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WITH DailyReturns AS (
    SELECT
        LINK.[timestamp],
        LINK.[close] AS LINK_Close,
        LINK.[volume] AS LINK_Volume,
        LINK.[volatility] AS LINK_Volatility,
        LINK.[signal] AS LINK_Signal,

        -- Daily Return for LINK
        (LINK.[close] - LAG(LINK.[close]) OVER (ORDER BY LINK.[timestamp])) /
        LAG(LINK.[close]) OVER (ORDER BY LINK.[timestamp]) AS LINK_Daily_Return,

        -- 7-day Moving Average for LINK Close
        AVG(LINK.[close]) OVER (ORDER BY LINK.[timestamp] ROWS BETWEEN 6 PRECEDING AND
            CURRENT ROW) AS LINK_MA7,

        -- Exponential Moving Average (EMA) for LINK Close
        ROUND(AVG(LINK.[close]) OVER (ORDER BY LINK.[timestamp] ROWS BETWEEN 14
            PRECEDING AND CURRENT ROW) * 0.1 +
            AVG(LINK.[close]) OVER (ORDER BY LINK.[timestamp] ROWS BETWEEN 6
            PRECEDING AND CURRENT ROW) * 0.9, 2) AS LINK_EMA,

        -- Similar calculations for BTC
        BTC.[close] AS BTC_Close,
        BTC.[volume] AS BTC_Volume,
        BTC.[volatility] AS BTC_Volatility,
        BTC.[signal] AS BTC_Signal,

        -- Daily Return for BTC
        (BTC.[close] - LAG(BTC.[close]) OVER (ORDER BY BTC.[timestamp])) /
        LAG(BTC.[close]) OVER (ORDER BY BTC.[timestamp]) AS BTC_Daily_Return,

        -- 7-day Moving Average for BTC Close
        AVG(BTC.[close]) OVER (ORDER BY BTC.[timestamp] ROWS BETWEEN 6 PRECEDING AND
            CURRENT ROW) AS BTC_MA7,

        -- Exponential Moving Average (EMA) for BTC Close
        ROUND(AVG(BTC.[close]) OVER (ORDER BY BTC.[timestamp] ROWS BETWEEN 14
            PRECEDING AND CURRENT ROW) * 0.1 +
            AVG(BTC.[close]) OVER (ORDER BY BTC.[timestamp] ROWS BETWEEN 6 PRECEDING
            AND CURRENT ROW) * 0.9, 2) AS BTC_EMA

    FROM
        [crypto_data].[dbo].[LINK_USD_data] AS LINK
    JOIN
        [crypto_data].[dbo].[BTC_USD_data] AS BTC
    ON
        LINK.[timestamp] = BTC.[timestamp]
    WHERE
        LINK.[close] IS NOT NULL
        AND BTC.[close] IS NOT NULL
)

```

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-- Final selection with 30-day forecast calculation

SELECT

[timestamp],  
LINK\_Close,  
LINK\_Volume,  
LINK\_Volatility,  
LINK\_Signal,  
LINK\_Daily\_Return,  
LINK\_MA7,  
LINK\_EMA,  
BTC\_Close,  
BTC\_Volume,  
BTC\_Volatility,  
BTC\_Signal,  
BTC\_Daily\_Return,  
BTC\_MA7,  
BTC\_EMA,

-- 30-day Forecasted Return based on average daily returns for LINK and BTC

(POWER(1 + AVG(LINK\_Daily\_Return), 30) - 1) \* 100 AS

LINK\_30\_Day\_Forecasted\_Return,

(POWER(1 + AVG(BTC\_Daily\_Return), 30) - 1) \* 100 AS BTC\_30\_Day\_Forecasted\_Return

FROM DailyReturns

GROUP BY

[timestamp],  
LINK\_Close,  
LINK\_Volume,  
LINK\_Volatility,  
LINK\_Signal,  
LINK\_Daily\_Return,  
LINK\_MA7,  
LINK\_EMA,  
BTC\_Close,  
BTC\_Volume,  
BTC\_Volatility,  
BTC\_Signal,  
BTC\_Daily\_Return,  
BTC\_MA7,  
BTC\_EMA

ORDER BY

[timestamp] DESC;