

Financial Dashboard

COMM

Dashboard Summary

				Projected						
Trading Statistics		7/7/2016		Base Case Financials	2013	2014	2015	2016	2017	2018
Share Price	\$30.71			Revenue	3,480.1	3,829.6	3,807.8	4,972.0	5,110.8	5,254.4
Shares Out	195.5			Consensus				5,033.0	5,201.2	5,345.4
Market Cap	6,002.5			Adj. EBITDA	675.3	857.2	790.3	1,146.2	1,238.8	1,312.4
Net Debt	4,543.1			Consensus				1,136.0	1,149.5	1,240.5
Pension Liability	40.3			Adj. EPS	\$1.60	\$2.23	\$1.86	\$2.68	\$3.04	\$3.34
Enterprise Value	10,585.9			Consensus				\$2.47	\$2.71	\$3.20
FCF Valuation				Free Cash Flow	254.6	346.3	354.3	530.1	608.8	663.6
	Base	Bull	Bear	FCF/Share \$	\$1.55	\$1.81	\$1.87	\$2.70	\$3.07	\$3.32
2017 FCF/Share	\$3.07	\$3.33	\$2.80							
FCF Yield	8.0%	7.0%	10.0%	Revenue Growth %	4.8%	10.0%	(0.6%)	30.6%	2.8%	2.8%
Implied Price	\$38.41	\$47.54	\$27.99	EBITDA Growth %		26.9%	(7.8%)	45.0%	8.1%	5.9%
Premium / (Discount)	25.1%	54.8%	(8.8%)	FCF Growth %		36.0%	2.3%	49.6%	14.8%	9.0%
Probability	50.0%	30.0%	20.0%							
Weighted Average Target										
Premium / (Discount)	27.2%			Gross Margin %	34.5%	36.5%	35.3%	40.2%	40.9%	41.5%
				EBITDA Margin %	19.4%	22.4%	20.8%	23.1%	24.2%	25.0%
				Capex/sales %	1.1%	1.0%	1.5%	1.4%	1.5%	1.5%

Executive Summary

Founded in 1976, CommScope (COMM) is a leading provider of telecom equipment and mission-critical infrastructure. The firm holds dominant share in almost all of their markets. COMM manufactures 85% of the equipment they sell and is able to offer highly-customizable solutions to their customers (Fortune 500 companies and telco carriers) that help to not only entrench COMM's competitive position, but do so profitably: the firm boasts 40% gross and 20% EBIT margins along with mid-teens ROIC (mid-60%'s ex-intangibles). **Most importantly, margins and ROIC are inflecting higher as COMM finishes digesting a transformative \$3B acquisition and capturing synergies. The "new COMM" will produce \$3.00 and \$3.30 in FY17/FY18 levered free cash flow respectively – at an 8-9% FCF yield, COMM offers annualized returns of 15-25% over the next 24 months with limited downside.**

Investment Highlights

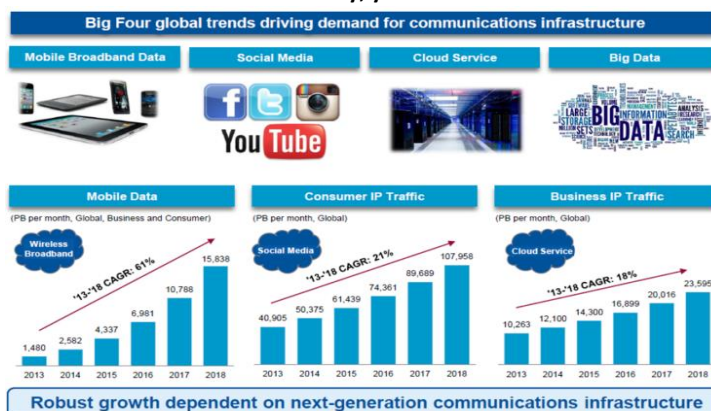
- **High-quality, cash-generative business with entrenched market position, favorable industry structure and ample opportunities to reinvest excess free cash.** COMM has a decades-long track record of sustainable cash flow generation buoyed by minimal capex requirements (~1% of sales). The firm faces limited global competition which leads to pricing power as customers (AT&T, VZ) choose COMM based on reputation, agility, stability and customization ("one-stop shopping") rather than just price.
- **COMM's moat is protected by multiple forms of barriers to entry.** COMM's fixed capital investments deter competition, with 30 manufacturing facilities in low-cost geographies like China or Mexico. The firm also has intangible barriers in their intellectual property (10,000+ patents), long-standing customer relationships (switching costs), and outsized R&D spend relative to peers.
- **COMM's end markets are buoyed by powerful structural tailwinds.** The rapid growth of data traffic, cloud services and streaming video has led to exponential demand for bandwidth and network densification. Customers like AT&T and Google are "hockey-sticking" fiber roll-outs to accommodate this interconnectivity growth and COMM is well-positioned in both wireless and fiber.
- **Experienced management team with demonstrable history of talented capital allocation and successful M&A integration.** COMM's management team has an average tenure of 25 years and has grown the business through multiple billion-dollar transformational acquisitions, with a track record of under-promising and over-delivering on synergies. The firm's corporate governance and comp structure are excellent as the entire organization is incentivized to maximize free cash flow and EBIT.
- **COMM stock offers compelling risk/reward and clear visibility into years of double-digit FCF compounding.** As COMM integrates the recent \$3B acquisition and de-leverages the balance sheet, free cash flow to equity will accrue from both margin expansion and lower interest expense. The firm has no near-term maturities with just \$282m of notes due before 2020. The stock's multiple is currently depressed vs. historical and will mean-revert as value is transferred from creditors to shareholders.

Business Overview - How does COMM make money?

- **CommScope is comprised of two segments:** Mobility (40% of revenue) and Connectivity (60% - split 25% outdoor, 35% indoor). These can essentially be simplified into wireless (Mobility) and fiber/broadband (Connectivity).
- The vast majority of CommScope's revenue is from equipment sales and not services; management tends to describe the business as "telecom infrastructure plumbing" with company's mission being "to make the information superhighway wider and faster."
- **CommScope's customer base is comprised of decades-long relationships** with a host of Fortune 500 companies and carriers such as AT&T, Verizon, Comcast, T-Mobile and Google. The diversification of COMM's product portfolio and geographic reach is a key strength and allows the firm to generate substantial free cash (~\$1.70/share trailing 5-year average) even if one segment slows due to shifting customer preferences - a recent example being wireless in 2014/15 as large carriers (AT&T) pushed out capex. The segment displayed impressive flexibility as they scaled back capacity and still reported a 20% FY15 EBIT margin.

Segment Overview:

- **Mobility:** COMM is the global leader in wireless and sells coaxial cables and cell-tower antennas to wireless carriers along with DAS/small cell solutions to fill coverage gaps. This segment is largely comprised of the \$2.6B Andrew acquisition from 2007.
 - **COMM offers significant know-how in this space as "last mile" installation is complex:** many antenna systems are placed in airports, garages, campuses, metro transit, on top of office buildings, or elsewhere on public streets, and this introduces both complexity and permitting issues with customers and municipalities.
 - **Industry contacts have indicated that COMM's ubiquitous presence is self-reinforcing** and as equipment needs to be replaced, the simplest (and not necessarily cheapest) option is to upgrade what is currently in place – usually COMM's.
 - This segment has performed poorly as of late due to a weak capex environment (sales down 14% y/y in Q1'16) but comps should ease going forward. Despite lumpy earnings, the long-term fundamentals remain "up and to the right" with mobile data traffic expected to grow at a 53% CAGR through 2020.
 - Lee Ainslie, a long-time CommScope shareholder, once responded to claims that wireless capex is in secular decline by stating: **"If you've tried to use an iPhone in New York City, you know that's a ludicrous assumption."**



- **Connectivity:** Provides fiber solutions for residential networks, enterprises and data centers.
 - The majority of this segment is comprised of the recent \$3B BNS acquisition (2015). Post-acquisition, the industry structure for telco/enterprise fiber deployment has essentially evolved into a duopoly between COMM and Corning.
 - **The long-term tailwinds for fiber are even stronger than wireless and have been described as "a modern day gold rush"** due to the convergence of multiple trends: cord-cutting/SVOD, a secular shift of Internet traffic to video (projected 80% by 2019), and data center traffic projected to 4x as well. Consumers simply want faster broadband.
 - Specialty telecom contractors like Dycom have stated they see opportunities that are **"unprecedented for our industry...the breadth of demand is stunning."** **"It is increasingly likely that 2015 will be seen in retrospect as the initiation of a massive investment cycle in wireline networks reminiscent of, and perhaps more meaningful than, the one that occurred in the 1990's."**
 - Companies like AT&T have "hockey-sticked" their future growth capex plans higher, from serving 1.6mm fiber customers in 2015 to a goal of 14 million by 2019. Relatively capex-unconstrained players like Google have entered the arena as well and are aggressively rolling out fiber in cities nationwide. Both COMM management and third-party publications believe this market will grow at least in high single-digits through 2019-2020.
 - **Even if COMM simply maintains their market share in this division, the stock can deliver double-digit free cash flow growth in a flat-to-down wireless environment.**

Key Investment Factors

1. CommScope enjoys a host of sustainable competitive advantages in both segments.

- Barriers to entry are high due to incumbent scale, entrenched relationships with customers, mission-critical nature of projects, and 10,000 patents plus other forms of IP. Cost advantages and high switching costs exist as well.
- COMM's market position is strengthening. Management indicated in a phone call that carrier industry consolidation is largely a positive for them; many operators and cable MSO's are positioning themselves for "Triple Play" offerings and COMM is one of the only players that can quickly fulfill a customized order of AT&T or Verizon's magnitude.
- **What would a new, subscale entrant have to do to compete?**
 - Offering a similar customizable set of solutions to COMM would require significant initial investments in both capex and working capital to construct manufacturing facilities. However, without stable customer relationships and a reliable distribution network these under-utilized plants would result in weak profitability.
 - Bottlenecks exist on both ends. Training and hiring installers for a product like fiber is slow and complicated, particularly "miniaturized" equipment which is crucial for installation and is a CommScope specialty.
 - Last, while customers tend to be price-insensitive, COMM's global economies of scale allows access to low-cost materials and labor and they can pass these savings on to the client. Any price increases they layer on free up excess capital for COMM to invest in R&D or bolt-on M&A, widening their moat.

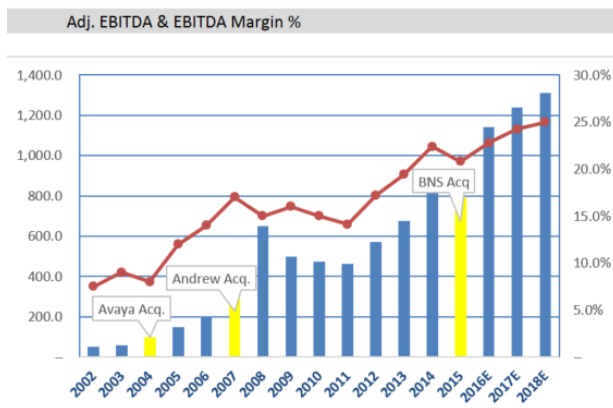
Solutions	Cell-site Solutions	Intelligent Enterprise Infrastructure Solutions	Metro Cell Concealment Solutions	Distributed Antenna Systems and Small Cell Solutions
	Data Center Solutions	In-building Cellular Solutions	Broadband Solutions	Fiber Optic Connectivity Solutions
Key products and services	Antennas (base stations & microwave)	Distributed Antenna Systems/In-building Cellular	Terminals and Connectors Cables (hybrid, coaxial, optical, twisted pair) Network Design Services	Data Center Infrastructure Management Data Center on Demand Filters
Operating segments	Wireless	Enterprise	Broadband	BNS
Global market leadership position	Global leader in merchant RF wireless network connectivity solutions and DAS solutions	Global leader in enterprise connectivity solutions for data centers and commercial buildings	Global leader in cables for HFC networks	Global leader in fiber optic connectivity for wireline and wireless networks
2015 Revenue (in millions)(1)(2)	\$1,939	\$864	\$476	\$530

- **These scale advantages have led to an oligopoly market structure.** COMM has one notable competitor in Germany (Kathrein) with the same breadth of product offering. Outside of that, the industry landscape is barren; Huawei is a competitor with scale but US telcos are skeptical of trusting mission-critical data to the Chinese despite lower prices.

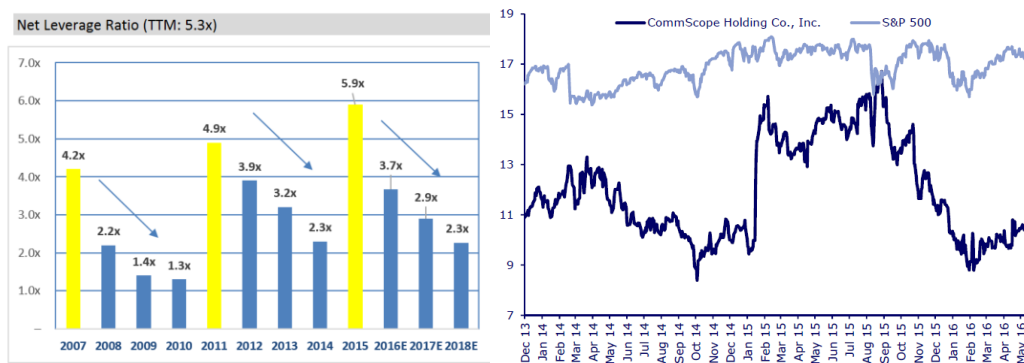
2. Transformative M&A has masked the earnings power of the combined entity and COMM's experienced management team (25 years on average) is likely to deliver synergies in excess of guidance.

- CommScope's management has primarily grown the business through M&A and is no stranger to large-scale integration. The balance sheet's ability to support such large acquisitions is a testament to the stability of the business – most recently, COMM was taken private in 2011 by Carlyle with five turns of debt before being re-IPOed in late 2013.
- **Over the years, COMM's management team has developed a reputation for under-promising and over-delivering on synergies, most notably on the Andrew deal in 2007 and Avaya's Connectivity segment in 2004.**
 - COMM's synergy capture has historically been based on a combination of scale, exiting unprofitable product lines/geographies, simplifying ERP systems, and layering in price increases wherever possible.
 - Management has stated they target 31 different synergy areas but does not list out each one individually.
- In 2007, COMM paid \$2.6B (~90% cash) for Andrew Corp, which now comprises their wireless segment. Their original synergy target was \$90-100m which was then raised to \$115m in 2008 – an estimate management exceeded again in 2009.
 - **When the acquisition was fully integrated in 2010, COMM had topped their original synergy guide by ~30%.**

- A similar scenario played out with the 2004 acquisition of Avaya's connectivity business for \$283m. While the scale of the acquisition was smaller, it doubled the firm's revenues from \$550m to over \$1 billion.
 - **From 2004 to 2007, consolidated operating margins expanded from 4.4% to 14.9%, or 1050 bps.**



- **It is likely management uses the same playbook with the recent (August 2015) \$3B acquisition of BNS.**
 - Management already boosted their synergy guidance once since the acquisition, from \$150m through 2018 up to \$175m. Following this announcement, COO Randy Crenshaw stated at COMM's investor day in May that they are "well ahead" of their targets thus far; a soft catalyst for COMM stock exists in management boosting guidance to \$200m or \$225m in upcoming quarters.
3. **The BNS acquisition offers three added benefits beyond strategic fit:**
- **First, BNS smooths the volatility of COMM's earnings and should be beneficial to the stock's multiple.** Not only does BNS diversify the firm's product offering into fiber (wireless capex is notoriously volatile) but also expands their geographic concentration. TE Connectivity/BNS is based in Switzerland and extends CommScope's reach in Europe along with incremental revenue synergies via cross-selling.
 - **Second, this multiple expansion is supplemented by COMM's ability to rapidly de-lever the balance sheet post-BNS** and shift value to shareholders. COMM's business model is cash flow-generative due to low capex requirements and this D&A mismatch (from acquisition intangibles) means COMM typically converts over 100% of net income into FCF.
 - **We can see below how quickly COMM reduced leverage following both the Andrew acquisition in 2007 and the Carlyle LBO in 2011.** While leverage is high (~5.3x TTM) and weighing on valuation at 11x forward EPS, the firm has only \$262m of their ~\$5B debt balance due before 2020 and has access to nearly \$1B of current liquidity.



- **Third, this rapid retirement of debt will not only boost returns on invested capital but also net margins and free cash flow to equity via lower interest expense.**
 - Management is committed to paying down debt and has retired \$300m of 2020 PIK notes in the current quarter (2Q16), which shaves nearly \$20m or 7% off the firm's annual interest expense.
- **COMM should hit their 3.5x target leverage ratio within 18 months**, freeing up excess cash flow to reinvest in organic growth opportunities, R&D, or further bolt-on M&A.
- **In sum: while COMM may be volatile quarter-to-quarter, this is a high-quality business available at a reasonable price (~10% FCF yield) that should reliably compound at a double-digit clip for the next 24 months and beyond.**

Base Case Model

CommScope (COMM) Earnings Model														
FY End: 12/31	FY	FY	31-Mar-15	30-Jun-15	30-Sep-15	31-Dec-15	FY	31-Mar-16	30-Jun-16	30-Sep-16	31-Dec-16	FY	FY	FY
Line Items \$m, except where noted	2013	2014	1Q15	2Q15	3Q15	4Q15	2015	1Q16	2Q16E	3Q16E	4Q16E	2016E	2017E	2018E
SUMMARY INCOME STATEMENT														
Net Sales	3,480.1	3,829.6	825.4	867.3	972.6	1,142.5	3,807.8	1,144.0	1,297.0	1,297.2	1,233.9	4,972.0	5,110.8	5,254.4
(-) COGS	2,279.2	2,431.8	532.2	552.6	633.7	743.5	2,462.0	696.9	777.0	771.5	728.7	2,974.1	3,022.8	3,072.4
Gross Profit	1,200.9	1,397.8	293.2	314.7	338.9	399.0	1,345.8	447.1	520.0	525.7	505.2	1,998.0	2,087.9	2,182.0
(-) SG&A	502.3	484.9	125.7	130.8	203.8	227.1	687.4	209.2	195.1	190.2	180.5	775.0	740.0	750.0
(-) R&D	126.4	125.3	27.8	28.0	31.1	49.1	136.0	52.2	45.4	42.8	42.1	182.5	189.1	199.7
(-) Amortization	174.9	178.3	44.8	44.6	54.3	76.9	220.6	73.6	73.6	73.6	73.6	294.5	294.5	294.5
Adj. EBIT	620.1	808.4	156.5	175.9	201.0	196.0	729.8	211.4	279.5	292.6	282.7	1,066.2	1,158.8	1,232.4
Adj. EBITDA	675.3	857.2	168.1	187.4	216.6	217.9	790.3	231.0	299.5	312.6	303.1	1,146.2	1,238.8	1,312.4
(-) Net Interest Expense	205.5	174.0	32.1	49.0	73.4	76.0	230.5	70.0	67.2	65.5	63.9	266.6	238.0	210.5
Pre-Tax Income	76.2	317.0	60.4	61.5	(122.9)	(61.0)	(62.0)	21.0	212.3	227.1	218.8	679.2	920.8	1,021.8
(-) Taxes	56.8	80.3	3.3	15.9	(42.1)	14.1	(8.9)	50.7	73.2	78.3	75.5	277.8	317.7	352.5
Adj. Net Income	262.0	426.7	81.4	94.8	102.6	82.8	361.5	94.4	139.1	148.7	143.3	525.5	603.1	669.3
Diluted Shares Out	164.0	191.5	194.0	194.0	190.3	191.0	189.9	195.5	195.9	196.4	196.9	196.2	198.2	200.1
Adj. EPS	\$1.60	\$2.23	\$0.42	\$0.49	\$0.53	\$0.42	\$1.86	\$0.48	\$0.71	\$0.76	\$0.73	\$2.68	\$3.04	\$3.34
Free Cash Flow	254.6	346.3	(6.6)	56.1	96.7	99.2	354.3	78.0	50.9	139.0	248.0	530.0	608.7	663.5
Growth y/y %														
Revenue	4.8%	10.0%	(11.7%)	(18.7%)	(2.8%)	38.0%	(0.6%)	38.6%	49.5%	33.4%	8.0%	30.6%	2.8%	2.8%
EBITDA	18.3%	26.9%	(17.4%)	(30.7%)	(6.2%)	43.3%	(7.8%)	37.4%	59.8%	44.3%	39.1%	45.0%	8.1%	5.9%
EPS	243.2%	946.7%	(39.8%)	60.0%	(184.0%)	(256.0%)	(130.2%)	(132.7%)	20.4%	(180.4%)	(179.2%)	(332.8%)	56.1%	21.5%
Free Cash Flow	(1.4%)	36.0%	(84.8%)	(349.3%)	(52.2%)	(14.3%)	2.3%	(1289.5%)	(9.3%)	43.8%	149.9%	49.6%	14.8%	9.0%
Margins %														
Gross Margin %	34.5%	36.5%	35.5%	36.3%	34.8%	34.9%	35.3%	39.1%	40.1%	40.5%	40.9%	40.2%	40.9%	41.5%
Adj. EBIT Margin %	17.8%	21.1%	19.0%	20.3%	20.7%	17.2%	19.2%	18.5%	21.6%	22.6%	22.9%	21.4%	22.7%	23.5%
Adj. EBITDA Margin %	19.4%	22.4%	20.4%	21.6%	22.3%	19.1%	20.8%	20.2%	23.1%	24.1%	24.6%	23.1%	24.2%	25.0%
Adj. Net Margin %	7.5%	11.1%	9.9%	10.9%	10.5%	7.2%	9.5%	8.3%	10.7%	11.5%	11.6%	10.6%	11.8%	12.7%
% of Sales														
R&D / Sales %	3.6%	3.3%	3.4%	3.2%	3.2%	4.3%	3.6%	4.6%	3.5%	3.3%	3.4%	3.7%	3.7%	3.8%
SG&A / Sales %	14.4%	12.7%	15.2%	15.1%	21.0%	19.9%	18.1%	18.3%	15.0%	14.7%	14.6%	15.6%	14.5%	14.3%
Capex / Sales %	1.1%	1.0%	1.0%	1.8%	1.6%	1.5%	1.5%	1.3%	1.4%	1.4%	1.5%	1.4%	1.5%	1.5%
D&A / Sales %	7.4%	6.8%	7.2%	7.6%	7.6%	9.1%	8.0%	8.5%	7.2%	7.2%	7.6%	7.6%	7.3%	7.1%
Effective Tax Rate %	74.6%	25.3%	5.4%	25.8%	34.3%	(23.1%)	14.3%	241.0%	34.5%	34.5%	34.5%	40.9%	34.5%	34.5%
Return Metrics														
NOPAT	563.3	728.1	153.2	160.0	243.1	181.9	738.7	160.7	206.3	214.3	207.2	788.4	841.2	879.8
Invested Capital	3,213.0	3,247.2	3,310.4	5,976.2	6,056.1	5,903.5	5,903.5	5,831.6	5,894.7	5,841.3	5,703.4	5,703.4	5,478.4	5,269.7
Invested Capital ex-Goodwill/Intangibles	340.3	534.4	647.4	3,353.9	1,174.1	1,065.4	1,065.4	1,034.9	1,171.7	1,191.8	1,127.6	1,127.6	1,197.0	1,282.8
ROIC	17.5%	22.4%	18.5%	10.7%	16.1%	12.3%	12.5%	11.0%	14.0%	14.7%	14.5%	13.8%	15.4%	16.7%
ROIC ex-Goodwill/Intangibles	165.5%	136.3%	94.7%	19.1%	82.8%	68.3%	69.3%	62.1%	70.4%	71.9%	73.5%	69.9%	70.3%	68.6%

Top Ten Shareholder Overview (March 31, 2016) – High-conviction holding for many well-known funds

- 1st: Carlyle Group (PE Sponsor): 32% ownership
- 2nd: Chieftain Capital: 8.3% of free float / 23.6% of portfolio
- 3rd: Maverick Capital: 7.1% of free float / 5.9% of portfolio
- 4th: FPR Partners: 5.3% of free float / 6.8% of portfolio
- 5th: Vanguard: 4.3% of free float
- 6th: Route One Investment Company (ex-Farallon investors): 3.3% of float / 9.2% of portfolio
- 7th: FMR LLC: 3.3% of free float
- 8th: Corvex: 2.6% of float, 2.3% of portfolio
- 9th: JPM: 2.5% of float
- 10th: Blue Ridge, 2% of float, 1.3% of portfolio

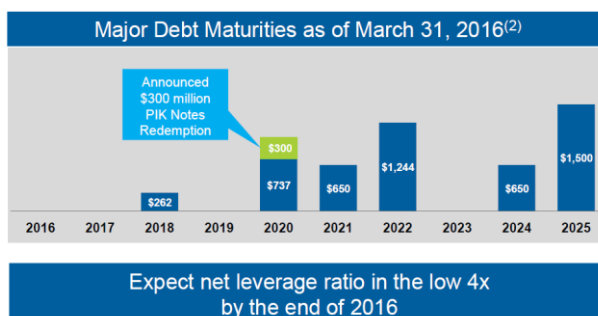
Key Assumptions

- Base: 4% connectivity / 1% mobility revenue CAGR through FY18. \$225m synergies and 210 bps EBITDA margin expansion.
- Bull: 6% connectivity / 3% mobility revenue CAGR through FY18. \$275m synergies and 350 bps EBITDA margin expansion.
- Bear: (1%) connectivity / (5%) mobility revenue CAGR through FY18. \$175m synergies and flat EBITDA margins.

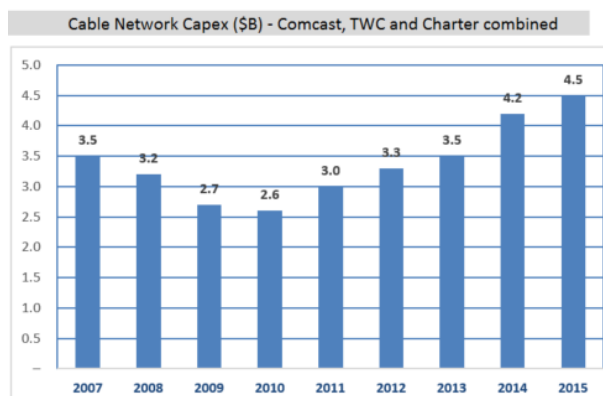
FCF Valuation	Base	Bull	Bear
2017 FCF/Share	\$3.07	\$3.33	\$2.80
FCF Yield	8.0%	7.0%	10.0%
Implied Price	\$38.41	\$47.54	\$27.99
Premium / (Discount)	25.1%	54.8%	(8.8%)
Probability	50.0%	30.0%	20.0%
Weighted Average Target	\$39.06		
Premium / (Discount)	27.2%		

Risks and Mitigants

- **Risk:** COMM earnings are lumpy in nature as they only have 4-6 weeks of backlog visibility; can sell off hard quarter-to-quarter.
 - **Mitigant:** While earnings visibility is limited, the longer-term structural tailwinds are intact and should benefit an investor with a multi-year horizon. COMM management also indicated they hold quarterly “high-level” meetings with their larger customers (AT&T, Verizon) to ensure that their working capital forecasts are reasonable. Last, COMM has no significant customer concentration issues (above 10%) due to their diversification efforts.
- **Risk:** Despite secular trends, the business is still cyclical. With ~\$5B in debt, CommScope’s leverage could be an issue.
 - **Mitigant:** No near-term maturities and just \$262m of debt due before 2020, along with \$1B in current liquidity.



- **Risk:** Global telecom capex environment hit-or-miss outside of US, risks of potential slowdown in Europe
 - **Mitigant:** COMM’s diversification into fiber/broadband helps shield the business from a weak wireless environment. Cable MSO’s have begun ramping up investment (below) which should help pick up the slack.



- **Risk:** Integration / M&A risk – synergies fail to materialize
 - **Mitigant:** Possible but unlikely given management track record. Goldman Sachs also ran a study (below) showing that component M&A synergies historically reach 10% of acquired company sales. BNS did \$1.9B in LTM revs pre-deal so \$190m is a reasonable base rate.

Exhibit 1: Historically, component M&A synergies have been able to get to 10% of acquired company sales
Target synergies as a % of COGS/Opex and % of revenue, historical semi/SPE deals

M&A synergies		Target	Target close	Synergies	% of opex + COGS	% of target	% of revenue
Announced	Acquirer						
1/19/2016	Microchip	Atmel	4/4/2016	170	10.8%	\$1,256	13.5%
10/21/2015	Western Digital	Sandisk	5/12/2016	500	10.4%	\$5,757	8.7%
10/21/2015	Lam Research	KLA-Tencor	mid 2016	250	11.9%	\$2,814	8.9%
10/19/2015	Microsemi	PMC-Sierra	1/15/2016	100	21.4%	\$521	19.2%
5/26/2015	Avago	Broadcom	Mar-16	750	10.9%	\$6,502	8.8%
3/2/2015	NXP	Freescal	2H15	500	13.0%	\$4,634	10.8%
2/24/2014	RFMD	TriQuint	Jan-15	200	22.4%	\$893	22.4%
5/6/2014	Avago	LSI Corp	1H14	200	9.6%	\$2,370	8.4%
9/24/2013	Applied Materials	Tokyo Electron	2014	500	9.3%	\$4,200	11.9%
10/1/2013	Maxim	Voltage	4Q13	15	10.9%	\$168	8.9%
8/2/2012	Microchip	Standard Microsystems	8/2/2012	60	11.2%	\$412	12.1%
3/20/2012	Sentech	Gennum	1Q12	15	12.8%	\$136	11.0%
2/17/2012	Broadcom	NetLogic	1H12	17	4.3%	\$405	4.2%
9/23/2011	Texas Instruments	National	3Q11	100	10.9%	\$1,300	7.7%
3-year median					10.9%		9.9%

Source: Company data, FactSet, compiled by Goldman Sachs Global Investment Research

- Carlyle still owns 32% of float (technical overhang)
- Crowded long + sell-side sentiment overwhelmingly positive – likely to underperform in a sell-off (also due to leverage)
- **Invert:** Could COMM be a short?
 - **Mitigant:** On a longer-term basis COMM is likely a poor choice due to powerful secular tailwinds, but could be a shorter-term bet on a weak wireless capex environment or capex delays/cuts.

CommScope (COMM) Investment Memo – Greg Blotnick – July 2016

Appendix – Cash Flow Statement, Balance Sheet, Debt Schedule

CommScope (COMM) Earnings Model														
FY End: 12/31	FY	FY	31-Mar-15	30-Jun-15	30-Sep-15	31-Dec-15	FY	31-Mar-16	30-Jun-16	30-Sep-16	31-Dec-16	FY	FY	FY
Line Items \$m, except where noted	2013	2014	1Q15	2Q15	3Q15	4Q15	2015	1Q16	2Q16E	3Q16E	4Q16E	2016E	2017E	2018E
CASH FLOW STATEMENT														
Net Income	19.4	236.7	39.5	45.6	(80.8)	(75.1)	(70.9)	(13.0)	56.6	66.3	60.9	170.9	268.8	330.0
D&A	256.6	259.5	59.5	66.3	73.8	104.0	303.5	96.9	93.6	93.6	94.0	378.2	374.5	374.5
SBC	16.1	21.1	5.3	10.1	5.7	7.6	28.7	8.8	8.8	8.8	8.8	35.3	40.0	45.0
Deferred Taxes	(40.7)	(33.3)	(13.6)	(20.5)	(58.4)	(9.3)	(101.8)	(10.4)	(10.4)	(10.4)	(10.4)	(41.8)	(45.0)	(50.0)
Impairments	46.0	12.0	(0.1)	—	85.3	5.5	90.7	15.3	—	—	—	15.3	—	—
Excess Tax from SBC	(0.2)	(11.4)	(10.4)	(3.8)	(5.0)	(5.6)	(24.8)	(1.4)	(1.4)	(1.4)	(1.4)	(5.5)	(7.5)	(10.0)
Change in Working Capital	(68.7)	(180.1)	(77.9)	(27.7)	88.2	88.9	71.5	(3.7)	(90.2)	(11.0)	103.1	(1.8)	0.5	(5.8)
Cash from Operations	238.1	289.3	1.7	72.0	112.0	116.3	302.0	92.5	57.1	146.0	255.0	550.6	631.3	683.6
Capex	(36.8)	(36.9)	(8.2)	(15.9)	(15.3)	(17.1)	(56.5)	(14.5)	(18.0)	(18.8)	(18.8)	(70.0)	(75.0)	(80.0)
Sale of PP&E	3.2	4.6	0.2	—	—	3.2	3.4	3.7	—	—	—	3.7	—	—
Acquisitions	(55.8)	(41.8)	(0.0)	—	(2,957.5)	(43.5)	(3,001.0)	—	—	—	(30.0)	(30.0)	(30.0)	(30.0)
Sale of Businesses	26.5	12.8	2.2	—	—	—	2.2	—	—	—	—	—	—	—
Cash paid (in escrow) for investments	(0.8)	(15.0)	—	(2,746.9)	2,746.9	—	—	—	—	—	—	—	—	—
Other	0.2	0.4	0.4	—	—	0.2	0.6	15.8	—	—	—	15.8	—	—
Cash from Investing	(63.4)	(76.0)	(5.4)	(2,762.8)	(225.9)	(57.2)	(3,050.6)	5.0	(18.0)	(18.8)	(48.8)	(80.5)	(105.0)	(110.0)
Debt Repaid	(907.8)	(1,124.4)	(2.3)	(500.3)	—	(116.5)	(619.1)	(3.1)	(300.0)	(100.0)	(100.0)	(503.1)	(500.0)	(500.0)
Debt Proceeds	947.4	1,315.0	—	3,246.9	—	—	3,246.9	—	—	—	—	—	—	—
Debt Financing Costs	(14.6)	(23.3)	(0.0)	(9.0)	(64.9)	(0.4)	(74.3)	(2.7)	(3.0)	(3.0)	(3.0)	(11.7)	(12.0)	(12.0)
Issuance for SBC	1.2	12.1	12.0	5.0	4.3	4.3	25.6	1.5	7.5	7.5	7.5	24.0	24.0	24.0
Excess tax from SBC	0.2	11.4	10.4	3.8	5.0	5.6	24.8	1.4	7.5	7.5	7.5	23.9	23.9	23.9
Other	(0.0)	—	(0.7)	—	—	—	(0.7)	—	—	—	—	—	—	—
Cash from Financing	(89.7)	190.8	19.4	2,746.3	(55.5)	(107.1)	2,603.1	(3.0)	(288.0)	(88.0)	(88.0)	(467.0)	(464.1)	(464.1)
FX Effect	(2.7)	(21.3)	(10.2)	1.8	(6.2)	(6.4)	(21.0)	5.3	—	—	—	5.3	—	—
Change in Cash	82.4	382.8	5.5	57.3	(175.6)	(54.4)	(166.5)	99.9	(248.9)	39.2	118.2	8.5	62.2	109.5
Beginning Cash	264.4	346.8	729.3	735.1	793.0	618.0	729.3	562.9	662.8	413.9	453.1	562.9	571.4	633.5
Ending Cash	346.8	729.3	735.1	792.4	617.4	562.9	562.9	662.8	413.9	453.1	571.4	571.4	633.5	743.1
Cash Taxes	80.9	98.6	34.6	26.0	35.0	27.0	122.6	50.7	73.3	78.4	75.5	277.8	317.7	352.6
Cash Interest	199.3	184.9	7.3	60.0	15.0	125.0	207.3	70.0	67.2	65.5	63.8	266.5	237.8	210.3
Free Cash Flow														
EBITDA	675.3	857.2	168.1	187.4	216.6	217.9	790.3	231.0	299.5	312.6	303.1	1,146.2	1,238.8	1,312.4
(-) Capex	(36.8)	(36.9)	(8.2)	(15.9)	(15.3)	(17.1)	(56.5)	(14.5)	(18.0)	(18.8)	(18.8)	(70.0)	(75.0)	(80.0)
(-) Cash Taxes	(80.9)	(98.6)	(34.6)	(26.0)	(35.0)	(27.0)	(122.6)	(50.7)	(73.3)	(78.4)	(75.5)	(277.8)	(317.7)	(352.6)
(-) Cash Interest	(199.3)	(184.9)	(7.3)	(60.0)	(15.0)	(125.0)	(207.3)	(70.0)	(67.2)	(65.5)	(63.8)	(266.5)	(237.8)	(210.3)
(-) WC	(68.7)	(180.1)	(77.9)	(27.7)	88.2	88.9	71.5	(3.7)	(90.2)	(11.0)	103.1	(1.8)	0.5	(5.8)
Free Cash Flow	254.6	346.3	(6.6)	56.1	96.7	99.2	354.3	78.0	50.9	139.1	248.1	530.1	608.8	663.6
FCF/Share	\$1.55	\$1.81	(\$0.03)	\$0.29	\$0.51	\$0.52	\$1.87	\$0.40	\$0.26	\$0.71	\$1.26	\$2.70	\$3.07	\$3.32
BALANCE SHEET														
Cash/Equivs	346.3	729.3	735.1	793.0	617.9	562.9	562.9	688.4	413.9	453.1	571.4	571.4	633.5	743.1
Accounts Receivable	607.5	612.0	689.6	718.3	958.2	833.0	833.0	924.2	1,026.2	1,026.3	881.4	881.4	882.1	892.5
Inventories	372.2	367.2	353.1	352.8	554.8	441.8	441.8	464.5	512.3	508.7	440.4	440.4	447.2	446.1
Prepaid/Other	55.6	67.9	65.2	59.2	146.7	166.9	166.9	149.9	149.9	149.9	149.9	149.9	149.9	149.9
Deferred Taxes	71.8	51.2	45.0	49.6	72.7	—	—	—	—	—	—	—	—	—
Current Assets	1,453.4	1,827.6	1,887.9	1,972.9	2,350.4	2,004.6	2,004.6	2,227.0	2,102.3	2,138.1	2,043.1	2,043.1	2,112.8	2,231.6
PP&E	310.1	289.4	282.2	286.1	530.1	528.7	528.7	519.9	517.9	516.7	545.0	545.0	570.0	600.0
Goodwill/Intangibles	2,872.7	2,712.8	2,663.0	2,622.3	4,882.0	4,838.1	4,838.1	4,796.7	4,723.1	4,649.4	4,575.8	4,575.8	4,281.4	3,986.9
Other non-current	97.8	87.3	123.6	2,830.7	98.0	131.2	131.2	129.3	154.9	154.9	154.9	154.9	154.9	154.9
Total Assets	4,734.1	4,917.1	4,956.8	7,712.0	7,860.5	7,502.6	7,502.6	7,672.9	7,498.2	7,459.2	7,318.8	7,318.8	7,119.1	6,973.5
Accounts Payable	251.6	177.8	234.0	248.5	336.8	300.8	300.8	388.0	418.4	407.0	360.3	360.3	356.1	353.5
Accrued	332.3	289.0	236.4	269.4	414.6	371.7	371.7	397.7	426.9	423.9	360.3	360.3	372.7	378.8
Current portion LTD	9.5	9.0	9.0	12.6	12.6	12.5	12.5	12.5	—	—	—	—	—	—
Current Liabilities	593.4	475.8	479.4	530.4	763.9	685.1	685.1	798.2	845.3	830.9	720.7	720.7	728.8	732.3
Long-Term Debt	2,505.1	2,659.9	2,697.2	5,346.3	5,342.9	5,231.1	5,231.1	5,231.5	4,941.1	4,838.1	4,735.1	4,735.1	4,223.1	3,711.1
Deferred Taxes	386.5	339.9	318.2	303.1	263.4	202.5	202.5	190.9	180.5	170.1	159.6	159.6	114.6	64.6
Pension	40.3	29.5	23.2	19.9	52.0	37.1	37.1	40.3	40.3	40.3	40.3	40.3	40.3	40.3
Other non-current	120.7	104.3	101.1	102.1	120.5	124.1	124.1	123.5	123.5	123.5	123.5	123.5	123.5	123.5
Total Liabilities	3,646.0	3,609.4	3,619.0	6,301.8	6,542.7	6,279.9	6,279.9	6,384.4	6,130.7	6,002.8	5,779.2	5,779.2	5,230.3	4,671.8
Total Equity	1,088.0	1,307.6	1,339.4	1,410.3	1,318.5	1,222.7	1,222.7	1,288.5	1,367.5	1,456.3	1,539.7	1,539.7	1,888.8	2,301.7
Total Liabilities & Equity	4,734.1	4,917.1	4,958.4	7,712.1	7,861.2	7,502.6	7,502.6	7,672.9	7,498.2	7,459.2	7,318.8	7,318.8	7,119.1	6,973.5
Leverage / WC Metrics														
Net Debt	2,125.0	1,939.6	1,971.0	4,565.9	4,737.6	4,680.8	4,680.8	4,543.1	4,527.2	4,384.9	4,163.7	4,163.7	3,589.5	2,968.0
Net Debt / EBITDA	3.1x	2.3x	2.4x	6.2x	6.5x	5.9x	5.9x	5.3x	4.7x	4.1x	3.6x	3.6x	2.9x	2.3x
AR Days	63.7	58.3	76.0	75.4	89.7	66.3	79.9	73.5	72.0	72.0	65.0	64.7	63.0	62.0
Inv Days	59.6	55.1	60.4	58.1	79.7	54.1	65.5	60.6	60.0	60.0	55.0	54.0	54.0	53.0
AP Days	40.3	26.7	40.0	40.9	48.4	36.8	44.6	50.7	49.0	48.0	45.0	44.2	43.0	42.0
Accrued Days	53.2	43.4	40.4	44.4	59.5	45.5	55.1	51.9	50.0	50.0	45.0	44.2	45.0	45.0
DEBT SCHEDULE														
Senior secured term (Jan 2018)	875.0	865.0	862.5	361.9	361.9	261.9	261.9	261.9	261.9	261.9	261.9	261.9	261.9	261.9
Senior PIK toggle notes (June 2020)	550.0	550.0	550.0	550.0	550.0	536.6	536.6	536.6	236.6	136.6	36.6	36.6	36.6	36.6
4.375% senior secured notes due 2020	—	—	—	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0
5.00% senior notes due 2021	—	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0
Term loan due 2022 (L+300)	—	—	—	1,250.0	1,250.0	1,246.9	1,246.9	1,243.8	1,240.8	1,237.8	1,234.8	1,234.8	1,222.8	1,210.8
5.50% senior notes due 2024	—	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0	650.0
6.00% senior notes due 2025	—	—	—	1,500.0	1,500.0	1,500.0	1,500.0	1,500.0	1,500.0	1,500.0	1,500.0	1,500.0	1,000.0	500.0
Long-Term Debt	2,525.0	2,715.0	2,712.5	5,461.9	5,461.9	5,345.4	5,345.4	5,244.0	4,941.1	4,838.1	4,735.1	4,833.3	4,223.1	3,711.1