

Box A.1: DATA OVERVIEW

Date & Time Metrics

date	Day of the week	month	Days from month end	Current quarter	days to earnings	days since last earnings	earnings today (Y/N)
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Google. Apple & NVIDIA + Neighbouring companies: Performance & Sentiment

Stock Prices: Standard Daily Metrics

Open – Opening stock price	High – Day's highest price	Low – Day's lowest price	Close – Closing stock price	Volume – Shares traded that day	Price Movement – % change from previous close	Performance vs SP – Stock 5-day return – S&P 5-day return	S&P 500 5d return – (%)
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Relative P. Metrics

Momentum (Position & Trend)

Current price placement in short-term bands plus the magnitude and quality of the recent trend

Volatility / Risk

The typical magnitude, asymmetry, and co-movement with the market of price moves across single-day and multi-day horizons

RSI -14-day RSI (Relative Strength Indicator)	Bollinger position – (Close – lower BB) ÷ (upper – lower)	SMA_ratio_20d – Close ÷ 20-day SMA	MACD – signal line (Moving Av. Convergence Divergence)	rv_5d – 5-day realized vol: std(1-day returns, 5d)	rv_20d – 20-day realized vol: std(1-day returns, 20d)	Bollinger_lower – 20-day SMA + 2×std dev	Bollinger_upper – (Close – lower BB) ÷ (upper – lower)
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mom_20d – sum of last 20 daily returns	mom_63d – sum of last 63 daily returns	Sharpe_20d – mean(1-day returns, 20d) ÷ std(1-day returns, 20d)	semivol_20d – 20-day downside vol: std(negative 1-day returns only, 20d)	dd_60d – 60-day drawdown: close ÷ max(close, last 60d) – 1	range_pct – intraday range % – (high – low) ÷ close	gap_ret – overnight gap return – open ÷ prior close – 1
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Liquidity / Participation

The unusualness of trading volume versus the stock's own history, summarizing participation intensity

vol_z_60d – 60-day volume z-score: (volume – mean(volume, 60d)) ÷ std(volume, 60d)	beta_sp_60d – 60-day market beta: Cov(1-day stock, 1-day S&P, 60d) ÷ Var(1-day S&P, 60d)	idio_vol_20d – 20-day idiosyncratic vol: std(stock return – β_{so} × market return , 20d)
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Earnings Data: Key Metrics

EPS Actual	EPS Expected	EPS surprise – (Actual – Expected EPS) ÷ Expected EPS	Quarterly Revenue (Actual Revenue)
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Financial News & Earnings Call Transcripts – Sentiment Scores

Company's Sentiment	AI Sentiment	Tariffs-Related	Other
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Macroeconomic Factors: Mixed-frequency macro matrix (no leakage)

Interest Rate	Inflation (CPI, MoM, YoY)	Unemployment Rate	Trade (balance, imports, exports)	GDP	Household Debt Service Ratio
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