

Krause Fund Research Fall 2024

November 19, 2024

Stock Rating: **BUY**

Target Range: \$200 - \$284 Current Price: \$235.61

Investment Thesis

We recommend a **BUY** rating for T-Mobile US with a target price of \$284, reflecting a potential **upside of 20.87%**. The carrier retains a competitive advantage among the three major carriers in their 5G deployment strategy. Strong subscriber growth, and customer-centric "Un-carrier" playbook provide revenue for continued ventures into new segments while holding their own in a competitive telecommunications industry. Our forecasts find short-term growth to be positive, but long-term margins may be eroded by increasing competition from rivals. Should T-Mobile find continued success with the new home broadband segment, we believe a clear path to sustainable value creation exists.

Thesis Drivers:

5G Leadership and Subscriber Growth: T-Mobile's rapid deployment of 5G technologies to its network from 2019 onwards enabled them to become market leaders and quickly draw in customers with competitive pricing. For 2024, we project short-term operating revenue to grow around 4% as customers switch or add additional lines/services.

Customer-Centric Strategy: The "Un-carrier" approach, with simplified pricing, no-contract plans, and innovative customer perks, continues to differentiate T-Mobile in a crowded telecom market, fostering strong customer loyalty and acquisition.

Expansion of Broadband Services: T-Mobile's aggressive push into fixed wireless captures new customers from major ISPs to add a significant new revenue stream while leveraging existing network infrastructure to enhance operational efficiency.

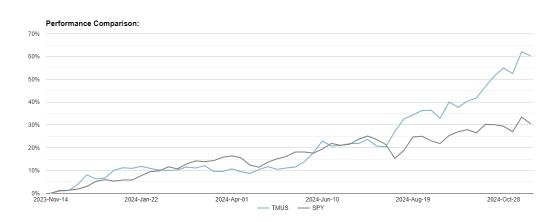
Thesis Risks:

Intensifying Competition: Verizon and AT&T are rapidly improving their 5G service offerings, which could erode T-Mobile's competitive advantage. The pressure on market share, and impact on pricing power are main concerns.

Declining Equipment Revenues: Shifting consumer preferences toward purchasing devices directly from manufacturers like Apple and Samsung may continue to reduce T-Mobile's equipment revenues, impacting overall top-line growth.

Regulatory and Capital Constraints: Heavy reliance on debt financing for network upgrades and potential regulatory hurdles in future mergers or spectrum acquisitions could limit T-Mobile's ability to sustain its aggressive growth and expansion strategy.

12M TMUS PERFORMANCE VS. S&P 500



T Mobile

Company	y Information:
Company: T-	Mobile US
Sector: Com	
	ecom Services
Exchange: N	asdaq: TMUS
DCF	\$284.79
DDM	\$200.42
Relative	\$102.14
Multiple	\$102.14
Price Data	
52wk Range	\$147-\$242
Key	
Statistics	
Market Cap	\$273.4B
Shares	1.16B
Outstanding	
Beta	0.55
Institutional	39.26%
Ownership	
Dividend	1.19%
Yield	
Profitability	
Operating	18.16%
Margin	
Net Profit	10.59%
Margin	
ROA	3.97%
ROE	11.94%

Company Description

T-Mobile is a leading telecommunications company providing wireless voice, messaging, and data services. It operates primarily in the U.S., focusing on consumer and business mobile solutions. It currently serves about 127 million subscribers, making it the 2nd largest carrier in the U.S. and the highest in 5G coverage among carriers at 51% of the country's land area

Analysts

Brendan Smith [bsmith90@uiowa.edu] Ugo Orjinta [uorjinta@uiowa.edu] Robert Wilson [rwilson8@uiowa.edu]

COMPANY DESCRIPTION

Company Overview

T-Mobile is a leading telecommunications company providing wireless voice, messaging, and data services. It operates primarily in the U.S. with a focus on consumer and business mobile solutions. It currently serves about 127 million subscribers, making it the 2nd largest carrier in the U.S., with about 30% market share and the highest in 5G coverage among carriers at 51% of the country. [Error! Reference source not found.]



T-Mobile 5G Coverage Map from WhistleOut

As a subsidiary of Deutsche Telekom AG (Deutsche Telekom AG owns a 51.4% share of T-Mobile), the company offers mobile connectivity through postpaid, prepaid, and wholesale offerings, as well as fixed wireless access (FWA) and fiber optic wireline service in select markets. Following the Sprint merger of 2020, the new T-Mobile is known for its "Un-carrier" approach, which aims to disrupt traditional telecom models with no contracts, simpler pricing, and customer-friendly innovations.

Corporate Strategy

T-Mobile's strategy centers on network expansion (5G leadership), aggressive customer acquisition, and delivering value through competitive pricing. It focuses on digital transformation and continued growth in the business and home broadband markets while enhancing customer experience and loyalty.

Revenue Discussion

T-Mobile's revenue streams consist of services and equipment. For 2023, postpaid monthly billed made up the lions share at 62%, or \$48.692B in revenue of the total \$78.558B operating revenue. This was an increase from 2022's \$45.919B in postpaid revenue. Further investigation into each revenue stream revealed the following conclusions. T-Mobile operates primarily within the United States, which serves as its core market. Due to limited international operations, the company's 2023 10-K does not provide a geographic breakdown of revenues. This concentrated market presence minimizes exposure to foreign exchange risks, meaning T-Mobile is less likely to engage in active currency hedging compared to globally diversified competitors. While this simplicity reduces operational complexity, it also limits the company's potential for revenue diversification across international markets.



Based on data from 2023 10-K [2]

Service Revenues:

First, we observed steady growth of postpaid revenue, stemming from increased line additions and a transition to higher-cost premium plans. Device add-ons like insurance are also included in this figure. In the near future, we expect the company to benefit from its competitive advantage in the 5G rollout and extensive spectrum portfolio. We use a 4.5% growth rate for the rest of 2024, to put postpaid revenues at \$53.212B. In 2025 and 2026, we chose to decrease the growth rate by 1.5%, followed by another 1% in 2027. Our team believes increased competition from network advancements by major rivals AT&T and Verizon, as well as market saturation in the wireless telecom industry, will impact T-Mobile's long-term ability to maintain a positive growth rate for its postpaid revenues.

Prepaid revenues for T-Mobile come from brands like MetroPCS, Mint Mobile, and Ultra Mobile. This segment has been slowly growing for the company and we are forecasting this to continue going forward at a rate of 0.7% due to the highly competitive nature of prepaid wireless services.

Wholesale and other service revenues include MVNO businesses who are reselling the T-Mobile network to their own customers, any M2M connected devices (think vending machines or ATMs), and roaming services for other, generally regional or international carriers paying to access the T-Mobile network. Previously, Ka'ena Corp, which owned the Mint and Ultra brands, provided significant wholesale revenues but has since sold to T-Mobile directly [11]. Other MVNOs like TracFone Wireless have been acquired by Verizon, which has shifted all customers to their network. As a result, wholesale revenues dropped significantly. We are forecasting the declines to stop around 2025 after these shock events have been fully reflected and turn slightly positive going forward, remaining roughly 5-6% of overall operating revenue due to remaining business-tobusiness agreements and international roaming revenues continuing to provide revenue.

Equipment Revenues:

T-Mobile sells end-user equipment and accessories online and at retail locations to business and consumer customers. Most sales are available both outright or through the company's *Equipment Installment Plan* (EIP), an interest free financing option usually between 12-24 monthly payments and sometimes requiring downpayment to initiate. Occasionally, device leases are also offered. As the carrier gets wholesale pricing on their inventory, they benefit from high margin accessory sales or retail pricing on discounted devices.

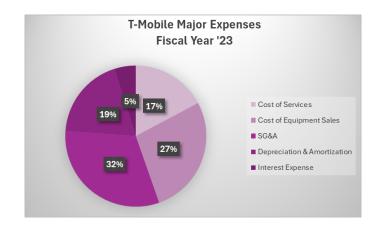
One trend we have observed is Apple and Samsung pushing the option for customers to finance or purchase phones directly from the manufacturer, rather than the carrier. This shift is reflected in our forecasted equipment revenues shrinking, and we believe helps in part to explain the significant decrease of 17% in the years 2022 and 2023. Going forward for example, we expect younger customers to continue these direct-frommanufacturer purchasing options as support offered from in-store transactions is not as desired.

Other Revenues:

Finally, other revenues represent the company's small miscellaneous sources otherwise not noted in financial statements. These do not play a major role in the current operating revenues, sitting around 2%. Our forecast for T-Mobile expects this to grow at a slowing pace over the next 5 years.

COSTS DISCUSSION

Expenses for the company are similar to other major carriers, with the most significant being the cost of selling, general, and other administrative expenses. For the year end 2023, this made up 32% of operating expenses, or \$21.311B out of a total \$64.292B. Overall expenses were higher in 2021 and 2022, both around \$73B. Going forward we expect this figure to remain in the low \$60B range. Our findings for each major expense category are detailed as follows.



Based on data from 2023 10-K [2]

Cost of Services (COS):

Includes spectrum leasing, and operational costs for providing mobile and broadband services to subscribers. It also includes routine maintenance of cell tower sites and installation of radio equipment on the existing and new locations.

We expect COS to slightly decrease from existing levels due to improved operating efficiencies and slower buildout of their 5G network to new locations. We also believed that a further expansion into fiber optic wireline services would be possible, which will have its own unique costs reflected in this item. To reflect these ideas into our forecast, we retained the \$11.655B result from 2023 as 14.84% of total operating expenses and shrunk it 1.5% for 2024, and another 1% for 2025 to get a slightly under \$11B result for each.

Sales, General, and Administrative (SG&A):

Includes marketing, employee compensation, and other administrative expenses. It's vital for customer acquisition and running daily operations. We expect SG&A expenses to essentially remain stable, decreasing very slightly due to operational efficiencies as ongoing digital transformation and process automation will help limit expense growth maintaining stability despite the anticipated customer base growth.

Cost of Equipment Sales:

Covers the procurement of mobile devices (smartphones, tablets) and other accessories for resale. This fluctuates with customer demand and new device launches. We expect growth of these expenses to decline in line with the anticipated decline in equipment revenue, since Apple and Samsung have been pushing the option for customers to finance or purchase phones directly from the manufacturer, rather than the carrier. We also believe consumers may upgrade their devices less frequently, and the demand for new smartphones and tablets

purchased through T-Mobile softens as described in equipment revenues.

Depreciation and Amortization:

Reflects the cost of depreciating network infrastructure and amortizing intangible assets like spectrum licenses. As T-Mobile completes its 5G rollout, the pace of new infrastructure additions will slow, leading to a more stable depreciation expense trajectory. Because of this, we expect growth in Depreciation and Amortization to slightly decline over the next decade.

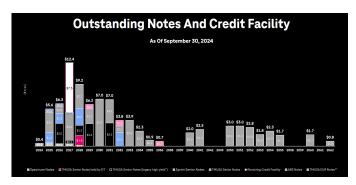
Interest Expense:

Due to debt from mergers and network expansion costs, T-Mobile incurs interest costs. We expect a growth in interest expenses going forward because the company is likely to take on additional debt for future growth projects and merger activities discussed later.

DEBT MATURITY AND RATING

Debt Maturity Schedule [6]:

T-Mobile has a number of notes issued, many of which are long-term. The amount outstanding currently totals \$79.551 billion. Some notes have higher interest rates than others. The company continues to carry over debt from the Sprint merger, with the last note maturing in 2032. There is a total of \$5.6 billion maturing in 2025 and an additional 6.3 in 2026. For the rest of the year, there are two notes, each about \$200 million due. Based on our forecasts, we do not foresee any difficulties in repayment going forward. The complete list is attached in reference 5 and 6.



Credit Ratings [5]:

Moody's, S&P, and Fitch all have given stable rating outlooks to the carrier for debt related financing. S&P gives legacy Sprint issued senior unsecured notes a BBB- rating. T-Mobile issued senior unsecured notes are higher with a BBB rating. As a result, the carrier benefits from lower costs to finance and maintains access to capital through a revolving credit line, at a rate of SOFR + 0.875%, and issuance of additional notes.

Debt to Equity Ratio:

As of T-Mobile's 2023 annual filing [2], their debt-toequity ratio sat at about 2.21, which tells us they have \$2.21 of debt for every one dollar of equity. This puts them in a highly leveraged position which could be problematic if they are unable to repay their obligations. Additionally, about 85% of their total liabilities are longterm debt obligations, giving them more time to earn money from their newly expanded networks before needing to pay back their obligations.

CAPEX ASSUMPTIONS

Capital Expenditures for PP&E:

Our assumption for capital expenditures related to PP&E is based on a percentage of depreciation for each given year. We forecasted T-Mobile's yearly capital expenditures to be the average of capital expenditures as a percent of depreciation and amortization for the three prior years. This assumption provides that each year, T-Mobile's capital expenditures will about be equal in amount to depreciation in order to keep their PP&E upto-date and running efficiently.

Capital Expenditures as Result of Merger:

5G Network and Integration of Sprint In 2023, the primary use of capital expenditures was focused on expanding, upgrading, and integrating both T-Mobile and Sprint networks. Their capital expenditures for fiscal year 2023 totaled approximately \$9.8 billion. Comparatively, 2024 will see reduced capital expenditures related to the 5G network buildout, as the accelerated deployment of this network has largely been completed. During the Q2 FY24 [3] earnings, T-Mobile lowered its capital expenditure guidance to \$8.7–\$9.1 billion. As noted in T-Mobile's 2023 10-K, their higher level of debt could limit the funds available for capital expenditures as they prioritize servicing these obligations.

Spectrum Auctions and Licenses:

Recently, T-Mobile acquired the C-band and 3.45 GHz spectrum licenses for \$9.3 billion and \$2.9 billion, respectively. As stated in T-Mobile's 2023 annual filing, future capital expenditures related to the deployment of these spectrum acquisitions will occur over the next few years.

PAYOUT POLICY [7]

Dividend and Share Repurchasing:

Historically, the company has not paid out dividends to common stock shareholders. However, in Q4 2023, they announced a quarterly distribution of 0.65/share to be paid on 12/15/2023, which totaled 747 million of

additional returned capital. The dividend was maintained for Q1-Q3 2024 at the same rate. This year on September 18th, it was announced the dividend would increase to \$0.88/share to be paid on 12/12/2024. Our team believes in additional increases going forward, so we have raised the dividend at a rate of inflation to try and account for any shifts in future years.

We also observed T-Mobile returning capital to shareholders through share repurchases each quarter. In 2023, about \$13 billion was bought back. We are concerned about the sustainability of this practice going forward as the share price has increased dramatically, so our forecast incorporated a reduction of this activity. In the 2024 Q3 earnings report [4], it was noted a total of \$6.541 billion in common stock was repurchased so far on September 30th. For the rest of 2024, we forecast share repurchasing to not exceed \$7.5 billion. Going forward we included a greater shift towards dividend payments.

TELECOMMUNICATIONS INDUSTRY ANALYSIS AND TRENDS

Industry Overview and Key Players:

The telecommunications industry remains an important part of the vast majority of households. Nowadays customers have multiple ISP and cellular provider options to pick from for their households and businesses.

Wireline providers include companies or brands like Charter Communications (Spectrum), Comcast (Xfinity), Cox Communications, Verizon (FIOS), Mediacom, AT&T, Lumen (CenturyLink), Google Fiber, and similar regional ISPs offering fiber optic, copper, or FWA solutions. Historically one, maybe two of these would service individual areas. Nowadays overbuilding has become a popular tactic for expansion and as the technology to deliver services has evolved.

Wireless providers have greatly expanded into becoming internet service providers themselves as bandwidth has become more accessible and 5G networks continue to rollout nationwide. The main providers include AT&T (+ FirstNet), Verizon, U.S. Cellular, Dish Wireless, and related prepaid/MVNO offerings. The big three control the majority of the market. The recent shakeup has been Dish Wireless seeking to become the 4th largest carrier and replace what Sprint used to be, as a condition of the merger agreement.

Major Carrier	Market Share of	Total
	Category %	Subscribers
Verizon	38.06	156.7 million
T-Mobile	30.97	127.5 million
AT&T	28.18	116 million
Dish Wireless	1.695	6.98 million
U.S. Cellular	1.093	4.5 million

Peer Comparison:

Company	Market	Revenue	Net	ARPA per
	Cap		Profit	month
	Current		Margin	
T-Mobile	275.07В	134B	2.5%	\$48.86
Verizon	170.24B	122B	16.0%	\$131.83
AT&T	128.85B	78.6B	9.2%	\$55.63

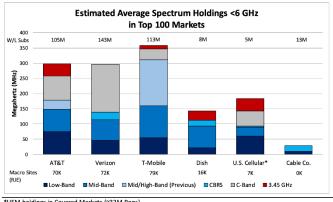
Based on data at the fiscal end of 2023 10k

AT&T and Verizon prior to 2020 were the two big providers in the US. They both maintain extensive 4G LTE networks and have rapidly been expanding their 5G network buildout using mid-band and C-Band spectrum. They remain a big threat to T-Mobile's future expansion in the industry. Additionally, each maintains their own wireline and fixed wireless products in many markets. This is a segment T-Mobile is more of a newcomer to, where they especially lack experience in wireline, having not been a large-scale landline provider historically.

How does T-Mobile differentiate itself from its peers?

T-Mobile differentiates itself through the early adoption of 5G technologies in the U.S., with its 5G network operating on a triple-layered approach. This includes utilizing its lower 600MHz holdings, known as n71, to provide long-distance coverage between towers along freeways and improve indoor signal strength. Their midband holdings, operating in the PCS and AWS spectrum blocks as n25 and n66, offer a balance between coverage and higher data capacity. Lastly, their higher band 2500MHz holdings, running as n41, deliver limited range but extremely fast speeds and high capacity. Deploying n41 is crucial for supporting their FWA home internet offerings, helping to avoid network congestion, and ensuring customer satisfaction.

Nationwide, T-Mobile holds extensive spectrum assets, enabling it to deploy this triple-layered approach in most markets. However, customers need compatible devices to fully benefit from these improvements. In recent years, this has prompted the company to offer strong incentives to encourage upgrades, particularly for users with devices older than the iPhone 12. When compared to Verizon and AT&T, their networks are slowly adopting a similar strategy. Initially focused on mmWave deployments which often required line of sight to a tower with few obstacles for a reliable connection. Following the recent clearance of more 3.45 GHz/C-band licenses by the FCC, the two are now scrambling to close the 5G availability gap. This is incurring significant Capex expenses to upgrade backhaul, tower equipment, and the labor involved to keep up. Recent figures show T-Mobile's 5G availability metric to be 67.9% of commonly frequented locations, whereas AT&T stood at 11.8% and Verizon at 7.7%. [8]



*USM holdings in Covered Markets (~32M Pops)

W/L Subs: Retail branded postpaid + prepaid. AT&T excludes connected devices. TMUS/USM/VZ exclude fixed wireless Low Band <1 GHz, Mid-Band 1-2 GHz, Mid/High-Band 2-6 GHz Cable Co. includes CMCSA, CHTR, ATUS, Cox, Mediacom, and CMCSA-Midcontinent Joint Venture. Assumes DISH does not exercise option to purchase 13.5 MHz of 800 MHz spectrum from TMUS. Source: Raymond James, FCC, AllNet Labs, Company documents

Comparison between average spectrum holdings of top carriers. Excludes mmWave holdings. [16]

Catalysts for Growth/Change for T-Mobile:

Strengths

T-Mobile's extensive spectrum assets enable flexible deployments in nationwide markets. They can balance coverage, high capacity, and fast data speed characteristics by combining low, mid, and high-band licenses. T-Mobile has a loyal customer base due to aggressive customer promotions and pricing which helped it to gain market share.

On October 23, 2024, T-Mobile reported strong financial results, beating revenue and EPS expectations. The company achieved \$3.1 billion in net income (\$2.61 per share), driven by 1.6 million postpaid subscriber gains and record-low churn of 0.86%. Revenue reached \$20.2 billion, reflecting operational efficiency and growth. These results highlight the company's ability to leverage its strategic strengths in a competitive market.

In light of its Q3 results, T-Mobile raised its 2024 outlook, projecting postpaid customer additions of 5.6– 5.8 million and adjusted free cash flow of \$16.6–\$17.0 billion for the year. This improved guidance underscores T-Mobile's commitment to sustained customer growth, operational efficiency, and profitability.

Going forward, T-Mobile is expected to expand its 5G services, boost home broadband subscriptions, and enhance cost efficiencies post-merger. These efforts align with the company's strategic focus on profitability and long-term market leadership.

T-Mobile's 5G handles 87% of traffic on sites with all spectrum bands, ensuring broad coverage. Rising 5G device usage requires ongoing network optimization to manage increased data demand. [8]

The company has a lot of financing options available to it for future growth. Creditors seem satisfied with the company's performance. JP Morgan extended a \$7.5 billion revolving credit line if needed. [6]

Subscriber growth has rocketed in recent years, making them the 2nd largest carrier. Their goals for annual growth have increased since last year.

Weaknesses

T-Mobile still struggles to compete with Verizon and AT&T when it comes to square footage coverage. Their 5G coverage has been marketed heavily, but historically 4G LTE falls apart in rural areas. Any signal is better than none, 5G or not.

T-Mobile currently does not have a nationwide fiber ISP offering like competitors AT&T Fiber and Verizon FIOS.

The parent company Deutsche Telekom AG owns the T-Mobile trademark, logo, and just under 51.4% of common stock. Many decisions need their approval, and T-Mobile is therefore a controlled company.

T-Mobile's first responder plans and network reliably are weak against AT&T winning the FirstNet contract.

After selling off SprintLink, T-Mobile relies on Cogent Communications for much of its Tier 1 backhaul to the Internet. [15] This may be a limiting factor in future data capacity and increases third party reliance/costs.

Opportunities

The potential acquisition of UScellular's (USM) customer base and gaining a master lease agreement on their owned towers could significantly improve coverage and data speeds in markets where USM has previously dominated. T-Mobile is underrepresented in rural markets, so this is a fantastic opportunity for growth.

The focus on FWA has proved quite successful thus far and remains a growing segment for the company. For most internet users, the solution provides competition in neighborhoods previously served by one or two wireline ISPs only. Continued technology improvements, spectrum acquisition, and network management practices will improve user experience.

Fiber to the Home (FTTH) expansion can fill the customer demand for reliable, low-latency connections while freeing up tower capacity to allow signups of new FWA customers.

Lowering interest rates may provide an opportunity to begin on more growth projects without significantly increasing interest payments.

Threats

Technology advances at wireline ISPs such as mid-split and high-split on legacy DOCSIS cable internet infrastructure will enable faster upload and download speeds. Currently potential upload speeds are higher on fiber and wireless than most cable plans. This will give Charter, Comcast, Mediacom, etc. a technological reason to market their services as viable alternatives once again.

Proposed industry changes by the FCC would require devices to be unlocked after 60 days. Currently T-Mobile only unlocks paid off devices or provides a temporary unlock for international travel. This would enable unpaid off devices the ability to be used on other carriers, having the potential for negatively impacting customer retention during the EIP period.

Most customers do not care about 5G or 4G LTE icons, they just want their phones to work. AT&T and Verizon have a more stable network where square footage coverage matters.

T-Mobile carries a lot of debt. Currently the situation seems fine but if macroeconomic conditions deteriorate, these could pose a problem if the company suddenly has cashflow issues. There are three notes due in 2025 and an additional four in 2026.

Key Trends:

Recent M&A Activity for T-Mobile:

Date	Company	Assets	Misc.
[FINAL] 4/2020	Sprint Corp.	Tower equipment, spectrum licenses, customers	Huge step in TMUS 5G rollout

[ANN] 4/2024	Lumos Fiber	Brand rights, customers.	JV with EQT Infrastructure Pending approval, est. 2025.
[FINAL] 5/2024	Ka'ena Corp.	Mint Mobile + Ultra Mobile customers	Prepaid MVNO brands
[ANN] 5/2024	U.S. Cellular	Customers, 30% spectrum licenses, lease agreement on towers	Pending approval, est. 2025.
[ANN] 7/2024	Metronet	Fiber ISP customers and infrastructure	JV with \$KKR Pending approval, est. 2025

Sprint Corporation [9] - \$26 billion

In April 2020, T-Mobile officially closed the merger with Sprint. This gave T-Mobile ownership of important 800 MHz, 1.9 GHz, and 2.5GHz wireless spectrum licenses Sprint previously used for CDMA, 4G LTE, and 5G NR network services. Of particular importance to T-Mobile was the higher frequency 2.5GHz holdings because of their characteristics for massive data speeds and tower capacity. Sprint's customer base would be converted into T-Mobile customers and migrated off the legacy network, which would later get decommissioned. Additionally, Sprint operated a Tier 1 ISP network, SprintLink, that provided backhaul to cell towers and enterprise customers as an internet backbone. This was sold to Cogent Communications later for \$1 in exchange for T-Mobile to have access to their IP transit services.

Lumos Fiber [10] - \$950 million

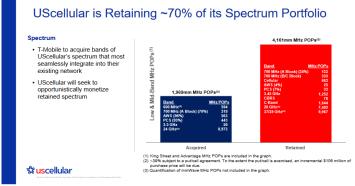
In April 2024, T-Mobile announced intentions to create a joint venture with EQT, a Swedish investment firm, to take over Lumos' customers and branding. It is unclear which part of the infrastructure will be included, but it appears the goal for T-Mobile is to further grow their fiber internet market presence. Lumos is a small ISP covering select markets in NC, VA, and SC with plans to expand into parts of Ohio and Kentucky.

Ka'ena Corporation [11] - \$1.35 billion

May 2024 will mark the completion of Ka'ena Corporation, which operated popular prepaid brands Mint Mobile and Ultra Mobile. These brands complement MetroPCS's existing prepaid offerings. With increasing competition from other MVNOs operating on the AT&T or Verizon networks, this move appears to be a strategic effort to maintain market share relevance. It also gives T-Mobile greater price control in the industry, enabling them to raise prices on the brands with fewer alternatives for customers to switch to.

U.S. Cellular [12] [13] - \$4.4 billion

Recently, in May 2024, a press release detailing the announcement for certain UScellular (USM) assets to effectively be sold to T-Mobile was released. TDS Telecom currently holds an 83 percent stake in USM and announced their approval of the deal. This would include the sale of all customers, select spectrum assets detailed below, and an extension of the master lease agreement (MLA) T-Mobile has on about 600 UScellular towers to a minimum of an additional 2,015 more for a tenancy period of 15 years. UScellular is unique in that it owns its towers, which will remain unchanged with the deal.



What remains extremely important for T-Mobile in this deal is not so much the customers, but the acquisition of more low-frequency spectrum. This will complement existing assets and provide a significant speed and capacity boost to their 5G NR network. The MLA will help T-Mobile close the coverage gap in rural areas due to the unique tower sites not previously available or heavily restricted to T-Mobile customer roaming access. UScellular is currently the 5th largest carrier by subscribers, and the deal is pending antitrust approval. As of the TMUS Q3 earnings report on Oct. 23, 2024, the deal is expected to close around the middle of 2025. Transactions involving other USM spectrum assets were announced on Oct. 18, 2024, with Verizon and on Nov. 7, 2024, with AT&T. All deals aim to benefit their respective provider's 5G networks in the future.

Metronet [14] - \$4.9 billion

Over the summer, T-Mobile announced another acquisition plan, this time with Metronet, the regional fiber ISP. A planned joint venture with investment management firm KKR, the deal would see all customers and fiber infrastructure acquired. Like Lumos, it appears part of the goal is to complement FWA offerings with a low-latency, reliable alternative for businesses and power users. These customers demand higher bandwidth guarantees than can be offered with a shared wireless airspace medium. Further investment to expand the fiber market footprint is expected following the deal's closure in 2025.

Emergence of Cable ISPs to Wireless:

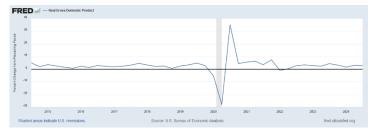
Throughout our research of the industry, we discovered another key trend of traditional wireline providers like Comcast and Charter expanding into mobile offerings through a partnership with Verizon. Similar to other MVNOs, this creates a marketing opportunity for these internet providers to offer bundled services to increase customer retention. We would like to see T-Mobile do a better job marketing themselves as a viable option for these cable companies to partner with. The prior discussed Metronet merger would be a good starting point to consider should the deal be approved.

ECONOMIC ANALYSIS

Key Variables

Real GDP

As an inflation-adjusted value of goods and services, real GDP shows us a macroeconomic view of the country's output. Two-thirds of this metric is driven by consumer spending, making it a great indicator of the overall state of the economy. The telecommunications sector is expected to make up 7% of real GDP growth in 2025. We predict GDP to grow about 3% annually, as the 60-year historical average ranges from 2.9-3.1%. GDP growth is generally a very stable statistic, so we do not anticipate this to be different going forward.



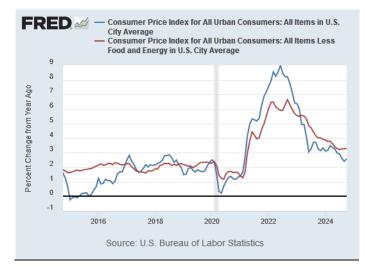
Interest Rates

This metric has a significant impact on companies within the telecommunications sector because of their heavy reliance on debt financing for new projects. This will show an inverse relationship between interest rates and investment in new projects. On November 7th the Federal Reserve cut interest rates by an additional 25 basis points after a 50-basis point reduction in September. Interest rates currently sit at 4.5% - 4.75%, which is down significantly from the highs of 2022 of about 7%. This signals that the Federal Reserve is looking to spark more investment in the economy as inflation shrinks. We expect interest rates to continue trending downwards in the coming months as the Fed aims to combat inflation and unemployment.



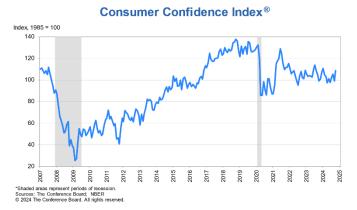
Consumer Price Index

CPI data shows the overall change in prices for consumers in the economy. As inflation increases, this puts pressure on companies which can cause them to pass increased costs onto consumers. In recent years year-over-year inflation has been as high as 9.1% in June 2022, but the Federal Reserve has been clear on their goal of keeping inflation around 2%. We have been trending towards this target in 2024, with the most recent CPI data coming in at 2.6% year-over-year in November, down from 2.9% in July and 3.5% in March 2024. We anticipate inflation to continue trending down towards the Fed's target of about 2% year-over-year.



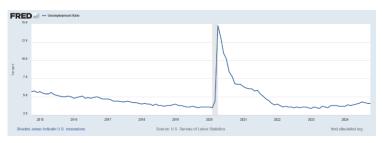
Consumer Confidence Index

CCI data is an indicator of consumers' propensity to spend given the current economic climate. Historically an index above 100 signals consumers are more likely to spend their money, while an index below 100 indicates they are more likely to save instead. In October, the CCI increased to 108.7, up 9.5 from September. We expect there to be volatility around this number in the coming months following the recent presidential election.

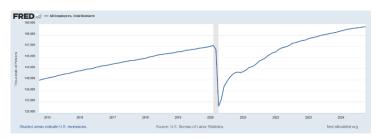


Unemployment & Nonfarm Payrolls

Recent reports have shown slight increases in unemployment which may spark concerns over the trajectory of the economy in the coming months. The Federal Reserve typically adjusts interest rates opposite of unemployment rates, so we predict unemployment will tick upwards in the coming months due to the Fed's plans to continue lowering interest rates.



Nonfarm payrolls are a monthly statistic that measure the number of jobs created in the economy, excluding some employees like farm workers, non-profit employees, and government officials, among others. This number has been trending upwards in recent months, which means companies have been hiring more employees. We anticipate this number to flatline and eventually decrease in the coming months as a result of unemployment increasing.



VALUATION DISCUSSION

Dividend Discount Model:

Our forecast horizon included the years 2024-2028. T-Mobile began paying dividends to its shareholders in Q4 of 2023. Since then, they have increased the dividend yield and provided increased guidance for dividends in

2025, so we projected their dividend to continue increasing over the forecast period. Our EPS assumptions were derived from the forecasted net income and weighted average shares outstanding for the period. The weighted average shares outstanding trend downwards over the forecast period because of management's intent to buy back shares in the future. After forecasting the dividends, we calculated the terminal value for T-Mobile which, along with our dividend assumptions, were discounted using the cost of equity to today's value. We came to an implied price as of November 19, of about \$200 which is less than the price per share of \$235 as of November 15. Given the short history of dividends for T-Mobile, we have decided to place less emphasis on this model for our BUY recommendation.

Discounted Cash Flow & Economic Profit:

For T-Mobile's discounted cash flow (DCF) model, we forecasted the company's free cash flow (FCF) to the firm nearly 10 years into the future (2033E) and calculated a horizon value using a NOPLAT growth rate of 2.5%. By adding these future cash flows together, we discounted them to present value using T-Mobile's WACC of 6.12%, resulting in a value of operating assets of \$459,609. After adjusting for non-operating assets and dividing by the shares outstanding, we arrived at an implied price of \$284.84.

For the economic profit (EP) model, a similar process was followed. We calculated the economic profit and projected it over the same period. After subtracting nonoperating adjustments, we arrived at the same implied price.

Relative Valuation:

In our relative valuation, we computed a share price of \$102.14 for 2024 and \$123.01 for 2025. The peer group we included consists of companies that directly compete with T-Mobile in the telecommunications sector, namely Verizon, AT&T, Comcast Corporation, and Charter Communications. T-Mobile currently has a forward P/E ratio of 23.6 for 2024, which is significantly higher than the peer group average of 10.25. We attribute this premium valuation to T-Mobile's recent high growth trajectory, which has outpaced its competitors.

We expect T-Mobile to continue its aggressive growth within the telecommunications sector, driven by its expanding market share, strategic initiatives, and investments in 5G infrastructure. The higher P/E ratio is justified by these robust growth prospects, reflecting the market's confidence in T-Mobile's ability to outperform its peers in the coming years.

Weighted Average Cost of Capital:

For our WACC calculation, we determined T-Mobile's cost of equity to be 6.96% and its after-tax cost of debt to be 4.28%. T-Mobile's capital structure consists of 68.64% equity and 31.36% debt. Using these inputs, we calculated T-Mobile's weighted average cost of capital (WACC).

We then used the WACC as the discount rate to bring all projected cash flows back to their present value. This process allowed us to compute T-Mobile's intrinsic value, which we determined to be \$284.79 per share.

Cost of Equity:

We applied the Capital Asset Pricing Model (CAPM) to estimate T-Mobile's cost of equity. For the risk-free rate, we selected the yield of the U.S. 10-year Treasury bond, which was 4.43%. We incorporated NYU Country's implied equity risk premium of 4.60%. Additionally, we used T-Mobile's 5-year monthly raw beta of 0.55, sourced from Bloomberg.

Using these inputs, we calculated T-Mobile's cost of equity to be 6.96%.

Cost of Debt:

To estimate T-Mobile's cost of debt, we selected the U.S. 10-year Treasury bond yield as the risk-free rate, which was 4.43% as of November 15th. We added an implied default premium of 1.32%, and the yield-to-maturity (YTM) on T-Mobile's 30-year corporate bond resulted in a pre-tax cost of debt of 5.75%. Using T-Mobile's prior-year marginal tax rate of 25.60%, we calculated the after-tax cost of debt to be 4.28%, reflecting the company's effective borrowing cost after accounting for the tax shield.

SENSITIVITY ANALYSIS

Normal Cash vs. Beta:

Beta measures T-Mobile's sensitivity to market risk, with higher beta values indicating greater exposure to volatility and risk. The normal cash percentage reflects assumptions about cash flow stability. Changes in this percentage impact how much operating cash flow contributes to the company's valuation, with higher percentages indicating greater financial efficiency and cash availability.

This table helps us understand how small changes in market risk (Beta) and cash flow assumptions interact to influence T-Mobile's intrinsic value.

				N	ormal Cash %	6		
	284.79	0.05%	0.78%	1.78%	2.78%	3.78%	4.78%	5.78%
	0.40	337.65	337.36	336.97	336.58	336.18	335.79	335.40
	0.45	318.72	318.45	318.08	317.71	317.34	316.97	316.60
-	0.50	301.49	301.23	300.88	300.52	300.17	299.82	299.46
	0.55	285.71	285.47	285.13	284.79	284.46	284.12	283.79
-	0.60	271.22	270.98	270.66	270.34	270.02	269.70	269.38
	0.65	257.85	257.62	257.32	257.01	256.70	256.40	256.09
	0.70	245.47	245.26	244.96	244.67	244.38	244.08	243.79

Postpaid Customer Growth vs. Growth in Revenue:

Postpaid customer growth represents additional lines being added onto the T-Mobile network. It does not necessarily represent individual accounts. As service revenues are important for T-Mobile's profitability, an increase to this number is beneficial to valuation. This table is beneficial for understanding this relationship between customer growth and increased revenues.

	Postpaid Customer Growth for 2024									
	284.79	3.04%	3.54%	4.04%	4.54%	5.04%	5.54%	6.04%		
е 24	3.04%	274.56	276.87	279.20	281.53	283.88	286.24	288.61		
enue 2024	3.54%	275.74	278.07	280.41	282.76	285.12	287.50	289.88		
Reve er in	4.04%	276.96	279.30	281.66	284.02	286.40	288.79	291.20		
Growth in Revenue er Customer in 202	4.54%	278.20	280.56	282.94	285.32	287.72	290.12	292.54		
owth in Custome	5.04%	279.49	281.87	284.26	286.65	289.07	291.50	293.93		
L CL	5.54%	280.81	283.20	285.61	288.03	290.46	292.90	295.36		
Gr	6.04%	282.16	284.58	287.00	289.44	291.89	294.35	296.82		

Risk-Free Rate vs. Equity Risk Premium:

The risk-free rate represents a return which an investor can expect without incurring risk. Our model based this number on the 10-year treasury yield. The equity risk premium should be an excess return one can expect from investing in the stock market over the risk-free rate. As we reduce the risk-free rate, we can see an increase in valuation because it is more enticing to take on risk and the cost of debt for firms is reduced.

					Risk-Free Rat	e		
	284.79	4.13%	4.23%	4.33%	4.43%	4.53%	4.63%	4.73%
Е	3.10%	375.95	366.37	357.23	348.48	340.11	332.10	324.41
niu	3.60%	349.10	340.67	332.59	324.85	317.42	310.29	303.43
rer	4.10%	325.32	317.84	310.65	303.75	297.11	290.72	284.56
Equity Risk Premium	4.60%	304.10	297.42	290.99	284.79	278.82	273.06	267.50
y Ri	5.10%	285.05	279.05	273.25	267.66	262.26	257.04	252.00
luit	5.60%	267.84	262.41	257.17	252.09	247.18	242.43	237.83
Ĕ	6.10%	252.21	247.28	242.50	237.88	233.40	229.05	224.84

Inflation vs. WACC:

Inflation is a decrease in the purchasing power over a period of time. High inflation can harm the value of firms because their costs to operate increase. The WACC is an after-tax cost of capital for a firm, which is important for T-Mobile when investing in financing activities. A higher WACC indicates the cost to finance assets is higher. We calculated a baseline WACC of 6.12% in our model. When the value is increased by a quarter percent, we see a roughly 9% decrease in valuation.

				Inflation			
284.79	2.25%	2.50%	2.75%	3.00%	3.25%	3.50%	3.75%
5.37%	380.79	379.68	378.61	377.57	376.57	375.60	374.67
5.62%	344.61	343.60	342.63	341.69	340.78	339.90	339.05
5.87%	313.72	312.80	311.91	311.05	310.22	309.41	308.64
6.12%	287.25	286.40	285.59	284.79	284.03	283.29	282.58
6.37%	263.70	262.92	262.17	261.44	260.73	260.05	259.39
6.62%	243.15	242.43	241.73	241.05	240.40	239.77	239.16
6.87%	224.89	224.22	223.57	222.94	222.33	221.75	221.18
	5.37% 5.62% 5.87% 6.12% 6.37% 6.62%	5.37% 380.79 5.62% 344.61 5.87% 313.72 6.12% 287.25 6.37% 263.70 6.62% 243.15	5.37% 380.79 379.68 5.62% 344.61 343.60 5.87% 313.72 312.80 6.12% 287.25 286.40 6.37% 263.70 262.92 6.62% 243.15 242.43	5.37% 380.79 379.68 378.61 5.62% 344.61 343.60 342.63 5.87% 313.72 312.80 311.91 6.12% 287.25 286.40 285.59 6.37% 263.70 262.92 226.217 6.62% 243.15 242.43 241.73	284.79 2.25% 2.50% 2.75% 3.00% 5.37% 380.79 379.68 378.61 377.57 5.62% 344.61 343.60 342.63 341.69 5.87% 313.72 312.80 311.91 311.05 6.12% 287.25 286.40 285.59 284.79 6.37% 263.70 262.92 262.17 261.44 6.62% 243.15 242.43 241.73 241.05	284.79 2.25% 2.50% 2.75% 3.00% 3.25% 5.37% 380.79 379.68 378.61 377.57 376.57 5.62% 344.61 343.60 342.63 341.69 340.78 5.87% 313.72 312.80 311.91 311.05 310.22 6.12% 287.25 286.40 285.59 284.79 284.03 6.37% 263.70 262.92 262.17 261.44 260.73 6.62% 243.15 242.43 241.73 241.05 240.40	284.79 2.25% 2.50% 2.75% 3.00% 3.25% 3.50% 5.37% 380.79 379.68 378.61 377.57 376.57 375.60 5.62% 344.61 343.60 342.63 341.69 340.78 339.90 5.87% 313.72 312.80 311.91 311.05 310.22 309.41 6.12% 287.25 286.40 285.59 284.79 284.03 283.29 6.37% 263.70 262.92 262.17 261.44 260.73 260.05 6.62% 243.15 242.43 241.73 241.05 240.40 239.77

Capex vs. PP&E Growth:

In 2023, T-Mobile's capital expenditures focused on expanding, upgrading, and integrating both T-Mobile and Sprint networks, totaling \$9.8 billion. CapEx efficiency plays a critical role in supporting PP&E growth, as shown by the relationship between CapEx percentages and PP&E increases in the table. For example, PP&E growth of 8.16% aligns with optimized CapEx investments near 38.33%, demonstrating T-Mobile's ability to balance infrastructure spending with operational returns. Future investments will target deploying new spectrum assets, maintaining this balance to support continued customer growth and valuation improvements.

					CapEx			
	284.79	35.33%	36.33%	37.33%	38.33%	39.33%	40.33%	41.33%
	5.16%	286.72	286.69	286.67	286.65	286.63	286.60	286.58
£	6.16%	286.10	286.08	286.05	286.03	286.01	285.98	285.96
Growth	7.16%	285.48	285.46	285.43	285.41	285.39	285.37	285.34
G	8.16%	284.86	284.84	284.82	284.79	284.77	284.75	284.73
PP&E	9.16%	284.24	284.22	284.20	284.18	284.15	284.13	284.11
PI	10.16%	283.62	283.60	283.58	283.56	283.53	283.51	283.49
	11.16%	283.01	282.98	282.96	282.94	282.92	282.89	282.87

Cost of Services vs. CV Growth of NOPLAT:

A large expense for a carrier like T-Mobile is their cost of services as it directly takes away from net income. We observe a higher valuation when costs decrease, and we hold CV Growth constant. Our CV Growth of NOPLAT is a metric we can use to predict how we believe the company will perform in the future. Since it is a main driver for our DCF and EP valuation models, small changes create big swings in valuation as seen by increasing by a half percentage point holding cost of services steady. We jump 10 percent in share price.

			Cost of Services for 2024								
	284.79	11.84%	12.34%	12.84%	13.34%	13.84%	14.34%	14.84%			
AT	1.00%	247.23	242.03	236.83	231.63	226.42	221.22	216.02			
JPL	1.50%	262.18	256.63	251.07	245.51	239.95	234.40	228.84			
fNG	2.00%	280.77	274.77	268.77	262.77	256.77	250.77	244.77			
Growth of NOPLAT	2.50%	304.48	297.92	291.36	284.79	278.23	271.67	265.10			
N O	3.00%	335.81	328.50	321.19	313.89	306.58	299.27	291.96			
	3.50%	379.10	370.77	362.43	354.09	345.75	337.42	329.08			
2	4.00%	442.84	432.99	423.13	413.28	403.43	393.58	383.72			

CONCLUSION

In conclusion, we are recommending a BUY rating for T-Mobile US as we believe strong upside potential continues to exist following expansion into additional service segments and realized benefits from the competitive edge the 5G network brings to the industry. Our analysis forecasts a positive return of 20.87% driven by key factors discussed prior.

Beta

IMPORTANT DISCLAIMER

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References:

- T-Mobile 4G LTE and 5G coverage map | WhistleOut. (n.d.). https://www.whistleout.com/CellPhones/Gui des/t-mobile-coverage-map
- T-Mobile 2023 Results. (2024, February 2). *Form 10-K*. Retrieved from https://investor.t-mobile.com/financials/secfilings/default.aspx
- T-Mobile Q2 Results. (2024, July 31). Form 10-Q. Retrieved from https://investor.tmobile.com/financials/secfilings/default.aspx
- 4. T-Mobile Q3 Results. (2024, October 23). *Form 10-Q.* Retrieved from https://investor.t-mobile.com/financials/secfilings/default.aspx
- T-Mobile Fixed Income. (2024, September 30). Retrieved from https://investor.tmobile.com/fixed-income-1/default.aspx
- T-Mobile Schedule of Debt. (2024, September 30). Retrieved from https://s29.q4cdn.com/310188824/files/doc_ financials/2024/q3/Q3_2024-Schedule-of-Debt.pdf
- T-Mobile Stock Info Capital Return. (2024, September 18). Retrieved from https://investor.t-mobile.com/stockinfo/dividend-history/default.aspx
- T-Mobile results pile 5G humiliation onto AT&T and Verizon. (2024, July 31). Retrieved from https://www.lightreading.com/5g/t-mobileresults-pile-5g-humiliation-onto-at-t-andverizon
- 9. T-Mobile Completes Merger with Sprint to Create the New T-Mobile. (2020, April 1). Retrieved from https://www.tmobile.com/news/un-carrier/t-mobile-sprintone-company
- T-Mobile and EQT Announce Joint Venture to Acquire Lumos and Build Out the Un-carrier's First Fiber Footprint. (2024, April 25). Retrieved from https://www.tmobile.com/news/business/t-mobile-eqt-jvto-acquire-lumos
- 11. Mint and Ultra: Welcome to the T-Mobile Family! (2024, May 1). Retrieved from https://www.t-mobile.com/news/business/tmobile-closes-acquisition-mint-and-ultramobile

- UScellular Financials SEC Filing Details DEFM14C Information Statement – Merger or Acquisition (definitive). (2024, July 26). Retrieved from https://investors.uscellular.com/financials/se c-filings/sec-filingsdetails/default.aspx?FilingId=17707164
- 13. UScellular Sale of Wireless Operations and Select Spectrum Assets. (2024, May 28). Retrieved from https://investors.uscellular.com/presentations /presentation-details/2024/Sale-of-Wireless-Operations-and-Select-Spectrum-Assets/default.aspx
- 14. T-Mobile and KKR Announce Joint Venture to Acquire Metronet and Offer Leading Fiber Solution to More U.S. Consumers. (2024, July 24). Retrieved from https://www.t-mobile.com/news/network/tmobile-kkr-joint-venture-to-acquiremetronet
- 15. Cogent Announces Definitive Agreement to Acquire T-Mobile's Wireline Business. (2022, September 7). Retrieved from https://www.cogentco.com/en/aboutcogent/press-releases/3566-cogentannounces-definitive-agreement-to-acquiret-mobile-s-wireline-business
- 16. The complex story behind T-Mobile's spectrum struggles. (2023, September 5). Retrieved from https://www.lightreading.com/5g/the-complex-story-behind-t-mobile-s-spectrum-struggles

Revenue Decomposition

Scale (millions)

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
Postpaid revenues	22,673	36,306	42,562	45,919	48,692	53,212	56,496	58,248	58,877	58,336
Prepaid revenues	9,543	9,421	9,733	9,857	9,767	9,834	10,040	10,179	10,320	10,463
Wholesale & other service revenues	1,778	4,668	6,074	5,547	4,782	4,245	4,372	4,503	4,638	4,778
Equipment revenues	9,840	17,312	20,727	17,130	14,138	13,427	12,751	12,110	11,500	10,922
Other revenues	1,164	690	1,022	1,118	1,179	1,245	1,302	1,349	1,384	1,407
Total Operating Revenues	44,998	68,397	80,118	79,571	78,558	81,963	84,961	86,389	86,721	85,905
Growth Rates										
Postpaid revenues	8.68%	60.13%	17.23%	7.89%	6.04%	4.54%	3.04%	1.54%	0.54%	-0.46%
Prepaid revenues	-0.57%	-1.28%	3.31%	1.27%	-0.91%	0.69%	0.69%	0.69%	0.69%	0.69%
Wholesale & other service revenues	16.06%	162.54%	30.12%	-8.68%	-13.79%	-11.23%	3.00%	3.00%	3.00%	3.00%
Equipment revenues	-1.69%	75.93%	19.73%	-17.35%	-17.47%	-5.03%	-5.03%	-5.03%	-5.03%	-5.03%
Other revenues	-11.08%	-40.72%	48.12%	9.39%	5.46%	5.60%	4.60%	3.60%	2.60%	1.60%
Total Operating Revenues	3.90%	52.00%	17.14%	-0.68%	-1.27%	4.33%	3.66%	1.68%	0.38%	-0.94%
Number of Accounts in millions										
Postpaid	47.034	81.35	87.663	92.232	98.052	102.502	105.617	107.243	107.821	107.324
Implied revenue per postpaid customer	482.06	446.29	485.52	497.86	496.59	519.13	534.91	543.14	546.07	543.55
Prepaid	20.86	20.714	21.056	21.366	21.648	21.798	21.948	22.100	22.252	22.406
Implied revenue per prepaid customer	457.48	454.81	462.24	461.34	451.17	454.29	457.43	460.59	463.77	466.98

Income Statement

Scale (Millions)

Scale (Millions)										
Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	20285
Operating Revenues										
Postpaid revenues	22,673	36,306	42,562	45,919	48,692	53,212	56,496	58,248	58,877	58,336
Prepaid revenues	9,543	9,421	9,733	9,857	9,767	9,834	10,040	10,179	10,320	10,463
Wholesale & other service revenues	1,778	4,668	6,074	5,547	4,782	4,245	4,372	4,503	4,638	4,778
Equipment revenues	9,840	17,312	20,727	17,130	14,138	13,427	12,751	12,110	11,500	10,922
Other revenues	1,164	690	1,022	1,118	1,179	1,245	1,302	1,349	1,384	1,407
Total Operating Revenues	44,998	68,397	80,118	79,571	78,558	81,963	84,961	86,389	86,721	85,905
Operating Expenses										
Cost of services	6,622	11,878	13,934	14,666	11,655	10,931	10,906	11,089	11,132	11,027
Cost of equipment sales	11,899	16,388	22,671	21,540	18,533	18,107	18,344	18,653	18,724	18,548
Selling, general & administrative expenses	14,139	18,926	20,238	21,607	21,311	21,005	20,924	21,276	21,357	21,156
Depreciation & amortization expenses	6,616	14,151	16,383	13,651	12,818	12,144	11,739	11,936	11,982	11,869
Impairment/Disposal Gain (Loss)	-	418	-	1,564	(25)	-	-	-	-	-
Total Operating Expenses	39,276	61,761	73,226	73,028	64,292	62,187	61,913	62,953	63,195	62,600
Operating Income	5,722	6,636	6,892	6,543	14,266	19,776	23,048	23,436	23,526	23,304
Other income (expense)										
Interest expense	(1,135)	(2,730)	(3,362)	(3,364)	(3,335)	(4,314)	(4,592)	(4,648)	(4,706)	(4,765)
Interest income	24	29	20	-	-	223	525	898	1,336	1,806
Other income (expense), net	(8)	(405)	(199)	(33)	68	-	-	-	-	-
Total other income (expense), net	(1,119)	(3,106)	(3,541)	(3,397)	(3,267)	(4,091)	(4,067)	(3,751)	(3,370)	(2,959)
Income from operations before income taxes	4,603	3,530	3,351	3,146	10,999	15,685	18,981	19,685	20,156	20,345
Income Tax Expenses										
Income tax expenses (benefit)	1,135	466	327	556	2,682	3,921	4,745	4,921	5,039	5,086
Net income	3,468	3,064	3,024	2,590	8,317	11,764	14,236	14,764	15,117	15,259
Net earnings per share - basic	4.06	2.68	2.42	2.07	7.02	9.97	12.38	13.14	13.72	14.08
Dividends Declared (Started Q4 '23)						0.00	0 50	0.00	0 70	2 0 5
	-	-	-	-	0.65	2.83	3.52	3.63	3.73	3.85
Weighted average shares outstanding - basic Year end shares outstanding	- 854 857	- 1,144 1,242	- 1,247 1,249	- 1,250 1,234	0.65 1,185 1,196	2.83 1,180 1,164	3.52 1,150 1,136	3.63 1,124 1,112	3.73 1,102 1,092	3.85 1,084 1,076

Balance Sheet

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
Assets										
Current Assets										
Cash & cash equivalents	1,528	10,385	6,631	4,507	5,135	12,098	20,680	30,791	41,617	52,986
Accounts receivable, net	1,888	4,254	4,167	4,445	4,692	4,212	4,367	4,440	4,457	4,415
Equipment installment plan receivables, net	2,600	3,577	4,748	5,123	4,456	3,476	3,332	3,175	3,009	2,959
Accounts receivable from affiliates	20	22	27	-	-	-		-	-	
Inventory	964	2,527	2,567	1,884	1,678	1,672	1,498	1,455	1,419	1,301
Prepaid expenses	-	624	746	673	702	420	435	442	444	440
Other current assets	2,305	2,496	2,005	2,435	2,352	3,031	3,142	3,195	3,207	3,177
Total current assets	9,305	23,885	20,891	19,067	19,015	24,909	33,453	43,497	54,153	65,277
Property & equipment, net	21,984	41,175	39,803	42,086	40,432	43,731	43,821	43,278	43,066	42,846
Operating lease right-of-use assets	10,933	28,021	26,959	28,715	27,135	29,349	29,409	29,045	28,903	28,755
Financing lease right-of-use assets	2,715	3,028	3,322	3,257	3,270	3,537	3,544	3,500	3,483	3,465
Goodwill	1,930	11,117	12,188	12,234	12,234	12,234	12,234	12,234	12,234	12,234
Spectrum licenses	36,465	82,828	92,606	95,798	96,707	98,736	95,445	92,154	88,862	85,571
Other intangible assets, net	115	5,298	4,733	3,508	2,618	1,896	1,326	909	619	448
Equipment installment plan receivables due after one ye	1,583	2,031	2,829	2,546	2,010	1,890	1,833	1,716	1,597	1,561
Other assets	1,891	2,031	3,232	4,127	4,229	3,380	3,503	3,562	3,576	3,542
Total assets	86,921	200,162	206,563	211,338	207,682	219,685	224,568	229,895	236,493	243,700
10101 035015	00,921	200,102	200,303	211,550	207,002	219,005	224,300	229,095	230,493	243,700
Liabilities & Stockholders' Equity Current Liabilities										
Accounts payable & accrued liabilities	6,746	10,196	11,405	12,275	10,373	13,072	13,550	13,778	13,831	13,701
Payables to affiliates	187	157	103	-	-	-	-	-	-	-
Short-term debt	25	4,579	3,378	5,164	3,619	5,851	5,935	6,020	6,106	6,193
Short-term debt to affiliates	-	-	2,245	-	-	-	-	-	-	-
Deferred revenue	631	1,030	856	780	825	1,117	1,158	1,177	1,182	1,170
Short-term operating lease liabilities	2,287	3,868	3,425	3,512	3,555	3,845	3,853	3,805	3,787	3,767
Short-term financing lease liabilities	957	1,063	1,120	1,161	1,260	1,363	1,366	1,349	1,342	1,335
Other current liabilities	1,673	810	967	1,850	1,296	1,148	1,143	1,162	1,166	1,155
Total current liabilities	12,506	21,703	23,499	24,742	20,928	26,396	27,004	27,290	27,413	27,322
Long-term debt	10,958	61,830	67,076	65,301	69,903	72,522	73,559	74,611	75,678	76,760
Long-term debt to affiliates	13,986	4,716	1,494	1,495	1,496	1,496	1,346	1,212	1,091	982
Tower obligations	2,236	3,028	2,806	3,934	3,777	3,103	3,090	3,142	3,154	3,124
Deferred tax liabilities	5,607	9,966	10,216	10,884	13,458	14,896	14,921	14,946	14,966	14,988
Operating lease liabilities	10,539	26,719	25,818	29,855	28,240	30,544	30,607	30,228	30,080	29,926
Financing lease liabilities	1,346	1,444	1,455	1,370	1,236	1,337	1,340	1,323	1,317	1,310
Deferred rent expense	-	-	-	-	-	-	-	-	-	-
Other long-term liabilities	954	5,412	5,097	4,101	3,929	3,640	3,773	3,836	3,851	3,815
Total long-term liabilities	45,626	113,115	113,962	116,940	122,039	127,538	128,636	129,297	130,135	130,905
Stockholders' Equity										
Treasury stock, at cost	(8)	(11)	(13)	(3,016)	(9,373)	(16,805)	(23,865)	(30,220)	(35,621)	(40,212)
Accumulated other comprehensive income (loss)	(868)	(1,581)	(1,365)	(1,046)	(964)	(964)	(964)	(964)	(964)	(964)
Retained earnings (accumulated deficit)	(8,833)	(5,836)	(2,812)	(223)	7,347	15,816	26,053	36,786	47,825	58,945
Common equity	38,498	72,772	73,292	73,941	67,705	67,705	67,705	67,705	67,705	67,705
Total stockholders' equity	28,789	65,344	69,102	69,656	64,715	65,752	68,928	73,307	78,945	85,474
Total liabilities & stockholders' equity	86,921	200,162	206,563	211,338	207,682	219,685	224,568	229,895	236,493	243,700

Historical Cash Flow Statement

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023
Operating Activities					
Net income	3,468	3,064	3,024	2,590	8,317
Depreciation and amortization	6,616	14,151	16,383	13,651	12,818
Stock based compensation	495	694	540	595	667
Deferred income tax expense (benefit)	1,091	822	197	492	2,600
Bad debt expense	307	602	452	1,026	_,
Losses from sales of receivables	130	36	15	214	165
Losses on redemption of debt	19	371	184		898
Impairment expense	-	418	-	477	-
Loss on remeasurement of disposal group held for sale	_	-	-	377	9
Changes in operating assets and liabilities:				0//	Ŭ
Accounts receivable	(3,709)	(3,273)	(3,225)	(5,158)	(5,038)
Equipment installment plan receivables	(1,015)	(1,453)	(3,141)	(1,184)	(3,000)
Inventory	(1,013) (617)	(2,222)	201	(1,104) 744	170
Operating lease right-of-use assets	1,896	(2,222) 3,465	4,964	5,227	3,721
Other current and long-term assets					
Accounts payable and accrued liabilities	(144) 17	(402) (2,123)	(573) 549	(754) 558	(358) (1,126)
Short- and long-term liabilities	(2,131)	(3,699)	(5,358)	(2,947)	(3,785)
Other current and long-term liabilities	144	(2,178)	(531)	459	(839)
Other, net	257	367	236	414	143
Net cash provided/(used) by operating activities	6,824	8,640	13,917	16,781	18,559
Investing Activities	(0.004)	(11.00.4)	(10,000)	(10.070)	(0.004)
Purchases of PP&E	(6,391)	(11,034)	(12,326)	(13,970)	(9,801)
Purchases of spectrum licenses and other intangible assets	(967)	(1,333)	(9,366)	(3,331)	(1,010)
Proceeds from sales of tower sites	38	-	40	9	12
Proceeds related to beneficial interests in securitization tran	3,876	3,134	4,131	4,836	4,816
Acquisition of companies, net of cash and restricted cash ac	(31)	(5,000)	(1,916)	(52)	-
Other, net	(650)	1,518	51	149	154
Net cash provided/(used) by investing activities	(4,125)	(12,715)	(19,386)	(12,359)	(5,829)
Financing Activities					
Proceeds from issuance of long-term debt	-	35,337	14,727	3,714	8,446
Repayments of financing lease obligations	(798)	(1,021)	(1,111)	(1,239)	(1,227)
Repayments of short-term debt for purchases of inventory, F	(775)	(481)	(184)	-	-
Repayments of long-term debt	(600)	(20,416)	(11,100)	(5,556)	(5,051)
Distribution to affilitate	-	-	-	-	(747)
Repurchases of common stock	-	(19,536)	-	(3,000)	(13,074)
Proceeds from issuance of short-term debt	-	18,743	-	-	-
Repayments of short-term debt	-	(18,929)	-	-	-
Issuance of common stock	-	19,840	-	-	-
Tax withholdings on share-based awards	(156)	(439)	(316)	(243)	(297)
Cash payments for debt prepayment or debt extinguishmen	(28)	(82)	(116)	-	-
Other, net	(17)	(6)	(191)	(127)	(147)
Not share to the state of the s	(17)	(-)	. ,		
Net cash (used in) / provided by financing activities	(2,374)	13,010	1,709	(6,451)	(12,097)
Net change in cash				(6,451) (2,029)	(12,097) 633
	(2,374) 325	13,010 8,935	1,709		
Net change in cash	(2,374) 325	13,010 8,935	1,709		

Forecasted Cash Flow Statement

Fiscal Years Ending Dec. 31	2024E	2025E	2026E	2027E	2028E
Operating Actvities Net income	11,764	14,236	14,764	15,117	15,259
Adjustments to reconcile net income to net cash provided by operating activities:	11,704	14,230	14,704	13,117	13,233
Depreciation and amortization	12,144	11,739	11,936	11,982	11,869
Allowance for doubtful accounts	12,144	11,733	11,550	11,502	11,005
Changes in working capital assets:					
(Increase) / decrease in receivables	1,587	72	200	268	128
(Increase) / decrease in inventories	6	174	43	36	118
(Increase) / decrease in prepaid expenses and other current assets	(396)	(126)	(60)	(14)	34
Increase / (decrease) in accounts payable	2,699	478	228	53	(130)
Increase / (decrease) in accrued compensation and other liabilities	2,099	478	(45)	(21)	(130)
Increase / (decrease) in deferred revenue	245	41	(45)	(21)	(37)
Increase / (decrease) in deferred taxes	1,438	25	25	20	(11)
Increase / (decrease) in other non-current liabilities	1,438	182	(264)	(121)	(219)
Net cash provided / (used) by operating activities	31,120	26,827	26,845	27,323	27,034
Net cash provided / (used) by operating activities	51,120	20,027	20,043	27,525	27,034
Investing Activities					
Capital expenditures	(15,443)	(11,829)	(11,393)	(11,770)	(11,649)
Capitalization of intangible assets	(3,788)	3,793	4,117	3,740	3,627
(Increase) / decrease in other assets	849	(124)	(59)	(14)	34
Net cash provided / (used) by investing activities	(18,381)	(8,159)	(7,335)	(8,043)	(7,988)
Financing Activities	4.052	074	0.9.0	1.025	1 05 4
Proceeds from issuance of notes payable & long-term debt Payment of dividends	4,952	974	986	1,025	1,054
Proceeds from issuance of common stock	(3,295)	(3,999)	(4,030)	(4,078)	(4,139)
Repurchases of common stock	(7,432)	- (7,060)	- (6,354)		- (4,591)
			,	(5,401)	
Net cash provided / (used) by financing activities	(5,776)	(10,085)	(9,399)	(8 <i>,</i> 454)	(7,677)
Net increase / (decrease) in cash	6,963	8,582	10,110	10,826	11,369
Beginning cash balance	5,135	12,098	20,680	30,791	41,617
Ending cash balance	12,098	20,680	30,791	41,617	52,986

Common Size Income Statement

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
Operating Revenues										
Postpaid revenues	50.39%	53.08%	53.12%	57.71%	61.98%	64.92%	66.50%	67.43%	67.89%	67.91%
Prepaid revenues	21.21%	13.77%	12.15%	12.39%	12.43%	12.00%	11.82%	11.78%	11.90%	12.18%
Wholesale & other service revenues	3.95%	6.82%	7.58%	6.97%	6.09%	5.18%	5.15%	5.21%	5.35%	5.56%
Equipment revenues	21.87%	25.31%	25.87%	21.53%	18.00%	16.38%	15.01%	14.02%	13.26%	12.71%
Other revenues	2.59%	1.01%	1.28%	1.41%	1.50%	1.52%	1.53%	1.56%	1.60%	1.64%
Total Operating Revenues	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Operating Expenses										
Cost of services	14.72%	17.37%	17.39%	18.43%	14.84%	13.34%	12.84%	12.84%	12.84%	12.84%
Cost of equipment sales	26.44%	23.96%	28.30%	27.07%	23.59%	22.09%	21.59%	21.59%	21.59%	21.59%
Selling, general & administrative expenses	31.42%	27.67%	25.26%	27.15%	27.13%	25.63%	24.63%	24.63%	24.63%	24.63%
Depreciation & amortization expenses	14.70%	20.69%	20.45%	17.16%	16.32%	14.82%	13.82%	13.82%	13.82%	13.82%
Impairment/Disposal Gain (Loss)	0.00%	0.61%	0.00%	1.97%	-0.03%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Operating Expenses	87.28%	90.30%	91.40%	91.78%	81.84%	75.87%	72.87%	72.87%	72.87%	72.87%
	40.70%	0 70%	0.00%	0.00%	40.400/	04.400/	07 400/	07 400/	07 400/	07 400/
Operating Income	12.72%	9.70%	8.60%	8.22%	18.16%	24.13%	27.13%	27.13%	27.13%	27.13%
Other income (expense)										
Interest expense	-2.52%	-0.039914	-4.20%	-4.23%	-4.25%	-5.26%	-5.41%	-5.38%	-5.43%	-5.55%
Interest income	0.05%	0.04%	0.02%	0.00%	0.00%	0.03%	0.03%	0.03%	0.03%	0.03%
Other income (expense), net	-0.02%	-0.59%	-0.25%	-0.04%	0.09%	-0.16%	-0.16%	-0.16%	-0.16%	-0.16%
Total other income (expense), net	-2.49%	-4.54%	-4.42%	-4.27%	-4.16%	-3.91%	-3.91%	-3.91%	-3.91%	-3.91%
Income from operations before income taxes	10.23%	5.16%	4.18%	3.95%	14.00%	7.38%	7.38%	7.38%	7.38%	7.38%
Income Tax Expenses										
Total current income tax expense (benefit)	0.10%	0.11%	0.16%	0.08%	0.10%	0.11%	0.11%	0.11%	0.11%	0.11%
Total Tax Expense	2.12%	0.99%	0.68%	0.79%	2.74%	0.88%	0.88%	0.88%	0.88%	0.88%
Income tax expense (benefit)	2.52%	0.68%	0.41%	0.70%	3.41%	0.96%	0.96%	0.96%	0.96%	0.96%
Net income	7.71%	4.48%	3.77%	3.25%	10.59%	6.81%	6.81%	6.81%	6.81%	6.81%

Common Size Balance Sheet

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	Average	2024E	2025E	2026E	2027E	2028E
Assets											
Current Assets											
Cash & cash equivalents	3.40%	15.18%	8.28%	5.66%	6.54%	6.41%	6.41%	6.41%	6.41%	6.41%	6.41%
Accounts receivable, net	4.20%	6.22%	5.20%	5.59%	5.97%	5.14%	5.14%	5.14%	5.14%	5.14%	5.14%
Equipment installment plan receivables, net	5.78%	5.23%	5.93%	6.44%	5.67%	5.79%	5.79%	5.79%	5.79%	5.79%	5.79%
Accounts receivable from affiliates	0.04%	0.03%	0.03%	0.00%	0.00%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
Inventory	2.14%	3.69%	3.20%	2.37%	2.14%	2.84%	2.84%	2.84%	2.84%	2.84%	2.84%
Prepaid expenses	0.00%	0.91%	0.93%	0.85%	0.89%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%
Other current assets	5.12%	3.65%	2.50%	3.06%	2.99%	3.70%	3.70%	3.70%	3.70%	3.70%	3.70%
Total current assets	20.68%	34.92%	26.08%	23.96%	24.21%	24.42%	24.42%	24.42%	24.42%	24.42%	24.42%
Property & equipment, net	48.86%	60.20%	49.68%	52.89%	51.47%	53.10%	53.10%	53.10%	53.10%	53.10%	53.10%
Operating lease right-of-use assets	24.30%	40.97%	33.65%	36.09%	34.54%	24.22%	24.22%	24.22%	24.22%	24.22%	24.22%
Financing lease right-of-use assets	6.03%	4.43%	4.15%	4.09%	4.16%	3.27%	3.27%	3.27%	3.27%	3.27%	3.27%
Goodwill	4.29%	16.25%	15.21%	15.37%	15.57%	10.75%	10.75%	10.75%	10.75%	10.75%	10.75%
Spectrum licenses	81.04%	121.10%	115.59%	120.39%	123.10%	104.35%	104.35%	104.35%	104.35%	104.35%	104.35%
Other intangible assets, net	0.26%	7.75%	5.91%	4.41%	3.33%	3.23%	3.23%	3.23%	3.23%	3.23%	3.23%
Equipment installment plan receivables due at	3.52%	2.97%	3.53%	3.20%	2.60%	3.22%	3.22%	3.22%	3.22%	3.22%	3.22%
Other assets	4.20%	4.06%	4.03%	5.19%	5.38%	4.12%	4.12%	4.12%	4.12%	4.12%	4.12%
Total assets	193.17%	292.65%	257.82%	265.60%	264.37%	230.67%	230.67%	230.67%	230.67%	230.67%	230.67%
Liabilities & Stockholders' Equity											
Current Liabilities											
Accounts payable & accrued liabilities	14.99%	14.91%	14.24%	15.43%	13.20%	15.95%	15.95%	15.95%	15.95%	15.95%	15.95%
Payables to affiliates	0.42%	0.23%	0.13%	0.00%	0.00%	0.24%	0.24%	0.24%	0.24%	0.24%	0.24%
Short-term debt	0.06%	6.69%	4.22%	6.49%	4.61%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Short-term debt to affiliates	0.00%	0.00%	2.80%	0.00%	0.00%	0.40%	0.40%	0.40%	0.40%	0.40%	0.40%
Deferred revenue	1.40%	1.51%	1.07%	0.98%	1.05%	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%
Short-term operating lease liabilities	5.08%	5.66%	4.27%	4.41%	4.53%	3.42%	3.42%	3.42%	3.42%	3.42%	3.42%
Short-term financing lease liabilities	2.13%	1.55%	1.40%	1.46%	1.60%	1.16%	1.16%	1.16%	1.16%	1.16%	1.16%
Other current liabilities	3.72%	1.18%	1.21%	2.32%	1.65%	1.85%	1.85%	1.85%	1.85%	1.85%	1.85%
Total current liabilities	27.79%	31.73%	29.33%	31.09%	26.64%	28.38%	28.38%	28.38%	28.38%	28.38%	28.38%
Long-term debt	24.35%	90.40%	83.72%	82.07%	88.98%	61.05%	61.05%	61.05%	61.05%	61.05%	61.05%
Long-term debt to affiliates	31.08%	6.90%	1.86%	1.88%	1.90%	16.17%	16.17%	16.17%	16.17%	16.17%	16.17%
Tower obligations	4.97%	4.43%	3.50%	4.94%	4.81%	4.99%	4.99%	4.99%	4.99%	4.99%	4.99%
Deferred tax liabilities	12.46%	14.57%	12.75%	13.68%	17.13%	12.80%	12.80%	12.80%	12.80%	12.80%	12.80%
Operating lease liabilities	23.42%	39.06%	32.22%	37.52%	35.95%	24.03%	24.03%	24.03%	24.03%	24.03%	24.03%
Financing lease liabilities	2.99%	2.11%	1.82%	1.72%	1.57%	1.46%	1.46%	1.46%	1.46%	1.46%	1.46%
Deferred rent expense	0.00%	0.00%	0.00%	0.00%	0.00%	1.87%	1.87%	1.87%	1.87%	1.87%	1.87%
Other long-term liabilities	2.12%	7.91%	6.36%	5.15%	5.00%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%
Total long-term liabilities	101.40%	165.38%	142.24%	146.96%	155.35%	126.82%	126.82%	126.82%	126.82%	126.82%	126.82%
Stockholders' Equity	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Treasury stock, at cost	-0.02%	-0.02%	-0.02%	-3.79%	-11.93%	-2.26%	-2.26%	-2.26%	-2.26%	-2.26%	-2.26%
Accumulated other comprehensive income (los	-1.93%	-2.31%	-1.70%	-1.31%	-1.23%	-1.32%	-1.32%	-1.32%	-1.32%	-1.32%	-1.32%
Retained earnings (accumulated deficit)	-19.63%	-8.53%	-3.51%	-0.28%	9.35%	-13.16%	-13.16%	-13.16%	-13.16%	-13.16%	-13.16%
Common equity	85.55%	106.40%	91.48%	92.92%	86.18%	92.21%	92.21%	92.21%	92.21%	92.21%	92.21%
Total stockholders' equity	63.98%	95.54%	86.25%	87.54%	82.38%	75.47%	75.47%	75.47%	75.47%	75.47%	75.47%
Total liabilities & stockholders' equity	193.17%	292.65%	257.82%	265.60%	264.37%	230.67%	230.67%	230.67%	230.67%	230.67%	230.67%

Value Driver Estimation

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
NOPLAT:										
Operating Revenue	44,998	68,397	80,118	79,571	78,558	81,963	84,961	86,389	86,721	85,905
- Cost of Services	6,622	11,878	13,934	14,666	11,655	10,931	10,906	11,089	11,132	11,027
- Cost of Equipment Sales	11,899	16,388	22,671	21,540	18,533	18,107	18,344	18,653	18,724	18,548
- SGA Expenses	14,139	18,926	20,238	21,607	21,311	21,005	20,924	21,276	21,357	21,156
- Depreciation & Amortization	6,616	14,151	16,383	13,651	12,818	12,144	11,739	11,936	11,982	11,869
+ Implied Lease Interest	-	629	1,611	1,550	1,651	1,560	1,688	1,691	1,670	1,662
EBITA	5,722	7,683	8,503	9,657	15,892	21,336	24,736	25,127	25,196	24,966
	•,. ==	,,	0,000	0,000		21,000	2.,	20,121	20,.00	1,000
Provision for income taxes	1,135	466	327	556	2,682	3,921	4,745	4,921	5,039	5,086
+ Tax on Lease Interest	-	241	617	594	632	598	646	648	640	637
+ Tax on Impairment	-	160	-	599	(10)	-	-	-	-	-
+ Tax on Interest Expense	(435)	(1,046)	(1,288)	(1,288)	(1,277)	(1,652)	(1,759)	(1,780)	(1,802)	(1,825)
- Tax on Interest Income	9	11	8	-	-	85	201	344	512	692
- Tax on Other income	(3) 694	(155)	(76)	(13) 473	26	- 2,782	- 3,432	-	- 3,364	- 2 206
Total Adjusted Taxes	094	(35)	(275)	473	2,001	2,702	3,432	3,445	3,304	3,206
Deferred Tax Liability	5,607	9,966	10,216	10,884	13,458	14,896	14,921	14,946	14,966	14,988
Change in Deferred Taxes	1,135	4,359	250	668	2,574	1,438	25	25	20	23
EBITA	5,722	7,683	8,503	9,657	15,892	21,336	24,736	25,127	25,196	24,966
Less Adjusted Taxes	694	(35)	(275)	473	2,001	2,782	3,432	3,445	3,364	3,206
Change in Deferred Taxes	1,135	4,359	250	668	2,574	1,438	25	25	20	23
NOPLAT	6,163	12,076	9,028	9,852	16,465	19,993	21,329	21,707	21,851	21,783
Invested Capital (IC): Operating Current Assets:										
+ Normal Cash	1,250	1,900	2,225	2,210	2,182	2,277	2,360	2,400	2 400	2 206
+ Accounts Receivable		-			-	-		-	2,409	2,386
+ EIP Receivables	1,888	4,254	4,167	4,445	4,692	4,212	4,367	4,440 3,175	4,457	4,415
+ Other Receivables	2,600 20	3,577 22	4,748 27	5,123	4,456	3,476	3,332	-	3,009	2,959
+ Inventory	964	2,527	2,567	-					-	
+ Prepaid expenses	904		2,307	1,884	1,678	1,672	1,498	1,455 442	1,419	1,301 440
+ Other Current Assets	- 2,305	624 2,496	2,005	673 2,435	702 2,352	420 3,031	435 3,142	3,195	444 3,207	3,177
	2,305	2,490	2,005	2,435	2,352	3,031	3,142	3,195	3,207	3,177
Operating Current Liabilities: - Accounts Payable	0.740	10 100	11 405	10.075	10.070	10.070	10 550	10 770	10.001	10 701
- Accounts Payable to Affliliates	6,746	10,196	11,405	12,275	10,373	13,072	13,550	13,778	13,831	13,701
- Other Current Liabilities	187	157	103		-	-	-			-
- Deferred Revenue	1,673 631	810 1,030	967 856	1,850 780	1,296 825	1,148 1,117	1,143 1,158	1,162 1,177	1,166 1,182	1,155 1,170
Total Net Operating Working Capital	(210)	3,207	3,154	1,865	3,568	(249)	(718)	(1,011)	(1,234)	(1,349)
	. ,	,	,		,		. ,	())	())	.,,,
+ Net PPE	21,984	41,175	39,803	42,086	40,432	43,731	43,821	43,278	43,066	42,846
+ Financing Lease Right of Use Asset	2,715	3,028	3,322	3,257	3,270	3,537	3,544	3,500	3,483	3,465
+ Operating Lease Right of Use Asset	10,933	28,021	26,959	28,715	27,135	29,349	29,409	29,045	28,903	28,755
+ Net Spectrum Assets	36,465	82,828	92,606	95,798	96,707	98,736	95,445	92,154	88,862	85,571
+ Net Other Operating Assets	115	5,298	4,733	3,508	2,618	1,896	1,326	909	619	448
+ Net Long-Term EIP Receivables	1,583	2,031	2,829	2,546	2,042	1,915	1,833	1,716	1,597	1,561
+ Net Other Assets	1,891	2,779	3,232	4,127	4,229	3,380	3,503	3,562	3,576	3,542
- Deferred Rent Expense	-	-	-	-	-	-	-	-	-	-
- Other Long-Term Liabilities	954	5,412	5,097	4,101	3,929	3,640	3,773	3,836	3,851	3,815
Invested Capital	74,522	162,955	171,541	177,801	176,072	178,654	174,390	169,316	165,021	161,025
Free Cash Flow (FCF):										
NOPLAT	6,163	12,076	9,028	9,852	16,465	19,993	21,329	21,707	21,851	21,783
Change in IC	17,129	88,433	8,587	6,260	(1,729)	2,581	(4,264)	(5,074)	(4,295)	(3,996)
FCF	(10,966)	(76,357)	442	3,592	18,194	17,411	25,593	26,780	26,146	25,779
Return on Invested Capital (ROIC):										
	6 160	10.076	0.000	0.950	16 465	10.002	21 220	01 707	01 051	01 700
NOPLAT Beginning IC	6,163	12,076	9,028	9,852	16,465	19,993	21,329	21,707	21,851	21,783
Beginning IC ROIC	57,393 10.74%	74,522 16.21%	162,955 5.54%	171,541 5.74%	177,801 9.26%	176,072 11.35%	178,654 11.94%	174,390 12.45%	169,316 12.91%	165,021 13.20%
	/ .									
Economic Profit (EP):										
Beginning IC	57,393	74,522	162,955	171,541	177,801	176,072	178,654	174,390	169,316	165,021
	57,393 4.62% 2,652	74,522 10.09% 7,517	162,955 -0.58% (941)	171,541 -0.37% (642)	177,801 3.14% 5,587	176,072 5.24% 9,221	178,654 5.82% 10,400	174,390 6.33% 11,038	169,316 6.79% 11,493	165,021 7.08% 11,687

Weighted Average Cost of Capital (WACC) Estimation

I	Estimated WACC	6.12%
MV of Total Debt	128,741.00	31.36%
PV of Operating Leases	34,291	
Long-Term Debt	69,903	
Current Portion of LTD	20,928	
Short-Term Debt	3,619	
Market Value of Debt:		
MV of Equity	281,789.56	68.64%
Current Stock Price	\$235.61	
Total Shares Outstanding	1,196	
Narket Value of Common Equity	<i>ı</i> :	MV Weights
After-Tax Cost of Debt	4.28%	
Marginal Tax Rate	25.60%	Prior year marginal tax rate (2023)
Pre-Tax Cost of Debt	5.75%	YTM on TMUS 30-year corporate bond
Implied Default Premium	1.32%	
Risk-Free Rate	4.43%	10-Year Treasury Yield as of November 15th
Cost of Debt:		
Cost of Equity	6.96%	
Equity Risk Premium	4.60%	From NYU Country Risk Premiums
Beta	0.55	Average of 2 - 5 year betas (Bloomberg)
Risk-Free Rate	4.43%	10-Year Treasury Yield as of November 15th
ost of Equity:		ASSUMPTIONS:

Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models

Key Inputs:

CV Growth of NOPLAT	2.50%
CV Year ROIC	14.97%
WACC	6.12%
Cost of Equity	6.96%

Fiscal Years Ending Dec. 31	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
DCF Model:										
Free Cash Flow (FCF)	17,411	25,593	26,780	26,146	25,779	26,203	25,667	25,658	25,566	25,588
Continuing Value (CV)	,				,	,				498,386
PV of FCF	16,408	22,727	22,411	20,619	19,157	18,349	16,938	15,956	14,982	292,063
Value of Operating Assets:	459,609									
Non-Operating Adjustments										
Less: Underfunded Pension	(70)									
Less: Tower obligations	(3,777)									
Less: Short-term Debt	(3,619)									
Less: Current Portion of LTD	(20,928)									
Less: PV of Operating Leases	(34,291)									
Less: Long-term debt to affiliates	(1,496)									
Less: Long-term debt	(69,903)									
Value of Equity	325,525									
Shares Outstanding	1,196									
Intrinsic Value of Last FYE	\$ 272.18									
Implied Price as of Today	\$ 284.79									
EP Model:										
Economic Profit (EP)	9,221	10,400	11,038	11,493	11,687	11,872	12,097	12,305	12,523	12,800
Continuing Value (CV)	,			,						353,810
PV of EP	8,690	9,235	9,237	9,063	8,685	8,314	7,983	7,652	7,339	207,339
Total PV of EP	283,537									
Invested Capital (last FYE)	176,072									
Value of Operating Assets:	459,609									
Non-Operating Adjustments										
Less: Underfunded Pension	(70)									
Less: Tower obligations	(3,777)									
Less: Short-term Debt	(3,619)									
Less: Current Portion of LTD	(20,928)									
Less: PV of Operating Leases	(- / /									
Less: Long-term debt to affiliates	(34.291)									
Less. Long-lenn debt to annales	(34,291) (1,496)									
-	(1,496)									
Less: Long-term debt	(1,496) (69,903)									
Less: Long-term debt Value of Equity	(1,496) (69,903) 325,525									
Less: Long-term debt	(1,496) (69,903)									

Dividend Discount Model (DDM) or Fundamental P/E Valuation Model

Fiscal Years Ending	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
EPS	\$ 9.97	\$ 12.38 \$	13.14 \$	13.72 \$	14.08 \$	14.42 \$	14.77 \$	15.12 \$	15.47 \$	15.88
<i>Key Assumptions</i> CV growth of EPS CV Year ROE Cost of Equity	2.50% 17.89% 6.96%									
Future Cash Flows P/E Multiple (CV Year) EPS (CV Year) Future Stock Price Dividends Per Share	2.83	3.52	3.63	3.73	3.85	3.96	4.08	4.20	\$ 4.33	19.30 15.88 306.38
Discounted Cash Flows	2.65	3.08	2.96	2.85	2.75	2.65	2.55	2.45	2.36	167.24
Intrinsic Value as of Last FYE Implied Price as of Today	\$ 191.54 \$ 200.42									

Relative Valuation Models

				EPS	EPS		
Ticker	Company	Price		2024E	2025E	P/E24	P/E 25
VZ	Verizon Communications	\$41.65		\$4.60	\$4.73	9.05	8.81
Т	AT&T	\$22.68		\$2.21	\$2.24	10.26	10.13
CMCSA	Comcast Corporation	\$42.88		\$4.22	\$4.39	10.16	9.77
CHTR	Charter Communications	\$389.57		\$33.85	\$35.23	11.51	11.06
					Average	10.25	9.94
TMUS	T-Mobile	\$235.61		9.97	12.38	23.6	19.0
Implied P/E (EP P/E (EP	-		\$ \$	102.14 123.01			

Key Management Ratios

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
Liquidity Ratios:										
Current Ratio	0.74	1.10	0.89	0.77	0.91	0.94	1.24	1.59	1.98	2.39
Quick Ratio (Current Assets - Inventories / Current Liabilities)	0.67	0.98	0.78	0.69	0.83	0.88	1.18	1.55	1.92	2.33
Cash Ratio (Cash and Cash Equivalents / Current Liabilites)	0.07	0.48	0.28	0.18	0.25	0.46	0.77	1.13	1.52	1.94
Operating Cash Flow Ratio (Operating Cash Flows / Current Liabilities)	0.55	0.40	0.59	0.68	0.89	1.18	0.99	0.98	1.00	0.99
Asset-Management Ratios:										
Inventory Turnover (COGS / Average Inventory)	18.09	16.19	14.37	16.27	16.95	17.33	18.45	20.14	20.77	21.74
Total Asset Turnover (Net Sales / Average Total Assets)	0.56	0.48	0.39	0.38	0.37	0.38	0.38	0.38	0.37	0.36
Fixed Asset Turnover (Net Sales / Average Net Fixed Assets)	1.98	2.17	1.98	1.94	1.90	1.95	1.94	1.98	2.01	2.00
Capital Asset Turnover (Net Sales / Net Capital Assets)	0.52	0.34	0.39	0.38	0.38	0.37	0.38	0.38	0.37	0.35
Financial Leverage Ratios:										
Debt to Equity Ratio (Total Debt / Total Equity)	2.02	2.06	1.99	2.03	2.21	2.34	2.26	2.14	2.00	1.85
Debt to Assets Ratio (Total Debt / Total Assets)	0.67	0.67	0.67	0.67	0.69	0.70	0.69	0.68	0.67	0.65
Debt to EBITDA Ratio	10.16	17.55	16.17	14.67	9.00	7.21	6.29	6.23	6.25	6.34
Profitability Ratios:										
Return on Equity (Net Income / Beginning Total Equity)	14.03%	10.64%	4.63%	3.75%	11.94%	18.18%	21.65%	21.42%	20.62%	19.33%
Gross Profit Margin (Operating Income / Net Sales) x 100	12.72%	9.70%	8.60%	8.22%	18.16%	24.13%	27.13%	27.13%	27.13%	27.13%
Net Profit Margin (Net Income / Net Sales) x 100	7.71%	4.48%	3.77%	3.25%	10.59%	14.35%	16.76%	17.09%	17.43%	17.76%
ROA (Return on Assets)	4.35%	2.13%	1.49%	1.24%	3.97%	5.51%	6.41%	6.50%	6.48%	6.36%
ROE (Return on Equity)	14.03%	10.64%	4.63%	3.75%	11.94%	18.18%	21.65%	21.42%	20.62%	19.33%
Payout Policy Ratios:										
Dividend Payout Ratio (Dividend / Net Income)	-	-	-	-	0.09	0.28	0.28	0.27	0.27	0.27
Total Payout Ratio ((Divs. + Repurchases)/NI)	-	6.38	-	1.16	1.66	0.91	0.78	0.70	0.63	0.57
Retention Ratio	1.00	(5.38)	1.00	(0.16)	(0.66)	0.09	0.22	0.30	0.37	0.43

Beta

Sensitivity Tables

_		Normal Cash %									
	284.79	0.05%	0.78%	1.78%	2.78%	3.78%	4.78%	5.78%			
	0.40	337.65	337.36	336.97	336.58	336.18	335.79	335.40			
	0.45	318.72	318.45	318.08	317.71	317.34	316.97	316.60			
	0.50	301.49	301.23	300.88	300.52	300.17	299.82	299.46			
	0.55	285.71	285.47	285.13	284.79	284.46	284.12	283.79			
	0.60	271.22	270.98	270.66	270.34	270.02	269.70	269.38			
	0.65	257.85	257.62	257.32	257.01	256.70	256.40	256.09			
	0.70	245.47	245.26	244.96	244.67	244.38	244.08	243.79			

					Risk-Free Rat	e		
	284.79	4.13%	4.23%	4.33%	4.43%	4.53%	4.63%	4.73%
Е	3.10%	375.95	366.37	357.23	348.48	340.11	332.10	324.41
niu	3.60%	349.10	340.67	332.59	324.85	317.42	310.29	303.43
rer	4.10%	325.32	317.84	310.65	303.75	297.11	290.72	284.56
sk F	4.60%	304.10	297.42	290.99	284.79	278.82	273.06	267.50
y Ri	5.10%	285.05	279.05	273.25	267.66	262.26	257.04	252.00
Equity Risk Premium	5.60%	267.84	262.41	257.17	252.09	247.18	242.43	237.83
Ec	6.10%	252.21	247.28	242.50	237.88	233.40	229.05	224.84

					Inflation			
	284.79	2.25%	2.50%	2.75%	3.00%	3.25%	3.50%	3.75%
	5.37%	380.79	379.68	378.61	377.57	376.57	375.60	374.67
	5.62%	344.61	343.60	342.63	341.69	340.78	339.90	339.05
WACC	5.87%	313.72	312.80	311.91	311.05	310.22	309.41	308.64
	6.12%	287.25	286.40	285.59	284.79	284.03	283.29	282.58
	6.37%	263.70	262.92	262.17	261.44	260.73	260.05	259.39
	6.62%	243.15	242.43	241.73	241.05	240.40	239.77	239.16
	6.87%	224.89	224.22	223.57	222.94	222.33	221.75	221.18

Growth in Revenue per Customer in 2024

PP&E Growth

284.79

3.04%

274.56 3.04% 276.87 279.20 281.53 283.88 286.24 288.61 3.54% 275.74 278.07 280.41 282.76 285.12 287.50 289.88 4.04% 276.96 279.30 281.66 284.02 286.40 288.79 291.20 4.54% 280.56 282.94 285.32 287.72 292.54 278.20 290.12 5.04% 279.49 281.87 284.26 286.65 289.07 291.50 293.93 5.54% 280.81 283.20 285.61 288.03 290.46 292.90 295.36 6.04% 282.16 284.58 287.00 289.44 291.89 294.35 296.82

4.04%

3.54%

Postpaid Customer Growth for 2024

4.54%

5.04%

5.54%

6.04%

CapEx

284.79	35.33%	36.33%	37.33%	38.33%	39.33%	40.33%	41.33%
5.16%	286.72	286.69	286.67	286.65	286.63	286.60	286.58
6.16%	286.10	286.08	286.05	286.03	286.01	285.98	285.96
7.16%	285.48	285.46	285.43	285.41	285.39	285.37	285.34
8.16%	284.86	284.84	284.82	284.79	284.77	284.75	284.73
9.16%	284.24	284.22	284.20	284.18	284.15	284.13	284.11
10.16%	283.62	283.60	283.58	283.56	283.53	283.51	283.49
11.16%	283.01	282.98	282.96	282.94	282.92	282.89	282.87

_				Cost	of Services fo	r 2024		
	284.79	11.84%	12.34%	12.84%	13.34%	13.84%	14.34%	14.84%
AT	1.00%	247.23	242.03	236.83	231.63	226.42	221.22	216.02
JPL	1.50%	262.18	256.63	251.07	245.51	239.95	234.40	228.84
CV Growth of NOPLAT	2.00%	280.77	274.77	268.77	262.77	256.77	250.77	244.77
	2.50%	304.48	297.92	291.36	284.79	278.23	271.67	265.10
owt	3.00%	335.81	328.50	321.19	313.89	306.58	299.27	291.96
Ū	3.50%	379.10	370.77	362.43	354.09	345.75	337.42	329.08
S	4.00%	442.84	432.99	423.13	413.28	403.43	393.58	383.72