

AI_in_Finance_1

August 26, 2024

1 AI in Finance Assignment 1

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1.1.1 Data Merging

(17721968, 19)

1.1.2 Data Cleaning & Processing

1.1.3 Descriptive Statistics

- Mean
- 25th percentile
- 50th percentile (Median)
- 75th percentile
- standard deviation

Descriptive Statistics for Stocks

	LitVol	OrderVol	Hidden	TradesForHidden	HiddenVol	\
mean	5.379637e+05	1.870332e+07	968.831828	5738.491751	99722.754827	
25%	2.019300e+04	8.758220e+05	57.000000	279.000000	5034.000000	
50%	1.009490e+05	4.079547e+06	256.000000	1571.000000	21979.000000	
75%	3.753650e+05	1.366474e+07	901.000000	5644.000000	76615.000000	
std	2.031089e+06	6.107317e+07	3141.077006	14878.428159	422786.510328	

	TradeVolForHidden	Cancels	LitTrades	OddLots	\
mean	6.214294e+08	89876.500206	4625.565455	2571.344112	
25%	2.625300e+07	4830.000000	196.000000	100.000000	
50%	1.238790e+08	25686.000000	1222.000000	595.000000	
75%	4.470640e+08	83831.000000	4447.000000	2433.000000	
std	2.344103e+09	234406.201528	12060.150218	8112.504700	

	Trades	OddLotVol	TradeVol	Cancel-to-Trade	\
mean	10364.057206	71143.096822	6.219674e+08	59.515336	
25%	477.000000	3016.000000	2.627380e+07	14.094611	
50%	2799.000000	18732.000000	1.239826e+08	20.436508	
75%	10106.000000	68769.000000	4.474406e+08	32.000000	
std	26882.353202	208129.748576	2.346115e+09	1082.076691	

	Trade-to-Order-Volume	Hidden_rate	Hidden_volume	Oddlot_volume	\
mean	3.252069	21.155762	0.021258	20.992803	
25%	1.489190	11.180680	0.011533	7.418823	
50%	2.536912	17.775906	0.017875	16.105256	
75%	4.037126	27.586207	0.027587	30.024331	
std	3.419594	14.064637	0.015124	18.255843	

	Oddlot_rate
mean	46.755594
25%	25.428700
50%	44.008506
75%	67.853102
std	25.761093

Descriptive Statistics for ETP/ETFs

	LitVol	OrderVol	Hidden	TradesForHidden	HiddenVol	\
mean	4.112432e+05	1.443204e+08	239.492621	2190.921340	52304.109495	
25%	7.000000e+02	3.963824e+06	2.000000	11.000000	129.000000	
50%	4.300000e+03	1.757742e+07	13.000000	49.000000	1498.000000	
75%	3.658500e+04	7.624540e+07	72.000000	336.000000	10765.000000	
std	2.753552e+06	7.214115e+08	1329.200033	15352.812214	328014.574832	

	TradeVolForHidden	Cancel	LitTrades	OddLots	\
mean	4.616931e+08	194554.461882	1944.287536	603.484166	
25%	1.200000e+06	7553.000000	6.000000	3.000000	
50%	6.834000e+06	27280.000000	31.000000	14.000000	
75%	5.084100e+07	115910.000000	246.000000	101.000000	
std	3.024160e+09	773977.252080	14112.132908	5931.143390	

	Trades	OddLotVol	TradeVol	Cancel-to-Trade	\
mean	4135.208876	18471.576047	4.621043e+08	3327.863218	
25%	18.000000	90.000000	1.201200e+06	165.938731	
50%	81.000000	407.000000	6.838031e+06	621.661538	
75%	584.000000	2981.000000	5.087718e+07	2346.333333	
std	29458.920843	167671.072572	3.026909e+09	12148.915008	

	Trade-to-Order-Volume	Hidden_rate	Hidden_volume	Oddlot_volume	\
mean	0.264999	25.961694	0.025651	15.196920	
25%	0.007000	6.273946	0.004190	2.065217	
50%	0.037036	19.401398	0.016101	6.287417	
75%	0.177051	41.000000	0.041237	16.143911	
std	1.015612	23.879833	0.026322	23.942272	

	Oddlot_rate
mean	36.965304
25%	14.814815

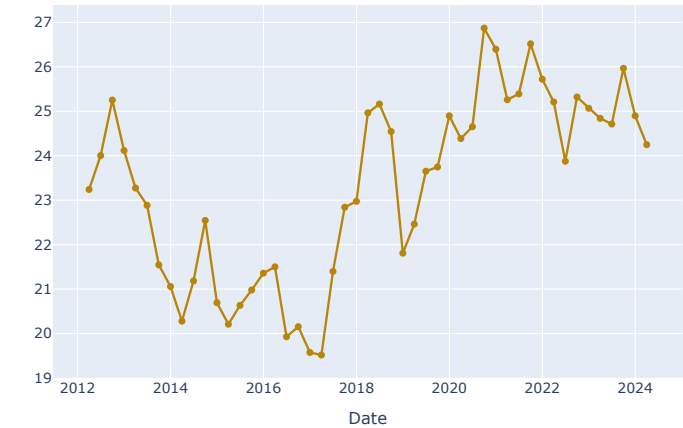
50%	30.928765
75%	53.921569
std	27.743563

1.1.4 Exploratory Data Analysis

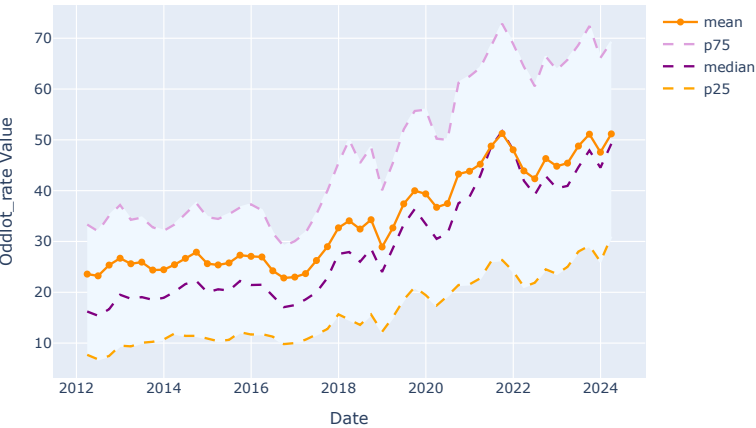
Stock Analysis

ETP/ETFs Analysis

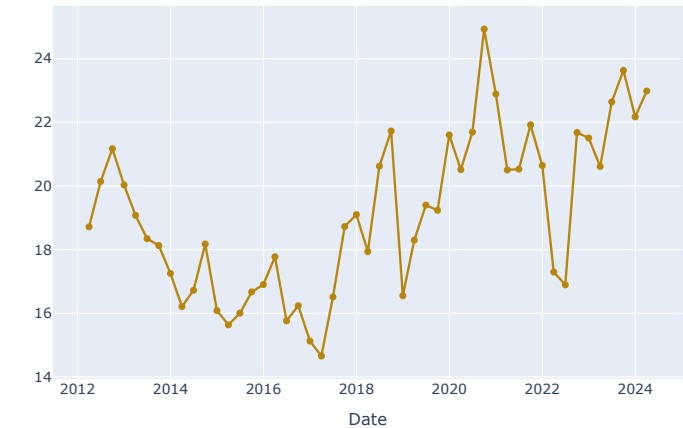
ETF Oddlot_rate Std.Dev



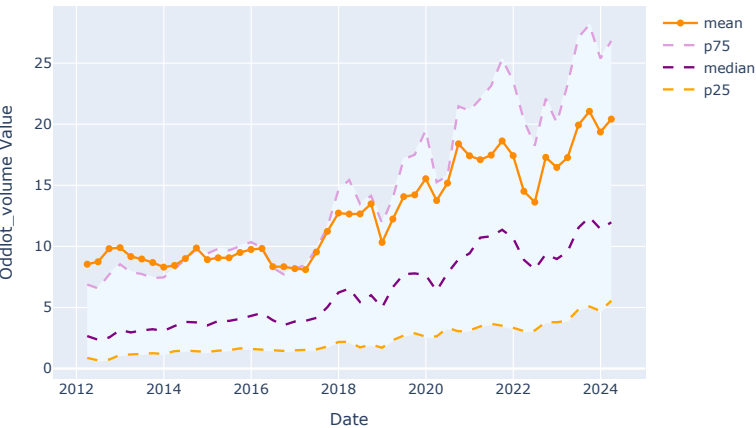
ETF Oddlot_rate Statistics



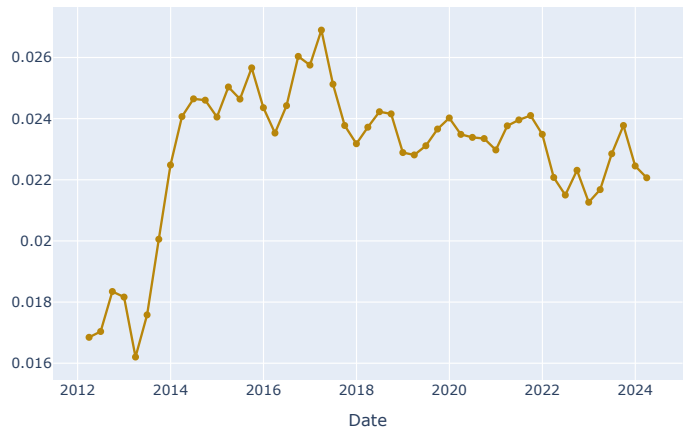
ETF Oddlot_volume Std.Dev



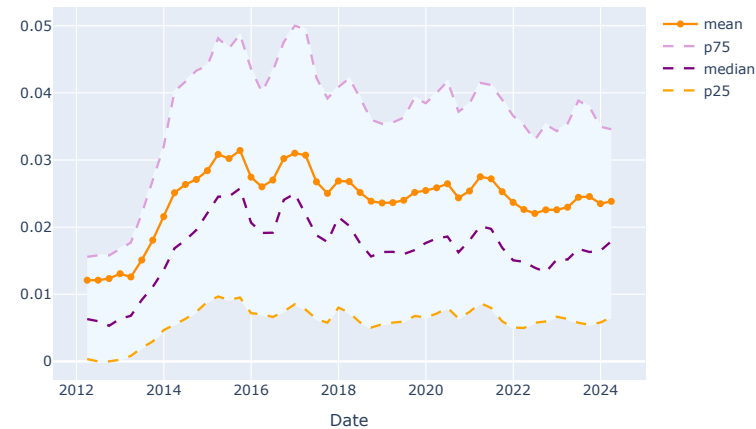
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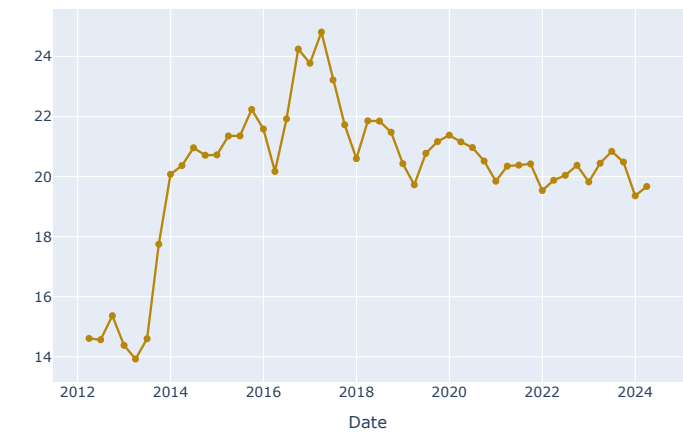
ETF Hidden_volume Std.Dev



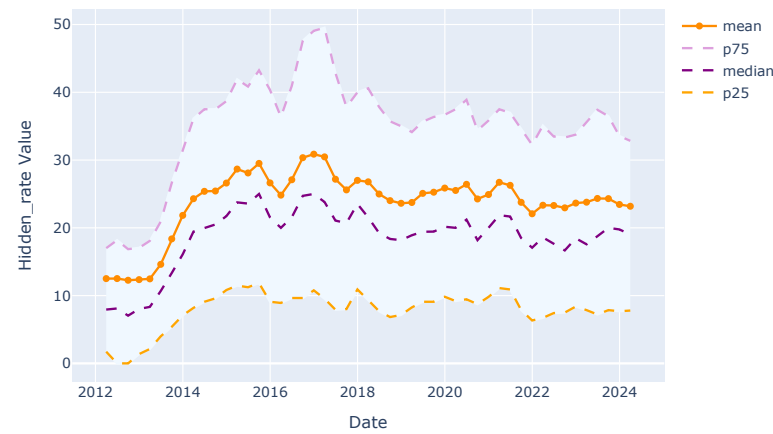
ETF Hidden_volume Statistics



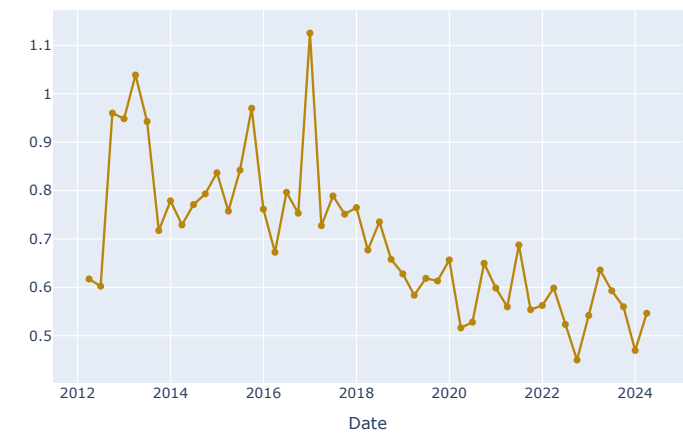
ETF Hidden_rate Std.Dev



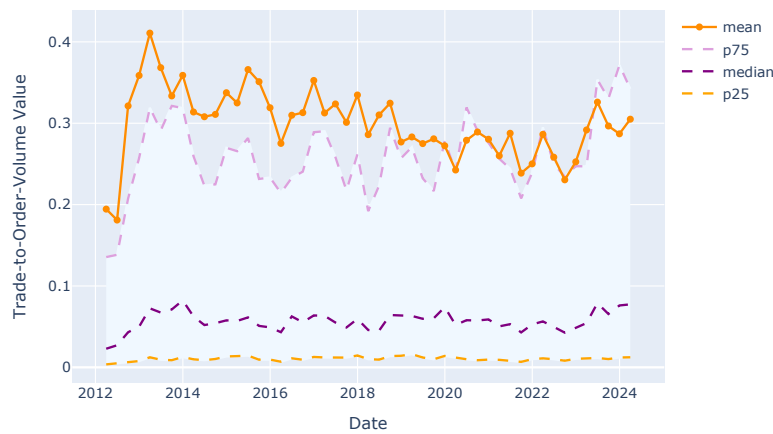
ETF Hidden_rate Statistics



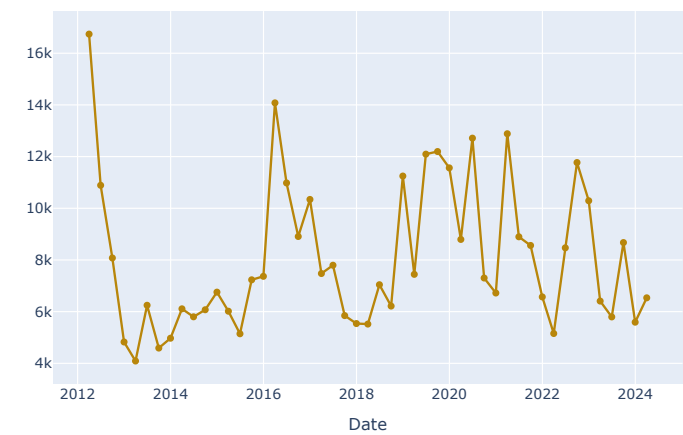
ETF Trade-to-Order-Volume Std.Dev



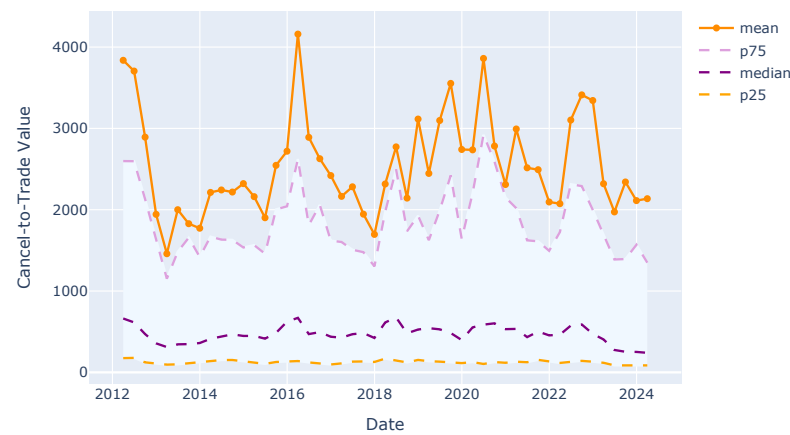
ETF Trade-to-Order-Volume Statistics



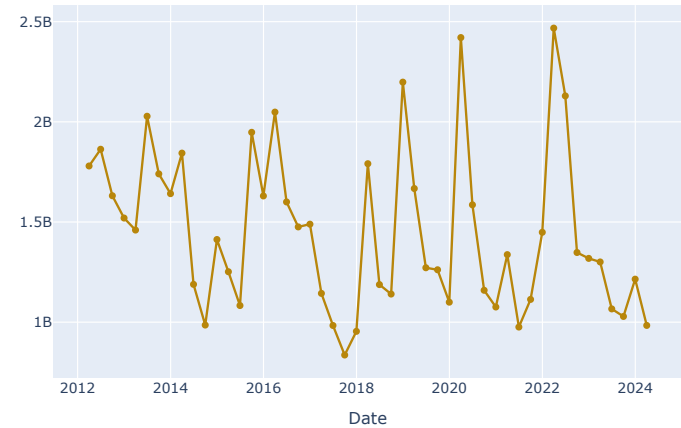
ETF Cancel-to-Trade Std.Dev



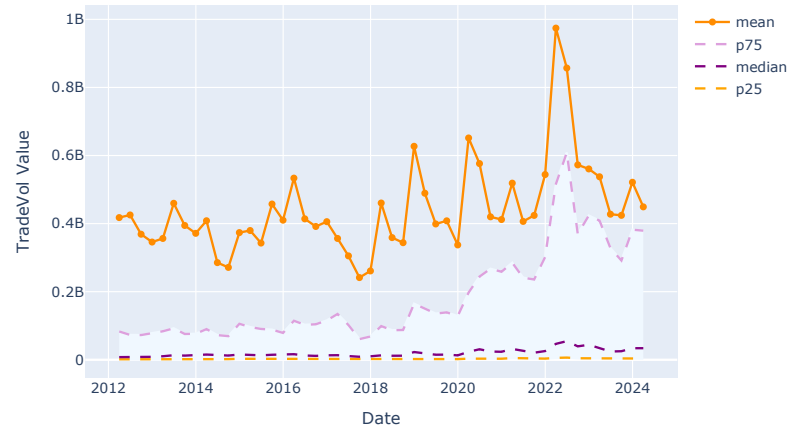
ETF Cancel-to-Trade Statistics



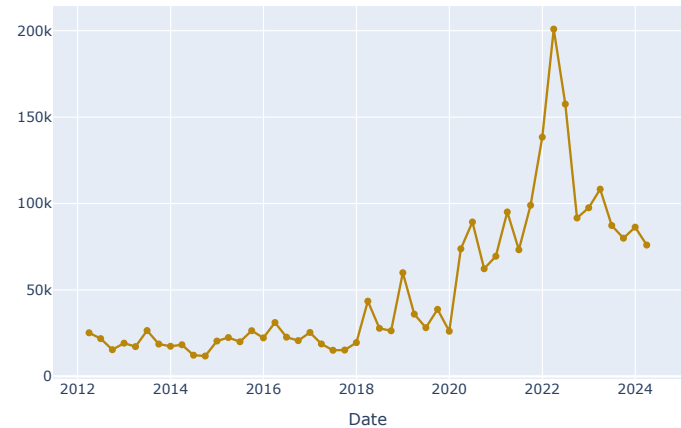
ETF TradeVol Std.Dev



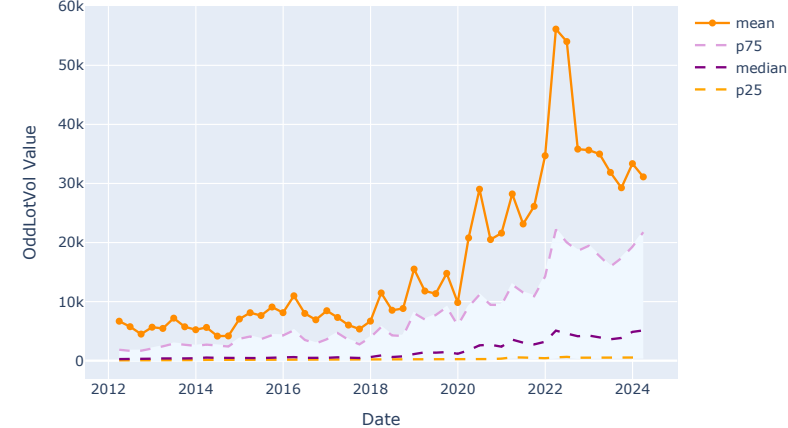
ETF TradeVol Statistics



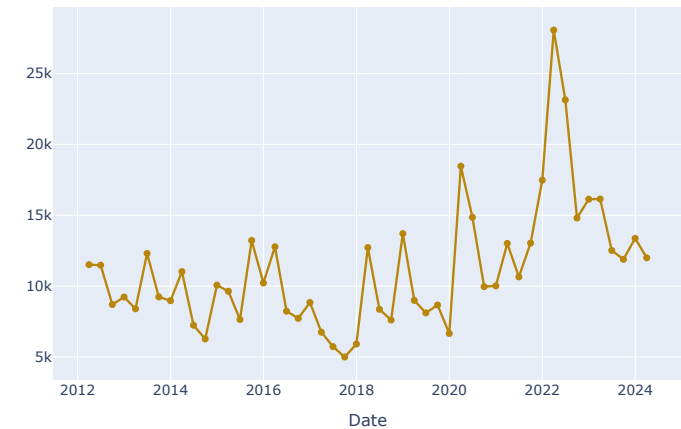
ETF OddLotVol Std.Dev



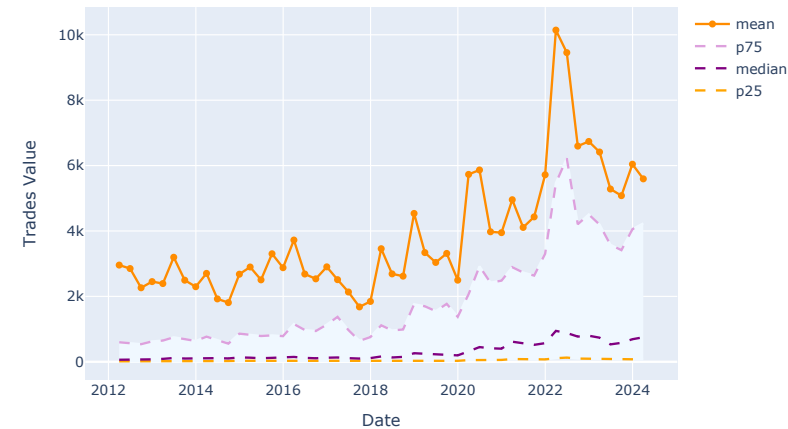
ETF OddLotVol Statistics



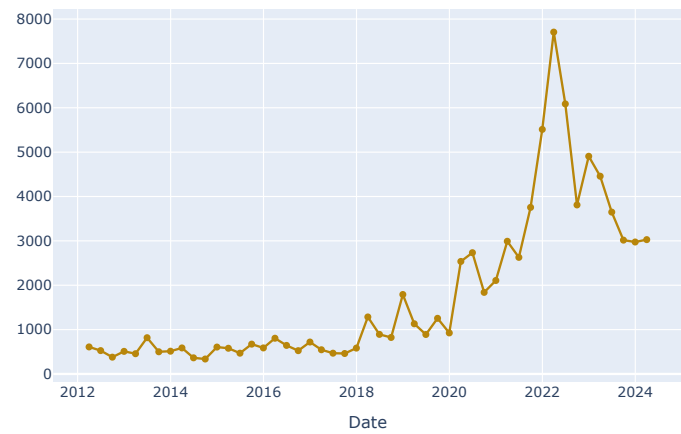
ETF Trades Std.Dev



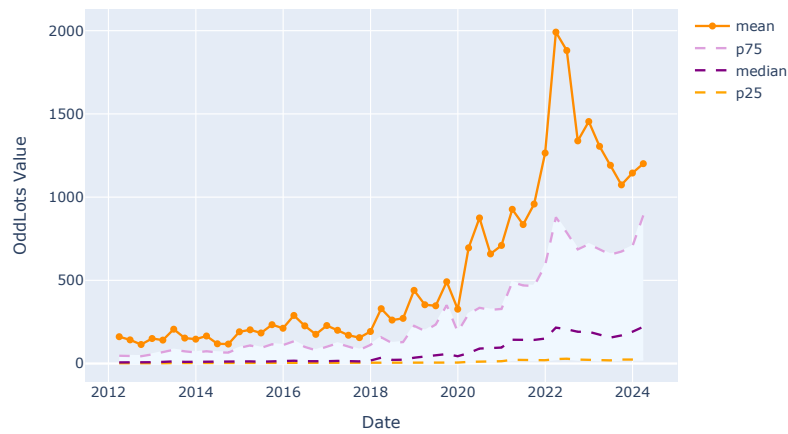
ETF Trades Statistics



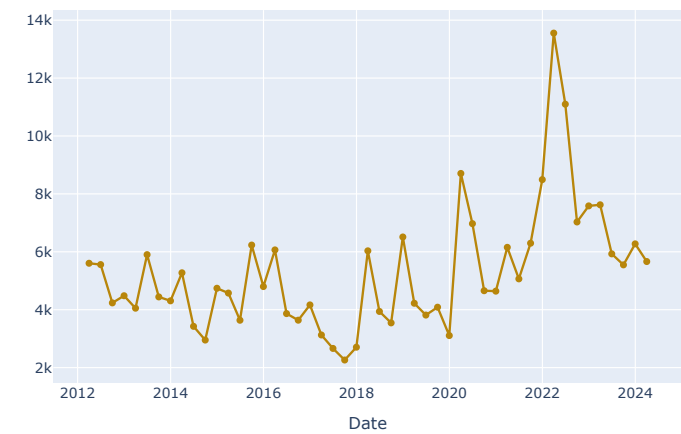
ETF OddLots Std.Dev



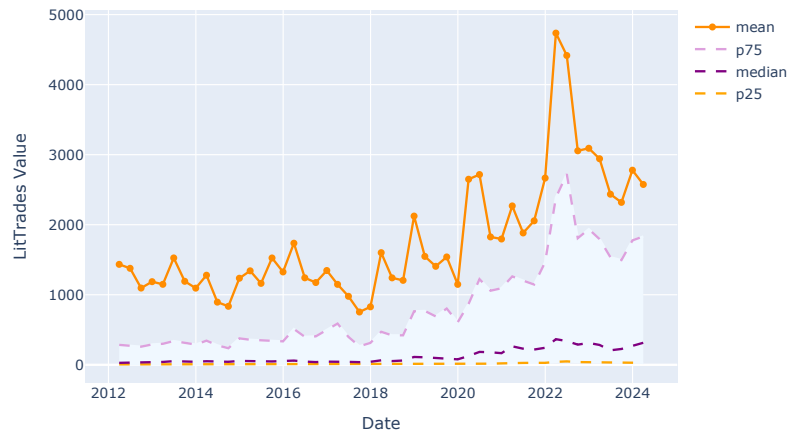
ETF OddLots Statistics



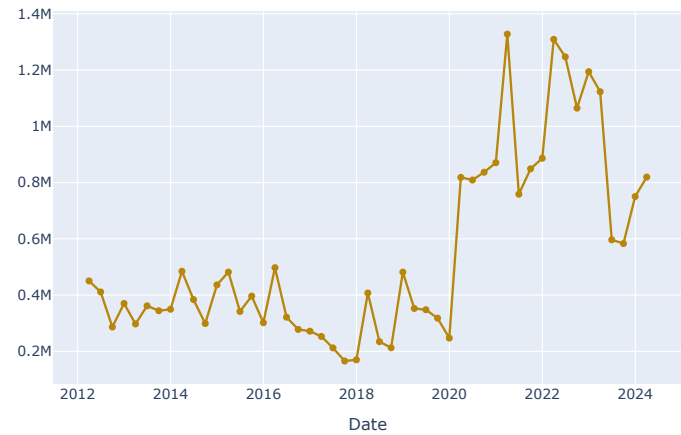
ETF LitTrades Std.Dev



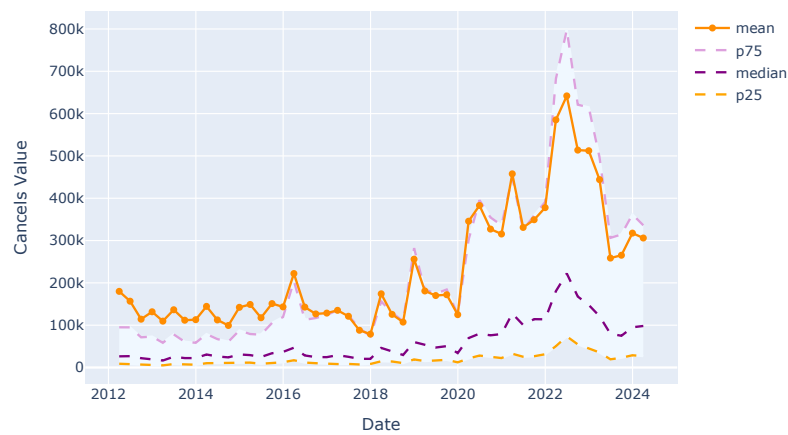
ETF LitTrades Statistics



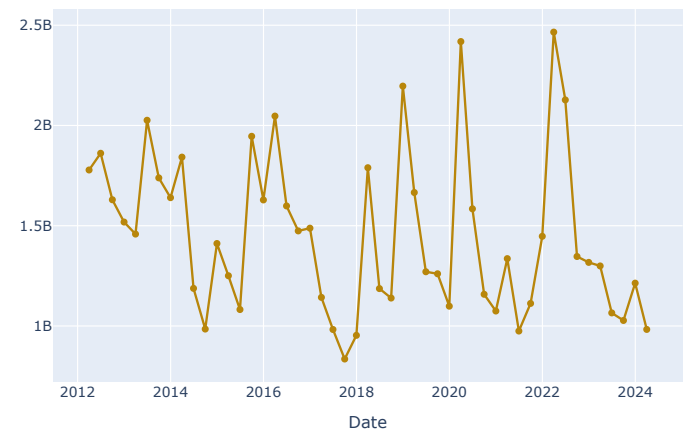
ETF Cancels Std.Dev



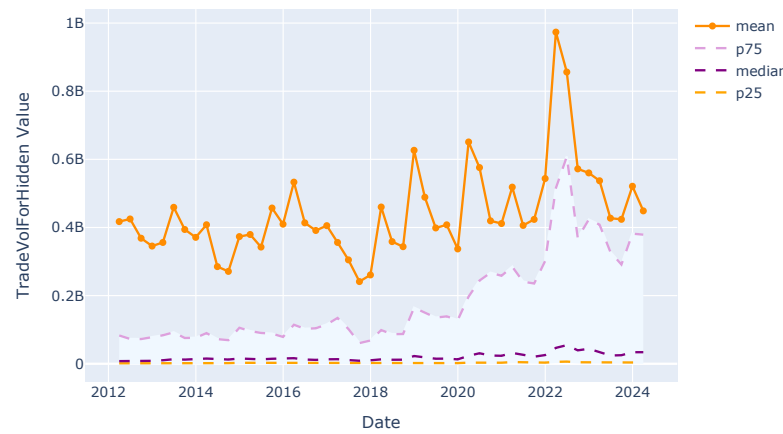
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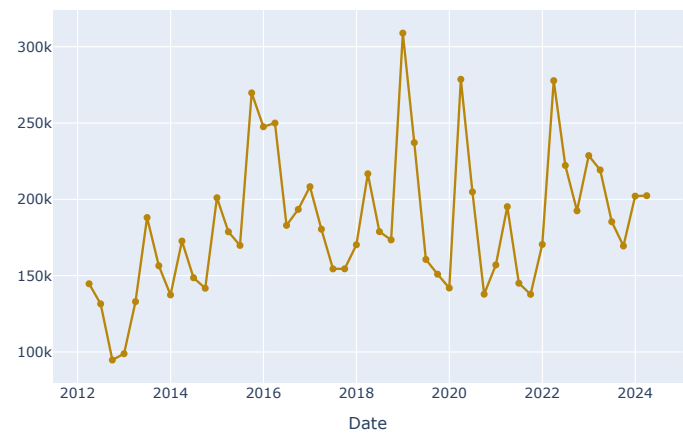
ETF TradeVolForHidden Std.Dev



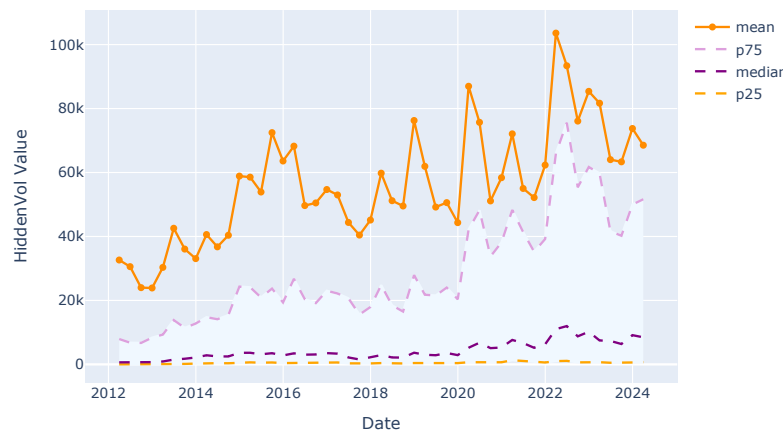
ETF TradeVolForHidden Statistics



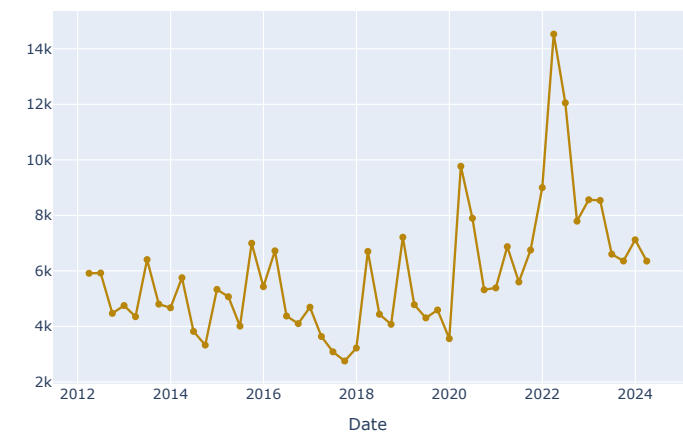
ETF HiddenVol Std.Dev



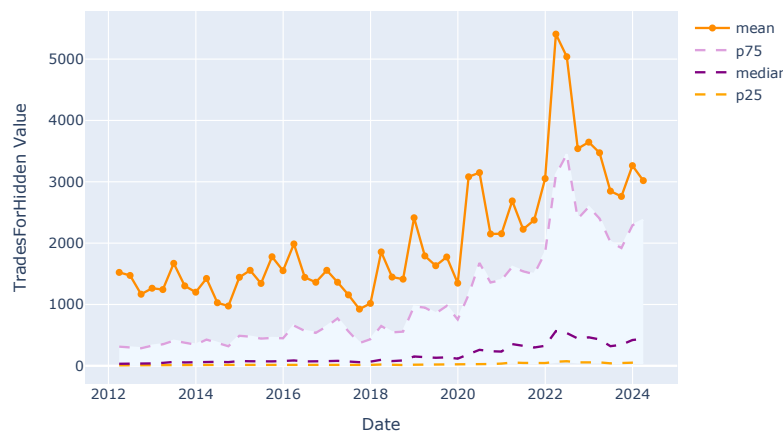
ETF HiddenVol Statistics



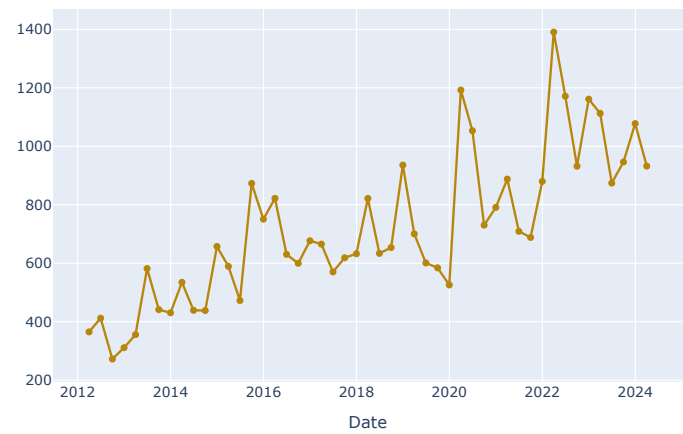
ETF TradesForHidden Std.Dev



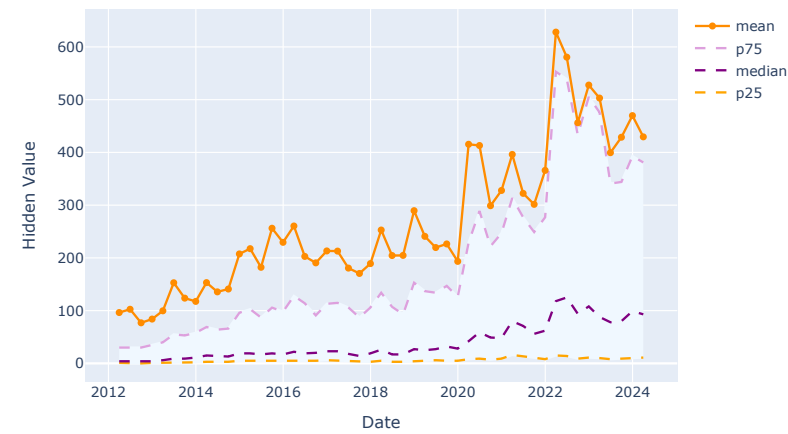
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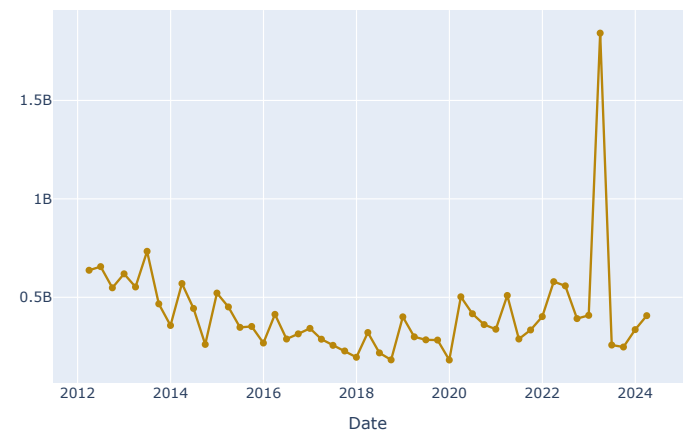
ETF Hidden Std.Dev



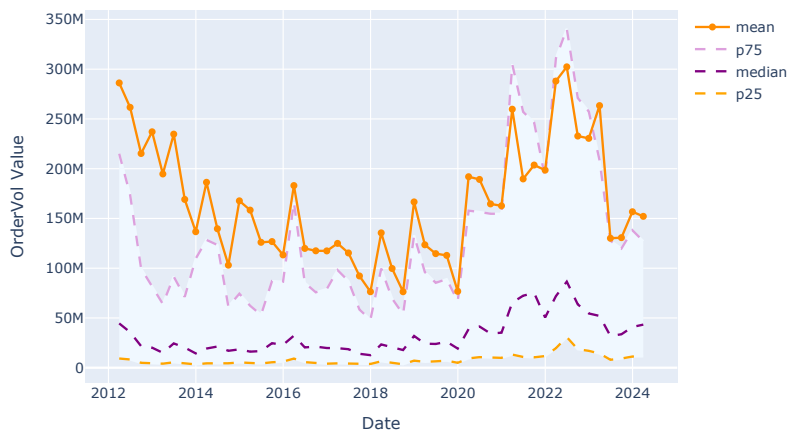
ETF Hidden Statistics



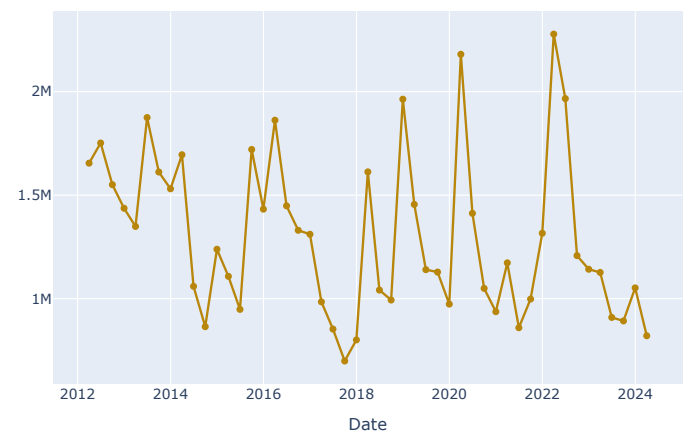
ETF OrderVol Std.Dev



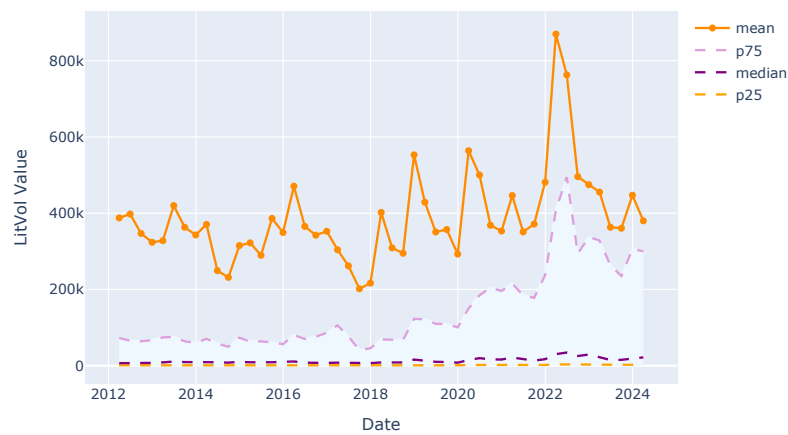
ETF OrderVol Statistics



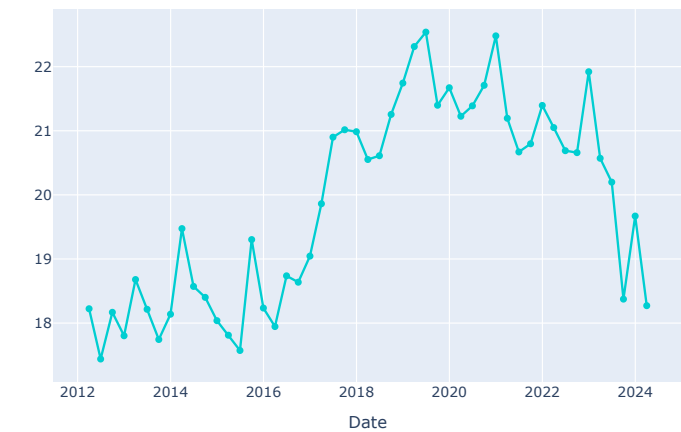
ETF LitVol Std.Dev



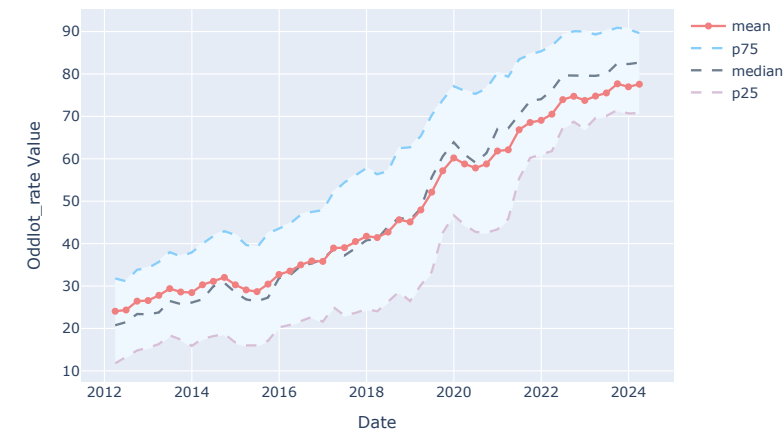
ETF LitVol Statistics



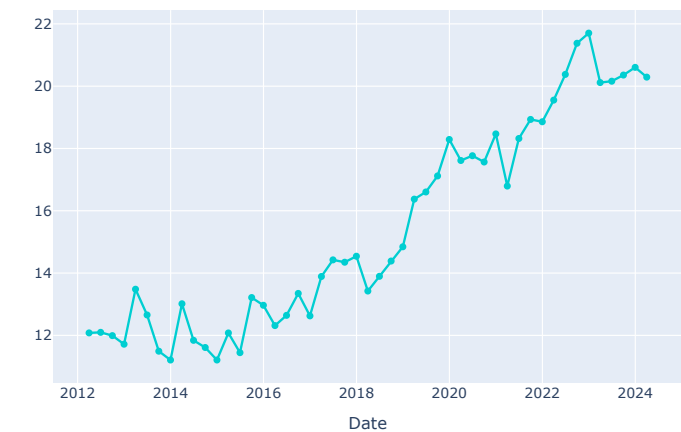
Stock Oddlot_rate Std.Dev



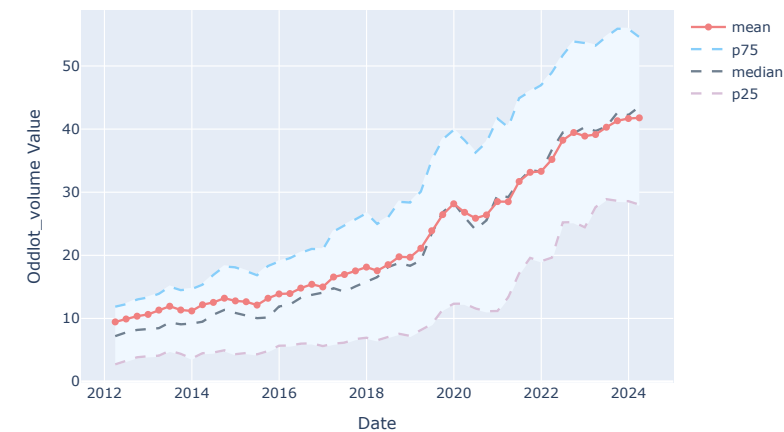
Stock Oddlot_rate Statistics



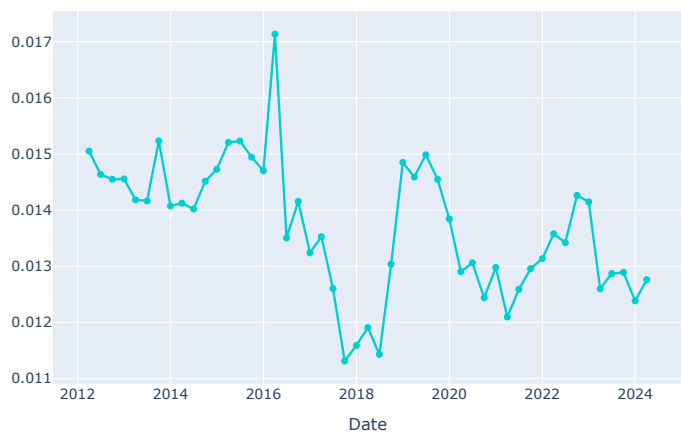
Stock Oddlot_volume Std.Dev



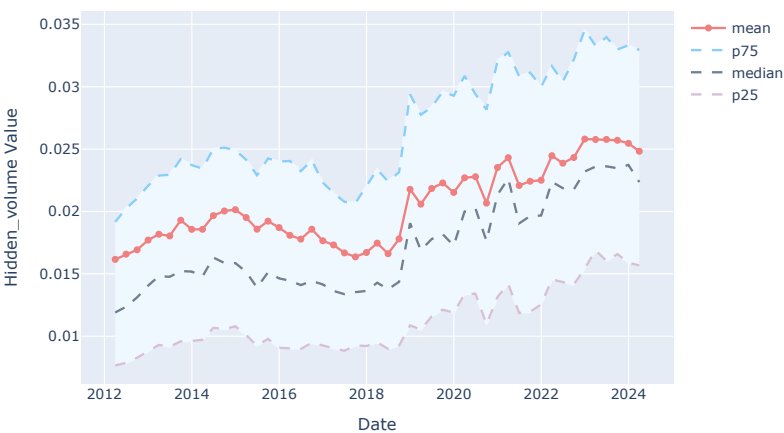
Stock Oddlot_volume Statistics



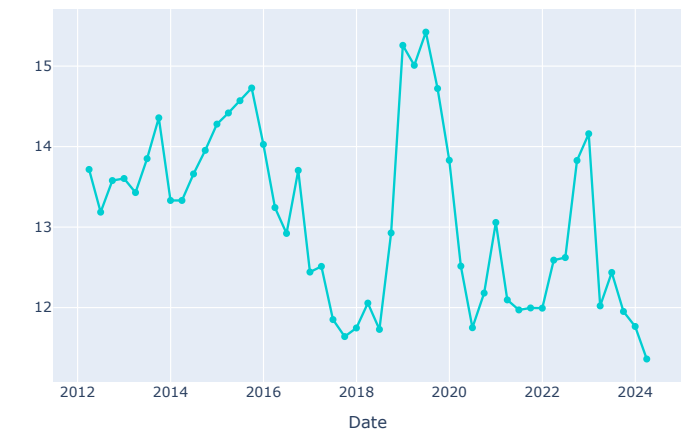
Stock Hidden_volume Std.Dev



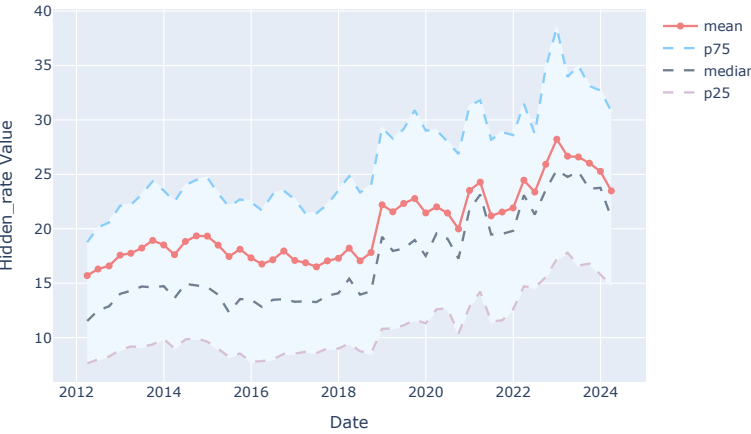
Stock Hidden_volume Statistics



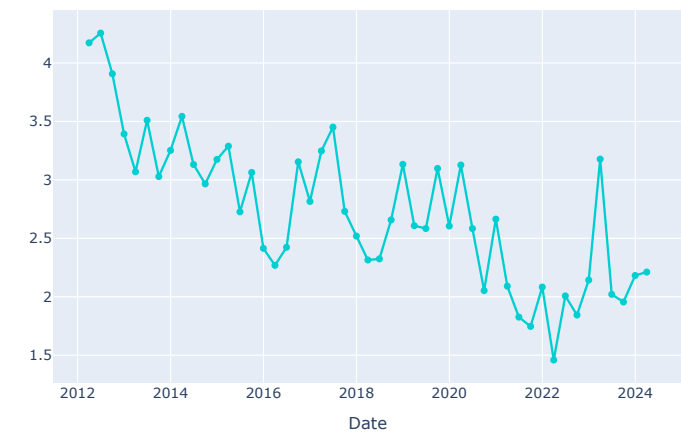
Stock Hidden_rate Std.Dev



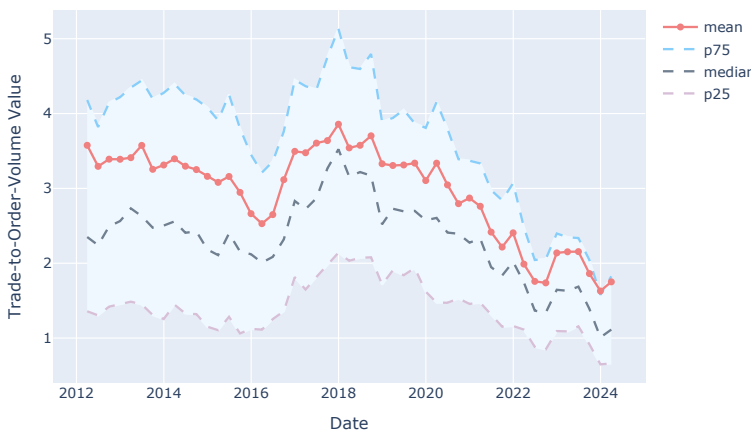
Stock Hidden_rate Statistics



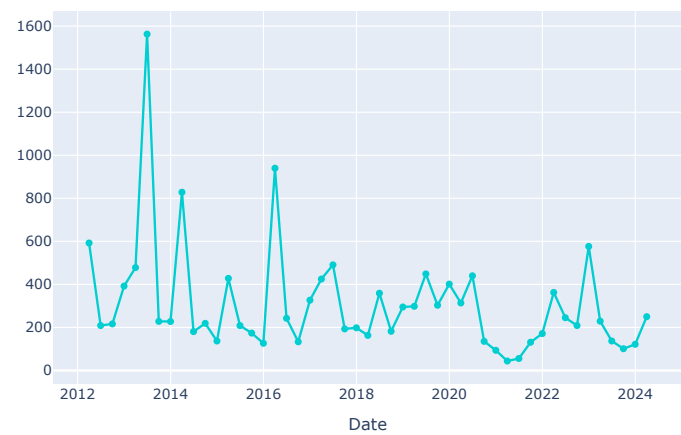
Stock Trade-to-Order-Volume Std.Dev



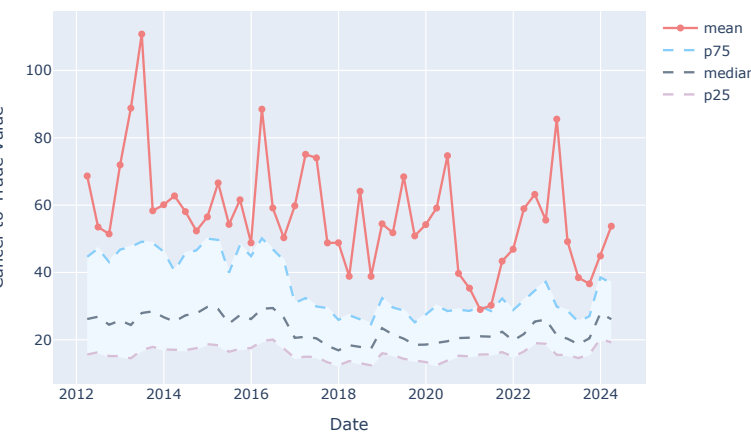
Stock Trade-to-Order-Volume Statistics



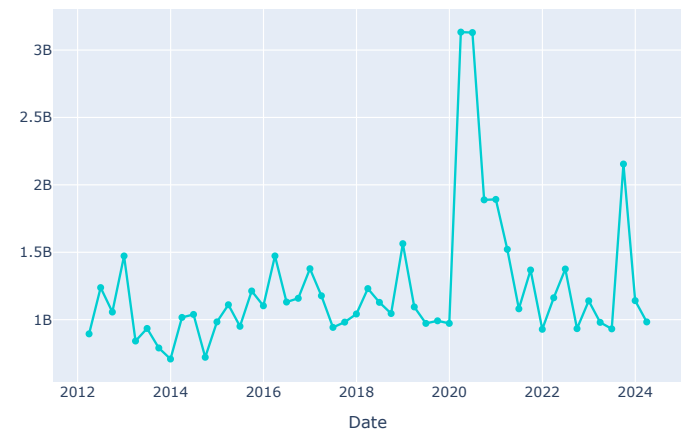
Stock Cancel-to-Trade Std.Dev



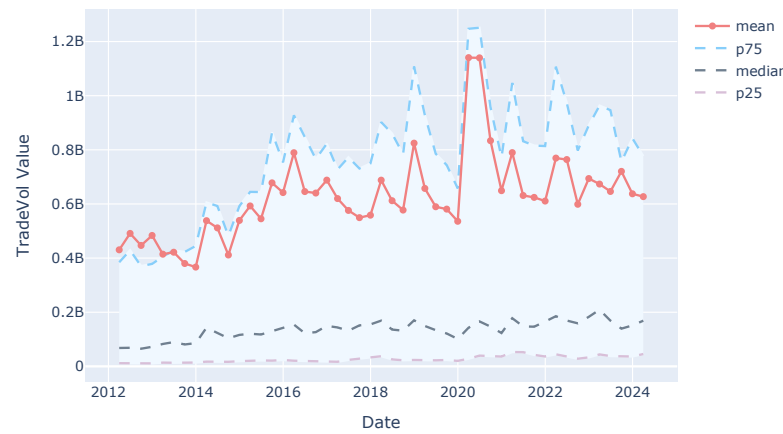
Stock Cancel-to-Trade Statistics



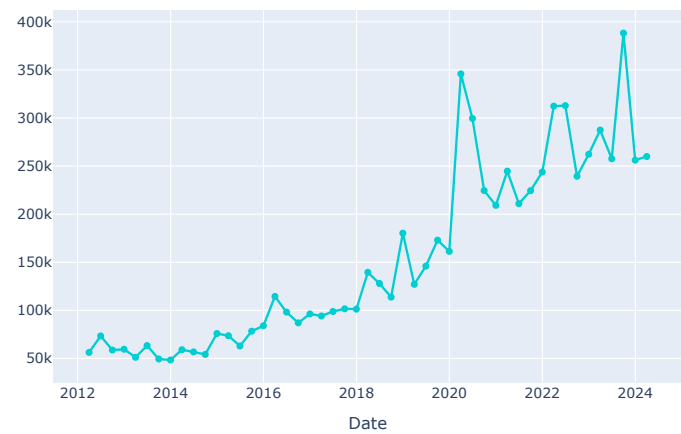
Stock TradeVol Std.Dev



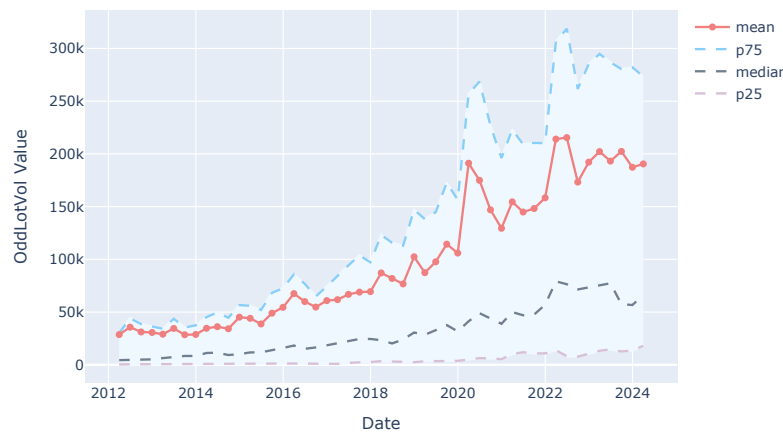
Stock TradeVol Statistics



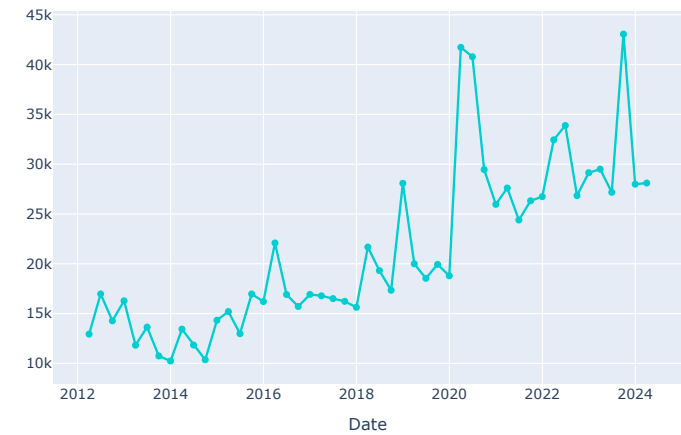
Stock OddLotVol Std.Dev



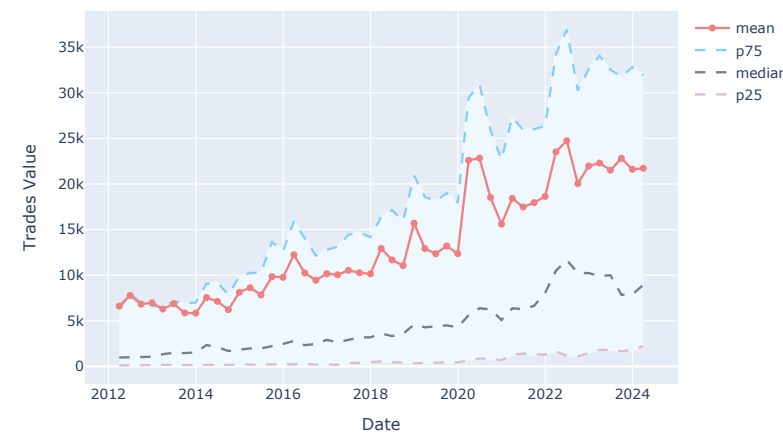
Stock OddLotVol Statistics



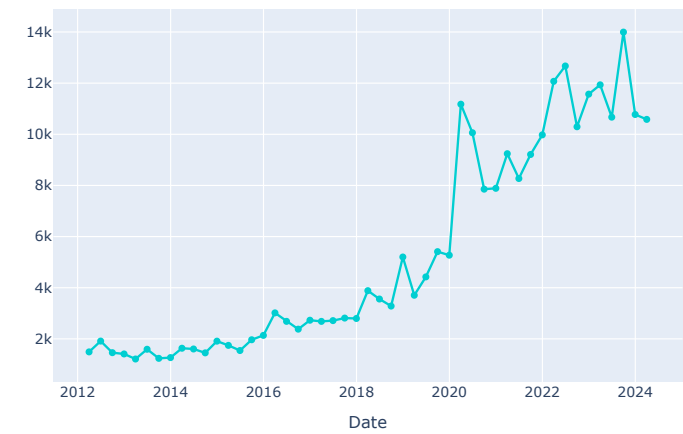
Stock Trades Std.Dev



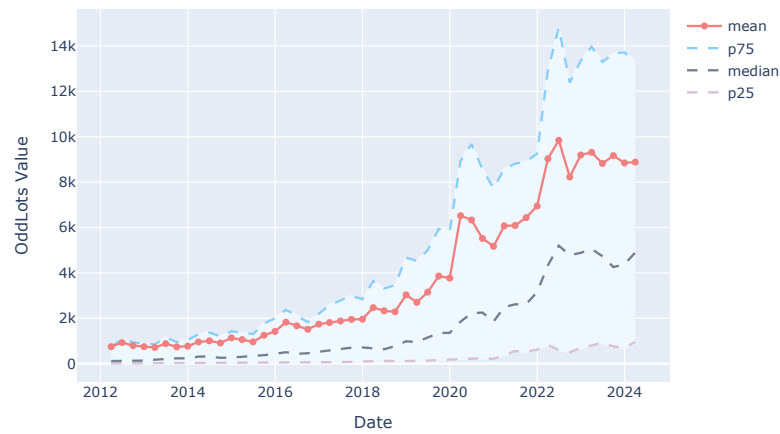
Stock Trades Statistics



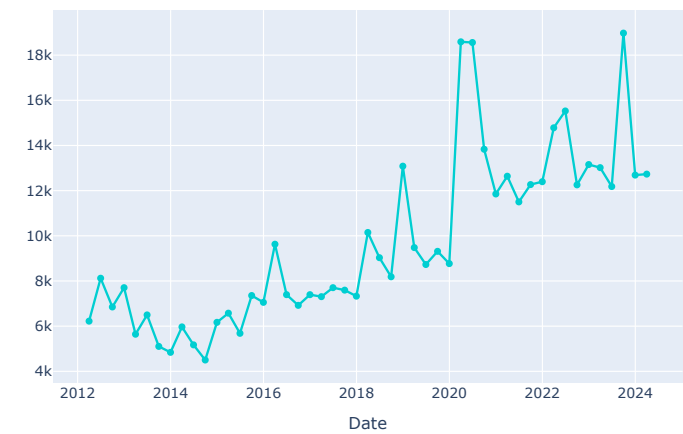
Stock OddLots Std.Dev



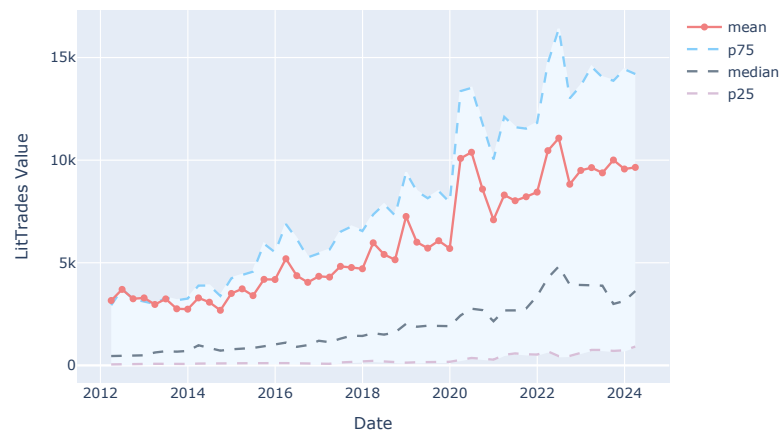
Stock OddLots Statistics



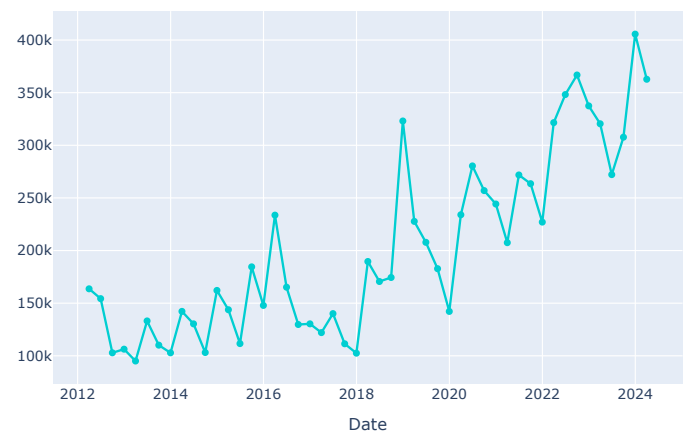
Stock LitTrades Std.Dev



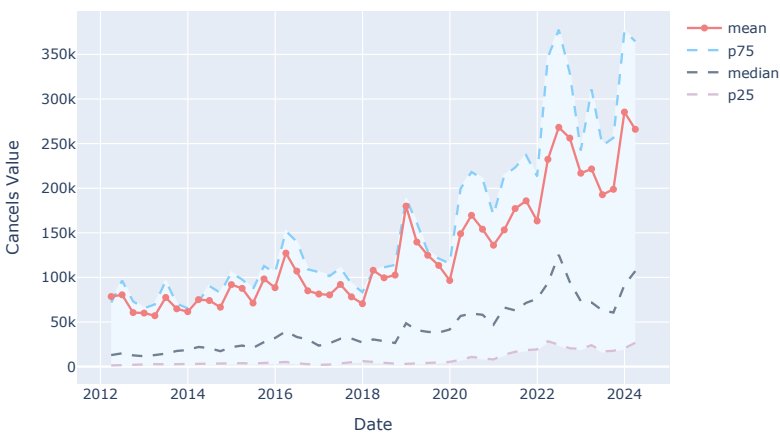
Stock LitTrades Statistics



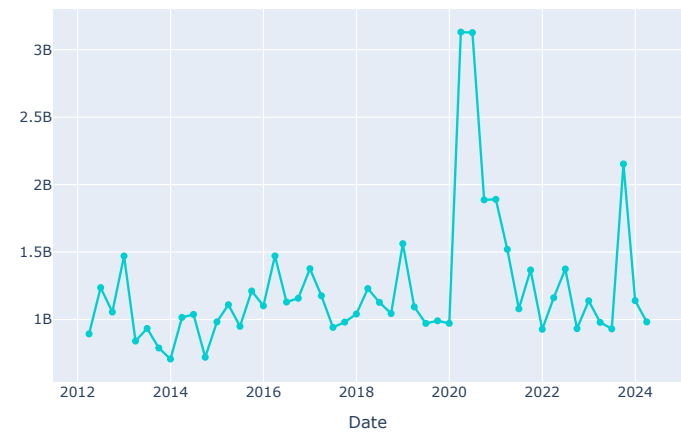
Stock Cancels Std.Dev



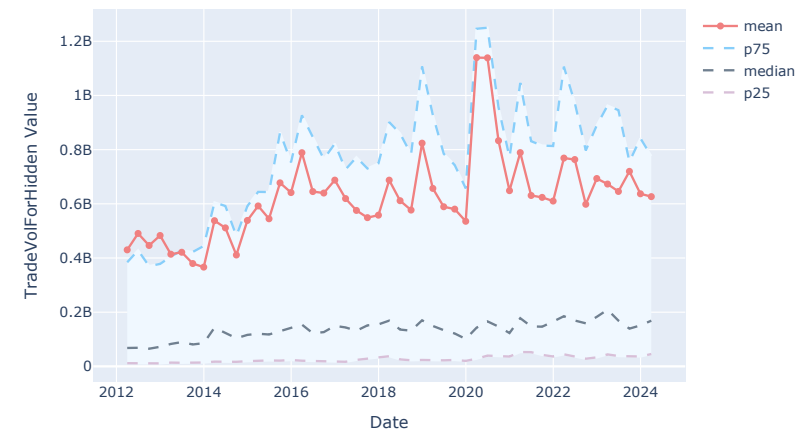
Stock Cancels Statistics



Stock TradeVolForHidden Std.Dev

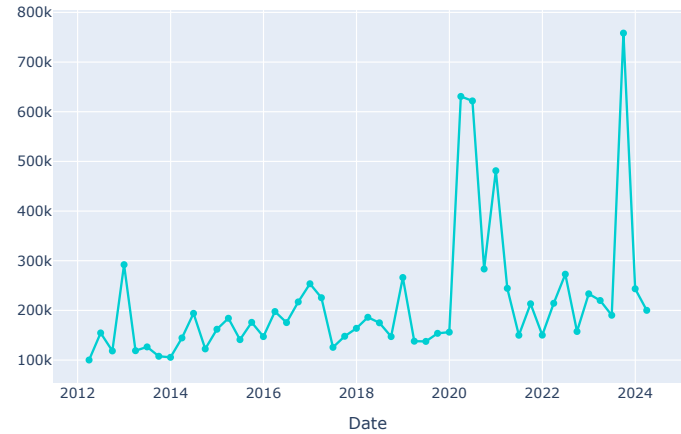


Stock TradeVolForHidden Statistics

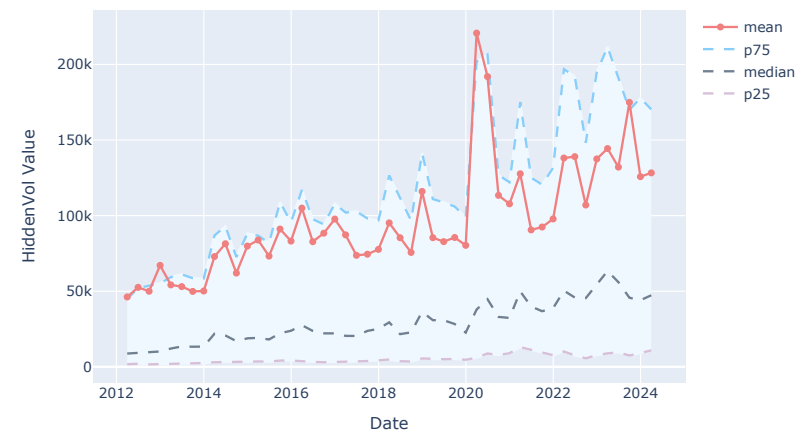


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Stock HiddenVol Std.Dev

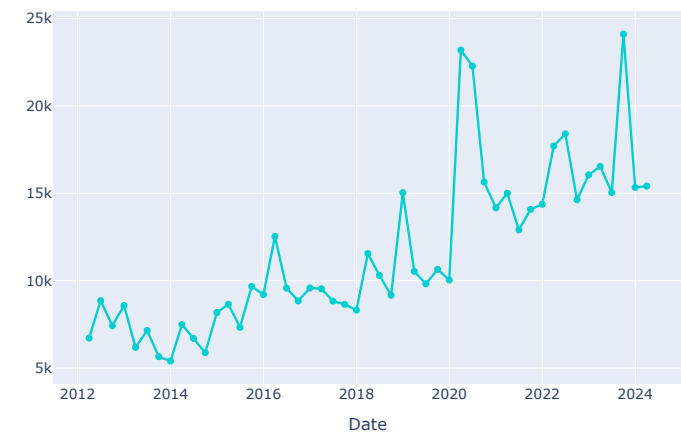


Stock HiddenVol Statistics

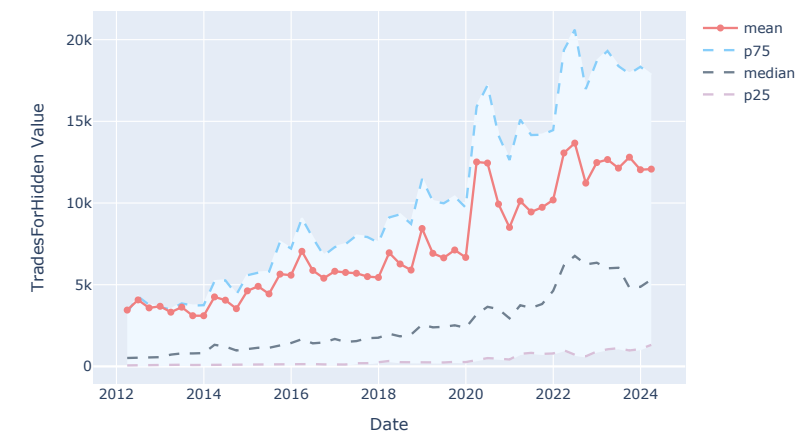


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Stock TradesForHidden Std.Dev

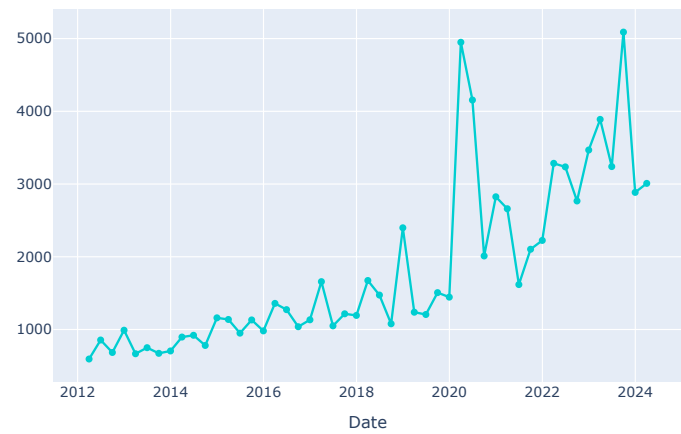


Stock TradesForHidden Statistics



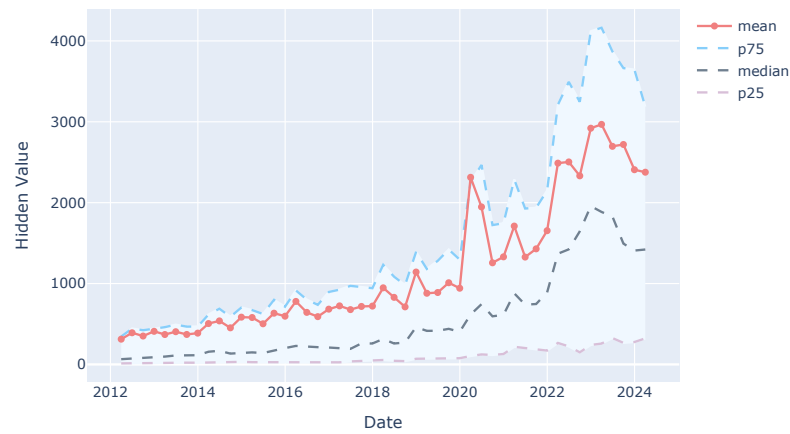
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Stock Hidden Std.Dev



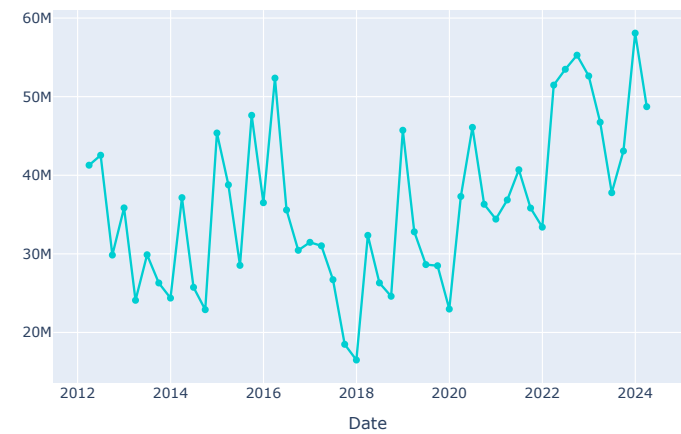
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Stock Hidden Statistics



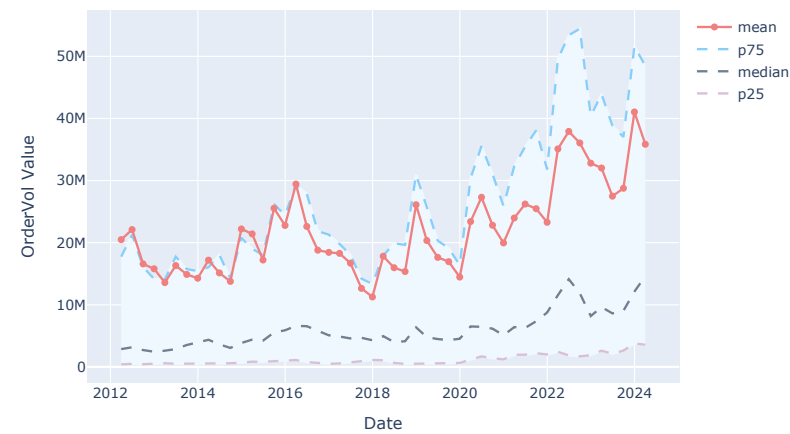
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Stock OrderVol Std.Dev



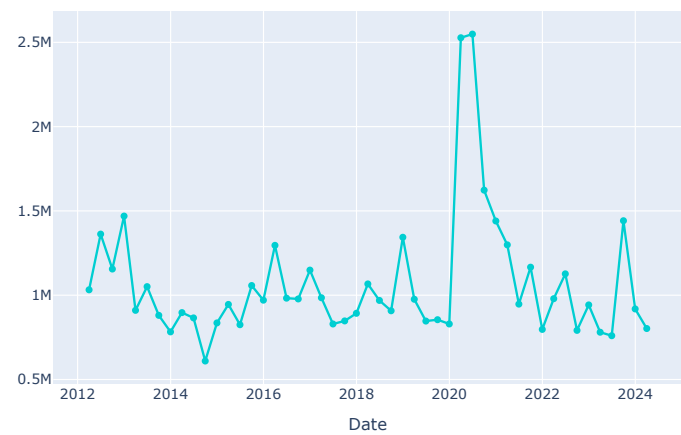
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Stock OrderVol Statistics



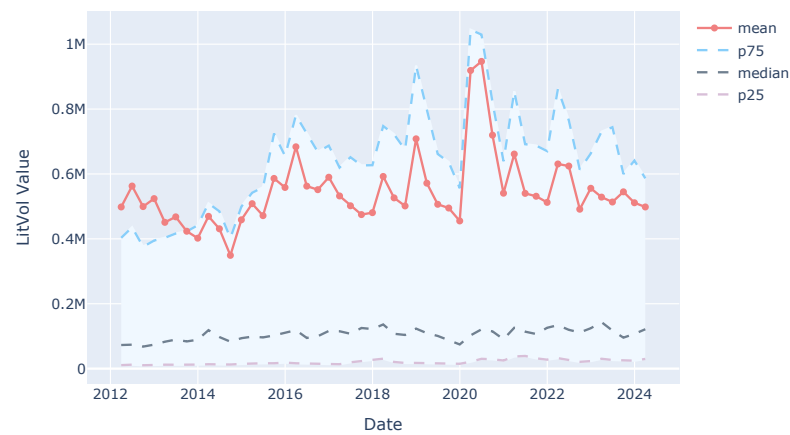
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Stock LitVol Std.Dev



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Stock LitVol Statistics



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