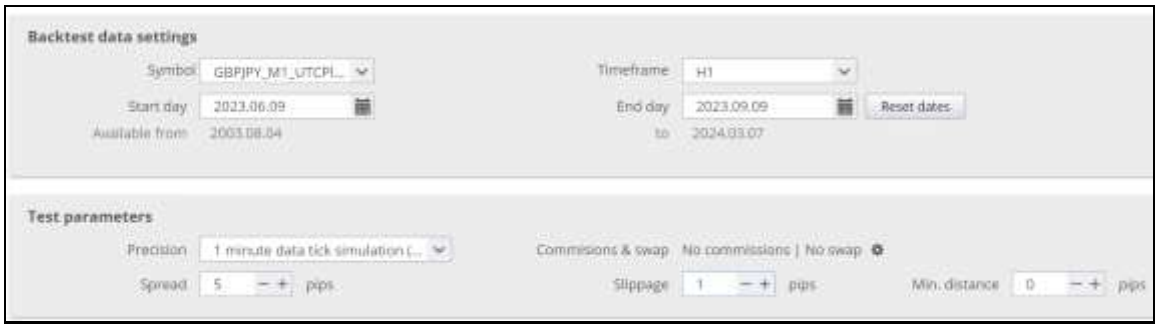


Abbildung 56: This is the setting for the Endtest. The time period is the same, only the currency pair is GBPJPY. The test is 3 Months.

I use for the endtest 3 Months. This is just supposed to be a quick analysis of what the M15 timeframe looks like.

I will generate 5000 Strategies for every period.

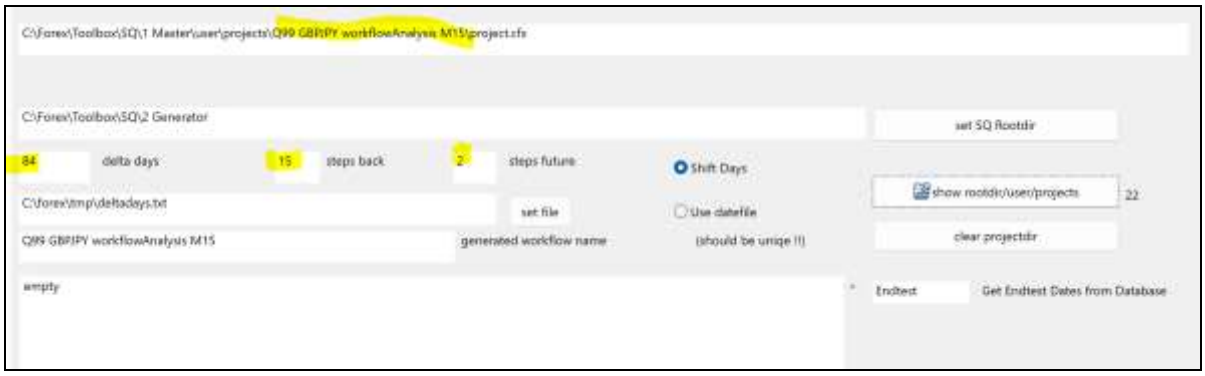


Abbildung 57: This are the settings for the Walkflow-Generator.

Walkflow-Analysis without Robustnesstest. (only OOS1-Test)

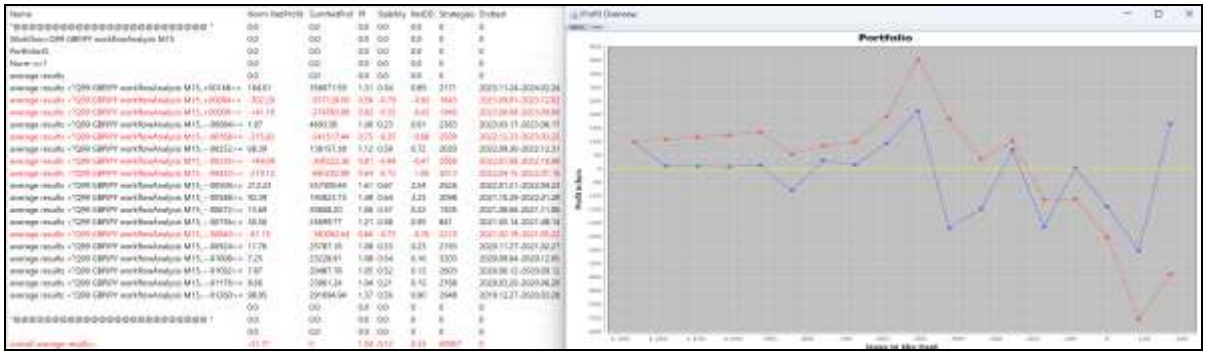


Abbildung 58: The Workflow is bad, it is loosing.

The average profit of a strategy is 21,71 Euro loss.

Walkflow-Analysis with Robustnesstest

We now want to improve the poor workflow with various robustness tests. We take the same robustnessts from the successful GBPJPY H1 workflow. The hope is that if we copy from successful things, then this will also be successful.

First I descripe the Filter Periods and Filtersettings

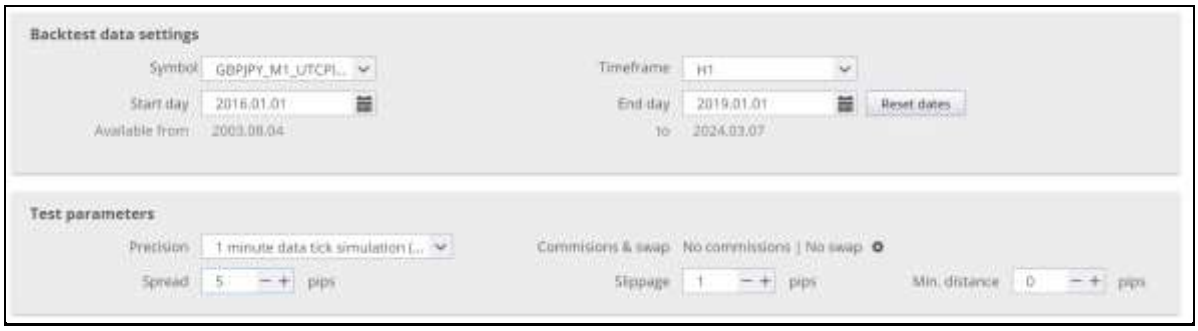


Abbildung 59: OOS2 period

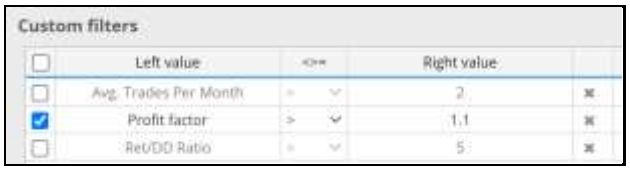


Abbildung 60: The filter for the oos2 period.

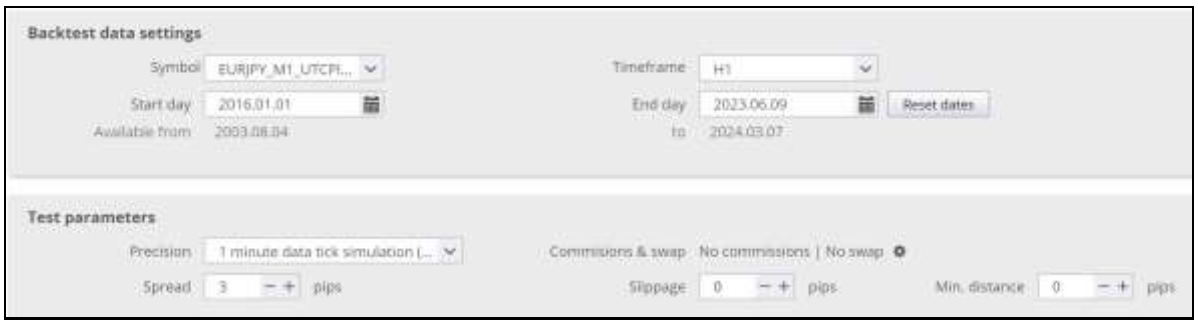


Abbildung 61: EURJPY –Filter –Period

Abbildung 62: EURJPY Filter

Abbildung 63: USDJPY Filter Period

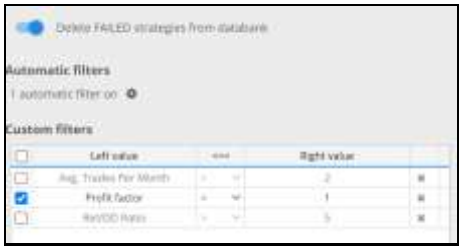


Abbildung 64: USDJPY filtering

Abbildung 65: Robustness Filter Period

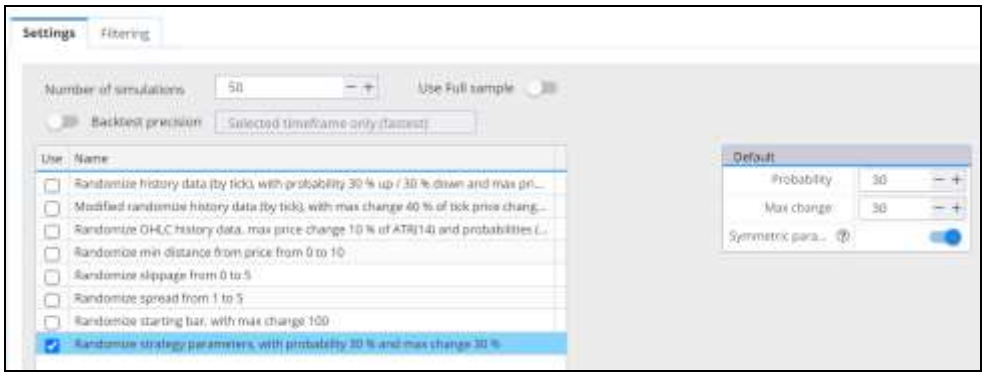


Abbildung 66: Robustness Filter Settings

The Result:

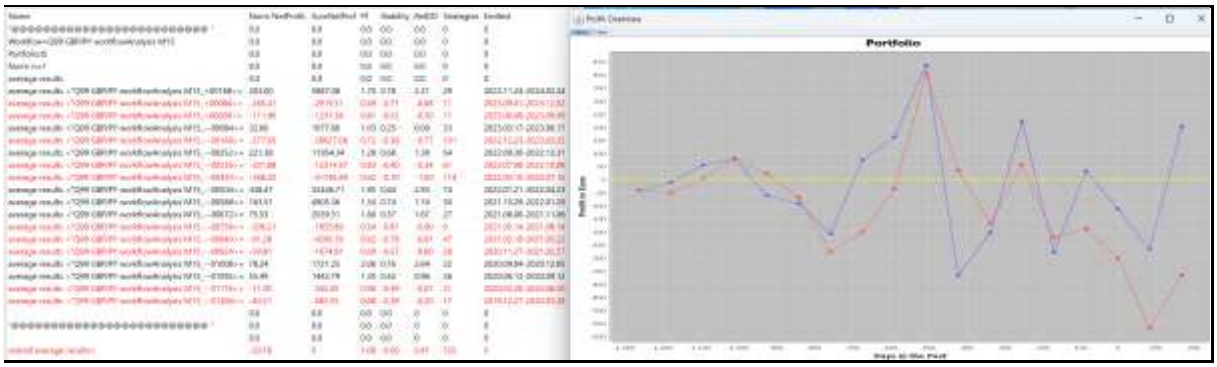


Abbildung 67: This is the result of the Walkflow-Analysis **with** Robustnesstests.

The Result is Bad. This workflow is not profitable with this currencypair and this timeframe.

The result has even gotten a little worse. The question arises here: why didn't the robustness tests produce anything?

The answer is probably the following.

If the generator is no good and only produces bad strategies, then the robustness test can't do anything in the end.

Q100 EURJPY H1

In this workflow I took the workflow GBPJPY from the SQX Forum and changed the main currency pair from GBPJPY to EURJPY. I will check if this successful GBPJPY workflow works with a different currency pair.

Walkflow-Analysis without Robustnesstest

Abbildung 68: I shifted the workflow 15 Times back with a shift of 84 days in the past and 7 times with a shift o 84 in the future. The time periods for the endtests are in the resultlist.

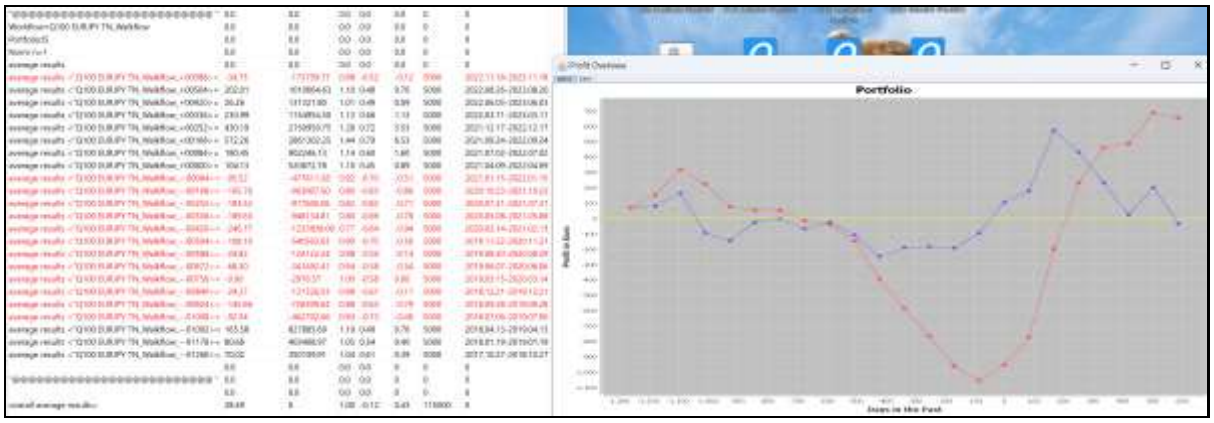


*Abbildung 69: Result of the Workflow-Analysis for the Workflow EURJPY **without** Robustnesstest.*

Walkflow-Analysis with Robustnesstest

In next Step I will switch all the default Robustnesstests on for this workflow and make the Workflow-Analysis.

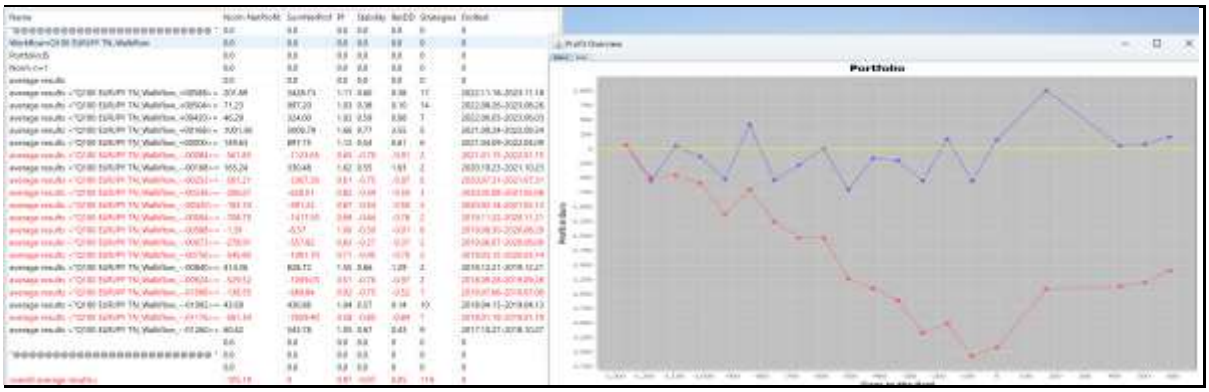


Abbildung 70: Result of Walkflow-Analysis with full Robustnesstests. The Results looks worse.

The Robustnesstests can´t fix the bad results of the generator.

⇨ The Walkflow is bad.

Or put in other words. The generator is no good. The robustness tests in the SQX work well, as we have already shown in the previous sections. The statement "the generator is not good" does not mean that something is incorrectly implemented in the SQX.

No, that's because we didn't choose the right settings for the generator.

What are the correct settings?

Yes, that's a good question. This is what I want to know from the reader. That's why I'm writing this document here.