

Exceptional & Rich ADR 60™ Modern Portfolio Theory (MPT) Statistics

AS OF AUGUST 30, 2023

We have compiled a summary of the annualized excess returns for yearly starting points of the Exceptional & Rich ADR 60 from 2007 to 2023, with rolling periods spanning from 2 to 10 years. Across different starting periods, there were variations in performance. Notably, the legacy models initiated before 2010 exhibited average annualized excess returns of 400 basis points, while models established after 2010 recorded annualized excess returns exceeding 500 basis points.

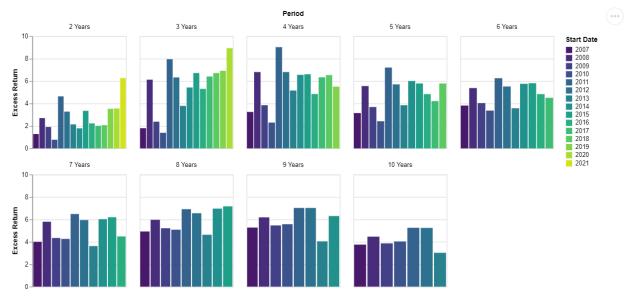
Additionally, we have presented tabulated statistics based on Modern Portfolio Theory (MPT) for each starting point, both individually and since the inception of the Exceptional & Rich ADR 60. The statistics include high R squared values, average negative Excess Drawdowns, high Beta coefficients, low tracking error (TE) averaging 8.73%, Information ratio averaging 0.54, and marginally negative average excess volatility.

1: Annualized Excess Return Histograms

The histograms illustrate Annualized Excess Returns for the various starting dates across multiple holding periods.

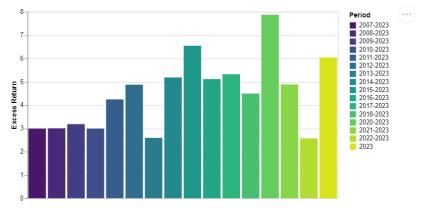
1.1: Annualized Excess Return Histograms for Various Periods and Start Dates

Out[175...



1.1: Annualized Excess Return Histograms Since Inception

Out[176...



2: Modern Portfolio Theory (MPT) Statistics

The tables of MPT statistics for multiple starting dates and periods.

(AR - Annualized Excess Return, AV - Annualized Excess Volatility, TE - Tracking Error, IR - Information Ratio, MED - Maximum Excess Drawdown)

2.1: Modern Portfolio Theory (MPT) Statistics for Various Periods and Start Dates

İ	Start Date	+ Period +	AR	+ AV +	+ TE +	+ IR +	+ Alpha +	Beta	+	+ R-Squared +
	2007	2 Years	1.28	-2.72	11.57	0.11	0.07	0.78	6.79	76.44
	2007	3 Years	1.8	-1.88	10.27	0.17	0.23	0.82	2.09	79.35
	2007	4 Years	3.25	-0.03	9.74	0.33	0.31	0.91	-2.23	81.76
	2007	5 Years	3.15	0.37	8.92	0.35	0.27	0.93	-2.23	83.79
	2007	6 Years	3.82	0.42	8.54	0.45	0.33	0.93	-1.27	83.37
	2007	7 Years	4.0	0.68	8.33	0.48	0.34	0.94	-1.27	82.31
	2007	8 Years	4.92	0.42	8.04	0.61	0.4	0.93	-1.27	82.82
	2007	9 Years	5.27	0.09	7.81	0.67	0.42	0.92	-1.27	82.93
	2007	10 Years	3.75	-0.06	7.67	0.49	0.35	0.91	-1.27	82.37
	2007	10 fears] 3./5	-0.00 	/.6/ 	0.49 	1 0.35	0.91	-1.2/	62.37
	2000			!	!	!	1 0 2	l.	1	!
	2008	2 Years	2.7	-2.55	12.53	0.22	0.2	0.77	8.19	72.48
	2008	3 Years	6.13	-1.05	11.33	0.54	0.57	0.83	4.19	75.46
	2008	4 Years	6.81	0.94	10.74	0.63	0.57	0.93	-3.27	79.08
	2008	5 Years	5.56	1.16	9.85	0.56	0.46	0.95	-3.27	81.27
	2008	6 Years	5.38	1.18	9.36	0.57	0.45	0.95	-3.85	81.11
	2008	7 Years	5.79	1.33	9.05	0.64	0.48	0.96	-3.85	80.19
	2008	8 Years	5.96	0.94	8.77	0.68	0.49	0.94	-3.85	80.41
	2008	9 Years	6.18	0.67	8.43	0.73	0.5	0.93	-3.85	80.91
	2008	10 Years	4.46	0.52	8.23	0.54	0.4	0.92	-3.85	80.5
						i	i			
	2009	2 Years	1.91	-3.0	11.3	0.17	0.11	0.78	6.0	77.51
	2009	3 Years	2.38	-1.7	10.12	0.24	0.26	0.83	0.86	79.98
					:	:	:			!
	2009	4 Years	3.85	0.25	9.8	0.39	0.34	0.92	-2.08	81.78
	2009	5 Years	3.69	0.47	8.98	0.41	0.31	0.94	-2.08	83.67
	2009	6 Years	4.04	0.6	8.59	0.47	0.34	0.94	-1.79	83.35
	2009	7 Years	4.34	0.75	8.33	0.52	0.37	0.94	-1.79	82.4
	2009	8 Years	5.21	0.49	8.08	0.64	0.42	0.93	-1.79	82.72
	2009	9 Years	5.46	0.19	7.83	0.7	0.44	0.92	-1.79	82.92
	2009	10 Years	3.86	0.09	7.66	0.5	0.35	0.91	-1.79	82.55
	2010	2 Years	0.77	-2.86	11.76	0.07	0.01	0.77	1.23	75.64
	2010	3 Years	1.39	-1.3	10.6	0.13	0.19	0.84	5.42	78.26
	2010	4 Years	2.3	0.77	10.17	0.23	0.22	0.93	-0.49	80.97
	2010	5 Years	2.42	0.93	9.31	0.26	0.21	0.95	-3.5	82.97
	2010	6 Years	3.37	0.91	8.83	0.38	0.29	0.95	-3.5	82.8
	2010	7 Years	4.26	1.16	8.69	0.49	0.36	0.96	-2.28	81.48
	2010	8 Years	5.08	0.86	8.42	0.6	0.41	0.95	-2.28	81.79
	2010	9 Years	5.57	0.63	8.03	0.69	0.44	0.94	-2.28	82.56
	2010	10 Years	4.03	0.48	7.86	0.51	0.36	0.93	-2.28	82.08
	2010	I To tear.2	4.05	0.46	/.00	1 6.21	1 0.30	0.93	-2.20	02.00
	2011	1 2 1/	1 4 64	2 47	12.6			0.77	2 20	72.2
	2011	2 Years	4.64	-2.47	12.6	0.37	0.34	0.77	-2.28	72.2
	2011	3 Years	7.95	-1.42	11.25	0.71	0.69	0.82	8.79	75.55
	2011	4 Years	9.03	0.51	10.66	0.85	0.73	0.91	5.76	78.89
	2011	5 Years	7.21	0.87	9.85	0.73	0.58	0.94	-2.36	80.94
	2011	6 Years	6.26	0.93	9.37	0.67	0.51	0.94	-2.36	80.76
	2011	7 Years	6.48	1.14	9.09	0.71	0.53	0.95	-3.6	79.73
	2011	8 Years	6.91	0.8	8.74	0.79	0.55	0.94	-3.6	80.36
	2011	9 Years	7.02	0.49	8.4	0.84	0.56	0.92	-3.6	80.83
	2011	10 Years	5.25	0.34	8.25	0.64	0.45	0.91	-3.6	80.2
					i	i	i			i
	2012	2 Years	3.28	-2.38	12.25	0.27	0.23	0.78	7.21	73.69
	2012	3 Years	6.33	-1.21	11.08	0.57	0.56	0.83	3.62	76.38
	2012	4 Years	6.81	0.73	10.52	0.65	0.56	0.92	-2.77	79.66
	2012	5 Years	5.71	0.9	9.58	0.6	0.47	0.94	-2.77	81.95
	2012	6 Years	5.52	0.85	9.03	0.61	0.45	0.94	-3.06	81.95
							0.49		-3.06	!
	2012	7 Years	5.94	1.08	8.81	0.67		0.95		80.85
	2012	8 Years	6.55	0.76	8.5	0.77	0.52	0.94	-3.06	81.32
	2012	9 Years	7.02	0.49	8.15	0.86	0.56	0.93	-3.06	81.9
	2012	10 Years	5.24	0.35	7.98	0.66	0.45	0.92	-3.06	81.39
	2013	2 Years	2.14	-2.84		0.19	0.14		5.87	76.84
	2013	3 Years					0.39			
	2013	4 Years	5.16	0.06	9.79				-1.45	81.64
	2013	5 Years 6 Years	3.85	0.57	8.99	0.43	0.33	0.94	-1.45	83.72
	2013	6 Years	3.58	0.69	8.65	0.41	0.31	0.94	-5.39	83.21
	2013	7 Years	3.62	0.78	8.31	0.44	0.31	0.95	-5.39	82.52
	2013	8 Years	4.63	0.59	8.06	0.57	0.37	0.94	-5.39	82 93
	2013	9 Years	4.04	0.37	7.77	0.52	0.34	0.93	-5.39	83.36
		10 Years				0.4	0.29	0.93	-5.39	83.5
		2 Years								
		3 Years							4.3	
	2014	4 Vears	6 56	i a 43	10 14	i a 65	i a 56	a 92	i -2 12	i 80 7
	2014	5 Years	0.30 6.01	0.43	1 0.14	1 0.05	1 0.50	0.52	1 -2.12	1 00.7
	2014	J rears	0.01	U./0	1 2.29	0.05	0.0	0.94	-2.12	02.8/
		6 Years								
		7 Years			8.8 6.5	0.68	0.5	0.95	-0.72	80.//
	2014	8 Years	6.96	0.75	8.5	0.82	0.56	0.94	-0.72	81.29
		9 Years							-0.72	
	2015	2 Years	3.35	-2.36	11.69	0.29	0.26	0.79	8.85	75.98
	2015	3 Years	6.72	-1.1	10.63	0.63	0.61	0.85	5.51	78.22
	2015	4 Years	6.61	0.6	10.01	0.66	0.56	0.93	-2.46	81.34
	2045	5 Years	5.79	0.86	9.18	0.63	0.48	0.95	-2.46	83.34
	2015	6 Years								
					8.56				-0.83	
	2015		0.12	0.70	1 2.30	0.72	0.51	0.05	1 -0 83	82.15
	2015 2015	7 Tears	7 16	1 0 00						
	2015 2015 2015	8 Years								
	2015 2015 2015	8 Years								
	2015 2015 2015 2016	8 Years 2 Years	2.23	-2.24	11.54	0.19	0.17	0.8	5.59	76.62
	2015 2015 2015 2016 2016	8 Years 2 Years 3 Years	2.23	 -2.24 -1.6	 11.54 10.28	0.19 0.52	 0.17 0.49	0.8 0.83	 5.59 4.35	76.62 79.37
	2015 2015 2015 2016 2016 2016	8 Years 2 Years	2.23 5.31 4.85	 -2.24 -1.6 0.42	 11.54 10.28 9.93	 0.19 0.52 0.49	0.17 0.49 0.42	0.8 0.83 0.92	 5.59 4.35 -2.95	 76.62 79.37 81.45

	2016	6 Years	4.84	0.74	8.73	0.55	0.4	0.95	-1.33	l 82.97 l
	2016	7 Years	4.48	0.76	8.36	0.54	0.38	0.94	-1.33	82.29
	2017	2 Years	2.01	-2.67	11.35	0.18	0.14	0.79	5.5	77.29 i
	2017	3 Years	6.41	-1.63	10.49	0.61	0.59	0.83	5.66	78.52
	2017	4 Years	6.34	0.5	9.95	0.64	0.54	0.92	-2.99	81.46 İ
	2017	5 Years	4.22	1.21	9.31	0.45	0.35	0.96	-2.99	l 83.25 i
	2017	6 Years	4.51	0.96	8.86	0.51	0.38	0.95	-4.24	82.73
					i	i				i i
	2018	2 Years	2.07	-2.97	11.59	0.18	0.14	0.77	5.68	76.33 İ
	2018	3 Years	6.72	-1.67	10.72	0.63	0.61	0.82	7.57	77.61
	2018	4 Years	6.54	1.08	10.62	0.62	0.54	0.94	-3.55	79.67
	2018	5 Years	5.79	0.95	9.76	0.59	0.48	0.94	-3.55	81.36
					i	i				ii
	2019	2 Years	3.53	-1.85	12.3	0.29	0.31	0.8	6.3	73.69
	2019	3 Years	6.92	-1.58	10.6	0.65	0.64	0.83	9.43	78.11
	2019	4 Years	5.51	1.05	10.11	0.55	0.48	0.95	-5.51	81.47
					i	i				i i
	2020	2 Years	3.56	-1.52	9.94	0.36	0.27	0.86	4.66	82.65
	2020	3 Years	8.94	0.18	11.01	0.81	0.78	0.89	0.61	77.72
	2021	2 Years	6.27	-3.23	11.09	0.57	0.53	0.77	9.6	78.39
-	L		L	L	L	L	L	L		

2.2: Modern Portfolio Theory (MPT) Statistics Since Inception

+			+	+	+	+	+		-
Period	AR	AV	TE	IR	Alpha	Beta	MED	R-Squared	
2007-2023	2.99	-0.71	6.58	0.45	0.27	0.92	3.78	89.74	
2008-2023	3.0	-0.21	7.08	0.42	0.26	0.93	2.76	88.68	
2009-2023	3.18	-0.53	6.68	0.48	0.3	0.92	-1.79	88.56	
2010-2023	2.99	-0.23	7.04	0.42	0.27	0.92	-2.28	86.08	
2011-2023	4.24	-0.17	7.52	0.56	0.37	0.91	-3.6	83.88	
2012-2023	4.87	0.03	7.53	0.65	0.42	0.91	-3.06	82.87	
2013-2023	2.59	0.08	7.38	0.35	0.25	0.92	-5.39	83.65	
2014-2023	5.18	0.4	7.97	0.65	0.44	0.93	-0.72	81.78	
2015-2023	6.54	0.63	8.13	0.8	0.54	0.94	-0.83	82.65	
2016-2023	5.11	0.59	8.24	0.62	0.43	0.94	-1.33	82.11	
2017-2023	5.32	0.92	8.63	0.62	0.41	0.95	-4.24	82.28	
2018-2023	4.31	1.04	9.36	0.46	0.35	0.95	-5.1	81.72	
2020-2023	7.87	2.18	10.97	0.72	0.68	0.99	-4.39	81.39	
2021-2023	4.88	-2.66	9.87	0.49	0.5	0.78	8.86	78.65	
2022-2023	2.57	-6.11	12.1	0.21	0.58	0.75	1.91	85.51	
2023	6.04	-3.74	7.75	0.78	0.76	0.78	0.38	85.48	
+			+	+	+	+	+	+	

Bibliography

- [1] Matia, Kaushik and Pal, Mukul and Stanley, H. Eugene and Salunkay, H., Scale-Dependent Price Fluctuations for the Indian Stock Market. EuroPhysics Letters, Aug 2003
- [2] M. Pal, M. Shah, A. Mitroi, Temporal Changes in Shiller's Exuberance Data, SSRN, Feb 2011
- [3] M. Pal, Mean Reversion Framework, SSRN, May 2015
- [4] M. Pal, Markov and the Mean Reversion Framework, SSRN, May 2015
- [5] M. Pal, Momentum and Reversion, Aug 2015
- [6] M. Pal, What is Value, SSRN, Sep 2015
- [7] M. Pal, M. Ferent, Stock Market Stationarity, SSRN, Sep 2015
- [8] M. Pal, Reversion Diversion Hypothesis, SSRN, Nov 2015
- [9] M. Pal, How Physics Solved your wealth problem, SSRN, Oct 2016
- [10] M. Pal, Human Al, SSRN, Jul 2017
- [11] M. Pal, The Size Proxy, Aug 2017
- [12] M. Pal, The Beta Maths, SSRN, Mar 2017
- [13] Maureen, O. Bhattacharya, A. ETFs and Systematic Risk. CFA Research Institute, Jan 2020
- [14] M. Pal, [3N] model of life, SSRN, Apr 2021
- [15] M. Pal, The S&P 500 Myth, SSRN, Jul 2022
- [16] M. Pal, The Snowball Effect, SSRN, Jul 2022
- [17] M. Pal, Mechanisms of Psychology, SSRN, Jun 2022
- [18] M. Pal, The [3N] model of life, SSRN, Feb 2023

AlphaBlock Research:

Ciprian Tiric, MSc. Artificial Intelligence

ciprian.tiric@alphablock.org

Patricia Ratiu, MSc. Finance

patricia@alphablock.org

Florina Pal, MSc. Computer Science

florina@alphablock.org

Bianca Bradea, BSc. Finance

bianca.bradea@alphablock.org

Mukul Pal, CAIA

mukul@alphablock.org

David Masculic, CFA

david@alphablock.org

Visit our GitHub repository:



contact@alphablock.org

CONFIDENTIALITY NOTICE: The information contained in this communication is intended solely for the use of the individual or entity to whom it is addressed and others authorized to receive it, It may contain confidential or legally privileged information. If you are not the intended recipient you are hereby notified that any disclosure, copying, distribution or taking any action in reliance on the contents of this information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately by responding to this email and then delete it from your system. We are neither liable for the proper and complete transmission of the information contained in this communication nor for any delay in its receipt.