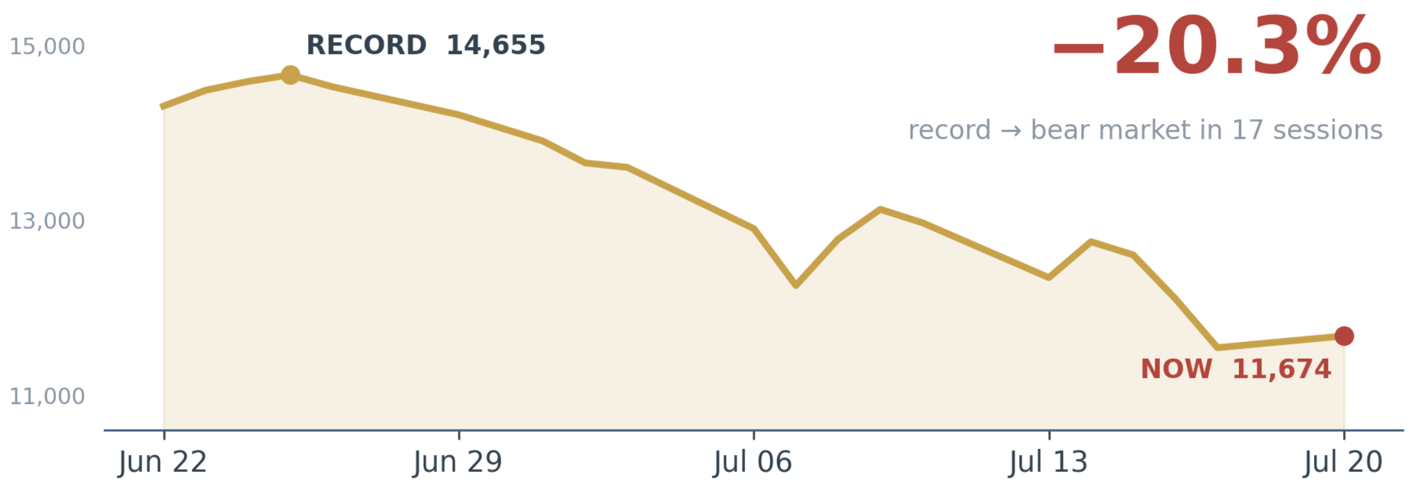
ARSALAN RESEARCH · MARKET STRUCTURE SERIES · SPECIAL BRIEFING

SEMIS UNDER FIRE

Oil at $90, SOX in a bear market — what the tape is actually saying

MONDAY, JULY 20, 2026 · PHLX SEMICONDUCTOR INDEX (SOX) 11,674 INTRADAY · SEVEN PAGES, ELEVEN CHARTS ·

SOX 11,674 –20.3% from record 14,655	**BRENT $89.22** +27% off July lows	**VIX 18.65** elevated, not panicked	**US 10Y 4.55%** hawkish Fed backdrop	**FLOWS +$7.1B** record 1-day semi-ETF buy



PHLX Semiconductor Index (SOX). Path indicative between reported closes — CNBC, Investing.com, CappNotes. As of Jul 20, 2026 intraday.

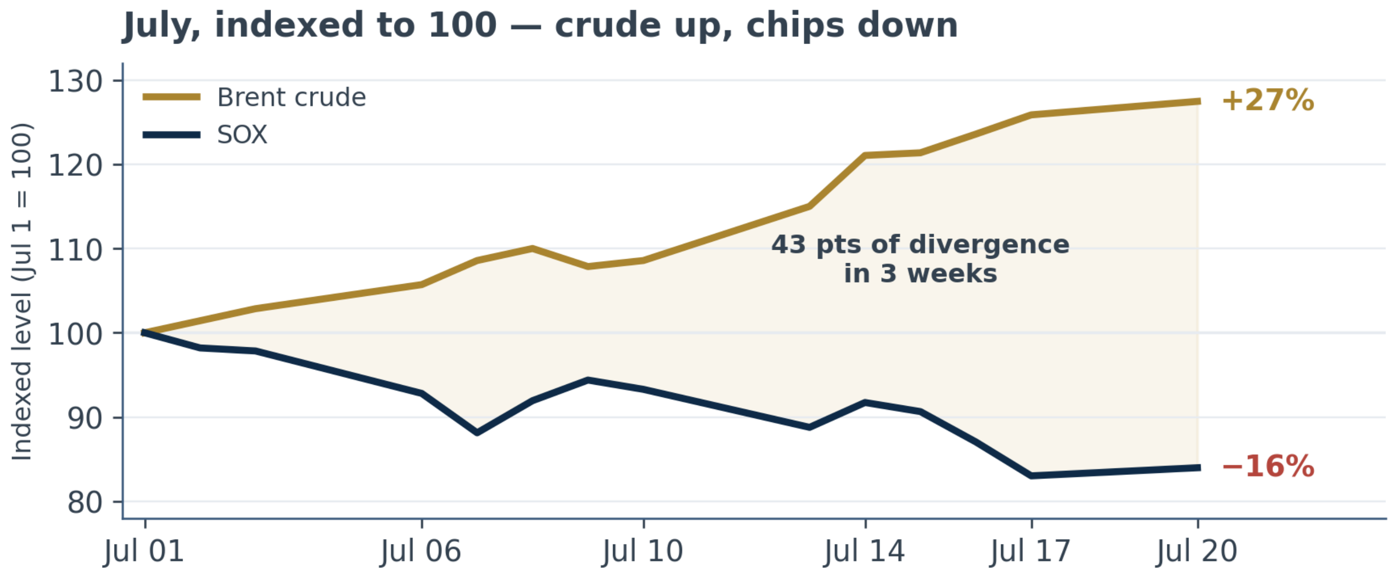
BOTTOM LINE — This is a positioning unwind with a macro accelerant: oil is the excuse, AI-capex ROI is the story. The crowd is still buying the dip, so no capitulation print exists yet. Damaged tape, tradeable bounces. Scale in — don't dive in.

INSIDE: 01 Macro — it's not the oil · 02 Positioning — the crowd is still long · 03 Options & vol — short gamma until proven otherwise · 04 Technicals — damaged, not dead · 05 Structural — the EUV supply gate · 06 Verdict — better price, unconfirmed bottom

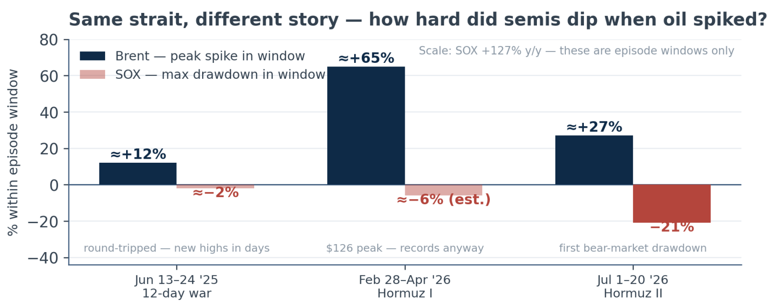
01 · MACRO

It's not the oil.

Brent has surged ~27% off its July lows on the collapsed US–Iran ceasefire and the Hormuz blockade — yet the same strait crisis in Feb–Apr sent crude to $126 while SOX rallied to records. The July catalysts were Broadcom-style capex doubts, TSMC's spending shock and the Kimi K3 "DeepSeek moment," with oil hitting semis only indirectly through rates (10Y 4.55%).



Indexed Jul 1 = 100. Brent settles confirmed Jul 14/15/17/20 (84.73/84.95 / 88.10/89.22); SOX anchors as on price map; interim path indicative.



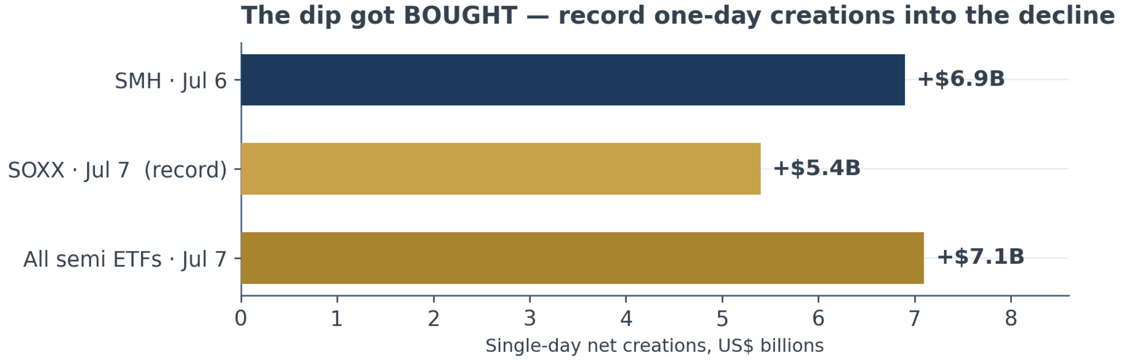
Brent spikes ≈ from reported prints (Jul low ~$70→$89.22 settle; Mar–Apr peak ~$121–126 by vendor). SOX troughs: Jun '25 and Feb–Apr '26 estimated (mid-Mar wobble; no semi week before Jul '26 exceeded the Apr '25 rout); Jul '26 confirmed on closes — intraday trough −24%.

TAKEAWAY — Treat oil as a volatility amplifier, not the thesis. If crude retraces and semis don't bounce, that confirms the selloff is fundamental (capex ROI), not geopolitical.

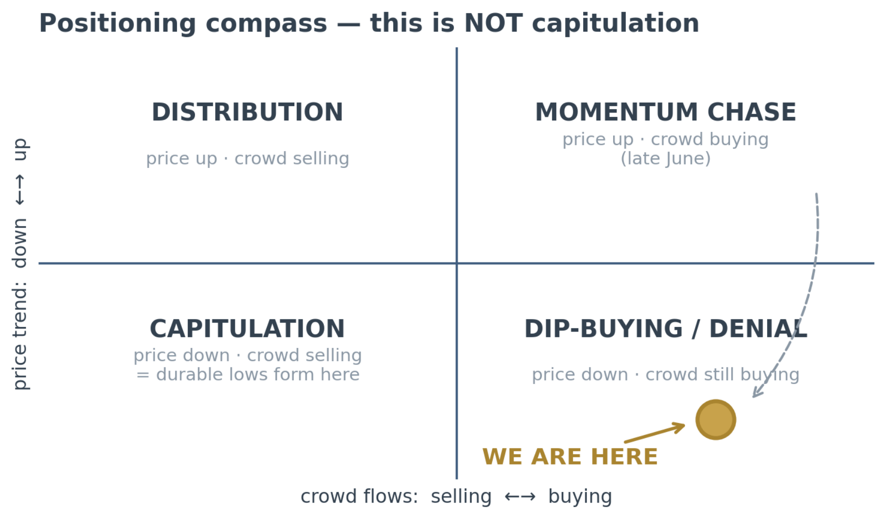
02 · POSITIONING & FLOWS

The crowd is still buying — that's the problem.

Capitulation lows form when forced sellers exhaust. The evidence shows the opposite: record ETF creations, the strongest retail July on record, and hedge funds buying at the fastest pace in 3.5 years — before the last leg down.



ETF.com / ETF Action daily flow reports, early Jul 2026; SOXX AUM +11.7% in one day. Retail (Citadel Securities): zero net-sell days in July; buying ~3.2× monthly avg — strongest July on record.



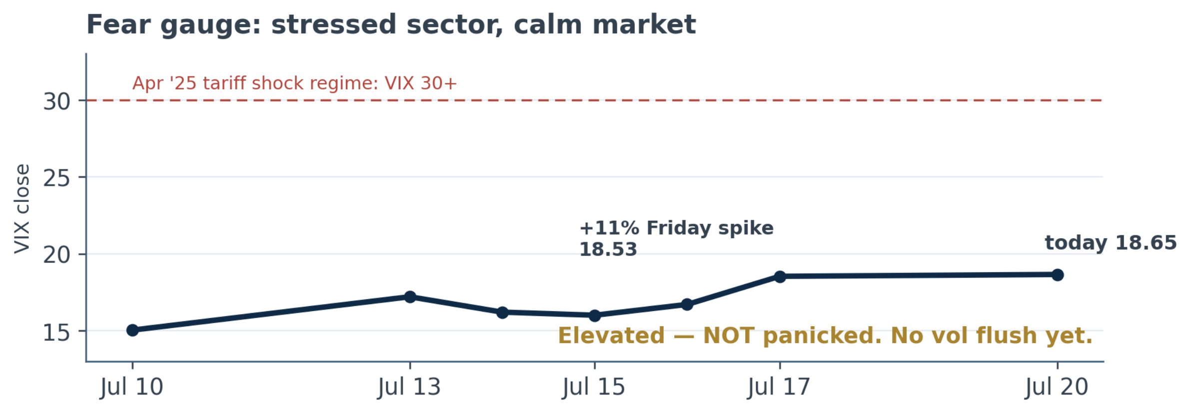
Evidence: record ETF creations · zero retail net-sell days in July · HFs buying fastest in 3.5 yrs. SOXX/SMH short-interest prints lag ~2 wks — no fresh figure available; flows show longs, not shorts.

TAKEAWAY — Not capitulation, not aggressive shorting: dip-buying into a decline. Crowded longs are fuel for lower prices until a flush prints.

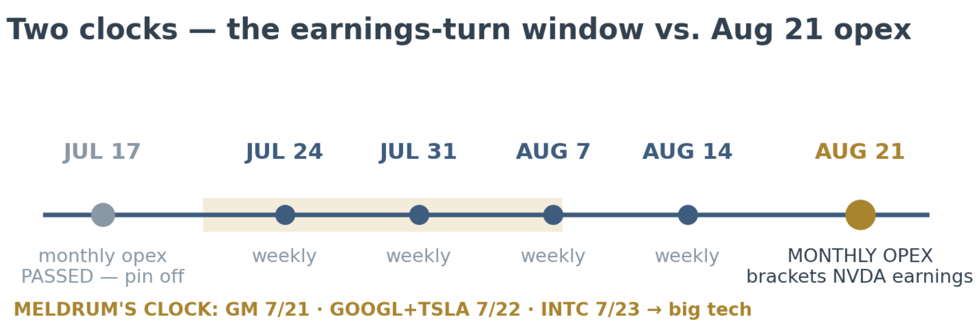
03 · OPTIONS & VOLATILITY

Short gamma until proven otherwise.

Retail's call/put direction ratio has sunk to its 16th percentile — the weakest since late March — as hedge buying picks up (Citadel Securities). Rising put demand into a fast decline typically leaves dealers short gamma: hedging that amplifies moves in both directions. July's 6.5% intraday SOX range fits that regime.



Cboe VIX closes (Jul 10 = 15.03; Jul 17 = 18.53; Jul 20 = 18.65 confirmed; interim indicative). SOXX 50-day σ of daily returns 4.2% (≈67% annualized) — highest since May 2020 (CNBC).



Confirmed: GM Jul 21 (pre-mkt), Alphabet + Tesla Jul 22 (post-close), Intel Jul 23 — CNBC / Seeking Alpha. Third-Friday monthlies; Friday weeklies; NVDA reports late Aug.

DATA GAPS — STATED, NOT GUESSED

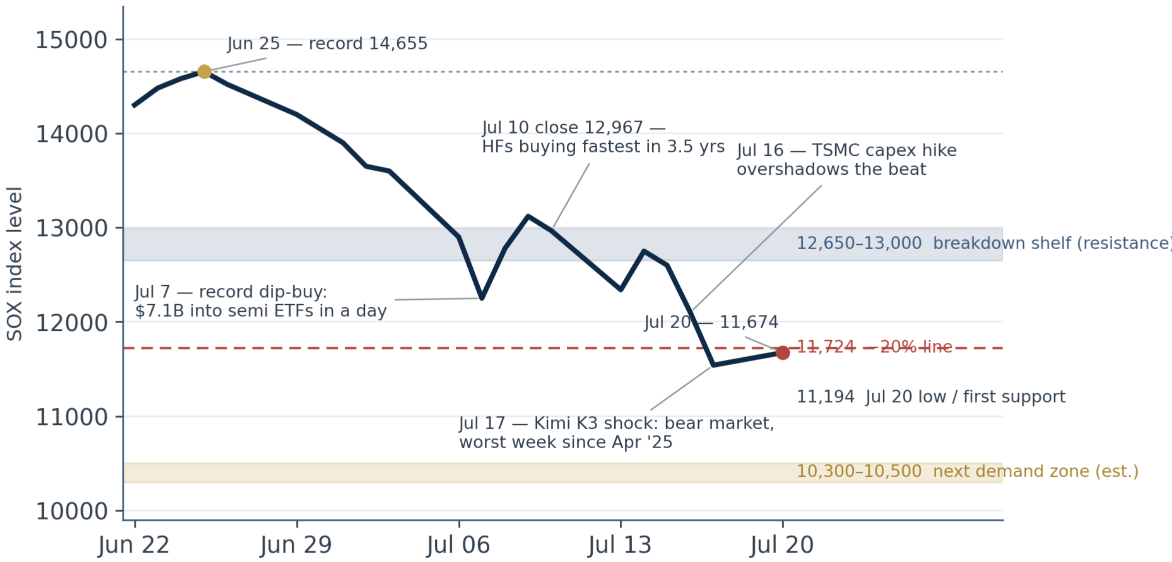
Strike-level open interest, dealer GEX/delta and max pain for SOXX/SMH require paid feeds (SpotGamma-class) and are not publicly retrievable today; fresh FINRA short-interest prints lag ~2 weeks. Nothing above relies on assumed values for these series.

TAKEAWAY — With the July pin rolled off and no monthly expiry until Aug 21, expect wide, headline-driven ranges. Two clocks are now live: Meldrum's earnings turn (GM Jul 21, GOOGL+TSLA Jul 22, INTC Jul 23) vs. our Aug 21 / NVDA checkpoint — trade one consciously.

04 · TECHNICALS

Damaged structure, tradeable bounces.

Fast, high-volume decline with failed bounces — a momentum unwind, not a healthy pullback. The primary uptrend is intact; the intermediate trend is broken; the washout print is missing.



SOX with catalyst map. Confirmed anchors: record 14,655 · Jul 10 close 12,967 · wk of Jul 13–17 −11% · Jul 20 intraday 11,674 (range 11,195–11,939). Path between anchors indicative.

Technical signal board — damaged structure, no capitulation

PRIMARY TREND (12-mo)	UP — intact (+127%)
INTERMEDIATE TREND	DOWN — broken (−20% in 17 sessions)
PRICE vs 20-DAY / 50-DAY	BELOW both — rolling over
PRICE vs 200-DAY	NEAR — zone test; exact level unverified*
RSI-14 (SOXX)	≈46 — weak but NO washout print
MACD (SOXX)	NEGATIVE — momentum down
REL. STRENGTH vs NDX/SPX	BROKEN — leader → laggard
VOLUME SIGNATURE	DISTRIBUTION — record buys, then lower lows

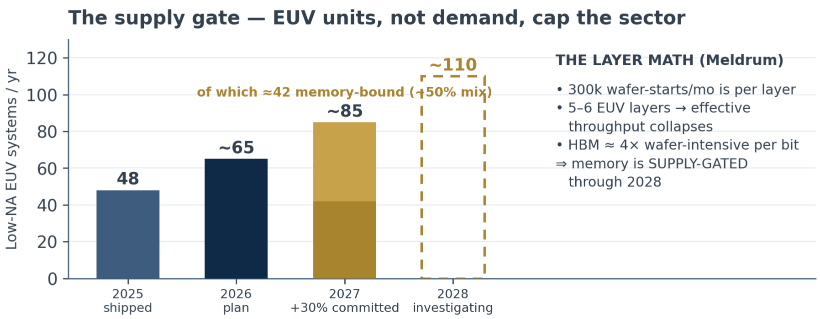
*Sources conflict on the 200-day: Investing.com shows SOXX below its published figure; 3×-levered SOXL sits far above its own — treated as a zone, not a line.

Indicator snapshots: Investing.com (SOXX RSI 46.3, MACD −7.9), CNBC, CappNotes. As of Jul 20, 2026.

05 · STRUCTURAL

The supply gate.

v1.0's biggest omission. ASML's Jul 15 call: ~65 EUV systems in 2026, +30% committed for 2027 — and a further +30% for 2028 only under investigation, not committed. With roughly half of shipments memory-bound and HBM about 4x as wafer-hungry per bit, memory is supply-gated into 2028. That is a structural floor under the complex, and it belongs inside the bull case.



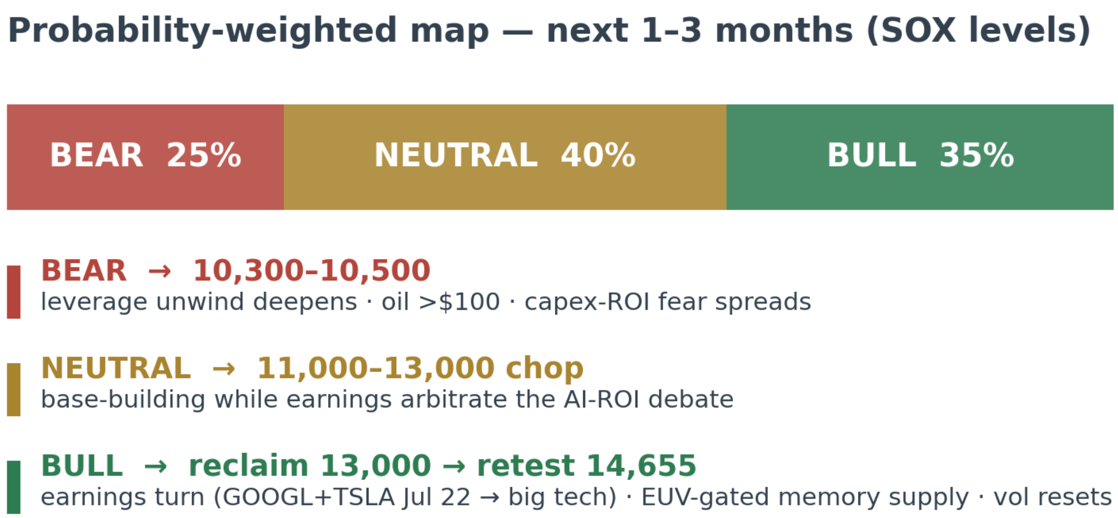
ASML Q2'26 6-K (Jul 15): ~65 NXE units in 2026; +30% capacity committed for 2027; another +30% for 2028 'investigating'. Q1'26 shipments 51% memory-bound; ≈42 = 85 × ~50% mix (derived). Layer math per Meldrum. 2025 shipments: TechPowerUp.

TAKEAWAY — Scarcity cuts both ways: it underwrites memory and equipment pricing power, and it is also why capex shocks (TSMC) land so hard on the tape. Structural support — not a timing signal.

06 · VERDICT

Better price, unconfirmed bottom.

Macro defines the regime; technicals gate the timing. Right now they disagree — which argues for sizing discipline, not conviction sizing.



v1.1 — revised from 30/40/30: K3 reclassified as narrative shock; EUV supply gate added. Better price than 3 weeks ago; still an unconfirmed low.

STRONGEST CASE FOR ENTERING	STRONGEST CASE AGAINST
· –20% discount inside an intact secular uptrend (+127% y/y); geopolitical oil spikes have historically round-tripped · Record institutional and HF dip-buying; demand itself uncracked — analysts frame a mid-cycle reset · Kimi K3 reads linear / non-frontier on Meldrum's test — a narrative shock, not a moat breach (v1.1) · Memory is EUV supply-gated (~42 of ~85 systems in 2027 memory-bound) — a structural floor under the complex	· No flush: crowded longs (record creations, Korean retail leverage per JPMorgan) are fuel for lower prices · 4.55% tens plus a hawkish Fed compress long-duration multiples · TSMC's capex/margin shock is the genuinely fundamental question — plus $100-oil tail risk if Hormuz worsens

ENTRY FRAMEWORK (not advice)	Thirds: starter at current levels · add in the 10,300–10,500 demand zone · add on a reclaimed 50-day. Full size only after a capitulation print — a vol flush or washout momentum. Leveraged vehicles wait for the reclaim, not the knife.
REVISIONS — v1.1 / v1.2 (same day)	v1.2: 'Same strait' chart reframed from net episode moves to max drawdowns within each dated window — net moves buried the dips, and the Jun '25 bar read like annual performance. SOX +127% scale note added; Jun '25 and Feb–Apr '26 troughs marked as estimates. v1.1: Kimi K3 reclassified from 'fundamental crack' to narrative shock: capability is contested — market coverage called it competitive; Meldrum's test reads it as linear/non-frontier, which if right is bull evidence, not bear. EUV supply gate added (p6). Probabilities 30/40/30 to 35/40/25. Realized-vol unit clarified: 4.2% is the daily standard deviation (~67% annualized). Earnings clock added alongside the opex clock (p4).

Sources: CNBC, Investing.com, ETF.com, ETF Action, Citadel Securities Global Market Intelligence, CappNotes, Benzinga, Cboe, Yahoo Finance, TradingEconomics, ASML Q2 2026 6-K (SEC), TechPowerUp, Seeking Alpha — as of Jul 20, 2026 intraday. Kimi K3 capability assessment and EUV layer math per Mark Meldrum's market outlook; ~42 memory-bound figure is derived (85 x ~50% Q1 memory mix), not an ASML disclosure. Price paths between confirmed closes are indicative and labeled on each chart. Educational market commentary for discussion purposes only; not investment advice, not a recommendation to buy or sell any security. The author may hold positions in securities discussed.