

Tempus AI, Inc. (NASDAQ: TEM)

Equity research report · Initiation of coverage · Data as of 28 September 2026 close

Item	Summary
Verdict	Avoid at the current price. Level of interest: about \$58
Price (28 Sep 2026 close)	\$85.08
Probability-weighted fair value	\$68 (about 20% below the price)
Investment Score	56 / 100
Market cap / enterprise value	About \$15.4 billion / about \$16.0 billion
Valuation	10.0x 2026 revenue guidance; 7.4x our 2027 base revenue of \$2.15 billion (EV/sales)
Next results	Q3 2026, expected early November (date not yet announced; early November is the usual pattern)

Core thesis. Tempus is a real business that has turned a corner. Q2 revenue rose 22% to \$382.5 million, oncology test volume grew 31%, the data licensing business grew 36%, and the company posted its first GAAP net income (\$5.6 million). Full-year guidance is \$1.595-1.605 billion of revenue and about \$65 million of adjusted EBITDA. Three developments since May have added genuine value: FDA approval of the tumor-only xT CDx test, which moves the solid-tumor portfolio to a higher reimbursement rate from 2027; the \$1.5 billion all-stock purchase of Personalis, a tumor-informed MRD platform; and Merck and Moderna's positive Phase 3 readout for a personalised cancer vaccine built on Personalis sequencing.

The problem is the price. The stock has risen 92% since results on 30 July, from \$44.28 to \$85.08, and sits 19% above the average analyst target of \$68.56. At about 7.4 times our 2027 base revenue for a company that expects roughly break-even adjusted EBITDA this year, the market is paying today for reimbursement gains that start in 2027 and 2028 and a vaccine market that does not yet exist. The weighted fair value is \$68. The name becomes interesting near \$58.

Biggest risk. Valuation risk in a high-beta stock (beta 3.7) with 24% of its float sold short and insiders selling into the rally. A disappointing Q3, a delay to the Personalis close, or a change in reimbursement assumptions could reverse much of the two-month move.

Investment memo

Would this be a purchase with new money today? No. Tempus has done most things right in 2026: growth accelerated, it reached GAAP profitability in Q2, it won the FDA approval it needed for unified reimbursement, and it bought into the fastest-growing segment of cancer diagnostics just before a landmark trial validated that segment. The issue is that the share price has absorbed all of it and more. Three cases for 2027 give \$103, \$67 and \$36, weighted 25/50/25 to \$68. The upside case needs 9 times sales on faster growth; the downside case needs only a return to 4 times sales, close to where the stock traded in July.

What would change the view: a price near \$58 (about 5.7 times 2027 base revenue, with about 18% upside to fair value), or evidence that 2027 revenue is heading well above \$2.2 billion. **What would make it worse:** a weak Q3, a slipping Personalis close, or cash burn that fails to turn positive by year-end as management targets.

1. Business

Tempus sells two things. **Diagnostics** (\$289.3 million in Q2, 76% of revenue, up 20%) is mainly genomic profiling of tumours (xT tissue, xF liquid biopsy, RNA and hereditary tests), paid by Medicare and commercial insurers. Oncology test volume grew 31% in Q2; hereditary testing grew 5%. **Data and applications** (\$93.2 million, 24% of revenue, up 28%) licenses de-identified clinical and molecular data to drug companies and sells AI tools. Its Insights licensing line grew 36%. Customers include AstraZeneca, GSK, Bristol Myers Squibb, Merck and, since Q2, BioNTech.

The two halves reinforce each other: every test adds records to one of the largest multimodal oncology data sets, and that data sells to pharma at high margins. The advantage is scale and data breadth. The disadvantage is that diagnostics is a reimbursement business with thin margins at the test level, and much of the value case depends on Medicare pricing

decisions.

2. Industry

Precision oncology testing grows in the high teens to twenties as more therapies need a companion diagnostic and as testing moves from tissue to blood. Competition is intense: Guardant Health leads in liquid biopsy, Foundation Medicine (Roche) in tissue profiling, and Natera in tumor-informed MRD. MRD is the fastest-growing segment; Tempus management calls it a \$20 billion-plus opportunity. Data licensing to pharma is a newer market in which Tempus and a few others hold the largest real-world oncology data sets. The industry's economics are set by CMS: an ADLT designation lets a lab charge its own list-based rate rather than a lower bundled fee, which is why the xT approval matters.

3. Financials

Measure	Q2 2026	Comment
Revenue	\$382.5m (+22%)	Diagnostics \$289.3m (+20%); data and applications \$93.2m (+28%)
Gross profit	\$246.5m (+26%)	About 64% margin; growing faster than revenue
Net income	\$5.6m	Loss of \$42.8m in Q2 2025
Adjusted EBITDA	\$8.0m	Loss of \$5.6m in Q2 2025
Adjusted EPS	-\$0.04	Consensus -\$0.08
Cash and securities	\$820.7m	At 30 June 2026
Total debt	About \$1.44bn	Net debt about \$0.63bn
Trailing free cash flow	-\$263m	Company targets positive free cash flow by year-end 2026

Q2 2026 results, released 30 July 2026, and balance sheet figures.

Guidance. Full-year 2026 revenue guidance rose to \$1.595-1.605 billion, about 25% growth, with adjusted EBITDA of about \$65 million, an improvement of about \$72 million on 2025. Management said it expects further improvement in adjusted EBITDA and free cash flow in 2027 despite Personalis. **What the numbers mean.** The business has reached operating break-even, but it is not yet a cash generator: trailing free cash flow is still negative \$263 million. At \$65 million of 2026 adjusted EBITDA, the enterprise value is about 246 times EBITDA, so earnings-based measures cannot support the price. The valuation rests on revenue growth and the promise of much higher margins. Data licensing is shifting to longer multi-year contracts with deferred recognition, which improves visibility but pushes revenue out.

4. Company developments

Development	Status and date	What is known	What is forecast (and by whom)	Impact
Tumor-only xT CDx approval and unified ADLT pricing	FDA approval 29 May 2026; pricing effect from 2027	FDA approved the tumor-only indication for xT CDx, allowing the solid-tumor DNA portfolio to move under ADLT pricing.	Management: about \$200 higher average price, roughly \$85m a year from 2027; about \$400m combined uplift in 2028 with xF approval (expected H2 2027).	High
Personalis acquisition (tumor-informed MRD)	Announced 20 Jul 2026; close expected late 2026 or early 2027	\$16.25 a share, about \$1.5bn enterprise value, all stock with a floating ratio capped at 0.3356 and an option of up to 50% cash. Personalis Q2 revenue \$22.4m (preliminary).	Our estimate: about 17-18m new shares (about 10% dilution) if paid fully in stock at the current price. No accretion guidance.	High
INTErpath-001 Phase 3 (Merck and Moderna)	Positive readout 19 Aug 2026	Personalised mRNA vaccine (intismeran) plus Keytruda improved recurrence-free survival in high-risk resected melanoma; the vaccine design relies on Personalis sequencing.	Supports future sequencing demand if approved; no revenue timing disclosed.	High

Development	Status and date	What is known	What is forecast (and by whom)	Impact
Data licensing momentum	Q2 2026	About \$200m of Q2 bookings; new BioNTech multi-year deal; first foundation model delivered to AstraZeneca and met acceptance criteria.	Management expects longer contracts with deferred revenue recognition.	Medium
Q2 results and guidance raise	30 Jul 2026	Revenue +22%; first GAAP net income; 2026 guidance raised to \$1.595-1.605bn and about \$65m adjusted EBITDA.	Company target: positive free cash flow by year-end 2026.	Medium
AI cardiology clearances	ECG-PH 24 Aug; ECG-MR 28 Sep 2026	FDA 510(k) clearances for ECG algorithms detecting signs of pulmonary hypertension and mitral regurgitation.	Small revenue today; broadens the AI device portfolio.	Low
Other launches	May-Sep 2026	Prostate cancer risk test (May); agentic AI platform for drug development (Jun); OneOme pharmacogenomics (Jul); whole-genome multimodal data set programme (Sep).	Pipeline breadth; no disclosed revenue.	Low

4.1 Tumor-only xT CDx approval and reimbursement uplift

Known. On 29 May 2026 the FDA approved the tumor-only indication of xT CDx. Management said on the Q2 call that this lets Tempus move its entire solid-tumor DNA portfolio under unified ADLT pricing, with an average price uplift of about \$200 per test and roughly \$85 million of annual revenue from 2027. It expects a liquid biopsy (xF) approval in the second half of 2027 and a combined uplift of about \$400 million in 2028. A Morgan Stanley note in mid-September, as reported, put the combined effect at \$330-400 million a year.

Why it matters. Diagnostics is 76% of revenue, and price increases on existing volume fall almost straight to profit. \$85 million is about 4% of our 2027 base revenue but could be most of 2027's EBITDA improvement. **Success and failure.** Success is the ADLT rate applied from January 2027 with no payer pushback, visible as a jump in average revenue per test in Q1 2027. Failure is a delay or a lower rate. **What the price assumes.** The rally after mid-September suggests the market already counts most of the 2028 uplift. A \$400 million uplift at high drop-through is worth a lot, but it arrives in 2028 and depends on an FDA approval that has not happened. **Unknown:** the final rate and the xF timeline.

4.2 Personalis and the MRD bet

Known. Tempus agreed on 20 July to buy Personalis for \$16.25 a share, about \$1.5 billion of enterprise value, in stock with a floating exchange ratio capped at 0.3356 and an option to pay up to half in cash. Closing is expected in late 2026 or early 2027. Personalis's NeXT Personal test has Medicare coverage in three indications; Personalis reported \$22.4 million of Q2 revenue (preliminary) and 10,384 clinical tests. On 19 August Merck and Moderna reported that their personalised mRNA vaccine, designed using Personalis sequencing, improved recurrence-free survival in the Phase 3 INTERpath-001 melanoma trial. Tempus shares rose 24% that day.

Economics (our estimates). At \$85.08 a share and paid fully in stock, the deal needs about 17-18 million new Tempus shares, about 10% dilution. Personalis revenue runs at about \$90 million a year, so Tempus is paying roughly 16 times sales for it, partly with a share price that has doubled. Management said MRD testing will expand only once the test is roughly break-even per unit, so the deal dilutes margins before it helps them. **Precedent.** Natera shows how valuable a leading MRD franchise can become, but it took years of losses. **Sized outcomes.** Success: vaccine approval creates a large sequencing stream and MRD volume grows fast, supporting the bull case. Failure: integration drags and MRD pricing stays below cost, supporting the bear case. The vaccine is not yet approved, and no revenue from it is in any case here. **Unknown:** the final mix of cash and stock, and the vaccine regulatory timeline.

Effect on the verdict. Without these three developments, fair value would be lower, not higher: they are the reason the base case uses 6.5 times sales rather than 5 times. The verdict would be Avoid either way. The developments raise the level of interest and widen the bull case.

5. Growth drivers

Driver	Status and date	Likelihood	Impact	Fact or forecast
Oncology test volume	Shipping; +31% in Q2	High	High	Fact: Q2 growth. Forecast: continued 20%+ (management guidance implies)
ADLT pricing on xT	Approved 29 May; effect 2027	Medium-High	Medium	Forecast: about \$85m a year (management)
xF liquid biopsy approval	Expected H2 2027	Medium	High (2028)	Forecast: part of about \$400m 2028 uplift (management)
Data licensing	About \$200m Q2 bookings	High	Medium-High	Fact: bookings. Forecast: multi-year recognition (management)
MRD via Personalis	Close expected late 2026 or early 2027	Medium	Medium	Forecast: \$20bn+ market (management)
AI devices and foundation model	ECG clearances; model delivered to AstraZeneca	Medium	Low	Fact: clearances. No revenue disclosed

6. Competitors

Company	Overlap	Position against Tempus
Guardant Health	Liquid biopsy, MRD, screening	Leader in liquid biopsy with ADLT pricing; ahead of Tempus xF.
Foundation Medicine (Roche)	Tissue and liquid profiling	Long-standing FDA-approved comprehensive profiling; backed by Roche.
Natera	Tumor-informed MRD (Signatera)	The MRD leader Personalis must compete with; much larger volume.
Caris Life Sciences	Tissue profiling and data	Similar multimodal data strategy.
Flatiron Health (Roche)	Real-world oncology data	Main rival in pharma data licensing.

Tempus's edge is breadth: it combines testing, clinical records and AI in one platform, which competitors mostly do not. In any single test category it is rarely the leader. The moat is real in data and moderate in testing.

7. Management

Founder and CEO Eric Lefkofsky has built the company quickly and delivered on 2026 guidance, which was raised at Q2. Execution on reimbursement (the xT approval) has been good. Capital allocation is aggressive: Paige in 2025 and now Personalis, paid largely in stock. Insiders own about 35% of shares, which aligns interests, but insiders have been selling into the rally: Form 144 notices of proposed sales were filed on 22 and 25 September, a Form 4 by the CEO on 24 September, and a 10% holder sold about \$19.4 million of stock (reported). The CEO said on the Q2 call he could not see any scenario in which the Personalis deal does not close, which is confident but not a guarantee.

8. Risks

Risk	Probability	Severity	Comment
Valuation reversal	High	High	The stock doubled in two months and trades 19% above the average analyst target.
Reimbursement	Medium	High	The value case depends on ADLT rates and Medicare coverage decisions.
Personalis close and integration	Low-Medium	Medium	Needs shareholder and regulatory approvals; MRD loses money per test today.

Risk	Probability	Severity	Comment
Dilution	High	Medium	About 10% from Personalis if paid in stock, plus stock pay and convertible debt.
Cash burn	Medium	Medium	Trailing free cash flow -\$263m; positive FCF is a year-end target.
Competition	Medium	Medium	Guardant, Natera and Foundation Medicine lead their categories.
Short interest and volatility	High	Medium	24% of float short; beta 3.7; ATR 5.6% of price a day.
Data contract timing	Medium	Low	Longer contracts defer revenue recognition.

9. Valuation

Measure	Value	Note
EV / 2026 revenue guidance	10.0x	EV about \$16.0bn on \$1.6bn
EV / 2027 base revenue (our estimate, \$2.15bn)	7.4x	Includes Personalis and xT pricing
EV / 2026 adjusted EBITDA guidance	About 246x	On about \$65m
Price vs average analyst target	+19%	Average \$68.56; range \$35-100
2026 EPS consensus	-\$0.26	Still loss-making on a GAAP basis for the year

EV to sales is the right measure for a company at break-even whose margins are still expanding. A 25% grower with a 64% gross margin and a data business can justify 6-7 times forward sales if margins keep rising; 9 times needs faster growth and visible profits; 4 times is where the stock traded before the recent run. **Conclusion: overvalued** by about 20% against a weighted fair value of \$68.

Macro drivers. Cancer testing demand does not depend on the economy or interest rates, so revenue is largely macro-insensitive. The macro variable that matters is the cost of capital, which sets the multiple on a stock valued on profits several years away. The ten-year Treasury closed at 5.17% on 25 September, near its highest since 2007, after the Fed raised rates to 3.75-4.00% on 16 September. A beta of 3.7 means the stock moves far more than the market on any change in that rate. The other external driver is Medicare reimbursement policy, which is a regulatory rather than a macro variable.

10. Sentiment

Indicator	Reading
Analyst consensus	20 analysts: 8 Strong Buy, 2 Buy, 8 Hold, 1 Strong Sell. Average target \$68.56 (range \$35-100), below the price.
Recent actions	Piper Sandler upgraded to Overweight, target \$76 (1 Sep). Goldman Sachs initiated at Neutral (22 Sep). Morgan Stanley raised its revenue outlook on reimbursement (mid-Sep, reported).
News flow	Strongly positive since mid-August: the vaccine readout, the upgrade and FDA clearances.
Short interest	28.1m shares, 24.1% of float, 3.5 days to cover.
Insider activity	Form 144 notices of proposed sales on 22 and 25 Sep; CEO Form 4 on 24 Sep; a 10% holder sold about \$19.4m (reported).
Fund flows	ARK Invest reduced its position in late September (reported).

Sentiment is hot and split. The price has run past most analyst targets, momentum buyers are in, and a quarter of the float is short. That combination can extend the move but makes the downside sharp if news disappoints.

11. Technicals

Indicator	Value	Reading
Price (28 Sep close)	\$85.08	18% below the \$104.32 52-week high
20-day SMA / EMA	\$70.16 / \$72.68	Price 21.3% / 17.1% above
50-day SMA / EMA	\$60.02 / \$64.52	Price 41.7% / 31.9% above
100-day SMA / EMA	\$55.77 / \$59.92	Price 52.6% / 42.0% above
200-day SMA / EMA	\$56.30 / \$61.40	Price 51.1% / 38.6% above
RSI (14)	72.6	Overbought
MACD (12,26,9)	Line 6.35, signal 4.97, histogram +1.38	Positive and above signal
ATR (14)	\$4.74	5.6% of price a day
Volume	20-day 6.9m vs 50-day 7.0m	Flat
Ranges	100-session \$40.77-86.44; 52-week \$40.77-104.32	

The trend is strongly up and extended: price is 51% above its 200-day average and RSI is above 70. Support sits near the 20-day average (\$70) and then the 50-day (\$60); the 100-session high of \$86.44 and then the \$104.32 52-week high are resistance. The \$58 level of interest sits just below the 50-day average. Moves of that size are common for this stock: it rose 24% in one day in August.

12. Scorecard

Factor	Score	Weight	Basis
Business Quality	 7/10	15%	Scale in oncology testing plus a high-margin data business.
Financial Strength	 5/10	15%	\$821m cash, net debt about \$0.63bn, still burning cash.
Competitive Advantage	 7/10	15%	Data breadth is the moat; rarely the leader per test.
Management	 6/10	10%	Strong execution; stock-funded deals and insider selling.
Growth Potential	 8/10	15%	About 25% growth plus 2027-28 pricing uplifts.
Valuation	 3/10	15%	7.4x 2027 sales; fair value 20% below price.
Risk (10 = lowest risk)	 3/10	10%	Beta 3.7, reimbursement dependence, 24% short interest.
Technical Setup	 4/10	5%	Strong uptrend but overbought and extended.
Investment Score	56 / 100	100%	Weighted sum of the factor scores.

Scored 1-10, where 10 is always best, including Risk. The Investment Score is the weighted sum of factor scores.

Scores are initial; there is no earlier report to compare against. The company developments lifted Growth Potential (the pricing uplift and MRD) and held Financial Strength at 5 (dilution and integration costs). The Risk score of 3 agrees with the risk table: several high-probability risks, a volatile stock and a business still short of steady cash generation.

13. Scenario analysis

Case	Probability	Outlook (our estimates)	Fair value
Bull	25%	2027 revenue about \$2.35bn: volume stays above 25%, ADLT pricing lands in full, data bookings convert quickly, MRD grows after the close. 9x EV/sales.	\$103
Base	50%	2027 revenue about \$2.15bn: about 25% organic growth plus Personalis and xT pricing; adjusted EBITDA keeps improving. 6.5x EV/sales.	\$67
Bear	25%	2027 revenue about \$1.95bn: growth slows toward 20%, a pricing delay, MRD losses weigh. Multiple returns to 4x, near July levels.	\$36

Case	Probability	Outlook (our estimates)	Fair value
Weighted	100%	Probability-weighted fair value.	\$68

Fair values use about 198 million shares (180.4 million today plus about 17.6 million for Personalis) and net debt of about \$0.7 billion. The weighted fair value of \$68 is about 20% below the \$85.08 price. Each case states its assumption on the high-impact developments: the xT pricing uplift and MRD growth drive revenue, and the vaccine readout is reflected only in the bull multiple.

14. Recommendation

Avoid at \$85.08. Tempus is improving fast, but the price has run ahead of the fundamentals and no longer offers a margin of safety. The name becomes interesting near **\$58**: about 5.7 times 2027 base revenue, just below the 50-day average, with about 18% upside to the weighted fair value. No cut-loss or take-profit applies because no position is recommended. The verdict is the same with or without the three high-impact developments; they raise the fair value and the level of interest. If Q3 results arrive first, the level should be reassessed against what they show on test volume, pricing and cash flow.

What would change the view	Direction
Price near \$58, about 5.7x 2027 base revenue	Toward Buy
Q3 results (expected early November) with test volume growth above 30% and positive free cash flow	Toward Buy
Confirmation of the ADLT rate for xT from January 2027	Toward Buy
Personalis closing on schedule with most consideration in stock at a high Tempus price	Toward Buy
Delay or lower rate in reimbursement	Toward Strong Avoid
Personalis close slipping or MRD losses widening	Toward Strong Avoid
A further sustained rise in long-term yields	Toward Strong Avoid

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