



## August 2018

Electric  
Vehicles



Ecosystem  
Intelligence



Mobility-as-  
a-Service



Autonomous  
Infrastructure



Data &  
Analytics



### About Greentech Capital Advisors

Our mission is to empower companies and investors who are creating a more efficient and sustainable global infrastructure. We are purpose-built to ensure that our clients achieve success. We have deeply experienced senior bankers and investment professionals who are sector experts and understand our clients' industry and needs. We reach a vast global network of buyers, growth companies, asset owners and investors, and thereby provide clients with more ways to succeed through a deeper relationship network. We have directly relevant transaction experience which enables us to find creative structures and solutions to close transactions. We are an expert team of 55 professionals working seamlessly on our clients' behalf in New York, Zurich and San Francisco and through a strategic partnership in Japan. Our team of experienced bankers and investment professionals provides conflict-free advice and thoughtful, innovative solutions.

### Business Developments

#### Greentech's Take:

Traditional vehicle OEMs are looking to make transformative acquisitions for AV technology in order to keep pace with Waymo, GM Cruise and Zoox

- > **Audi** will unveil its first EV in September, an SUV with a 250 mile range; the first of three new Audi EVs over the next two years ([Clean Technica](#))
- > **AutoX**, an AV technology startup, has announced that it will begin a grocery delivery and mobile store pilot to 400 homes in North San Jose ([TechCrunch](#))
- > **Hyundai** has completed a 40 km highway test; the first journey by an autonomous truck in South Korea ([CNBC](#))
- > **Aurora** rejected an acquisition attempt by VW, with the automaker looking to make an acquisition by year end to catch up with competitors ([Auto News](#))
- > **Lyft** hired an IPO advisor in preparation for a potential March/April 2019 listing; hoping to enter the market before Uber's expected IPO ([Bloomberg](#))
- > **NIO**, a Chinese EV maker that has delivered only 481 vehicles, has filed to go public on the NYSE to raise \$1.3bn at a valuation of ~\$8.5bn ([Electrek](#))
- > **Tesla** has developed a custom chip, in-house, that will replace the graphics chip they have been using from Nvidia and will ship with Autopilot 3 ([Forbes](#))
- > **Tritium**, an Australian producer of 350 kW ultra-fast charging stations, has unveiled a new station with a record capacity of up to 475 kW ([Electrek](#))
- > **Tropos Motors**, a utility EV manufacturer, rolled out a new round of EVs with a range of 160 miles, beating all low-speed EV competition ([Clean Technica](#))
- > **Uber** has discontinued its autonomous trucking project, after investing \$925mm in the unit, shortly after settling a legal battle with Waymo ([NPR](#))
- > **Uber** has hired a new CFO, ex-CEO of The Warranty Group Nelson Chai, who will be tasked with preparing the company for a 2019 IPO ([recode](#))
- > **Volkswagen** is launching the largest all electric car share fleet in Berlin, deploying 1,500 e-Golf EVs in Q2 2019 and 500 e-up! EVs "later" ([Electrek](#))
- > **WaveSense** is developing ground-penetrating radars to add subterranean data to HD maps to facilitate AV driving in poor weather ([VentureBeat](#))
- > **Waymo** is opening an office in Shanghai in an effort to enter China following Google's launch of an AI research center lab in Beijing last year ([WSJ](#))
- > **Zoox's** board removed founder Tim Kentley-Klay as CEO ([TechCrunch](#))

#### Greentech's Take:

new sensing technologies are being developed which attempt to fill the shortcomings of LiDAR and radar as the race towards an L5 AEV intensifies

### Regulatory Developments

#### Greentech's Take:

The Chinese government has taken a proactive approach to AV testing as they look to establish themselves as the leader in AV development

- > The city council in **Arlington, TX**, unanimously approved a deal with Drive.ai to operate autonomous shuttles near AT&T Stadium where the company will share "significant performance data" with the city ([GovTech](#))
- > The EPA and the National Highway Traffic Safety Administration announced a plan to reduce future fuel economy and emissions standards by freezing fuel economy standards at 2020 levels and attempting to revoke **California's** independence in setting its own greenhouse gas emissions standards ([Forbes](#))
- > A coalition of 35 **California** mayors, representing 25% of the state's population, proposed accelerating the transition to zero-emission buses, which the proposed measure aims to do by 2040 ([Utility Dive](#))
- > **China** has rolled out a set of national standards for testing AVs on roads that is expected to speed up domestic AV development ([China Daily](#))
- > **New York's** city council voted to implement a year-long moratorium on new ride-hail vehicle licenses for 12 months and gave the New York City Taxi and Limousine Commission the power to regular minimum driver pay ([BBC](#))
- > Tesla successfully sued **Ontario** after the province initially refused to include Tesla owners in their refund program following the wind-down of their EV subsidy program, the Electric and Hydrogen Vehicle Incentive Program ([CBC](#))

### Selected Capital Raises

**Greentech's Take:** While much of the capital deployed has been focused on autonomous passenger vehicles, autonomous trucking platforms continue to gain prominence as the market opportunity remains more near-term

- > **Ample**, a provider of EV charging using autonomous robotics and smart-battery technology, raised a \$31mm round led by Shell ([Business Wire](#))
- > **Cargomatic**, an on-demand transportation startup focused on short-haul and drayage trucking, raised a \$35mm round led by Warburg Pincus ([FinSMEs](#))
- > **CargoX**, a Brazil-based trucking efficiency platform, raised a \$60mm round led by Blackstone and Hudson Structure Capital Management ([Axios](#))
- > **Carmera**, a provider of real-time HD maps and navigation critical data to AVs, raised a \$20mm round led by Google Ventures ([TechCrunch](#))
- > **DoorDash**, a provider of on-demand food delivery services, raised a \$250mm round led by DST Global and Coatue Management ([TechCrunch](#))
- > **Getaround**, the peer-to-peer car sharing marketplace, raised a \$300mm round led by SoftBank with participation from Toyota ([TechCrunch](#))
- > **Ghost Locomotion**, an AV technology startup in stealth mode incubated out of Sutter Hill Ventures, raised a \$15mm round ([Crunchbase News](#))
- > **Grab**, a ride-hailing platform focused on Southeast Asia, raised an additional \$1bn on top of the \$1bn raised from Toyota in June ([TechCrunch](#))
- > **Kodiak Robotics**, a developer of full system stack AV technology for trucks, raised a \$40mm round led by Battery Ventures ([TechCrunch](#))
- > **MaaS Global**, a Finland-based Mobility-as-a-Service solutions provider also present in Belgium and the UK, raised a €9mm round ([FinSMEs](#))
- > **Nikola Motor Company**, a developer of hybrid hydrogen-electric heavy-duty trucks, has secured \$100mm as part of a \$200mm Series C ([Electrek](#))
- > **RiseOS**, a fleet-management platform that aims to synchronize self-driving vehicle services, has raised a \$25mm round led by Next47 ([TechCrunch](#))
- > **Uber**, a ride-hailing provider, raised \$500mm from Toyota in a partnership intended in bringing an on-demand autonomous ride-hailing service to market by 2021 using Toyota Sienna minivans equipped with Uber's self-driving technology, deployed on the ride-hailing company's network and owned and operated by a third party fleet operator ([TechCrunch](#))
- > **Xiaopeng Motors**, a Chinese EV maker planning to release its car by the end of 2018, raised a \$587mm round led by Primavera Capital and Morningside Venture Capital with a valuation of \$3.7bn ([China Money Network](#))

### Selected Mergers & Acquisitions

- > Nissan sold its EV battery business, **Automotive Energy Supply Corp.**, and battery manufacturing operations in the U.S., England and Japan to Chinese wind turbine maker **Envision Group** to focus on EV development ([GTM](#))
- > FCA's **Magneti Marelli** acquired France-based **StartMeUp**, an AV technology developer focused on object recognition ([Detroit Free Press](#))

### Selected Partnerships

**Greentech's Take:** Car rental companies are partnering with AV leaders and offering their superior fleet management services, as they look to fit into the AV ecosystems

- > **ZMP Inc**, an AV technology company, and taxi company, **Hinomaru Kotsu**, partnered to pilot an autonomous, fare-paying taxi in Tokyo ([The Guardian](#))
- > Ford's **Autonomic** partnered with **Alibaba** to develop a standardized platform where all participants can develop AV technology services ([IoTNews](#))
- > Hertz's **Donlen** partnered with **Aptiv** to assist with the operations and management of Aptiv's growing fleet of AVs in Las Vegas ([PR Newswire](#))
- > **Avis Budget** announced a partnership with **Lyft**, allowing the TNC's existing and potential drivers to rent a vehicle from the app ([Fortune](#))
- > **eMotorWerks**, **Honda** and **Southern California Edison** have partnered to offer a SmartCharge program, enabling customers to charge their EVs when the most renewable energy is available at the lowest cost ([Clean Technica](#))

### Capital Raises

Date	Company	Invested (\$mm) <sup>(1)</sup>	Investors	Company Description
8/1	Grab	\$1,000	Toyota Motor Corporation, Vulcan Capital, Ping An Capital, Oppenheimer Funds, Mirae Asset Global Investments, Macquarie Capital, Lightspeed Venture Partners, China Cinda Asset Management, All-Starts Investment	Ride-hailing platform focused on Southeast Asia
8/2	RiseOS	\$25	next47, Sequoia Capital, St Engineering Ventures Fund	Fleet-management platform that aims to synchronize self-driving vehicle services,
8/2	Xiaopeng Motors	\$587	Primavera Capital Group, Morningside Venture Capital, K11 Investment, Hillhouse Capital Group, Eastern Bell Venture	Chinese EV maker aiming to deliver its first car at the end of 2018
8/6	Ample	\$31	Shell Technology Ventures, TRIREC, Repsol Energy Ventures, Hemi Ventures, Moore Strategic Ventures	Provider of EV charging using autonomous robotics and smart-battery technology
8/7	Kodiak Robotics	\$40	Battery Ventures, Tusk Ventures, Lightspeed Venture Partners, CRV	Developer of full system stack AV technology for trucks
8/7	Nikola Motor Company	\$200	n/a	Developer of hybrid hydrogen-electric heavy-duty trucks
8/15	Ghost Locomotion	\$15	Angel Investors	AV technology startup in stealth mode incubated out of Sutter Hill Ventures
8/15	Cargomatic	\$35	Xplorer Capital, Warburg Pincus, Muse Family Enterprises, Genesee & Wyoming, Canaan Partners	On-demand transportation startup focused on short-haul and drayage trucking
8/16	DoorDash	\$250	DST Global, Coatue Management	Provider of on-demand food delivery services
8/21	MaaS Global	\$9	n/a	Finland-based Mobility-as-a-Service solutions provider also present in Belgium and the UK
8/21	Getaround	\$300	Toyota Motor Corporation, SoftBank	Peer-to-peer car sharing marketplace
8/23	Carmera	\$20	Google Ventures	Provider of real-time HD maps and navigation critical data AVs
8/27	Uber	\$500	Toyota	Ride-hailing provider
8/28	CargoX	\$60	Blackstone Group, Soros Fund Management, Qualcomm Ventures, Goldman Sachs	Brazil-based trucking efficiency platform

### Mergers & Acquisitions

Date	Target	Acquiror	EV			Target Description
			(\$mm)	Revenue	EBITDA	
8/1	StartMeUp	Magnetti Marelli (FCA)	n/a	n/a	n/a	France-based AV technology developer focused on object recognition
8/3	Autonomous Energy Supply Corporate (Nissan)	Envision Group	n/a	n/a	n/a	Nissan's EV battery business and battery manufacturing operations in the U.S., England and Japan

Source: Greentech Estimates, FactSet, Public Disclosures.

(1) Investment amounts in \$ millions unless otherwise indicated.

# Advanced Mobility Market Update

## Trading Comparables

Company	Price as of 8/31/2018	Market Cap	Firm Value	EV / Revenue		EV / EBITDA		P / E	
				2018E	2019E	2018E	2019E	2018E	2019E
<b>Automotive Companies</b>									
Toyota	¥ 6930.0	\$203,928	\$347,061	1.3x	1.3x	10.3x	9.8x	8.7x	8.5x
Volkswagen	€ 138.70	81,411	250,047	0.9x	0.9x	6.2x	5.7x	5.5x	4.8x
Daimler	€ 55.70	69,333	202,597	1.0x	1.0x	9.3x	8.9x	6.4x	6.2x
BMW	€ 83.41	63,096	167,258	1.5x	1.4x	9.9x	9.5x	7.4x	7.1x
Ford	\$ 9.48	37,786	153,681	1.0x	1.0x	13.5x	12.6x	6.9x	6.8x
General Motors	\$ 36.05	50,863	127,413	0.9x	0.9x	9.0x	8.6x	6.0x	6.0x
Nissan	¥ 1040.0	39,586	102,153	1.0x	0.9x	10.0x	9.4x	6.9x	7.0x
Honda	¥ 3292.0	53,778	99,920	0.7x	0.7x	8.5x	8.1x	7.5x	7.9x
Hyundai	₩ 125000.0	28,678	74,573	0.9x	0.8x	11.1x	10.1x	9.0x	7.2x
Renault	€ 74.20	25,530	69,758	1.0x	1.0x	9.0x	8.6x	4.9x	4.6x
Tesla	\$ 301.66	51,461	63,851	3.2x	2.3x	40.5x	18.4x	NM	NM
SAIC Motor	¥ 29.15	49,867	59,844	0.4x	0.4x	10.4x	9.2x	9.0x	8.3x
Fiat Chrysler	€ 14.56	33,196	36,137	0.3x	0.3x	2.3x	2.2x	4.7x	4.1x
Suzuki	¥ 7230.0	32,018	31,760	0.9x	0.8x	6.2x	5.7x	13.4x	12.4x
BYD	HK\$ 46.65	17,242	27,877	1.5x	1.3x	12.2x	10.6x	29.6x	22.9x
Peugeot	€ 23.70	24,951	19,936	0.2x	0.2x	2.2x	2.1x	7.1x	6.3x
Geely	HK\$ 16.68	19,080	17,199	1.0x	0.9x	6.4x	5.4x	9.3x	7.3x
Tata Motors	RS 267.10	11,893	17,141	0.4x	0.3x	3.2x	2.7x	11.0x	8.8x
Subaru	¥ 3301.0	22,898	14,983	0.5x	0.5x	3.6x	3.2x	9.8x	8.6x
Dongfeng Motor	HK\$ 8.77	9,627	10,856	0.6x	0.6x	36.9x	35.1x	4.6x	4.5x
Guangzhou Automobile	HK\$ 8.52	14,200	10,595	0.9x	0.8x	10.3x	9.3x	6.0x	5.4x
KIA	₩ 32050.0	11,671	9,148	0.2x	0.2x	3.0x	2.6x	7.5x	6.1x
Mitsubishi	¥ 792.0	10,644	8,680	0.4x	0.4x	5.3x	4.4x	10.4x	9.4x
Mazda	¥ 1288.50	7,342	6,800	0.2x	0.2x	3.8x	3.3x	8.8x	8.3x
FAW Car Group	¥ 6.80	1,620	2,825	0.7x	0.7x	17.5x	17.6x	52.3x	45.3x
Navya	€ 6.49	205	202	5.5x	1.9x	NM	NM	NM	NM
<b>Mean</b>				<b>0.9x</b>	<b>0.8x</b>	<b>10.4x</b>	<b>8.9x</b>	<b>10.5x</b>	<b>9.3x</b>
<b>Median</b>				<b>0.9x</b>	<b>0.8x</b>	<b>9.0x</b>	<b>8.6x</b>	<b>7.5x</b>	<b>7.1x</b>
<b>Truck Companies</b>									
Daimler	€ 55.70	\$69,333	\$202,597	1.0x	1.0x	9.3x	8.9x	6.4x	6.2x
Volvo	KR 157.50	36,702	47,896	1.2x	1.1x	8.2x	7.8x	11.7x	11.6x
PACCAR	\$ 68.42	23,984	29,652	1.4x	1.3x	10.4x	10.3x	11.3x	11.1x
MAN SE	€ 93.65	16,021	19,463	1.1x	1.1x	15.5x	13.2x	24.8x	30.8x
Isuzu	¥ 1607.0	12,296	12,971	0.7x	0.6x	5.8x	5.4x	10.8x	9.8x
Navistar	\$ 43.57	4,304	8,479	0.9x	0.8x	10.8x	9.7x	17.8x	12.6x
<b>Mean</b>				<b>1.0x</b>	<b>1.0x</b>	<b>10.0x</b>	<b>9.2x</b>	<b>13.8x</b>	<b>13.7x</b>
<b>Median</b>				<b>1.1x</b>	<b>1.0x</b>	<b>9.9x</b>	<b>9.3x</b>	<b>11.5x</b>	<b>11.4x</b>
<b>Tier 1 Suppliers</b>									
Continental	€ 158.05	\$36,779	\$40,672	0.8x	0.7x	5.4x	4.9x	10.7x	9.6x
Denso	¥ 5355.0	38,348	38,036	0.8x	0.7x	6.0x	5.6x	13.3x	12.5x
Bridgestone	¥ 4093.0	28,110	27,274	0.8x	0.8x	4.8x	4.6x	10.3x	9.9x
Aptiv	\$ 88.01	23,300	26,646	1.8x	1.7x	10.9x	10.0x	16.4x	14.8x
Michelin	€ 101.95	21,230	26,100	1.0x	1.0x	5.3x	4.8x	10.1x	8.9x
Magna	C\$ 70.66	19,348	19,850	0.5x	0.5x	4.6x	4.5x	7.9x	7.2x
Valeo	€ 39.11	10,933	14,542	0.6x	0.6x	4.8x	4.3x	9.9x	8.7x
Lear	\$ 162.20	10,626	11,528	0.5x	0.5x	5.0x	4.8x	8.4x	7.8x
BorgWarner	\$ 43.77	9,142	11,047	1.0x	1.0x	6.1x	5.8x	9.8x	9.1x
Goodyear	\$ 22.69	5,378	10,882	0.7x	0.7x	5.2x	4.8x	7.8x	6.5x
Faurecia	€ 52.78	8,477	9,445	0.5x	0.4x	3.9x	3.6x	9.8x	8.6x
Delphi	\$ 35.23	3,128	4,440	0.9x	0.9x	5.4x	5.2x	7.3x	6.8x
Visteon	\$ 110.39	3,242	3,895	1.2x	1.2x	10.8x	10.2x	17.0x	15.0x
Veoneer	\$ 49.94	4,349	3,495	1.5x	1.4x	NM	NM	NM	NM
ATS Automation Tooling Systems	C\$ 22.12	1,595	1,592	1.7x	1.6x	13.3x	12.2x	24.9x	21.9x
Stoneridge	\$ 29.93	852	909	1.0x	1.0x	8.3x	7.7x	14.6x	13.3x
<b>Mean</b>				<b>1.0x</b>	<b>0.9x</b>	<b>6.7x</b>	<b>6.2x</b>	<b>11.9x</b>	<b>10.7x</b>
<b>Median</b>				<b>0.8x</b>	<b>0.8x</b>	<b>5.4x</b>	<b>4.9x</b>	<b>10.1x</b>	<b>9.1x</b>
<b>Autonomous Driving Chip Makers</b>									
Intel	\$ 48.43	\$223,311	\$239,882	3.5x	3.3x	7.9x	7.8x	11.7x	11.5x
Nvidia	\$ 280.68	170,653	164,711	12.6x	11.1x	30.8x	27.1x	39.5x	35.2x
Qualcomm	\$ 68.71	100,944	87,515	3.9x	3.9x	14.7x	11.0x	17.9x	14.7x
Advanced Micro Devices	\$ 25.17	24,538	24,943	3.7x	3.4x	34.4x	27.1x	54.5x	39.3x
<b>Mean</b>				<b>5.9x</b>	<b>5.4x</b>	<b>22.0x</b>	<b>18.3x</b>	<b>30.9x</b>	<b>25.2x</b>
<b>Median</b>				<b>3.8x</b>	<b>3.7x</b>	<b>22.8x</b>	<b>19.1x</b>	<b>28.7x</b>	<b>25.0x</b>

Source: FactSet, SEC filings and third party providers. Values in U.S. Dollars. Share prices shown in local currencies.

# Advanced Mobility Market Update

## Trading Comparables (cont.)

Company	Price as of 8/31/2018	Market Cap	Firm Value	EV / Revenue		EV / EBITDA		P / E	
				2018E	2019E	2018E	2019E	2018E	2019E
<b>Intelligent Transport</b>									
Roper Technologies	\$ 298.37	\$30,835	\$36,037	7.0x	6.7x	20.4x	19.3x	25.9x	24.2x
FLIR Systems	\$ 62.74	8,659	8,573	4.7x	4.5x	20.6x	17.3x	28.2x	25.9x
Conduent	\$ 23.18	4,895	6,078	1.1x	1.1x	9.0x	8.5x	20.7x	17.7x
LS Corp	W 67200.0	1,944	5,516	0.6x	0.6x	7.5x	7.3x	4.0x	7.4x
Beijing E-Hualu IT	Y 26.22	1,730	2,329	3.8x	2.7x	NM	15.8x	33.3x	23.9x
Cubic Corporation	\$ 75.70	2,063	2,167	1.8x	1.7x	NM	15.4x	NM	29.0x
Gosuncn Technology Group	Y 7.44	1,927	1,833	3.7x	2.8x	NM	NM	22.9x	17.7x
Vaisala	€ 19.45	825	759	1.9x	1.8x	13.8x	11.5x	23.7x	18.9x
Kapsch TrafficCom	€ 38.10	576	585	0.7x	0.7x	6.4x	6.4x	12.5x	11.3x
Beijing Wanji Technology <sup>(1)</sup>	Y 16.91	268	272	NM	NM	NM	NM	NM	NM
INIT Innovation in Traffic Systems	€ 16.70	195	221	1.3x	1.2x	NM	9.3x	23.7x	17.7x
Iteris, Inc	\$ 5.15	171	158	1.5x	1.4x	NM	42.1x	NM	NM
Q-Free	NOK 8.0	85	103	1.0x	0.9x	NM	7.1x	20.5x	12.9x
Image Sensing Systems <sup>(1)</sup>	\$ 6.05	32	28	NM	NM	NM	NM	NM	NM
<b>Mean</b>				<b>2.4x</b>	<b>2.2x</b>	<b>12.9x</b>	<b>14.5x</b>	<b>21.5x</b>	<b>18.8x</b>
<b>Median</b>				<b>1.7x</b>	<b>1.5x</b>	<b>11.4x</b>	<b>11.5x</b>	<b>23.3x</b>	<b>17.7x</b>
<b>ITS / Smart Tolling</b>									
Abertis Infraestructuras	€ 18.36	\$19,340	\$40,296	6.5x	6.0x	9.8x	9.1x	19.7x	21.9x
Atlantia	€ 17.95	17,246	34,898	4.9x	4.7x	7.5x	7.5x	13.0x	11.2x
Ferrovial	€ 18.63	16,021	21,170	1.5x	1.5x	27.9x	20.4x	68.9x	34.4x
Autostrada	€ 17.58	2,025	5,357	2.6x	2.5x	6.1x	5.7x	7.9x	7.3x
<b>Mean</b>				<b>3.9x</b>	<b>3.7x</b>	<b>12.8x</b>	<b>10.7x</b>	<b>27.4x</b>	<b>18.7x</b>
<b>Median</b>				<b>3.8x</b>	<b>3.6x</b>	<b>8.6x</b>	<b>8.3x</b>	<b>16.4x</b>	<b>16.6x</b>
<b>Telematics</b>									
Descartes Systems	\$ 35.0	\$2,681	\$2,696	9.8x	8.8x	28.6x	24.7x	NM	61.8x
TomTom	€ 8.73	2,390	2,262	2.4x	2.4x	10.5x	9.5x	29.8x	23.9x
Orbcomm	\$ 10.79	848	1,057	3.6x	3.3x	18.5x	13.1x	NM	NM
CalAmp	\$ 23.50	829	807	2.1x	1.9x	14.4x	11.9x	19.2x	16.7x
Ituran	\$ 34.10	800	770	3.3x	2.9x	11.0x	8.9x	16.4x	13.6x
MiX Telematics	R 9.41	390	376	2.9x	2.7x	10.3x	9.0x	36.0x	27.5x
Inseego	\$ 3.13	227	344	1.7x	1.6x	20.6x	12.4x	NM	52.2x
Quartix	£ 3.25	202	196	6.1x	6.3x	20.1x	22.8x	25.8x	29.3x
TeleNav	\$ 5.60	251	163	1.5x	0.7x	NM	NM	NM	NM
Quarterhill (fka Wi-LAN)	C\$ 1.91	174	107	1.2x	1.0x	NM	6.3x	NM	11.3x
Kerlink	€ 12.15	72	60	2.0x	1.2x	NM	NM	NM	30.4x
<b>Mean</b>				<b>3.3x</b>	<b>3.0x</b>	<b>16.7x</b>	<b>13.2x</b>	<b>25.4x</b>	<b>29.6x</b>
<b>Median</b>				<b>2.4x</b>	<b>2.4x</b>	<b>16.5x</b>	<b>11.9x</b>	<b>25.8x</b>	<b>27.5x</b>
<b>Logistics</b>									
UPS	\$ 122.88	\$105,725	\$123,530	1.7x	1.6x	12.4x	11.2x	16.9x	15.5x
FedEx	\$ 243.95	64,510	77,830	1.1x	1.0x	8.0x	7.2x	14.8x	12.9x
Deutsche Post	€ 31.41	45,100	61,275	0.9x	0.8x	8.1x	6.9x	17.4x	13.7x
Fortive	\$ 83.98	29,352	30,728	4.2x	4.0x	17.4x	15.7x	24.1x	22.1x
J.B. Hunt	\$ 120.75	13,203	14,193	1.7x	1.5x	11.1x	9.8x	22.3x	18.7x
Penske	\$ 52.63	4,466	10,205	0.4x	0.4x	12.2x	12.8x	9.8x	9.5x
<b>Mean</b>				<b>1.7x</b>	<b>1.6x</b>	<b>11.5x</b>	<b>10.6x</b>	<b>17.6x</b>	<b>15.4x</b>
<b>Median</b>				<b>1.4x</b>	<b>1.3x</b>	<b>11.7x</b>	<b>10.5x</b>	<b>17.2x</b>	<b>14.6x</b>
<b>Communications / Infrastructure</b>									
AT&T	\$ 31.94	\$231,948	\$409,696	2.4x	2.2x	7.4x	6.9x	9.2x	8.9x
Verizon	\$ 54.37	224,653	338,243	2.6x	2.6x	7.1x	6.9x	11.7x	11.4x
Cisco Systems	\$ 47.77	224,657	203,678	4.1x	4.0x	11.6x	11.3x	17.3x	15.4x
T-Mobile	\$ 66.04	55,951	86,280	2.0x	1.9x	7.1x	6.6x	20.6x	16.9x
Sprint	\$ 6.11	24,858	57,141	1.7x	1.7x	4.7x	4.4x	13.4x	NM
Hitachi	¥ 725.50	31,624	45,840	0.5x	0.5x	4.4x	4.2x	8.6x	8.0x
Xerox	\$ 27.86	7,107	11,313	1.1x	1.2x	6.6x	8.1x	8.3x	7.9x
Toshiba	¥ 332.0	19,524	8,825	0.3x	0.3x	6.7x	5.4x	1.8x	5.0x
<b>Mean</b>				<b>1.9x</b>	<b>1.8x</b>	<b>7.0x</b>	<b>6.7x</b>	<b>11.4x</b>	<b>10.5x</b>
<b>Median</b>				<b>1.9x</b>	<b>1.8x</b>	<b>6.9x</b>	<b>6.8x</b>	<b>10.4x</b>	<b>8.9x</b>
<b>Aggregate Mean</b>				<b>1.9x</b>	<b>1.7x</b>	<b>10.9x</b>	<b>10.0x</b>	<b>15.7x</b>	<b>14.9x</b>
<b>Aggregate Median</b>				<b>1.1x</b>	<b>1.0x</b>	<b>9.0x</b>	<b>8.7x</b>	<b>11.5x</b>	<b>11.3x</b>

Source: FactSet, SEC filings and third party providers. Values in U.S. Dollars. Share prices shown in local currencies.

(1) Denotes limited equity research coverage.



# Global Experts in Sustainable Technology and Infrastructure

San Francisco

New York

Zürich

Tokyo

Partnership with Sangyo Sosei Advisory Inc.

## INVESTMENT BANKING<sup>(1)</sup>

### Mergers & Acquisitions

- Corporate sales
- Asset sales
- Acquisitions
- Minority investments
- Joint ventures
- Fairness opinions

\$14bn

### Capital Raising

- Equity private placements
- Debt private placements
- Project finance advisory
- Co-managed public offerings

\$4bn

### Strategic Advisory

- Strategic consulting
- IPO preparation
- Financial restructuring
- Specialized opinions
- Independent capital markets advice

>20 assignments

## ASSET MANAGEMENT

### Public Equity

- GCA Sustainable Growth Fund
- GCA Emerging Markets Sustainable Growth Fund

(1) As of August 31, 2018

## Highly Experienced Partners Supported by 55 Professionals

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- > >150 completed transactions
- > Founder and head of advisory business
- > Large industrials and energy companies
- > Broad coverage of senior leaders

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- > Distributed generation Water

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- > Distributed energy production
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- > Renewable energy value chain
- > Environmental services

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- > Energy efficiency
- > Renewable energy
- > Smart grid

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- > Utilities

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- > Cleantech
- > Power infrastructure

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- > >50 completed transactions
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- > Power infrastructure
- > Renewable energy value chain
- > Smart grid

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- > Chief Compliance Officer

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- > Portfolio Manager of GCA Sustainable Growth Long-Only Fund

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- > Advanced transportation
- > Industrial IoT & software
- > Environmental services
- > Advanced building products
- > Water

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