

EDA GARCH Model Report

Sheets: SPY, GLD, CL=F, PSX, VLO, MPC, EUR_USD

Generated automatically.

CL=F • Schema & Missingness

Variable	dtype	count	missing	missing_pct
Adj Close CL=F	float64	1793	0	0.0
Close CL=F	float64	1793	0	0.0
High CL=F	float64	1793	0	0.0
Low CL=F	float64	1793	0	0.0
Open CL=F	float64	1793	0	0.0
Volume CL=F	int64	1793	0	0.0

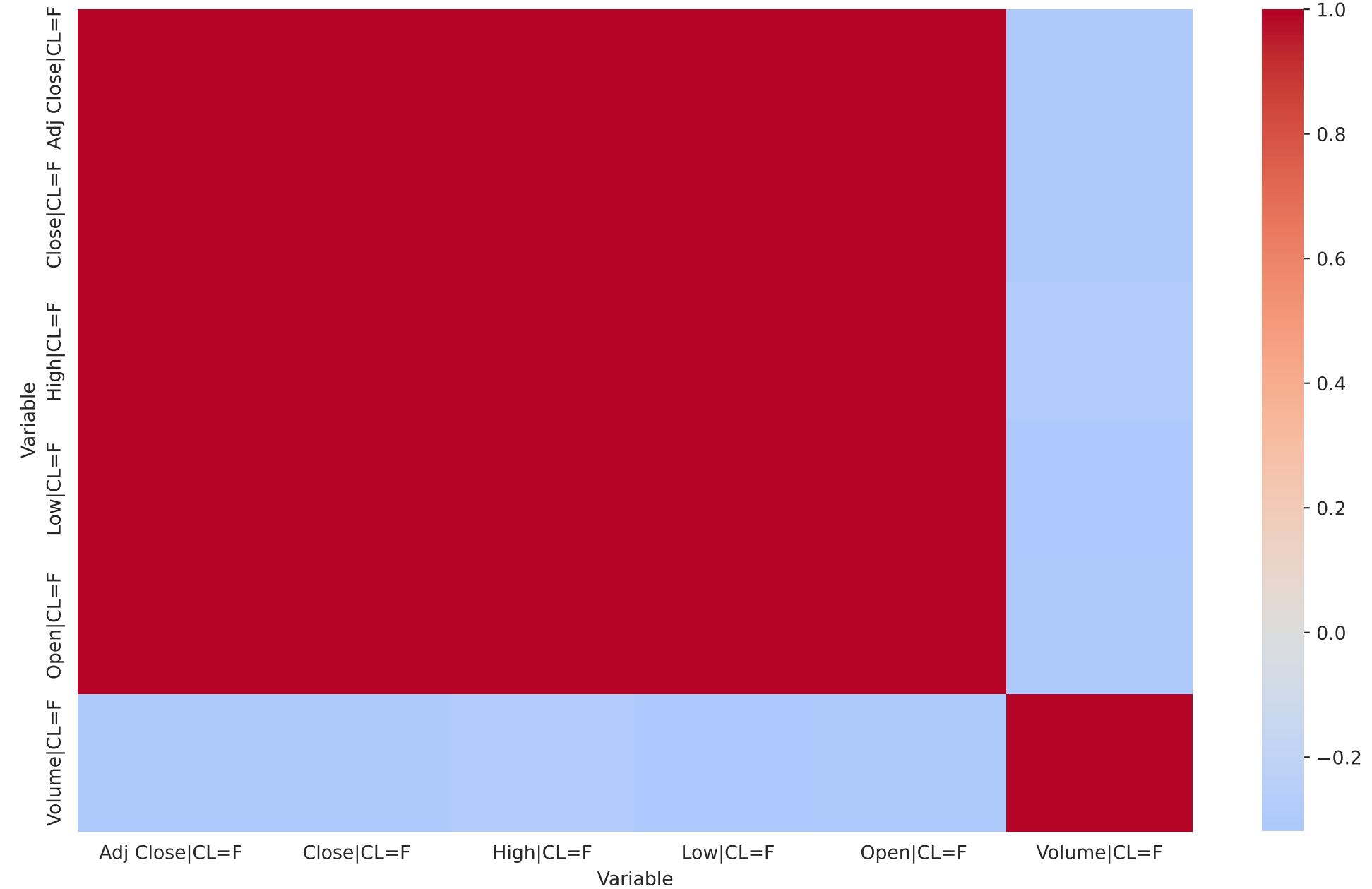
CL=F • Numeric Quality & Ranges

Variable	count	missing	missing_pct	zeros	negatives	infs	min	max	mean	std
Volume CL=F	1793	0	0.0	6	0	0	0.0	2288230.0	386041.42	198168.4901
High CL=F	1793	0	0.0	0	0	0	13.69	130.5	69.205	18.017
Adj Close CL=F	1793	0	0.0	0	1	0	-37.63	123.7	67.9744	17.8106
Close CL=F	1793	0	0.0	0	1	0	-37.63	123.7	67.9744	17.8106
Open CL=F	1793	0	0.0	0	1	0	-14.0	124.66	68.0192	17.7695
Low CL=F	1793	0	0.0	0	2	0	-40.32	120.79	66.7358	17.5547

CL=F • Describe

Variable	count	mean	std	min	25%	50%	75%	max
Adj Close CL=F	1793.0	67.9744	17.8106	-37.63	58.01	68.72	78.48	123.7
Close CL=F	1793.0	67.9744	17.8106	-37.63	58.01	68.72	78.48	123.7
High CL=F	1793.0	69.205	18.017	13.69	58.74	69.89	79.6	130.5
Low CL=F	1793.0	66.7358	17.5547	-40.32	57.2	67.71	77.25	120.79
Open CL=F	1793.0	68.0192	17.7695	-14.0	58.05	68.98	78.48	124.66
Volume CL=F	1793.0	386041.42	198168.4901	0.0	275331.0	345368.0	458006.0	2288230.0

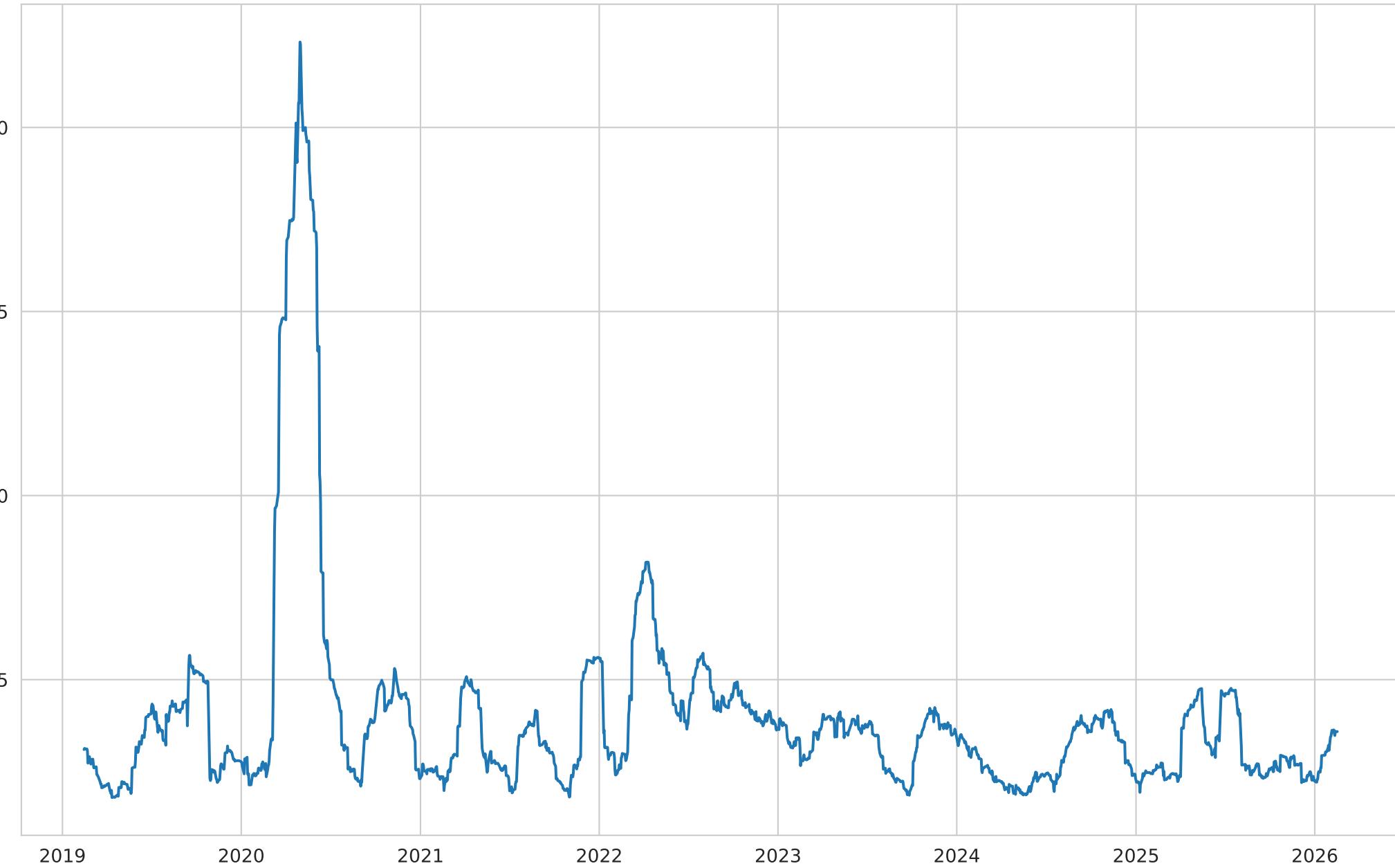
CL=F • Correlation



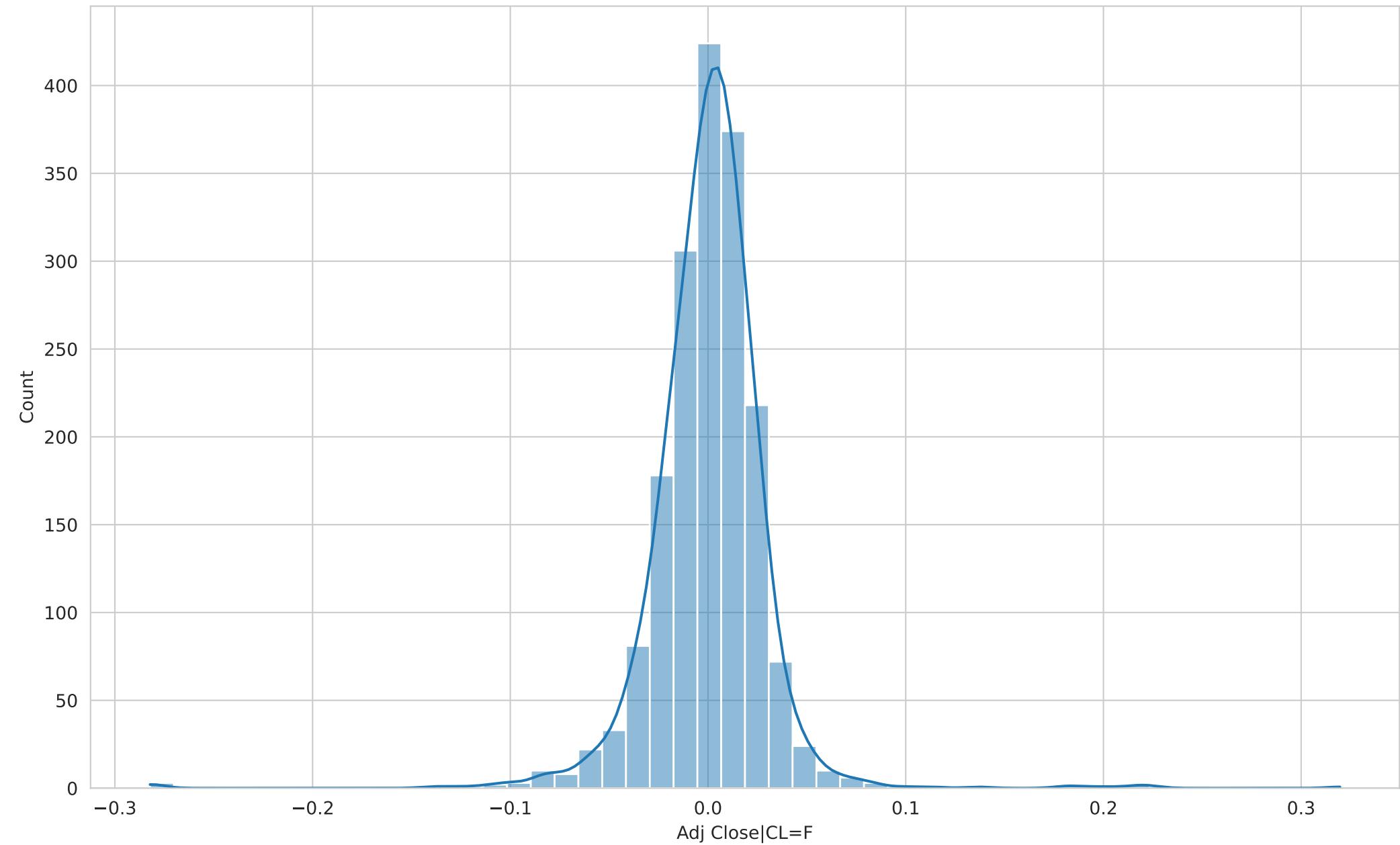
CL=F • Price (Adj Close|CL=F)



CL=F • 30D Volatility (ann.)



CL=F • Daily Log Returns



EUR_USD • Schema & Missingness

Variable	dtype	count	missing	missing_pct
Adj Close EURUSD=X	float64	1854	0	0.0
Close EURUSD=X	float64	1854	0	0.0
High EURUSD=X	float64	1854	0	0.0
Low EURUSD=X	float64	1854	0	0.0
Open EURUSD=X	float64	1854	0	0.0
Volume EURUSD=X	int64	1854	0	0.0

EUR_USD • Numeric Quality & Ranges

Variable	count	missing	missing_pct	zeros	negatives	infs	min	max	mean	std
Low EURUSD=X	1854	0	0.0	0	0	0	0.954	1.2267	1.111	0.054
Close EURUSD=X	1854	0	0.0	0	0	0	0.9596	1.2341	1.1144	0.0537
Close EURUSD=X	1854	0	0.0	0	0	0	0.9596	1.2341	1.1144	0.0537
Open EURUSD=X	1854	0	0.0	0	0	0	0.9596	1.2338	1.1144	0.0536
High EURUSD=X	1854	0	0.0	0	0	0	0.967	1.235	1.1176	0.0533
VOLUME EURUSD=X	1854	0	0.0	1854	0	0	0.0	0.0	0.0	0.0

EUR_USD • Describe

Variable	count	mean	std	min	25%	50%	75%	max
Close EURUSD=X	1854.0	1.1144	0.0537	0.9596	1.0803	1.1091	1.1599	1.2341
Close EURUSD=X	1854.0	1.1144	0.0537	0.9596	1.0803	1.1091	1.1599	1.2341
High EURUSD=X	1854.0	1.1176	0.0533	0.967	1.0838	1.1119	1.1621	1.235
Low EURUSD=X	1854.0	1.111	0.054	0.954	1.0776	1.1068	1.1568	1.2267
Open EURUSD=X	1854.0	1.1144	0.0536	0.9596	1.0802	1.1091	1.1599	1.2338
Volume EURUSD=X	1854.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

EUR_USD • Correlation

Adj Close|EURUSD=X

Close|EURUSD=X

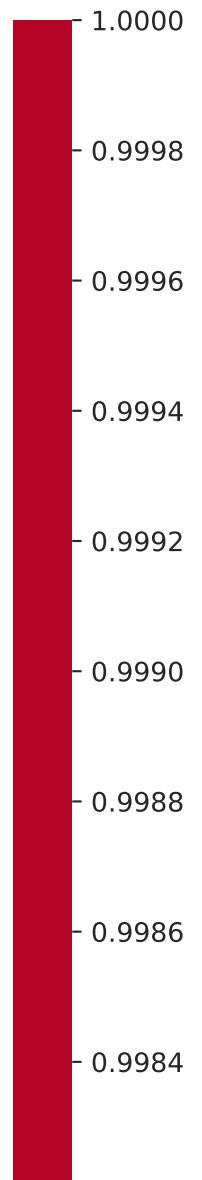
High|EURUSD=X

Low|EURUSD=X

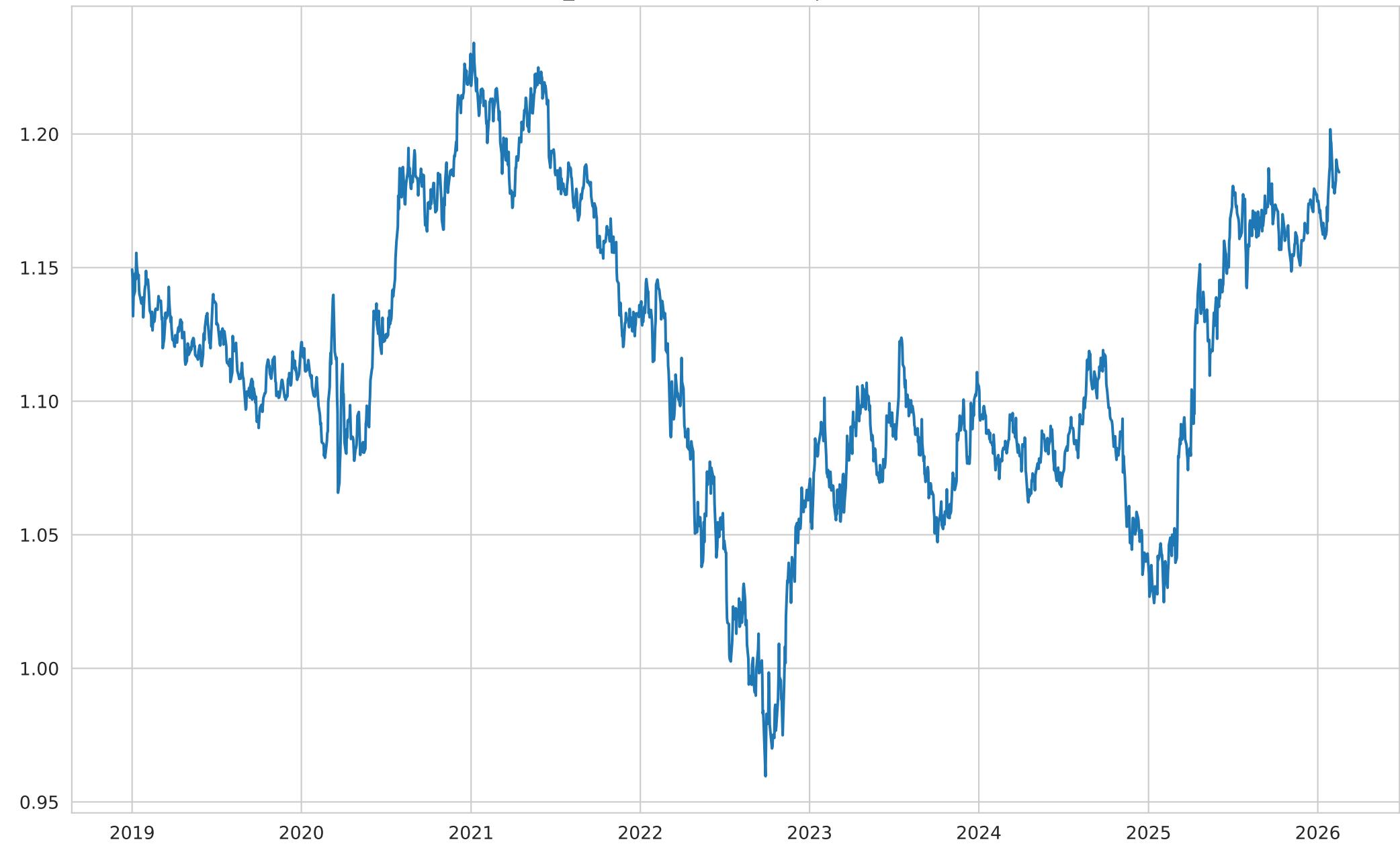
Open|EURUSD=X

Volume|EURUSD=X

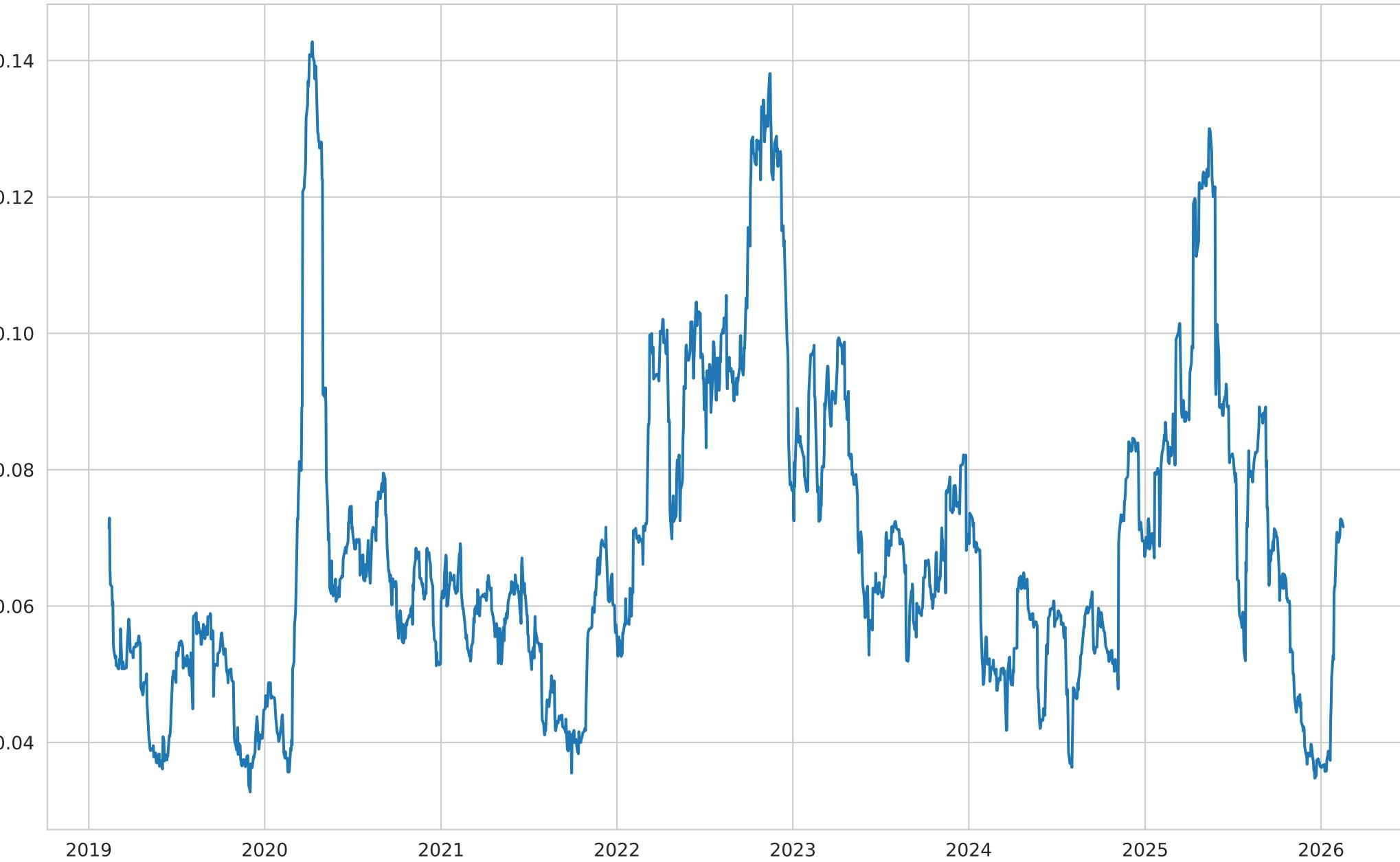
Adj Close|EURUSD=X Close|EURUSD=X High|EURUSD=X Low|EURUSD=X Open|EURUSD=X Volume|EURUSD=X
Variable



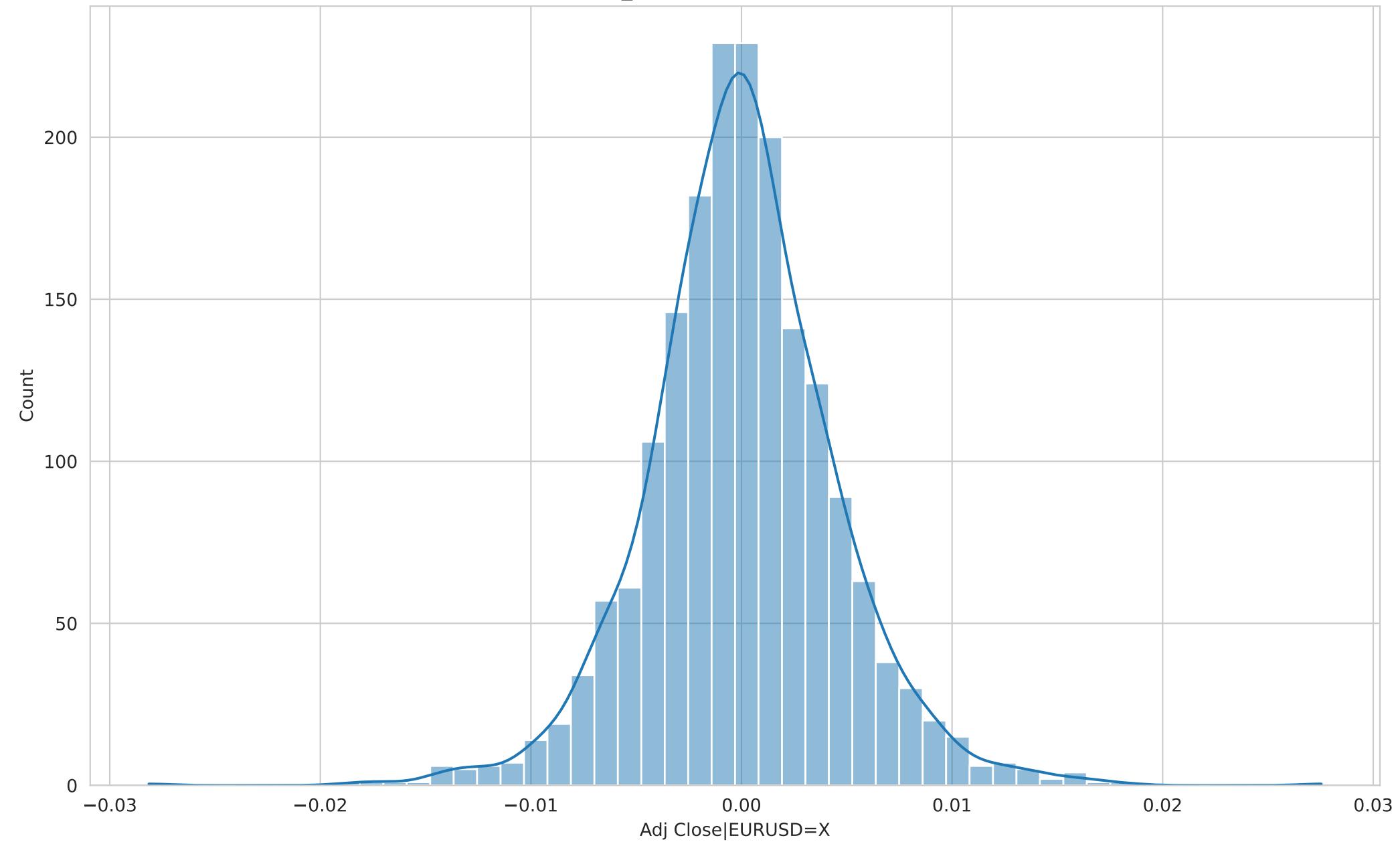
EUR_USD • Price (Adj Close|EURUSD=X)



EUR_USD • 30D Volatility (ann.)



EUR_USD • Daily Log Returns



GLD • Schema & Missingness

Variable	dtype	count	missing	missing_pct
Adj Close GLD	float64	1790	0	0.0
Close GLD	float64	1790	0	0.0
High GLD	float64	1790	0	0.0
Low GLD	float64	1790	0	0.0
Open GLD	float64	1790	0	0.0
Volume GLD	int64	1790	0	0.0

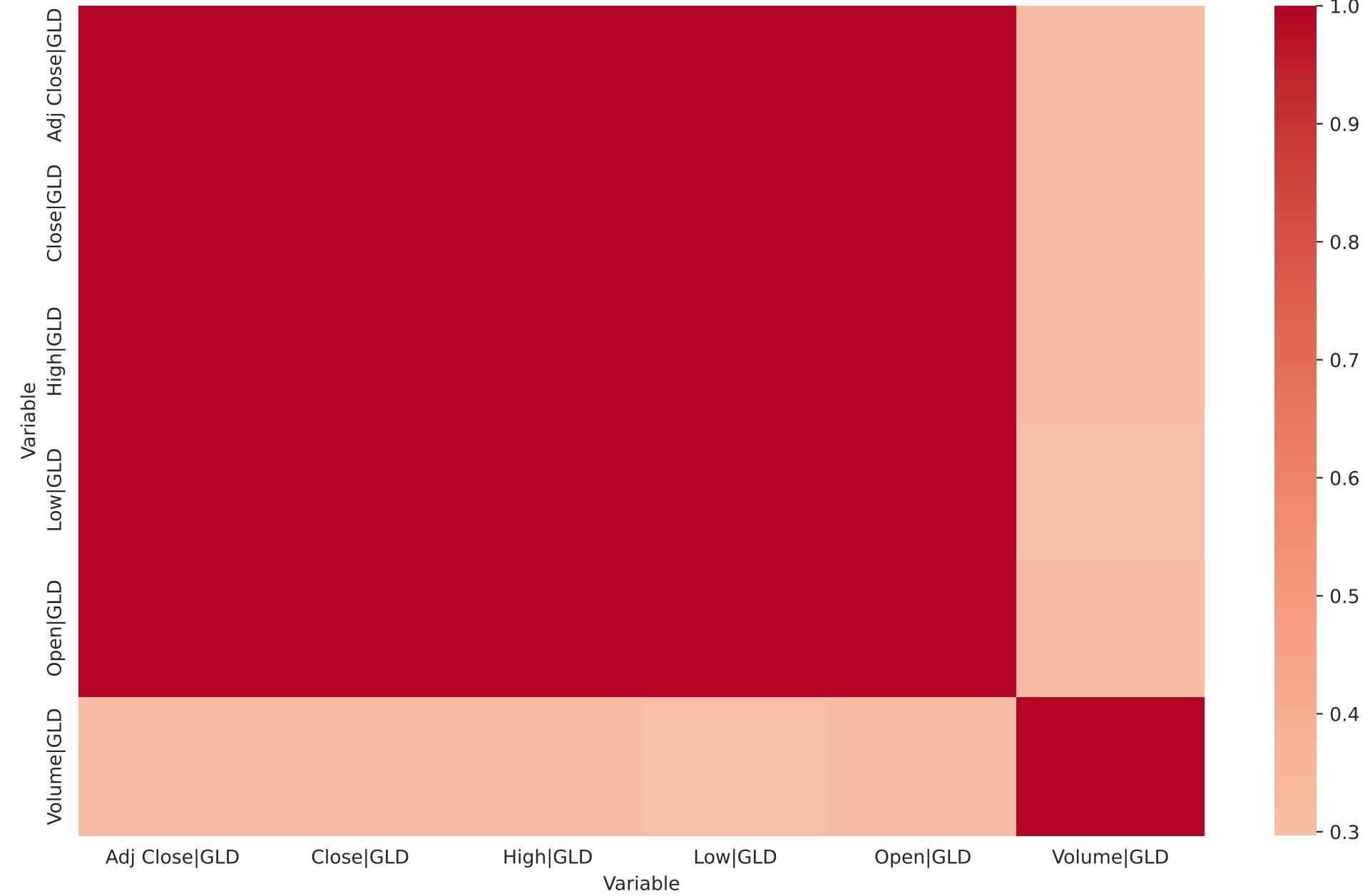
GLD • Numeric Quality & Ranges

Variable	count	missing	missing_pct	zeros	negatives	infs	min	max	mean	std
Volume GLD	1790	0	0.0	0	0	0	1436500.0	86593500.0	9342843.2402	5994500.7613
High GLD	1790	0	0.0	0	0	0	120.11	509.7	198.3599	67.8713
Open GLD	1790	0	0.0	0	0	0	119.67	509.51	197.4578	67.4023
Adj Close GLD	1790	0	0.0	0	0	0	119.94	495.9	197.4593	67.3705
Close GLD	1790	0	0.0	0	0	0	119.94	495.9	197.4593	67.3705
Low GLD	1790	0	0.0	0	0	0	119.54	481.25	196.4275	66.6635

GLD • Describe

Variable	count	mean	std	min	25%	50%	75%	max
Adj Close GLD	1790.0	197.4593	67.3705	119.94	162.285	175.495	215.115	495.9
Close GLD	1790.0	197.4593	67.3705	119.94	162.285	175.495	215.115	495.9
High GLD	1790.0	198.3599	67.8713	120.11	163.1625	176.415	215.9325	509.7
Low GLD	1790.0	196.4275	66.6635	119.54	161.5675	174.87	214.32	481.25
Open GLD	1790.0	197.4578	67.4023	119.67	162.3675	175.83	215.0425	509.51
Volume GLD	1790.0	9342843.2402	5994500.7613	1436500.0	5800350.0	7871850.0	11068125.0	86593500.0

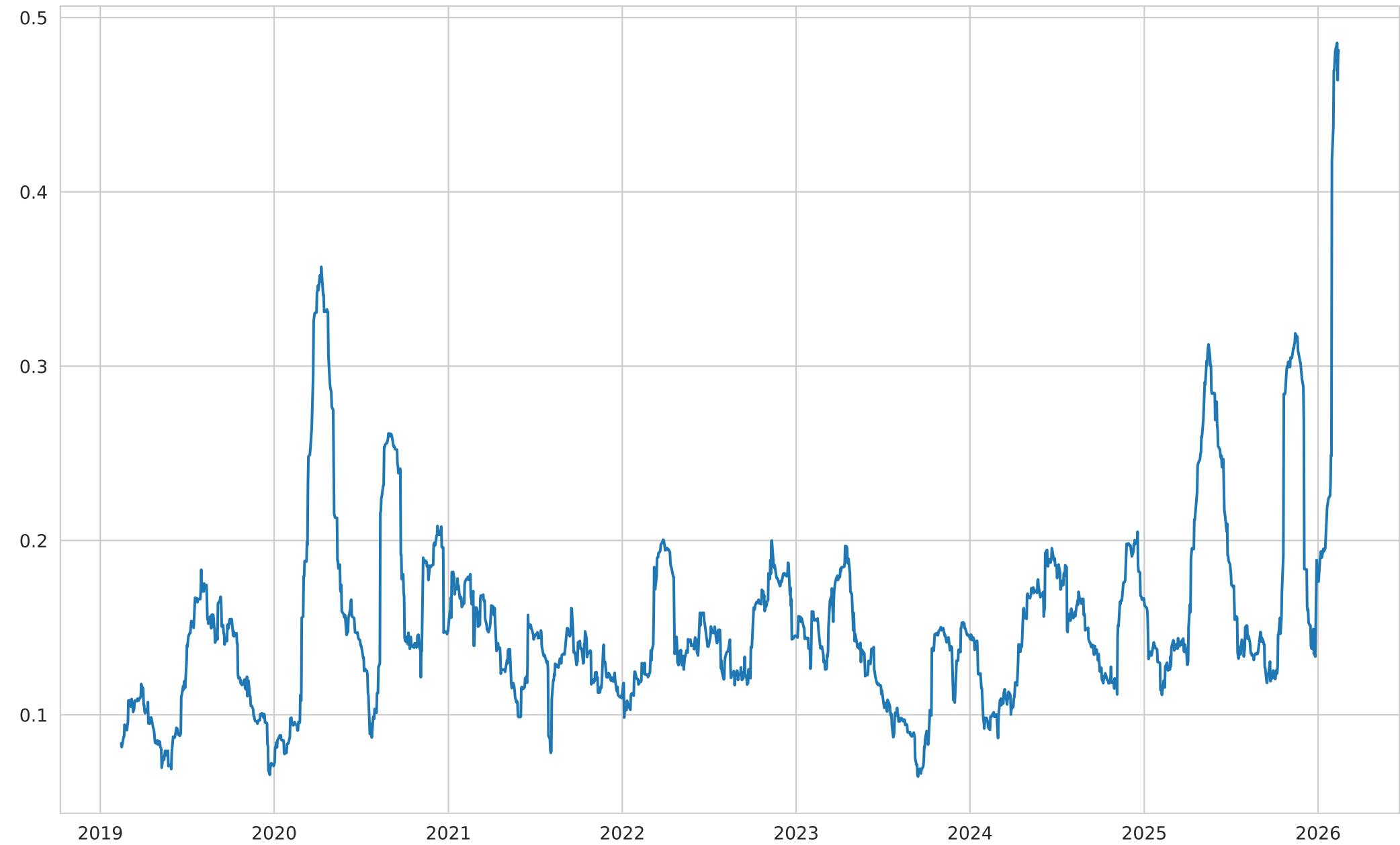
GLD • Correlation



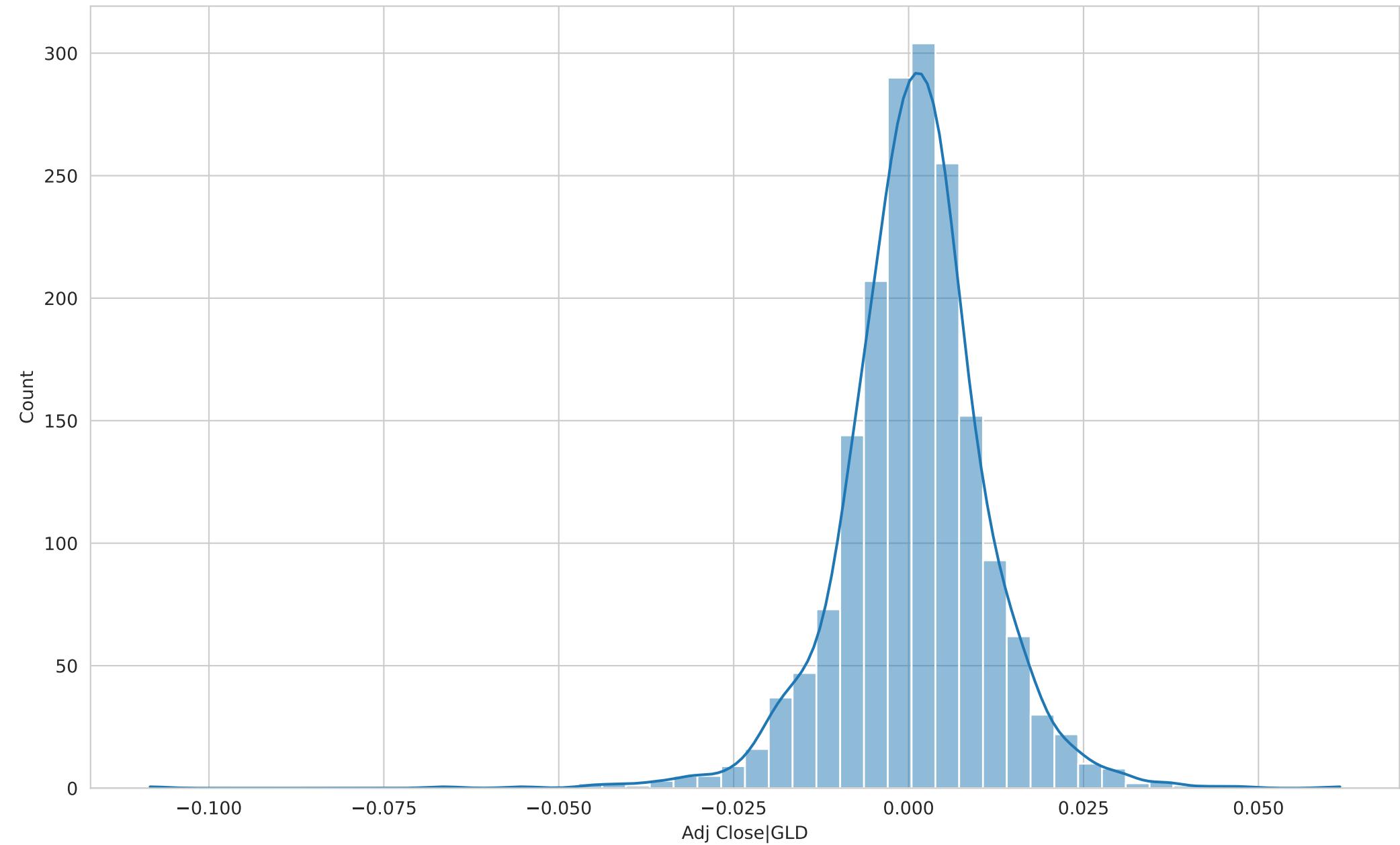
GLD • Price (Adj Close|GLD)



GLD • 30D Volatility (ann.)



GLD • Daily Log Returns



MPC • Schema & Missingness

Variable	dtype	count	missing	missing_pct
Adj Close MPC	float64	1790	0	0.0
Close MPC	float64	1790	0	0.0
High MPC	float64	1790	0	0.0
Low MPC	float64	1790	0	0.0
Open MPC	float64	1790	0	0.0
Volume MPC	int64	1790	0	0.0

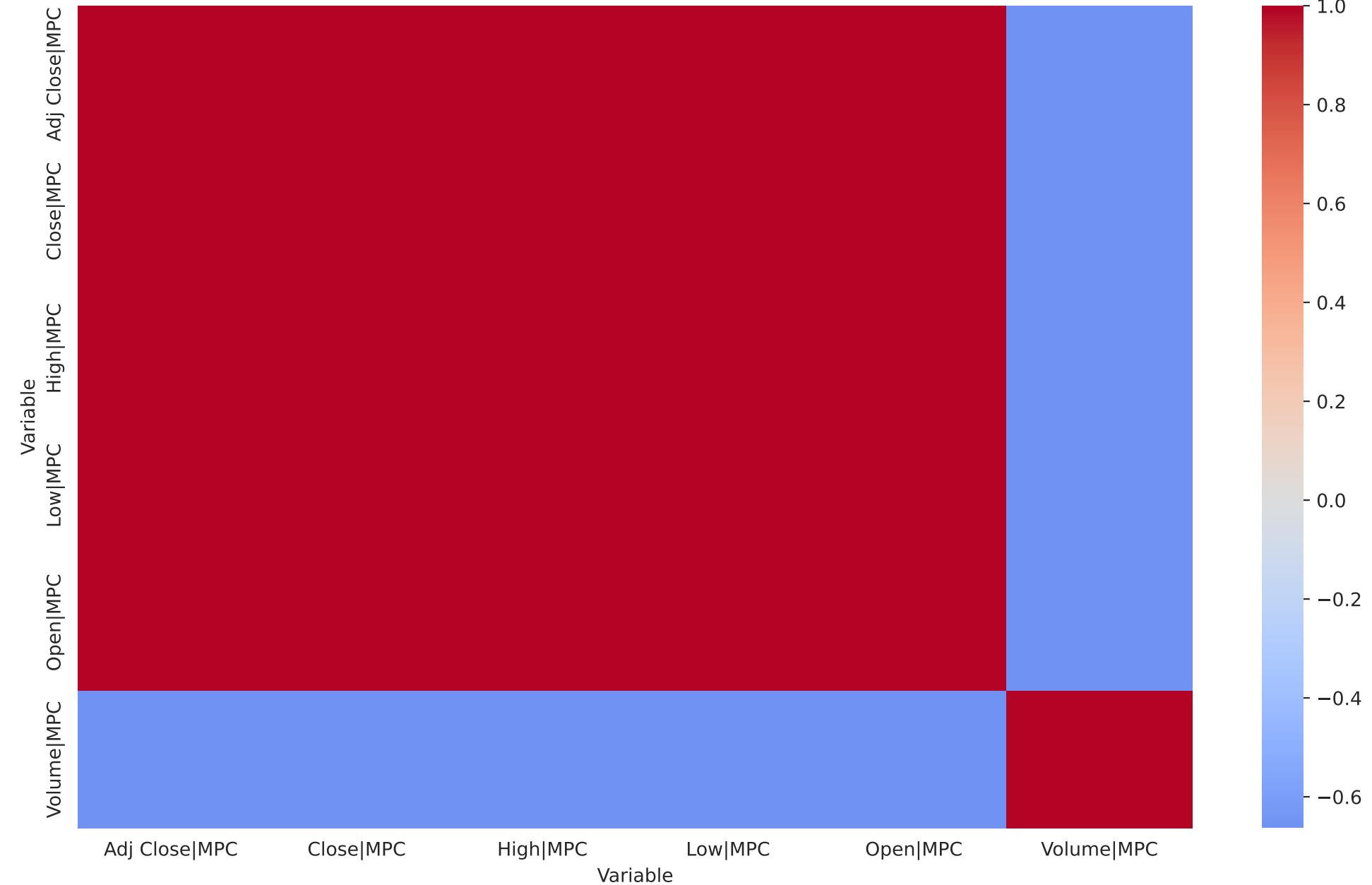
MPC • Numeric Quality & Ranges

Variable	count	missing	missing_pct	zeros	negatives	infs	min	max	mean	std
Volume MPC	1790	0	0.0	0	0	0	957900.0	31341800.0	5042910.9497	3233504.3995
Adj Close MPC	1790	0	0.0	0	0	0	13.9231	211.1141	97.2969	54.0587
High MPC	1790	0	0.0	0	0	0	17.77	221.11	104.8644	53.2575
Close MPC	1790	0	0.0	0	0	0	16.62	219.13	103.3748	52.6875
Open MPC	1790	0	0.0	0	0	0	17.01	219.57	103.3498	52.6682
Low MPC	1790	0	0.0	0	0	0	15.26	217.63	101.8893	52.1099

MPC • Describe

Variable	count	mean	std	min	25%	50%	75%	max
Adj Close MPC	1790.0	97.2969	54.0587	13.9231	49.0161	89.0326	147.5461	211.1141
Close MPC	1790.0	103.3748	52.6875	16.62	57.6375	96.175	152.4825	219.13
High MPC	1790.0	104.8644	53.2575	17.77	58.57	97.4	154.675	221.11
Low MPC	1790.0	101.8893	52.1099	15.26	56.8575	94.38	150.7875	217.63
Open MPC	1790.0	103.3498	52.6682	17.01	57.8825	95.92	152.6	219.57
Volume MPC	1790.0	5042910.9497	3233504.3995	957900.0	2701325.0	4289550.0	6491850.0	31341800.0

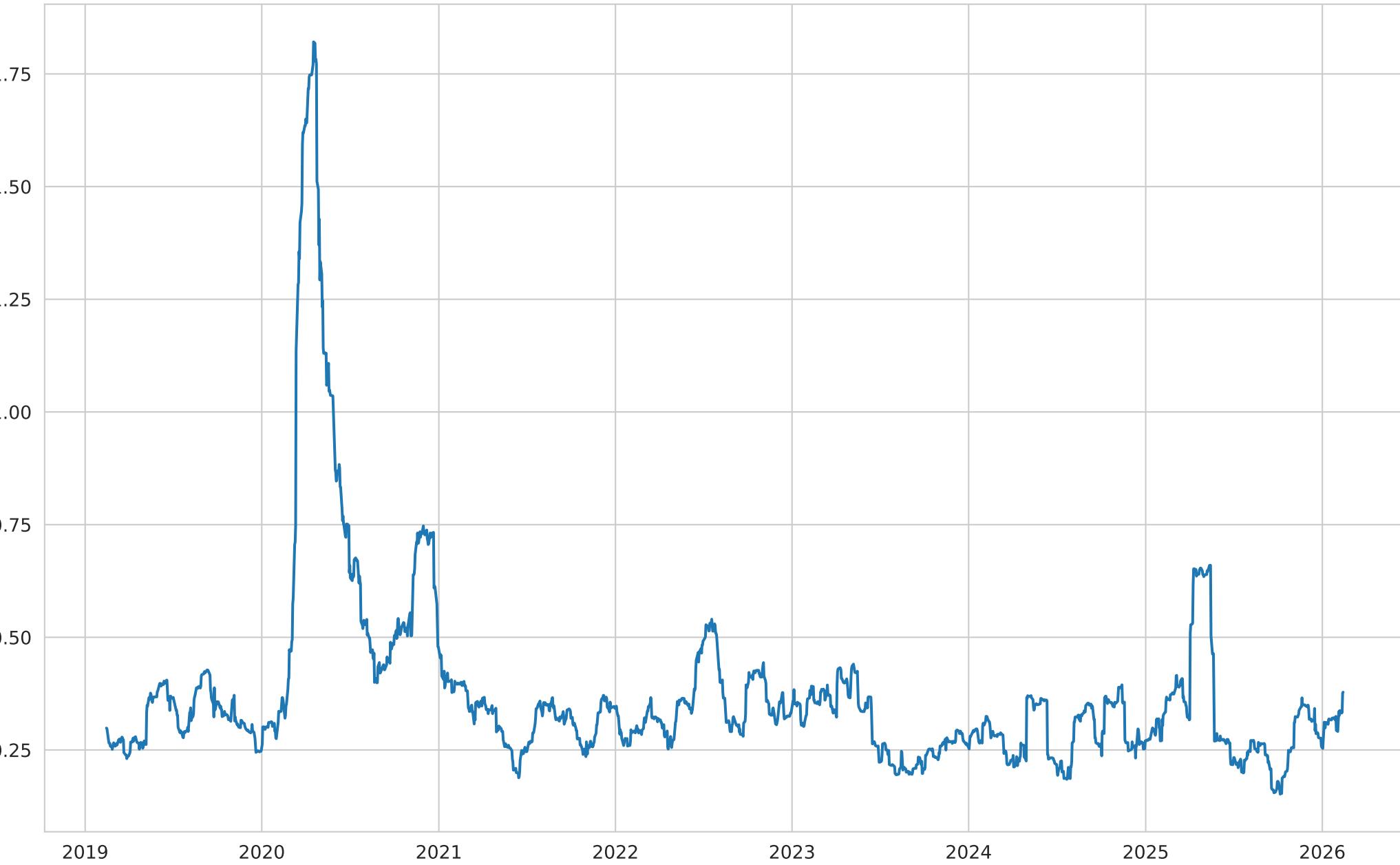
MPC • Correlation



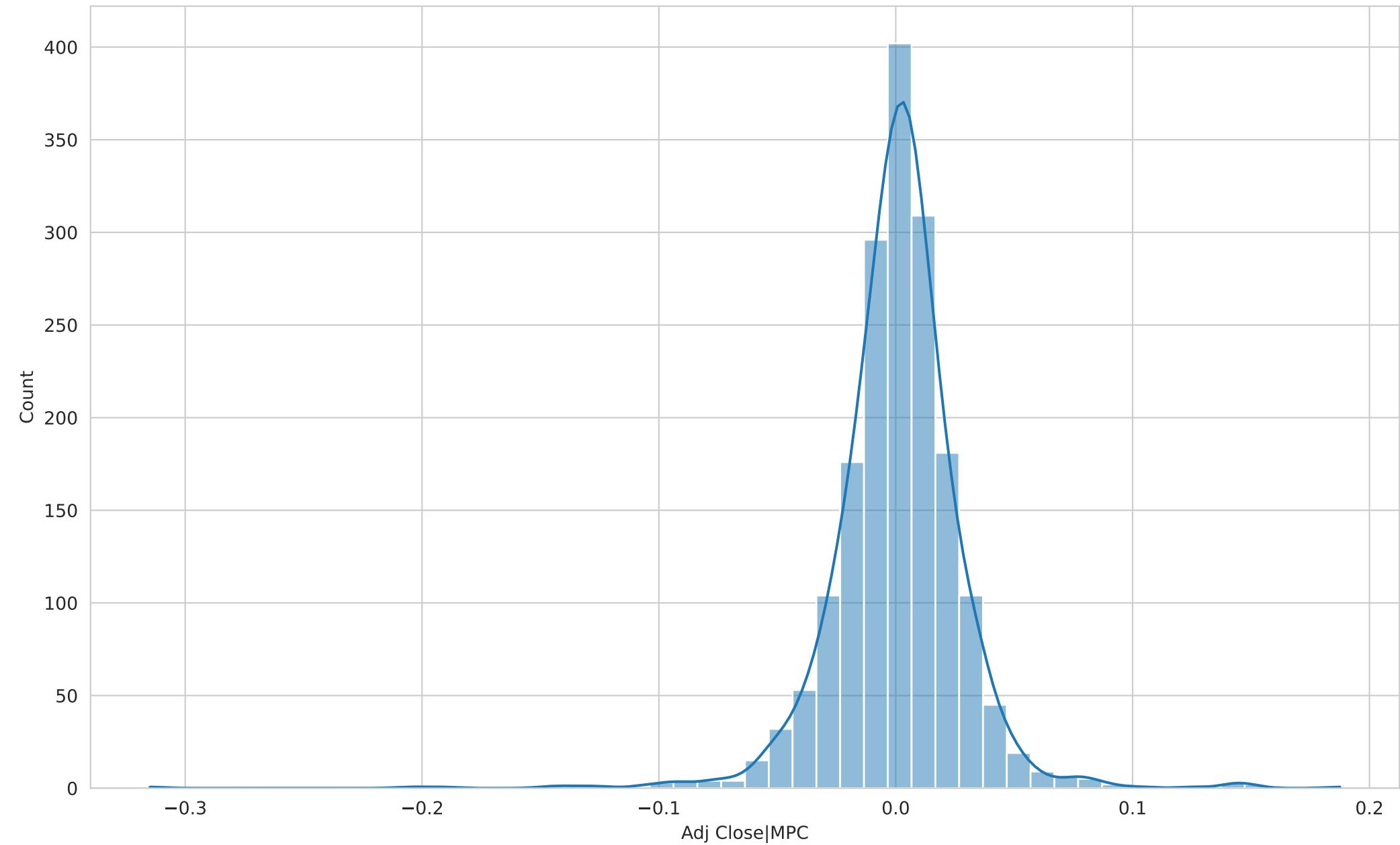
MPC • Price (Adj Close|MPC)



MPC • 30D Volatility (ann.)



MPC • Daily Log Returns



PSX • Schema & Missingness

Variable	dtype	count	missing	missing_pct
Adj Close PSX	float64	1790	0	0.0
Close PSX	float64	1790	0	0.0
High PSX	float64	1790	0	0.0
Low PSX	float64	1790	0	0.0
Open PSX	float64	1790	0	0.0
Volume PSX	int64	1790	0	0.0

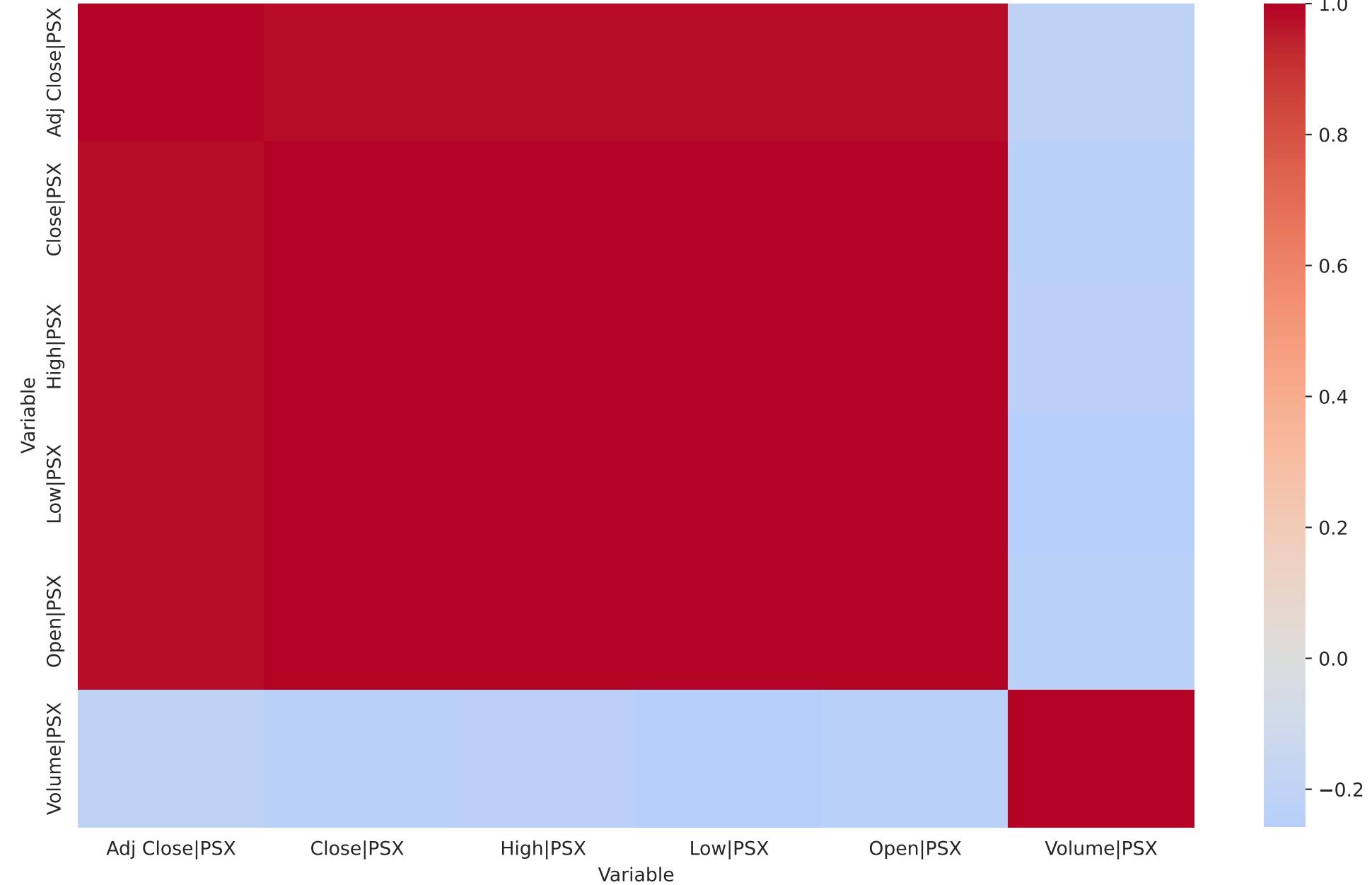
PSX • Numeric Quality & Ranges

Variable	count	missing	missing_pct	zeros	negatives	infs	min	max	mean	std
Volume PSX	1790	0	0.0	0	0	0	942700.0	16579800.0	3165478.8827	1449609.0355
Adj Close PSX	1790	0	0.0	0	0	0	33.1872	162.3481	90.6265	29.1046
High PSX	1790	0	0.0	0	0	0	46.18	174.08	103.0723	26.1047
Close PSX	1790	0	0.0	0	0	0	42.09	172.71	101.6677	26.0167
Open PSX	1790	0	0.0	0	0	0	43.25	173.18	101.6874	25.999
Low PSX	1790	0	0.0	0	0	0	40.04	170.64	100.3048	25.9143

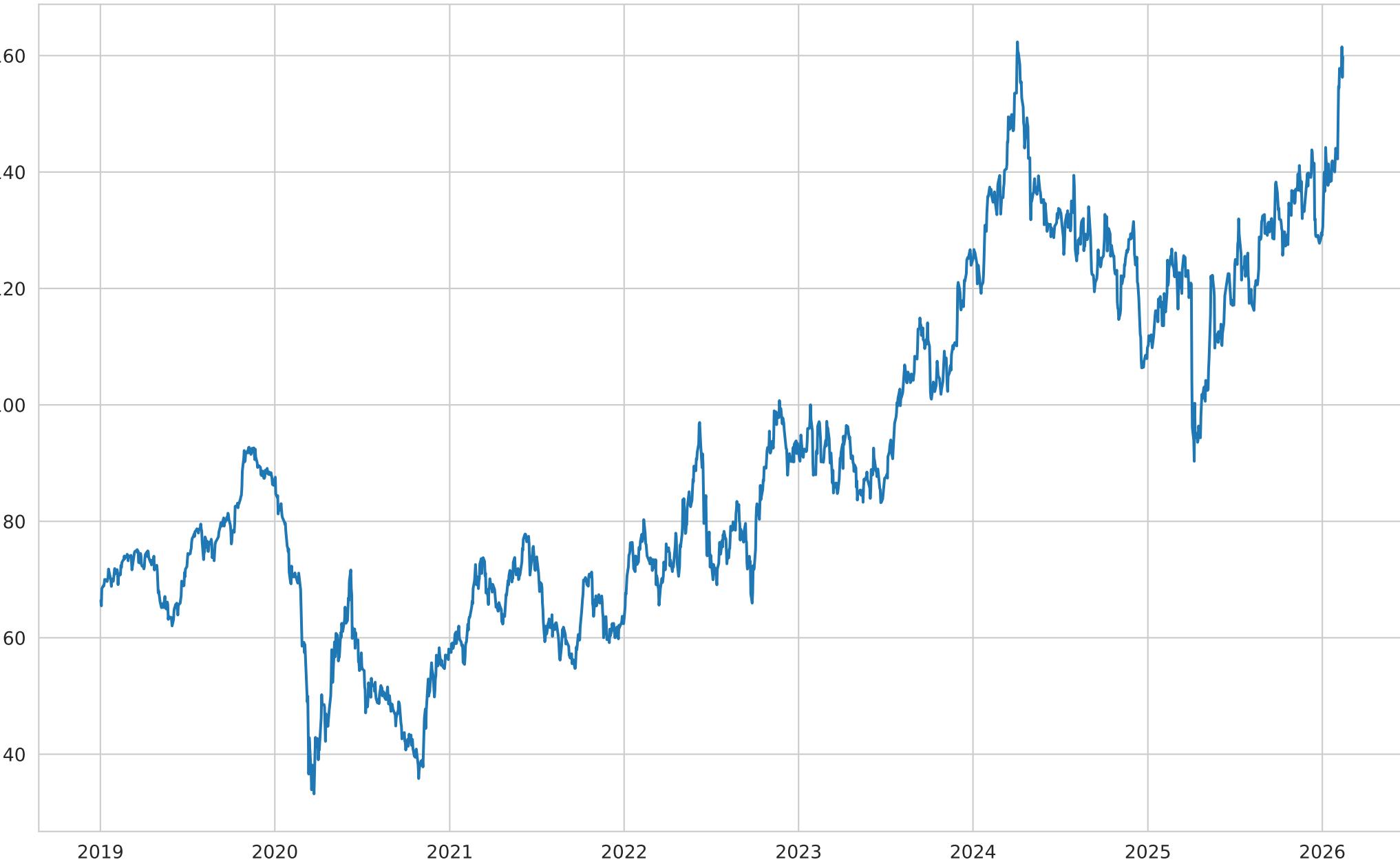
PSX • Describe

Variable	count	mean	std	min	25%	50%	75%	max
Adj Close PSX	1790.0	90.6265	29.1046	33.1872	69.1618	84.6583	118.911	162.3481
Close PSX	1790.0	101.6677	26.0167	42.09	82.7875	98.85	123.0525	172.71
High PSX	1790.0	103.0723	26.1047	46.18	84.2025	100.405	124.2825	174.08
Low PSX	1790.0	100.3048	25.9143	40.04	81.5625	97.83	121.39	170.64
Open PSX	1790.0	101.6874	25.999	43.25	83.0025	98.895	122.9775	173.18
Volume PSX	1790.0	3165478.8827	1449609.0355	942700.0	2284025.0	2841500.0	3616175.0	16579800.0

PSX • Correlation



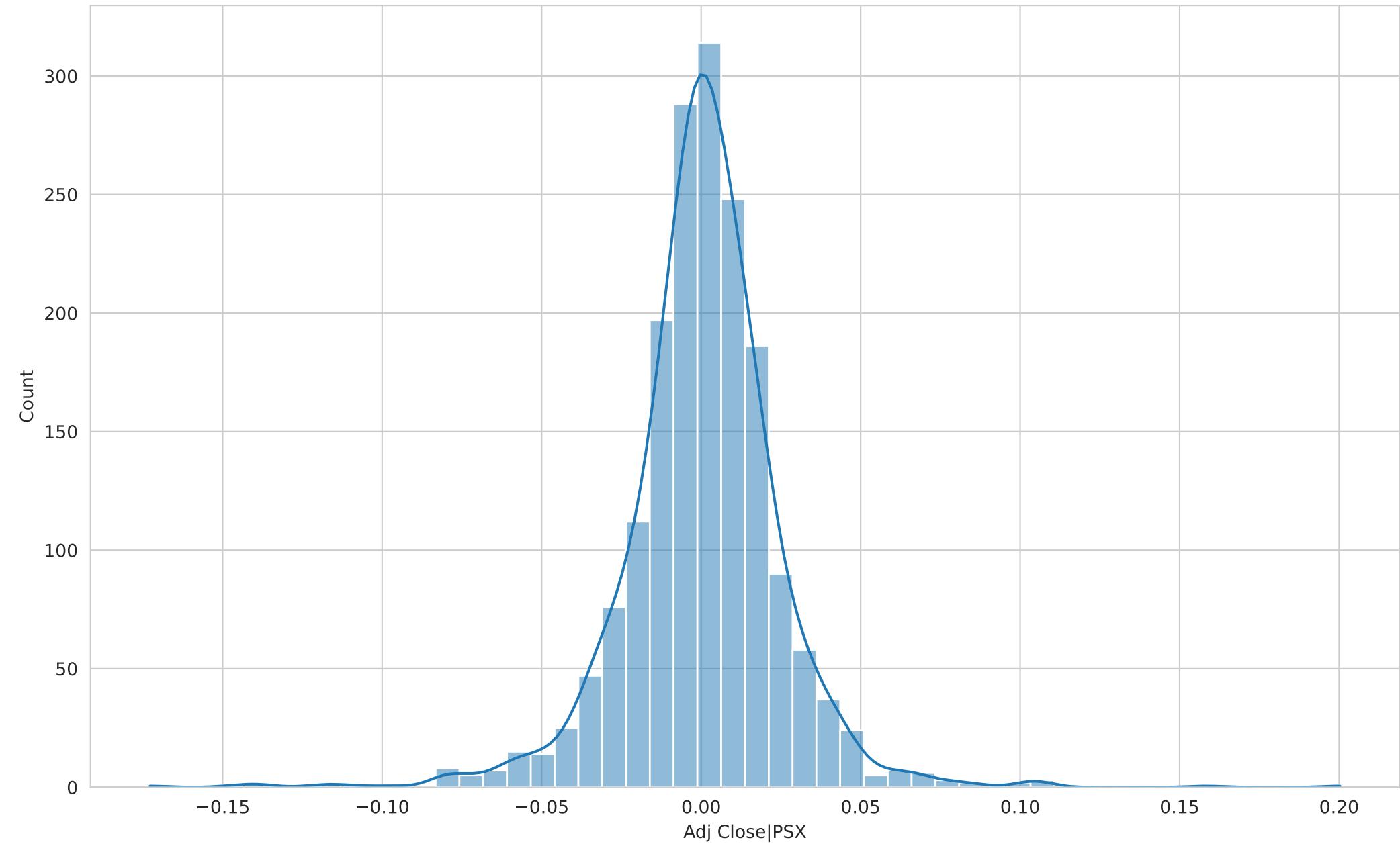
PSX • Price (Adj Close|PSX)



PSX • 30D Volatility (ann.)



PSX • Daily Log Returns



SPY • Schema & Missingness

Variable	dtype	count	missing	missing_pct
Adj Close SPY	float64	1790	0	0.0
Close SPY	float64	1790	0	0.0
High SPY	float64	1790	0	0.0
Low SPY	float64	1790	0	0.0
Open SPY	float64	1790	0	0.0
Volume SPY	int64	1790	0	0.0

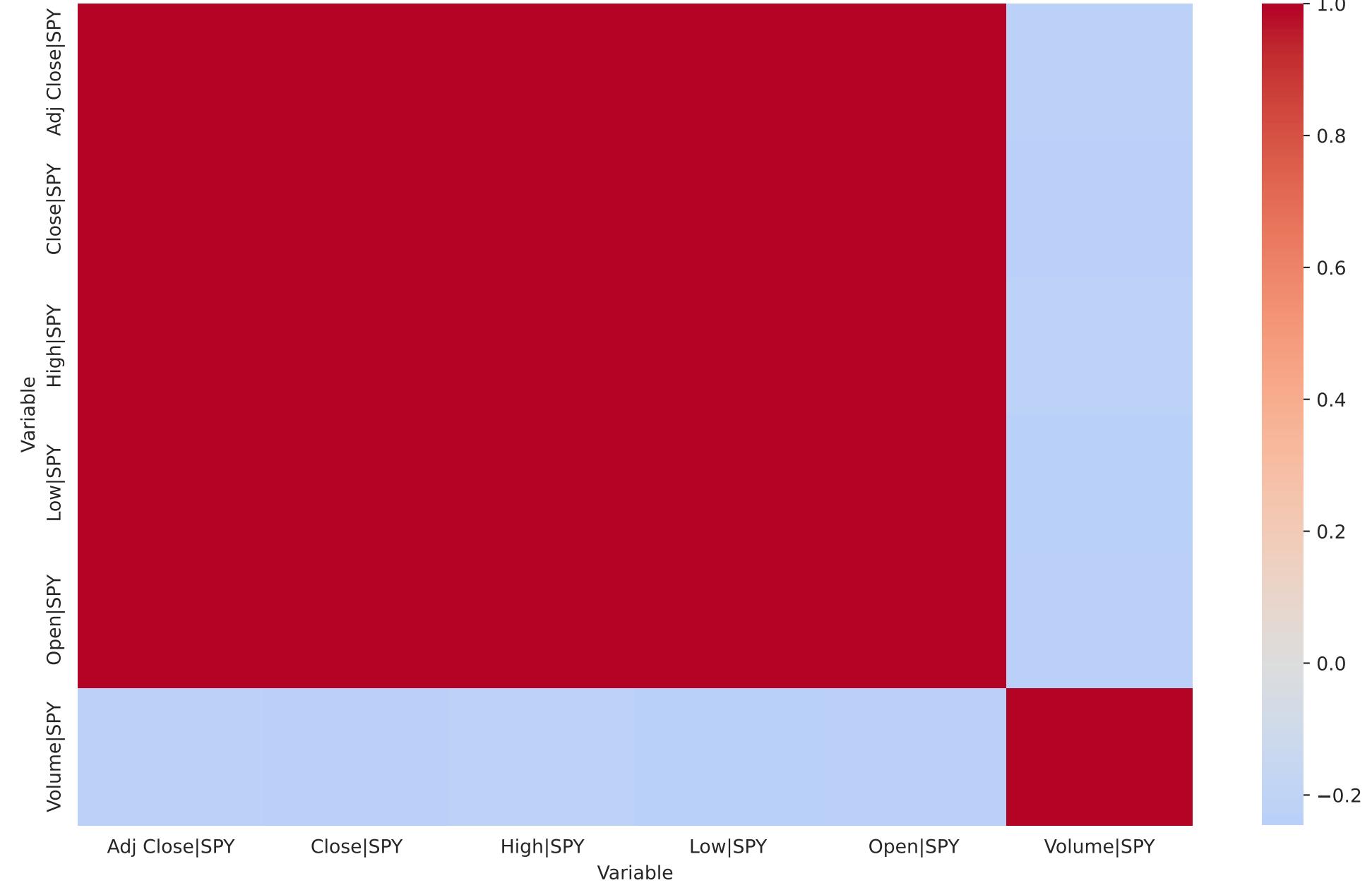
SPY • Numeric Quality & Ranges

Variable	count	missing	missing_pct	zeros	negatives	infs	min	max	mean	std
Volume SPY	1790	0	0.0	0	0	0	20270000.0	392220700.078776779.273738155538.2365		
Adj Close SPY	1790	0	0.0	0	0	0	205.5046	695.49	420.1049	122.7464
High SPY	1790	0	0.0	0	0	0	229.68	697.84	440.1732	115.5332
Open SPY	1790	0	0.0	0	0	0	228.19	697.05	437.6871	115.342
Close SPY	1790	0	0.0	0	0	0	222.95	695.49	437.7779	115.2912
Low SPY	1790	0	0.0	0	0	0	218.26	693.94	434.9881	114.9776

SPY • Describe

Variable	count	mean	std	min	25%	50%	75%	max
Adj Close SPY	1790.0	420.1049	122.7464	205.5046	318.736	401.1583	508.2999	695.49
Close SPY	1790.0	437.7779	115.2912	222.95	343.42	422.04	518.7875	695.49
High SPY	1790.0	440.1732	115.5332	229.68	345.75	424.845	521.67	697.84
Low SPY	1790.0	434.9881	114.9776	218.26	341.245	419.305	515.125	693.94
Open SPY	1790.0	437.6871	115.342	228.19	343.3625	422.51	519.2025	697.05
Volume SPY	1790.0	78776779.2737	38155538.2365	20270000.0	56136050.0	71205850.0	90600325.0	392220700.0

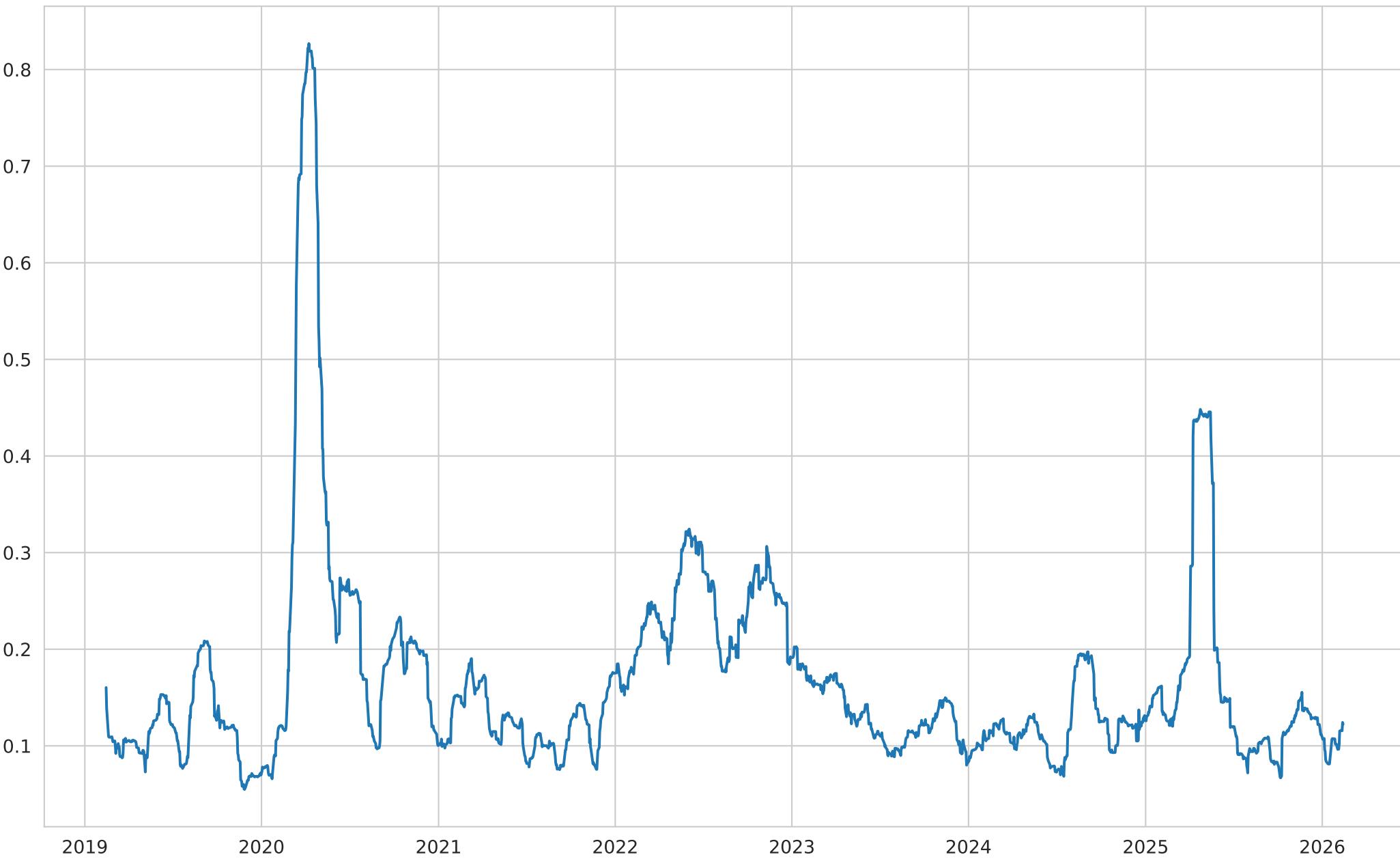
SPY • Correlation



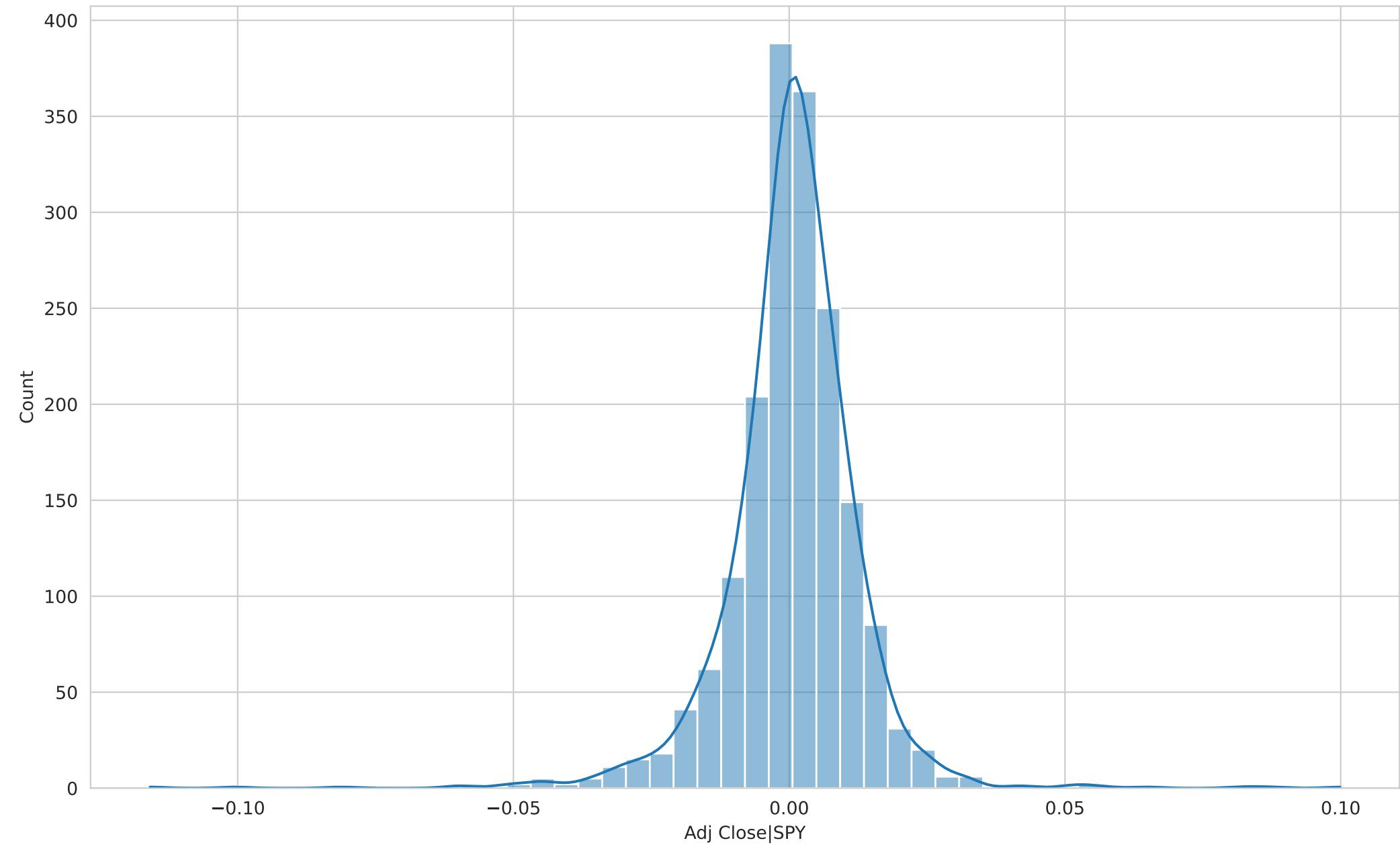
SPY • Price (Adj Close|SPY)



SPY • 30D Volatility (ann.)



SPY • Daily Log Returns



VLO • Schema & Missingness

Variable	dtype	count	missing	missing_pct
Adj Close VLO	float64	1790	0	0.0
Close VLO	float64	1790	0	0.0
High VLO	float64	1790	0	0.0
Low VLO	float64	1790	0	0.0
Open VLO	float64	1790	0	0.0
Volume VLO	int64	1790	0	0.0

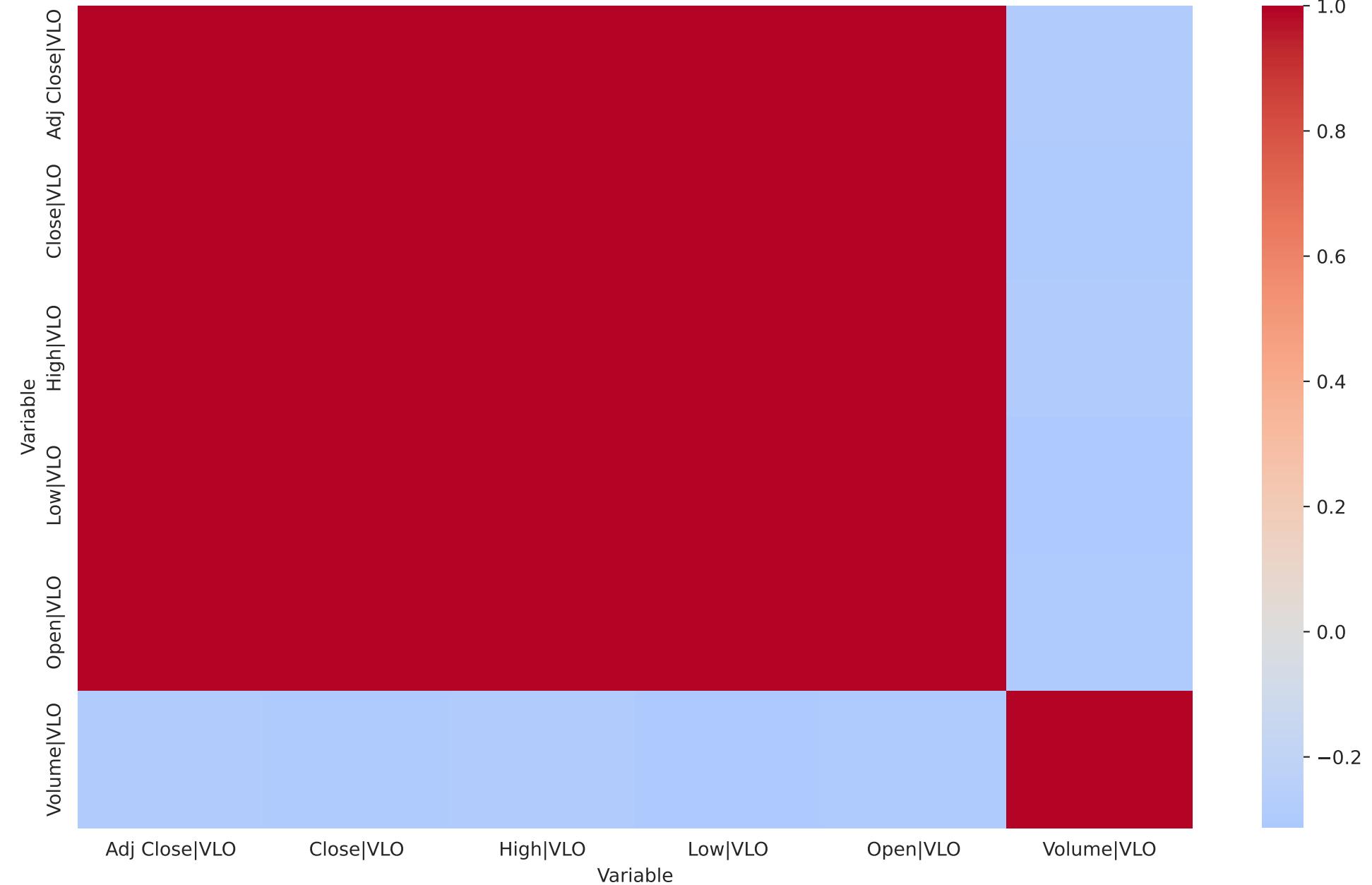
VLO • Numeric Quality & Ranges

Variable	count	missing	missing_pct	zeros	negatives	infs	min	max	mean	std
Volume VLO	1790	0	0.0	0	0	0	559800.0	19211600.0	3815705.2514	1679007.2485
Adj Close VLO	1790	0	0.0	0	0	0	25.6788	203.92	96.9527	39.4086
High VLO	1790	0	0.0	0	0	0	37.31	206.77	109.0621	36.9029
Close VLO	1790	0	0.0	0	0	0	32.62	203.92	107.38	36.5099
Open VLO	1790	0	0.0	0	0	0	34.79	204.08	107.3947	36.5068
Low VLO	1790	0	0.0	0	0	0	31.0	200.51	105.6881	36.0925

VLO • Describe

Variable	count	mean	std	min	25%	50%	75%	max
Adj Close VLO	1790.0	96.9527	39.4086	25.6788	62.5952	100.2655	128.2516	203.92
Close VLO	1790.0	107.38	36.5099	32.62	77.8375	110.195	134.9875	203.92
High VLO	1790.0	109.0621	36.9029	37.31	78.89	112.135	136.99	206.77
Low VLO	1790.0	105.6881	36.0925	31.0	76.675	107.385	133.09	200.51
Open VLO	1790.0	107.3947	36.5068	34.79	77.91	109.575	135.0	204.08
Volume VLO	1790.0	3815705.2514	1679007.2485	559800.0	2765200.0	3458100.0	4438375.0	19211600.0

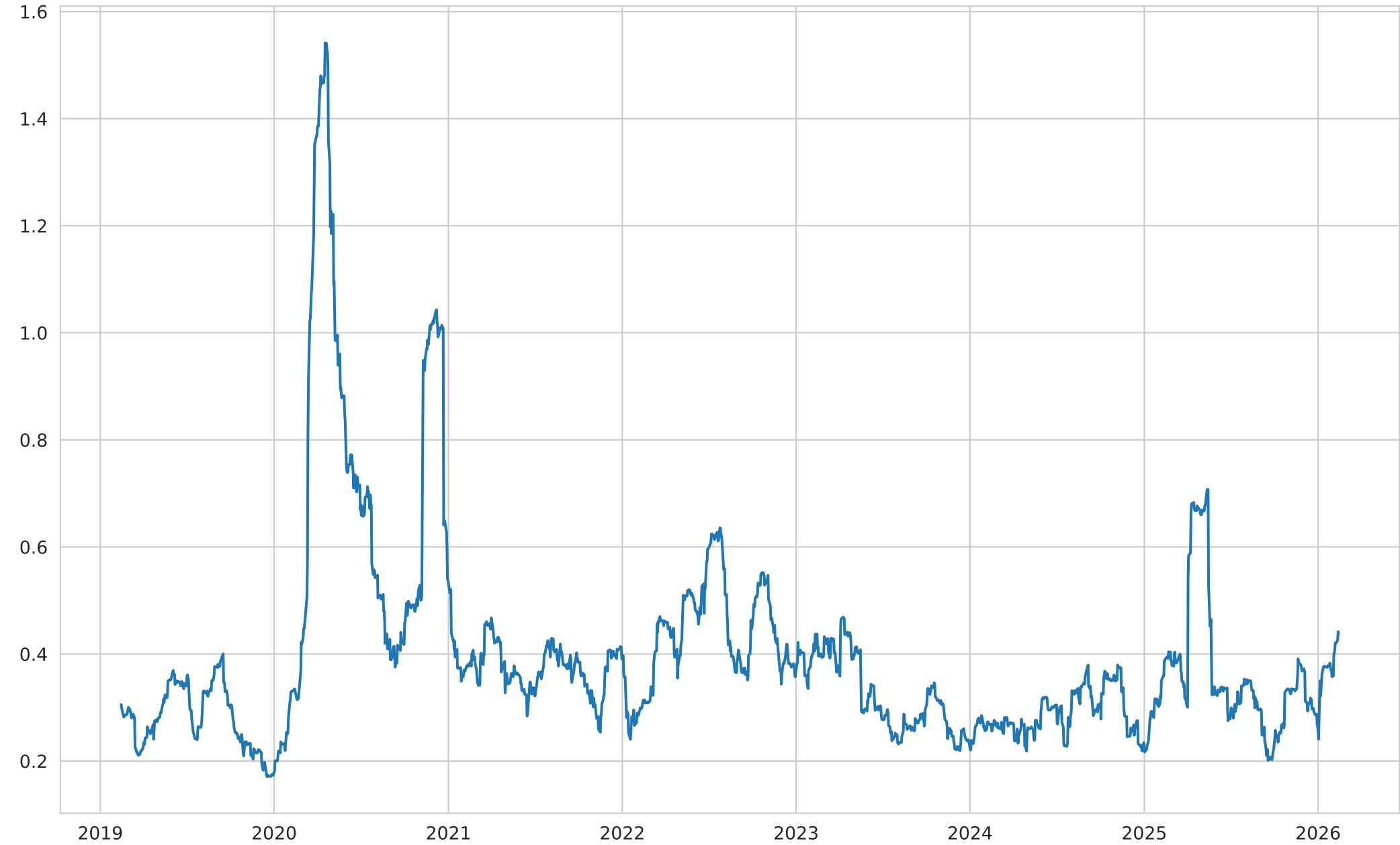
VLO • Correlation



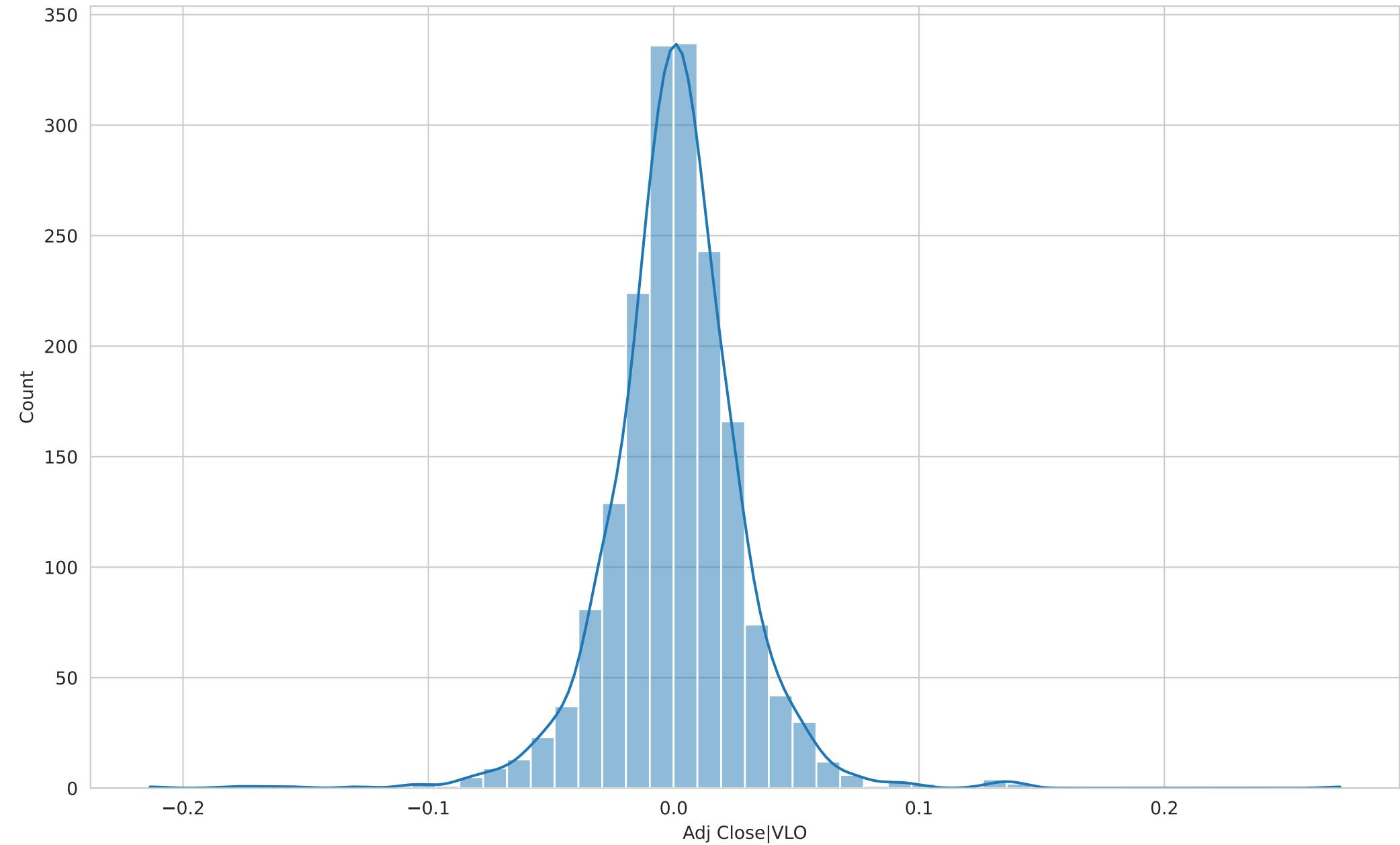
VLO • Price (Adj Close|VLO)



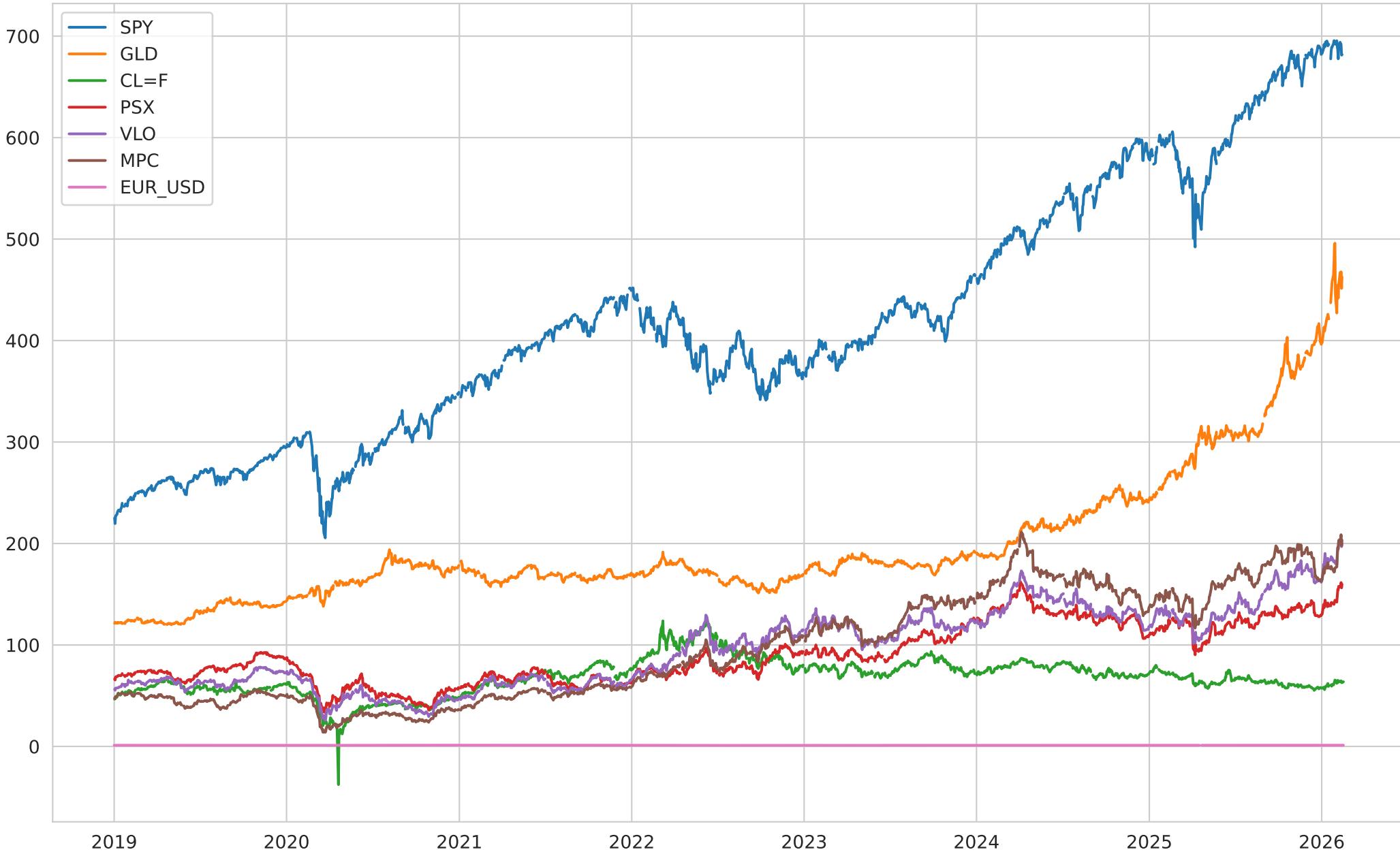
VLO • 30D Volatility (ann.)



VLO • Daily Log Returns



Cross-Ticker Prices (Close/Adj Close)



Cross-Ticker Return Correlation (log returns)

