

Cryptocurrency Causa

CRYPTO FORECASTING RESEARCH · BTC · ETH · XRP · LINK

Will bitcoin, Ether, XRP and Chainlink move up, down or sideways over the next 30 days? Below: what our tested models expect for each coin, which model has the best record, and what live Deribit option prices imply for each listed expiry. The research behind it asks whether price history or machine learning can beat a simple base rate.

30-day outlook: what the models expect

daily from fresh prices; as of Oct 24, 2026.

Direction: not predictable - no reliable edge found Machine-learning models built to read trend and momentum were reliably worse than the base rate in 10 of 22 tests and reliably better in 0. For 3 of 4 coins, long-run history and the past year's trend point in opposite directions. So any UP or DOWN call below is a lean, not a forecast with a proven edge.	Size of moves: partly predictable - the models' real edge Volatility models, which forecast how far prices swing rather than which way, had positive skill against the base rate in 17 of 22 development tests (up to +14.2%). On the one-time final test, none passed every condition: the best, for BTC, was within noise. The ranges below are the most useful part of each outlook.
BTC \$81,078 - close of Oct 23, 2026 ► FLAT No directional edge. Most likely stays within ±10% (\$72,970–\$89,186): 64% chance. ▼ down >10% within ±10% ▲ up >10% 18% 64% 18% 80% range in 30 days \$69,991 – \$92,791 Headline model: Lognormal, 90-day vol. Best on the final test: +16.2% skill vs the base rate, within noise (95%: –7.9% to +44.3%). It forecasts the size of moves, not their direction. Direction signals Long-run history ▲ up +14 pts Past-year trend ▼ down –10 pts Options market (Nov 27, 2026, 34d) ▼ 16% ▲ 18%	ETH \$2,384 - close of Oct 23, 2026 ▲ UP Leans up: 37% chance of rising more than 10%, vs 30% for the opposite move. Big moves are likely either way (67% chance of more than ±10%). ▼ down >10% within ±10% ▲ up >10% 30% 33% 37% 80% range in 30 days \$1,781 – \$3,586 Headline model: Base rate (past frequency). No model beat it on the final test; the closest was Lognormal, 90-day vol (–1.8%). Direction signals Long-run history ▲ up +7 pts Past-year trend ▼ down –16 pts Options market (Nov 27, 2026, 34d) ▼ 24% ▲ 25%
XRP \$1.29 - close of Oct 23, 2026 ► FLAT No directional edge, but big swings are likely: 62% chance of moving more than 10% either way. ▼ down >10% within ±10% ▲ up >10% 33% 38% 29% 80% range in 30 days \$0.96 – \$1.92 Headline model: Base rate (past frequency). No model beat it on the final test; the closest was Lognormal, 90-day vol (–4.5%). Direction signals Long-run history ► flat –3 pts Past-year trend ▼ down –19 pts Options market (Nov 27, 2026, 34d) ▼ 26% ▲ 24%	LINK \$11.81 - close of Oct 23, 2026 ► FLAT No directional edge, but big swings are likely: 67% chance of moving more than 10% either way. ▼ down >10% within ±10% ▲ up >10% 37% 33% 30% 80% range in 30 days \$8.49 – \$15.55 Headline model: GARCH(1,1)-t. Best on the final test: +3.1% skill vs the base rate, within noise (95%: –5.6% to +15.7%). It forecasts the size of moves, not their direction. Direction signals Long-run history ► flat +4 pts Past-year trend ▼ down –10 pts Options market (Nov 27, 2026, 34d) no listed options

Reading the options market

Market implied, not a forecast

Probabilities come from option prices, which include a risk premium (traders pay up for protection). Read them as the market's pricing, not a prediction or advice.	Options trade with a bid and an ask. The quote range is every probability consistent with those prices: wide when the market is thin, tight when it is liquid.	Far from today's price no options are quoted, so the market says nothing there. Those targets are marked rather than guessed.
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Market snapshot

Very listed expiry at a glance. The median and the 80% range are read on the market-implied curve: 10% of the probability sits below the range and 10% above it.						
ASSET	EXPIRY	PRICE TODAY	MARKET MEDIAN	80% MARKET RANGE	CHANCE ABOVE TODAY	IMPLIED VOL
BTC	Nov 27, 2026 · 34 days	\$80,157	\$81,061	\$69,160 – \$91,310	54%	37%
	Dec 25, 2026 · 62 days		\$81,074	\$65,616 – \$96,119	53%	37%
ETH	Nov 27, 2026 · 34 days	\$2,318	\$2,320	\$1,873 – \$2,780	50%	52%
	Dec 25, 2026 · 62 days		\$2,306	\$1,735 – \$2,952	49%	52%
XRP	Nov 27, 2026 · 34 days	\$1.27	\$1.26	\$1.03 – \$1.54	47%	55%
	Dec 25, 2026 · 62 days		\$1.25	\$0.95 – \$1.63	46%	55%
LINK	No listed options on any reachable venue, so there is no market-implied view.					

BTC • Nov 27, 2026 (34 days)

Options price a **50% chance BTC settles above \$81,061** on Nov 27, 2026, and an **80% chance it lands between \$69,160 and \$91,310**. The market gives 54% odds it finishes above today's \$80,157.

\$80,157
BTC price today
(settlement index)

Nov 27, 2026
expiry, 08:00 UTC ·
34 days away

37%
implied volatility
(annualised)

\$58k–\$120k
prices with quoted
options

Chance BTC settles above each price on Nov 27, 2026

inverse options on Deribit

— Market-implied (full option chain)

— Target, with quote range

Upside targets

Chance of settling **above** each price

MOVE VS TODAY	PRICE	MARKET	QUOTE RANGE	BENCHMARK
+10%	\$88,173	18%	13%–24%	19%
+25%	\$100,197	2%	<1%–3%	2%
+50%	\$120,236	not quoted	—	<1% †
+75%	\$140,276	not quoted	—	<1% †
+100%	\$160,315	not quoted	—	<1% †

Downside targets

Chance of settling **below** each price

MOVE VS TODAY	PRICE	MARKET	QUOTE RANGE	BENCHMARK
-10%	\$72,142	16%	11%–21%	18%
-25%	\$60,118	3%	<1%–4%	<1%
-50%	\$40,079	not quoted	—	<1% †

Benchmark: the same expiry priced with one volatility for every strike (Black-76). The gap to the market shows how much extra weight traders put on large moves. **Not quoted:** no options traded that far out, so the market gives no reading; † marks a benchmark value extrapolated past the quotes.

BTC • Dec 25, 2026 (62 days)

Options price a **50% chance BTC settles above \$81,074** on Dec 25, 2026, and an **80% chance it lands between \$65,616 and \$96,119**. The market gives 53% odds it finishes above today's \$80,157.

\$80,157
BTC price today
(settlement index)

Dec 25, 2026
expiry, 08:00 UTC ·
62 days away

37%
implied volatility
(annualised)

\$20k–\$220k
prices with quoted
options

Chance BTC settles above each price on Dec 25, 2026

inverse options on Deribit · closest listed expiry to 90 days · year-end expiry

— Market-implied (full option chain)

— Target, with quote range

Upside targets

Chance of settling **above** each price

MOVE VS TODAY	PRICE	MARKET	QUOTE RANGE	BENCHMARK
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ETH • Nov 27, 2026 (34 days)

Options price a **50% chance ETH settles above \$2,320** on Nov 27, 2026, and an

ETH • Dec 25, 2026 (62 days)

Options price a **50% chance ETH settles above \$2,306** on Dec 25, 2026, and an

Prices above today's \$2,318. \$2,318 ETH price today (settlement index) Nov 27, 2026 expiry, 08:00 UTC · 34 days away 52% implied volatility (annualised) \$1.6k–\$4.8k prices with quoted options	Prices above today's \$2,318. \$2,318 ETH price today (settlement index) Dec 25, 2026 expiry, 08:00 UTC · 62 days away 52% implied volatility (annualised) \$1.2k–\$11k prices with quoted options																																																												
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XRP · Nov 27, 2026 (34 days)

Options price a **50% chance XRP settles above \$1.26** on Nov 27, 2026, and an **80% chance it lands between \$1.03 and \$1.54**. The market gives 47% odds it finishes above today's \$1.27.

\$1.27
XRP price today
(settlement index)

Nov 27, 2026
expiry, 08:00 UTC -
34 days away

55%
implied volatility
(annualised)

\$0.95–\$1.85
prices with quoted
options

Chance XRP settles above each price on Nov 27, 2026

linear options on Deribit

Upside targets

Chance of settling **above** each price

MOVE VS TODAY	PRICE	MARKET	QUOTE RANGE	BENCHMARK
+10%	\$1.40	24%	18%–30%	26%
\$1.50	\$1.50	13%	8%–19%	15%
+25%	\$1.59	7%	4%–12%	8%
\$1.75	\$1.75	3%	1%–6%	2%
+50%	\$1.91	not quoted	—	<1% †
\$2.00	\$2.00	not quoted	—	<1% †
+75%	\$2.23	not quoted	—	<1% †
\$2.25	\$2.25	not quoted	—	<1% †
\$2.50	\$2.50	not quoted	—	<1% †
+100%	\$2.55	not quoted	—	<1% †
\$3.00	\$3.00	not quoted	—	<1% †

Downside targets

Chance of settling **below** each price

MOVE VS TODAY	PRICE	MARKET	QUOTE RANGE	BENCHMARK
-10%	\$1.15	26%	18%–34%	28%
-25%	\$0.96	not quoted	—	5% †
-50%	\$0.64	not quoted	—	<1% †

The gap to the market shows how much extra weight traders put on large moves. **Not quoted:** no options traded that far out, so the market gives no reading; † marks a benchmark value extrapolated past the quotes.

XRP · Dec 25, 2026 (62 days)

Options price a **50% chance XRP settles above \$1.25** on Dec 25, 2026, and an **80% chance it lands between \$0.95 and \$1.63**. The market gives 46% odds it finishes above today's \$1.27.

\$1.27
XRP price today
(settlement index)

Dec 25, 2026
expiry, 08:00 UTC -
62 days away

55%
implied volatility
(annualised)

\$0.40–\$2.30
prices with quoted
options

Chance XRP settles above each price on Dec 25, 2026

linear options on Deribit · closest listed expiry to 90 days · year-end expiry

Upside targets

Chance of settling **above** each price

MOVE VS TODAY	PRICE	MARKET	QUOTE RANGE	BENCHMARK
+10%	\$1.40	28%	21%–35%	30%
\$1.50	\$1.50	19%	13%–26%	21%
+25%	\$1.59	12%	8%–18%	14%
\$1.75	\$1.75	6%	3%–10%	7%
+50%	\$1.91	3%	1%–6%	3%
\$2.00	\$2.00	3%	1%–5%	2%
+75%	\$2.23	not quoted	—	<1% †
\$2.25	\$2.25	not quoted	—	<1% †
\$2.50	\$2.50	not quoted	—	<1% †
+100%	\$2.55	not quoted	—	<1% †
\$3.00	\$3.00	not quoted	—	<1% †

Downside targets

Chance of settling **below** each price

MOVE VS TODAY	PRICE	MARKET	QUOTE RANGE	BENCHMARK
-10%	\$1.15	33%	25%–42%	35%
-25%	\$0.96	11%	6%–17%	12%
-50%	\$0.64	not quoted	—	<1% †

The gap to the market shows how much extra weight traders put on large moves. **Not quoted:** no options traded that far out, so the market gives no reading; † marks a benchmark value extrapolated past the quotes.

LINK

No market-implied odds: No listed LINK options on Deribit, OKX, Gate, Derive, Delta, Aevo, Thalex or Coinbase Derivatives (verified live 2026-10-11); CME lists LINK futures only. Perpetuals and ETF (GLNK) options are not substitutes (brief s.3). See research/STAGE1_COVERAGE.md.

Can history or machine learning beat the base rate?

Each model forecast the same kind of price targets as the options above, using only data available at the time, and was scored against what actually happened. The yardstick is the **base rate**: how often a move that size happened before.

Mostly no. Across 22 asset $\times$ horizon tests, the best price-history model was reliably better than the base rate in only **1**, machine learning in **0**, and the Chronos foundation

model in 1 of the 16 it covered. On the sealed final test (the most recent 20% of history, scored once), **no model was promoted**. Only 4 tests had enough outcomes to judge, so this is “no demonstrated improvement”, not proof of no skill.

Settlement prices (Deribit, 08:00 UTC)						
ASSET	HORIZON	SEPARATE OUTCOMES	BEST HISTORY MODEL	IMPLIED VOL (DVOL)	BEST MACHINE LEARNING	FOUNDATION MODEL
BTC	30 days	53	Lognormal, 90-day vol +7.0%	+6.4%	Logistic regression -10.0%	Chronos (volatility) +6.4%
BTC	60 days	25	GARCH(1,1)-t +3.6%	+4.0%	Logistic regression -2.8%	Chronos (price) +7.2%
BTC	90 days	16	GARCH(1,1)-t +7.8%	+4.1%	Random forest -5.2%	__b
ETH	30 days	52	Lognormal, 90-day vol +10.3%	+9.8%	Logistic regression -8.0%	Chronos (volatility) +10.3%
ETH	60 days	25	Lognormal, 90-day vol +10.9%	+10.8%	Random forest -9.2%	Chronos (volatility) +9.9%
ETH	90 days	16	Lognormal, 90-day vol +14.2%	+14.6%	Random forest -6.1%	__b
LINK	30 days	26	Lognormal, 90-day vol +0.5%	__a	Random forest -15.2% reliably worse	Chronos (volatility) +0.6%
LINK	60 days	12	Lognormal, 90-day vol +6.1% reliably better	__a	Random forest -58.3% reliably worse	Chronos (volatility) +6.2% reliably better
XRP	30 days	27	Filtered hist. simulation -1.7%	__a	Random forest -9.2%	Chronos (volatility) -1.1%
XRP	60 days	12	Filtered hist. simulation -5.1% reliably worse	__a	Random forest +0.1%	Chronos (volatility) -4.0%
Not scored: LINK 90 days, XRP 90 days. This price history is too short for that horizon.						
Spot closes (Coinbase / Bitstamp)						
ASSET	HORIZON	SEPARATE OUTCOMES	BEST HISTORY MODEL	IMPLIED VOL (DVOL)	BEST MACHINE LEARNING	FOUNDATION MODEL

BTC	30 days	103	Filtered hist. simulation
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				-3.0%		-12.4% (reliably worse)	-4.9%
BTC	60 days	50	Filtered hist. simulation -4.7%	+3.2%	Random forest (reliably worse)	Chronos (price)	-5.4%
BTC	90 days	33	Filtered hist. simulation -4.5%	+4.5%	Random forest (reliably worse)	__b	
ETH	30 days	93	Lognormal, 90-day vol +0.9%	+5.1%	Random forest (reliably worse)	Chronos (volatility)	+0.4%
ETH	60 days	45	Lognormal, 90-day vol +0.2%	+1.5%	Random forest (reliably worse)	Chronos (price)	+2.7%
ETH	90 days	30	Lognormal, 90-day vol +2.0%	+1.4%	Random forest (reliably worse)	__b	
LINK	30 days	55	Lognormal, EWMA vol +4.3%	__a	Random forest -6.9%	Chronos (volatility)	+4.2%
LINK	60 days	26	Lognormal, 90-day vol +2.5%	__a	Logistic regression -8.7%	Chronos (volatility)	+2.3%
LINK	90 days	17	Lognormal, EWMA vol +9.0%	__a	Random forest -7.0%	__b	
XRP	30 days	86	Lognormal, 90-day vol +3.8%	__a	Random forest -4.7%	Chronos (volatility)	+3.8%
XRP	60 days	42	Lognormal, EWMA vol +4.9%	__a	Random forest (reliably worse)	Chronos (volatility)	+5.5%
XRP	90 days	27	Lognormal, EWMA vol +5.7%	__a	Random forest (reliably worse)	__b	

Skill: reduction in forecast error versus the base rate (how often a move that size

Reliably better / worse: the 95% interval excludes zero. A result without a tag is within

Separate outcomes: non-overlapping windows. Daily forecasts overlap, so this count.

usually a few dozen, decides how much a result can be trusted. 60 days only. ^c too little history to train.

Method. Results above are from the development period (Brier skill vs past event frequency (climatology); 95% block-bootstrap interval; development period only). Every forecast used only data available on its date. **Final test:** the last 20% of history (settlement outcomes from 2025-08-30, spot from 2025-04-02) was set aside before any model was built and scored once under a promotion rule fixed in advance. Testable there: spot BTC 30d, spot ETH 30d, spot LINK 30d, spot XRP 30d. ML models (logistic regression, random forest, XGBoost) were trained walk-forward with past-only tuning and shrink-only calibration. None beat the base rate or the best history model in any test. *Chronos-Rpt*: a pretrained time-series foundation model (Amazon, weights frozen Nov 2024). *forecast* 30d, and 60-day moves from price history alone; it did not beat the

best history model in any test, and beat the base rate with confidence in only 1 of 16 (LINK settlement, 60 days, via its volatility forecast), where the best history model also did. Full results, condition by condition, are on the **Model Scorecard**.

Source: Deribit public API (option chains); probabilities derived, quotes not redistributed. Probabilities are risk-neutral (market-implied) and include any risk premium; they are not forecasts or