TMUS gideon lens

■# T-Mobile US, Inc. (TMUS) - Gideon-Lens Equity Research

Date: 2026-07-05. Analyst: Codex ER2. Price: $177.52. Market cap: about $195.6B. Fiscal year end: December 31. Reporting currency: USD.

VERDICT BLOCK

Verdict: PASS

Scorecard:

Gate	Result	Notes
Management	YELLOW	New CEO tenure and DT control keep governance unresolved
Moat	YELLOW	Real wireless moat, but 2046 durability remains unresolved
P/E <= 15 on confident EPS at TTM + 5 calendar years	PASS	Base EPS cushion 41.8% at $177.52
Compounder Score	Audited 50 / 100	Diagnostic Reject; good wireless cash generation but not dream-investment quality
Business Quality Score	Audited 47 / 80	Scale and FCF are real, but capital intensity, leverage, and disclosure gaps cap quality
20% Return UW Score	Audited 3 / 20	About 9% base-case annualized, not a 20% underwriting case

One-line thesis (or reason to pass): TMUS clears the five-year P/E 15 valuation check, but ER2 cannot underwrite BUY while management and moat/2046 durability remain YELLOW and the audited 20% compounder score is a diagnostic Reject.

Kill / trigger criteria:

- BUY trigger: not active at this quality-gate state; requires Management and Moat to upgrade to PASS, plus price still below the P/E 15 base-case line of about $251.78.
- PASS triggers: two consecutive quarters through Q4 2027 with postpaid account churn above 1.15%, service revenue growth below 7.0%, and operating margin below 20.5%; broad-basis net debt / Core Adjusted EBITDA staying above target while buybacks continue aggressively; or evidence that UScellular/fiber spend dilutes returns rather than compounds per-share value.
- Upgrade to BUY conditions: CEO track record becomes seasoned through 2026-2027 guidance delivery, DT minority-governance risk proves benign, service-led growth persists without promotional margin leakage, and the 2046 moat test upgrades from plausible to demonstrably durable.

Position sizing if bought: 0% now under ER2; WATCH-list only until both qualitative gates clear.

Stage 0 - Time anchor

Today is 2026-07-05. T-Mobile's fiscal year ends December 31. The most recently reported quarter is Q1 2026, ended 2026-03-31. The TTM anchor is Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026, producing TTM ending 2026-03-31. The forward horizon is TTM + 5 calendar years, or 2031-03-31, with a compounding span of exactly five calendar years.

Stage 1 - Disqualifier sweep

ROIC is YELLOW because telecom returns are definition-sensitive once leases, spectrum, and debt are treated as real capital. FCF conversion is GREEN, with TTM FCF of $18.198B. Net debt / EBITDA is YELLOW because leverage is serviceable but material. End-markets are GREEN: wireless is mature but stable, and TMUS is still taking account share. Governance is YELLOW because Deutsche Telekom voting control and board rights are material. AI disruption is GREEN for the physical-network core. Pricing power is YELLOW: ARPA and service revenue growth are visible, but promotional oligopoly

behavior remains a constraint.

Management - one paragraph summary

The management appendix grades the gate YELLOW, not PASS. The positive case is strong: T-Mobile has credible Sprint integration execution, service revenue momentum, FCF conversion, and a large capital-return framework. Compensation includes FCF and relative TSR metrics, with standard clawback and anti-hedging protections. The unresolved issues are not cosmetic. Srini Gopalan has less than one year as CEO, so the current CEO record is not cycle-tested. Deutsche Telekom owns about 54.5% voting control and has board-designation rights, which creates real minority-shareholder risk. The buyback engine is powerful, but Q1 2026 repurchases occurred at high absolute prices, so price discipline still needs proof. Upgrade requires 2026-2027 guidance delivery, disciplined leverage, and evidence that UScellular/fiber capital is earning real returns.

Moat - one paragraph summary

The moat appendix also grades the moat gate YELLOW and the 2046 test YELLOW. TMUS has a real moat today: licensed spectrum, national network scale, mid-band 5G position, brand, and distribution are hard to replicate. Margin evidence supports that this is not imaginary; operating margin improved from low single digits/teens in the post-Sprint integration period to around 20% recently. But the 20-year durability case is not clean enough for PASS. Verizon and AT&T do not need to destroy T-Mobile; they only need to narrow the network gap enough to make ARPA growth promotional. Cable MVNOs, fiber bundles, satellite alternatives, regulation, and capital intensity can all erode returns. The 2046 business description is plausible, but it is still a capital-intensive wireless utility-like compounder, not a self-evident dream business.

Stage 5 synthesis - headline numbers

The synthesis starts from TTM revenue of $90.530B and TTM operating income of $17.976B. T-Mobile has one reportable Wireless segment, so the combined model is the reviewed Wireless segment model rather than a multi-segment sum. The base case compounds Wireless revenue to $108.963B by 2031-03-31, with operating margin rising from 19.9% to 22.5%. That produces base-case operating income of $24.517B. After normalized interest, tax, and an explicit five-year buyback/SBC path, base-case net income is $15.952B and EPS is $16.79 on 950.4M diluted shares.

Case	Revenue ($B)	OI ($B)	OI margin	NI ($B)	EPS	EPS x 15	Vs. $177.52
Bear	96.612	17.390	18.0%	9.925	10.44	156.66	-11.8%
Base	108.963	24.517	22.5%	15.952	16.79	251.78	41.8%
Bull	119.397	28.655	24.0%	19.600	20.62	309.36	74.3%

The required EPS for a 15x P/E at $177.52 is $11.83. The base case clears with a 41.8% cushion, and the synthesis reports 11/11 tie-out checks passed. This is the strongest part of the report: valuation is not the blocking issue under normal ER2 math. The model is not heroic on revenue, but it is constructive on margin and buybacks. The most important sensitivity is whether service-led growth and cost leverage can coexist with capex, equipment promotions, churn control, and network investment.

Red team - one paragraph

The red team argues that T-Mobile can remain a good carrier while the equity case quietly depends on it being much better than a good carrier. The most likely optimistic Stage 5 number is the 22.5% horizon operating margin because service growth, AI savings, integration fade, broadband economics, and low promotional intensity all have to work together. The red team agrees with the scoring audit that no credible 20% return claim survives at the current price. The exit signal is specific: two consecutive quarters through Q4 2027 with postpaid account churn above 1.15%, service revenue growth below 7.0%, and operating margin below 20.5%.

Analyst flags

The main unresolved evidence gaps are product-level operating income and capital by postpaid, prepaid, wholesale, equipment, broadband, fiber, business, advertising, and other lines; normalized annual churn/ARPA history; and seasoned realized returns on UScellular, Lumos, Metronet, Vistar, Blis, and fiber JV capital. The QF/QFR foundation cleared, but FMP-vs-official differences required official SEC/IR overrides for selected capex and operating lines. Those data controls are acceptable for ER2, but they reinforce why the final result should not be stretched into BUY.

Final decision

PASS. TMUS is not being rejected because the stock is obviously expensive; the base-case P/E 15 gate passes cleanly. It is being rejected because ER2 requires Management, Moat, and Valuation to clear together. Here, Management is YELLOW, Moat is YELLOW, 2046 is YELLOW, and the audited Compounder Score is 50/100 with a 3/20 return-underwriting score. That is a good wireless cash generator at a reasonable price, not a Gideon BUY.

Appendix A - Company Primer

T-Mobile US, Inc. (TMUS) - Appendix A: Company Primer

Stage 0 anchor: Today is 2026-07-05. T-Mobile US, Inc. has a December 31 fiscal year end. The most recently reported quarter is Q1 2026, quarter ended 2026-03-31. TTM is Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026, ending 2026-03-31. The forward horizon is 2031-03-31, exactly five calendar years from the TTM anchor.

Primary financial source: `C:\Users\Admin\OneDrive\GPT\ER 2.0\T-Mobile US\quant_foundation.md`, which QFR cleared with `QUANT FOUNDATION VERIFIED - CLEARED FOR WAVE 1`. Qualitative context uses live primary filings and IR materials: T-Mobile's FY2025 Form 10-K, Q1 2026 Form 10-Q, and Q1 2026 earnings release/factbook. The local data package was only a placeholder when this primer was written, so it was not used.

1. Business Overview

T-Mobile US is a U.S. wireless communications and broadband company. It sells recurring connectivity, devices that access that connectivity, and adjacent products that sit around the customer relationship. The company operates under the T-Mobile, Metro by T-Mobile, Mint Mobile and Ultra Mobile brands, with a mix of owned stores, apps, websites, care channels, national retailers, dealers and third-party distributors. The customer promise is simple: a mass-market alternative to AT&T and Verizon that combines national 5G coverage, competitive pricing, no-contract positioning in key products, and customer-experience branding under the "Un-carrier" identity.

The business is best understood as one nationwide wireless network monetized through several revenue lines, not as a collection of independent segments. QF and QFR both confirm that T-Mobile has one reportable operating segment: Wireless. The Q1 2026 10-Q states that the company manages activity on a consolidated basis as the Wireless segment and derives revenue primarily from wireless communications, broadband services and the sale of devices that connect to the wireless network. The FY2025 10-K makes the same point. This matters because postpaid, prepaid, wholesale, equipment and other revenue are product/service lines inside one integrated network business. They should not be modeled as separate reportable segments.

As of December 31, 2025, T-Mobile served 142.4 million postpaid and prepaid customers. It generates most of its value by selling monthly service to postpaid and prepaid customers, then deepening the account through multiple devices, premium plans, fixed wireless or fiber broadband, device financing, protection, advertising and business services. The financial center of gravity is service revenue, especially postpaid service revenue. Equipment revenue is large, but it is economically subordinate to service revenue: handsets and gateways are sold to acquire, retain and upgrade subscribers, often with installment plans and promotional credits that extend the duration and value of the service relationship.

At the Q1 2026 anchor, T-Mobile is in a post-Sprint, post-UScellular integration phase. Sprint changed the network and spectrum base by giving T-Mobile scale in 2.5 GHz mid-band spectrum; UScellular adds wireless operations, customers, spectrum and integration work. The company is also expanding broadband through fixed wireless and fiber joint ventures while returning a large amount of capital through repurchases and dividends.

2. Revenue Architecture

T-Mobile's official disclosure splits revenue by product/service type. The FY2025 product/service architecture from QF is:

Revenue line	FY2025 revenue ($m)	% of FY2025 revenue	What it means
Branded postpaid / postpaid service	57,932	65.6%	Monthly service from postpaid phone, broadband, tablet, wearable, IoT and business accounts.
Branded prepaid / prepaid service	10,497	11.9%	Advance-pay wireless service under brands including Metro by T-Mobile, T-Mobile, Mint Mobile and Ultra Mobile.
Wholesale and other service	2,877	3.3%	MVNO, M2M, roaming and partner access to the T-Mobile network.
Equipment	15,972	18.1%	Smartphones, wearables, gateways and other devices sold to customers, dealers and distributors.

Revenue line	FY2025 revenue ($m)	% of FY2025 revenue	What it means
Other	1,031	1.2%	Ancillary revenue, including items around protection, advertising, finance-related products and other services.
Total	88,309	100.0%	One Wireless segment, consolidated.

Postpaid is the strategic core. Q1 2026 postpaid service revenue was $15.629 billion, up from $13.594 billion in Q1 2025. T-Mobile also disclosed postpaid net account additions of 217 thousand, postpaid account churn of 1.04%, and postpaid average revenue per account (ARPA) of $151.93 in Q1 2026. Postpaid service revenue is high-quality because it is recurring, billed monthly, usually tied to multi-line accounts or device-financing relationships, and less economically fragile than prepaid. The downside is that the U.S. postpaid wireless market is mature, so growth must come from share gains, ARPA expansion, new devices, enterprise penetration, fixed broadband attachment and churn control rather than greenfield penetration.

Prepaid is a lower-friction value channel. It serves customers who prefer advance payment or who may not qualify for postpaid credit terms. Metro by T-Mobile, Mint Mobile and Ultra Mobile widen the price ladder and help T-Mobile compete with no-contract offers, cable wireless brands and MVNOs. Prepaid service revenue is recurring but usually has higher churn and lower account depth than postpaid. It is strategically useful because it keeps T-Mobile present across income and credit bands, fills network capacity and gives the company a way to defend against lower-price competitors without forcing the flagship postpaid brand to take every price point.

Wholesale and other service revenue monetizes the network through partners. MVNOs, M2M accounts and roaming partners buy network access and often own the customer interface. This revenue is generally less brand-differentiated than postpaid, but it can be attractive if incremental traffic uses spare capacity and contract structures protect minimum economics.

Equipment revenue is large but structurally lower quality than service revenue. A device sale can add headline revenue, but the economics depend on subsidy, financing, promotional bill credits, inventory cost, trade-in values and retention effects. T-Mobile frequently sells or finances devices to acquire and retain subscribers. Equipment installment plans generally run for 24 months, and contract assets arise when promotional bill credits are contingent on customers maintaining service. The real value of equipment activity is not the standalone margin on the handset; it is the customer life extension, the higher plan mix, the multi-device account and the reduced churn risk.

Other revenue is small but strategically interesting. It includes products and services complementary to connectivity, including device protection, financial services, advertising and other adjacent offerings. Recent acquisitions of Vistar and Blis point to a desire to build or strengthen advertising technology and data-enabled advertising capabilities, while still keeping Wireless as the single reportable segment. These adjacencies are not yet large enough to define the company, but they can help improve ARPA, deepen account relationships and create optionality if the core network can supply differentiated data or reach.

At the TTM anchor, revenue was $90.530 billion, operating income was $17.976 billion, net income was $10.543 billion, and free cash flow was $18.198 billion. The TTM revenue mix was postpaid $59.967 billion, prepaid $10.371 billion, wholesale/other service $2.874 billion, equipment $16.264 billion and other $1.054 billion. Service revenue was $73.212 billion, or 80.9% of TTM revenue. That service mix is the key reason T-Mobile can combine a utility-like recurring base with growth-company language around share gains, ARPA and broadband.

3. Unit Economics

T-Mobile's unit economics begin with the network. Once spectrum is licensed, towers and radios are deployed, backhaul is arranged, and care/billing/retail systems are in place, the marginal cost of an additional gigabyte or connected device can be low relative to the fixed cost base, provided capacity is available. That operating leverage is the attraction of the model. The offset is that the fixed cost base is huge, spectrum is scarce and expensive, technology cycles require ongoing upgrades, customer acquisition is costly, and competitors can pressure returns through device subsidies and promotional pricing.

For postpaid service, a dollar of revenue starts as a recurring monthly bill. The customer uses voice, messaging, data, broadband or connected-device services on T-Mobile's network. Direct costs include network operations, backhaul, tower and site leases, customer care, billing, bad debt, commissions, advertising, retail occupancy, employee costs and depreciation/amortization on the network and spectrum-related asset base. The best postpaid economics come from accounts with multiple lines, low churn, premium plans, autopay, good credit, device-financing attachment, and limited care intensity. ARPA growth can come from more lines per account, higher-value plans, broadband attachment or add-ons. The most dangerous postpaid economics come from promotional switching cycles where device subsidy, sales commission and churn

pressure absorb the apparent revenue growth.

For prepaid service, the revenue dollar has less credit risk because the customer pays in advance, but churn can be higher and ARPA is typically lower. The economics can still be attractive because prepaid brands use the same national network and can target price-sensitive customers without diluting flagship postpaid positioning. The key diligence issue is whether Mint, Metro and Ultra Mobile grow profitable prepaid service revenue or simply increase brand complexity and promotional intensity. Prepaid is useful when it captures customers who otherwise would be lost to MVNOs, cable wireless, or regional discount brands; it is less useful if it cannibalizes postpaid migration or requires perpetual marketing spend to replace churn.

Wholesale economics are capacity-allocation economics. If T-Mobile sells MVNO or M2M access at a rate that covers incremental network usage and contributes to fixed costs, wholesale can be cash-generative. But wholesale customers have less brand value to T-Mobile and may pressure rates if capacity becomes commoditized. The Q1 2026 contract minimums create some visibility, but investors should not treat wholesale revenue as equivalent to owned postpaid revenue. It is more contractual and partner-dependent, with weaker customer-level control.

Equipment economics require special care. Equipment revenue in Q1 2026 was $3.996 billion, while cost of equipment sales in the Wireless segment table was $5.488 billion. That does not mean the company is irrationally selling phones at a loss in isolation; it means the hardware sale is embedded in a broader customer-acquisition and retention system. Device discounts, trade-ins, installment plans and promotional bill credits are the toll paid to win or keep a service customer. The analytically correct unit is the lifetime account contribution after device economics, not the handset gross margin. Bad device economics can be justified if they lengthen customer tenure, upgrade plan mix, reduce churn and add lines; they destroy value if they merely rent growth.

Capital intensity is central. QF shows TTM operating cash flow of $28.325 billion, capex/cash purchases of PP&E of $10.127 billion and free cash flow of $18.198 billion. Capex was 11.2% of TTM revenue on that basis. Management's Q1 2026 guidance continued to expect roughly $10.0 billion of cash purchases of property and equipment for 2026. Wireless networks require continuous spending on coverage, densification, capacity, equipment modernization, fiber/backhaul and technology upgrades. The upside is that Sprint integration and 5G deployment can create efficiency and scale benefits; the downside is that network advantage is never permanently prepaid. If data demand rises, competitors invest, or technology transitions accelerate, sustaining the advantage can absorb capital.

The FY2025 Wireless segment expense disclosure confirms that the cost stack is not just network capex. It includes device cost, employees, leases/towers, advertising, bad debt, backhaul, commissions, outside services, depreciation and financing. A good T-Mobile model must not stop at service revenue growth; it must underwrite how much of that growth survives equipment promotions, network costs, depreciation, interest and taxes.

4. Customer and Value Proposition

The customer proposition is "best network, best value and best experiences," as T-Mobile framed it in the Q1 2026 release. That is not just marketing language; it is the company's attempt to reposition from a challenger price disruptor into a scaled network-quality leader that can still be perceived as customer-friendly. Historically, T-Mobile's Un-carrier identity attacked contracts, fees, poor customer service and incumbent pricing. The strategic question now is whether the company can keep challenger brand energy while operating as the second-largest U.S. wireless provider by total postpaid and prepaid customers.

For consumers, the value proposition is a national 5G network, unlimited talk/text/data plans, bundled features, device offers, in-flight Wi-Fi, scam protection, streaming benefits and simpler digital/retail experiences. For value-oriented consumers, Metro, Mint and Ultra provide prepaid options without forcing every customer into the flagship postpaid price umbrella. For households, fixed wireless home internet uses excess 5G capacity to offer broadband without annual contracts, data overages or hidden fees. Fiber joint ventures add a wireline broadband path where fixed wireless is insufficient or where fiber can deepen the home relationship.

For business customers, T-Mobile sells connectivity under T-Mobile for Business, including phones, tablets, hotspots, IoT, connected devices and potentially private/advanced network solutions. Business wireless can be stickier than consumer wireless if it is tied into fleet, device management, security and workflow needs, but it also requires enterprise-grade sales, support and reliability. For wholesale and M2M customers, the value proposition is network access rather than brand. T-Mobile's job is to price that access in a way that monetizes capacity without giving away too much economics to partners.

The Q1 2026 numbers support the proposition, but they do not settle the long-term question. Postpaid account additions were positive, ARPA rose 3.9% year over year, service revenue grew 11% year over year, and postpaid service revenue grew 15%.

The value proposition must still be judged by sustained churn, ARPA, account growth, service-revenue growth and free cash flow after promotions, not by any single quarter's net adds.

5. Market Structure and Competitors

The U.S. wireless market is concentrated but highly competitive. The national MNO set is T-Mobile, Verizon and AT&T, with cable wireless providers, MVNOs, regional carriers, satellite-connected services and fixed wireless/broadband alternatives around them. T-Mobile's FY2025 10-K names AT&T and Verizon as major wireless competitors and also points to Charter, Comcast, EchoStar, Cox and Altice as smaller, regional or cable-linked competitors. In broadband, T-Mobile competes against cable, DSL, fiber, other fixed wireless products and satellite internet.

This market structure is not a pure commodity because network quality, spectrum depth, coverage, device economics, retail distribution, customer care, business sales and brand all matter. But it is also not a software market with negligible marginal costs and easy global expansion. Scale matters because spectrum, network, care, brand and device procurement costs are enormous.

The mature-market problem is saturation. Most U.S. adults already have wireless service. Growth therefore comes from taking share, adding devices per household, upgrading customers to higher-priced plans, reducing churn, expanding fixed wireless and fiber broadband, winning business accounts, and adding adjacent services. This is why T-Mobile's account additions and ARPA matter more than raw subscriber count alone. A postpaid phone add at high ARPA and low churn is valuable; a promotional add with a large device subsidy and quick churn is much less valuable.

Cable wireless is a particular watch item because cable companies can bundle mobile with home broadband and often use MVNO economics to offer aggressive prices. Satellite-to-device and alternative connectivity are also watch items, though as of the Q1 2026 anchor they look more like coverage complements or niche competitors than full substitutes for terrestrial mobile broadband.

6. Network and Spectrum Assets

T-Mobile's core asset is its spectrum-backed national network. The FY2025 10-K describes low-band 600 MHz and 700 MHz spectrum, mid-band AWS, PCS and 2.5 GHz spectrum, and mmWave holdings. As of December 31, 2025, T-Mobile controlled an average of 394 MHz of combined low- and mid-band spectrum nationwide: 43 MHz in 600 MHz, 12 MHz in 700 MHz, 14 MHz in 800 MHz, 42 MHz in AWS, 68 MHz in PCS, 185 MHz in 2.5 GHz, 3 MHz in 3.45 GHz and 27 MHz in C-band. It also controlled an average of 1,059 GHz of combined mmWave spectrum licenses.

The most strategically important part is mid-band, particularly 2.5 GHz. Low-band spectrum provides coverage and building penetration; mid-band provides the capacity/coverage balance that makes broad 5G performance competitive; mmWave offers high capacity in dense localized areas but does not create the same nationwide coverage layer. T-Mobile's Sprint merger gave it a differentiated mid-band position earlier than peers. That helped support a network-quality narrative that is now central to its ability to win postpaid customers without acting only as the low-price challenger.

Spectrum is also a capital-allocation and regulatory asset. T-Mobile is party to Comcast 600 MHz license purchase arrangements with total cash consideration of $1.2 billion to $3.4 billion, with a targeted accelerated 2026 closing for approximately $45 million of licenses and remaining acquisitions targeted for first-half 2028. It also has a Grain transaction to sell 800 MHz spectrum in exchange for $2.9 billion of cash and Grain 600 MHz spectrum licenses. These transactions show that spectrum management is continuous: acquire, lease, sell, exchange and refine holdings to improve network economics. Investors should treat spectrum as a scarce asset that can support advantage, but also as a source of cash demands, regulatory approvals and complexity.

The company is also actively managing physical network cost. The FY2025 and Q1 2026 filings describe a Network Restructuring Initiative intended to rationalize network and backhaul services and decommission cell sites and distributed antenna systems. Q1 2026 also included UScellular restructuring initiatives related to redundant network, retail, distribution and backhaul assets. These efforts are the other side of network scale: a bigger network can be more efficient if overlapping sites and systems are removed, but integration costs, accelerated depreciation, lease terminations and service-risk management must be absorbed first.

7. Growth Drivers

The first growth driver is postpaid account and ARPA growth. Q1 2026 postpaid net account additions of 217 thousand and ARPA of $151.93 indicate that T-Mobile was still adding accounts while increasing monetization per account. The Q1 2026

guidance raise to 950 thousand to 1.05 million postpaid net account additions suggests management still sees room to grow after years of share gains.

The second driver is service revenue mix. TTM service revenue was $73.212 billion, 80.9% of total revenue, and Q1 2026 service revenue grew 11% year over year. Equipment revenue can be volatile depending on upgrade cycles and promotions, but service revenue reveals customer base, ARPA and churn dynamics.

The third driver is network differentiation. T-Mobile argues that its spectrum position, standalone 5G network, Massive MIMO, VoNR, carrier aggregation, L4S, network slicing and 5G Advanced deployment support network leadership. A network lead is valuable only if it translates into lower churn, higher ARPA, lower acquisition cost or sustained share gains.

The fourth driver is broadband. Fixed wireless uses excess 5G capacity for home internet, and T-Mobile is adding fiber exposure through joint ventures with Lumos, Metronet, Wren House/i3 Broadband and Oak Hill/GoNetspeed/Greenlight. In the joint-venture model, T-Mobile often owns customer relationships while the venture focuses on build, network engineering, deployment and installation. This can extend the household relationship and diversify broadband economics, but it also introduces wholesale access costs, equity-method accounting, execution complexity and the risk that fiber expansion absorbs capital without the returns implied by wireless margins.

The fifth driver is M&A and integration. UScellular adds customers, operations and spectrum, while management expects $1.2 billion of annual run-rate cost synergies when integration is complete, offset by expected costs to achieve of about $2.6 billion excluding accelerated depreciation. Ka'ena added Mint Mobile and Ultra Mobile, while Vistar and Blis add advertising capabilities. The roll-up works only if synergies are real, churn is controlled and acquired revenue quality holds.

8. Capital Intensity and Balance Sheet

T-Mobile is a high-cash-flow but high-fixed-asset business. The QF TTM bridge shows $28.325 billion of operating cash flow, $10.127 billion of capex and $18.198 billion of free cash flow. That free cash flow is substantial, but it exists after a very large recurring network investment requirement. Management's Q1 2026 guidance for roughly $10.0 billion of 2026 capex confirms that network investment is not a temporary post-merger artifact.

The balance sheet is large and leveraged. As of March 31, 2026, QF shows cash and cash equivalents of $3.520 billion, short-term debt of $2.238 billion and long-term debt of $83.809 billion, for a SEC debt subtotal excluding leases and tower obligations of $86.047 billion. FMP's broader total debt including lease obligations was $117.729 billion, with net debt including lease obligations of $114.209 billion. The distinction matters. Telecom leverage analysis should state whether it uses financial debt only or includes leases/tower obligations, because the latter better captures recurring fixed obligations while the former ties more closely to SEC debt line items.

Debt can be rational in a telecom business because cash flows are recurring and assets are long-lived. But debt reduces strategic flexibility when spectrum, capex, promotions and acquisitions all compete for cash. Interest expense is material: FY2025 Wireless segment interest expense, net was $3.774 billion, and Q1 2026 was $1.031 billion. Higher rates or credit deterioration would affect equity value directly. The company's ability to support large buybacks depends on sustaining free cash flow after capex, restructuring, integration, interest and dividends.

Receivables also matter. Device financing and promotional credits create contract assets, EIP receivables and sales of receivables. T-Mobile services sold receivables and maintains normal customer relationships, but it can retain recourse exposure and credit risk. These financing mechanics are normal for the sector, yet they mean investors should not treat reported revenue and cash flow as completely detached from customer-credit cycles or device-promotion intensity.

9. Capital Allocation

T-Mobile has shifted from merger integration to explicit shareholder returns. The Q1 2026 10-Q disclosed a 2026 Stockholder Return Program initially authorized at up to $14.6 billion, consisting of share repurchases and cash dividends. During Q1 2026, T-Mobile paid $1.1 billion of dividends and repurchased 23.329925 million shares at an average price of $210.07 for $4.9 billion. On April 23, 2026, the board increased the 2026 authorization to up to $18.2 billion.

Management also framed a 2026-2027 capital envelope: up to approximately $30.0 billion for repurchases and cash dividends, plus more than $22.0 billion in discretionary and flexible deployment that could include delevering, core investment, strategic investment or additional shareholder returns. This is a major part of the equity story. If T-Mobile can keep growing service revenue and FCF while shrinking share count, per-share earnings and free cash flow can compound faster than consolidated revenue.

The danger is that capital returns can flatter per-share metrics while leverage, network investment, spectrum and integration risks build underneath. The right diligence question is not whether buybacks are large; it is whether they are funded from durable excess cash after maintaining the network, preserving spectrum optionality, integrating UScellular, investing in broadband and keeping leverage within a range that allows the company to act opportunistically during stress.

Dividend policy is still relatively new compared with legacy telecom peers. At Q1 2026, the quarterly dividend was $1.02 per share. Because Deutsche Telekom controls a majority economic and voting position, dividends also send cash to DT. Q1 2026 dividends included $594 million paid to DT and $594 million payable to DT from the declared dividend. Minority investors must therefore evaluate whether capital allocation is optimized for all shareholders or partly influenced by the controlling shareholder's objectives.

10. Regulatory and Governance Context

T-Mobile is regulated as a telecommunications and wireless-license holder. The FCC, DOJ, state authorities and other regulators matter for spectrum transactions, mergers, network obligations, consumer protection, privacy, data security, E911, national security, open internet, accessibility and competition policy. The Q1 2026 release explicitly lists competition, spectrum scarcity and cost, regulatory changes, national security obligations, privacy/data/AI laws, legal proceedings and FCC foreign ownership limitations among risk factors.

The company also carries merger commitments and litigation/regulatory residue from prior transactions. Sprint merger commitments remain referenced in the Q1 2026 10-Q. UScellular integration depends on regulatory approvals already obtained for closing and on continued execution of post-close restructuring. Spectrum purchases and exchanges require FCC approvals and can be delayed or modified by regulatory conditions.

Governance is dominated by Deutsche Telekom. As of April 24, 2026, DT held directly or indirectly about 53.8% of T-Mobile's outstanding common stock and had voting control over approximately 54.7% because of the Proxy, Lock-Up and ROFR Agreement with SoftBank. This is not a dispersed public-company governance structure. The upside is strategic stability, industry expertise and an anchor owner with a long-term telecom view. The downside is that minority shareholders must accept control by a strategic parent whose interests may differ from theirs, including on dividends, transactions, licensing, related-party arrangements, future share sales or strategic positioning.

Related-party transactions with DT and affiliates occur in the ordinary course, including intercompany servicing and licensing. For ER2, this does not automatically disqualify T-Mobile, but control, related-party economics and parent-company incentives should be part of the management and moat assessment.

11. Key Diligence Questions

- Can T-Mobile sustain postpaid account growth and ARPA expansion without materially increasing device subsidies, advertising intensity or churn risk?
- Is the 5G network lead still widening, stable or narrowing versus AT&T and Verizon, based on independent speed, coverage, reliability, churn and switcher data?
- How much of Q1 2026 service revenue growth came from UScellular and acquired assets versus organic T-Mobile account/ARPA growth?
- Are the expected UScellular cost synergies of $1.2 billion annual run-rate credible after considering integration cost, customer migration, network decommissioning and churn?
- Does fixed wireless remain a high-return use of excess network capacity, or does growth eventually require incremental capacity investment that erodes its margin?
- Do fiber joint ventures deepen household relationships at attractive returns, or are they a capital-heavy attempt to keep up with cable and fiber competitors?
- What leverage metric should investors use: SEC debt excluding leases/tower obligations, or broader debt including lease obligations? How much delevering is necessary before excess capital should go to repurchases?

- Are buybacks value-accretive at current prices under the 2031-03-31 ER2 horizon, or are they being used to offset maturity in the underlying wireless market?
- How should minority investors price Deutsche Telekom's control, related-party arrangements and potential future share-sale dynamics?
- What evidence would prove that T-Mobile's brand has shifted from challenger advantage to incumbent complacency: rising churn, weaker switcher share, customer-care deterioration, worse network rankings, or more promotional pricing?

12. Primer Takeaway

T-Mobile is a scaled U.S. wireless compounder candidate, not a multi-segment technology company. The company has one reportable Wireless segment, a recurring service-revenue base, a large postpaid engine, a meaningful prepaid/value ladder, wholesale network monetization, large but economically secondary equipment revenue, and a spectrum-backed network asset that management believes supports 5G leadership. QF's cleared numbers show a TTM business with $90.530 billion of revenue, $17.976 billion of operating income, $10.543 billion of net income and $18.198 billion of free cash flow through 2026-03-31.

The attractive case is straightforward: T-Mobile keeps taking postpaid share, raises ARPA, monetizes broadband and business services, realizes UScellular synergies, sustains a network lead, and uses free cash flow to retire shares while paying dividends. The skeptical case is equally clear: the U.S. wireless market is mature, promotional competition is intense, network advantages require continuous capex, equipment economics can hide customer-acquisition cost, leverage is meaningful, spectrum is expensive, and Deutsche Telekom controls the company. The ER2 work downstream should therefore focus less on whether T-Mobile is a good telecom operator and more on whether the combination of organic service growth, durable network differentiation, integration synergies and shareholder returns can clear Gideon's 2031-03-31 per-share return hurdle after accounting for telecom capital intensity and governance control.

Primary Sources Used

- Quantitative foundation: `C:\Users\Admin\OneDrive\GPT\ER 2.0\T-Mobile US\quant_foundation.md`
- Quantitative foundation review: `C:\Users\Admin\OneDrive\GPT\ER 2.0\T-Mobile US\quant_foundation_review.md`
- FY2025 Form 10-K: https://s29.q4cdn.com/310188824/files/doc_financials/2025/q4/2025-FORM-10-K-vFinal.pdf
- Q1 2026 Form 10-Q: https://www.sec.gov/Archives/edgar/data/1283699/000128369926000063/tmus-20260331.htm
- Q1 2026 earnings release: https://s29.q4cdn.com/310188824/files/doc_financials/2026/q1/Q1-2026-Earnings-Release-vFinal.pdf
- Q1 2026 investor factbook: https://s29.q4cdn.com/310188824/files/doc_financials/2026/q1/Q1-2026-Investor-Factbook-vFinal.pdf

Appendix M - Management Assessment

T-Mobile US, Inc. - Management Assessment

Stage 0 anchor used throughout: today is 2026-07-05; fiscal year ends December 31; latest reported quarter is Q1 2026 ended 2026-03-31; TTM anchor is Q2 2025 plus Q3 2025 plus Q4 2025 plus Q1 2026; forward horizon is 2031-03-31. Data package status: `DATA PACKAGE VERIFIED - CLEARED FOR WAVE 2`.

Source discipline: capital allocation history and recent corporate actions are taken from `data_package.md` Sections 7-9. Governance, compensation, ownership, related-party, and disclosure evidence were refreshed live in this run from T-Mobile's 2026 DEF 14A, SEC Q1 2026 10-Q, Q1 2026 8-K earnings release exhibit, T-Mobile IR leadership page, Q1 2026 transcript, Q4 2025 Capital Markets Day transcript, and older IR transcript PDFs for the last-eight-quarter candor review. Raw pulls are saved under `raw/management/`.

1. Who Is Running The Company

T-Mobile is now run by Srinivasan "Srini" Gopalan, who became president and chief executive officer on November 1, 2025 after joining as chief operating officer effective March 1, 2025. He also sits on the Board. This is a new public-company CEO tenure, but not an outsider parachute. T-Mobile's 2026 proxy states that Gopalan's CEO appointment followed a multi-year succession process and that Mike Sievert retired as CEO on the same transition date and became vice chairman. The T-Mobile leadership page says Gopalan had been CEO of Deutsche Telekom Germany, had served on T-Mobile's board, and had prior senior roles at Deutsche Telekom Europe, Bharti Airtel, Vodafone, and Capital One. That background is relevant because T-Mobile's next phase is not a pure wireless-share-take story; it is wireless plus broadband, fiber partnerships, digitalization, AI-enabled operations, and controlled balance-sheet allocation.

Peter Osvaldik is chief financial officer. The 2026 proxy notes his title changed from executive vice president and CFO to CFO on December 5, 2025; functionally, he is the long-running financial operator who has been central to T-Mobile's post-Sprint cash-flow conversion and shareholder-return messaging. Jonathan Freier is chief operating officer after previously running the consumer group. Michael Katz moved from president, marketing, strategy and products to chief business and product officer. Andre Almeida runs growth and emerging businesses, John Saw is president of technology and CTO, and Mark Nelson is chief legal officer and general counsel. This is a broad telecom operating bench, not a founder-centric company.

Board accountability is more complicated. The board has 13 directors. The proxy states Deutsche Telekom held voting control over approximately 54.5% of T-Mobile common stock as of March 31, 2026 and, based on the stockholders' agreement and its ownership position, had the right to designate 10 directors. T-Mobile discloses a lead independent director, independent chairs for Audit, Compensation, and Nominating/Governance/Compliance, executive sessions of independent directors, annual board elections, no poison pill, anti-hedging/anti-pledging policies, and a clawback policy. Those are real governance practices, but they operate inside a controlled-company structure. T-Mobile is exempt from certain Nasdaq requirements that otherwise would require a majority-independent board and fully independent compensation and nominating committees. That does not make management uninvestable by itself, but it changes the burden of proof for minority shareholders.

2. Tenure And Track Record

The current CEO has less than one year in the CEO seat, so the cleanest answer is that Gopalan does not yet own a full cycle of T-Mobile results. He owns the 2026 plan, the early post-UScellular integration posture, the expanded fiber strategy, the account-based disclosure framework, and the February 2026 Capital Markets Day update. He does not own the original Sprint merger, the early 5G network buildout, or the full transition from challenger to scaled incumbent; those belong mostly to the Sievert/Legere era and the operating team around them.

The inherited track record is strong. Data package Section 7 shows capex falling from $21.692 billion in FY2021 to $9.955 billion in FY2025 as Sprint integration-era spending normalized. Over the same period, free cash flow swung from negative to sharply positive, and the company returned $14.0 billion to stockholders in FY2025. Q1 2026 TTM free cash flow was $18.198 billion in the cleared package. That is evidence that management converted network scale into cash rather than merely reporting synergy slides.

Three decisions matter most. First, the Sprint integration and 2.5 GHz network build produced a differentiated mid-band 5G position, lower integration capex over time, and a basis for both wireless share gains and fixed wireless broadband. Second, management shifted capital allocation from integration-first to per-share value creation through buybacks and dividends. The

company reported $51.4 billion cumulative stockholder returns through Q1 2026 since program inception, and the Q1 2026 board authorization was increased to up to $18.2 billion for 2026. Third, the team is now pursuing UScellular integration and a portfolio of fiber joint ventures rather than buying a large cable operator. That is directionally coherent: it adds spectrum, customers, and broadband reach without transforming T-Mobile into a cable conglomerate. It still needs proof because integration costs, customer migration, and fiber returns are not yet seasoned.

The CFO track record is credible. Osvaldik's finance organization has given investors explicit service revenue, Core Adjusted EBITDA, capex, adjusted FCF, leverage, and capital-return frameworks. The tougher point is buyback discipline. Q1 2026 repurchases were 23.329925 million shares at an average price of $210.07 for $4.9 billion; after quarter-end through April 24, the company repurchased 3.791020 million shares at $195.87 for $743 million. That is a meaningful pace at high absolute equity values. It is not obviously reckless if the forward EPS/FCF math clears, but it is not demonstrably countercyclical either.

3. Capital Allocation Behavior From Data Package Section 7

The five-year capital allocation table is the strongest part of the management case. Capex/revenue moved from 27.1% in FY2021 to 21.7% in FY2022, 13.8% in FY2023, 15.1% in FY2024, and 11.3% in FY2025. Buybacks increased from $0.316 billion in FY2021 to $3.000 billion in FY2022, $13.074 billion in FY2023, $11.228 billion in FY2024, and $9.974 billion in FY2025. Dividends moved from zero before FY2023 to $0.747 billion in FY2023, $3.300 billion in FY2024, and $4.121 billion in FY2025. Cash M&A outflow rose to $3.523 billion in FY2025, reflecting the shift from pure integration to UScellular, fiber, and adjacent assets.

This pattern is internally consistent: integrate Sprint, normalize capex, harvest free cash flow, fund returns, then redeploy selectively into spectrum/customers/fiber/adtech while maintaining a stated leverage target. It also contains the main risk. The Q1 2026 balance sheet in the data package shows FMP total debt including lease obligations of $117.729 billion and net debt on that broad basis of $114.209 billion, or about 3.27x TTM Core Adjusted EBITDA. Management continues to cite a prudent 2.5x leverage target. Large buybacks, dividends, UScellular integration, and fiber investments therefore compete with deleveraging capacity. For a Gideon compounder, the question is not whether T-Mobile can return capital. It can. The question is whether the team will slow repurchases if returns no longer beat delevering or network reinvestment.

M&A record is mixed but rational so far. UScellular brought customers, spectrum, and network overlap; management expects meaningful synergies, but integration costs and churn risk are still live. Lumos, Metronet, GoNetspeed, Greenlight, and i3 Broadband are framed as return-focused fiber partnerships, not full balance-sheet cable acquisitions. Vistar and Blis add advertising capabilities. None of these looks obviously empire-building, but none has matured enough to score as proven per-share value creation.

4. Compensation Alignment From Proxy

The compensation design is generally aligned with the T-Mobile equity story, though not perfect for a ROIC-obsessed investor. The proxy describes annual LTI grants as 50% time-based RSUs and 50% performance-based RSUs. The PRSU component is split between relative TSR and free cash flow performance, with the relative TSR peer group including AT&T, Charter, Comcast, Verizon, and several large technology/communications peers. For 2025, Gopalan's annual LTI target grant value was $9.5 million, Osvaldik's was $7.3125 million, Katz's was $8.575 million, Freier's was $7.125 million, and Nelson's was $7.190625 million. Gopalan also received new-hire and CEO-transition equity true-up awards tied to forfeited Deutsche Telekom awards and the CEO appointment.

The good: free cash flow is a real metric for telecom stewardship, relative TSR prevents pure scale-chasing, equity is meaningful, and the company discloses anti-hedging, anti-short-sale, anti-pledging, and clawback policies. Insider ownership is not founder-level but is non-zero: the proxy lists Gopalan at 54,926 shares, Osvaldik at 13,367, Katz at 135,826, Freier at 182,642, and all directors and executive officers as a group at 3.433635 million shares as of March 31, 2026.

The limitation: compensation does not put enough explicit weight on ROIC, leverage-adjusted per-share value, or acquisition returns. FCF can be flattered by capex timing or working capital, and TSR can reward buybacks at high multiples if the market approves the story. For T-Mobile, the missing metric is not revenue; management already has strong growth incentives. The missing hard guardrail is whether each dollar used for buybacks, fiber, spectrum, or acquisitions earns a better risk-adjusted return than debt reduction.

5. Disclosure Quality And Candor

Disclosure quality is above average for U.S. telecom, but not ideal. T-Mobile gives useful account-level KPIs, ARPA, churn, service revenue, postpaid service revenue, Core Adjusted EBITDA, capex, adjusted FCF, leverage framing, and capital-return

detail. The Q1 2026 SEC earnings release gave postpaid net account additions, postpaid account churn, ARPA, service revenue growth, UScellular merger-cost impact, Core Adjusted EBITDA growth, operating cash flow, adjusted FCF, and updated guidance. The Q1 2026 transcript directly addressed ARPA growth, fiber joint ventures, guidance raises, capex, and the refusal to chase large cable M&A. The Q4 2025 Capital Markets Day transcript addressed the move to account-based metrics, fiber economics, spectrum discipline, subsidies, AI/digitalization savings, and recession sensitivity.

Across the last eight quarterly/CMD transcript sources reviewed or pulled live for this run - Q2 2024, Q3 2024, Q4 2024, Q1 2025, Q2 2025, Q3 2025, Q4 2025/CMD, and Q1 2026 - management generally answers the load-bearing questions rather than hiding behind promotional language. The best examples are spectrum discipline at the Q4 2025 CMD, where Gopalan described spectrum decisions as build-versus-buy and said T-Mobile walked away from expensive EchoStar spectrum; the account-churn discussion, where management explained why account-level churn is economically more relevant than line-level churn; and the Q1 2026 cable M&A answer, where management rejected buying a cable company in favor of challenging incumbents through wireless, fixed wireless, and fiber partnerships.

The disclosure weakness is product-level economics. T-Mobile does not disclose operating income for fixed wireless, fiber, advertising, business, postpaid, prepaid, wholesale, or equipment lines. It reports one Wireless segment. That is accounting-valid and consistent with how management says it runs the business, but it leaves investors dependent on management's assertions that broadband, fiber JVs, and adjacencies are high-return. In a mature wireless market, that is a real analytical gap.

Guidance credibility is favorable. Q3 2025 raised guidance across the board, Q4/CMD raised the 2027 target set, and Q1 2026 raised 2026 postpaid account, Core Adjusted EBITDA, operating cash flow, and adjusted FCF guidance after a strong quarter. This is not a team repeatedly walking back targets. The risk is not candor today; it is whether management will keep giving enough disaggregation as growth shifts from core wireless into broadband, fiber, advertising, AI/digitalization, and acquired customer bases.

6. Strategic Coherence

The strategy is coherent: best network, best value, best customer experience; account growth plus ARPA growth; fixed wireless and fiber to deepen household relationships; business, advertising, financial services, and AI/digitalization as adjacencies; and large shareholder returns funded by service-revenue growth and normalized capex. The Q1 2026 release described growth in core wireless, broadband, and smart adjacencies, while the Capital Markets Day update targeted 18 million to 19 million total broadband customers by 2030, including 15 million 5G broadband customers and 3 million to 4 million T-Fiber customers.

This is not a pivot-per-quarter story. It is the same core asset - spectrum, network, brand, customer relationships, and scale - monetized through more services per account. The fiber strategy is more debatable. It is strategically logical because fixed wireless alone has capacity limits and cable/fiber competitors own the home relationship. It is also more capital-intensive and more operationally complex than adding lines on an existing wireless account. Management's "capital-efficient" and "double-digit IRR" claims for fiber JVs are plausible but unseasoned.

7. Governance Flags, Including Deutsche Telekom Control

Deutsche Telekom control is the gating issue. The 2026 proxy states DT has approximately 54.5% voting control and the right to designate 10 board members. The same proxy describes controlled-company exemptions, registration rights, trademark licensing, commercial roaming/management/service agreements, and related-party transactions with DT affiliates. In 2025, T-Mobile paid DT approximately $80 million under the trademark license. It also had roaming, telecom services, insurance brokerage, and other intercompany arrangements. These are disclosed, not hidden, and several are ordinary-course telecom arrangements. But minority shareholders do not control the board, dividend policy, parent-company strategic agenda, or the long-run outcome if DT seeks a deeper combination or changes its monetization plan.

There are mitigants. DT owns the same common equity as minorities economically, so value destruction at T-Mobile hurts DT. The stockholders' agreement includes restrictions around DT acquiring above certain thresholds unless minority-protective approvals or all-holder offers are involved, and restrictions around transfers that would result in a transferee owning more than 30% unless board approval or all-holder offer protections apply. The board has independent directors and committees. Still, this is not dispersed governance. For Gideon, the risk is not fraud; it is that a controlling shareholder can be rational for itself while not maximizing optionality for minority holders.

I found no current evidence of SEC enforcement, restatement, or material-weakness governance failure in the live sources reviewed. Insider-sale evidence is mixed but not thesis-breaking. Recent Form 4 activity includes ordinary equity grants, tax withholdings, and some open-market sales by Sievert, Osvaldik, Katz, Nelson, and directors. The sales are material in dollars but not obviously clustered CEO abandonment; Gopalan's disclosed ownership remained meaningful after tax-withholding activity and grants.

8. Peer Comparison

Against Verizon and AT&T, T-Mobile's operating stewardship looks better over the last five years. Verizon and AT&T have larger legacy wireline/business burdens, heavier dividend identities, and less visible per-share compounding from wireless share gains. T-Mobile's post-Sprint network execution, service revenue growth, ARPA growth, and FCF conversion are superior. Compared with Charter and Comcast as broadband peers, T-Mobile is more aggressive and growth-oriented, but those cable operators still have deeper fixed broadband infrastructure economics and a clearer household broadband P&L. T-Mobile's fiber strategy is a response to that reality, not proof it has already beaten it.

On communication, T-Mobile ranks well. Management is more explicit than Verizon/AT&T on challenger positioning, account economics, and capital-return ambition. It is less transparent than a segment-rich industrial or software company because Wireless is the only reportable segment. On capital allocation per dollar, T-Mobile leads the telecom peer set on post-Sprint conversion and buyback scale, but Charter historically has a longer record of disciplined buybacks and Comcast has a more diversified cash engine. T-Mobile's current team ranks above Verizon/AT&T on five-year stewardship, but Gopalan personally has not yet earned that grade as CEO.

9. Explicit Management Gate Verdict

Management gate: YELLOW.

This is an investable but unresolved management profile, not a polite FAIL. The operating organization has earned credit for Sprint integration, network execution, free-cash-flow conversion, guidance credibility, and a coherent strategy. Compensation is reasonably aligned through FCF and relative TSR, and disclosure quality is better than the sector average. The reason this is not PASS is specific: the current CEO has less than one year in-seat, the buyback program is large relative to leverage and acquisition/fiber commitments, and Deutsche Telekom's voting control plus board-designation rights create a standing minority-shareholder overhang.

Upgrade to PASS if, over the next four to six quarters, Gopalan delivers UScellular integration without customer or margin leakage, keeps 2026/2027 FCF and EBITDA guidance credibility intact, demonstrates price-sensitive buyback/delevering discipline, and provides better evidence that fiber JVs earn the claimed double-digit IRRs. Downgrade to FAIL if DT pushes a transaction that disadvantages minorities, management keeps repurchasing aggressively while leverage remains above the target and operating growth slows, fiber/acquisition spend begins to look like scale-seeking, or disclosure becomes less granular as the story shifts into adjacencies.

Appendix W - Moat and 2046 Durability

T-Mobile US, Inc. - Moat and 2046 Durability

Time anchor: Today is 2026-07-05. T-Mobile's fiscal year ends December 31. The latest reported quarter is Q1 2026, ended 2026-03-31. The TTM anchor is Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026, and the forward ER2 horizon is 2031-03-31. The 2046 test date is 2046-07-05.

Source discipline: this appendix uses `data_package.md` Sections 1-3 for segment structure and margin evidence, `appendix_A_primer.md` for competitive orientation, and live primary/industry sources for current competitive context. The Wireless segment appendix existed only as an in-progress one-line stub when this file was written, so this appendix did not wait for it and instead relied on the verified data package, primer, and T-Mobile's single-segment structure.

1. Moat taxonomy applied

Network effects are weak in the classic sense. A T-Mobile phone line does not become more valuable because more unrelated consumers have T-Mobile phone lines, and the business is not a marketplace or software collaboration platform. There is a second-order density effect: more customers over a fixed national network can improve scale utilization, retail density, data for network planning, and purchasing leverage. That is valuable, but it is scale economy rather than a true user-to-user network effect. The moat should not be described as a network effect moat.

Switching costs are moderate, not impregnable. Consumer wireless customers can move numbers, switch devices, and compare promotions. T-Mobile must continuously re-win customers through network quality, plan design, device economics, and customer experience. The switching cost is higher for multi-line family accounts, business accounts, device-financing balances, bundled broadband, wearables, tablets, and satellite or app add-ons, but it is still not enterprise software lock-in. Churn evidence matters more than asserted stickiness. Q1 2026 postpaid account churn of 1.04% and continued positive postpaid net account additions support the claim that the customer base is not fleeing despite pricing and mix actions, but this is a moat with leaks, not a closed wall.

Scale economies are the strongest moat source. Wireless is a high-fixed-cost business: spectrum licenses, towers, radios, backhaul, billing systems, care infrastructure, stores, advertising, device procurement, and regulatory compliance all have national scale characteristics. The data package confirms one reportable Wireless segment with FY2025 revenue of $88.309 billion, and the primer notes a TTM business with roughly $90.530 billion of revenue and $18.198 billion of free cash flow through 2026-03-31. A subscale entrant cannot cheaply replicate a nationwide network, device channel, support system, and spectrum base. This does not eliminate price competition, but it does make the three-national-carrier structure economically rational.

Brand is real but not sufficient by itself. T-Mobile's "Un-carrier" positioning historically gave it a differentiated consumer identity against AT&T and Verizon. The current test is harder: T-Mobile is now a scaled incumbent and must preserve challenger trust while raising ARPA, integrating UScellular, and retiring or migrating old plans. Brand helps the company take share, support premium plan adoption, and defend prepaid/value tiers through Metro, Mint, and Ultra. It can also erode quickly if customers perceive price actions as a reversal of the original promise. Brand is a moat component only when it shows up in churn, account additions, ARPA, and switcher share.

Regulatory and spectrum economics are strong. Licensed spectrum is scarce, geographically specific, technically complex, and controlled through FCC processes. The primer records T-Mobile's average nationwide low- and mid-band holdings at 394 MHz as of 2025 year-end, including 185 MHz in 2.5 GHz spectrum, plus substantial mmWave licenses. This is not merely an accounting asset: it is the input that lets T-Mobile build capacity and coverage at national scale. Regulation can hurt through merger conditions, consumer rules, privacy, security, open internet, and spectrum-transaction constraints, but it also blocks easy entry and protects the incumbents' licensed operating base.

IP and patents are not the moat. T-Mobile uses advanced network technology, but the durable economics do not come from proprietary inventions that competitors cannot license or engineer around. AT&T, Verizon, cable operators, satellite operators, tower companies, vendors, and hyperscale technology partners all have access to world-class technical capabilities. T-Mobile's advantage is in asset position, deployment, customer proposition, integration, and execution, not in a defensible patent estate.

High-trust procurement is moderate and more relevant in business wireless than consumer. Enterprises need reliability, security, device management, coverage, billing, service levels, and support. That creates procurement friction and makes a

scaled network with credible enterprise support harder to displace. T-Mobile for Business could deepen this moat over time, but the data package does not disclose stand-alone business revenue dollars or operating income, so the current evidence is strategic rather than fully quantified.

2. Per-segment moat: Wireless

Wireless is the only reportable segment and therefore the only segment-level moat to evaluate. FY2025 Wireless revenue was $88.309 billion, or 100.0% of company revenue, and segment revenue equals consolidated revenue. The data package explicitly warns not to promote postpaid, prepaid, wholesale, equipment, broadband, fiber, advertising, or business into reportable segments.

The Wireless moat is a combination of spectrum scarcity, national network scale, mid-band 5G position, distribution, brand, and customer-base scale. Postpaid service is the highest-quality profit pool because it is recurring, account-based, and tied to family, business, device, and broadband relationships. Prepaid is useful because Metro, Mint, and Ultra defend the value ladder and help T-Mobile fight MVNOs and cable wireless without forcing every price point into the flagship brand. Wholesale is weaker because the partner owns more of the customer relationship, but it can monetize excess capacity if terms are disciplined. Equipment revenue is economically secondary and should not be mistaken for moat; it is often a customer-acquisition and retention cost wearing a revenue label.

The durability is good over five years, plausible over ten years, and unresolved over twenty years. Over five years, T-Mobile has visible network and spectrum advantages, UScellular synergy opportunity, broadband growth targets, and ARPA growth. Over ten years, the question becomes whether AT&T and Verizon narrow the network gap, whether cable wireless bundles keep taking gross adds, and whether fixed wireless creates capacity stress. Over twenty years, the question is not whether people still need connectivity; they will. The question is whether T-Mobile can still earn attractive returns on that connectivity after decades of technology resets, spectrum auctions, densification, satellite integration, fiber substitution, and consumer price pressure.

The earliest observable break signal would be a combination of postpaid account churn rising above peer norms, ARPA growth turning negative after promotions, service revenue growth converging to the weakest incumbent, and capex rising without corresponding network ranking or churn benefits. A second break signal would be broadband growth shifting from excess-capacity monetization to heavy incremental investment with lower returns.

3. Margin persistence evidence

The margin evidence supports a real business-quality improvement, but it is not yet a clean twenty-year proof. Data package Section 2 shows consolidated revenue of $80.118 billion in FY2021, $79.571 billion in FY2022, $78.558 billion in FY2023, $81.400 billion in FY2024, and $88.309 billion in FY2025. Operating income moved from $6.892 billion in FY2021 and $6.543 billion in FY2022 to $14.266 billion in FY2023, $18.010 billion in FY2024, and $18.279 billion in FY2025. Operating margin therefore moved from 8.6% and 8.2% in FY2021-FY2022 to 18.2%, 22.1%, and 20.7% in FY2023-FY2025.

Because Wireless is the only reportable segment, those consolidated margins are also the segment margin base for ER2 purposes. The upward step-change is meaningful. It suggests merger integration, network rationalization, service mix, scale, and cost discipline created a structurally better earnings base than the immediate post-Sprint years. It also suggests T-Mobile has not been forced to compete away all of its network advantage through price cuts.

But margin persistence is not the same as margin permanence. The strongest years include Sprint integration effects, UScellular integration timing, restructuring, device-promotion cycles, and accounting differences between operating income, Core Adjusted EBITDA, and cash free flow. The data package also records FY2025 capex of $9.955 billion and TTM capex near $10.127 billion. This business creates free cash flow, but it must keep reinvesting in spectrum, capacity, network modernization, backhaul, and customer acquisition. A software-like moat would show high returns with low replacement investment. T-Mobile's moat shows up as scale economics after large ongoing replacement investment.

The TTM trend remains constructive. Q2 2025 through Q1 2026 service revenue was $73.212 billion, and Q1 2026 service revenue grew 11% year over year while postpaid service revenue grew 15%. Q1 2026 Core Adjusted EBITDA was $9.240 billion, and adjusted free cash flow was $4.599 billion. These are not commodity-carrier numbers. The margin evidence therefore argues against a moat FAIL. It argues for a real moat today, but not enough by itself to call the 2046 compounding case solved.

4. AI disruption stress test

Wireless connectivity is not primarily a prompt-to-output workflow. A foundation model cannot replace spectrum licenses, towers, radios, backhaul, network operations, emergency obligations, device certification, retail distribution, and billing relationships. AI can improve customer care, network planning, fraud detection, personalization, churn prediction, device support, and marketing, but it does not dissolve the physical and regulatory chokepoint.

The most protected part of T-Mobile is the licensed terrestrial wireless network. AI may increase data demand through agents, connected devices, physical AI, robotics, video, wearables, and machine-to-machine connections. That could make high-capacity spectrum and reliable low-latency access more valuable, not less. T-Mobile's Capital Markets Day update explicitly frames digitalization and AI as an EBITDA contributor rather than a demand destroyer, targeting nearly $3 billion of incremental Core Adjusted EBITDA contribution from digitalization and AI by 2027 relative to 2025.

The most AI-exposed areas are customer care, sales, advertising adjacencies, and some enterprise workflow overlays. If every carrier can use similar AI tools to lower care costs and personalize offers, AI savings may be competed away through lower prices or higher promotions. T-Ads and data-enabled advertising are more workflow-like and more exposed to platform competition from hyperscalers and retail media networks. Those adjacencies are not yet large enough to define the moat.

AI also creates a second-order threat: it can improve competitors. AT&T and Verizon can use AI for network optimization, churn management, and service cost reduction. Cable operators can use AI to bundle broadband, mobile, and customer-care workflows more efficiently. Satellite operators can use software-defined networks and AI routing to improve capacity allocation. The AI risk is therefore not disintermediation of wireless service; it is faster diffusion of operational best practices and a possible compression of T-Mobile's execution advantage.

5. 2046 test

On 2046-07-05, the specific plausible T-Mobile business still sells connectivity. The customer is a U.S. household, business, public-sector user, device maker, IoT fleet operator, and app or platform partner that needs managed access to a national network. The product is no longer just smartphone service. It is a bundle of mobile broadband, home broadband, fiber where relevant, direct-to-device satellite fallback, connected-vehicle and industrial IoT access, business device management, security, emergency connectivity, and network APIs. The Wireless segment likely still exists as the economic core, although product presentation may split into mobile, home, enterprise, wholesale, and platform-adjacent services.

In the bull 2046 description, T-Mobile remains one of a small number of scaled U.S. terrestrial network operators. It has kept enough low-band and mid-band spectrum to support national mobility, integrated satellite as a coverage complement rather than a substitute, used fiber selectively to deepen households, and kept the prepaid/value ladder without destroying postpaid pricing. Operating margin is directionally stable to modestly lower than the FY2024-FY2025 peak because automation helps costs, but data growth and network densification consume capital. The company still makes money because licensed spectrum, national network scale, customer trust, device ecosystems, and regulatory complexity remain hard to replicate.

The bear 2046 description is also credible. In that version, wireless capacity becomes more fungible. Cable and fiber bundles own the household relationship. Satellite-to-device and platform partnerships handle enough low-bandwidth coverage to weaken rural and emergency differentiation. Regulators force more open access or spectrum-sharing economics. AT&T and Verizon close the 5G/6G/7G performance gap. Consumers become more price-sensitive as connectivity is treated as utility access. T-Mobile still exists, but returns look like a regulated or quasi-commodity utility rather than a Gideon compounder.

The probability of the bear case is not high enough to call the moat a FAIL, because the replacement problem remains enormous and spectrum/network scarcity is real. It is also not low enough to call 2046 a clean PASS. The 2046 case depends on T-Mobile continuing to convert network advantage into pricing, churn, and free cash flow after several future technology cycles. That is an unresolved durability question, not a solved fact.

6. Competitive threat inventory table

Threat	Mechanism	Segment(s) affected	Earliest observable signal	Plausibility
AT&T and Verizon network catch-up	Peers close speed, reliability, coverage, and enterprise-service gaps with spectrum, C-band, densification, and promotions	Wireless postpaid, business, broadband	Independent network rankings converge while T-Mobile churn rises or ARPA growth slows	High
Cable wireless and fiber bundle pressure	Comcast, Charter, Altice, Cox, and fiber players use broadband relationships and MVNO economics to price mobile aggressively	Postpaid, prepaid, home broadband, business	Cable net adds accelerate, T-Mobile gross adds require heavier device subsidies, broadband adds slow	High

Threat	Mechanism	Segment(s) affected	Earliest observable signal	Plausibility
Satellite and alternative connectivity	Starlink/direct-to-device and hybrid satellite offerings expand from emergency/text and low-data use cases toward broader coverage utility	Rural wireless, coverage differentiation, wholesale, emergency add-ons	Satellite capacity and supported apps improve while consumers adopt non-carrier plans for incremental devices	Medium
Regulatory or spectrum reset	FCC/DOJ conditions, open-access rules, spectrum caps, privacy/security obligations, or merger remedies reduce returns	All Wireless	Spectrum transactions delayed, wholesale obligations imposed, compliance costs rise, pricing flexibility narrows	Medium
Promotional oligopoly behavior	Rational oligopoly breaks as carriers chase share with device subsidies, plan discounts, and bundle giveaways	Postpaid, prepaid, equipment	Service revenue growth decelerates while equipment losses, commissions, or churn rise	High

7. Pricing power verification

Pricing power is observable but constrained. The strongest evidence is not a price-list increase; it is ARPA growth with manageable churn. T-Mobile reported Q1 2026 postpaid ARPA of $151.93, up 3.9% year over year, alongside 217 thousand postpaid net account additions and 1.04% postpaid account churn. The Q1 2026 release also reported service revenue growth of 11% and postpaid service revenue growth of 15%. That combination suggests T-Mobile can deepen account monetization without immediate customer flight.

The product mix supports the same conclusion. FY2025 postpaid service revenue was $57.932 billion, up from $42.562 billion in FY2021. Prepaid service revenue was stable to modestly higher over the period, reaching $10.497 billion in FY2025. Wholesale and other service revenue declined from $5.547 billion in FY2022 to $2.877 billion in FY2025, which reinforces the point that owned customer relationships matter more than wholesale access revenue. Equipment revenue remains large but should be treated cautiously because device promotions can mask acquisition cost.

The constraint is competitive and reputational. T-Mobile can raise ARPA through premium-plan migration, more lines per account, broadband attachment, benefits, and legacy-plan retirement, but every step risks weakening the Un-carrier brand if customers interpret it as ordinary incumbent behavior. Recent public reporting about legacy plan retirements reinforces that price power is not frictionless. It exists because customers value the network and account relationship, not because they have no alternative.

Contract structure also matters. Consumer wireless is not protected by long-term enterprise contracts with hard price escalators. Business and wholesale arrangements may include commitments, and device financing can create retention friction, but the core consumer base remains competitively priced monthly service. The pricing power verdict is therefore "real but monitored." It upgrades if ARPA growth stays positive with stable churn and declining promotional intensity. It downgrades if ARPA growth is accompanied by rising churn, subsidy inflation, or brand deterioration.

8. Explicit moat gate and 2046 verdict

Moat gate: YELLOW

2046 test: YELLOW

T-Mobile has a real moat today: scarce spectrum, national scale, a differentiated mid-band network position, a strong consumer brand, and visible ARPA/service-revenue growth. The data package's margin evidence shows the Wireless segment improved from low-single-digit operating margins in FY2021-FY2022 to roughly 20% operating margins in FY2025, and the Q1 2026 trend supports continued monetization. That is enough to reject a FAIL.

The appendix does not award a PASS because the Gideon bar is twenty-year high-return durability, not current carrier strength. Wireless remains capital intensive, promotional, regulated, and exposed to peer catch-up, cable bundles, satellite expansion, and customer backlash if pricing power is overused. The 2046 business can be described specifically, but the ability to keep earning attractive incremental returns through multiple network generations is unresolved.

Upgrade signals: postpaid ARPA remains positive with churn at or below current levels; independent network-performance reports keep showing a material T-Mobile lead after peers finish major spectrum deployments; broadband/fiber growth contributes free cash flow rather than absorbing incremental capital; and capex intensity stays near the current post-integration range while service revenue grows. Downgrade signals: peer network convergence, cable wireless share

acceleration, rising churn after plan migrations, fixed-wireless capacity stress, or sustained capex inflation without margin improvement.

Sources used for live competitive context: T-Mobile Q1 2026 earnings release, T-Mobile Q1 2026 event materials and transcript, T-Mobile February 2026 Capital Markets Day update, T-Mobile UScellular integration update, T-Mobile T-Satellite product page, T-Mobile 2025 Form 10-K / annual reports page, and Opensignal January 2026 USA Mobile Network Experience report.

Appendix B1 - Wireless

Wireless - Segment Deep Dive

Stage 0 anchor used throughout this appendix: today is 2026-07-05; T-Mobile US, Inc. has a December 31 fiscal year end; the most recently reported quarter is Q1 2026, quarter ended 2026-03-31; the TTM anchor is Q2 2025 plus Q3 2025 plus Q4 2025 plus Q1 2026, ending 2026-03-31; the forward horizon is 2031-03-31 exactly. Every forward CAGR in this appendix compounds from TTM ending 2026-03-31 to 2031-03-31, exactly five calendar years.

0. Segment boundary + taxonomy note

Wireless is T-Mobile's only reportable operating segment. The cleared data package states that the FY2025 Form 10-K and Q1 2026 Form 10-Q describe T-Mobile as one operating and reportable segment, Wireless, and that the company manages business activities on a consolidated basis. The segment includes wireless communications services, broadband services delivered over wireless networks, and devices that provide access to those networks. Postpaid service, prepaid service, wholesale and other service, equipment, and other revenue are product and service revenue lines inside Wireless, not separate reportable segments. There is no segment restatement boundary that prevents comparison of FY2021-FY2025 Wireless revenue, but older product presentation details include legacy rows that QF/QFR explicitly kept out of the TTM base. This appendix therefore models one Wireless segment from disclosed product revenue lines and reconciles every product line back to the Wireless total.

1. What this segment actually is

Wireless is the whole economic engine of T-Mobile US. The business sells recurring connectivity and adjacent broadband services to U.S. consumers, households, businesses, government accounts, and wholesale partners. The revenue architecture is simple at the reportable level but more nuanced at the unit level. Postpaid service revenue is the core: customers receive monthly wireless service and pay after service is delivered, typically on unlimited or tiered plans that monetize phones, connected devices, broadband, value-added benefits, and account-level feature bundles. Prepaid service revenue is similar network access sold under prepaid brands and formats where customers pay before service. Wholesale and other service revenue comes from partners that use T-Mobile's network or related services. Equipment revenue is device sales, lease or installment activity, and related handset economics. Other revenue is the residual product/service line inside the official product taxonomy.

The customer problem is connectivity with predictable coverage, speed, capacity, and monthly price. The go-to-market model is national retail, digital, enterprise sales, partner distribution, prepaid channels, and device financing. At the segment level, T-Mobile monetizes two linked assets: spectrum/network capacity and customer relationships. Spectrum and network density create the product. Retail distribution, plan design, brand, device financing, and customer experience turn that product into recurring accounts. The business is not a software subscription with near-zero marginal cost. It carries large fixed network investment, recurring site and backhaul costs, device subsidy or financing complexity, customer acquisition cost, and spectrum/capex cycles. But it also benefits from high incremental contribution when capacity is available and churn is controlled.

The data package's taxonomy is important because several visible sub-businesses can tempt a modeler into creating fake segments. 5G broadband, T-Fiber, T-Mobile for Business, T-Ads, financial services, and AI/digital savings are strategic initiatives, but the package does not disclose them as separate dollar revenue segments. The appendix uses them as drivers of the disclosed product lines and as margin/capital intensity considerations. For example, 5G broadband can lift postpaid account ARPA and service revenue, but the data package records broadband primarily as net additions and customer targets, not as a standalone revenue line. Similarly, AI and digital initiatives are a cost and service-quality lever, not a separate revenue line in the Section 4 product table.

2. Current economics

The current Wireless base is $90.530B of TTM revenue and $17.976B of TTM operating income, for a 19.9% TTM operating margin. That base is taken from the QF P3/P4 bridge and QFR TTM construction check, which use Q2 2025, Q3 2025, derived Q4 2025, and Q1 2026. The TTM product revenue mix is $59.967B postpaid service, $10.371B prepaid service, $2.874B wholesale and other service, $16.264B equipment, and $1.054B other revenue, as tied in QF P3 and QFR product/segment provenance. Service revenue is therefore $73.212B, or 80.9% of Wireless revenue, while equipment is

18.0%. The service/equipment split matters because recurring service revenue is the margin and valuation core, while equipment is strategically necessary but typically lower quality from a profit and cash-conversion perspective.

The FY2025 historical context is unusually strong. Data package Section 3 shows Wireless revenue rising from $81.400B in FY2024 to $88.309B in FY2025, up 8.5%, while operating income rose only modestly from $18.010B to $18.279B and margin declined from 22.1% to 20.7%. That combination says the 2025 growth year was not pure operating leverage. The company had a mix of postpaid service growth, UScellular integration, device sales, capex/network work, and merger/integration dynamics that diluted some of the margin benefit. The TTM margin of 19.9% is below FY2024 and FY2025 margins, which keeps the base case from over-capitalizing a peak margin print.

Product-line economics are concentrated in postpaid service. Data package Section 4 shows postpaid service revenue growing from $45.919B in FY2022 to $57.932B in FY2025, an 8.1% three-year CAGR, and FY2025 growth of 10.7%. Prepaid service revenue was much flatter, rising from $9.857B to $10.497B over the same period, a 2.1% CAGR. Wholesale and other service revenue fell from $5.547B to $2.877B, a negative 19.7% CAGR, and FY2025 declined 16.3%. Equipment revenue fell over three years despite a FY2025 rebound: from $17.130B in FY2022 to $15.972B in FY2025, a negative 2.3% CAGR, with FY2025 up 12.0%. Other revenue was small at $1.031B in FY2025.

The Q1 2026 run-rate remained service-led. Data package Section 5 records Q1 2026 service revenue of $18.831B, postpaid service revenue of $15.629B, operating income of $4.497B, Core Adjusted EBITDA of $9.240B, capex of $2.623B, and adjusted FCF of $4.599B. Postpaid net account additions were 217 thousand, total postpaid accounts were 34.439M, postpaid account churn was 1.04%, postpaid ARPA was $151.93, and broadband net additions were over 0.5M. The quarterly KPI trend supports a model where T-Mobile is still adding accounts and raising account monetization, but the visible churn and capex base prevent the segment from being modeled like an asset-light platform.

Capital intensity is a core constraint. QF P4 shows TTM operating cash flow of $28.325B, capex/cash purchases of property and equipment of $10.127B, and free cash flow of $18.198B. That is a strong cash conversion picture, but it is still built on roughly $10B of annual network investment. Equipment revenue and network/spectrum deployment also mean revenue growth can consume working capital or gross margin before it reaches operating income. The segment can compound if service revenue keeps growing faster than required network cost, but adjusted FCF yield alone should not set the operating-income forecast.

3. Unit economics

Wireless unit economics start with accounts, devices, and network usage. A postpaid account produces monthly recurring service revenue, and the most important account-level variables are account additions, churn, ARPA, phone ARPU, device attachment, and broadband/home-internet attachment. The data package does not provide a normalized five-year annual churn and ARPA series, so this appendix relies on the last-four-quarter table for recency and flags the annual KPI gap rather than inventing a synthetic series. [DATA GAP: annual normalized postpaid churn and annual postpaid ARPA are not fully normalized in the data package; use Section 5 quarterly recency only.] The recency evidence is still useful: Q1 2026 postpaid account churn was 1.04% and postpaid ARPA was $151.93.

Revenue turns into profit through scale economics and cost discipline, but the cost stack is heavy. The network has high fixed costs and high replacement/upgrade needs. Site rent, backhaul, energy, network operations, customer care, sales and marketing, device procurement, bad debt, depreciation, spectrum-related costs, and corporate overhead all sit between gross service revenue and operating income. Incremental service revenue should carry attractive contribution margin when there is available capacity, because a new device on an existing network does not require a full duplicate network. However, the same network must be sized for peak demand, rural coverage, fixed wireless usage, and regulatory quality expectations. Broadband growth can be high-return when it uses spare 5G capacity, but it can become capex-heavy if usage growth forces accelerated capacity spending or if T-Fiber joint ventures require more capital than the current return narrative implies.

Equipment economics are lower quality than service economics. Device sales help win and retain customers, but handset revenue carries procurement cost and financing risk. A revenue year with more equipment mix can lift the top line while diluting margin, and device promotions can support churn at the expense of near-term profitability. The TTM base has $16.264B of equipment revenue, or 18.0% of Wireless revenue, so even a stable service margin can be masked by device cycles. For this reason, the forward model keeps equipment revenue low-growth and treats equipment as a margin constraint rather than a profit pool.

The operating margin history shows the Sprint integration and scale story but also its limits. Data package Section 3 reports operating margin of 8.6% in FY2021, 8.2% in FY2022, 18.2% in FY2023, 22.1% in FY2024, 20.7% in FY2025, and 19.9% for

the TTM bridge. The expansion from FY2022 to FY2024 was large, consistent with merger synergies, network integration, lower relative capex intensity after peak 5G build, and service revenue scaling. The retreat from FY2024 to the TTM base warns against assuming an uninterrupted march to mid-20s operating margins. The right margin question is not whether T-Mobile is structurally advantaged versus old Sprint-era economics; it is whether incremental postpaid, broadband, and AI/digital savings can more than offset equipment drag, integration costs, rising network depreciation, and competitive price matching.

A simple unit-economics read is therefore: postpaid service revenue is high-quality and still growing; prepaid is mature and price-sensitive; wholesale/other service is declining; equipment is strategically necessary but lower margin; other revenue is too small to drive the thesis. The segment's moat and forecast should be judged by whether postpaid ARPA/account growth and broadband attachment can fund the capex and device ecosystem while preserving a 20% plus operating margin.

4. Competitive dynamics

The U.S. wireless market is an oligopoly led by T-Mobile, Verizon, and AT&T, with cable MVNOs, prepaid brands, and smaller or emerging network operators exerting price pressure in specific niches. Competition is intense because the product is essential, relatively substitutable at the customer-visible level, and marketed through national price plans, device promotions, and coverage claims. At the same time, facilities-based entry is difficult because a national network requires spectrum, sites, backhaul, devices, distribution, roaming, billing, and regulatory compliance. T-Mobile's competitive question is whether its 5G network lead and customer-growth momentum are enough to sustain share gains without giving back the economics through price locks, promotions, or capex.

The external Q1 2026 evidence supports T-Mobile's near-term growth edge. T-Mobile's Q1 2026 release says it delivered accelerating postpaid net account growth and strong postpaid ARPA growth, with industry-best service revenue growth. The data package records Q1 2026 postpaid service revenue of $15.629B and service revenue of $18.831B. Verizon's Q1 2026 release reported mobility and broadband service revenue of about $22.9B, up 1.6% year over year, wireless equipment revenue up 5.2%, and 55,000 total postpaid phone net additions. AT&T's Q1 2026 release reported Advanced Connectivity service revenue up 3.6%, segment revenue up 4.7%, internet net additions of 584,000, and postpaid phone net additions of 294,000. Those comparisons frame T-Mobile as the fastest service-revenue grower among national wireless carriers, but not a monopoly: AT&T is bundling fiber/fixed wireless with mobile, and Verizon is showing signs of postpaid stabilization. Competitive sources used: T-Mobile Q1 release, SEC exhibit at https://www.sec.gov/Archives/edgar/data/1283699/000128369926000062/tmus03312026ex991.htm; Verizon Q1 release at https://www.verizon.com/about/news/verizons-transformation-actions-deliver-growth-profitability-1q26-company-raises-adjusted-eps; AT&T Q1 release at https://about.att.com/story/2026/1q-earnings.html.

Network evidence also supports T-Mobile's competitive position, with some caveats. Opensignal's January 2026 USA Mobile Network Experience report awarded T-Mobile the 5G Download Speed award with a 249.0 Mbps score, ahead of AT&T at 184.3 Mbps and Verizon behind AT&T. BroadbandBreakfast's summary of that report says T-Mobile ranked first for Reliability Experience and Consistent Quality for the second report in a row, led in 5G Availability and 5G Coverage Experience, and won 12 performance awards versus three for Verizon and one for AT&T. This network advantage is important because the post-Sprint 2.5 GHz spectrum position can support speed and capacity claims, especially in 5G. However, network-quality awards are not permanent property rights. AT&T and Verizon continue to deploy C-band, fiber backhaul, fixed wireless, and service bundles. The best network can vary by geography, and a customer's local experience can dominate national averages. Competitive sources used: Opensignal January 2026 report at https://insights.opensignal.com/reports/2026/01/usa/mobile-network-experience and BroadbandBreakfast summary at https://broadbandbreakfast.com/t-mobile-leads-in-opensignals-2026-u-s-mobile-network-report/.

Pricing power is real but bounded. The data package's management commentary says Q1 management tied account growth and ARPA growth together, and recent external reporting notes that T-Mobile is migrating some legacy customers from older plans to newer offerings. That can support ARPA, but it also creates brand risk because T-Mobile's historical Un-carrier positioning trained customers to expect value and simplicity. If legacy plan migration is perceived as ordinary carrier price extraction, churn could rise or price-sensitive customers could shift to MVNOs, cable wireless, AT&T value offers, or Verizon's Visible and other flankers. The base case therefore assumes postpaid service growth decelerates from the FY2025/Q1 2026 pace but remains above peers because T-Mobile still has network and share-take advantages. Pricing-risk source used: The Verge legacy-plan coverage at https://www.theverge.com/tech/959144/t-mobile-legacy-plan-retire-sprint.

The broadband battleground is strategically important. T-Mobile's management target in the data package is 18M-19M total broadband customers by 2030, including 15M 5G broadband and 3M-4M T-Fiber customers. Fixed wireless creates a growth

vector that leverages mobile network capacity, but it is also where the competitive set broadens. Cable, fiber overbuilders, Verizon fixed wireless, AT&T Internet Air, and fiber acquisitions all compete for home broadband. AT&T's Q1 2026 release showed 584,000 internet net additions split between fiber and fixed wireless, and Verizon's Q1 release highlighted broadband and mobility service revenue. T-Mobile can win where 5G capacity is underutilized and the cable alternative is weak, but the long-term economics depend on usage, congestion, household density, and whether fiber JVs create attractive returns rather than just headline customer growth.

5. Moat at the segment level

The Wireless moat is not a classic brand-only moat, and it is not a pure software switching-cost moat. It is a scale/network/spectrum moat with a customer-relationship overlay. The strongest defensible elements are spectrum depth, national network scale, dense distribution, device ecosystems, account-level bundling, and the operational learning curve from serving tens of millions of customers. These advantages raise the cost of entry and make a fourth national competitor hard to build from scratch. They also allow T-Mobile to convert network quality into subscriber growth, ARPA expansion, and operating leverage when execution is good.

The segment moat looks stronger in postpaid service than in prepaid or equipment. Postpaid customers often attach multiple lines, devices, autopay, family plans, insurance, streaming benefits, and home internet. That raises switching friction and gives the carrier more ways to manage ARPA without explicitly raising a single headline phone-line price. Prepaid customers are more price-sensitive and less locked in, so the moat is thinner. Wholesale/other service depends on partner economics and can decline sharply, as the data package's three-year history shows. Equipment has little standalone moat because Apple, Samsung, and device financing economics are broadly available across carriers.

The network advantage is durable for several years but not unassailable over a decade. The Sprint transaction gave T-Mobile mid-band spectrum and a head start in 5G capacity. That shows up in third-party network tests and in customer momentum. Over five years, this can support above-peer service growth. Over ten years, competitors can narrow gaps through spectrum deployment, densification, and converged fiber/wireless bundles. T-Mobile's moat therefore depends on continuing to convert its network lead into customer relationships before competitors neutralize the performance gap.

Management's digital and AI savings target is a margin enhancer but not a moat by itself. The data package records a management expectation for nearly $3.0B of incremental Core Adjusted EBITDA contribution from digitalization and AI by 2027 relative to 2025. If delivered, this can absorb cost inflation and fund customer care improvements. But Verizon and AT&T can also automate customer care, network planning, and sales processes. AI savings are more likely to protect the cost base than to create a unique customer-facing moat.

The moat verdict at segment level is good, not impregnable. Wireless has real scale barriers, spectrum scarcity, network quality evidence, and switching-cost elements. It also faces a rational but aggressive oligopoly, cable MVNO pricing pressure, potential regulatory scrutiny of pricing and consolidation, and a product that customers can compare every month on price, coverage, and device offers. For ER2 purposes, that supports a base case of sustained service growth and some margin expansion, but it does not justify extrapolating 2025 postpaid growth into perpetuity.

6. Historical growth rates from data package

The following table reproduces the relevant Wireless and product-line history from data package Sections 3 and 4. Dollar figures are billions. The FY-3, FY-2, and FY-1 columns show FY2023, FY2024, and FY2025. The 3-year CAGR uses FY2022 to FY2025 because that is the clean three-year interval available in the data package row. Latest YoY is FY2025 versus FY2024. Every row ties back to a specific data-package row.

Product / sub-segment	FY-3 rev	FY-2 rev	FY-1 rev	3-yr CAGR	Most recent YoY	Data package cite
Wireless total	$78.558B	$81.400B	$88.309B	3.5%	8.5%	data_package Section 3, Wireless revenue row; FMP live and SEC segment note
Postpaid service revenue	$48.692B	$52.340B	$57.932B	8.1%	10.7%	data_package Section 4, product table row; FMP product live and 10-K product/service line
Prepaid service revenue	$9.767B	$10.399B	$10.497B	2.1%	0.9%	data_package Section 4, product table row; FMP product live and 10-K product/service line

Product / sub-segment	FY-3 rev	FY-2 rev	FY-1 rev	3-yr CAGR	Most recent YoY	Data package cite
Wholesale and other service revenue	$4.782B	$3.439B	$2.877B	-19.7%	-16.3%	data_package Section 4, product table row; FMP product live and 10-K product/service line
Equipment revenue	$14.138B	$14.263B	$15.972B	-2.3%	12.0%	data_package Section 4, product table row; FMP product live and 10-K product/service line
Other revenue	$1.179B	$0.959B	$1.031B	-2.7%	7.5%	data_package Section 4, product table row; FMP product live and 10-K product/service line

Internal arithmetic checks: Wireless total FY2024 $81.400B times 1.085 equals $88.319B, within rounding of $88.309B. Postpaid FY2024 $52.340B times 1.107 equals $57.941B, within rounding of $57.932B. Prepaid FY2024 $10.399B times 1.009 equals $10.493B, within rounding of $10.497B. Wholesale FY2024 $3.439B times 0.837 equals $2.878B, within rounding of $2.877B. Equipment FY2024 $14.263B times 1.120 equals $15.974B, within rounding of $15.972B. Other FY2024 $0.959B times 1.075 equals $1.031B. No historical product dollar line is back-solved in this appendix.

The historical table says the segment has two different growth profiles inside one reportable segment. Postpaid service is the growth engine and has been compounding high single digits. Prepaid is flat to low growth. Wholesale/other service is structurally declining. Equipment is cyclical and not a durable thesis driver. Other revenue is too small to matter. Therefore a segment forecast that simply grows Wireless total revenue at one rate would hide the underwriting risk. The product mix must be explicit.

7. Management guidance from data package Section 6

The data package groups all forward commentary under Wireless because there is one reportable segment. The relevant guidance is reproduced here from data package Section 6 and used as the anchor for forward assumptions.

- Q2 2025 call, Mike Sievert, CEO: "best-ever total postpaid". Data package interpretation: management framed Q2 as a record postpaid and phone net-add quarter, supporting continued share-taking rather than a mature ex-growth carrier model. Modeling use: postpaid service should not be forced immediately to GDP-like growth, but the record setup also raises the deceleration burden after a strong FY2025.

- Q2 2025 release, management release: "Postpaid service revenues of $14.1 billion grew 9%". Data package interpretation: postpaid service revenue growth remained the largest product-line growth driver before the UScellular close. Modeling use: the base case starts with high postpaid momentum but compounds below 9% across five years as the denominator grows and competitors respond.

- Q3 2025 call, Mike Sievert, CEO: "best network, the best value". Data package interpretation: the outgoing CEO framed the handoff around network, value, and experience, not price-only competition. Modeling use: network quality and value positioning support share gains, but a value brand cannot assume unlimited price increases without churn risk.

- Q3 2025 release, management release: "Raises Guidance Across the Board". Data package interpretation: Q3 raised Core Adjusted EBITDA, operating cash flow, capex, and adjusted FCF expectations, with greenfield network builds driving capex. Modeling use: the forecast can allow operating leverage, but capex and greenfield network work remain constraints.

- Q4 2025 and CMD call, Srini Gopalan, CEO: "free cash flow conversion". Data package interpretation: the new CEO highlighted cash conversion as the economic scorecard. Modeling use: cash conversion supports a higher quality rating, but this appendix still forecasts operating income, not FCF yield.

- CMD update, management release: "18-19 million total broadband customers by 2030". Data package interpretation: broadband is a major growth vector, but the disclosed metric is customers, not a separate revenue segment. Modeling use: broadband supports postpaid/account ARPA and service revenue growth, but it is not modeled as an independent revenue line without disclosed dollars.

- CMD update, management release: "nearly $3.0 billion". Data package interpretation: management expects digitalization and AI to contribute materially to 2027 Core Adjusted EBITDA relative to 2025. Modeling use: the base case allows 260 bps of TTM-to-horizon operating-margin expansion, partly from digital/AI savings and scale, but does not credit the full EBITDA target one-for-one into operating income.

- Q1 2026 call, Srini Gopalan, CEO: "strong postpaid ARPA growth". Data package interpretation: Q1 management tied account growth and ARPA growth together. Modeling use: postpaid service growth can come from price/mix as well as accounts, but ARPA growth brings churn and brand risk if legacy plan migration becomes visible.

- Q1 2026 call, Peter Osvaldik, CFO: "increase our guidance". Data package interpretation: CFO raised postpaid account, Core Adjusted EBITDA, operating cash flow, and adjusted FCF guidance after Q1. Modeling use: the near-term guide supports a constructive 2026, but a five-year CAGR must include eventual industry normalization.

- Q1 2026 call, Srini Gopalan, CEO: "double-digit IRRs". Data package interpretation: management described new fiber JVs as return-focused and capital-efficient, but those claims are not product revenue disclosures. Modeling use: fiber can support bull-case service growth and convergence, but the base case does not assume fiber JVs are margin-accretive until proven by reported economics.

8. Forward growth assumptions: base/bull/bear by product/service line

The model starts from the TTM product/service base in QF P3: Postpaid service $59.967B, prepaid service $10.371B, wholesale and other service $2.874B, equipment $16.264B, and other revenue $1.054B. The product lines sum to TTM Wireless revenue of $90.530B. These are product/service revenue lines inside the Wireless segment, not separate operating segments.

Base case assumptions:

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Postpaid service	8.1%	10.7%	Raised postpaid account guide; strong ARPA growth	5.5%	Growth decelerates from FY2025/Q1 strength as scale rises, but network lead, broadband attachment, and ARPA mix keep it above AT&T and Verizon service growth.
Prepaid service	2.1%	0.9%	No separate prepaid growth guide	-1.0%	Prepaid is mature and price-sensitive; base assumes modest erosion as focus shifts to postpaid and value competition remains intense.
Wholesale and other service	-19.7%	-16.3%	No separate wholesale guide	-3.0%	Severe historical decline moderates from a smaller base, but no evidence supports a return to durable growth.
Equipment	-2.3%	12.0%	No equipment growth guide	1.0%	Device cycles normalize after a FY2025 rebound; equipment follows customer growth but remains a low-quality revenue line.
Other revenue	-2.7%	7.5%	No separate other guide	2.0%	Small residual line grows roughly with account base and adjacent services, with limited thesis weight.

Bull case assumptions:

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
Postpaid service	8.1%	10.7%	Raised postpaid account guide; strong ARPA growth	7.5%	T-Mobile sustains share gains, 5G broadband attachment lifts account ARPA, and competitors fail to close the network perception gap quickly.

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
Prepaid service	2.1%	0.9%	No separate prepaid growth guide	0.5%	Prepaid stabilizes as brand portfolio and network quality offset value-segment pressure.
Wholesale and other service	-19.7%	-16.3%	No separate wholesale guide	1.0%	Partner revenue stabilizes from a smaller base and some wholesale/MVNO economics improve without pressuring retail postpaid.
Equipment	-2.3%	12.0%	No equipment growth guide	2.5%	Higher gross additions and premium-device mix support modest equipment growth, though it remains margin dilutive versus service.
Other revenue	-2.7%	7.5%	No separate other guide	3.5%	Ads, financial services, and account add-ons grow from a small base, but remain immaterial to total segment revenue.

Bear case assumptions:

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Postpaid service	8.1%	10.7%	Raised postpaid account guide; strong ARPA growth	3.0%	Verizon and AT&T narrow network gaps, legacy plan migration raises churn, and ARPA expansion slows as promotions rise.
Prepaid service	2.1%	0.9%	No separate prepaid growth guide	-3.5%	Value competition from MVNOs, cable wireless, and flanker brands accelerates prepaid erosion.
Wholesale and other service	-19.7%	-16.3%	No separate wholesale guide	-8.0%	Wholesale decline continues as partners pressure economics and legacy arrangements roll off.
Equipment	-2.3%	12.0%	No equipment growth guide	-1.0%	Upgrade cycles weaken and device promotions become more selective, reducing equipment revenue.
Other revenue	-2.7%	7.5%	No separate other guide	0.0%	Small residual line stagnates; no material offset to core service deceleration.

The base case implies a clear deceleration path for postpaid service: 15% Q1 2026 postpaid service growth in management commentary is not extrapolated. A five-year 5.5% CAGR means growth steps down as the UScellular contribution is absorbed, the denominator rises, competitors respond, and broadband/fiber growth becomes more capacity-constrained. The bull case is not just the current year continued forever; it requires sustained network leadership, successful broadband/fiber execution, and low churn during price/mix actions. The bear case is also not a collapse; it recognizes that U.S. wireless is a stable category and that even pressured carriers can usually hold low-single-digit service growth through pricing and account growth.

9. Forward operating margin assumptions

The operating margin base is Wireless TTM operating income of $17.976B divided by TTM revenue of $90.530B, or 19.9%, using the QF P2/P3/P4 and QFR TTM bridge. Product-level operating income is not disclosed in the data package or QF. [DATA GAP: product-level operating income for postpaid, prepaid, wholesale, equipment, broadband, fiber, business, advertising, and other lines is a true non-disclosure in data_package Section 10.] This appendix therefore projects one segment-level operating margin and explains the product/mix mechanisms without inventing subsegment OI.

Case	Current TTM margin	Horizon operating margin	Change vs current	Mechanism
Bear	19.9%	18.0%	-190 bps	Promotions and device subsidies rise to defend churn, equipment mix stays margin-dilutive, UScellular/fiber integration costs persist, and network/fiber depreciation absorbs AI savings.

Case	Current TTM margin	Horizon operating margin	Change vs current	Mechanism
Base	19.9%	22.5%	+260 bps	Postpaid service mix rises, AI/digital savings partially materialize against the nearly $3.0B EBITDA target, merger/network integration costs fade, and equipment growth stays below service growth.
Bull	19.9%	24.0%	+410 bps	Postpaid ARPA growth lands without churn damage, broadband uses spare capacity rather than forcing densification, digital support cost per account falls, and capex discipline limits depreciation drag.

The base-case margin increase is deliberately below the most aggressive interpretation of management's nearly $3B digital/AI EBITDA contribution target. The reason is that EBITDA savings do not automatically become operating income if depreciation, network densification, fiber JV support, customer acquisition, or device promotions rise. The company also has a large capital-return program, but buybacks do not improve segment operating margin. The correct operating model is service-driven leverage with periodic reinvestment, not a straight-line conversion of every cost program into operating income.

The bear case reflects the main margin failure modes. If T-Mobile pushes ARPA too hard while retiring old plans, churn can rise and require promotions. If broadband usage grows faster than spare capacity, fixed wireless can pull capex and network cost forward. If Verizon and AT&T regain network parity in key markets, T-Mobile may defend share with device subsidies or price locks. If UScellular integration or fiber JVs cost more than expected, reported operating income can lag service revenue.

The bull case requires evidence that network quality translates into durable pricing power rather than just subscriber growth. It needs postpaid ARPA gains with churn around current levels, broadband additions without capacity stress, and digitalization savings that reduce support cost per account. It also needs equipment revenue to remain a customer-acquisition tool rather than a margin sink. A 24.0% operating margin is achievable in a favorable execution case, but it is not the central estimate because the TTM base is already below FY2024 and FY2025 margins.

10. Segment rollup, bottom-up arithmetic tie

The rollup below compounds each TTM product/service line from the QF P3 base to 2031-03-31 using the case CAGRs in Section 8. Product lines then sum to Wireless revenue. Operating income is computed by applying the Section 9 case margin to the summed Wireless revenue. Dollars are billions.

Case	Postpaid service revenue	Prepaid service revenue	Wholesale/other service revenue	Equipment revenue	Other revenue	Segment revenue	Segment op margin	Segment op income	Arithmetic tie
Bear	$69.518B	$8.679B	$1.894B	$15.467B	$1.054B	$96.612B	18.0%	$17.390B	Product sum equals segment revenue
Base	$78.374B	$9.863B	$2.468B	$17.094B	$1.164B	$108.963B	22.5%	$24.517B	Product sum equals segment revenue
Bull	$86.090B	$10.633B	$3.021B	$18.401B	$1.252B	$119.397B	24.0%	$28.655B	Product sum equals segment revenue

The base case grows segment revenue from $90.530B to $108.963B, a 3.8% total segment CAGR. That is much lower than postpaid's 5.5% base CAGR because prepaid, wholesale, and equipment dilute the growth rate. The base case operating income grows from $17.976B to $24.517B, a 6.4% CAGR, because revenue mix and cost programs lift operating margin from 19.9% to 22.5%. This is a constructive but not heroic segment forecast: service revenue improves mix, but product and capex constraints keep the margin below a software-like profile.

The bear case grows revenue only to $96.612B, a 1.3% CAGR, and operating income falls slightly to $17.390B. This is not a recession-collapse case. It is an oligopoly normalization case where postpaid still grows but margin deteriorates because the cost of defending the base consumes the growth. The bull case reaches $119.397B of revenue and $28.655B of operating income, requiring sustained postpaid growth, better-than-base broadband monetization, and a 24.0% margin.

Reconciliation check: the case product-line totals tie to the stated segment revenue within rounding. The operating income values are simple segment revenue times operating margin: bear $96.612B times 18.0% equals $17.390B; base $108.963B times 22.5% equals $24.517B; bull $119.397B times 24.0% equals $28.655B. No separate corporate residual or product-level OI adjustment is created.

11. Key risks and wildcards

Bear risk: ARPA-led growth becomes churn-led pain. T-Mobile's strongest near-term signal is account growth plus ARPA growth, but the same mechanism can break if customers view legacy plan migration and more-for-more pricing as ordinary carrier behavior. The visible risk is not one quarter of higher churn; it is a durable need to reintroduce promotions, device subsidies, or price locks that transfer value from shareholders back to customers.

Bear risk: network parity narrows faster than expected. Opensignal and other network evidence currently support T-Mobile's advantage, but Verizon and AT&T continue to invest in mid-band spectrum, fiber backhaul, fixed wireless, and network quality. If the local-market performance gap narrows, the postpaid service CAGR should move toward the bear case because customers will compare price and bundle economics more aggressively.

Bear/base risk: broadband growth consumes capacity. Fixed wireless is attractive when it monetizes underused 5G capacity. It is less attractive if high household data consumption forces densification, spectrum refarming, or service-quality tradeoffs with mobile users. The data package's 18M-19M total broadband customer target by 2030 is meaningful, but without disclosed broadband revenue and margin, the model should not assume every broadband addition is high-return.

Base risk: equipment revenue muddies top-line quality. Device revenue can look positive in a growth year but weaken margin if promotions rise. The model keeps equipment growth modest. If equipment becomes the main way to drive postpaid net additions, the base-case margin expansion is too high.

Base/bull wildcard: AI and digitalization savings exceed expectations. Management's nearly $3B Core Adjusted EBITDA contribution target from digitalization and AI by 2027 is large relative to the operating-margin bridge. If delivered with limited offset, T-Mobile could reach the bull margin path even with base-case revenue growth. The monitoring condition is whether operating income margin expands without a simultaneous rise in churn, customer complaints, or network underinvestment.

Bull wildcard: T-Fiber and convergence deepen account stickiness. Fiber JVs and broadband targets can make the customer relationship more durable if they create household-level bundles that reduce churn and improve ARPA. The bull case gives some credit to this through higher postpaid and other revenue growth, but does not model a separate fiber segment because the data package does not disclose separate fiber revenue.

Regulatory and political risk: national wireless pricing and consolidation can attract scrutiny. The U.S. wireless industry is concentrated, essential, and politically visible. Large price actions, plan migrations, spectrum transactions, or consumer complaints could draw regulatory attention. This risk mostly pressures bull-case pricing power and margin assumptions.

Capital allocation wildcard: buybacks amplify EPS but not segment operating income. T-Mobile's capital-return program can make equity returns look better than segment operating growth. This appendix deliberately stops at operating income. The synthesis appendix should separately handle shares, interest, taxes, and valuation. A buyback-led EPS story should not rescue a weak Wireless operating forecast.

Summary table

Case	Segment TTM+5y Revenue	Segment TTM+5y Op Margin	Segment TTM+5y Op Income	Probability
Bear	$96.612B	18.0%	$17.390B	25%
Base	$108.963B	22.5%	$24.517B	55%
Bull	$119.397B	24.0%	$28.655B	20%

Weighted probability check: the probability-weighted horizon revenue is $108.456B and probability-weighted operating income is $23.244B. That is close to but slightly below the base operating-income case, reflecting asymmetric risk that margin defense becomes more expensive than the current growth narrative suggests. The segment still looks like a strong U.S. wireless compounder, but not an unconstrained one: the model is only as good as the durability of postpaid service growth, the discipline of equipment promotions, and the ability to convert network lead into operating income while funding spectrum, capex, and broadband expansion.

Appendix S - Synthesis (Combined Earnings Model)

T-Mobile US, Inc. - Synthesis (Combined Earnings Model)

This appendix is the combined earnings model for T-Mobile US, Inc. It uses the cleared quantitative foundation, the cleared data package, and the reviewed Wireless segment appendix. T-Mobile is modeled as one reportable segment, Wireless. The model does not create synthetic postpaid, prepaid, equipment, broadband, fiber, advertising, or corporate segments, because the source package and the segment appendix both state that those are product, service, or strategic lines inside Wireless rather than reportable segments. Every forward number is anchored on the TTM period ending 2026-03-31 and compounds exactly five calendar years to 2031-03-31.

The base case is the decision case for the P/E 15 gate. At the current price of $177.52, the required horizon EPS is $11.83. The base case produces revenue of $108.963B, operating income of $24.517B, net income of $15.952B, and EPS of $16.79 after an explicit five-year share count path. Base EPS times 15 equals $251.78, or 41.8% above the current price. The bear case fails the price gate, but the framework does not require the bear case to clear. The base case clears, subject to the management and moat gates remaining YELLOW rather than PASS.

1. Anchors

Anchor	Value	Source / treatment
Today	2026-07-05	Orchestrator anchor
Fiscal year end	December 31	Data package and QF
TTM anchor end date	2026-03-31	Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026
TTM quarters	Q2 2025, Q3 2025, Q4 2025, Q1 2026	QF P3/P4
Latest completed FY label	FY2025	Historical tie-out only
Horizon date	2031-03-31	TTM end plus exactly 5 calendar years
Compounding span	5.0 calendar years	Not FY2025 to FY2031
Current price	$177.52	Orchestrator live finance anchor
TTM diluted share count	1,120.2M	QF P4 simple average diluted share base

The most important discipline in this appendix is horizon discipline. The phrase FY+5 means TTM plus exactly five calendar years, ending 2031-03-31. It does not mean FY2025 plus six fiscal years, the fiscal year containing 2031, or a rounded calendar-year forecast. The segment appendix already uses the same horizon. This synthesis therefore reproduces the segment appendix case values unchanged and does not re-derive a longer window.

2. Segment-level forward assumptions

T-Mobile has one reportable segment, Wireless. Postpaid service, prepaid service, wholesale and other service, equipment, and other revenue are product/service lines inside Wireless. The values below reproduce the reviewed Wireless appendix Section 10 case numbers without modification.

Segment	TTM revenue ($B)	Bear TTM+5y rev	Base TTM+5y rev	Bull TTM+5y rev	Bear OI margin	Base OI margin	Bull OI margin	Source
Wireless	90.530	96.612	108.963	119.397	18.0%	22.5%	24.0%	appendix_B_wireless Sections 8-10

The Wireless appendix builds these totals from disclosed product/service revenue lines. Base case postpaid service compounds at 5.5%, prepaid at -1.0%, wholesale/other service at -3.0%, equipment at 1.0%, and other revenue at 2.0%. The base case intentionally decelerates postpaid from the recent FY2025/Q1 2026 growth rate, because the denominator is larger, UScellular contribution normalizes, competitors respond, and broadband/fiber capacity becomes more relevant over time. Operating margin expands from the TTM base of 19.9% to 22.5%, below an aggressive read of management's digital and AI savings target, because depreciation, network densification, customer acquisition, and device promotions can absorb part of the savings.

The key modeling choice is to leave the product lines inside the Wireless appendix rather than repeat them as separate segments here. That is not merely presentational. If postpaid, prepaid, equipment, or broadband were promoted to separate ER2 segments, the synthesis would need product-level operating income, product-level capital intensity, and product-level

corporate cost allocation. The data package explicitly says those are not disclosed. The Wireless appendix still uses the product lines to make the revenue forecast auditable, but it keeps operating profit at the only level where the source package has a clean profit metric. This protects the model from a common telecom error: assigning attractive margins to the recurring service lines, weak margins to equipment, and then accidentally creating a total margin that the company has never reported or reconciled.

The base case should therefore be read as a single-segment operating case with product mix beneath it. Postpaid is the main growth engine. Prepaid and wholesale are drags. Equipment is necessary but lower quality. Broadband, fiber, business, advertising, and AI/digitalization matter as drivers, but they are not standalone revenue pools in the source package. The base case gives credit to these drivers only through the disclosed Wireless revenue and margin path. That is a conservative accounting posture even though the final valuation result is constructive.

3. Combined revenue build

Because Wireless is the whole reportable business and there is no corporate/other segment or elimination line in the cleared package, combined revenue equals Wireless segment revenue. The revenue CAGR is computed from TTM revenue of $90.530B to the 2031-03-31 horizon over exactly five years.

Line	Bear	Base	Bull
Sum of segment TTM+5y revenue	$96.612B	$108.963B	$119.397B
Corporate eliminations	$0.000B	$0.000B	$0.000B
Combined TTM+5y revenue	$96.612B	$108.963B	$119.397B
Implied TTM to TTM+5y CAGR	1.3%	3.8%	5.7%

The base case is not a heroic revenue case. It requires the postpaid growth engine to remain healthy, but total company revenue grows slower than postpaid because prepaid is flat to down, wholesale/other remains pressured, and equipment is low growth. This matters for the final valuation because the model is not buying a top-line acceleration story alone. It is buying the combination of service mix, cost leverage, and capital return.

The revenue build also avoids treating management's 2030 broadband customer target as a direct revenue line. Management targets 18M to 19M total broadband customers by 2030, including 15M 5G broadband and 3M to 4M T-Fiber customers. That is strategically important, but the data package does not disclose broadband revenue or broadband operating profit separately. The base case allows broadband to support postpaid account economics, ARPA, household stickiness, and service revenue resilience. It does not add a separate broadband revenue estimate on top of the product-line rollup. This is an important anti-double-counting control because broadband customers already sit somewhere inside service revenue, account metrics, or adjacent revenue mechanisms.

The bear/base/bull revenue spread is also reasonable in context. Bear revenue of $96.612B still grows from the TTM base, because wireless connectivity is essential and the company should retain some pricing and account growth even under pressure. Base revenue of $108.963B is a mid-single-digit service-led case diluted by slower equipment and wholesale revenue. Bull revenue of $119.397B requires sustained postpaid share gain, successful broadband and fiber attachment, and a benign competitive response. The spread is wide enough to matter for EPS, but not so wide that the bull becomes a fantasy category or the bear becomes a recession liquidation case.

4. Combined operating income build

The data package says consolidated operating income is the Wireless operating-profit base because there is no corporate residual segment. Therefore the combined operating income build starts and ends with the reviewed Wireless segment OI. I do not add an unallocated corporate expense line because that would double count costs already inside consolidated operating income.

Line	Bear	Base	Bull
Sum of segment TTM+5y OI	$17.390B	$24.517B	$28.655B
Unallocated corporate expense	$0.000B	$0.000B	$0.000B
Combined TTM+5y OI	$17.390B	$24.517B	$28.655B
Implied OI margin	18.0%	22.5%	24.0%

The corporate expense assumption is explicit: zero separate add-back or subtraction. The reason is not that T-Mobile has no corporate cost. It is that the reported operating income already includes the consolidated cost stack, and the QF/QFR package verified a single Wireless segment with no residual. Creating a new corporate line would fabricate a reconciliation item. If future filings introduce a new segment or a meaningful unallocated corporate line, this synthesis should be rebuilt from that new disclosure rather than patched.

Operating income is the most important line in this synthesis because it is where the Wireless story either becomes a compounding story or stays a mature telecom story. The base case requires operating income to rise from $17.976B TTM to $24.517B by 2031-03-31, a materially faster growth rate than revenue. That is credible only if mix and productivity improve together. The Wireless appendix identifies the necessary mechanisms: postpaid service becomes a larger share of revenue, digital and AI savings offset support-cost inflation, integration costs fade, and equipment growth remains below service growth. Each mechanism is plausible on its own, but the model requires several to work at once.

The margin assumption is therefore constructive but not free. The model does not give T-Mobile the full benefit of management's digitalization target because EBITDA savings do not automatically become operating income. Network depreciation, densification, spectrum-related investment, customer acquisition, device promotions, fiber support, and UScellular integration can all absorb savings before they reach the operating income line. A 22.5% base margin is above the 19.9% TTM base but close to the FY2024/FY2025 margin neighborhood. It is not a software margin, and it does not assume that a national wireless network becomes capital-light.

5. Net income and EPS build

The net income bridge uses combined operating income, a separate net interest assumption, an other income/expense assumption, a 23.0% tax rate, and the explicit share count path in Section 6. The 23.0% tax rate is the FY2025 FMP ratio cited in the data package. For non-operating items, the model uses a conservative normalized treatment rather than the noisy quarterly FMP "other" fields: bear assumes higher interest cost and negative other expense, base assumes roughly stable interest burden with no material other income, and bull assumes modest deleveraging plus small other income.

Line	Bear	Base	Bull
Combined TTM+5y OI	$17.390B	$24.517B	$28.655B
Net interest expense	($4.200B)	($3.800B)	($3.400B)
Other income / expense	($0.300B)	$0.000B	$0.200B
Pre-tax income	$12.890B	$20.717B	$25.455B
Tax rate assumed	23.0%	23.0%	23.0%
Tax expense	($2.965B)	($4.765B)	($5.855B)
Net income	$9.925B	$15.952B	$19.600B
Diluted share count at TTM+5y	950.4M	950.4M	950.4M
EPS at TTM+5y	$10.44	$16.79	$20.62

This treatment deliberately keeps the operating model separate from the capital structure model. The Wireless appendix proves or fails the operating case. This synthesis then asks whether the operating case, after interest, tax, and shares, clears the price. The base case clears even though it does not assume a large reduction in net interest expense. That matters because the balance sheet is still a constraint: the data package lists FMP total debt including lease obligations of $117.729B and net debt on that broad basis of $114.209B, or 3.27x TTM Core Adjusted EBITDA. A model that required both large buybacks and large interest reductions would be internally less credible.

The net interest bridge is intentionally simple. T-Mobile's quarterly non-operating lines are noisy, and the QF/QFR work already warned against relying mechanically on selected FMP quarterly fields where official values differ. The synthesis uses normalized net interest rather than fitting every historical quarter. Bear assumes a higher interest burden because leverage, lease obligations, refinancing rates, or integration costs could keep financial expense elevated. Base assumes the current debt load remains a material drag but does not worsen. Bull assumes some deleveraging or refinancing benefit, but only $0.4B better than base. The spread is enough to reflect balance-sheet risk without turning the valuation result into a debt-refinancing call.

The tax rate is also not optimized. A 23.0% rate is consistent with the data package's FY2025 ratio reference and is close enough for a U.S. domestic telecom model. The sensitivity table shows that a 300 bps tax-rate swing moves base EPS by about $0.65, meaningful but not decisive. This keeps the model's attention where it belongs: service revenue growth, margin

conversion, and share count.

6. Share count path

The share count path starts from the TTM diluted share count of 1,120.2M, not from a vague "buybacks offset dilution" shortcut. The model uses annual repurchases of $8.0B, below the annualized Q1 2026 pace and below the most aggressive possible use of the capital return authorization. It is closer to a disciplined continuation of the FY2025 buyback pattern after dividends, integration spending, fiber commitments, and leverage discipline. The average repurchase price rises from $190 to $230 over the five annual periods. Stock-based compensation issuance is estimated at 4.3M shares per year, derived from roughly $0.852B of TTM SBC divided by an approximate $200 share price.

Year	Starting share count (M)	Buyback $ ($B)	Avg price assumed	Shares retired (M)	SBC issuance (M)	Ending share count (M)
Year 1	1,120.2	8.0	$190	42.1	4.3	1,082.4
Year 2	1,082.4	8.0	$200	40.0	4.3	1,046.7
Year 3	1,046.7	8.0	$210	38.1	4.3	1,012.9
Year 4	1,012.9	8.0	$220	36.4	4.3	980.8
Year 5	980.8	8.0	$230	34.8	4.3	950.4

The ending diluted share count is 950.4M. The formula is starting shares minus cumulative retirements plus cumulative SBC issuance over five annual periods. Total retirements are 191.3M shares and total SBC issuance is 21.5M shares, for net retirement of 169.8M shares. This is a large per-share tailwind, but it is not unanchored: FY2025 buybacks were $9.974B, Q1 2026 repurchases were about $4.9B, and management has an enlarged capital return authorization. The constraint is not mechanical capacity; it is capital allocation judgment. If leverage stays above target and management continues repurchasing regardless of price or operating slowdown, that belongs in the management gate rather than hidden inside the EPS model.

There are two reasons to start from the TTM diluted average rather than the latest Q1 diluted share count. First, the ER2 horizon is anchored on TTM, and EPS is being compared to a TTM-derived operating and net income base. Second, the TTM average avoids overstating the immediate buyback benefit from a single quarter of heavy repurchases. The Q1 2026 diluted share count is already lower, so using TTM shares is more conservative for the five-year path. The model then forces every year of buybacks and SBC into the table, making the per-share math transparent.

The average repurchase price path is another control. It would be tempting to use the current $177.52 price for every repurchase year, which would retire more shares and lift EPS. Instead, the model uses $190, $200, $210, $220, and $230. That is consistent with a case where the stock rerates as EPS visibility improves. It also prevents the model from assuming that management can buy five years of stock at today's price while simultaneously claiming the stock is undervalued and the base case will clear the valuation gate. This is a small but important internal consistency check.

7. P/E 15 test

The required EPS for a 15x P/E at the current price is $177.52 divided by 15, or $11.83. The base case is the confident case for this gate. Bull-case upside cannot rescue a base-case failure.

Case	EPS at TTM+5y	EPS x 15	Current price	Cushion %	Pass?
Bear	$10.44	$156.66	$177.52	-11.8%	FAIL
Base	$16.79	$251.78	$177.52	41.8%	PASS
Bull	$20.62	$309.36	$177.52	74.3%	PASS

The P/E 15 gate passes in the base case. The result is not subtle. Even if the buyback path is haircut meaningfully, the base case still has room because operating income grows from $17.976B TTM to $24.517B at the horizon and the required EPS is only $11.83. The bear case failure is still important. It shows that the stock is not protected if pricing actions raise churn, network parity narrows, broadband becomes capital hungry, and margin falls to 18.0%. This is why the investment result cannot become a clean BUY from valuation alone while management and moat are still YELLOW.

The gate result should not be confused with a target price. ER2 uses P/E 15 as a discipline check: can the investor plausibly own the business at today's price and still underwrite a reasonable five-year forward multiple on confident earnings? In this case, yes. The base case has a large enough cushion that normal rounding differences in tax, interest, or share count do not reverse the gate. But the gate is only one of the required bars. A company can clear valuation and still fail the Gideon

compounder standard if the management gate or 2046 durability gate is not strong enough.

This distinction is especially relevant for T-Mobile because buybacks can make EPS look robust while the underlying business is still a capital-intensive wireless carrier. The P/E 15 gate says the stock is not obviously too expensive on base-case five-year EPS. It does not say the moat is a 20-year compounder moat. It does not say Deutsche Telekom control is irrelevant. It does not say management should repurchase stock at any price. The correct conclusion is narrower: valuation is not the blocking issue in the base case; qualitative gate confidence is the remaining issue.

8. Reflexivity check

The model is bottoms-up but must tie back to reported financials. Because T-Mobile has a single Wireless segment, the segment sum equals consolidated revenue and consolidated operating income at the TTM base and at FY2025.

Check	Segment value	Consolidated value	Difference	Result
TTM revenue	$90.530B	$90.530B	0.0%	PASS
TTM operating income	$17.976B	$17.976B	0.0%	PASS
FY2025 revenue	$88.309B	$88.309B	0.0%	PASS
FY2025 operating income	$18.279B	$18.279B	0.0%	PASS

The reported-financial tie is clean. QF and QFR preserved official SEC/IR values where FMP quarterly operating income and capex diverged, especially Q3/Q4 2025 operating income and Q4 2025 capex. This synthesis inherits the official bridge. No reconciliation plug is needed, and no corporate elimination is introduced.

9. In-progress FY reconciliation

Stage 0 does not use an in-progress FY as if it were complete. The model anchors on TTM ended 2026-03-31, so a full-year FY2026 run-rate reconciliation is not required for clearance. A sanity check is still useful because Q1 2026 is the right edge of the TTM anchor.

Item	Q1 2026 actual	Annualized Q1 run-rate	TTM actual	Difference vs TTM	Treatment
Revenue	$23.107B	$92.428B	$90.530B	2.1%	Within 5%, no issue
Operating income	$4.497B	$17.988B	$17.976B	0.1%	Within 5%, no issue

This cross-check supports the TTM anchor. Q1 annualized revenue is modestly above TTM revenue, consistent with recent growth, and Q1 annualized operating income is essentially equal to TTM operating income. The forward model therefore does not start from a hidden step-up above the latest run-rate.

The recency check is particularly useful here because Q4 2025 had a lower operating income print, while Q1 2026 returned to $4.497B of operating income. A model that annualized only Q1 and then layered five years of growth on top could overstate the base. A model that over-weighted Q4 could understate the current run-rate if Q4 contained integration or seasonality noise. The TTM anchor splits the difference. It captures the most recent four quarters, includes the derived Q4 bridge, and still ties to the latest Q1 annualized run-rate within the required tolerance.

10. Sensitivity

The sensitivity table holds two variables at base and varies the third. The base case is revenue of $108.963B, OI margin of 22.5%, net interest of $3.8B, tax rate of 23.0%, ending diluted shares of 950.4M, and EPS of $16.79.

Variable tested	Downside case EPS	Upside case EPS	EPS impact down	EPS impact up	Read-through
Revenue CAGR +/-200 bps	$14.94	$18.77	($1.84)	$1.99	Revenue growth matters, but margin and share count also carry the result
OI margin +/-200 bps	$15.02	$18.55	($1.77)	$1.77	Margin is nearly as important as revenue growth
Share count +/-5%	$15.99	$17.67	($0.80)	$0.88	Buybacks help, but do not fully define the gate
Tax rate +/-300 bps	$16.13	$17.44	($0.65)	$0.65	Tax sensitivity is secondary

The two variables that matter most are service-led revenue growth and operating margin. Share count is meaningful, but the base case does not depend solely on financial engineering. A no-buyback or severely reduced buyback path would reduce the cushion, but the bigger kill signal would be the operating case moving toward bear: postpaid growth decelerating faster than expected while equipment and network costs prevent margin expansion. That is the point at which the P/E 15 pass would become much less robust.

The revenue and margin sensitivities should be read together. A revenue CAGR shortfall is rarely isolated in wireless. If postpaid growth disappoints because churn rises or promotions intensify, operating margin probably also weakens. Conversely, if postpaid growth remains healthy because network quality and ARPA expansion hold, margin may also benefit from service mix. The single-variable table understates that correlation, but it still identifies the dominant drivers. Revenue growth and margin quality are not two independent checklist items; they are two expressions of the same competitive question.

The share count sensitivity is a governance and capital allocation test. If management slows repurchases because leverage reduction or reinvestment earns better risk-adjusted returns, lower share retirement is not necessarily bad for long-term value. If management slows repurchases because free cash flow disappoints, the lower share retirement would probably arrive with lower operating income as well. The base case uses buybacks as a legitimate use of cash, not as an unconditional entitlement. The monitoring condition is whether repurchases remain price-aware and leverage-aware.

11. Combined earnings summary

Case	Revenue ($B)	OI ($B)	OI margin (%)	NI ($B)	EPS ($)	Probability	EPS x 15	vs. $177.52
Bear	96.612	17.390	18.0%	9.925	10.44	25%	$156.66	-11.8%
Base	108.963	24.517	22.5%	15.952	16.79	55%	$251.78	41.8%
Bull	119.397	28.655	24.0%	19.600	20.62	20%	$309.36	74.3%
Probability-weighted	107.962	23.563	21.8%	15.175	15.97	100%	$239.52	34.9%

The probability weights are 25% bear, 55% base, and 20% bull. The base case has the highest weight because the company has visible postpaid momentum, ARPA growth, a strong cash conversion base, and a credible network position. The bear weight is still substantial because U.S. wireless remains competitive, leverage is not trivial, buyback discipline is a management question, and the moat/2046 test is YELLOW rather than green. The bull weight is lower because it requires T-Mobile to preserve network leadership, monetize broadband/fiber without capacity stress, and convert AI/digital savings into operating income without offsetting reinvestment.

The probability-weighted EPS of $15.97 also clears the P/E 15 bar, with EPS times 15 equal to $239.52. That is lower than the base case because the bear probability is larger than the bull probability and because the bear case has a sharper valuation penalty than the bull case has incremental decision value. This weighted view supports the same conclusion as the base case: the price is workable. It does not erase the qualitative concerns. Instead, it says the final verdict should focus on whether T-Mobile deserves a Gideon-quality management and moat upgrade, not on whether the current price mathematically blocks the investment.

The combined earnings summary also shows why the bear case deserves attention even though it is not the decision case. In bear, revenue still reaches $96.612B, but operating income is only $17.390B and EPS is $10.44. The problem is not a collapsing top line. It is margin and capital intensity. A stable but over-competitive wireless market can leave the company bigger yet not much more profitable. That is the adverse scenario the final report should monitor: service revenue grows, but promotions, equipment subsidies, network spending, integration costs, and churn defense consume the incremental value.

12. Tie-out checks

#	Check	Result	Evidence
1	Reported-financial tie-out	PASS	TTM and FY2025 Wireless revenue/OI equal consolidated revenue/OI within 0.0%
2	NI / shares = EPS	PASS	Bear $9.925B / 950.4M = $10.44; Base $15.952B / 950.4M = $16.79; Bull $19.600B / 950.4M = $20.62
3	Segment sum tie-out at horizon	PASS	Combined revenue equals Wireless revenue in all cases; no residual segment

#	Check	Result	Evidence
4	Product-to-segment rollup	PASS	Wireless appendix Section 10 product lines sum to segment revenue in all cases
5	Weighted margin check	PASS	Product-level OI is not disclosed; segment-level margin is applied to one Wireless segment and no product margin is invented
6	Share count path	PASS	Starting 1,120.2M less 191.3M retirements plus 21.5M SBC issuance equals 950.4M
7	Growth plausibility	PASS	Base total revenue CAGR is 3.8%; postpaid base CAGR of 5.5% is below 1.2x the 8.1% three-year historical postpaid CAGR
8	Historical arithmetic	PASS	Segment appendix Section 10 compounds TTM product lines over exactly 5 years and ties product sums to segment revenue
9	Recency anchor	PASS	Q1 2026 annualized revenue is 2.1% above TTM and annualized OI is 0.1% above TTM
10	Valuation arithmetic	PASS	Required EPS is $177.52 / 15 = $11.83; base EPS of $16.79 clears by 41.8%
11	Table integrity and source consistency	PASS	Required sections use valid pipe tables; no raw pipe characters or mismatched table structures found in manual scan

All 11 tie-out checks pass. The only caveats are substantive, not arithmetic. Management remains YELLOW because the CEO transition is recent, Deutsche Telekom controls the vote and board-designation rights, and buyback discipline has to be judged against leverage and reinvestment needs. Moat and 2046 remain YELLOW because T-Mobile has real spectrum, scale, and network advantages, but wireless is still a competitive, capital-intensive oligopoly where network superiority can narrow and pricing power can invite churn.

The most important passed check is the first one. If the TTM base did not tie, the whole forward model would be suspect. Here it ties because the QF/QFR package preserved official SEC/IR values and because there is one Wireless segment. The second most important check is the share count path. Without an explicit path, the model could quietly import a large buyback benefit without acknowledging the cash required, the average price paid, or SBC dilution. The third most important check is growth plausibility. The base case does not exceed the historical postpaid growth envelope, and the total revenue CAGR is lower than the postpaid CAGR because the slower product lines dilute the growth engine.

Check 5 needs a special note. For companies with multiple products inside a segment and disclosed product operating profit, a weighted margin check would test product-level margins. T-Mobile does not disclose product-level operating income, and the data package explicitly classifies this as a true non-disclosure. The correct check is therefore not to invent product margins. The correct check is to confirm that the model uses one segment-level margin and that the product-level revenue rollup does not create a fake profit bridge. On that basis, the check passes.

13. Final synthesis

The base-case earnings model clears the ER2 P/E 15 price gate. Current price is $177.52, required horizon EPS is $11.83, and base horizon EPS is $16.79. The base case is built on $108.963B of revenue, $24.517B of operating income, a 22.5% operating margin, $15.952B of net income, and 950.4M diluted shares. EPS times 15 is $251.78, creating a 41.8% cushion to the current price.

The result is driven first by operating improvement, not only by buybacks. Revenue grows at 3.8% over five years, operating income grows faster because margin expands from 19.9% to 22.5%, and buybacks reduce the share count from 1,120.2M to 950.4M. That is a credible combination for T-Mobile if postpaid service growth remains above peers, broadband/fiber strengthens the household relationship without consuming excessive capacity, and AI/digital savings show up in operating income rather than disappearing into depreciation or promotions.

The risk is that the model looks financially attractive before the qualitative gates are fully clean. Management is investable but unresolved, and the moat is good but not impregnable. The operating model can fail if plan migration raises churn, if Verizon

and AT&T close the local network-quality gap, if broadband becomes capital intensive, or if management keeps repurchasing shares while leverage remains above target and operating growth slows. Those are not table errors. They are the issues the main narrative should carry into the final verdict.

For final assembly, the synthesis headline should therefore be concise: base-case valuation clears, but it does not independently upgrade the company to BUY. The main narrative should separate the three ideas. First, the price is not the binding constraint on the base-case math. Second, the operating case is credible because the segment appendix ties product revenue growth, service mix, and margin expansion to disclosed Wireless economics. Third, the unresolved questions are management control/capital allocation and long-duration moat durability. That framing prevents the report from treating a strong EPS cushion as a complete thesis.

The most useful trigger criteria are similarly straightforward. Upgrade confidence if postpaid ARPA remains positive while churn stays near current levels, service revenue continues to grow faster than peers, operating margin expands without a capex spike, and repurchases slow when leverage or price discipline requires it. Downgrade confidence if postpaid churn rises after plan migration, network-quality rankings converge with peers, fixed wireless requires heavier incremental network investment, or buybacks continue aggressively while leverage remains above target and operating growth weakens. These are the signals that will decide whether the base case remains the confident case.

Appendix CS - Compounder Score

T-Mobile US, Inc. - Compounder Score

Analysis date: 2026-07-05. Company: T-Mobile US, Inc. Ticker: TMUS. Exchange: NASDAQ. Currency: USD. Current price: $177.52. TTM end: 2026-03-31. Horizon date: 2031-03-31. This score is diagnostic only inside ER2. It does not override the cleared Quant Foundation, Data Review, Management, Moat, or Synthesis gates.

1. Executive Verdict

The evidence supports a good, improving U.S. wireless business with strong current cash conversion, a real spectrum/network scale advantage, and a credible five-year base case. The evidence does not support a top-tier 20% annualized compounder at the current price. The stock can pass ER2's P/E 15 five-year earnings test and still fail this stricter compounder return rubric, because the 20% hurdle is much higher than the P/E 15 sanity check.

The Compounder Score is 60/100. Business Quality is 56/80. Price and 20% Return Underwriting is 4/20. The score-implied classification is Reject under this diagnostic rubric. That classification means only that TMUS does not meet the specific 20% compounder standard at $177.52; it is not a mechanical ER2 verdict.

The core tension is straightforward. T-Mobile's TTM revenue is $90.530B, TTM operating income is $17.976B, and TTM free cash flow is $18.198B. The synthesis base case reaches $108.963B of revenue, $24.517B of operating income, $15.952B of net income, and $16.79 of EPS by 2031-03-31. At 15x EPS, that is $251.78 per share, a strong P/E 15 result. But $251.78 plus estimated dividends is only a high-single-digit to low-double-digit annualized shareholder return from $177.52, not 20%. Even the bull EPS case at 15x does not clear 20% without a much higher terminal multiple, a much lower entry price, or materially better economics than the source chain supports.

Business quality is capped by the capital intensity and regulated oligopoly structure of wireless. T-Mobile has spectrum scarcity, national scale, a differentiated mid-band network position, postpaid account momentum, ARPA growth, and an improving margin/FCF profile. It also has roughly $10B of annual capex, lease/tower/debt complexity, large buybacks while leverage remains above the stated target on the broad FMP debt basis, a controlled-company governance structure under Deutsche Telekom, and no disclosed product-level operating income for broadband, fiber, postpaid, prepaid, equipment, business, or advertising.

2. Data Source Map

Topic	Primary source used	Treatment
Price, market cap, exchange	FMP profile raw pull in data package; orchestrator price anchor	Price $177.52; FMP profile market cap $192.113B
Enterprise value	FMP profile market cap plus Q1 2026 FMP net debt including lease obligations from QF/data package	Estimated current EV $306.322B
Income statement	quant_foundation.md; data_package.md	Official SEC/IR values control where FMP differed
Balance sheet	quant_foundation.md; data_package.md	Q1 2026 cash $3.520B, SEC debt $86.047B, FMP total debt including leases $117.729B
Cash flow	quant_foundation.md; data_package.md	TTM OCF $28.325B, capex $10.127B, FCF $18.198B
Share count	quant_foundation.md; appendix_synthesis.md	TTM average diluted shares 1,120.2M; synthesis horizon shares 950.4M
SBC	raw FMP annual cash-flow file and appendix_synthesis.md	FY2025 SBC $829M; synthesis uses about $852M TTM / $200 per share as 4.3M shares per year
Segment and product data	appendix_B_wireless.md; data_package.md	One Wireless segment; product revenue lines are not separate reportable segments
Management and governance	appendix_management.md	Management gate YELLOW; Deutsche Telekom voting control is a standing constraint
Moat and durability	appendix_moat.md	Moat gate YELLOW; 2046 test YELLOW
Five-year earnings model	appendix_synthesis.md	Base EPS $16.79; P/E 15 pass with 41.8% cushion

3. Key Financial and Quality Metrics

Metric	Value	Source / formula
TTM revenue	$90.530B	QF P4
TTM operating income	$17.976B	QF P4
TTM NOPAT	$13.842B	$17.976B x (1 - 23.0%)
TTM FCF	$18.198B	QF P4
TTM FCF / NOPAT	131.5%	$18.198B / $13.842B
FY2025 SBC / revenue	0.9%	$829M / $88.309B
FY2025 SBC / FCF	4.6%	$829M / $17.995B
Market cap	$192.113B	FMP profile
Estimated EV	$306.322B	Market cap plus $114.209B net debt, broad FMP basis
EV / TTM NOPAT	22.1x	$306.322B / $13.842B
EV / TTM EBIT	17.0x	$306.322B / $17.976B
Market cap / TTM FCF	10.6x	$192.113B / $18.198B
FCF yield	9.5%	$18.198B / $192.113B
Net debt / TTM Core Adjusted EBITDA	3.27x	data_package.md
Simple adjusted ROIC including broad debt/leases	8.1%	NOPAT / (total debt incl. leases + equity - cash)
Simple adjusted ROIC excluding goodwill/intangibles	9.1%	NOPAT / (broad invested capital - goodwill/intangibles)

The ROIC evidence is mixed and definition-sensitive. The data package reports FMP key-metrics ROIC of 3.2%, 2.7%, 5.5%, 7.1%, and 7.0% for FY2021-FY2025, but also notes that using official FY2025 operating income, a 23% tax rate, and FMP invested capital of $84.267B implies about 16.7% on a simple point-in-time basis. For this score I do not use the highest definition. Wireless is capital intensive and lease/tower obligations are real. Including the broad FMP total debt basis gives a latest adjusted ROIC in the high single digits. Excluding goodwill and intangibles lifts it only to about 9%. That is acceptable for a telecom operator, but it is not the high-ROIC profile this rubric is built to reward.

ROIIC is better than reported ROIC because T-Mobile has exited the Sprint integration heavy-capex period and converted the network build into cash flow. A rough three-year capex-only ROIIC from FY2022 to TTM uses NOPAT rising from about $5.04B to $13.84B against FY2023-FY2025 capex of about $33.08B plus the Q1 2026 run-rate component embedded in TTM. That points to a low-to-mid-20s incremental return before acquisition and working-capital adjustments. Including FY2025 acquisitions and broader reinvestment lowers the result. The evidence supports improving incremental returns, not a clean 35% plus ROIIC score.

4. Rubric Scorecard

Category	Score	Max	Rationale
Incremental returns on capital	14	25	ROIC is positive but not high on a lease/debt-inclusive basis; ROIIC improved after integration; cash conversion is strong
Reinvestment runway	15	20	Broadband, postpaid, ARPA, fiber, business, and AI/digitalization give runway, but U.S. wireless is mature and capital constrained
Durability of moat	10	15	Spectrum/network scale is real; 2046 remains unresolved because peers, cable, satellite, regulation, and capex cycles can erode returns
Accounting and financial quality	8	10	Cash flow strongly supports earnings; SBC is modest; disclosure is good but product-level economics are not disclosed
Capital allocation discipline	9	10	Sprint integration, capex normalization, and returns are strong; score is capped by leverage, M&A/fiber proof burden, and DT control

Category	Score	Max	Rationale
Price and 20% return underwriting	4	20	P/E 15 gate clears, but 20% annualized return does not clear without heroic assumptions or multiple expansion
Total	60	100	Good business, inadequate 20% compounder setup

Sub-score detail:

Subcategory	Score	Max
1A. Normalized ROIC is high	1	5
1B. ROIIC is high	4	8
1C. ROIIC is not deteriorating sharply	3	3
1D. Unit economics support reported returns	2	3
1E. Cash conversion is real	3	3
1F. ROIC is not an accounting artifact	1	3
2A. Large remaining market opportunity	4	5
2B. Proven ability to reinvest at scale	4	5
2C. Organic growth opportunity	3	4
2D. Repeatable expansion playbook	2	3
2E. Market structure supports long growth	2	2
2F. Growth does not require ROIC collapse	0	1
3A. Clear source of advantage	4	4
3B. Pricing power	2	3
3C. Competitive evidence	2	3
3D. Customer stickiness	1	2
3E. Resilience through stress	1	2
3F. Low disruption risk	0	1
4A. Clean revenue and earnings quality	2	2
4B. Cash flow supports earnings	2	2
4C. Conservative treatment of SBC and dilution	2	2
4D. Balance sheet strength	1	2
4E. Transparent disclosures	0	1
4F. No governance/accounting red flags	1	1
5A. Reinvestment priority is rational	2	2
5B. Acquisition discipline	1	2
5C. Buyback discipline	2	2
5D. Incentives align with value creation	2	2
5E. Owner mentality	1	1
5F. Evidence from past decisions	1	1
6A. Base-case IRR >= 20%	0	6
6B. Conservative exit multiple	1	4
6C. Bear case is acceptable	0	3
6D. Reverse DCF is beatable	0	3
6E. Multiple does not already price perfection	1	2
6F. Cash returns help	2	2

5. ROIIC and Reinvestment Analysis

T-Mobile is not a clean high-ROIC compounder. It is a scale telecom business that has recently improved its incremental economics after a heavy integration cycle. The distinction matters. A software or payments compounder can often reinvest at very high incremental margins with limited physical capital. T-Mobile must keep spending on spectrum, network, sites, backhaul, customer acquisition, device financing, broadband capacity, fiber partnerships, and regulatory compliance.

The strongest ROIIC evidence is the step-change in operating income after the Sprint integration and 5G build. Operating income rose from $6.543B in FY2022 to $18.279B in FY2025, while capex fell from $17.301B in FY2022 to $9.955B in FY2025. TTM operating cash flow of $28.325B and FCF of $18.198B confirm that the earnings improvement has converted into cash. This deserves credit. Management did not merely acquire Sprint, issue synergy slides, and fail to harvest cash.

The weaker evidence is the capital base. Q1 2026 cash is $3.520B, SEC debt excluding lease/tower obligations is $86.047B, and FMP total debt including lease obligations is $117.729B. Broad net debt is $114.209B. Goodwill and intangibles are $17.237B. The latest invested-capital denominator is therefore large, and the lease/tower obligations should not be ignored. On a broad invested-capital basis, latest ROIC is high single digits. On the narrower FMP invested-capital definition, FY2025 looks much better, but this rubric treats leases, spectrum, acquisitions, and debt-supported network assets as real capital.

The incremental return score is therefore capped at 14/25. The business has improved and the post-integration incremental picture is attractive, but the long-run return on each new dollar of capex, fiber investment, spectrum, M&A, and buybacks is not yet proven at the 25%-35% plus level. T-Mobile can be a strong equity without being an exceptional ROIIC machine.

6. Runway Analysis

The reinvestment runway is real. The segment appendix identifies postpaid service, broadband, fiber, business, advertising, financial services, and AI/digitalization as sources of revenue or margin opportunity. The data package records management's 2030 target of 18M-19M total broadband customers, including 15M 5G broadband and 3M-4M T-Fiber customers. It also records management's expectation for nearly $3B of incremental Core Adjusted EBITDA contribution from digitalization and AI by 2027 relative to 2025. Q1 2026 postpaid ARPA was $151.93, churn was 1.04%, and service revenue growth remained strong.

The base-case synthesis does not need heroic top-line growth. It grows total revenue from $90.530B to $108.963B over five years, a 3.8% CAGR. That is driven by 5.5% postpaid service growth, modest equipment growth, prepaid decline, and wholesale/other decline. The operating case is more important than the revenue case: operating margin rises from 19.9% TTM to 22.5%, producing $24.517B of horizon operating income.

The runway score is capped because the category is mature and contested. U.S. wireless is an oligopoly, not an open-ended greenfield. Postpaid growth can continue, but it is partly share gain against AT&T, Verizon, cable wireless, and MVNOs. Broadband is attractive when it monetizes spare 5G capacity; it becomes less attractive if household usage forces densification and capex. Fiber partnerships can deepen household relationships, but the economics are not yet separately disclosed. AI/digital savings can help margins, but competitors can use similar tools.

The evidence supports 15/20 for runway: strong for a telecom company, not a blank-check compounding runway.

7. Moat Analysis

The moat is real and understandable in one paragraph. T-Mobile owns and operates scarce licensed spectrum, a national network, a large customer base, distribution, device relationships, a post-Sprint 5G mid-band position, and a brand that still supports account growth and ARPA expansion. Those assets are difficult to replicate. A new entrant cannot quickly build a national network, acquire comparable spectrum, secure device channels, meet regulatory obligations, and win tens of millions of customer relationships.

The moat is also leaky. Wireless customers can switch. Cable wireless and MVNOs can pressure value tiers. AT&T and Verizon can narrow network gaps through mid-band deployment and fiber/wireless bundling. Satellite can improve coverage alternatives at the margin. Regulators can pressure pricing, spectrum transactions, privacy, security, and merger conditions. The moat appendix therefore gives both the moat gate and the 2046 test YELLOW.

Pricing power is observable but not unconstrained. Q1 2026 showed ARPA growth with manageable churn, which is the right evidence. The risk is that legacy plan migration or premium-plan pushes begin to look like ordinary incumbent price extraction, weakening the Un-carrier brand and requiring promotions. T-Mobile's pricing power deserves credit because customers are not immediately fleeing. It does not deserve full credit because consumer wireless is not protected by long-duration enterprise contracts.

The moat score is 10/15. Five-year durability is good. Twenty-year durability through multiple network generations is unresolved.

8. Accounting and Capital Allocation Analysis

Accounting and financial quality are strong enough for 8/10. Revenue is from ordinary wireless service, equipment, and adjacent services. Cash flow supports earnings. TTM FCF exceeds TTM NOPAT because the company is past the peak integration capex phase and working-capital/capex timing is favorable. SBC is modest: FY2025 SBC of $829M is only 0.9% of revenue and 4.6% of FCF. The synthesis explicitly models SBC issuance at 4.3M shares per year, so buybacks are not treated as free.

The score is not 10/10 because product-level economics are not disclosed. Investors do not get separate operating income for postpaid, prepaid, broadband, fiber, equipment, advertising, business, or wholesale. That is acceptable for a one-segment telecom filer, but it leaves the analyst dependent on management descriptions when assessing whether broadband and fiber are high-return growth vectors or capital-heavy share grabs.

Capital allocation is strong but not riskless. Capex fell from $21.692B in FY2021 to $9.955B in FY2025 while FCF turned sharply positive. Buybacks and dividends became material, with FY2025 stockholder returns around $14B and a 2026 authorization up to $18.2B. The synthesis uses $8B of annual repurchases at rising average prices and still clears the P/E 15 gate. That is a disciplined modeling choice.

The constraints are leverage, acquisitions, and control. Broad net debt / TTM Core Adjusted EBITDA is 3.27x versus management's 2.5x target. Recent and planned actions include UScellular, Lumos, Metronet, Vistar, Blis, and additional fiber JVs. Management says fiber JVs can earn double-digit IRRs, but the evidence is not yet seasoned. Deutsche Telekom voting control of about 54.5% and the right to designate 10 directors cap the governance score. DT's economics are aligned through common equity, but minority holders do not control the board or long-term strategic optionality.

9. 20% Return Underwriting

This is where the score fails. At $177.52, the 20% annualized hurdle requires ending value of about $441.8 over five years before considering dividends, or about $419-$422 of terminal share price if roughly $20-$23 of dividends are received. The base case does not get close.

Case	Horizon EPS	Exit P/E	Horizon price	Est. dividends	Approx IRR
Bear	$10.44	15.0x	$156.66	$20	roughly 0%
Base	$16.79	15.0x	$251.78	$22	roughly 9%
Bull	$20.62	15.0x	$309.36	$24	roughly 13%

The base case uses a lower terminal P/E than today's TTM P/E, so it is not relying on multiple expansion for the ordinary P/E 15 test. But it still does not clear 20%. If the terminal multiple stays near today's TTM P/E of roughly 18.9x, base-case IRR improves but remains well below 20%. To clear 20% on base EPS, the exit P/E would need to be roughly 25x even after giving credit for dividends. That is terminal multiple expansion, and the rubric explicitly bars an "investable now" classification when the 20% case requires expansion.

The reverse DCF is also not beatable. Current EV is about $306.3B using FMP profile market cap and broad net debt. Current TTM NOPAT is about $13.84B. A 20% return with a flat current EV/NOPAT multiple mechanically requires NOPAT to compound near 20% before debt/equity details. A 15x exit EV/NOPAT multiple would require roughly 30% NOPAT CAGR. The synthesis base case grows NOPAT from about $13.84B to about $18.88B, or about 6.4% annually. The gap is too large to bridge with ordinary buybacks and dividends.

Estimated max buy price for a 20% base-case IRR is about $110 per share using base-case $251.78 terminal value plus estimated dividends discounted at 20% for five years. That estimate is directional, not a target price, but it shows the scale of the issue. The stock can be a reasonable investment under a normal return hurdle while failing this 20% compounder hurdle.

10. Hard Veto Checklist

Veto	Status	Evidence
ROIIC below cost of capital with no path	Pass	Incremental economics improved after Sprint integration; FCF conversion is strong

Veto	Status	Evidence
Reported ROIC high only because invested capital is tiny	Watch	High return definitions are sensitive; broad invested-capital ROIC is only high single digits
Growth requires persistent external financing	Pass	TTM FCF is $18.198B
Share count rises materially without value creation	Pass	Share count is declining; SBC is modest
Large acquisitions without disclosed returns	Watch	UScellular/fiber/adtech activity is rational but not seasoned
FCF structurally lags earnings	Pass	FCF is strong relative to NOPAT and net income
Regulation/leverage/customer concentration can impair equity	Watch	Regulation and broad leverage are real constraints
20% case requires terminal multiple expansion	Fail	Base and bull do not clear 20% at 15x; base needs a much higher exit multiple
Flawless execution needed to justify price	Watch	P/E 15 case has cushion, but 20% case needs far more than base execution
Cannot explain the moat in one paragraph	Pass	Spectrum/network scale plus customer relationships explains it
Accounting/governance issues impair trust	Watch	DT control is a minority-holder constraint, not an accounting failure
Balance sheet could wipe out equity in downturn	Watch	Leverage is high but cash generation is strong

11. Final Decision

Score-implied classification: Reject under this diagnostic rubric.

This is a diagnostic rejection, not a statement that T-Mobile is a bad company. The business quality is good. The five-year ER2 earnings model is credible. The P/E 15 gate passes with a large base-case cushion. The problem is that the 20% return target is a different bar. At the current price, the base case underwrites something closer to a high-single-digit annualized outcome at a 15x exit P/E, helped by dividends and buybacks. That is not enough.

Compounder Score note: 60/100 - T-Mobile is a good post-integration wireless cash generator, but broad ROIC, capital intensity, leverage, DT control, and the failed 20% return case cap the diagnostic score.

Business Quality Score note: 56/80 - strong service revenue, FCF conversion, spectrum/network scale, and capital returns are offset by high capital intensity, product-level disclosure gaps, YELLOW management, and YELLOW moat/2046 durability.

20% Return UW Score note: 4/20 - P/E 15 clears, but the base case does not approach 20% annualized without a much lower entry price or terminal multiple expansion.

Confidence rating: Medium-High. The source chain is cleared and internally consistent. The remaining uncertainty is not arithmetic; it is whether T-Mobile can sustain incremental returns as broadband, fiber, acquisitions, leverage, and network competition evolve.

12. Machine-Readable JSON

See `compounder_score.json` in the same folder for the machine-readable score.

Appendix CSA - Scoring Audit

T-Mobile US, Inc. - Scoring Audit

Analysis date: 2026-07-05. Company: T-Mobile US, Inc. Ticker: TMUS. Current price: $177.52. TTM end: 2026-03-31. Horizon date: 2031-03-31. This audit reviews the Compounder Score appendix and JSON against the cleared ER2 source chain. It does not override the ER2 gates; it audits the diagnostic score that appears in the Stage 7 scorecard.

1. Original vs Audited Scores

Item	Original	Audited	Notes
Business Quality Score / 80	56	47	Reduced for definition-sensitive ROIC, rough ROIIC, unseasoned acquisition/fiber returns, high leverage, product-level operating income gaps, and YELLOW management/moat evidence.
Valuation / 20% Return UW Score / 20	4	3	Reduced because the 20% base case fails decisively, reverse DCF is not beatable, bear IRR is roughly zero, and the remaining credit is only for cash returns and non-heroic 15x P/E framing.
Total Score / 100	60	50	Reject remains the correct diagnostic classification.
Classification	Reject	Reject	The 20% hurdle is not close at $177.52.

Original reconstructed score: Business Quality 56/80, Valuation / 20% Return Underwriting 4/20, total 60/100, score-implied classification Reject. Original IRR cases are bear roughly 0%, base roughly 9.1%, and bull roughly 13.4%, with a stated maximum buy price for a 20% base-case IRR of about $110. The JSON and Markdown agree on all headline score values and classification, so there is no original-score authority conflict.

Audited score: Business Quality 47/80, Valuation / 20% Return Underwriting 3/20, total 50/100, score-implied classification Reject. Final 20% hurdle result: fail. Dream classification: neither. T-Mobile is a good post-integration wireless cash generator, but it is not a dream business under this rubric because the durable incremental-return proof is incomplete, and it is not a dream investment because the current price does not underwrite a 20% base-case return without a much lower entry price or terminal multiple expansion.

2. Score Reductions and Reasons

The original score is not promotional, but it is still too generous in several quality subcategories. This score is reduced because the CompounderScorer acknowledges the key weaknesses yet leaves too much credit in areas where the evidence is only partly proven.

Incremental returns on capital should fall from 14/25 to 11/25. The positive evidence is real: TTM operating income is $17.976B, TTM free cash flow is $18.198B, capex has normalized from Sprint integration levels, and operating income improved sharply after FY2022. But normalized ROIC remains definition-sensitive. The data package shows FMP ROIC of 3.2%, 2.7%, 5.5%, 7.1%, and 7.0% for FY2021-FY2025, while the scorer computes broad lease/debt-inclusive ROIC near 8.1% and an ex-goodwill/intangibles version near 9.1%. The highest simple point-in-time calculation is not the right anchor for a telecom compounder because spectrum, leases, tower obligations, and debt-supported network assets are real capital. ROIIC is rough, not fully rebuilt from a clean invested-capital bridge. The scorer states 3-year ROIIC of 24%, 5-year ROIIC of 13%, and acquisition-inclusive ROIIC of 12%, but the appendix does not show a fully reconciled annual invested-capital roll-forward. That does not require a zero for 1B because the scorer did calculate a directional ROIIC, but it does require a cap.

Reinvestment runway should fall from 15/20 to 12/20. The runway exists: postpaid service revenue growth, ARPA, broadband additions, 5G broadband targets, T-Fiber targets, business, advertising, and AI/digitalization give management multiple levers. The problem is evidence quality. Broadband revenue, T-Fiber revenue, business revenue, advertising revenue, and AI/digital initiative economics are not disclosed as standalone revenue or operating profit lines in the data package. Fiber JV double-digit IRR claims are management assertions, not seasoned cash returns. U.S. wireless is a mature, promotional oligopoly, and 5G broadband can become capital intensive when excess capacity is exhausted. A 12/20 runway score still

gives credit for visible account and service-revenue momentum, but it avoids treating management targets as already proven reinvestment economics.

Durability of moat should fall from 10/15 to 9/15. Spectrum and national network scale are real advantages, and the current moat appendix properly rejects a moat FAIL. The score cannot stay at two-thirds of maximum when both the moat gate and 2046 test are YELLOW. The 2046 risk is not theoretical: AT&T and Verizon can narrow network gaps, cable wireless can pressure gross adds and household bundles, satellite can erode coverage differentiation at the margin, and regulation can pressure pricing or spectrum economics. Pricing power is observable through ARPA growth and manageable churn, but it is not contractual or software-like.

Accounting and financial quality should fall from 8/10 to 8/10 unchanged at the category level, but with different emphasis. Cash conversion is excellent on the current TTM bridge, SBC is modest, and the synthesis explicitly models SBC issuance into the share count path. This is one of the better-supported categories. The cap remains because FY2021-FY2022 FCF was negative during the investment cycle, Q3/Q4 2025 official-versus-FMP discrepancies required manual source control, and product-level operating income is not disclosed.

Capital allocation should fall from 9/10 to 7/10. Sprint integration and capex normalization deserve credit. Buybacks and dividends are real cash returns. But the company also carries broad net debt of about $114.209B on the FMP total-debt basis, or 3.27x TTM Core Adjusted EBITDA, against management's 2.5x target. Q1 2026 repurchases occurred at high absolute share prices. UScellular, Lumos, Metronet, Vistar, Blis, and additional fiber JVs are rational but unseasoned. Compensation lacks a hard ROIC or acquisition-return guardrail. Deutsche Telekom's voting control also constrains minority governance. A near-perfect 9/10 is too high for this evidence set.

Valuation / 20% Return Underwriting should fall from 4/20 to 3/20. The original scorer correctly gives zero to base-case IRR, bear case, and reverse DCF. The remaining credit should be narrower. The base case at 15x EPS gives a horizon price of $251.78 plus roughly $22 of dividends, which is roughly 9% annualized from $177.52. The bull case at 15x EPS gives $309.36 plus roughly $24 of dividends, still only about 13%. The base case needs an exit multiple near 25x after dividend credit to approach 20%. That is terminal multiple expansion. The current price can be reasonable under an ordinary return hurdle and still fail this diagnostic score.

3. Unsupported Claims

The evidence does not support a full "proven reinvestment at scale" score for fiber, broadband, advertising, or AI/digitalization. The source package provides targets, commentary, customer additions, and broad Wireless economics, but not separate revenue, operating profit, capital, churn, or return data for those initiatives. These lines can support the base narrative only as drivers inside Wireless, not as independently proven high-return reinvestment pools.

The evidence does not support a clean high-ROIC compounder label. The scorer itself says ROIC is mixed and definition-sensitive. The audited score preserves credit for improved post-integration economics, but the business remains capital intensive and the broad capital base matters.

The evidence does not support full buyback-discipline credit. The synthesis share-count table is transparent and conservative versus the Q1 2026 pace, but management's actual capital allocation still has to be judged against leverage, high repurchase prices, and acquisition/fiber commitments. The model can include buybacks; the quality score should not assume they are always value-accretive.

4. Calculation Errors

I did not find a headline arithmetic error in the scorer's valuation math. The base EPS of $16.79 times 15 equals $251.85 using exact multiplication, and the reported $251.78 appears to come from unrounded EPS. The required EPS for the P/E 15 gate is $177.52 / 15 = $11.83, matching the synthesis. The IRR framing is directionally correct: $251.78 plus about $22 of dividends over five years from $177.52 is approximately 9%, not 20%.

The calculation weakness is not a simple math break. The calculation breaks at evidence depth. ROIIC is presented as directional rather than fully tied to an annual invested-capital roll-forward. Acquisition-inclusive ROIIC is acknowledged but not shown in enough detail to justify high reinvestment or capital allocation scores. Reverse DCF is correctly failed: current EV near $306.3B and TTM NOPAT near $13.84B imply EV / NOPAT of about 22.1x, while base-case NOPAT growth near 6.4% cannot satisfy a 20% five-year return without large multiple help or a much lower starting price.

5. Missing Data

The most important missing evidence is product-level operating income and capital by growth vector. The package explicitly says postpaid, prepaid, wholesale, equipment, fiber, business, advertising, broadband, 5G broadband, T-Fiber, and AI/digitalization do not have separate operating income disclosure. That gap matters because the compounder rubric is about incremental returns, not only consolidated revenue growth.

Second, normalized annual churn and ARPA histories are incomplete beyond recent recency tables. The latest ARPA/churn evidence is useful, but a compounder score should be careful about extrapolating it into durable pricing power.

Third, recent acquisition and fiber JV return evidence is unseasoned. Management's double-digit IRR claim for fiber JVs may prove right, but it is not yet a realized return series.

Fourth, debt basis and invested capital definitions remain material. SEC debt excluding leases/tower obligations and FMP total debt including lease obligations produce different leverage and ROIC reads. The audit uses the broad basis for conservative scoring because lease/tower obligations are economically relevant to a wireless network.

6. Hard-Veto and Threshold Test Audit

The original hard-veto conclusion is correct: the 20% case requires terminal multiple expansion or a materially lower entry price. The score should remain Reject. The threshold tests fail on total score >=80, business quality >=65/80, valuation score >=15/20, ROIIC plus runway >=35/45, base-case IRR >=20%, bear-case IRR support, no hard vetoes, and no multiple expansion requirement. The only thing that clears is the narrower ER2 P/E 15 valuation gate, which is not the same as the CompounderScorer 20% hurdle.

No quality score can compensate for that. Business Quality and 20% Return Underwriting must be judged separately. Even if the quality score were left at 56/80, the valuation score would still force Reject because the base-case return is too low.

7. Final 20% Hurdle Pass/Fail

Final 20% hurdle: fail. The base case produces roughly a high-single-digit annualized return at a 15x exit P/E plus dividends. The bull case still does not clear 20% at 15x. A 20% base case requires either a buy price near $110, materially higher economics than the source chain supports, or terminal multiple expansion toward roughly 25x on base EPS after dividend credit. That is not an investable-now result under this rubric.

8. Dream Business / Dream Investment Classification

Audited classification: neither. T-Mobile is a strong telecom operator, but not a dream business in the narrow compounder sense because broad ROIC is high single digit to low double digit depending on definition, the 2046 moat remains YELLOW, and new growth vectors have insufficient separate return evidence. It is also not a dream investment at $177.52 because the 20% base-case return is not close.

The single biggest reason the company does not qualify is the gap between ordinary valuation attractiveness and the 20% compounder hurdle. The stock can clear ER2's P/E 15 test and still fail this diagnostic score because 15x on $16.79 EPS plus dividends is not enough to compound at 20% from the current price.

9. Stage 7 Scorecard Notes

Compounder Score note: 50/100 - good post-integration wireless cash generation, but broad ROIC, unseasoned fiber/M&A returns, YELLOW moat/management evidence, and a failed 20% return case keep this a diagnostic Reject.

Business Quality Score note: 47/80 - spectrum scale, service revenue growth, and strong TTM FCF are real, but capital intensity, leverage, product-level disclosure gaps, unproven ROIIC, and DT control cap quality.

20% Return UW Score note: 3/20 - the 15x base case is acceptable for a normal return hurdle, but it underwrites only about 9% annualized and needs a much lower entry price or multiple expansion for 20%.

10. Auditor JSON

See `compounder_score_audit.json` in the same folder for the machine-readable audit. The JSON records audited Business Quality 47/80, audited Valuation / 20% Return UW 3/20, audited total 50/100, classification Reject, final 20% hurdle fail, dream classification neither, medium confidence, and the main score reductions, unsupported claims, calculation issues, and missing data.

Appendix RT - Red Team

T-Mobile US, Inc. - Red Team

Stage 0 anchor used throughout: today is 2026-07-05; fiscal year ends December 31; latest reported quarter is Q1 2026 ended 2026-03-31; TTM anchor is Q2 2025 plus Q3 2025 plus Q4 2025 plus Q1 2026; forward horizon is 2031-03-31 exactly.

Source discipline: this red team reads `appendix_synthesis.md` Sections 3-10, `appendix_B_wireless.md` Sections 8, 9, and 11, `data_package.md` Section 6, `appendix_management.md`, `appendix_moat.md`, `appendix_scoring_audit.md`, and `compounder_score_audit.json`. It also checks current peer and company context from T-Mobile Q1 2026 earnings materials, T-Mobile February 2026 Capital Markets Day update, Verizon Q1 2026 results, AT&T Q1 2026 results, and the T-Mobile UScellular closing update.

1. The most fragile assumption

The most fragile assumption is the Wireless base-case margin bridge: operating margin rising from the 19.9% TTM base to 22.5% at the 2031-03-31 horizon while postpaid service revenue still compounds at 5.5% and the company retires enough shares to end at 950.4 million diluted shares. This is not one assumption dressed up as three. It is a single operating story: T-Mobile must keep taking high-quality postpaid revenue, deepen ARPA, avoid churn damage, absorb UScellular and fiber costs, keep equipment and promotional intensity contained, convert AI/digital savings into operating income, and still fund large buybacks.

The segment appendix is transparent about the mechanics. Base-case postpaid service revenue grows from a TTM base of $59.967 billion to $78.374 billion, or 5.5% CAGR. Total Wireless revenue grows only 3.8% because prepaid, wholesale/other, equipment, and other revenue dilute the postpaid engine. Operating income then grows from $17.976 billion to $24.517 billion, a 6.4% CAGR, because margin expands 260 bps. That is the pressure point. The revenue case can be defended as lower than recent postpaid momentum, but the margin case requires the good revenue to be profitable growth rather than bought growth.

If this assumption is wrong by 200 bps of operating margin, the synthesis sensitivity says base EPS falls by about $1.77, from $16.79 to $15.02. That alone does not break the ER2 P/E 15 gate, but the single-variable table understates the real risk because margin misses rarely arrive alone in wireless. If ARPA actions or network parity pressure churn, the company likely gives up both revenue CAGR and margin. A simultaneous 200 bps revenue-CAGR shortfall and 200 bps margin shortfall would push EPS far closer to the bear/base boundary than the headline 41.8% P/E cushion suggests. The bear case already shows the shape: revenue of $96.612 billion, margin of 18.0%, EPS of $10.44, and a failed P/E 15 test.

The most dangerous part of the base case is that the forward model can look conservative on each individual line while still being aggressive in combination. A 5.5% postpaid service CAGR is below the 8.1% three-year history and far below Q1 2026 growth. A 22.5% operating margin is below the 24.0% bull margin and near the FY2024/FY2025 neighborhood. $8.0 billion of annual buybacks is below the annualized Q1 2026 pace. But the package of all three is not conservative. It assumes a mature telecom can keep above-peer service growth, expand OI margin, and retire about 170 million net shares while leverage, spectrum, fiber, UScellular, dividends, and network investment remain live constraints.

2. The most-likely-to-be-optimistic Stage 5 number

The single Stage 5 number most likely to be optimistic is the 22.5% horizon operating income margin. The base-case revenue number is arguable; the share-count path is explicit and can be adjusted; the tax rate and interest line are secondary. The margin is where the model converts a solid telecom into a better-than-ordinary compounding story.

The synthesis itself acknowledges the issue: each mechanism is plausible on its own, but several need to work at once. Postpaid service mix must rise. Integration costs must fade. Digital and AI savings must offset support-cost inflation. Equipment growth must stay lower than service growth. Broadband must monetize spare capacity instead of forcing densification. Fiber JVs must deepen relationships without dragging depreciation or support costs. Device promotions must not return as the price of keeping share. That is a lot of moving parts for a single segment with no product-level operating income disclosure.

Recent peer data sharpen the concern. Verizon's Q1 2026 release showed it returned to positive Q1 postpaid phone net additions for the first time since 2013, while also adding 341,000 broadband connections and raising 2026 EPS guidance. AT&T's Q1 2026 release showed 294,000 postpaid phone net adds, 584,000 advanced connectivity internet net adds, and

higher capital expenditures versus the year-ago quarter. Neither peer needs to beat T-Mobile outright to hurt the base case. They only need to narrow the perceived network and bundle gap enough that T-Mobile's ARPA growth requires more promotions or device economics than the model allows.

The margin line also bears the fiber and UScellular burden. T-Mobile completed the UScellular acquisition in 2025 and has layered on fiber partnerships and smaller acquisitions. Management's Capital Markets Day update says the capital envelope includes stockholder returns, accretive M&A, and flexible capacity for growth investments or delevering. That is a legitimate strategy, but not a free one. If integration, customer migration, tower/site obligations, or fiber support costs persist longer than expected, the operating-income line is where the optimism gets exposed first.

3. The strongest bear case, stated in its strongest form

The bear case is that T-Mobile has reached the point where the market still prices it as the superior wireless compounder, but the next five years force it to behave like the incumbent it displaced. The Un-carrier brand and 2.5 GHz network lead produced years of share gains, but Verizon and AT&T are now using fiber, fixed wireless, AI-driven segmentation, targeted offers, and improved network execution to blunt the differential. T-Mobile can keep reporting service revenue growth, but only by pushing ARPA, plan migration, and device economics hard enough that churn and promotional intensity leak into margin. The stock then has the worst mix for an equity holder: enough buybacks to hide slowing operating quality in EPS, but not enough underlying growth or ROIC to justify a 20% compounder underwriting case.

The mechanism shows up within six to eight quarters. First, postpaid account churn drifts above the current 1.04% range while ARPA growth stays positive, telling us pricing is being forced rather than earned. Second, postpaid service growth decelerates toward 3% to 4%, much closer to the segment bear case than the base. Third, operating margin fails to expand despite management's AI/digitalization and integration-synergy narrative. Fourth, buybacks continue at high prices while broad net debt remains above the 2.5x leverage target, making per-share EPS look better than enterprise value creation.

The observable anchor is simple: if postpaid account churn averages above 1.15% for two consecutive reported quarters while service revenue growth falls below 7% year over year and consolidated operating margin is below 20.5%, the base-case thesis should be rewritten around the bear case rather than defended as a temporary quarter.

4. Cross-examination of management commentary

First, management's "strong postpaid ARPA growth" framing from Q1 2026 is not automatically a moat signal. It can mean better mix, premium plan adoption, more lines per account, and real pricing power. It can also mean legacy plan migration and more-for-more pricing are being pulled forward while the brand still has enough goodwill to absorb it. The first sign of weakness would not be an immediate revenue miss. It would be ARPA growth accompanied by rising account churn, higher device promotions, or heavier retention spending. That combination would say growth is being bought back from customers after the bill increase.

Second, the broadband target of 18 million to 19 million total customers by 2030 is strategically useful but analytically dangerous. The synthesis properly refuses to add a separate broadband revenue line because the data package does not disclose broadband revenue or operating profit separately. The red-team concern is the other side of the same point: if the economics are not disclosed, the model cannot know whether broadband is high-return attachment or capacity-consuming traffic. Fixed wireless is attractive when it monetizes unused capacity. It is less attractive when household data use forces densification, spectrum refarming, or mobile-quality tradeoffs. T-Fiber may improve household stickiness, but fiber JVs still require capital, operational complexity, and partner economics that are not yet seasoned in reported returns.

Third, management's nearly $3.0 billion digitalization and AI EBITDA contribution target by 2027 should not be treated as automatic operating-income margin. AI and digital tooling can reduce care costs, improve churn prediction, optimize offers, and lower support intensity. But Verizon and AT&T can use the same class of tools. If the whole industry improves segmentation and care efficiency, the savings can be competed away through targeted promotions, better retention offers, or lower customer-acquisition cost. The first sign the target is overpromising would be Core Adjusted EBITDA progress without matching operating margin progress, especially if depreciation, network cost, or promotions absorb the benefit.

5. Stage 5 tie-out reverification

The synthesis's recency anchor is clean on arithmetic. It uses Q2 2025 plus Q3 2025 plus Q4 2025 plus Q1 2026, not FY2025 plus a loose forward year. Q1 annualized revenue of $92.428 billion is only 2.1% above TTM revenue, and Q1 annualized operating income is essentially identical to TTM operating income. That part is not the problem.

The problem is trend interpretation. Q1 2026 reported very strong service and postpaid service growth, but it also included UScellular merger-related costs and an aggressive capital-return posture. The current run-rate is not a hidden step-up; it is a high-momentum starting point that must normalize without losing the economics that made the momentum attractive. If postpaid growth is partly acquisition/integration uplift or pricing catch-up, a five-year 5.5% CAGR may still be too high. If the revenue growth is organic and durable, the model is fine. The red team does not have enough product-level profit disclosure to grant that confidence.

The share count path is realistic only if free cash flow remains abundant and management remains price-aware. The synthesis assumes $8.0 billion of annual repurchases at rising average prices from $190 to $230, with 4.3 million shares of annual SBC issuance. This is less aggressive than the Q1 2026 authorization pace, but it still retires 191.3 million shares before SBC and ends at 950.4 million diluted shares. The issue is not whether T-Mobile can buy stock. It can. The issue is whether buybacks are the right marginal dollar when broad net debt is about $114.209 billion on the FMP total-debt basis, net debt/TTM Core Adjusted EBITDA is 3.27x, and management still cites a 2.5x leverage target.

There is also a price sensitivity problem. If the stock rerates early, the same $8.0 billion buys fewer shares. If the stock derates because operations disappoint, the company may need to preserve cash for leverage, spectrum, integration, or fiber. The model uses a sensible average-price ladder, but real capital allocation is path-dependent. The most shareholder-friendly path is to buy more when value is high and operating confidence is high. The risk path is the opposite: buybacks continue because guidance says they can, while operating quality is already bending.

The product CAGR that exceeds competitor decel risk is postpaid service. The base case puts postpaid above AT&T and Verizon service growth across the horizon. That may be right, but it requires a named structural reason every year, not just a historical network lead. The named reasons are network quality, broadband attachment, ARPA mix, and account growth. Peer catch-up does not need to eliminate those advantages; it only needs to compress them enough that the 5.5% CAGR and 22.5% margin cannot coexist.

6. Score-derived 20% return claim most likely to be wrong

There is no credible score-derived 20% return claim to preserve. The audited scoring appendix already says the 20% hurdle fails, with a 50/100 Compounder Score, 47/80 Business Quality, 3/20 Valuation / 20% Return Underwriting, and Reject classification. The red team agrees. At $177.52, the base case of $16.79 EPS at a 15x exit produces an approximate 9% annualized return after dividend credit, not 20%. Even the bull case at a 15x exit does not clear 20%.

The claim most likely to tempt an optimist is that buybacks plus service growth can bridge the gap. That is wrong because the missing return is too large. A 20% base-case return needs a much lower entry price, materially higher operating economics, or terminal multiple expansion toward roughly 25x on base EPS after dividend credit. The first two are not supported by the current source chain; the third is not underwriting, it is multiple speculation.

What would have to change? The company would need to prove that broad ROIC and ROIIC are materially above the current high-single-digit to low-double-digit debate, that fiber and broadband are high-return incremental pools with disclosed economics, that leverage can fall while returns continue, and that postpaid ARPA growth is earned with stable churn and lower promotional intensity. Until then, T-Mobile can be a reasonable ordinary-return investment and still fail the Gideon 20% compounder test.

7. The signal that forces an exit

Exit signal: over any two consecutive reported quarters through Q4 2027, sell or downgrade if all three occur: postpaid account churn is above 1.15%, service revenue growth is below 7.0% year over year, and consolidated operating margin is below 20.5%.

The threshold is intentionally combined. Churn alone can be noisy. Service revenue alone can be helped by pricing or acquisition mix. Operating margin alone can be hit by temporary integration or depreciation. Together, the three metrics identify the exact thesis break: pricing and share gains are becoming less durable, the revenue engine is decelerating toward the bear case, and the cost of defending the base is preventing margin expansion. If that happens for two quarters, the 22.5% margin and 5.5% postpaid CAGR should no longer be the base case. The synthesis should be rebuilt around a postpaid CAGR closer to 3% to 4%, a horizon margin around 18% to 20%, slower buybacks, and a management gate that probably moves from YELLOW toward FAIL if repurchases remain aggressive.

This signal is monitorable from T-Mobile's ordinary quarterly reporting. It does not require guessing about brand sentiment, network rankings, or channel anecdotes. It also ties directly to the model's dominant sensitivity: revenue growth and operating

margin are the two variables that move EPS most.

8. Conviction at the end of red team

Red-team conclusion: conditional, with a hard lean against upgrading this to a clean compounder BUY. The ER2 P/E 15 base case survives the red team on arithmetic because the required EPS is only $11.83 and the base case has a large stated cushion. But the investment thesis does not survive as a 20% compounder thesis, and it does not yet deserve management/moat PASS treatment. The correct narrative is narrower: T-Mobile is a strong post-integration wireless cash generator with visible shareholder returns, but the next five years depend on an unusually precise combination of above-peer postpaid service growth, margin expansion, and disciplined capital allocation in a capital-intensive, promotional, controlled-company telecom structure.

The strongest bear argument is not that T-Mobile suddenly becomes a bad carrier. It is that T-Mobile remains a good carrier while the equity underwriting quietly depends on it being much better than a good carrier. A good carrier can clear a 15x EPS sanity check. It cannot automatically clear a Gideon compounder bar when broad debt-inclusive ROIC is debated, fiber returns are unseasoned, product-level operating income is undisclosed, DT controls the vote, leverage is above target on a broad basis, and buybacks provide a large share of per-share improvement.

The red team would change its view if T-Mobile delivers four to six quarters of ARPA growth with stable or lower churn, operating margin expanding toward 22% without capex or promotion leakage, disclosed evidence that fiber and broadband are high-return rather than capacity-consuming, and leverage moving toward target while buybacks stay price-aware. Until then, the base case is investable only with monitoring discipline, and the diagnostic score's Reject classification is the right guardrail.

Source notes

- T-Mobile Q1 2026 earnings release: https://www.t-mobile.com/news/business/t-mobile-q1-2026-earnings
- T-Mobile Q1 2026 transcript and materials: https://investor.t-mobile.com/events-and-presentations/events/event-details/2026/T-Mobile-Q1-2026-Earnings-Call-2026-kK_PEln7c3/default.aspx
- T-Mobile February 2026 Capital Markets Day update: https://www.t-mobile.com/news/business/t-mobile-capital-markets-day-update-feb-2026
- T-Mobile UScellular closing update: https://www.t-mobile.com/news/business/t-mobile-closes-uscellular-acquisition
- Verizon Q1 2026 results: https://www.verizon.com/about/news/verizons-transformation-actions-deliver-growth-profitability-1q26-company-raises-adjusted-eps
- AT&T Q1 2026 results: https://about.att.com/story/2026/1q-earnings.html

Appendix D - Data Package (raw historicals)

T-Mobile US, Inc. - Data Package

Stage 0 anchor: Today is 2026-07-05. T-Mobile US, Inc. has a December 31 fiscal year. The most recently reported quarter is Q1 2026, quarter ended 2026-03-31 and reported April 28, 2026. TTM is Q2 2025 plus Q3 2025 plus Q4 2025 plus Q1 2026, ending 2026-03-31. The forward horizon is 2031-03-31 exactly.

Data source rule applied: ER2 live fetches only. FMP data in this package was pulled live through `C:\Users\Admin\.codex\skills\fmp-financial-data\scripts\fmp_request.py` or the ER2 `fmp_to_file.py` helper, and official documents were pulled live from T-Mobile IR assets and SEC EDGAR into `raw\data_package`. No local data warehouse cache was used. Where the Quant Foundation Review identified an official-vs-FMP discrepancy, official SEC or IR values control and the discrepancy is preserved instead of reconciled away.

0a. Industry classification and disclosure inventory

T-Mobile is a U.S. wireless and broadband communications company, a U.S. domestic SEC filer, and a calendar-year issuer. The ER2 industry trigger applies because wireless economics are driven by operating KPIs that are more granular than ordinary FMP segment tables. FMP product segmentation is populated for revenue lines, but it does not provide the full operating KPI inventory for subscribers, accounts, churn, ARPA, broadband adds, Core Adjusted EBITDA, capex, or cash-flow margin. Official IR releases, investor factbooks, SEC filings, and the February 2026 Capital Markets Day update therefore control the industry inventory.

Official source inventory checked live in this D run: FMP stable income statement, cash flow statement, balance sheet, key metrics, ratios, enterprise values, and revenue-product-segmentation endpoints; SEC submissions feed; SEC companyfacts feed; FY2021 through FY2025 Forms 10-K; Q2 2025, Q3 2025, and Q1 2026 Forms 10-Q; T-Mobile Q2 2025, Q3 2025, Q4 2025, and Q1 2026 earnings releases; the Q2 2025, Q3 2025, Q4 2025, and Q1 2026 investor factbooks; the Q2 2025, Q3 2025, Q4 2025 plus Capital Markets Day, and Q1 2026 transcripts; and the February 11, 2026 Capital Markets Day update release. T-Mobile newsroom HTML pages for UScellular, Lumos, Vistar/Blis, and Q1 2026 were attempted live through PowerShell and returned Access Denied. They are treated as `Not fetched / omitted`, not as absent company disclosure.

Search inventory: "single operating segment", "Wireless", "postpaid net account additions", "total postpaid accounts", "postpaid account churn", "postpaid ARPA", "postpaid phone ARPU", "prepaid ARPU", "broadband net customer additions", "5G broadband", "fiber", "service revenues", "Core Adjusted EBITDA", "Adjusted Free Cash Flow", "cash purchases of property and equipment", "stockholder returns", "UScellular", "Metronet", "Lumos", "Vistar", "Blis", "Capital Markets Day", "2027 guidance", and "shareholder return authorization".

Dataset / table family	Official source searched	Search terms or table names	Years available	Included in data package?	If excluded, why	Downstream relevance
Segment economics	FY2021-FY2025 10-K, Q1 2026 10-Q, QF/QFR	single operating segment, Wireless, segment information	FY2021-FY2025 plus Q1 2026	Yes	Not excluded	Segment appendix must model one Wireless segment only
Product revenue lines	FMP product segmentation live, FY2021-FY2025 10-K, Q1 2026 release	postpaid, prepaid, wholesale, equipment, other revenues	FY2021-FY2025 plus last 4 quarters	Yes	Not excluded	Product revenue mix and recency
Industry KPIs	Earnings releases and factbooks, annual filings	account additions, ARPA, churn, broadband adds, Core Adjusted EBITDA	FY2021-FY2025 where annual sources support plus Q2 2025-Q1 2026	Yes	Some 5-year KPI rows use available official depth, not FMP substitution	Moat, pricing power, customer growth
Capital and cash flow	FMP live cash flow, 10-K, earnings releases	capex, operating cash flow, Adjusted Free Cash Flow, shareholder returns	FY2021-FY2025 plus last 4 quarters	Yes	Not excluded	Synthesis, ROIC, capital allocation
Corporate actions	IR releases, CMD release, SEC filings	UScellular, Metronet, Lumos, Vistar, Blis, fiber JV, stockholder return	Last 12 months	Yes with flags	Newsroom HTML direct fetch 403 for some pages	M&A, leverage, growth runway

KPI family	Granularity	FY2021	FY2022	FY2023	FY2024	FY2025	Latest interim / TTM	Source path
Service revenue	Total service revenue, $B	58.4	61.3	63.4	66.2	71.3	Q1 2026 $18.831B, TTM $73.212B	FMP product live, Q4 2025 release, Q1 2026 release

KPI family	Granularity	FY2021	FY2022	FY2023	FY2024	FY2025	Latest interim / TTM	Source path
Postpaid service revenue	Product revenue line, $B	42.6	45.9	48.7	52.3	57.9	Q1 2026 $15.629B	FMP product live, Q1 2026 release
Postpaid net account additions	Accounts, thousands	1,188	1,436	1,271	1,097	1,180	Q1 2026 217	FY2022-FY2025 Forms 10-K, Q4 2025 release, Q1 2026 release
Postpaid account churn	Quarterly KPI	Not in FMP	Not in FMP	Not in FMP	Official releases by quarter	Official releases by quarter	Q1 2026 1.04%	IR releases and factbooks
Postpaid ARPA	Quarterly account monetization	Not in FMP	Not in FMP	Not in FMP	FY2024 annual average $143.85	FY2025 annual average $148.97	Q1 2026 $151.93	Q4 2025 and Q1 2026 releases
Broadband net additions	Annual HSI / broadband customer additions, thousands	546 HSI	2,000 HSI	2,130 HSI	1,654 HSI	2,000 total broadband, including 1,900 5G broadband and 136 fiber	Q1 2026 over 0.5M total broadband net additions	FY2022-FY2024 Forms 10-K, Q4 2025 release, Q1 2026 release
Core Adjusted EBITDA	Non-GAAP operating KPI, $B	Not used	Not used	29.116	31.771	33.924	Q1 2026 $9.240B, TTM $34.906B	CMD update, Q4 2025 release, Q1 2026 release
Capex	Cash purchases of property and equipment, $B	21.692	17.301	10.811	12.311	9.955	TTM official $10.127B	FMP live and official release override
Free cash flow	GAAP OCF less capex, $B	-7.775	-0.520	7.748	9.982	17.995	TTM official $18.198B	FMP live and QF/QFR official bridge

The KPI table is intentionally explicit about what is and is not available. FMP has dollar revenue lines and statement data, but it does not provide a complete wireless KPI data set. For annual postpaid account additions, churn, ARPA, and broadband metrics, the most reliable source is the IR release, factbook, and Form 10-K series. Annual postpaid net account additions and broadband / HSI additions are bounded and extractable from official filings and releases, so those rows are included above. Remaining non-dollar KPI gaps are narrower: annual postpaid account churn and annual postpaid ARPA are not supplied by FMP and are most reliably used from the last-four-quarter IR release/factbook table rather than forced into a synthetic five-year annual series. Those remaining gaps are classified in Section 10 as `Not fetched / omitted`, not as true non-disclosure.

1. Reporting structure & taxonomy

Current reportable segment: Wireless. The QF/QFR controlling extraction states that the FY2025 Form 10-K and Q1 2026 Form 10-Q describe T-Mobile as one operating/reportable segment. Q1 2026 Note 10 says the company manages business activities on a consolidated basis and operates as a single operating segment, Wireless. Product/service revenue lines are disclosed within that segment and must not be promoted to reportable segments.

Reportable segment	Description	FY2025 revenue, $B	% of total FY2025 revenue	Source
Wireless	Wireless communications and broadband services plus devices that provide network access	88.309	100.0%	FY2025 10-K, QF/QFR, FMP live product endpoint

Reporting structure is stable for ER2 purposes: one Wireless segment is the only segment to model. Product/service revenue lines have changed presentation details over time, including the legacy roaming line visible in older FMP rows, but the current product taxonomy for FY2021-FY2025 and Q1 2026 is Postpaid service, Prepaid service, Wholesale and other service, Equipment, and Other. The FY2025 10-K provides product/service disaggregation for FY2023-FY2025, and live FMP annual product segmentation provides FY2021-FY2025 totals that tie to annual totals for FY2022-FY2025. QF/QFR flagged legacy annual endpoint artifacts for FY2021 and FY2018 annual-vs-quarter sums, but those periods do not contaminate the TTM base.

Geography: T-Mobile is effectively a U.S. domestic wireless operator for ER2 modeling. The relevant geography is U.S. nationwide wireless and broadband exposure rather than a multi-country segment split. The company does not disclose foreign operating segments.

2. Consolidated historicals, 5 years

Dollar figures are in billions except EPS and shares. FY2025 operating income uses the official QF/QFR control value of $18.279B, not the FMP annual income-statement value of $18.744B. ROIC is FMP key-metrics return on invested capital and is included as a directional historical series; synthesis should recompute ROIC if it needs a bespoke NOPAT and invested-capital definition.

Metric	FY2021	FY2022	FY2023	FY2024	FY2025	Source
Revenue ($B)	80.118	79.571	78.558	81.400	88.309	FMP live income statement; FY2025 official tie
Operating income ($B)	6.892	6.543	14.266	18.010	18.279	FMP live, SEC official override for FY2025
Operating margin (%)	8.6%	8.2%	18.2%	22.1%	20.7%	Calculated
Net income ($B)	3.024	2.590	8.317	11.339	10.992	FMP live and 10-K
EPS diluted ($)	2.41	2.06	6.93	9.66	9.72	FMP live and 10-K
Diluted share count (M)	1,254.8	1,255.4	1,200.3	1,173.2	1,131.1	FMP live income statement
Capex ($B)	21.692	17.301	10.811	12.311	9.955	FMP live cash flow and 10-K
FCF ($B)	-7.775	-0.520	7.748	9.982	17.995	FMP live cash flow
ROIC (%)	3.2%	2.7%	5.5%	7.1%	7.0%	FMP live key metrics

ROIC calculation note: the FMP key-metrics series defines return on invested capital as an after-tax operating return over invested capital. For an ER2 model, the synthesis subagent should use NOPAT equal to operating income times one minus tax rate, divided by average invested capital, and should state whether lease obligations are included. FY2025 tax rate from FMP ratios is 23.0%. Using official FY2025 operating income of $18.279B, a 23.0% tax rate gives directional NOPAT of about $14.07B. FMP invested capital for FY2025 is $84.267B, implying about 16.7% on that simple point-in-time basis; the FMP return-on-invested-capital field itself reports 7.0%. This divergence is a definition issue and should not be treated as a final ROIC verdict without a separate ROIC bridge.

3. Segment historicals, 5 years per segment

T-Mobile has one reportable segment, Wireless. Segment revenue equals consolidated revenue. The formal segment note reports consolidated/segment net income rather than product-level operating income. For ER2, consolidated operating income is the Wireless operating profit base because there is no corporate/other residual segment.

Wireless	FY2021	FY2022	FY2023	FY2024	FY2025	Source
Revenue ($B)	80.118	79.571	78.558	81.400	88.309	FMP live and SEC segment note
YoY %	n/a	-0.7%	-1.3%	3.6%	8.5%	Calculated
Operating income ($B)	6.892	6.543	14.266	18.010	18.279	Consolidated OI, official FY2025 override
Operating margin (%)	8.6%	8.2%	18.2%	22.1%	20.7%	Calculated
Net income ($B)	3.024	2.590	8.317	11.339	10.992	FMP live and 10-K

No postpaid, prepaid, broadband, wholesale, equipment, advertising, fiber, or enterprise line is a reportable segment in the ER2 taxonomy. These are products, services, customer categories, or growth initiatives inside Wireless. Downstream segment appendices should therefore create one `appendix_B_wireless.md`, not separate postpaid/prepaid/equipment appendices with invented operating income.

4. Product / sub-segment historicals at most granular dollar-disclosed level

The following are product/service revenue lines, not reportable segments. Dollar figures are in billions and come from live FMP product segmentation, cross-checked against official product/service disclosure where QF/QFR did the official tie. FY2025 product totals equal $88.309B.

Segment	Product / service line	FY2021	FY2022	FY2023	FY2024	FY2025	Dollar disclosure status	Source
Wireless	Postpaid service revenue	42.562	45.919	48.692	52.340	57.932	Disclosed in dollars	FMP product live, 10-K product/service line

Segment	Product / service line	FY2021	FY2022	FY2023	FY2024	FY2025	Dollar disclosure status	Source
Wireless	Prepaid service revenue	9.733	9.857	9.767	10.399	10.497	Disclosed in dollars	FMP product live, 10-K product/service line
Wireless	Wholesale and other service revenue	3.751	5.547	4.782	3.439	2.877	Disclosed in dollars	FMP product live, 10-K product/service line
Wireless	Equipment revenue	20.727	17.130	14.138	14.263	15.972	Disclosed in dollars	FMP product live, 10-K product/service line
Wireless	Other revenue	1.022	1.118	1.179	0.959	1.031	Disclosed in dollars	FMP product live, 10-K product/service line

The product/service lines with only KPI or growth disclosure, rather than stand-alone dollar revenue through the official source set used here, are below. They are strategically important but should not be used as separately modeled dollar segments without an explicit estimate tag.

Segment	Product / KPI-only item	Disclosure method	Last 4 quarters or latest KPI	Source
Wireless	5G broadband / fixed wireless home internet	Net additions and customer targets, not separate revenue	Q3 2025 total broadband net adds 560k; Q1 2026 total broadband net adds over 0.5M; 2030 target 15M 5G broadband customers	Q3 2025 release, Q1 2026 transcript, CMD update
Wireless	T-Fiber / fiber JVs	Customer and household targets, not separate revenue	CMD target 3M-4M T-Fiber customers by 2030; Q1 2026 announced additional JVs	CMD update, Q1 2026 transcript
Wireless	T-Mobile for Business	Growth target, not stand-alone revenue dollars	CMD update targets double-digit revenue CAGR from 2023 to 2027	CMD update
Wireless	T-Ads and financial services	Strategic adjacency commentary, not full revenue line here	Q1 2026 transcript says these adjacencies are delivering incremental growth	Q1 2026 transcript
Wireless	AI and digital initiatives	Savings and experience metrics, not revenue line	CMD update expects nearly $3B incremental Core Adjusted EBITDA contribution from digitalization and AI by 2027 relative to 2025	CMD update

No back-solved product dollar estimates are included in this data package. If a downstream subagent wants to model 5G broadband, fiber, business, advertising, or AI savings as explicit sub-lines, those values must be labeled as estimates and tied to official unit targets, not shown as disclosed product revenue.

5. Most recent quarterly trend: last 4 quarters

Company FY ends December 31. Most recently completed fiscal quarter at time of writing: FY2026 Q1, covering 2026-01-01 to 2026-03-31, reported on 2026-04-28 via T-Mobile IR earnings release and Q1 2026 Form 10-Q.

Quarter	Revenue ($B)	Service revenue ($B)	Postpaid service revenue ($B)	Operating income ($B)	Core Adjusted EBITDA ($B)	Capex ($B)	Adjusted FCF ($B)	Source date
Q2 2025	21.132	17.438	14.078	5.213	8.541	2.396	4.596	2025-07-23 release
Q3 2025	21.957	18.241	14.882	4.530 official; 4.862 FMP	8.680	2.639	4.818	2025-10-23 release
Q4 2025	24.334	18.702	15.378	3.736 official; 3.864 FMP	8.445	2.469 official; 5.037 FMP	4.185	2026-02-11 release
Q1 2026	23.107	18.831	15.629	4.497	9.240	2.623	4.599	2026-04-28 release

Quarter	Postpaid net account additions (000s)	Total postpaid accounts (M)	Postpaid account churn	Postpaid ARPA	Broadband net additions	Source date
Q2 2025	318	Not normalized in this package	Not normalized in this package	$149.87 from release KPI row	454k 5G broadband net additions	2025-07-23 release

Quarter	Postpaid net account additions (000s)	Total postpaid accounts (M)	Postpaid account churn	Postpaid ARPA	Broadband net additions	Source date
Q3 2025	396	Not normalized in this package	Not normalized in this package	$149.44 from release KPI row	560k total broadband net additions, including 506k 5G broadband	2025-10-23 release
Q4 2025	261	34.240 in Q1 2026 comparison	1.04% in Q1 2026 comparison	$150.17	558k total broadband net additions	2026-02-11 release
Q1 2026	217	34.439	1.04%	$151.93	Over 0.5M total broadband net additions	2026-04-28 release

The Q3 and Q4 2025 discrepancy rows matter. QFR preserved that FMP quarterly operating income for Q3 2025 and Q4 2025 diverges from official values, and Q4 2025 FMP capex diverges materially from official/IR values. This data package follows QFR: official SEC/IR values control those rows. Downstream synthesis should not use FMP Q4 2025 capex of $5.037B for TTM cash flow because it would understate official TTM FCF by $2.568B.

6. Management commentary on forward growth

The company has one Wireless segment, so all forward commentary is grouped under Wireless. Copyright-safe verbatim snippets are kept short; the file records the source, speaker, topic, and modeling interpretation. Longer management language is paraphrased from the live-fetched transcripts and releases.

Source	Speaker	Short verified quote	Topic	Interpretation
Q2 2025 call, 2025-07-23	Mike Sievert, CEO	"best-ever total postpaid"	Customer growth	Management framed Q2 as a record postpaid and phone net-add quarter, supporting continued share-taking rather than a mature ex-growth carrier model.
Q2 2025 release, 2025-07-23	Management release	"Postpaid service revenues of $14.1 billion grew 9%"	Revenue growth	Postpaid service revenue growth remained the largest product-line growth driver before the UScellular close.
Q3 2025 call, 2025-10-23	Mike Sievert, CEO	"best network, the best value"	Differentiation	The outgoing CEO framed the handoff around network, value, and experience, not price-only competition.
Q3 2025 release, 2025-10-23	Management release	"Raises Guidance Across the Board"	Near-term outlook	Q3 raised Core Adjusted EBITDA, operating cash flow, capex, and adjusted FCF expectations, with greenfield network builds driving capex.
Q4 2025 and CMD call, 2026-02-11	Srini Gopalan, CEO	"free cash flow conversion"	Cash economics	The new CEO highlighted cash conversion as the economic scorecard, not just revenue or EBITDA optics.
CMD update, 2026-02-11	Management release	"18-19 million total broadband customers by 2030"	Broadband target	Broadband is a major growth vector, but its disclosed metric is customers, not a separate revenue segment in this package.
CMD update, 2026-02-11	Management release	"nearly $3.0 billion"	AI and digital savings	Management expects digitalization and AI to contribute materially to 2027 Core Adjusted EBITDA relative to 2025.
Q1 2026 call, 2026-04-28	Srini Gopalan, CEO	"strong postpaid ARPA growth"	Pricing and mix	Q1 management tied account growth and ARPA growth together, indicating a more-for-more mix strategy rather than pure subscriber-volume economics.
Q1 2026 call, 2026-04-28	Peter Osvaldik, CFO	"increase our guidance"	2026 outlook	CFO raised postpaid account, Core Adjusted EBITDA, OCF, and adjusted FCF guidance after Q1.

Source	Speaker	Short verified quote	Topic	Interpretation
Q1 2026 call, 2026-04-28	Srini Gopalan, CEO	"double-digit IRRs"	Fiber JVs	Management described new fiber JVs as return-focused and capital-efficient, but those claims are not product revenue disclosures.

Key management messages for modeling: First, the company is explicitly underwriting both account growth and ARPA growth, so service revenue growth should not be modeled solely as unit growth. Second, broadband has become a formal long-term target, with the February 2026 update raising the total broadband ambition to 18M-19M customers by 2030, including 15M 5G broadband and 3M-4M T-Fiber customers. Third, management expects Core Adjusted EBITDA of $37.1B-$37.5B in 2026 after Q1 and $40.0B-$41.0B in 2027 from the February update. Fourth, adjusted FCF is guided to $18.1B-$18.7B in 2026 after Q1 and $19.5B-$20.5B in 2027 from the CMD update. Fifth, the company is keeping a large capital-return envelope while funding M&A and network buildout, which makes leverage, capex durability, and integration cost treatment critical to the final ER2 valuation.

7. Capital allocation history, 5 years

Dollar figures are in billions. R&D is immaterial or not separately reported for most years in FMP income statement until FY2025. M&A is cash acquisitions net from FMP cash flow and may not equal announced enterprise values because it reflects cash paid in the period.

Year	Capex ($B)	Capex / revenue (%)	R&D ($B)	R&D / revenue (%)	Buybacks ($B)	Dividends ($B)	M&A cash outflow ($B)	Source
FY2021	21.692	27.1%	0.000	0.0%	0.316	0.000	1.916	FMP live cash flow and income statement
FY2022	17.301	21.7%	0.000	0.0%	3.000	0.000	0.052	FMP live cash flow and income statement
FY2023	10.811	13.8%	0.000	0.0%	13.074	0.747	0.007	FMP live cash flow and income statement
FY2024	12.311	15.1%	0.000	0.0%	11.228	3.300	0.373	FMP live cash flow and income statement
FY2025	9.955	11.3%	0.278	0.3%	9.974	4.121	3.523	FMP live cash flow and income statement

Capital allocation interpretation: capex collapsed from Sprint integration-era levels above $20B in FY2021 to about $10B by FY2025, while free cash flow turned sharply positive. The company returned $14.0B to stockholders in FY2025 and reported $51.4B cumulative stockholder returns through Q1 2026 since program inception. The Q1 2026 release also says the board increased the 2026 stockholder return authorization to up to $18.2B, up $3.6B from the prior authorization. The February 2026 CMD update states more than $50B remained in the $80B capital envelope through 2027, including up to about $30B for stockholder returns and more than $22B of flexible capacity for growth investments, delevering, or additional returns. This is a meaningful shareholder-return case, but it depends on continuing high service-revenue conversion into cash.

8. Balance sheet snapshot

Balance sheet snapshot uses Q1 2026, the most recent quarter. Dollar figures are in billions. There are two debt bases: SEC debt subtotal excluding leases/tower obligations, and FMP total debt including lease obligations. This table shows both where relevant.

Item	$B	Source
Cash and equivalents	3.520	FMP live Q1 2026 balance sheet and Q1 2026 10-Q
Short-term investments	0.000	FMP live Q1 2026 balance sheet
Short-term debt	2.238	FMP live Q1 2026 balance sheet and Q1 2026 10-Q
Long-term debt	83.809	FMP live Q1 2026 balance sheet and Q1 2026 10-Q
SEC debt subtotal excluding leases/tower obligations	86.047	QF/QFR official bridge
FMP total debt including lease obligations	117.729	FMP live Q1 2026 balance sheet

Item	$B	Source
Net debt, FMP basis	114.209	FMP live total debt less cash
Net debt / TTM Core Adjusted EBITDA	3.27x	FMP net debt divided by TTM Core Adjusted EBITDA of $34.906B
Goodwill + intangibles	17.237	FMP live Q1 2026 balance sheet
Tangible book value	38.642	FMP total equity $55.879B less goodwill and intangibles

Leverage note: If the segment or synthesis work uses SEC debt excluding lease and tower obligations, net debt is materially lower than the FMP total-debt basis. If it uses FMP total debt including lease obligations, net debt to TTM Core Adjusted EBITDA is roughly 3.3x. The February 2026 CMD update states T-Mobile continues to target a prudent 2.5x leverage level, so deleveraging capacity is a modeling constraint if the FMP debt basis is used.

9. Recent corporate actions, last 12 months

- 2025 Q3: T-Mobile acquired UScellular customers and assets during the quarter. The Q3 2025 release says the company acquired 3.287M postpaid phone customers, 390k postpaid other customers including 141k 5G broadband customers, and 349k prepaid customers through the UScellular acquisition. Exact newsroom HTML page fetch was attempted and returned Access Denied, so the close-date source remains the IR release/CMD disclosure rather than the newsroom HTML.
- 2025 Q3: T-Mobile acquired 755k fiber customers from Metronet and other acquisitions, per Q3 2025 and Q4 2025 IR release footnotes. The Q2 2025 release expected Metronet to close on July 24, 2025; direct newsroom fetch was blocked, so the exact close date is flagged as not separately fetched in this package.
- 2025 Q2: T-Mobile acquired 97k fiber customers from Lumos, per Q3 and Q4 release footnotes. The Lumos newsroom close page direct fetch was blocked, but the live search result identified April 1, 2025 as the close announcement date.
- 2025: T-Mobile closed the acquisitions of Vistar and Blis, per the February 2026 CMD update release, which also says the $80B capital envelope funded approximately $12B of accretive M&A including UScellular, Vistar, Blis, Lumos, and Metronet.
- 2025 Q3: T-Mobile announced Srini Gopalan would become CEO effective November 1, succeeding Mike Sievert. This is a material management transition but was orderly and accompanied by Q3 guidance raises.
- 2026-02-11: The Q4 2025 earnings call was combined with a Capital Markets Day update. Management raised 2027 targets to service revenues of $80.5B-$81.5B, Core Adjusted EBITDA of $40.0B-$41.0B, and adjusted FCF of $19.5B-$20.5B.
- 2026-04-23 / 2026-04-28: The board increased the 2026 stockholder return authorization to up to $18.2B, and the Q1 release reported $6.0B of Q1 2026 returns, including $4.9B repurchases and $1.1B dividends.
- 2026-04-28: T-Mobile announced additional fiber JVs to acquire GoNetspeed, Greenlight Networks, and i3 Broadband. The Q1 transcript describes these as return-focused and capital-efficient; newsroom page direct fetch was blocked, so transaction details beyond the transcript and Q1 release are flagged as not fetched here.

10. Open data gaps

Gap	Classification	Sources searched	What downstream agents should do
Older annual KPI backfill for postpaid account churn and annual postpaid ARPA remains not fully normalized; annual postpaid net account additions and broadband / HSI additions were added by DR from official filings	Not fetched / omitted for churn and ARPA only	FY2021-FY2025 10-K files, IR release/factbook text, search terms listed in Section 0a	Use last-four-quarter KPI table for recency; no Wave 2 block because the material account-addition and broadband-addition histories are now included
T-Mobile newsroom HTML pages for UScellular, Lumos, Vistar/Blis, Q1 2026, and 2026 fiber JVs returned Access Denied via direct PowerShell fetch	Not fetched / omitted	Direct URLs attempted live; IR PDFs and SEC filings did fetch	Use IR PDFs/CMD release for package; exact close dates can be refreshed by browser/web if DR requires

Gap	Classification	Sources searched	What downstream agents should do
Product-level operating income for postpaid, prepaid, wholesale, equipment, fiber, business, advertising, and broadband	True non-disclosure	10-K segment note, Q1 2026 10-Q, FMP segment/product endpoints	Do not invent subsegment OI; model Wireless segment economics only
Revenue for 5G broadband, T-Fiber, T-Mobile for Business, T-Ads, financial services, and AI/digital initiatives	True non-disclosure for this D package	Earnings releases, CMD release, transcripts, FMP product segmentation	Use customer targets, growth targets, and savings targets as drivers only if explicitly estimated
FY2025 FMP operating income and selected Q3/Q4 2025 FMP operating income/capex values differ from official values	Estimated / source discrepancy	FMP live annual/quarterly statements, SEC/IR official sources, QF/QFR	Official values control; preserve discrepancy in synthesis and avoid FMP Q4 capex
Debt basis differs between SEC subtotal and FMP total-debt basis including lease obligations	Estimated / definition gap	Q1 2026 10-Q, FMP balance sheet, QF/QFR	State debt basis before computing leverage, ROIC, or enterprise value

Self-verification performed before return: Q1 2026 release confirms postpaid service revenue grew 15% year-over-year and total service revenue grew 11%; Q1 2026 transcript text contains the "strong postpaid ARPA growth" phrase used in Section 6; live FMP annual income statement confirms FY2025 revenue of $88.309B, tying within 1% to the official FY2025 revenue base. Additional live verification saved in `raw\dr` confirms the official FY2021-FY2025 postpaid-account and broadband-addition histories from SEC/IR sources. The material unresolved items are source-depth gaps, not arithmetic breaks.