

FOCUS Telecom
Technology and Services Group
**Telecom Business
Services Quarterly**

Summer 2019 Report

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FOCUS

Investment Banking

Strategic, Personal, Dedicated

Investment Banking and Advisory Services

FOCUS Investment Banking LLC is a leading investment bank with specialized telecom technology and services expertise, concentrating on providing highly tailored services to emerging middle market and larger organizations in this sector:

Mergers & Acquisition Advisory
Corporate Development Consulting
Strategic Partnering & Alliances
Capital Financing, Debt & Equity
Corporate Valuations

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Telecom Business Services Quarterly

By Richard Pierce, FOCUS Managing Director and Telecom Technology and Services Team Leader

FOCUS believes that the Telecom Business Services sector is an attractive (and often overlooked) segment of the telecom market. The companies in this sector perform services such as distributing communications-related products, designing and installing communications infrastructure and providing repair and other logistics services for both communications service providers and businesses. These companies often benefit from the same exciting trends that drive growth in the larger telecommunications industry. However, as professional services businesses they tend to be much less capital-intensive than network-based telecommunications service providers. Furthermore, they typically face little threat from shifts in technology. In fact, more often than not they benefit from technology shifts as upgrade cycles drive client demand for their services and expertise. FOCUS is proud of its commitment to the Telecom Business Services sector and we are excited about the prospects for companies in this space.

The FOCUS Telecom Technology and Services group consists of four professionals with a mix of backgrounds that include both C-level operating expertise and experience at leading middle market investment banks. The FOCUS Telecom team is uniquely qualified to help middle market clients reach their strategic objectives because the group:

- Devotes significant senior level resources to executing transactions for lower middle market clients,
- Has a breadth of knowledge that covers most segments of the telecom industry,

- Has bankers with C-level operating experience in the telecom industry,
- Has a proven transaction methodology for delivering results,
- Is equally comfortable with buy side and sell side M&A,
- Leverages an experienced team of research professionals,
- Has a national presence with coverage of both east and west coasts.

Sub Sector Definitions

Distributors and Logistics Services: This sub sector includes companies that distribute communications-related products or that provide repair, refurbish and other supply chain management solutions. Companies in this segment may serve either telecom service providers, businesses or both.

Engineering and Construction: Engineering and Construction companies provide a variety of services including network planning and design, systems integration, installation and construction. Customers are primarily service providers but may also include large enterprises and governments.

Summary Comments

Public Markets

The FOCUS Telecom Business Services Index (TBSI) enjoyed a second straight reporting period in the black as it turned in a solid three-month gain of 4.0%. This increase was strong enough to outperform the gains in both the S&P 500 (up 3.8%) and the NASDAQ (up 3.6%) over the corresponding time period. The TBSI also outpaced the broader indices over the past year. The sector is up 14.6% over the past 12 months, handily besting both the 8.2% gain in the S&P 500 and the 6.6% gain in the NASDAQ. Sector multiple performance was mixed over the past year. The sector revenue multiple inched up from 0.4x a year ago to 0.5x currently. However, the sector EBITDA multiple declined from 9.7x to 9.4x over the same time frame.

Distributors and Logistics Services

For the second straight reporting period it was the Distributors and Logistics Services sub sector that drove the growth in the TBSI with an increase of 8.4% over the past three months. Gains were relatively broad-based with five of the eight companies in the sub sector in positive territory for the period. ADDvantage Technologies, CDW and TESSCO were the strongest performers, with all three turning in three-month gains of approximately 15%. Conversely, ePlus plummeted more than 20% this period,

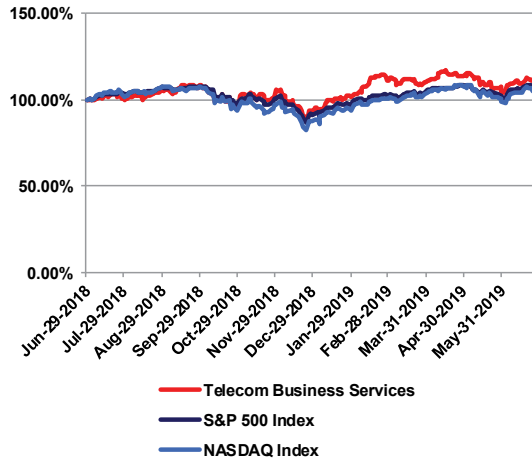
while Presidio shed 7.6% of its value. For the full year, the Distributors and Logistics Services sub sector boasted an impressive gain of 26.8%. Every single company in the index was up over this time period with the sole exception of ePlus. Sub sector multiples increased over the past year, with the revenue multiple going from 0.4x a year ago to 0.5x currently and the EBITDA multiple moving up from 10.8x to 11.4x over this same time period.

Engineering and Construction

The Engineering and Construction sub sector did not fare as well this period and was actually down 2.3% in the past three months. The period's losses can largely be attributed to international companies Baran Group (down 20.3%), China Communications Services (down 13.0%) and COMSYS Holdings (down 7.0%). U.S.-based companies Dycom and Mastec actually fared very well, with Dycom sporting a three month gain of 28.1% and Mastec increasing by 7.1%. The sub sector is also down slightly for the full year with a decline of 1.6%. The main drags on the sub sector over this time period were Dycom (down 37.7%) and Baran Group (down 22.6%). Sub sector multiples are lower than they were at this same time last year. Sub sector multiples closed out the period at 0.5x revenue (down from 0.6x a year ago) and 7.0x EBITDA (down from 8.1x a year ago).

Telecom Business Services: Public Market Summary

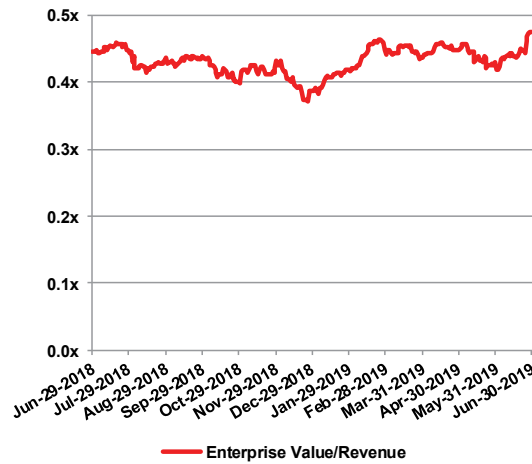
Twelve Month Index Returns



Sector and Sub Sector Returns

	12 Month	3 Month
Telecom Business Services	14.6%	4.0%
Distributors and Logistics Services	26.8%	8.4%
Engineering and Construction	-1.6%	-2.3%
S&P 500	8.2%	3.8%
NASDAQ	6.6%	3.6%

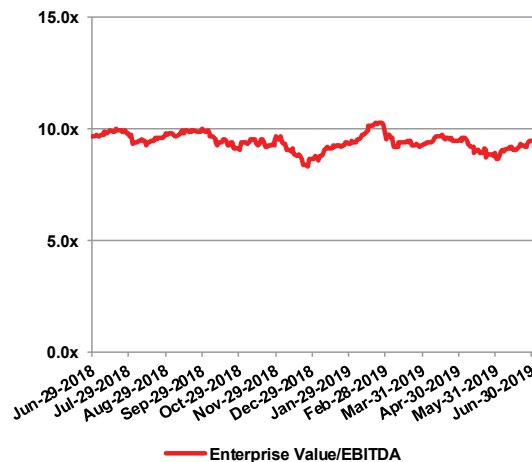
Revenue Multiple Trends



Sector and Sub Sector Revenue Multiples

	6/30/2019	6/30/2018
Telecom Business Services	0.5x	0.4x
Distributors and Logistics Services	0.5x	0.4x
Engineering and Construction	0.5x	0.6x

EBITDA Multiple Trends



Sector and Sub Sector EBITDA Multiples

	6/30/2019	6/30/2018
Telecom Business Services	9.4x	9.7x
Distributors and Logistics Services	11.4x	10.8x
Engineering and Construction	7.0x	8.1x

Source: Capital IQ

Summary Comments

M&A

M&A activity in the Telecom Business Services sector was fairly tepid for the second straight reporting period. There were only 31 transactions in these past three months for a total announced transaction dollar volume of \$624 million. Year-to-date we now count 63 transactions in the sector for a total announced transaction dollar volume of \$736 million. Both of these numbers are low by historical standards, and barring a major turnaround in the back half of the year 2019 will be a relatively anemic year for the sector in terms of M&A activity.

Distributors and Logistics Services

The Distributors and Logistics Services sub sector continued to bear the brunt of the decline in sector M&A activity as it had only 18 transactions for the period. This did include the period's largest announced dollar volume transaction as Insight Enterprises announced that it would acquire fellow distributor PCM for nearly \$620 million. However, though the deal size was not announced, the acquisition of Sirius Computer Solutions by private equity firm Clayton, Dubilier & Rice was almost certainly the period's largest transaction. We also noted the emergence of a new platform company in the area of repairing telecom and other electronic equipment. This was Staple Street Capital's acquisition of assets from iQor to form Ivy Technology. Park Place Technologies continued its acquisitive

ways with the acquisition of data center break-fix company MCSA, and Ingram Micro also notched an acquisition with the purchase of French Company Abbakan.

Engineering and Construction

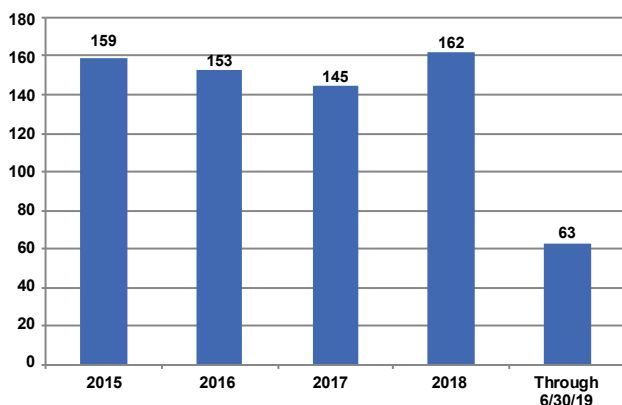
The Engineering and Construction sub sector actually had a very active period for M&A with 13 total transactions this period. Much of this was driven by private equity-backed platforms as Centerline Communications, Congruex and QualTek all announced add on acquisitions this period. We also lost one private equity-backed company as ITC Services was acquired by strategic acquirer AFL Telecommunications. Finally, we noted a significant transaction in the Canadian market as Telecon acquired installation services company SC360. Otherwise, M&A activity in the sub sector was varied with a mix of transactions for wireline, wireless and customer-premise focused targets.

Transactions with Multiples

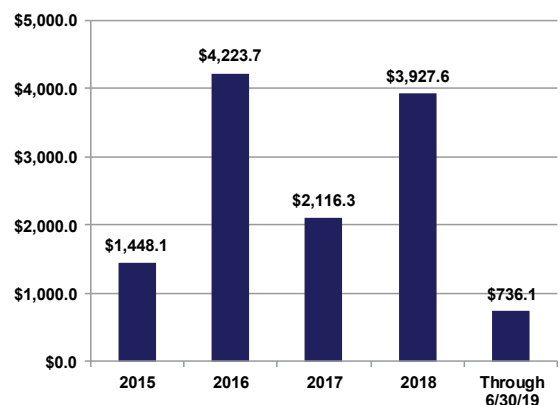
For the second straight reporting period we had only two transactions with announced multiples. The first of these was for the period's largest announced dollar volume transaction, the acquisition of PCM by Insight Enterprises. Multiples for this transaction were 0.3x revenue and 10.9x EBITDA. In the period's other transaction with an announced multiple, the acquisition of distributor Gencom by Yarix was done at a multiple of 0.5x revenue.

Telecom Business Services: M&A Summary

M&A Activity: Number of Transactions



M&A Activity (\$ Value of Transactions in Millions)



Announced Transactions (4/1/19 – 6/30/19)

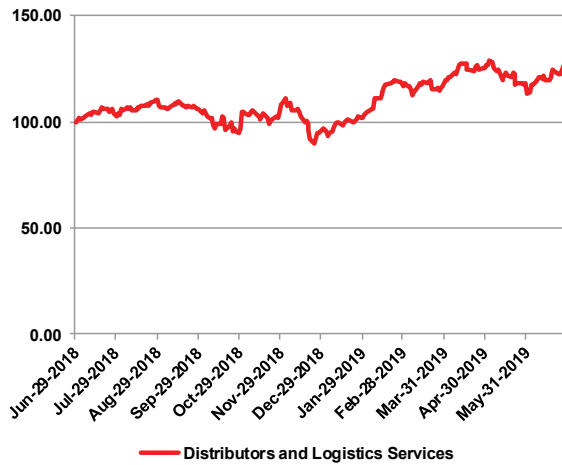
Acquiror	Target	Sector	Date Announced	Purchase Price	Description
Congruex	Terra Technologies	Telecom Engineering and Construction	6/24/19	NA	Provides civil engineering, construction and consulting services to telecommunications, energy and public utilities.
Insight Enterprises	PCM	Distributors & Logistics Services	6/24/19	\$618.7	Multi-vendor provider of technology products and solutions in the United States and Europe.
VINCI Energies	Koning & Hartman	Telecom Engineering and Construction	6/19/19	NA	Multi-vendor telecommunications infrastructure solutions including network design and control systems installation.
Sirti	Wellcomm Engineering	Telecom Engineering and Construction	6/14/19	NA	Structured cabling system solutions as well as products such as hub switches and routers.
Rahi Systems	Serro	Distributors & Logistics Services	6/6/19	NA	Network functions virtualization and software-defined networking systems design and integration services.
magellan netzwerke	Solit Systems	Distributors & Logistics Services	6/4/19	NA	IT services company specializing in security, data protection and compliance.
SoftwareONE	InterGrupo	Distributors & Logistics Services	6/4/19	NA	Integrated IT solutions in Colombia and Latin America including security, unified communications and infrastructure management.
Staple Street Capital	iQor (selected assets)	Distributors & Logistics Services	6/3/19	NA	Repair services for telecommunications, computers and other electronic equipment.
Blackpoint IT Services	Copper State Communications	Distributors & Logistics Services	5/30/19	NA	Provides phone systems, cabling, voice, data, cloud and managed services to businesses in Arizona.
AFL Telecommunications	ITC Services	Telecom Engineering and Construction	5/28/19	NA	Planning design, construction, installation and maintenance of voice, data and video networks for telecom operators.
Ingram Micro	Abbakan	Distributors & Logistics Services	5/28/19	NA	Value added distributor of security and IT systems and software for integration firms globally.
Prazska Energetika	VOLTCOM	Telecom Engineering and Construction	5/22/19	NA	Offers cable and telecommunication network design, installation, repair, maintenance and inspection services in the Czech Republic.
Smartlink	System Integrators	Telecom Engineering and Construction	5/17/19	NA	Fiber optic design, wireless installation, network deployment and upgrades, testing and maintenance services for businesses.
DCC	COMM-TEC	Distributors & Logistics Services	5/14/19	NA	Sells communication technology products to resellers, system integrators, planners and architects.
Yarix	Gencom	Distributors & Logistics Services	5/13/19	\$5.6	Offers collaboration, networking, security and datacenter solutions.
Maicom	Waveguide	Telecom Engineering and Construction	5/9/19	NA	Fully integrated, turn-key provider of network deployment services for fiber and wireless network infrastructures.
Advanced Imaging Solutions	Comworx	Distributors & Logistics Services	5/6/19	NA	IP telephony, digital telephony, mobility solutions, on-site phone systems, call center and call recording solutions.
MXC Capital	Koris Communications Group	Distributors & Logistics Services	5/2/19	NA	On-premise, hybrid, private cloud and cloud solutions with a focus on Mitel telephony and Skype for Business.
Young's Communications	General Utility Construction	Telecom Engineering and Construction	5/2/19	NA	Specializes in aerial and underground cable and fiber construction.
Centerline Communications	Notora	Telecom Engineering and Construction	5/1/19	NA	RF engineering services required to assess, design, test and turn-up distributed antenna and small cell systems.
Telecon	SC360	Telecom Engineering and Construction	4/29/19	NA	Residential installations, business connectivity and installation and maintenance of network infrastructure.
SPIE Communications	telba	Distributors & Logistics Services	4/26/19	NA	Provides telecommunications systems as well as cloud, security and IT consulting services.
Network Solutions & Technology	Urban Digital Solutions	Distributors & Logistics Services	4/21/19	NA	Communication and information technology solutions for businesses and consumers.
Pavlov Media	Simplified Technologies	Distributors & Logistics Services	4/18/19	NA	IT and computer repair services to commercial businesses in Central Illinois.
AMSYS Innovative Solutions	Mintco Group	Telecom Engineering and Construction	4/8/19	NA	Horizontal directional drilling services for the construction of underground telecom utility networks.
Clayton, Dubilier & Rice	Sirius Computer Solutions	Distributors & Logistics Services	4/5/19	NA	Solutions from proven technology providers to help clients optimize their IT infrastructures.
FE Moran Security Solutions	MidCo	Distributors & Logistics Services	4/5/19	NA	Systems integrator of communications systems, security systems, structured wiring, network solutions and voice systems.
Boston Networks	Pinacl Holdings	Telecom Engineering and Construction	4/2/19	NA	Infrastructure solutions for wireless, wide area networks, local area networks, WiFi, data center, cloud and security services.
Park Place Technologies	MCSA	Distributors & Logistics Services	4/2/19	NA	Data center and IT services including break-fix and IT maintenance services as well as product resale capabilities.
QualTek	Vertical Limit	Telecom Engineering and Construction	4/1/19	NA	Infrastructure construction and installation services to engineers and designers in the wireless telecommunications industry.
The Cook & Boardman Group	A3 Communications	Distributors & Logistics Services	4/1/19	NA	Enterprise networking, physical security, unified communications, voice, data and fiber cabling solutions.

Announced Transactions with Revenue Multiples (7/1/18 – 6/30/19)

Acquiror	Target	Sector	Date Announced	Purchase Price	Revenue Multiple	EBITDA Multiple	Description
Insight Enterprises	PCM	Distributors & Logistics Services	6/24/19	\$618.7	0.3 x	10.9 x	Multi-vendor provider of technology products and solutions in the United States and Europe.
Yarix	Gencom	Distributors & Logistics Services	5/13/19	\$5.6	0.5 x	NA	Offers collaboration, networking, security and datacenter solutions.
Tech Mahindra	K-Vision	Telecom Engineering and Construction	3/14/19	\$1.5	0.3 x	NA	Provides network integration and engineering services for wireless telecom providers in Japan.
Kyowa Exeo Corporation	DeClout	Distributors & Logistics Services	1/7/19	\$110.4	0.5 x	8.3 x	Supplies components and services to the telecommunication/cellular industry and sells refurbished IT equipment.
Kronologi Asia Berhad	Sandz Solutions	Distributors & Logistics Services	12/27/18	\$18.0	0.8 x	NA	Information technology solutions in the areas of virtualization, disaster recovery and security and compliance.
Leveling 8	ADDvantage Technologies (Cable Division)	Distributors & Logistics Services	12/27/18	\$10.3	0.5 x	NM	Sells new, surplus and refurbished cable television equipment to cable television operators and other resellers.
Converge Technology Partners	Lighthouse Computer Services	Distributors & Logistics Services	12/4/18	\$23.2	0.3 x	4.9 x	Information technology solutions in analytics, cloud, infrastructure, middleware and security.
AGC Networks	Black Box	Distributors & Logistics Services	11/11/18	\$154.3	0.2 x	NM	Provides digital solutions that assist customers with designing, building, managing and securing their IT infrastructure.
CVC Capital Partners	ConvergeOne	Distributors & Logistics Services	11/6/18	\$1,661.8	1.2 x	14.9 x	Provides collaboration and technology solutions for large and medium enterprises in the United States.
Over the Wire Holdings	Comlinx	Distributors & Logistics Services	11/1/18	\$16.0	1.0 x	5.0 x	Systems and telecom integration, support and distribution services for businesses and the public sector in Australia.
Computacenter	FusionStorm	Distributors & Logistics Services	10/2/18	\$70.0	0.1 x	NA	Cisco partner delivering technology solutions to enterprises of all sizes globally.
Shearwater Group	Brookcourt Solutions	Distributors & Logistics Services	8/17/18	\$39.5	1.4 x	15.1 x	Sells, implements, integrates and supports cyber security and networking technologies for business customers.
MIRAIT Holdings Corporation	SOLCOM	Telecom Engineering and Construction	8/1/18	\$121.2	0.3 x	5.5 x	Design, construction and maintenance of telecommunications facilities in Japan.

Sub Sector Analysis: Distributors and Logistics Services

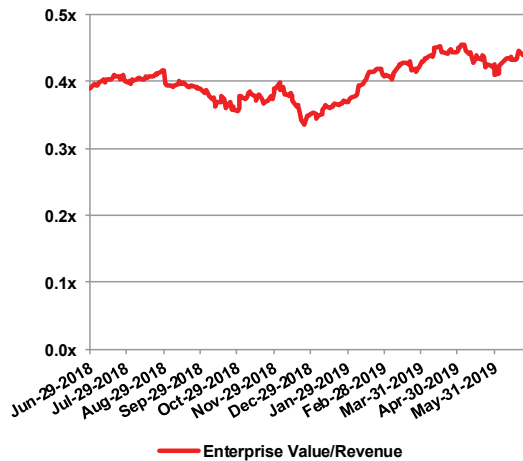
Twelve Month Index Returns



Company Returns

	12 Month	3 Month
Distributors and Logistics Index	26.8%	8.4%
ADDvantage Technologies	20.6%	15.3%
CDW	37.4%	15.2%
ePlus	-26.7%	-22.1%
Insight	18.9%	5.7%
PC Connection	5.4%	-4.6%
Presidio	4.4%	-7.6%
Tech Data	27.4%	2.1%
TESSCO	3.2%	15.4%

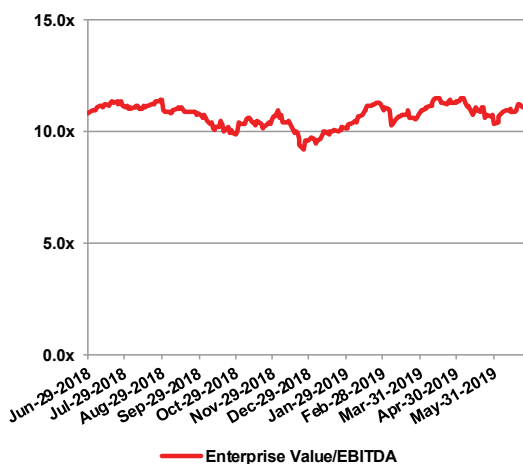
Revenue Multiple Trends



Company Revenue Multiples

	6/30/2019	6/30/2018
Distributors and Logistics Index	0.5x	0.4x
ADDvantage Technologies	0.3x	0.3x
CDW	1.2x	1.0x
ePlus	0.7x	0.9x
Insight	0.3x	0.3x
PC Connection	0.3x	0.3x
Presidio	0.7x	0.8x
Tech Data	0.1x	0.1x
TESSCO	0.3x	0.3x

EBITDA Multiple Trends



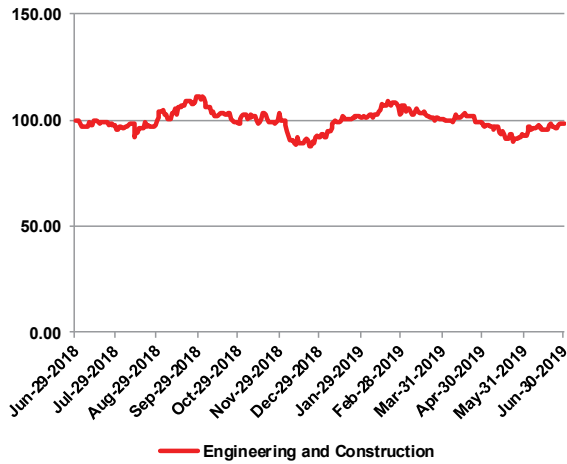
Company EBITDA Multiples

	6/30/2019	6/30/2018
Distributors and Logistics Index	11.4x	10.8x
ADDvantage Technologies	NM	16.1x
CDW	15.6x	13.6x
ePlus	10.2x	13.1x
Insight	8.6x	8.3x
PC Connection	8.2x	8.4x
Presidio	9.3x	NA
Tech Data	6.3x	7.0x
TESSCO	14.1x	13.2x

Source: Capital IQ

Sub Sector Analysis: Engineering and Construction

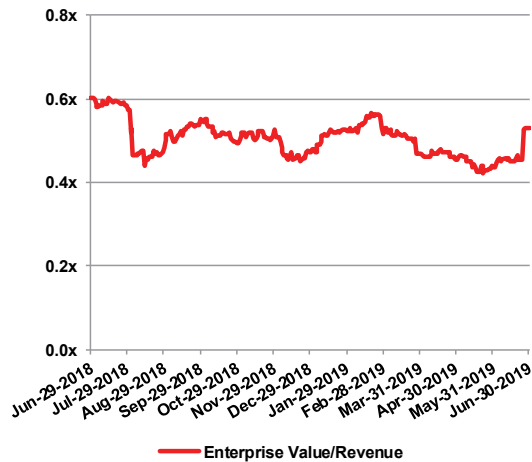
Twelve Month Index Returns



Company Returns

	12 Month	3 Month
Engineering and Construction Index	-1.6%	-2.3%
Baran Group	-22.6%	-20.3%
China Communications Services	22.5%	-13.0%
COMSYS Holdings	-4.4%	-7.0%
Dycom	-37.7%	28.1%
Mastec	1.5%	7.1%
MIRAIT Holdings	-4.4%	1.4%
TSS	74.5%	0.0%

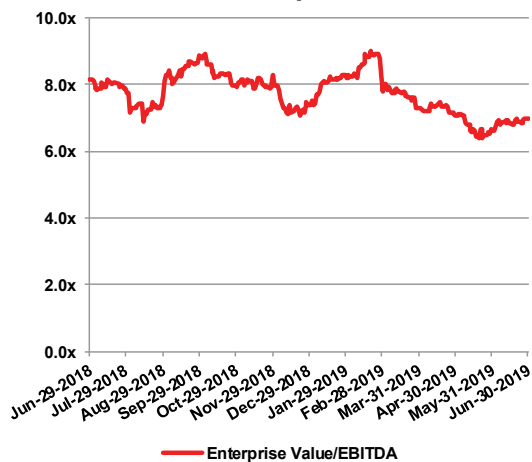
Revenue Multiple Trends



Company Revenue Multiples

	6/30/2019	6/30/2018
Engineering and Construction Index	0.5x	0.6x
Baran Group	0.3x	0.2x
China Communications Services	0.2x	0.1x
COMSYS Holdings	0.7x	0.8x
Dycom	0.9x	1.2x
Mastec	0.8x	0.8x
MIRAIT Holdings	0.4x	0.4x
TSS	0.5x	0.3x

EBITDA Multiple Trends



Company EBITDA Multiples

	6/30/2019	6/30/2018
Engineering and Construction Index	7.0x	8.1x
Baran Group	8.9x	5.9x
China Communications Services	4.6x	2.9x
COMSYS Holdings	7.9x	7.8x
Dycom	9.2x	11.1x
Mastec	7.9x	9.6x
MIRAIT Holdings	6.5x	5.8x
TSS	5.6x	4.6x

Source: Capital IQ

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Rich Pierce has more than ten years of investment banking experience advising middle market clients on a variety of mergers and acquisitions and capital raising transactions. During that time, Mr. Pierce’s primary emphasis has been on serving clients in the telecommunications industry including providers of network related hardware and software products, wireless, and wireline telecommunications service providers and network engineering and construction companies.



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David Freeland, a FOCUS Principal, has more than fifteen years of experience providing investment banking and management consulting services to a variety of corporate clients, ranging from the Fortune 500 to start-up businesses. He has been an investment banker since 2003, advising clients on mergers and acquisitions and capital raising transactions. Mr. Freeland has broad experience in the telecom and technology industry and has significant experience with data center companies.

About FOCUS Investment Banking LLC

With more than three decades of experience, FOCUS Investment Banking is a trusted name in M&A advisory services worldwide. FOCUS works to understand each client's strategic and financial objectives, craft the best plan to achieve these goals, and deliver success. Whether helping to sell, buy, or raise capital, FOCUS strives to maximize the value of every transaction to the benefit of its clients. FOCUS bankers are seasoned operating and financial executives with extensive transaction experience. Securities transactions conducted by FOCUS Securities LLC, an affiliated company, registered Broker Dealer member FINRA/SIPC. For more information on FOCUS, please visit www.focusbankers.com.

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