T-Mobile Full Research Report

UConn Undergraduate Student Managed Fund

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Vivek Tedla & Reilly Cotter

T-Mobile US Inc. (NASDAQ: TMUS)

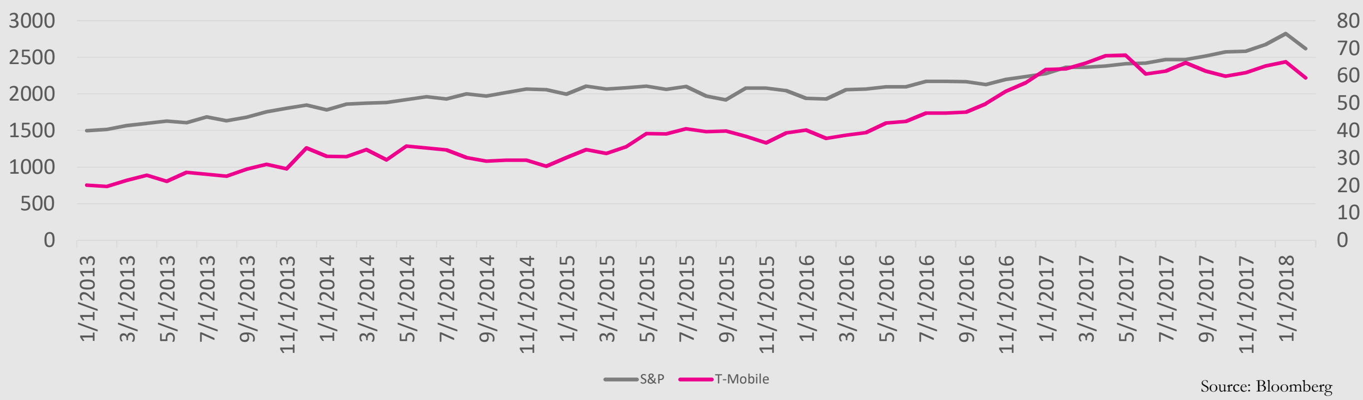
- **Sector:** Technology
- **Current Price:** $61.15
- **Industry:** Telecommunications
- **Target Price:** $74.70
- **Date:** 4/18/18
- **Recommendation:** BUY

Key Financial Metrics

Market Cap: $52.931B	Operating Margin: 12.04%	Price to FCF: 18.95x
52-Week High: $68.88	P/E Ratio: 28.19x	ROE: 21.97%
52-Week Low: $54.60	EPS: $2.20	ROIC: 10.22%
Dividend Yield: N/A	FCF/Sh: $3.27	ROA: 6.65%
Gross Margin: 56.39%	FCF Yield: 5.15%	Beta: 0.99

Source: Bloomberg

TMUS vs. S&P 500 (10YR)



Source: Bloomberg

Investment Highlights

Exclusive Focus on Wireless Market – T-Mobile is the strongest carrier focused exclusively on the wireless market. Competitors like Verizon and AT&T have been focusing their attention on cable TV and other products.

Most Consistent Customer Growth – T-Mobile has experienced the most consistent customer growth with the addition of over one million net subscribers over the last 18 quarters. The longest such streak in the industry.

Fastest Network – According to OpenSignal, an independent 3rd party mobile testing company, T-Mobile's network is the fastest in the industry and is continuing to get faster with time.

Decreasing Customer Churn - Customer churn rate has been falling and in Q4 of 2017 it fell 5bps to a low of 1.18%.

Strong Financial Performance – T-Mobile is the only large U.S. carrier that has growing wireless service revenue. This volume growth should result in a multi-year ramp up on profitability and free cash flow.

Business Description

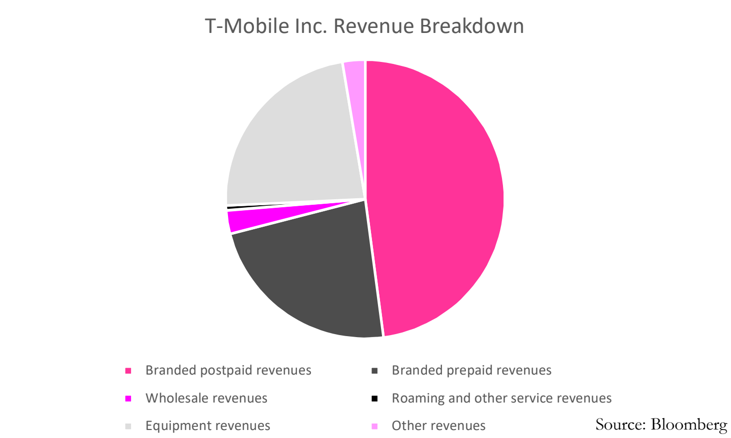
Business Overview: T-Mobile US, Inc. provides mobile communication services under the T-Mobile and MetroPCS brands in the US, Puerto Rico, and the U.S. Virgin Islands. The company's largest operating segments are Postpaid Wireless, Prepaid Wireless, and Equipment Services from which they derive 48%, 23%, and 23% of their revenue, respectively. T-Mobile operates as a low-cost industry disruptor offering low-prices, great service, free bonuses, and simplicity as they strive to redefine wireless as "The Un-carrier." T-Mobile grows their user base by offering plans with superior value to those of their competitors while leveraging the capabilities of their nationwide wireless network.

Business Description

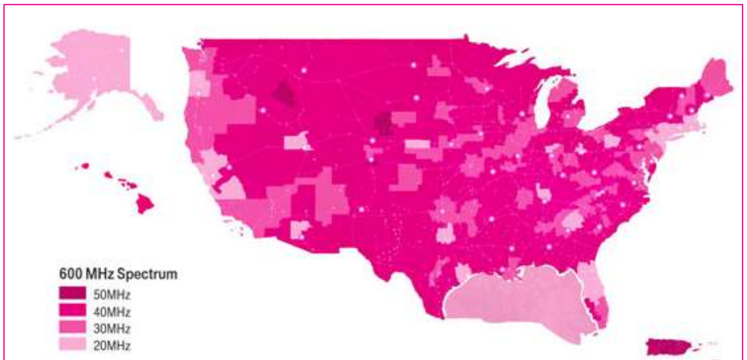
Business Segments:
Postpaid - Postpaid mobile phone plans provide a service based on a prior arrangement with a carrier and users are then billed after the fact depending on usage. Postpaid plans are typically the highest margin segment for a telecommunications provider. T-Mobile's postpaid presence is large consisting of nearly 38 million postpaid subscribers making up 48% of total revenues. T-Mobile has transformed the term "postpaid plans" by introducing its Un-carrier marketing campaign. T-Mobile broke conventional norms and introduced a streamlined pricing plan that dropped contracts, subsidized phones, coverage fees for data, and early termination fees. This campaign has been widely successful and has driven many new customer to the company.

Prepaid - Prepaid cell phone plans, also called no contract plans, do not require a monthly contract obligations. Instead users will prepay to have a certain amount of access to data, minutes, and texts per month. T-Mobile's prepaid brand is Metro PCS. Metro PCS is one of the most widely used prepaid phone companies and makes up over 23% of total revenues. Prepaid phone plans provide a lower cost no strings attached alternative to typical postpaid plans.

Layer3TV - T-Mobile U.S. Inc. recently acquired Layer3TV, a mobile TV streaming service for households and mobile users. Layer3TV expands upon T-Mobile's Un-carrier mission and breaks the norms of traditional TV. Layer3TV provides both T-Mobile and non T-Mobile customers the opportunity to get an no contract TV service accessible from all of your favorite devices.



Source: Bloomberg



Source: Company Data

Carrier	Data Throttled After	Unlimited Data Montly Cost	Additional Line Monthly Cost	Single-Line Data Plan Cost for 2 Years
AT&T Plus	22GB/month	$90	$55	$2,160
Verizon "beyondunlimited"	22GB/month	$85	$75	$2,040
T-Mobile One Plus	30GB/month	$80	$35	$1,920
Verizon "gounlimited"	22GB/month	$75	$55	$1,800
T-Mobile One	30GB/month	$70	$30	$1,680
AT&T Choice	22GB/month	$60	$55	$1,440
Sprint	23GB/month	$50*	$40	$1,320

Source: CNET

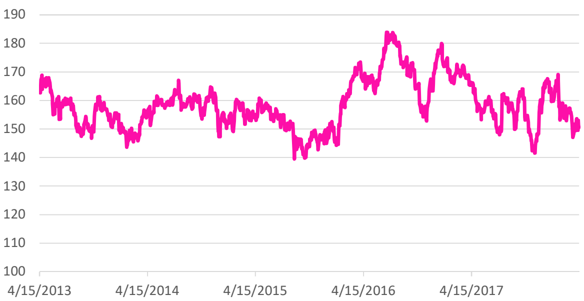
Business Strategy

T-Mobile's competitive advantage lies in their simplified pricing of equipment and data plans. Due to this, they have seen more consumers switch to and stay with the carrier, leading to rising service revenue growth. Additionally, their recent acquisition of 600Mhz and 700Mhz spectrum follows their philosophy of providing stronger and faster network coverage for the best price in the industry. The second figure on the left shows T-Mobile's coverage with the newly acquired spectrum. T-Mobile is currently the only large carrier in the wireless space solely focused on their wireless customers.

Plan Pricing – T-Mobile aims to provide their customer the most value across their unlimited plans. The figure at the bottom left displays the costs of unlimited plans offered by T-Mobile and its competitors. T-Mobile offers 26% more data than its competitors while remaining inline or cheaper in pricing. They also provide additional free add-on's that would be extremely costly with competitors (see Appendix 1). Lastly, when you factor in additional lines T-Mobile comes out as the clear choice.

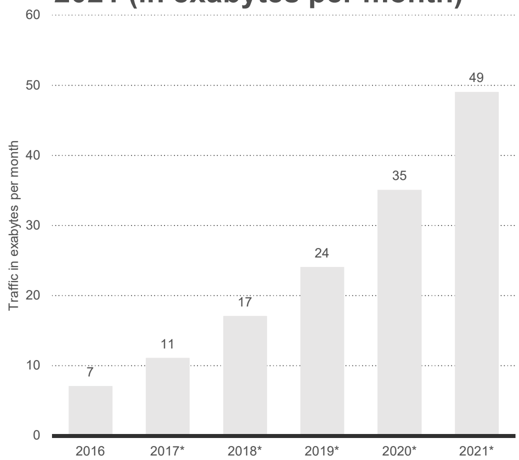
Hardware Costs – T-Mobile offers the most competitive hardware deals in the industry which has resulted in millions of new activations. 46% of customers believed smartphone should cost no more than $250 while 35% believed they should cost no more than $500. Customers have become more price conscious making T-Mobile's attractive offering on top selling phones a major selling point attracting many new customers from its competitors

S&P 500 Telecommunication Services (Sector)



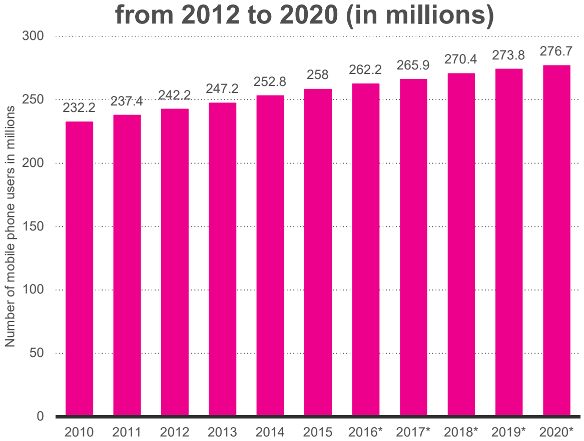
Source: S&P Global

Global mobile data traffic from 2016 to 2021 (in exabytes per month)



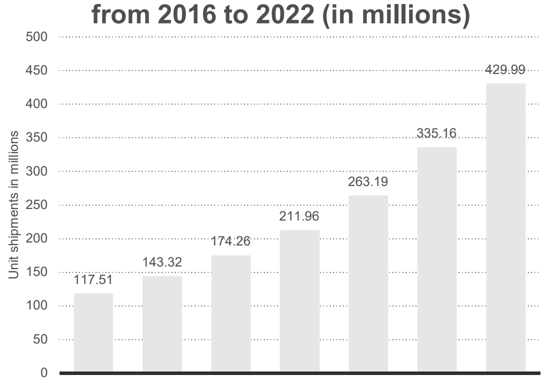
Source: Cisco Systems

Number of mobile phone users in the U.S. from 2012 to 2020 (in millions)



Source: Statista DMO

Wearable device shipments worldwide from 2016 to 2022 (in millions)



Source: Tractica

Industry Overview & Competitive Positioning

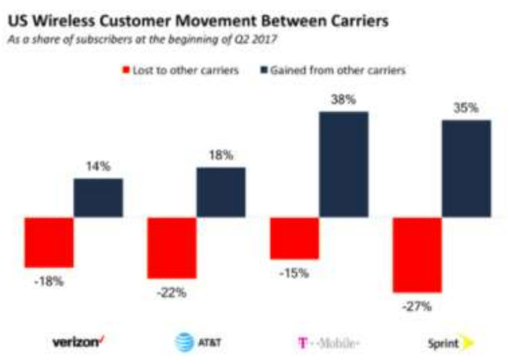
Overview - The wireless industry has seen a more aggressive behavior by the major players as competing offerings have continually resulted in lower consumer wireless prices, as many plans and practices are being simplified for the consumer. Growth in smartphone sales have continued to encourage users to compare wireless providers and the recent iPhone releases have ushered in an upgrade “supercycle”. The highest growth demographics include those 45-54 and 55+. Additionally, the growth of wearables and IOT devices has been an area of growth in the industry. The emergence of 5G coverage is expected to be complete by 2020 as firms such as T-Mobile have been heavily investing in these next-generation networks for years.

Next Generation Networks – There has been an industry wide race to build the first 5th generation (5G) wireless network. With data usage on the rise, a 5G network would provide users faster speeds, better connections, and even lower battery consumption for their devices. Verizon, AT&T, T-Mobile, and Sprint have all discussed the implementation of a new capital intensive network, however T-Mobile is the only company to have a formalized implementation plan through 2020. Additionally, not all smartphones are currently compatible with the 5G network so as network providers build out their infrastructure hardware manufacturers will also need to upgrade their technology concurrently.

Data Driven Future – Global mobile data traffic is expected to nearly triple by 2021. This growth in data traffic is not only driven by increased penetration in smartphone use, but also is driven by the growth in wearable technology as well as Internet of Things (IOT) devices. As a result, telecommunications companies will need to be equipped to handle the increased use on their networks and ensure fast speeds. T-Mobile already has the fastest data speeds in the industry and is determined to keep raising the bar for its customers.

Postpaid Competitors – The three largest postpaid competitors in the U.S. are Verizon Wireless, AT&T , and Sprint. Verizon ranks number one in wireless subscribers with AT&T in second, T-Mobile in third, and Sprint in fourth. The operating landscape of the postpaid market is extremely competitive and each provider constantly works on providing a differentiated offering. All four of these competitors operate within the business market, however Verizon and AT&T currently dominant most of this market share. T-Mobile’s current 5% share of this segment is poised to grow with their most recent network and spectrum investments.

Prepaid Competitors – The prepaid market is a competitive segment that is widely determined by price. The main competitors in this segment include Cricket Wireless, Boost Mobile and T-Mobile’s Metro PCS. According to the IAB, prepaid customers make up roughly 15% of the total mobile phone market. This market is dominated by lower income families as prepaid phone providers offer the lowest rates and provide the most flexibility for customers.



Source: Business Insider

Industry Headlines

On April 10th 2017, news broke that T-Mobile and Sprint's parent companies Deutsche Telecom and Softbank were in discussing a potential merger for the third time. If completed, this merger would combine the third and fourth largest telecom providers in the USA. The combined entity would surpass AT&T as the second largest telecom provider in the USA and would be poised to surpass Verizon within the coming years. The merger talks started again as both T-Mobile and Sprint begin their investment in a 5G network. By combining both entities they can better leverage their capital and network capabilities and create a truly unmatched wireless network. There are anti-trust concerns and the talks have just began, but the possibility for the merger provides significant upside for T-Mobile.

Management

John Legere - Joined T-Mobile in September 2012 and has been CEO and President since April 2013. Mr. Legere brings over 34 years of experience in the US telecommunications and technology industry. Previous roles include CEO of Global Crossing Limited, President of AT&T APAC, and President for Dell APAC. John has been instrumental in T-Mobile's resurgence as a premiere mobile carrier by introducing his un-carrier philosophy.

Nicholas Drake - Responsible for all marketing, product management, and digital platforms. Prior to joining T-Mobile Mr. Drake served as CMO of Quicksilver, Roxy, and DC Shoes. He also acted as an advisor for Michelle Obama's "Let's Move!" initiative. Nicholas has played a pivotal role in T-Mobile's marketing and branding initiatives over the last three years. He currently serves as Executive Vice President and manages a $1.8 billion dollar marketing budget.

Corporate Social Responsibility

#GIVINGTUESDAY

HUDDLE UP

Voted is 2017 as **World's Most Ethical Company** as presented by The Ethisphere Institute

Government Disclosure Score: 51.79 (Industry Average: 50.71)

Independent Directors: 5 (Industry Average: 5)

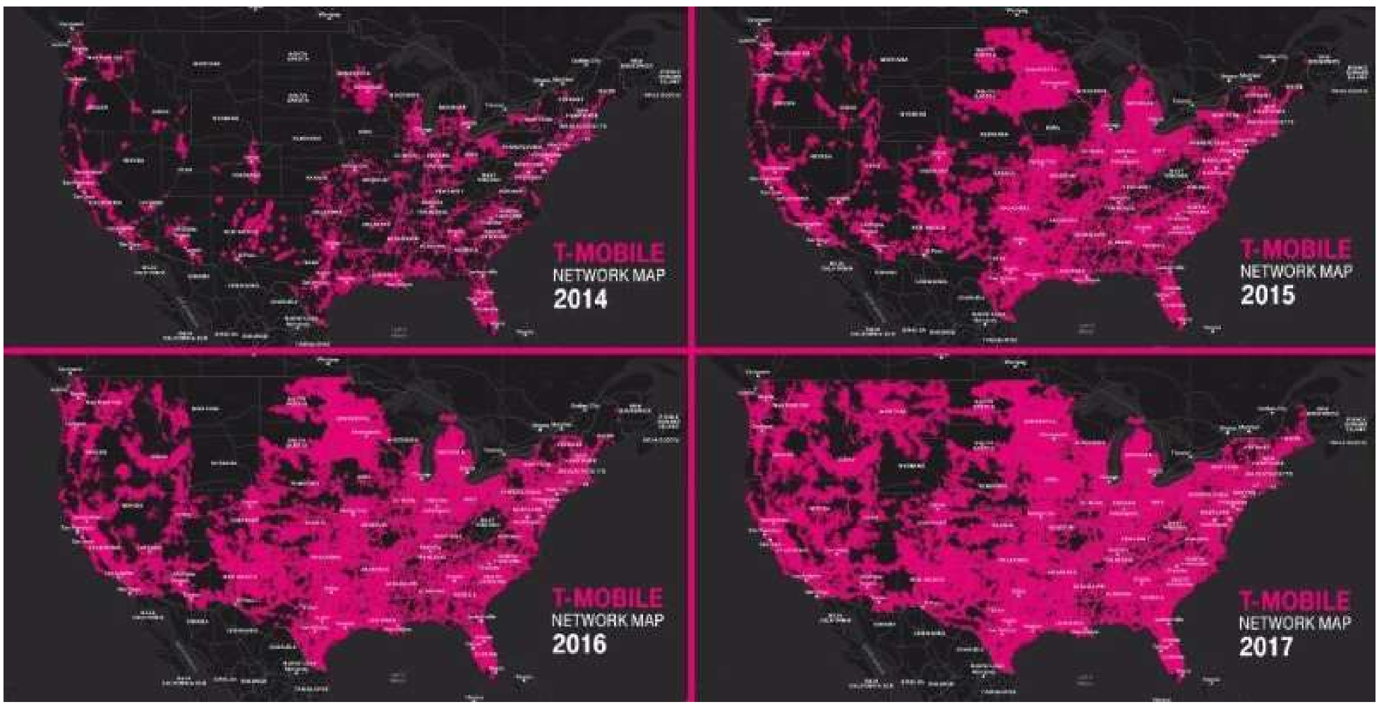
T-Mobile Huddle Up - In 2006, T-Mobile USA launched T-Mobile Huddle Up, a national community outreach program that connects kids, primarily from single-parent families in high-need, urban communities to positive people, places, and programs. T-Mobile Huddle Up addresses the critical need for high-quality afterschool programs by providing a safe, fun place for kids to go after school.

Growth Opportunities

Investment Thesis

We recommend a full position in T-Mobile given their exclusive focus on the wireless market, best customer growth in the industry, and increasing quality of their newly national network and offerings. We believe the company is undervalued because the market is discounting how successful the company's growth has been and how effective management has executed on their strategic initiatives.

Over a ten-year time horizon, we are confident that this growth will result in T-Mobile having a scale similar to that of Verizon and AT&T within the wireless space and ultimately increasing the pace at which they return capital to shareholders.



Opportunity: Distribution Catching up to Network

T-Mobile's network expansion since 2014 is the principal driver of their growth although their distribution and presence lacked in newly covered geographies, or about 33% of the country. As they become a truly national network, their strengthened presence will result in covering an additional 40 million subscribers, of which they are expected to capture at least 10 million.

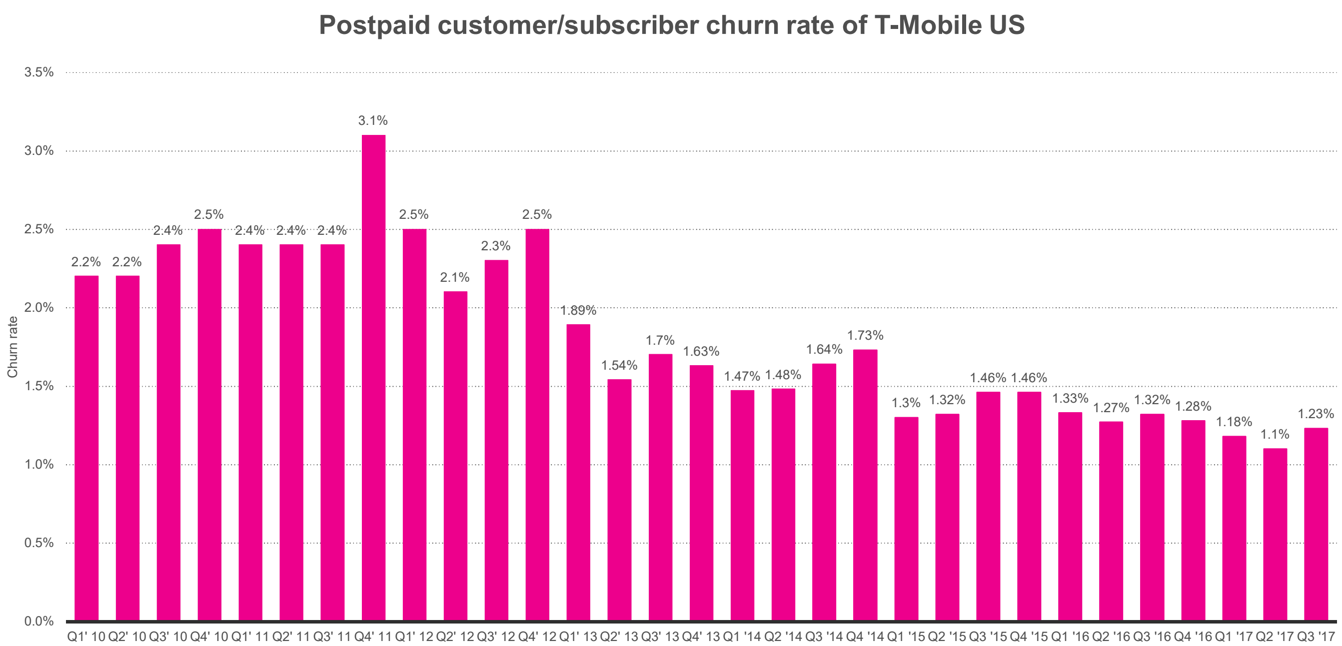
While closing the coverage gap, they are also coming to consumers with a speed gap that they have continued to widen. Management has consistently demonstrated their ability to transform subscriber gains to shareholder value through rapid growth in FCF/share. A wider subscriber base driven by retail expansion will catalyze this trend to ensure that it continues into the future.

Growth Opportunities (Cont.)

Opportunity: Best Customer Growth in the Industry

T-Mobile added 8.2 million customers in 2017 and has added over 1 million net subscribers for the past eighteen quarters, the longest such streak in the industry. The company's churn rates – particularly postpaid – continue to fall as customers are demonstrating more loyalty to the brand. This will allow for T-Mobile to save on acquisition costs and allow for them to focus on margin expansion. Additionally, their porting ratios relative to competitors indicate how effectively they have been successfully acquiring customers from their larger competitors as consumers take notice of their expanded network quality and capabilities.

Recent iPhone releases have spurred an upgrade "supercycle" which the company stands to benefit from due to the unmatched value in their product offerings and data plans. For example, their iPhone BOGO offers seem to be in-line with AT&T and Verizon, but consumers see that they incentives have a higher present value and that savings will be realized within eight weeks in the form of a Prepaid MasterCard rather than through bill credits that materialize over twenty-four to thirty months.



Source: Company Data

Opportunity: Exclusive Focus on Wireless Market

As competitors are attempting to diversify into unrelated segments, T-Mobile is the only carrier committed to deploying a 5G network and has an implementation plan through 2020. With 5G on the horizon, US telecommunication capital spending has been steadily decreasing and T-Mobile's Capex spending plans communicate their desire to be the company that brings the network to consumers.

A predominant focus on wireless bodes well for T-Mobile during spectrum auctions as they seek to obtain licenses in more rural locations, which can be acquired for lower prices while still serving a strategic purpose. In 2017 T-Mobile invested $7.99 billion to purchase 1,525 licenses spread throughout the country. T-Mobile acquired 45% of the spectrum available at auction which quadrupled T-Mobile's low band holding. Please see Appendix 2 for more information on the benefits of low band spectrum. This spectrum acquisition comes as a major victory for T-Mobile which lost out on the FCC's 2015 auction in which AT&T and Verizon dominated. T-Mobile announced that it would start deploying its new spectrum in parts of the country this year. Increased amounts of spectrum in less dense areas is in-line with their expansion and ensure that their network will be able to meet the additional load brought on by subscriber gains.

Valuation

Discounted Cash Flow

Based on the data in TMUS's 2017 10-k, we estimate the intrinsic value per share of TMUS is $78.04. This was given a 90% weighting in our final valuation. We project TMUS's revenue growth to slow about 100 bps annually, particularly in their core segment of branded postpaid revenue, as they approach maturity when we believe they will growth at 2.0% into perpetuity.

We also project margin expansion over the period, coming from TMUS's cost of equipment as a percentage of revenue decreasing and approaching the industry average. This metric is an effective proxy for cost of acquiring customers.

We assume a WACC of 7.07% as calculated by the company's current cost of debt and cost of equity as derived by CAPM.

EV/EBITDA Multiple

TMUS operates as one of the four national carriers, with their direct competitors being AT&T, Verizon, and Sprint. TMUS is currently the only growth company within the space and this is reflecting in various multiples. Relative to the stagnant and slow-growing AT&T and Verizon, they trade at ratios above the industry average.

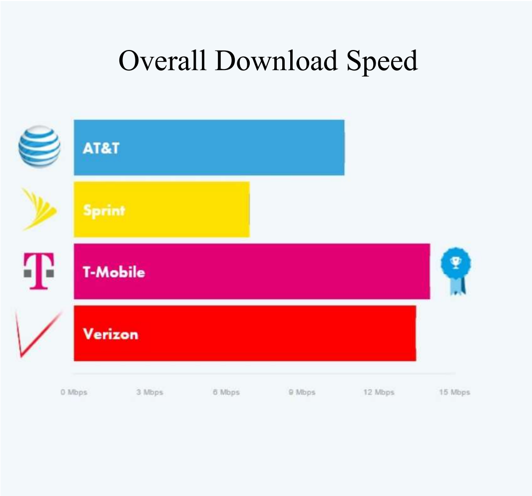
While this can be construed as the company being overvalued, we recognize that it is a product of their current standing as a disruptor, which facilitates their continued growth. We chose to include the multiple to factor in the market's current sentiment towards the company.

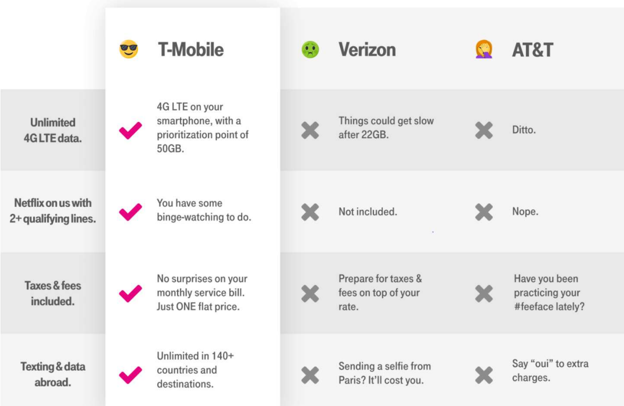
We used a EV/EBITDA multiple to assess the current relative value. At an industry average of 6.39x. TMUS's value is $44.66, which contributed 10% to our final valuation.

VALUATION	
Discounted Cash Flow	$78.04
Weight	*90%*
EV/EBITDA Multiple	$44.66
Weight	*10%*
Equity Value	$74.70
Margin of Safety	28.5%

Share Price Sensitivity

Perpetual Growth Rate	WACC 6.6%	WACC 7.1%	WACC 7.6%
1.5%	32.3%	17.0%	4.2%
2.0%	46.7%	28.5%	13.6%
2.5%	64.6%	42.6%	24.9%





	T-Mobile	Verizon	AT&T
Unlimited 4G LTE data.	4G LTE on your smartphone, with a prioritization point of 50GB.	Things could get slow after 22GB.	Ditto.
Netflix on us with 2+ qualifying lines.	You have some binge-watching to do.	Not included.	Nope.
Taxes & fees included.	No surprises on your monthly service bill. Just ONE flat price.	Prepare for taxes & fees on top of your rate.	Have you been practicing your #feeface lately?
Texting & data abroad.	Unlimited in 140+ countries and destinations.	Sending a selfie from Paris? It'll cost you.	Say "oui" to extra charges.

Risks to Investment Thesis

Consumer Churn – Considering over 70% of T-Mobile's revenues come from services, maintaining and growing their customer base is imperative to T-Mobile's growth in the highly competitive telecommunications industry. This is mitigated by T-Mobile's work over the last seven years have resulted in postpaid churn rates dropping to 1.18% in Q4 2017 and their great customer service, growing network, free bonuses, and simple pricing that will continue to keep that figure low.

Government Regulation – The Federal Communications Commission (FCC) has a lot of governing power in the telecommunications industry which could have adverse effects depending on future regulatory actions. This however would be impactful to the overall industry and could hit carriers like Verizon and AT&T harder considering their cable TV and other phone services could also come under scrutiny by the FCC. T-Mobile has also introduced a completely digital video streaming service that helps mitigate the effects of future changes in regulation.

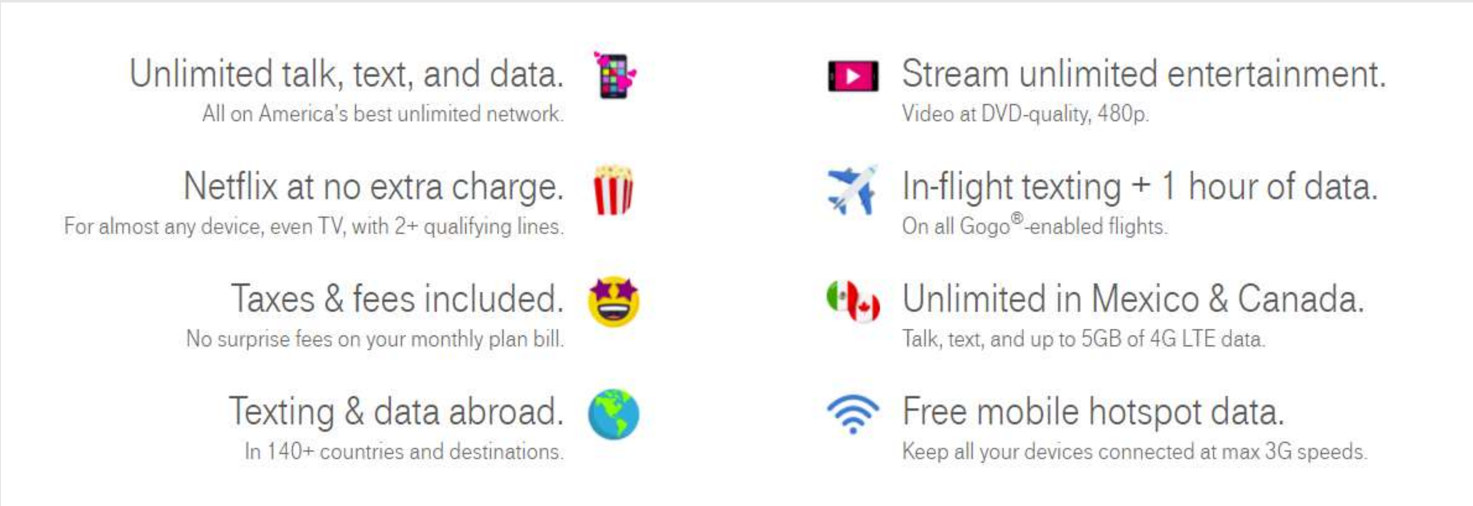
Pressure From Competitor Offerings – Competitors like Sprint, Verizon, and AT&T are now offering unlimited plans and integrated offerings put pressure on T-Mobile. Competitor's have noticed T-Mobile's success with their T-Mobile One Unlimited plan and have now tried to combat that with offerings of their own. Even so, T-Mobile offers a far superior suite of products with their plans as seen in Appendix 1. T-Mobile has also partnered with Netflix to provide customers new experiences, already has the best data speeds, and is priced lower than its competitors by significant margins

Conclusion

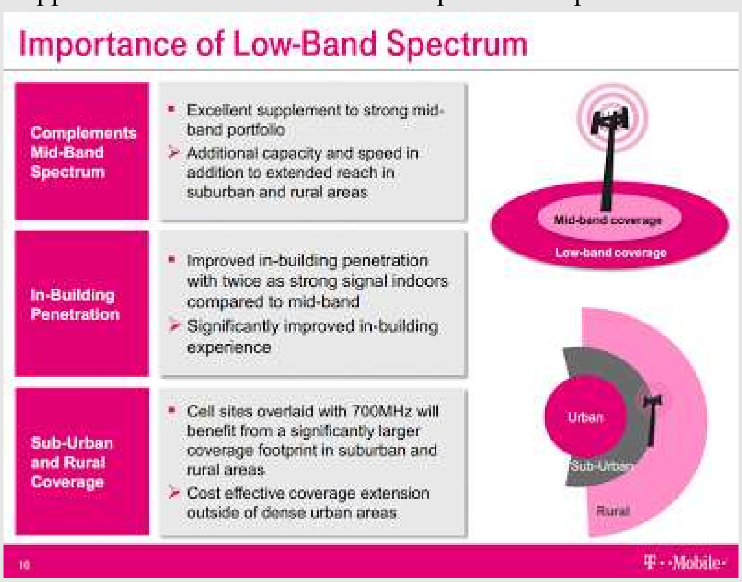
In conclusion, we reiterate our BUY rating of TMUS with a price target of $74.70 per share, which provides a 28.5% margin of safety over its current price of $58.12. TMUS is positioned well to provide strong returns for shareholders over the next 10 years due to their exclusive focus on the wireless market, best customer growth in the industry, and increasing quality of their newly national network and offerings. John Legere has demonstrated his ability to turn T-Mobile into a industry powerhouse and his unique management style coupled with strategic marketing initiatives positions TMUS to continue on its path to success.

Appendix

Appendix 1: T-Mobile One Inclusions

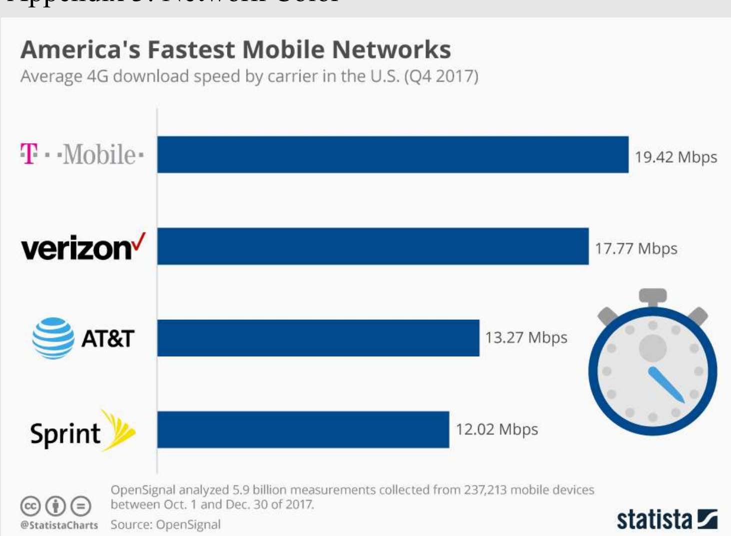


Appendix 2: T-Mobile Low Band Spectrum Importance



T-Mobile's recent acquisition of 600MHz and 700Mhz provide numerous benefits including complementing current spectrum in place, improving in-building service, as well as improving coverage in sub-urban and rural regions of the United States. This new spectrum will now provide coverage to 100% of the United States once fully implemented.

Appendix 3: Network Color



T-Mobile also recorded the highest levels of availability in OpenSignal's analysis. At the end of 2017. its customers could connect to an LTE network 93.1 percent of the time, just ahead of Verizon's 92.7 percent. AT&T customers could connect 87 percent of the time while Sprint had an availability rate of 85.7 percent.

Appendix 4: WACC

TMUS Capitalization	**Amount**	**Percent**
Equity	51	62.1%
Debt	31	37.9%
Total	81	100.0%

Cost of Debt	4.3%
Tax Rate	21.0%
After-Tax Cost of Debt	3.4%
Cost of Equity	
Expected Market Rate of Return	9.0%
Market Risk Premium	6.1%
Ten Year Treasury	2.9%
Beta	1.05
Cost of Equity	9.3%
Weighted Average Cost of Capital	7.07%

Appendix 5: Income Statement

Income Statement	FY 2012 12/31/2012	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 12/31/2017
Revenue	5,101.3	24,101.0	29,164.0	31,539.0	36,571.0	39,535.0
Other Revenue	-	319.0	400.0	514.0	919.0	1,069.0
Total Revenue	**5,101.3**	**24,420.0**	**29,564.0**	**32,053.0**	**37,490.0**	**40,604.0**
Cost Of Goods Sold	2,930.1	12,255.0	15,409.0	14,898.0	16,550.0	17,708.0
Gross Profit	**2,171.2**	**12,165.0**	**14,155.0**	**17,155.0**	**20,940.0**	**22,896.0**
Selling General & Admin Exp.	696.8	7,382.0	8,863.0	10,189.0	11,378.0	12,259.0
R & D Exp.	-	-	-	-	-	-
Depreciation & Amort.	641.4	3,627.0	4,412.0	4,688.0	6,243.0	5,984.0
Other Operating Expense/(Income	9.0	160.0	(536.0)	213.0	(731.0)	(235.0)
Operating Expense., Total	**1,347.3**	**11,169.0**	**12,739.0**	**15,090.0**	**16,890.0**	**18,008.0**
Operating Income	**824.0**	**996.0**	**1,416.0**	**2,065.0**	**4,050.0**	**4,888.0**
Interest Expense	275.5	1,223.0	1,351.0	1,496.0	1,730.0	1,671.0
Interest Income	1.6	189.0	359.0	420.0	13.0	17.0
Net Interest Exp.	**273.9**	**1,034.0**	**992.0**	**1,076.0**	**1,717.0**	**1,654.0**
Other Non-Operating Exp. (Inc)	(66.4)	(89.0)	851.0	174.0	841.0	308.0
EBT Excl. Unusual Items	**616.5**	**51.0**	**(427.0)**	**815.0**	**1,492.0**	**2,926.0**
Gain (Loss) On Sale Of Assets	9.0	-	(840.0)	(163.0)	(835.0)	(235.0)
EBT Incl. Unusual Items	**607.5**	**51.0**	**413.0**	**978.0**	**2,327.0**	**3,161.0**
Income Tax Expense	213.3	16.0	166.0	245.0	867.0	(1,375.0)
Net Income	**394.2**	**35.0**	**247.0**	**733.0**	**1,460.0**	**4,536.0**

Appendix 6: Balance Sheet

Balance Sheet	FY 2012 12/31/2012	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 12/31/2017
ASSETS						
Cash And Equivalents	2,368.3	5,891.0	5,315.0	4,582.0	5,500.0	1,219.0
Short Term Investments	245.0	-	-	2,998.0	-	-
Total Cash & ST Investments	**2,613.3**	**5,891.0**	**5,315.0**	**7,580.0**	**5,500.0**	**1,219.0**
Accounts & Notes Receivable	98.7	3,619.0	1,865.0	1,788.0	1,896.0	1,915.0
Total Receivables	**98.7**	**3,619.0**	**1,865.0**	**1,788.0**	**1,896.0**	**1,915.0**
Inventories	259.2	586.0	1,085.0	1,295.0	1,111.0	1,566.0
Other Current Assets	216.2	2,132.0	5,719.0	4,227.0	5,710.0	4,215.0
Total Current Assets	**3,187.3**	**12,228.0**	**13,984.0**	**14,890.0**	**14,217.0**	**8,915.0**
Net Property, Plant & Equipment	**4,292.1**	**15,349.0**	**16,245.0**	**20,000.0**	**20,943.0**	**22,196.0**
Long-term Investments	1.7	-	-	-	-	-
Other Long-Term Assets	2,708.4	22,376.0	26,424.0	27,523.0	30,731.0	39,452.0
Total Assets	**10,189.4**	**49,953.0**	**56,653.0**	**62,413.0**	**65,891.0**	**70,563.0**
LIABILITIES						
Accrued Exp.	-	-	-	-	-	-
Short-term Borrowings	36.6	244.0	87.0	182.0	354.0	1,612.0
Accounts Payable	196.5	3,560.0	5,322.0	6,137.0	5,163.0	6,182.0
Curr. Income Taxes Payable	-	-	-	-	-	-
Other Current Liabilities	614.6	2,004.0	3,367.0	3,209.0	3,505.0	3,721.0
Total Current Liabilities	**847.8**	**5,808.0**	**8,776.0**	**9,528.0**	**9,022.0**	**11,515.0**
Long-Term Debt	4,724.1	22,441.0	24,394.0	28,719.0	30,053.0	29,297.0
Unearned Revenue, Non-Current	-	-	-	-	-	-
Other Non-Current Liabilities	1,258.6	7,459.0	7,820.0	7,609.0	8,580.0	7,192.0
Total Liabilities	**6,830.5**	**35,708.0**	**40,990.0**	**45,856.0**	**47,655.0**	**48,004.0**
Additional Paid In Capital	1,826.0	37,330.0	38,503.0	38,666.0	38,846.0	38,629.0
Retained Earnings	1,553.6	(23,088.0)	(22,841.0)	(22,108.0)	(20,610.0)	(16,074.0)
Treasury Stock	(11.2)	-	-	-	(1.0)	(4.0)
Comprehensive Inc. and Other	(9.6)	3.0	1.0	(1.0)	1.0	8.0
Total Equity	**3,358.9**	**14,245.0**	**15,663.0**	**16,557.0**	**18,236.0**	**22,559.0**
Total Liabilities And Equity	**10,189.4**	**49,953.0**	**56,653.0**	**62,413.0**	**65,891.0**	**70,563.0**

Appendix 7: Statement of Cash Flow

Cash Flow	FY 2012 12/31/2012	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 12/31/2017
Net Income	**394.2**	**35.0**	**247.0**	**733.0**	**1,460.0**	**4,536.0**
Depreciation & Amort., Total	**641.4**	**3,627.0**	**4,412.0**	**4,688.0**	**6,243.0**	**5,984.0**
Other Non-Cash Adj	241.8	545.0	(2,115.0)	1,150.0	1,211.0	(1,369.0)
Changes in Non-Cash Capital	(96.0)	(662.0)	1,602.0	(1,157.0)	(2,779.0)	(1,189.0)
Cash from Ops.	**1,181.5**	**3,545.0**	**4,146.0**	**5,414.0**	**6,135.0**	**7,962.0**
Capital Expenditure	(817.2)	(4,025.0)	(4,317.0)	(4,724.0)	(4,702.0)	(5,237.0)
Sale of Property, Plant, and Equipment	3.3	3.0	-	-	-	-
Invest. in Marketable & Equity Securt.	(692.1)	(33.0)	-	-	-	-
Other Investing Activities	782.6	1,963.0	(2,929.0)	(4,836.0)	(978.0)	(5,827.0)
Cash from Investing	**(723.4)**	**(2,092.0)**	**(7,246.0)**	**(9,560.0)**	**(5,680.0)**	**(11,064.0)**
Net Short Term Debt Issued/Repaid	-	(244.0)	(418.0)	(564.0)	(150.0)	(300.0)
Long-Term Debt Issued	-	2,494.0	2,993.0	3,979.0	997.0	13,390.0
Long-Term Debt Repaid	(34.5)	(9.0)	(1,019.0)	(57.0)	(225.0)	(13,626.0)
Total Debt Issued/Repaid	**(34.5)**	**2,241.0**	**1,556.0**	**3,358.0**	**622.0**	**(536.0)**
Pref. Dividends Paid	-	-	-	(55.0)	(55.0)	(55.0)
Total Dividends Paid	**-**	**-**	**-**	**(55.0)**	**(55.0)**	**(55.0)**
Increase in CapItal Stocks	6.1	1,924.0	1,009.0	47.0	29.0	21.0
Decrease in Capital Stocks	(4.3)	-	-	-	-	(427.0)
Other Financing Activities	(0.3)	(121.0)	(41.0)	63.0	(133.0)	(182.0)
Cash from Financing	**(33.0)**	**4,044.0**	**2,524.0**	**3,413.0**	**463.0**	**(1,179.0)**
Net Change in Cash	**425.0**	**5,497.0**	**(576.0)**	**(733.0)**	**918.0**	**(4,281.0)**

Appendix 8: Valuation

Discounted Cash Flow

	Historicals			Projections						
	Fiscal Year Ending December 31									
	2015A	2016A	2017A	2018E	2019E	2020E	2021E	2022E	2023E	Terminal
Revenue	$32,467	$37,490	$40,604	$43,610	$46,406	$48,915	$51,066	$52,794	$54,041	$54,041
% Growth	9.8%	15.5%	8.3%	7.4%	6.4%	5.4%	4.4%	3.4%	2.4%	
EBITDA	$7,167	$10,293	$10,872	$9,522	$10,454	$11,362	$12,220	$13,003	$13,689	$13,689
% Margin	22.1%	27.5%	26.8%	21.8%	22.5%	23.2%	23.9%	24.6%	25.3%	25.3%
Less: Depreciation & Amortization	($4,688)	($6,243)	($5,984)	($6,594)	($7,017)	($7,396)	($7,722)	($7,983)	($8,172)	6,416
EBIT	$2,479	$4,050	$4,888	$2,928	$3,437	$3,965	$4,498	$5,020	$5,518	$5,518
% Margin	7.6%	10.8%	12.0%	6.7%	7.4%	8.1%	8.8%	9.5%	10.2%	10.2%
Less: Taxes	(245)	(867)	3,161	(615)	(722)	(833)	(945)	(1,054)	(1,159)	(1,159)
Effective Tax Rate	9.9%	21.4%	-64.7%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
Tax-Effected EBIT	$2,234	$3,183	$8,049	$2,313	$2,716	$3,132	$3,553	$3,966	$4,359	$4,359
Plus: Depreciation & Amortization	4,688	6,243	5,984	6,594	7,017	7,396	7,722	7,983	8,172	6,416
Less: Change in NWC	381	901	1,472	1,085	1,492	1,248	1,206	920	707	707
Less: Capital Expenditures	(4,724)	(4,702)	(5,237)	(5,300)	(5,300)	(5,640)	(5,945)	(6,206)	(6,416)	(6,416)
Unlevered Free Cash Flows	$2,579	$5,625	$10,268	$4,692	$5,924	$6,137	$6,536	$6,663	$6,821	$5,066
Discounted Cash Flows				$4,383	$5,168	$5,000	$4,974	$4,736	$4,528	$3,363

Net Working Capital Calculation

Net Working Capital Calculation									
Accounts Receivable	1,788	1,896	1,915	3,176	3,379	3,562	3,719	3,844	3,935
Equipment Installment Plan Receivables	2,378	1,930	2,290	2,573	2,753	2,918	3,064	3,186	3,282
Accounts Receivable from Affiliates	36	40	22	61	65	68	71	74	75
Inventories	1,295	1,111	1,566	1,486	1,566	1,634	1,689	1,729	1,752
Asset Purchase Deposit	--	2,203	--	--	--	--	--	--	--
Other Current Assets	1,813	1,537	1,903	2,171	2,310	2,435	2,542	2,628	2,690
Current Assets	**$7,310**	**$8,717**	**$7,696**	**$9,466**	**$10,072**	**$10,617**	**$11,084**	**$11,461**	**$11,734**
Less: Accounts Payable and Accrued Liabilities	(8,084)	(7,152)	(8,528)	(9,527)	(10,137)	(10,686)	(11,155)	(11,533)	(11,805)
Less: Payables to Affiliates	(135)	(125)	(182)	(136)	(165)	(181)	(209)	(227)	(244)
Less: Short-Term Debt	(182)	(354)	(1,612)	(333)	(403)	(442)	(511)	(553)	(594)
Less: Deferred Revenue	(717)	(986)	(779)	(495)	(599)	(658)	(760)	(823)	(884)
Less: Other Current Liabilities	(410)	(405)	(414)	(340)	(411)	(452)	(522)	(565)	(607)
Net Working Capital	**$16,838**	**$17,739**	**$19,211**	**$20,296**	**$21,788**	**$23,036**	**$24,241**	**$25,161**	**$25,868**

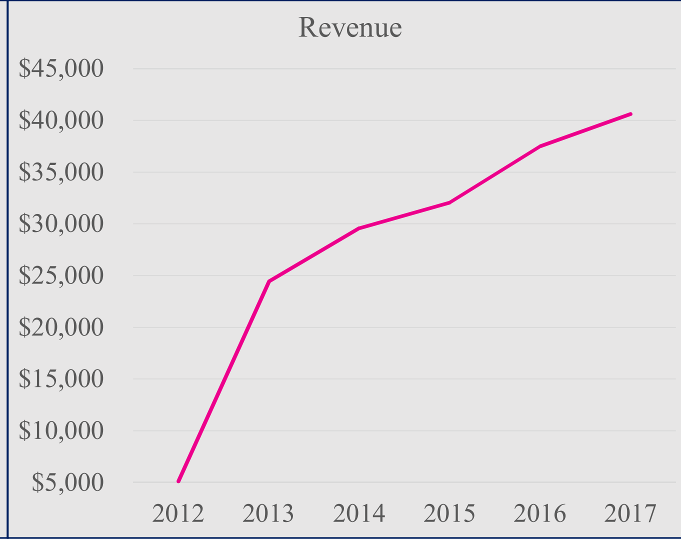
Comparibles Analysis

Ticker	Name	Mkt Cap	EV	TTM EBITDA	EV/TTM EBITDA	EBITDA Margin	P/E	P/FCF	Dividend Yield	Total Wireless Subscribers
Average		124,148 M	196,676 M	29,642 M	6.39x	29.99%	293.44x	25.52x	2.54%	100.02 M
TMUS	T-MOBILE US INC	50,580 M	77,064 M	10,637 M	7.24x	26.78%	26.94x	18.11x	0.00%	72.59 M
VZ	VERIZON COMMUNICATIONS	203,480 M	320,026 M	46,405 M	6.90x	35.20%	13.35x	25.28x	4.68%	116.26 M
T	AT&T INC	221,310 M	335,705 M	50,047 M	6.71x	28.24%	15.34x	12.97x	5.46%	156.67 M
S	SPRINT CORP	21,220 M	53,910 M	11,480 M	4.70x	29.73%	1,118.14x	45.71x	0.00%	54.58 M

Appendix 9: Historical Financial Trends (MM)

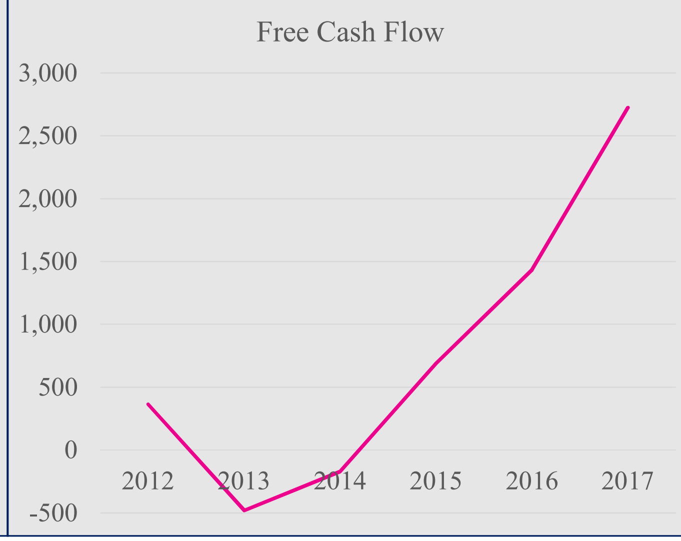
Revenue

Revenue in 2017 rose to over $40 million which represented an 8.3% increase over the previous year's level. This growth was driven by continued gains in service revenue and a continued trend of branded postpaid revenue comprising a larger overall portion of total revenue. Management sees this as encouraging given the segment has a higher average revenue per unit when compared to branded prepaid as well as a considerably lower churn rate. As mentioned before, T-Mobile is the only national carrier currently experiencing growth within the wireless revenue segment, while competitors continue to stagnate.



Free Cash Flow

Growth in free cash flow has been spurred by continued gains in net income by the company. The suite of "Un-carrier" initiatives have compressed T-Mobile's margins, but the sizable subscriber gains are proving to facilitate margin expansion. Continued expansion will bolster the bottom line and materialize in higher levels of free cash flow. Additionally, will be a net winner from the Tax Cuts and Jobs Act (TCJA), which stands to reduce their effective tax rate from an average level of over 33% to a new level of 21%. Management does not expect to be a material tax payer until 2024 at the earliest.



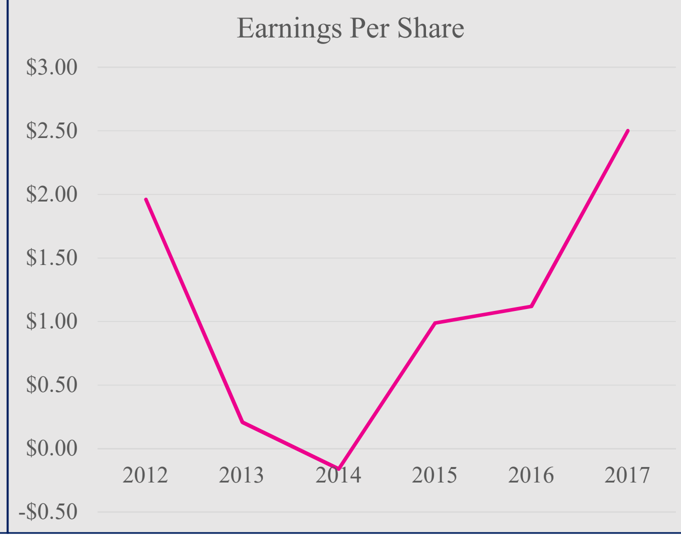
Shares Outstanding

During this growth phase, T-Mobile has forgone returning capital to shareholders in order to plowback any earnings into the business. Shareholders have not received dividends, but the company has since communicated plans to repurchase up to $1.5 billion of common stock through December 31, 2018. Considering repurchases made so far, the company currently has $717 million of repurchase authority remaining. It is encouraging that the company is beginning to translate growth into immediate value for shareholders.

Appendix 10: Historical Financial Trends (MM)

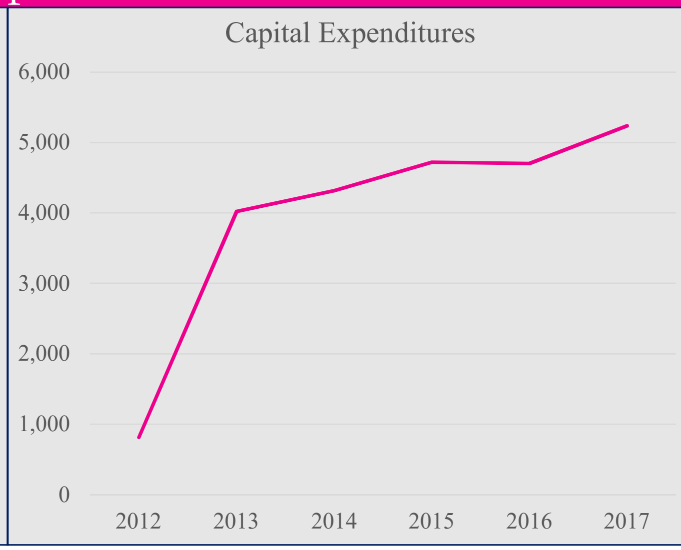
Earnings Per Share

Previous depressed levels of earnings per share coincided with the substantial capital expenditures approved by management. Continued share repurchases should also prove positive for this metric. Currently, lower relative levels in EPS has resulted in the company maintaining a P/E ratio reflective of a growth stock compared to more established and mature/declining competitors. Consensus estimates predict growth of 45, 25, and 22% over the next three years when controlling for effects of the TCJA.



Capital Expenditures

T-Mobile's capital expenditures are primarily growth-oriented, driven by the acquisition of spectrum licenses and the construction, expansion, and upgrading of their network infrastructure. Additionally, the company incurs property and equipment capital outlays to build out recently acquired 600 and 700MHz spectrum as well as deploy the nation's first 5G network. Management expects 2018 expenditures to be in the range of $4.9 to $5.3 billion.



Wireless Subscribers

T-Mobile's gains in wireless subscribers serves as the bedrock of any positive financial performance of the company. Their investment into creating a truly national network allowed them to offer consumers value that was previously absent in the wireless industry. Increased distribution serves to foster continued growth and they are positioned to benefit even as the space becomes more saturated. Decreased churn and favorable porting ratios suggest T-Mobile will continue to maintain and grow their subscriber base while also continuing to take market share from competitors.