



# QUANTUM FINANCIAL

RESEARCH

ANALYSIS

Experts in Algorithmic Trading and  
Portfolio Management

## Content

Overview .....	3
Concept .....	3
Characteristics .....	3
Involvement systems .....	3
Hypothetical historical performance data .....	4
Portfolio Max Risk / VaR .....	5
Capitalization / Risk .....	5
Correlation analysis .....	6
Disclosure and Disclaimer .....	7

Past results are not necessarily indicative of future results.

These results are based on simulated or hypothetical performance results that have certain inherent limitations. Unlike the results shown in an actual performance record, these results do not represent actual trading. Also, because these trades have not actually been executed, these results may have under- or over-compensated for the impact, if any, of certain market factors, such as lack of liquidity. Simulated or hypothetical trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. No representation is being made that any account will or is likely to achieve profits or losses similar to these being shown.

In addition, hypothetical trading does not involve financial risk, and no hypothetical trading record can completely account for the impact of financial risk in actual trading. For example, the ability to withstand losses or to adhere to a particular trading program in spite of trading losses are material points which can also adversely affect actual trading results. There are numerous other factors related to the markets in general or to the implementation of any specific trading program, which cannot be fully accounted for in the preparation of hypothetical performance results and all of which can adversely affect actual trading results.

## Overview

Well diversified mid-size portfolio with very good diversification and great MAR ratio.

This portfolio was made with aims:

- To maximize returns
- To minimize amount of DD periods
- To minimize P/L volatility
- Keep diversification / keep minimal or zero correlation inside portfolio

## Concept

One portfolio which consists of combination intraday and swing trading systems. During the time add additional trading systems of markets which are not involved yet. Keep minimal or zero correlation between them.

## Characteristics

- Each system in portfolio trades different market
- Each system has different logic
- Systems involved are combination of:
  - Intraday and swing
  - breakout and market systems
  - Systems included are long/short, long only, short only

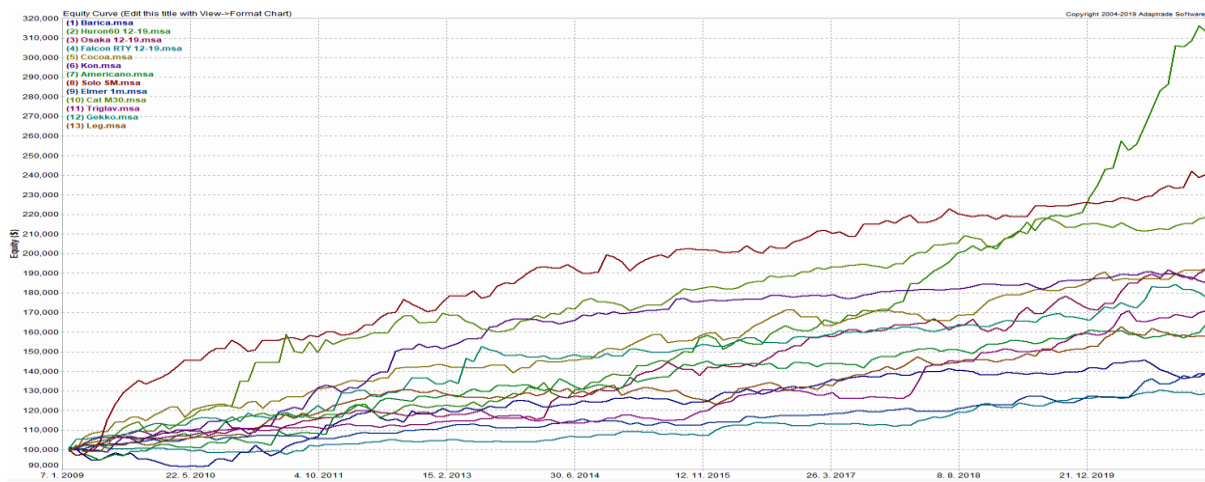
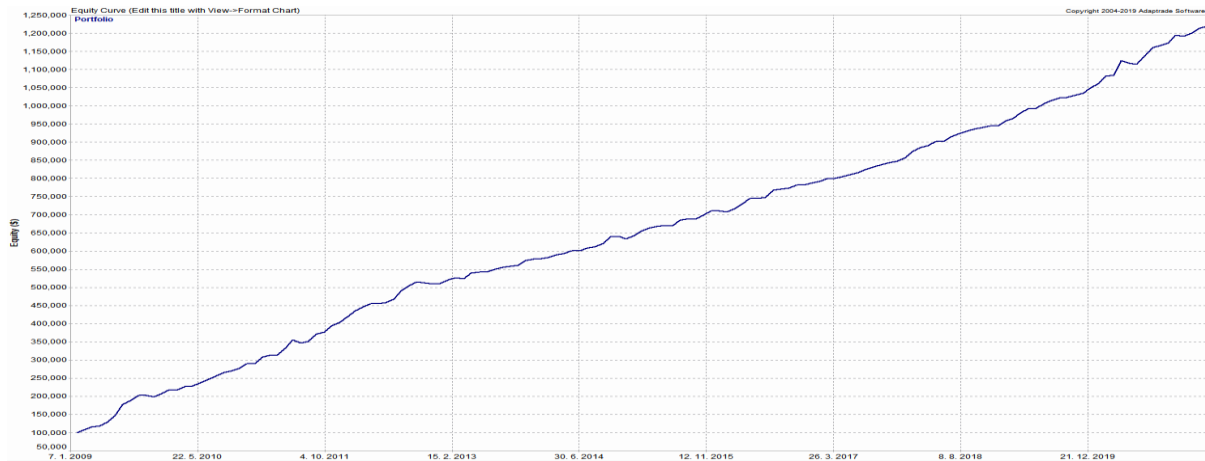
## Involved systems

1. Triglav - ES – Intraday breakout
2. Falcon - RTY – intraday short breakout
3. Huron - NQ – long swing breakout
4. Elmar – MES – long mean reversion (5 micro)
5. Osaka - LH – swing breakout
6. Kon - C – swing market
7. Cocoa - CC – swing market
8. Barica - BO – swing breakout
9. Americano - KC – swing breakout
10. Solo - SM – swing market
11. Cat – CT – swing breakout
12. Leg – LC – swing market
13. Gekko – GC – swing breakout



## Hypothetical historical performance data

\* includes \$35 transaction costs + slippage (for NQ, RTY = \$25; MES = \$4.5; GC = \$45)



**Starting Equity:**

**\$100,000.00**

<b>Prof Fact</b>	1.630
<b>Net Profit</b>	\$1,118,638.50
<b>Sortino Ratio</b>	6.239
<b>MAR Ratio</b>	3.458
<b>Ave Annual PL</b>	\$91,505.32
<b>Ave Monthly PL</b>	\$7,625.44
<b>Ave Weekly PL</b>	\$1,750.95
<b>\$ Trade Std Dev</b>	\$1,068.85
<b>Total Trades</b>	8,127
<b>Pct Wins</b>	50.22%
<b>Max \$ Win</b>	\$19,975.00
<b>Ave \$ Win</b>	\$709.19
<b>Max \$ Loss</b>	-\$4,655.00
<b>Ave \$ Loss</b>	-\$438.85
<b>\$ Win/Loss Ratio</b>	1.616
<b>Ave \$ Trade</b>	\$137.64
<b>Max \$ Drawdown</b>	-\$15,543.00

Period = 1/2009 – 3/2021

Annual Returns										
Year	Net Profit	Add/With	End Equity	Return(%)	Drawdown	Drawdown(%)	Trades	Wins(%)	P Fac	Sharpe
2021	\$27,183.50	\$0.00	\$1,218,638.50	2.282	\$8,912.50	0.7381	174	47.70	1.432	0.4159
2020	\$142,276.50	\$0.00	\$1,191,455.00	13.56	\$14,401.00	1.276	683	49.19	1.691	0.8617
2019	\$105,036.00	\$0.00	\$1,049,178.50	11.13	\$8,876.50	0.8946	673	52.90	1.793	1.766
2018	\$87,940.00	\$0.00	\$944,142.50	10.27	\$6,905.00	0.7627	644	50.78	1.641	1.338
2017	\$68,205.50	\$0.00	\$856,202.50	8.656	\$5,292.00	0.6583	687	48.33	1.641	2.813
2016	\$77,018.50	\$0.00	\$787,997.00	10.83	\$9,186.00	1.290	622	52.73	1.612	0.8856
2015	\$77,416.00	\$0.00	\$710,978.50	12.22	\$7,789.00	1.122	630	49.37	1.551	1.127
2014	\$55,112.50	\$0.00	\$633,562.50	9.528	\$9,058.00	1.410	730	47.12	1.327	0.7677
2013	\$68,194.00	\$0.00	\$578,450.00	13.36	\$10,214.00	1.872	667	49.63	1.503	1.061
2012	\$90,600.50	\$0.00	\$510,256.00	21.59	\$9,684.00	1.959	657	50.23	1.639	0.9326
2011	\$129,790.50	\$0.00	\$419,655.50	44.78	\$14,991.50	4.681	704	52.27	1.726	1.138
2010	\$82,608.50	\$0.00	\$289,865.00	39.86	\$8,193.00	3.638	632	50.16	1.687	1.504
2009	\$107,256.50	\$0.00	\$207,256.50	107.3	\$10,211.50	6.562	624	50.96	1.896	1.043
Ave	\$86,049.12	\$0.00	\$722,895.23	23.49	\$9,516.46	2.067	625.2	50.10	1.626	1.204
SD	\$30,464.09	\$0.00	\$324,330.70	28.02	\$2,666.58	1.801	139.5	1.827	0.1493	0.5897

Monthly Returns										
Month	Net Profit	Add/With	End Equity	Return(%)	Drawdown	Drawdown(%)	Trades	Wins(%)	P Fac	
Ave	\$7,609.79	\$0.00	\$654,423.43	1.748	\$4,462.47	0.9302	55.29	50.50	1.853	
SD	\$7,312.04	\$0.00	\$299,087.87	2.639	\$2,251.03	0.8803	10.41	7.248	0.9809	

## Portfolio Max Risk / VaR

	USD
<b>Max Historical DD</b>	<b>15 543</b>
<b>MC DD 99%*</b>	<b>30 200</b>

\* Turn off

VaR (Value at Risk) => for our purpose we calculate as portfolio Monte Carlo drawdown with confidence level 99%.

This situation may occur with extremely low probability. It represents situation when we stop trading and consider portfolio as it stopped to work properly.

## Capitalization / Risk

	Max Historical DD = \$ 15 543	Max VaR = \$ 30 200
<b>Account size</b>	Max Historical DD (%)	Max VaR (%)
<b>\$ 70k</b>	22,20	43,14
<b>\$ 150k</b>	10,03	20,13
<b>\$ 300k</b>	5,18	10,06

## Correlation analysis

1. Barica - BO – swing breakout
2. Huron - NQ – long swing breakout
3. Osaka - LH – swing breakout
4. Falcon - RTY – intraday short breakout
5. Cocoa - CC – swing market
6. Kon - C – swing market
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9. Elmar – MES – long mean reversion (5 micro)
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11. Triglav - ES – Intraday breakout
12. Gekko – GC – swing breakout
13. Leg – LC – swing market

Correlations Based on Daily Returns

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.000	0.009424	0.06065	-0.2208	-0.1178	0.2624	-0.02193	-0.04757	-0.01227	-0.04593	-0.1109	-0.02289	-0.001550
2	0.009424	1.000	-0.1141	0.02945	0.1415	-0.000020	0.1212	-0.03010	0.07789	0.1084	-0.06249	0.02233	0.2401
3	0.06065	-0.1141	1.000	-0.1540	0.000697	0.1587	0.02921	-0.003623	0.02793	0.1257	-0.009340	-0.02092	0.1076
4	-0.2208	0.02945	-0.1540	1.000	-0.02930	-0.07086	-0.1607	-0.05350	-0.06184	-0.04892	0.6570	-0.3648	-0.09591
5	-0.1178	0.1415	0.000697	-0.02930	1.000	0.07393	0.2733	-0.03171	0.01303	0.03270	0.02044	0.05651	-0.05810
6	0.2624	-0.000020	0.1587	-0.07086	0.07393	1.000	-0.07094	0.2732	-0.07663	-0.1576	-0.07742	0.1313	-0.001965
7	-0.02193	0.1212	0.02921	-0.1607	0.2733	-0.07094	1.000	0.01547	-0.09829	0.07705	0.02982	-0.08337	0.03894
8	-0.04757	-0.03010	-0.003623	-0.05350	-0.03171	0.2732	0.01547	1.000	0.05442	0.02094	0.009633	-0.09100	0.03625
9	-0.01227	0.07789	0.02793	-0.06184	0.01303	-0.07663	-0.09829	0.05442	1.000	-0.06451	-0.04147	0.07333	-0.1007
10	-0.04593	0.1084	0.1257	-0.04892	0.03270	-0.1576	0.07705	0.02094	-0.06451	1.000	0.009534	0.1940	-0.02928
11	-0.1109	-0.06249	-0.009340	0.6570	0.02044	-0.07742	0.02982	0.009633	-0.04147	0.009534	1.000	-0.03779	-0.04012
12	-0.02289	0.02233	-0.02092	-0.3648	0.05651	0.1313	-0.08337	-0.09100	0.07333	0.1940	-0.03779	1.000	-0.03928
13	-0.001550	0.2401	0.1076	-0.09591	-0.05810	0.001965	0.03894	0.03625	-0.1007	-0.02928	-0.04012	-0.03928	1.000

Correlations Based on Monthly Returns

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.000	-0.03970	0.05751	-0.07051	-0.09915	0.09756	-0.008780	-0.07991	-0.004117	0.3128	-0.003766	-0.006866	0.01989
2	-0.03970	1.000	-0.07628	-0.1748	0.01495	-0.01626	-0.09630	0.03894	0.1170	0.03570	0.08999	0.05104	0.03438
3	0.05751	-0.07628	1.000	-0.05390	-0.1165	-0.1319	-0.09873	-0.06019	0.1079	0.04307	-0.1065	0.02063	0.06960
4	-0.07051	-0.1748	-0.05390	1.000	-0.01285	-0.000531	-0.06688	-0.1936	-0.07627	-0.1684	0.1794	-0.1132	-0.1326
5	-0.09915	0.01495	-0.1165	-0.01285	1.000	0.1554	-0.03608	0.07421	0.01910	0.05136	-0.01505	0.07515	0.05296
6	0.09756	-0.01626	-0.1319	-0.000531	0.1554	1.000	0.1207	0.1212	-0.1529	0.1044	-0.09011	-0.04656	0.006644
7	-0.008780	-0.09630	-0.09873	-0.06688	-0.03608	0.1207	1.000	0.07843	-0.1942	-0.1590	-0.02680	0.09888	0.06857
8	-0.07991	0.03894	-0.06019	-0.1936	0.07421	0.1212	0.07843	1.000	-0.007600	0.2293	-0.07735	-0.1138	0.002656
9	-0.004117	0.1170	0.1079	-0.07627	0.01910	-0.1529	-0.1942	-0.007600	1.000	0.01648	-0.2407	-0.01928	0.003994
10	0.3128	0.03570	0.04307	-0.1684	0.05136	0.1044	-0.1590	0.2293	0.01648	1.000	-0.05271	-0.1218	0.1883
11	-0.003766	0.08999	-0.1065	0.1794	-0.01505	-0.09011	-0.02680	-0.07735	-0.2407	-0.05271	1.000	0.000616	0.008462
12	-0.006866	0.05104	0.02063	-0.1132	0.07515	-0.04656	0.09888	-0.1138	-0.01928	-0.1218	0.000616	1.000	0.06359
13	0.01989	0.03438	0.06960	-0.1326	0.05296	0.006644	0.06857	0.002656	0.003994	0.1883	0.008462	0.06359	1.000

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