

# Informe EDA

EURUSD y segundo activo (SPY/US500)

Carpeta: outputs/eda

## 00 Informe ejecutivo

Objetivo: describir patrones, riesgos y estructura temporal de EURUSD y SPY para servir de base al modelado predictivo (horizonte 1D). Criterio de modelos: comparación ARIMA vs SARIMA por BIC; verificación de residuales (Ljung-Box) y gráficos ACF/PACF de residuales. EURUSD: ARIMA(3,1,1) (BIC=-15800.78) · Alt: SARIMA(2,0,0)x(1,1,1)[5] ( $\Delta$ BIC=+796.64)

## EURUSD — 00 Narrativa ejecutiva

EURUSD (diario) • Periodo: 2018-02-02 00:00:00 → 2025-10-16 00:00:00 • Precio medio: 1.1192 | Último: 1.16672 | Rango [0.95906, 1.25068] • Riesgo (log-returns):  $\sigma=0.0046$  ( $\sim 0.46\%$ ),  $\text{VaR}_{95}=-0.73\%$ ,  $\text{ES}_{95}=-0.98\%$ , JB  $p=2.6e-54 \Rightarrow$  no normal.

- MDD  
aprox.: -23.32%.
- Modelo recomendado (menor BIC): ARIMA(3,1,1) | BIC=-15800.78, AIC=-15828.78, Ljung-Box  $p=0.10000604186211419$ . Alternativa: SARIMA(2,0,0) $\times$ (1,1,1)[5] | BIC=-15004.14 ( $\Delta\text{BIC}=+796.64$ ). Diagnóstico esperado: residuales  $\approx$  ruido blanco (Ljung-Box  $p \geq 0.05$ ) y ACF/PACF de residuales sin picos significativos.

EURUSD — HEAD (primeras filas)

Open	High	Low	Close	Volume
1.25075	1.2518	1.24089	1.24547	0.0
1.24348	1.24747	1.23624	1.23663	0.0
1.2366	1.24344	1.23136	1.23763	0.0
1.23761	1.24059	1.22458	1.22644	0.0
1.22619	1.22949	1.22119	1.22464	0.0

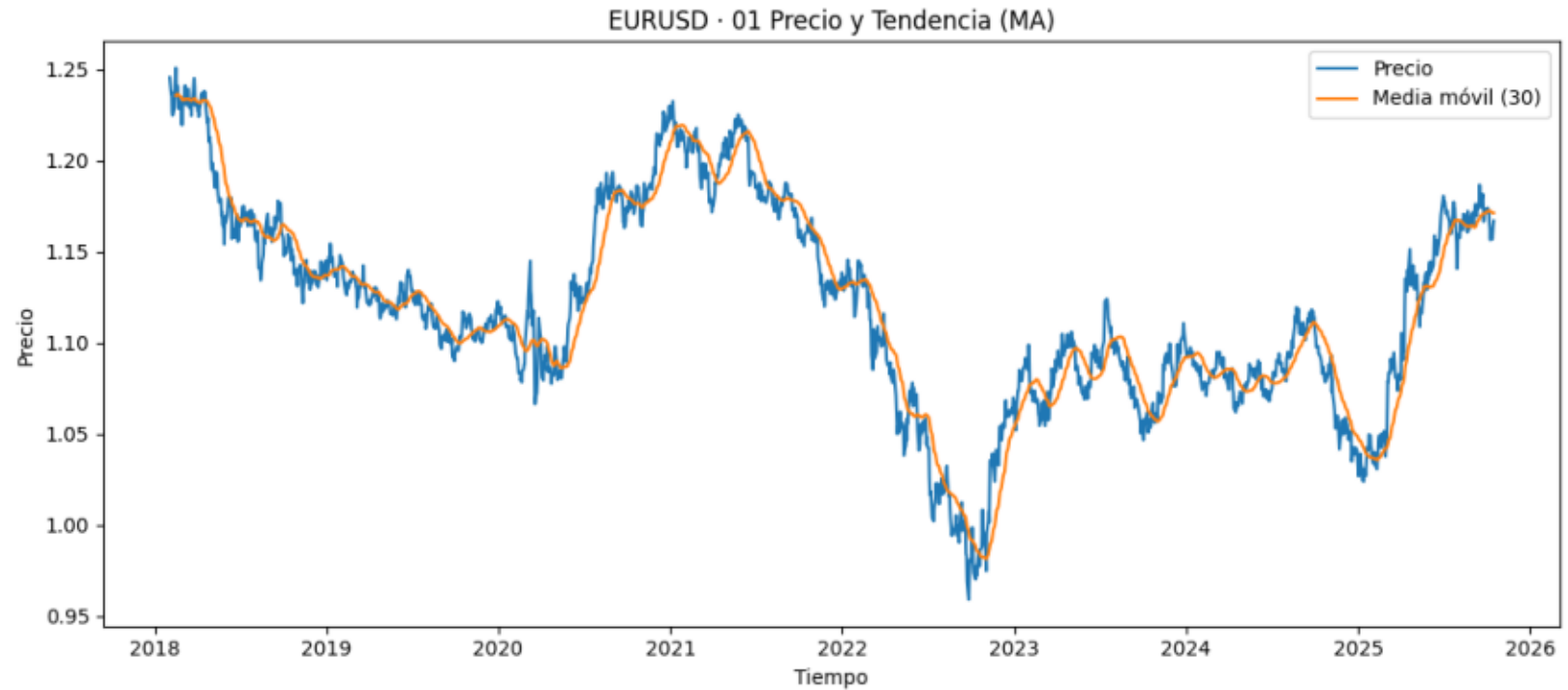
EURUSD — RESUMEN

activo	filas	inicio	fin	precio_ultimo	precio_promedio	precio_min	precio_max
EURUSD	2000	2018-02-02 00:00:00	2025-10-16 00:00:00	1.16672	1.11916	0.95906	1.25068

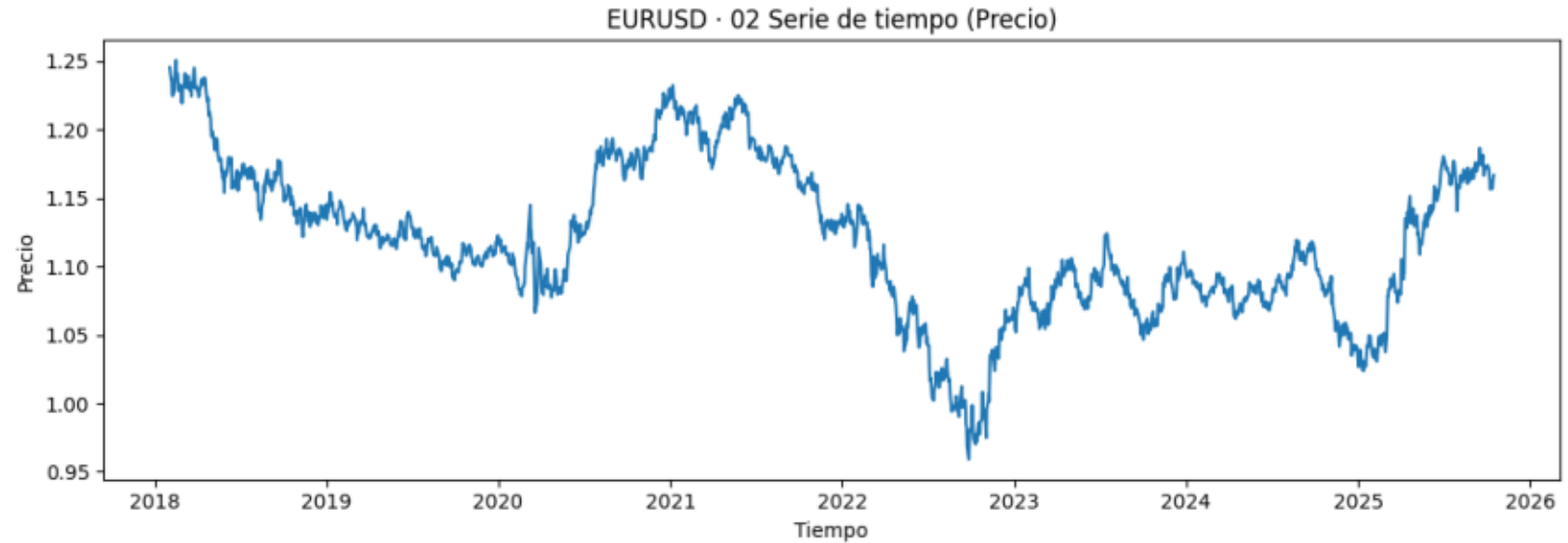
EURUSD — STATS (log-returns)

count	mean	std	skew	kurtosis	JB_stat	JB_pvalue	VaR_95	ES_95
1999.0	-3.3e-05	0.004577	0.098908	1.717128	246.76094	0.0	-0.007311	-0.009814

# EURUSD — 01 Precio y Tendencia

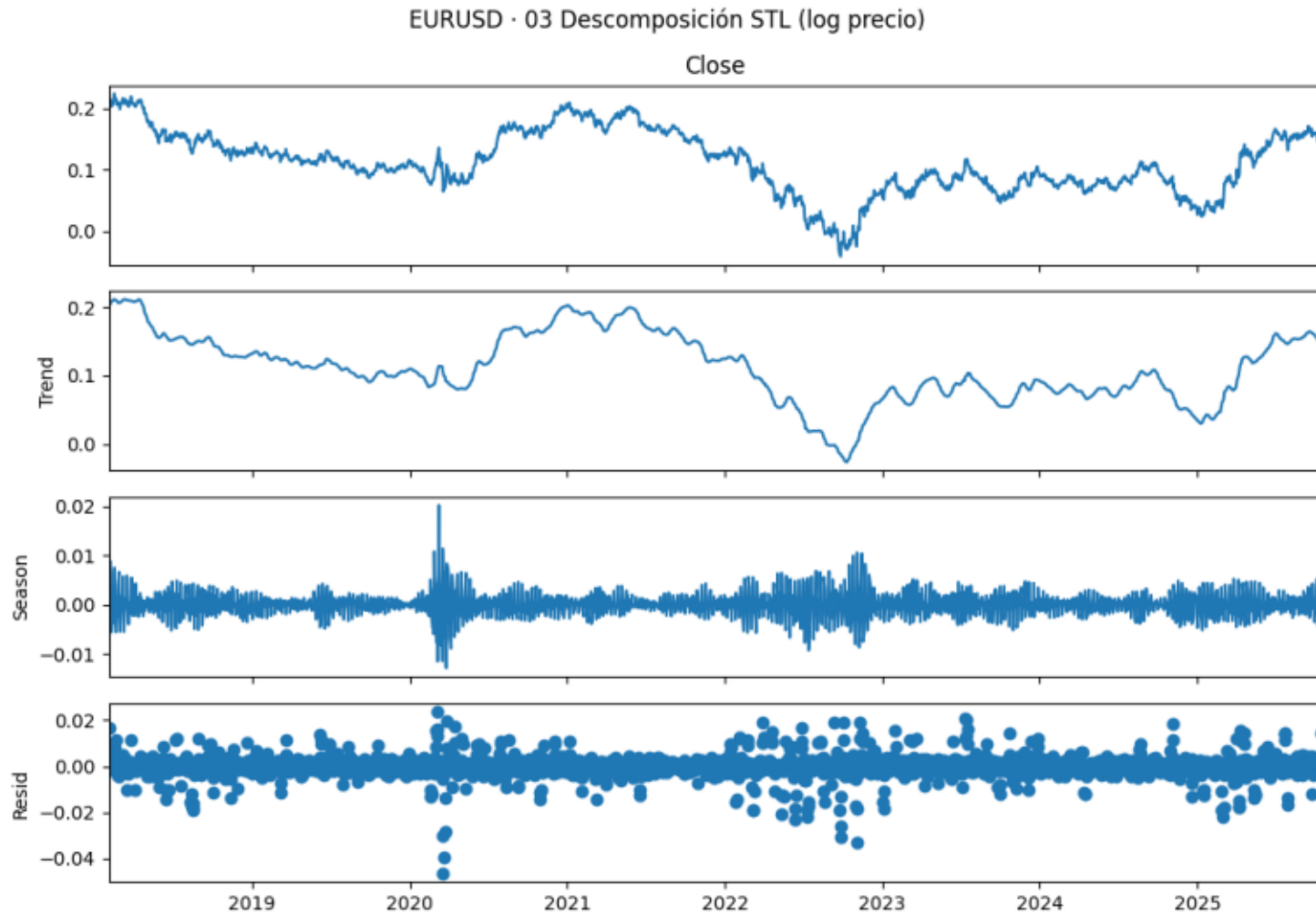


# EURUSD — 02 Serie de Precio

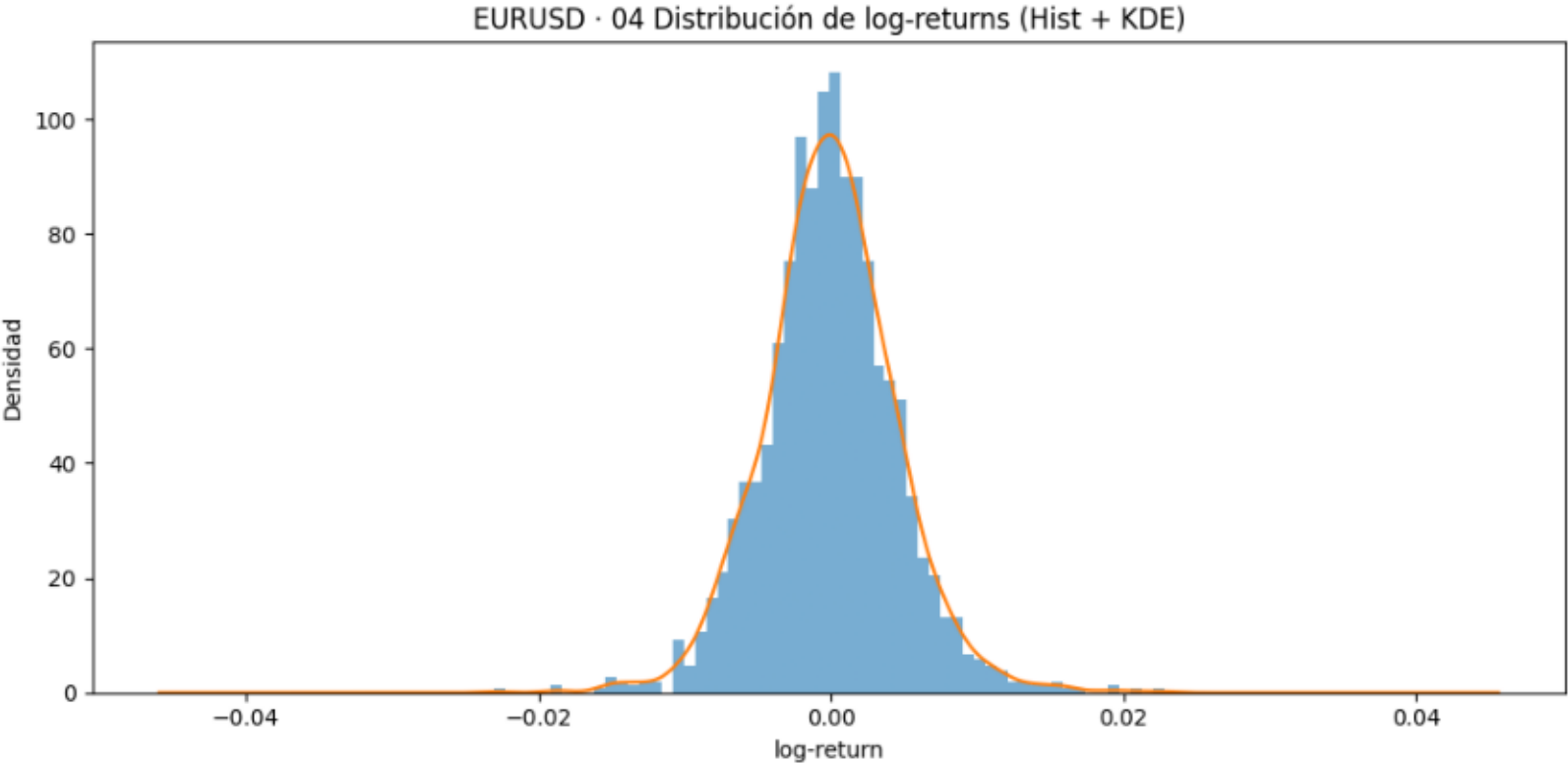




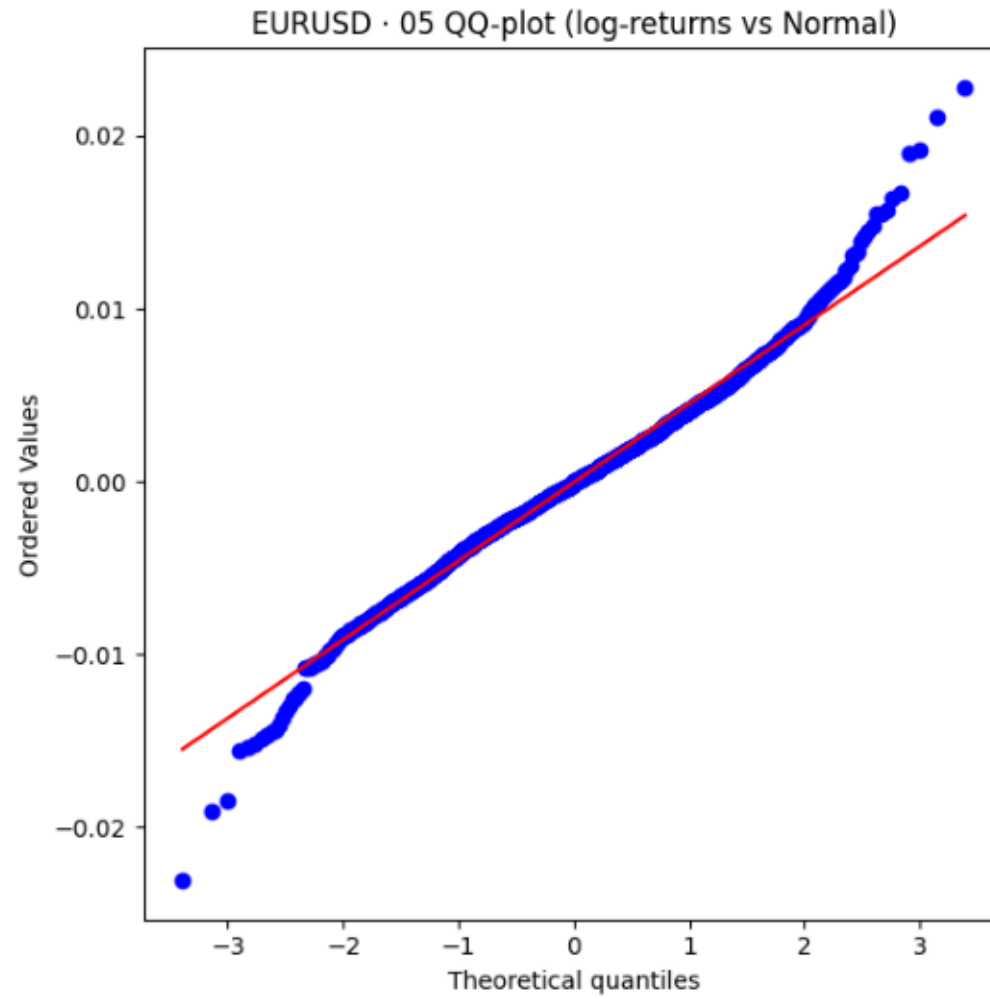
# EURUSD — 03 Descomposición STL



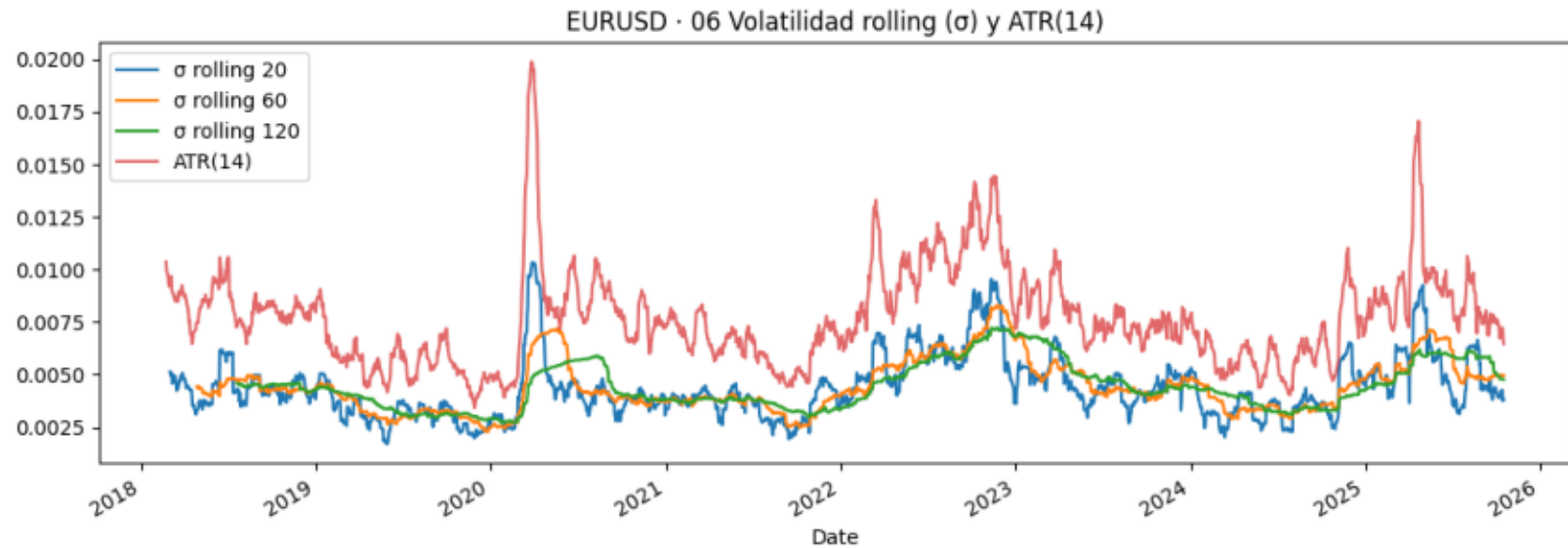
EURUSD — 04 Distribución log-returns (Hist+KDE)



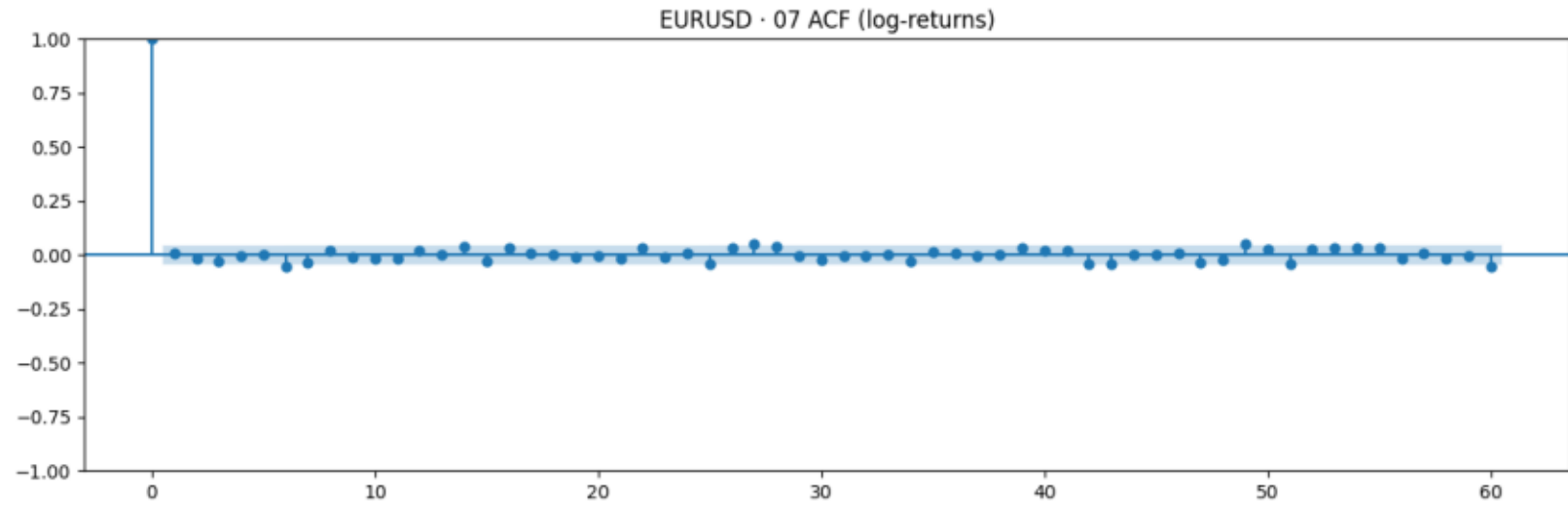
## EURUSD — 05 QQ-plot log-returns



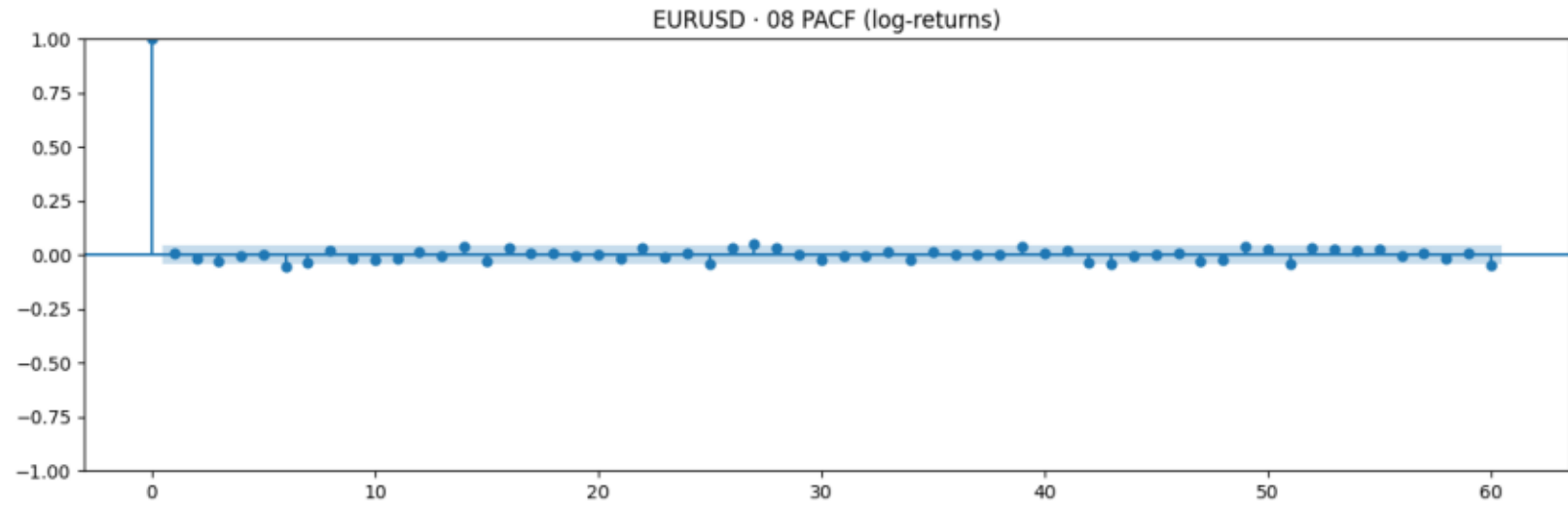
## EURUSD — 06 Volatilidad rolling y ATR



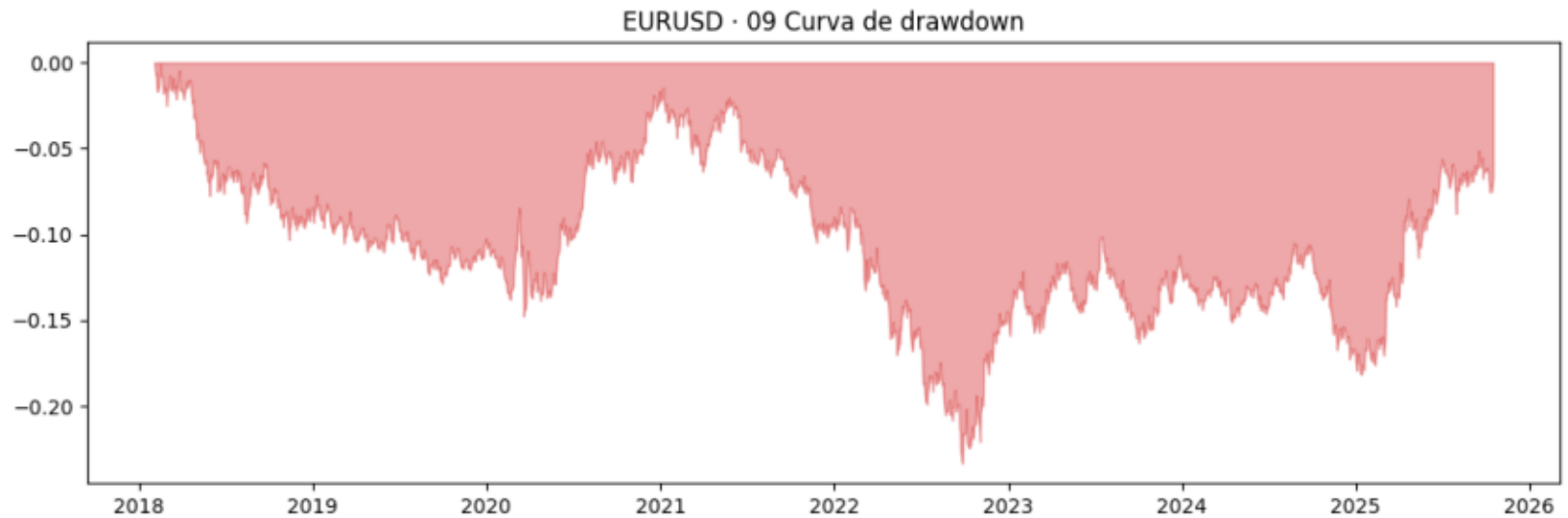
# EURUSD — 07 ACF log-returns



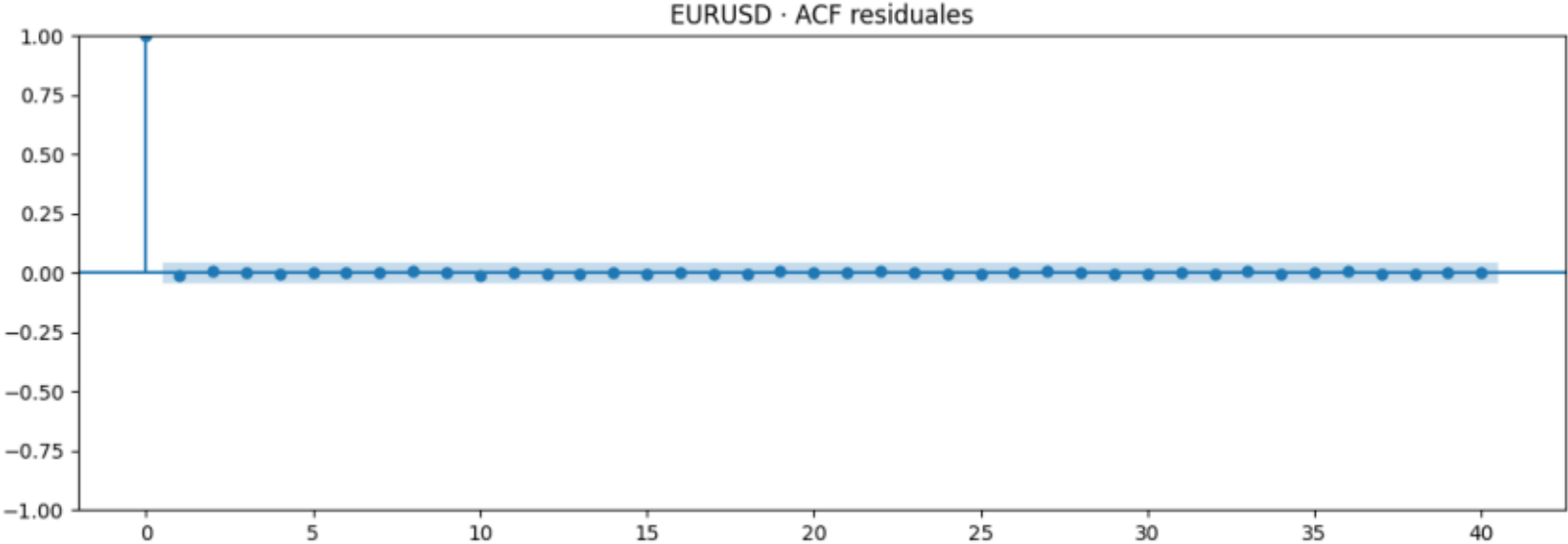
# EURUSD — 08 PACF log-returns



# EURUSD — 09 Curva de drawdown

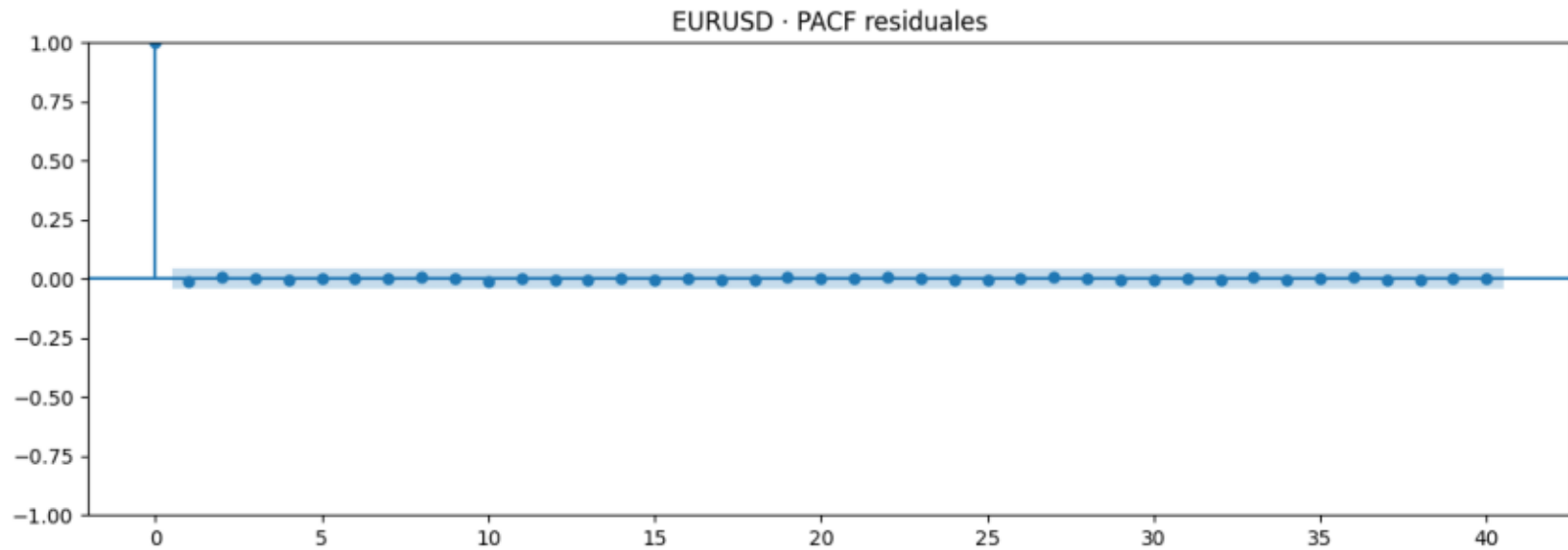


# EURUSD — ACF Residuales

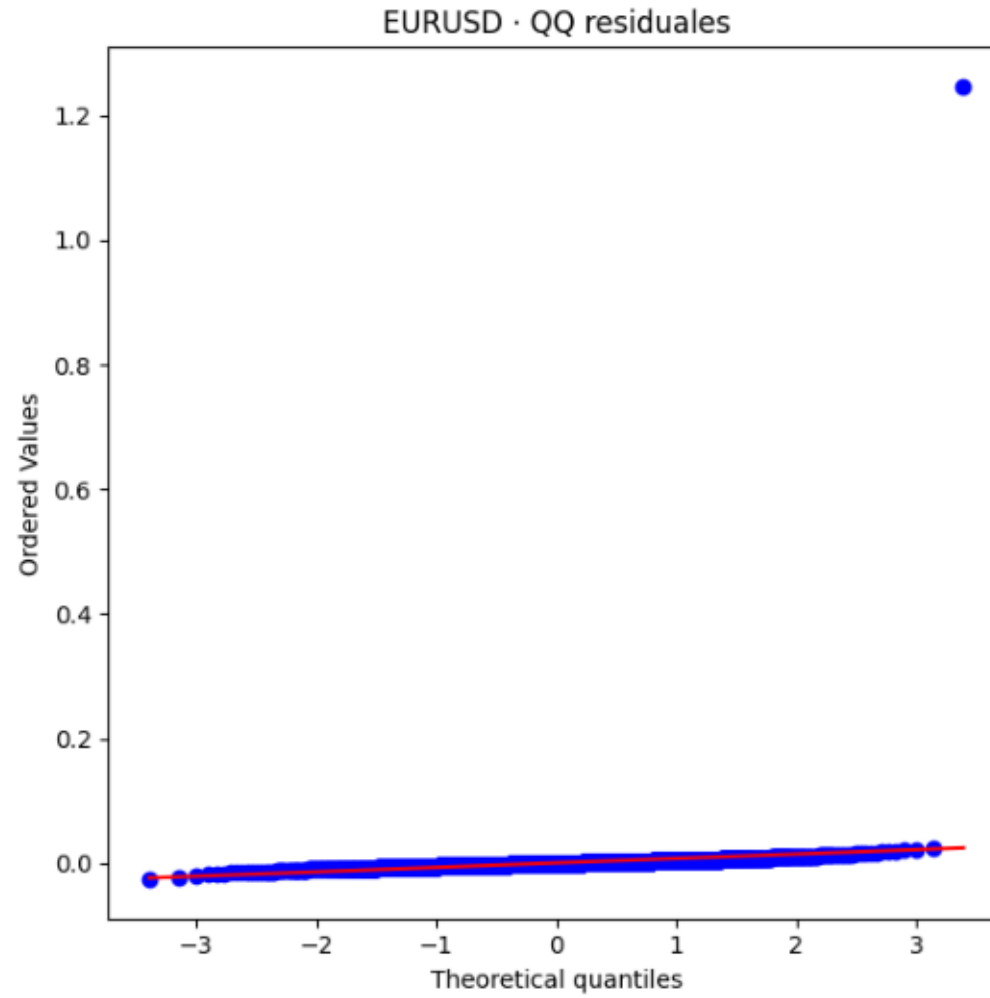




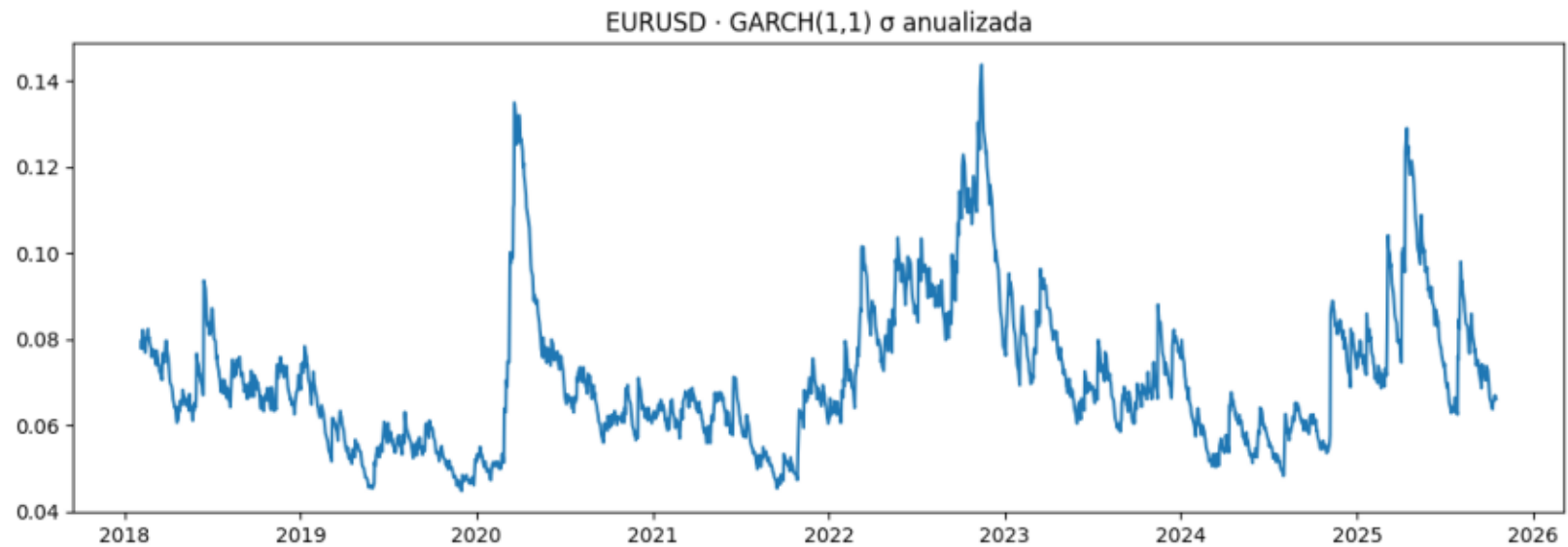
# EURUSD — PACF Residuales



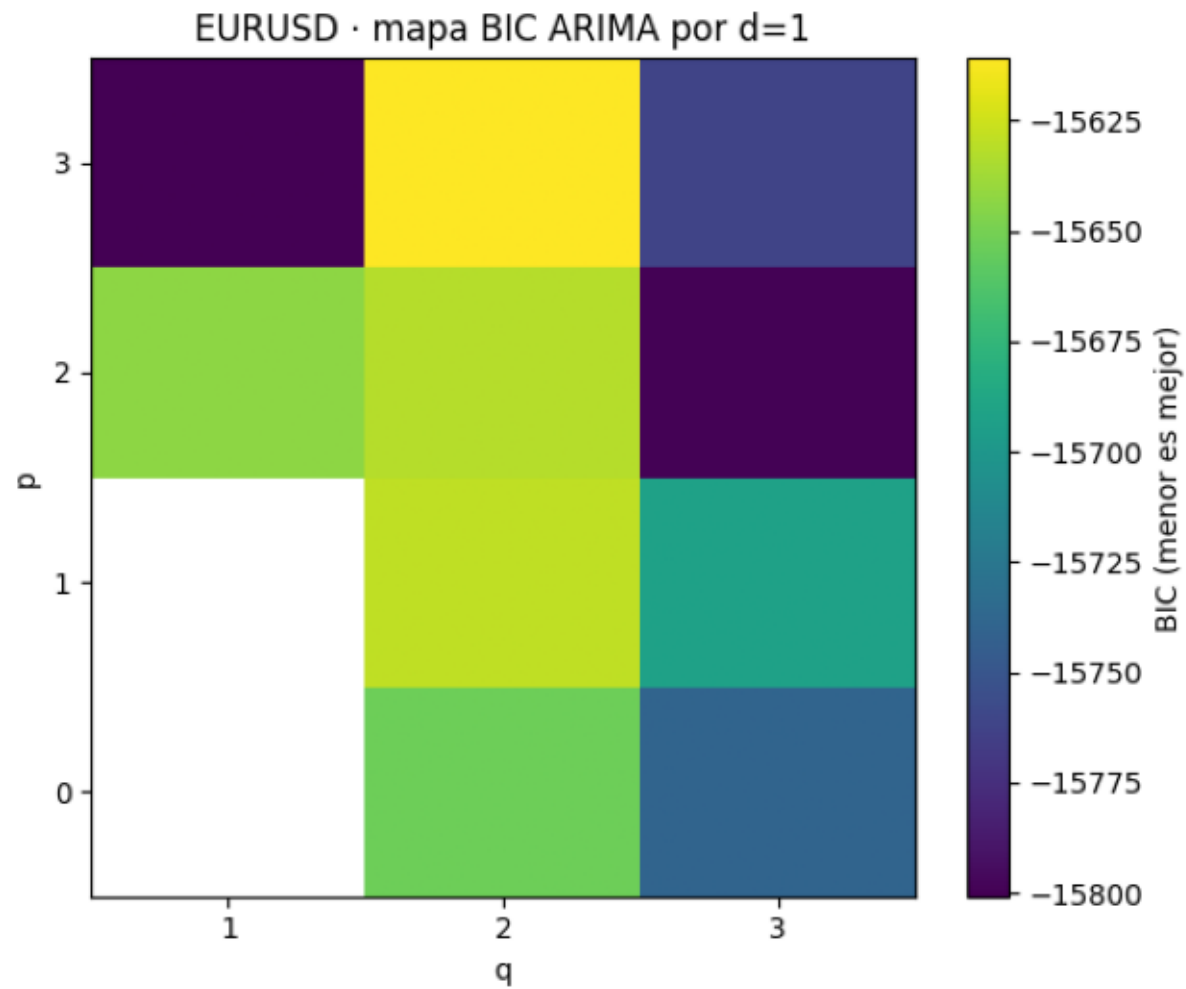
# EURUSD — QQ Residuales



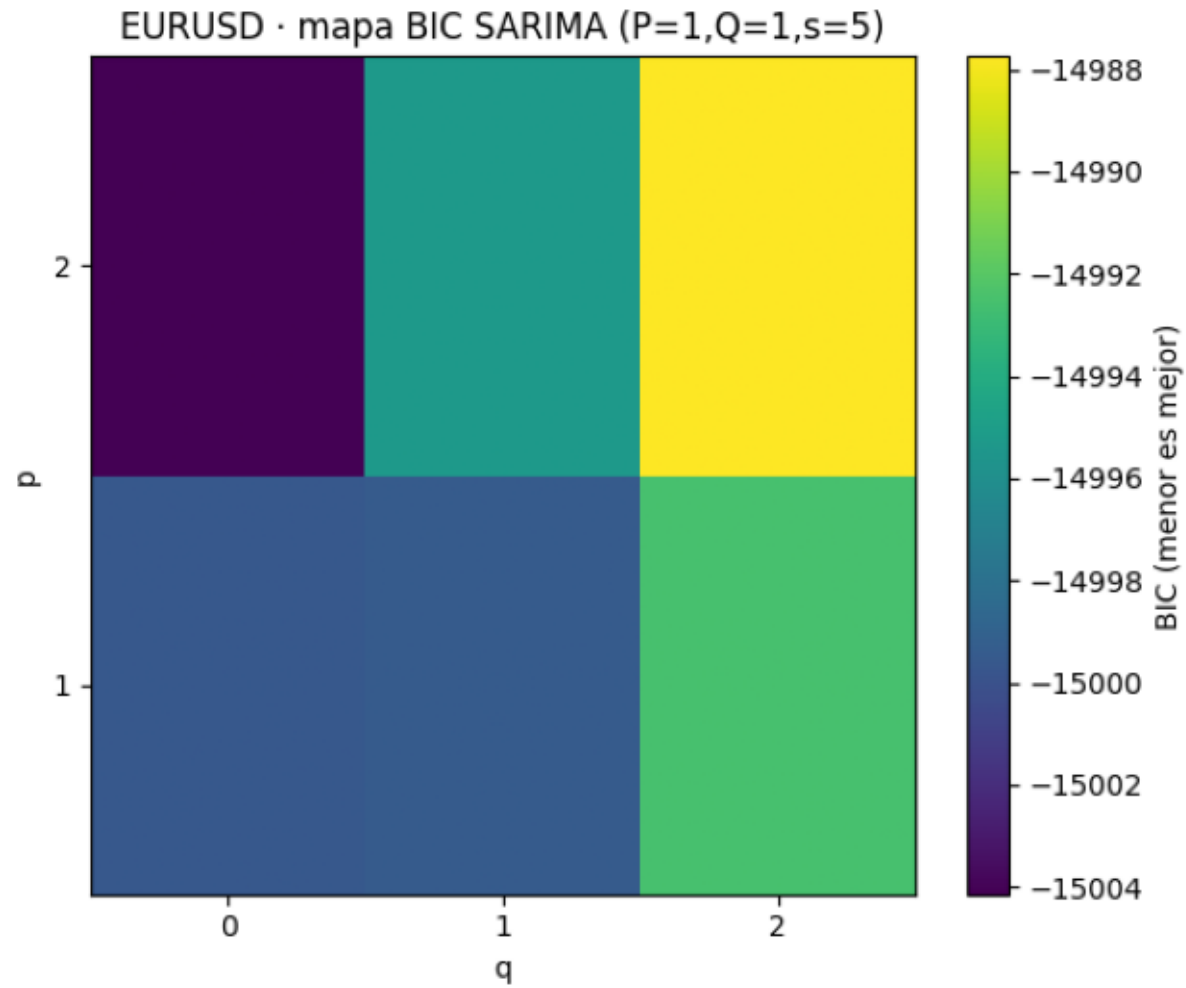
# EURUSD — 10 Volatilidad GARCH ( $\sigma$ anualizada)



# EURUSD — IMG\_BIC\_ARIMA\_1



# EURUSD — IMG\_BIC\_SARIMA\_1



# EURUSD — IMG\_BIC\_SARIMA\_2

