

Technology, Media and Telecom

INDUSTRY REPORT

Winter | 2022

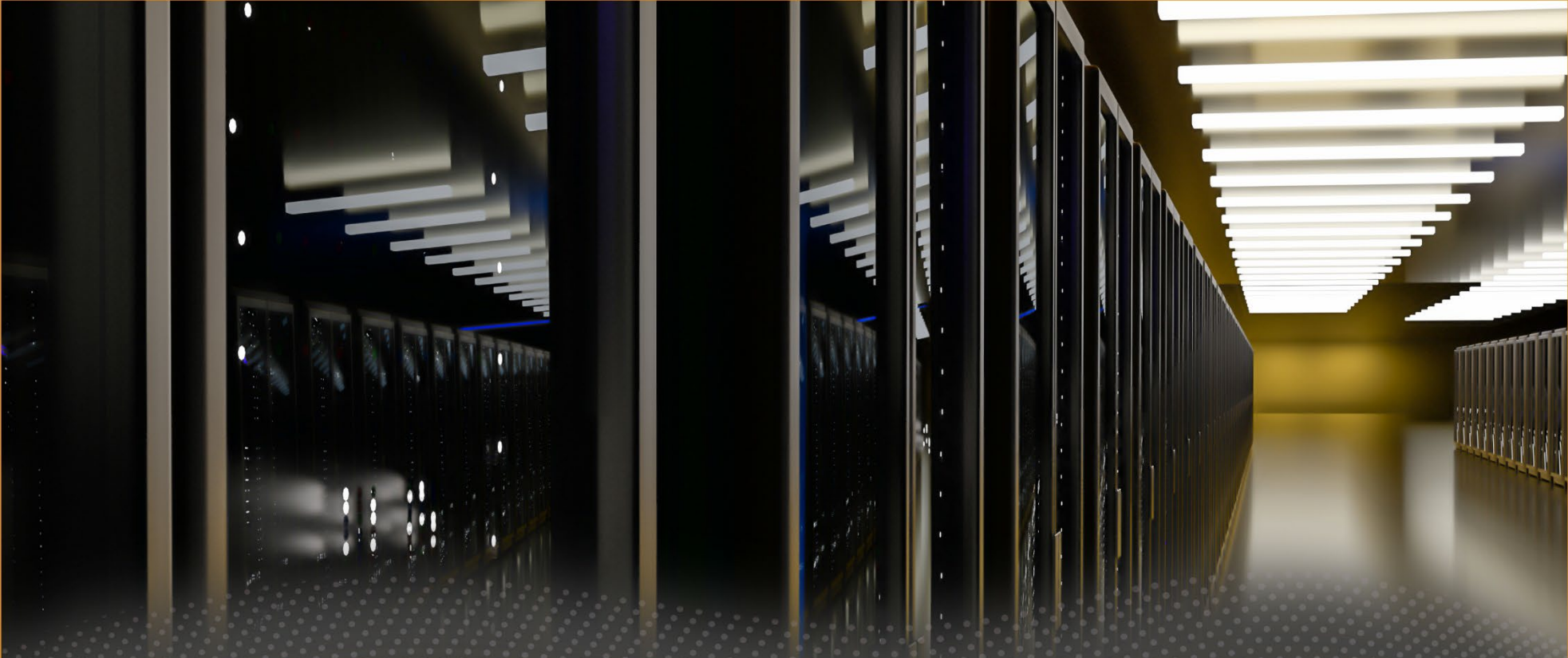
CREATING
M&A STRATEGIES
FOR BUSINESS OWNERS
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Market Observations

Market Summary

Technology Market

Private equity, Venture capital, and corporate investors continue to make large bets on digital companies as innovation advances and technology becomes more critical. As consumers and businesses seek to become more connected, IT companies are experiencing record investment opportunities from a variety of sources. The net neutrality controversy continues to cast a shadow over the future of internet service and content providers, and certain tech platforms may face additional privacy rules. The work from home culture is driving the demand for cloud-based connectivity. ESG, Metaverse, AI, and Data Privacy are the main themes that will shape the TMT industry in the future, as per the TMT Predictions 2022 report published by Thematic Research. Furthermore, the TMT industry is expected to remain profitable, giving the ideal basis for reinvesting retained earnings and scaling through acquisitions, along with offering product excellence across all critical sub-sectors.

Public Company Valuations

The CFAW Select Technology Index was up by 17.2% in the fourth quarter of 2021, and the 12 months return on the Index was 42.7%. Our index for each of the subsector of Technology was up in the fourth quarter of 2021, except for Electronics and Appliance Stores, which was down by 6.7%. Semiconductor and Other Electronic Component Manufacturing outperformed all other indices with 24.0% increase in the fourth quarter of 2021. Software Publishers had the highest median revenue and EBITDA multiple of 10.4x and 60.1x, respectively. Electronics and Appliance Stores had median revenue and EBITDA multiples of 0.9x and 9.5x, while Professional and Commercial Equipment and Supplies Merchant Wholesalers had median revenue and EBITDA multiples of 0.6x and 14.5x, respectively. Computer Systems Design and Related Services, Data Processing, Hosting, and Related Services, Other Telecommunications, Semiconductor and Other Electronic Component Manufacturing had median revenue multiples of 2.7x, 4.8x, 4.7x, 6.5x and median EBITDA multiples of 17.4x, 14.4x, 22.1x, 27.3x respectively.

“

The public technology market continued to flourish in the fourth quarter of 2021...

Mergers and Acquisitions

The M&A in the Technology, Media and Telecommunication sector remained positive throughout 2021. Significant interests from private equity participants are shaping the M&A activity in this industry. M&A activity decreased in the fourth quarter of 2021, as businesses in the industry feared government intervention. However, in 2021, the industry witnessed several IPOs of technology companies. Accelerated digital transformation remained an important theme for strategic and PE investors. Increased demand for streaming content, implementation of 5G and the rise in online gambling platforms, will act as drivers for M&A transactions in this industry.

Industry Trends

Wi-Fi 6

Wi-fi 6 is the first gigabit-speed Fixed Wireless Access (FWA) solution. Fixed Wireless Access is a cost-effective and scalable cellular wireless alternative for providing internet access to stationary equipment. FWA will play a crucial role in expanding internet access while also providing telcos with new income, growth, and innovation options. Wi-fi 6 offers up to 7 Gbps throughput for outdoor broadband networks and 5G backhaul infrastructure, which improves performance, scale, and dependability. These devices are now outselling 5G devices by a significant margin, and this trend is expected to continue for the next few years. The Wi-Fi 6 devices are more affordable as they use unlicensed spectrum and wireless connectivity makes it more attractive for consumers.

DARQ

DARQ stands for Distributed Ledger, Artificial Intelligence, Extended Reality, and Quantum Computing, refers to technologies that are ready to be implemented in enterprise-grade software. The most significant feature is the multitude of use cases that can be created in various combinations. GE Aviation and Microsoft partnered to improve the tracking of aircraft parts using distributed ledger technology which reduced inefficiencies and the overall process was completed in a time bound manner. Volkswagen used quantum computing to test traffic flow optimization and accelerated battery development. Distributed ledgers were also tested by Volkswagen to allow automatic payments at gas stations, construct tamper-proof odometers, and secure cars from hackers, among other things. LEGO Wear was able to open one store using augmented reality even though there were no clothes in the store as shoppers shopped virtually. DARQ technology is expected to play key role in defining the future.



RISC-V

The longevity of the chip shortage is due to a significant increase in demand, and this shortage is fueling digital transformation. Venture capitalists are looking for alternatives and investing in new kinds of chips like RISC-V. RISC-V is a new kind of chip architecture. Engineers collaborate to develop, set, and improve the architecture of RISC-V. The specification is set by RISC-V International, which is open to license, and chip makers are allowed to implement it in their processors and system-on-chips as they see fit. Smaller device manufacturers can build hardware, with a proven and freely available instruction set architecture.

Significant News

China pursues tech 'self-reliance,' fueling global unease

AP News, December 28, 2021

"To help make China a self-reliant "technology superpower," the ruling Communist Party is pushing the world's biggest e-commerce company to take on the tricky, expensive business of designing its own processor chips — a business unlike anything Alibaba Group has done before. Its 3-year-old chip unit, T-Head, unveiled its third processor in October, the Yitian 710 for Alibaba's cloud computing business. Alibaba says for now, it has no plans to sell the chip to outsiders. Other rookie chip developers including Tencent, a games and social media giant, and smartphone brand Xiaomi are pledging billions of dollars in line with official plans to create computing, clean energy and other technology that can build China's wealth and global influence."

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New measures to boost UK telecoms security

GOV.UK, December 8, 2021

"2G and 3G mobile networks will be phased out of use in the UK by 2033 as part of measures to increase the security of telecoms supply chains and to support a smooth transition to faster mobile networks. Digital Secretary Nadine Dorries announced the ambition, alongside £50 million of telecoms research and development projects, ahead of her first visit to the United States where she will meet with US Secretary for Commerce Gina Raimondo."

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HCL Technologies Announces Plan to Create 12,000 New Jobs in the United States

Business Wire, December 6, 2021

"HCL Technologies (HCL), a leading global technology company, announced plans to create 12,000 new jobs in the United States in the next five years. The company expects to recruit more than 2,000 graduates over the next 36 months as part of its U.S. early career and training program, Rise at HCL. This is part of the organization's global New Vistas program, which is designed to establish innovation and delivery centers in emerging cities around the world. The company also recently launched its HCL Apprenticeship Program, which offers full-time tech jobs and fully-funded higher education for high school graduates in the U.S."

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M&A Metrics

Technology Industry

M&A activity in the Technology industry decreased marginally in the Q4 2021. The number of M&A transactions in the industry decreased from 2,173 in Q3 2021 to 2,033 in Q4 2021. The number of sub-\$50 million transactions decreased from 1,977 in Q3 2021 to 1,817 in Q4 2021. However, the number of transactions above \$100 million increased from 150 in Q3 2021 to 158 in Q4 2021. The total number of M&A transactions increased 13.5% year on year from 1,791 in Q4 2020 to 2,033 in Q4 2021.



M&A Deal Summary Table | Count by Deal Size over Time

Transaction Value	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021
Not Disclosed	943	938	1,030	994	968	758	1,101	1,260	1,551	1,461	1,643	1,469
Under \$10MM	170	167	176	184	152	138	187	210	177	201	220	223
\$10-\$25MM	53	71	29	63	50	52	55	90	73	90	69	73
\$25-\$50MM	34	34	36	43	36	29	39	64	44	66	45	52
\$50-\$100MM	25	20	32	33	29	14	26	50	45	43	46	58
\$100-\$500MM	61	48	38	54	42	34	55	69	68	87	90	90
\$500MM+	24	32	29	25	15	12	42	48	63	53	60	68
Total Transactions	1,310	1,310	1,370	1,396	1,292	1,037	1,505	1,791	2,021	2,001	2,173	2,033

Source: FactSet

M&A Metrics – Spotlight on IT

IT Services

The number of M&A transactions in the IT Services increased from 415 in Q3 2021 to 423 in Q4 2021. The number of sub-\$50 million transactions increased from 383 in Q3 2021 to 393 in Q4 2021. The number of transactions above \$100 million remained intact at 25 in Q3 2021 and Q4 2021, however, number of transactions above \$500 million increased from 8 in Q3 2021 to 10 in Q4 2021. The total number of M&A transactions increased 12.2% year on year from 377 in Q4 2020 to 423 in Q4 2021.



M&A Deal Summary Table | Count by Deal Size over Time

Transaction Value	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021
Not Disclosed	192	196	220	241	218	158	231	270	326	300	322	327
Under \$10 MM	37	32	33	45	21	31	42	47	31	48	46	44
\$10 - \$25 MM	14	11	6	12	9	9	10	20	17	16	8	12
\$25 - \$50 MM	10	3	7	10	8	6	4	12	6	17	7	10
\$50 - \$100 MM	4	1	10	9	3	2	6	11	12	4	7	5
\$100 - \$500 MM	12	9	9	11	8	4	13	10	9	11	17	15
\$500 MM+	4	5	2	3	6	0	6	7	7	7	8	10
Total Transactions	273	257	287	331	273	210	312	377	408	403	415	423

Source: FactSet

Industry Metrics

Industry Financial Data and Ratios

NAICs 443142 - Electronics Stores

Financial Metric	Last12 Mo	2021	2020
Current Ratio	2.27	2.27	2.99
Gross Profit Margin	41.33%	41.33%	47.38%
Net Profit Margin	9.81%	9.81%	6.45%
Accounts Receivable Days	27.29	27.29	32.15
Accounts Payable Days	50.62	50.62	49.69
Debt-to-Equity Ratio	2.73	2.73	2.32
Return on Equity	36.44%	36.44%	52.88%
Sales per Employee	--	--	--
Profit per Employee	--	--	--
Sales Growth	12.22%	12.22%	3.37%
Profit Growth	89.38%	89.38%	51.43%

NAICs 423430 - Computer & Computer Peripheral Equipment & Software

Financial Metric	Last12 Mo	2021	2020
Current Ratio	4.62	4.43	2.51
Gross Profit Margin	34.09%	34.70%	39.11%
Net Profit Margin	10.01%	9.81%	6.85%
Accounts Receivable Days	54.51	53.14	53.53
Accounts Payable Days	55.17	56.68	55.63
Debt-to-Equity Ratio	2.27	2.96	3.23
Return on Equity	50.08%	57.37%	49.37%
Sales per Employee	--	--	--
Profit per Employee	--	--	--
Sales Growth	49.79%	49.79%	11.34%
Profit Growth	105.72%	105.72%	55.39%

NAICs 5415 - Computer Systems Design and Related Services

Financial Metric	Last12 Mo	2021	2020
Current Ratio	4.33	4.26	3.37
Gross Profit Margin	58.75%	58.66%	62.06%
Net Profit Margin	11.12%	10.77%	8.89%
Accounts Receivable Days	54.12	59.13	48.99
Accounts Payable Days	29.06	29.68	32.94
Debt-to-Equity Ratio	2.03	2.06	2.12
Return on Equity	68.44%	66.00%	57.28%
Sales per Employee	--	--	\$196,674
Profit per Employee	--	--	\$23,539
Sales Growth	10.79%	10.26%	8.82%
Profit Growth	18.22%	18.22%	28.51%

NAICs 5182 - Data Processing, Hosting, and Related Services

Financial Metric	Last12 Mo	2021	2020
Current Ratio	3.96	4.06	3.19
Gross Profit Margin	71.02%	71.42%	66.49%
Net Profit Margin	15.84%	15.25%	4.91%
Accounts Receivable Days	56.44	56.79	57.42
Accounts Payable Days	39.51	40.51	43.68
Debt-to-Equity Ratio	2.11	2.19	2.05
Return on Equity	75.23%	69.39%	39.61%
Sales per Employee	--	--	\$176,707
Profit per Employee	\$234,860	\$234,860	\$45,933
Sales Growth	23.79%	25.28%	10.84%
Profit Growth	35.14%	35.14%	37.89%

Source: Profit Cents

Industry Metrics

Industry Financial Data and Ratios

NAICs 5179 - Other Telecommunications

Financial Metric	Last12 Mo	2021	2020
Current Ratio	1.96	1.98	2.8
Gross Profit Margin	52.00%	50.70%	56.25%
Net Profit Margin	12.24%	11.85%	8.09%
Accounts Receivable Days	37.62	38.2	47.58
Accounts Payable Days	75.4	73.85	53.76
Debt-to-Equity Ratio	1.32	1.34	2.35
Return on Equity	55.28%	52.70%	58.41%
Sales per Employee	--	--	\$136,616
Profit per Employee	--	--	(\$3,184)
Sales Growth	12.66%	12.66%	1.08%
Profit Growth	53.39%	53.39%	26.77%

NAICs 5112 - Software Publishers

Financial Metric	Last12 Mo	2021	2020
Current Ratio	2.8	2.78	3.7
Gross Profit Margin	79.56%	78.55%	75.83%
Net Profit Margin	11.06%	9.42%	-0.96%
Accounts Receivable Days	61.61	64.69	62.33
Accounts Payable Days	62.49	57.56	92.85
Debt-to-Equity Ratio	0.95	0.93	1.86
Return on Equity	32.26%	38.10%	17.14%
Sales per Employee	\$196,039	\$196,039	--
Profit per Employee	\$29,800	\$29,800	--
Sales Growth	7.72%	12.18%	18.77%
Profit Growth	72.03%	72.03%	25.70%

NAICs 3344 - Semiconductor & Other Electronic Component Manufacturing

Financial Metric	Last12 Mo	2021	2020
Current Ratio	4.23	4.39	3.42
Gross Profit Margin	31.29%	31.38%	37.29%
Net Profit Margin	-1.14%	-1.10%	5.11%
Accounts Receivable Days	50.15	50.15	51.94
Accounts Payable Days	39.67	39.27	41.44
Debt-to-Equity Ratio	1.63	1.59	1.32
Return on Equity	27.05%	26.16%	24.53%
Sales per Employee	\$105,183	\$105,183	\$107,228
Profit per Employee	\$8,194	\$8,194	\$13,861
Sales Growth	-5.07%	-7.56%	1.28%
Profit Growth	33.98%	20.91%	23.60%

Source: Profit Cents



Transaction Highlights

Notable Transactions



In December 2021, **Oracle Corp** entered into a definitive agreement to acquire **Cerner Corp** for US\$27.8 billion in cash, via tender offer. Under the terms of agreement, Oracle Corp will pay US\$95 in cash for every share of Cerner Corp. The transaction will be funded through sufficient cash and available lines of credit. Cerner Corp is located in North Kansas City, Missouri, United States and provides healthcare information technology solutions, healthcare devices and related services.



In December 2021, **Thoma Bravo LP** entered into a definitive agreement to acquire **Bottomline Technologies Inc** for US\$2.6 billion in cash. Under the terms of the transaction, Thoma Bravo LP will pay US\$57 in cash per share to the shareholders of Bottomline Technologies Inc, which represents a premium of approximately 42% to Bottomline's unaffected closing stock price on October 19, 2021. Bottomline Technologies Inc is located in Portsmouth, New Hampshire, United States and provides software and support services for automated money processing for banks.



In December 2021, **Kohlberg Kravis Roberts & Co LP** entered into a definitive agreement to acquire **Yayoi Co Ltd** from ORIX Corp for an undisclosed amount. Yayoi Co Ltd is located in Tokyo, Japan and develops and distributes business software products.



In December 2021, **Permira Advisers LLP**, a subsidiary of Permira Holdings Ltd, entered into a definitive agreement to acquire **Mimecast Ltd** for GBP5.4 billion (US\$4 billion) in cash. The transaction will be funded by Blackstone Credit and Ares Management Corp. Mimecast Ltd is located in London, Greater London, United Kingdom and provides cloud security and risk management services for corporate information and email.



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Select M&A Transactions

Date	Target Name	Acquirer Name	Enterprise Value (MM)	Revenue	EBITDA
12/20/2021	Cerner Corp.	Oracle Corp.	28,814	5,708	1,457
12/17/2021	Bottomline Technologies, Inc.	Thoma Bravo LP	2,602	483	45
12/17/2021	Yayoi Co., Ltd.	Kohlberg Kravis Roberts & Co. LP	2,110	186	NM
12/7/2021	Mimecast Ltd.	Permira Advisers LLP	5,198	546	125
11/30/2021	Griid Infrastructure LLC	Adit Edtech Acquisition Corp.	3,035	NM	NM
11/24/2021	Etraveli AB	Booking Holdings, Inc.	1,836	NM	NM
11/22/2021	athenahealth, Inc.	Hellman & Friedman LLC; Bain Capital Life Sciences LP; athenahealth, Inc. /Private Group 2/	17,273	NM	NM
11/22/2021	ProKarma, Inc.	Concentrix Corp.	1,575	NM	NM
11/18/2021	Bitdeer Technologies Holding Co.	Blue Safari Group Acquisition Corp.	4,000	NM	NM
11/15/2021	Encora Digital, Inc.	Advent International Corp.	1,500	NM	NM
11/9/2021	Wolt Enterprises Oy	DoorDash, Inc.	7,607	NM	NM
11/8/2021	McAfee Corp.	Advent International Corp.; Permira Advisers LLP; GIC Special Investments Pte Ltd.; Abu Dhabi Investment Authority (Private Equity); Canada Pension Plan Investment Board Private /US/; Crosspoint Capital Partners LP; McAfee Corp. /Private Group/	13,547	2,177	642
10/28/2021	Momentive Global, Inc.	Zendesk, Inc.	4,141	427	-33
10/18/2021	Sirius Computer Solutions, Inc.	CDW Corp.	2,500	2,040	NM
10/17/2021	Playtech Plc	Aristocrat Leisure Ltd.	3,608	1,159	238
10/11/2021	Aspen Technology, Inc.	Emerson Electric Co.	8,653	730	391

(\$ in millions) Source: Factset

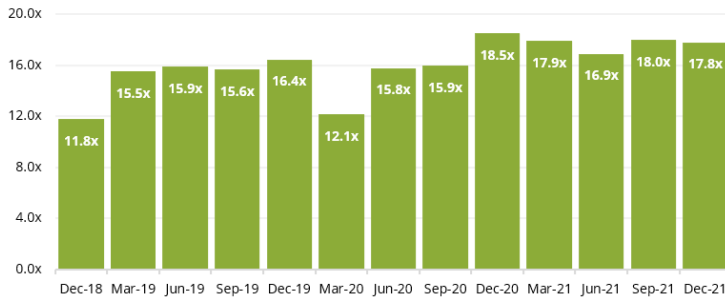


Public Companies

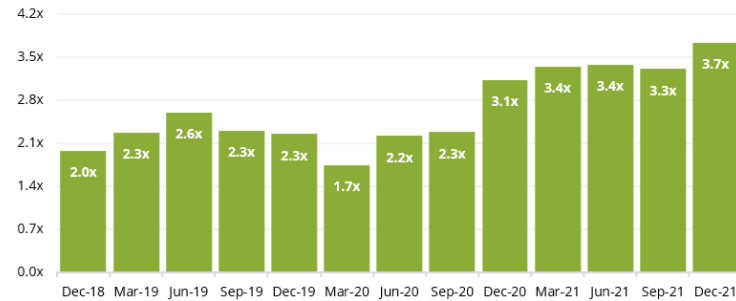
Industry Performance

CFAW Select Technology Index

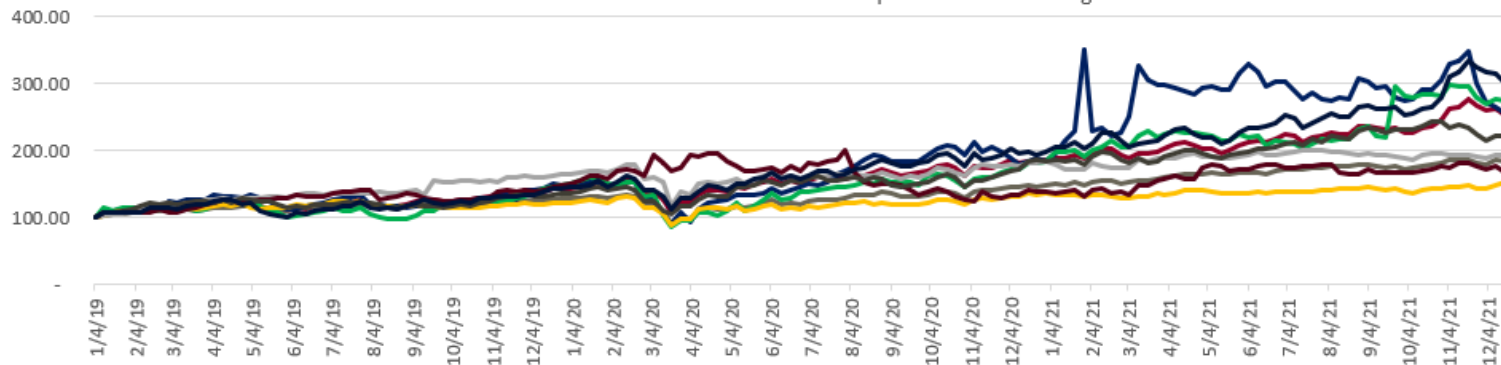
CFAW Select Technology Index | Median EBITDA Multiples



CFAW Select Technology Index | Median Revenue Multiples



- Select CFAW Select Technology Index
- S&P 500
- CFAW Selected Electronics and Appliance Stores Index
- CFAW Selected Professional and Commercial Equipment and Supplies Merchant Wholesalers Index
- CFAW Selected Computer Systems Design and Related Services Index
- CFAW Selected Data Processing, Hosting, and Related Services Index
- CFAW Selected Other Telecommunications Index
- CFAW Selected Software Publishers Index
- CFAW Selected Semiconductor and Other Electronic Component Manufacturing Index

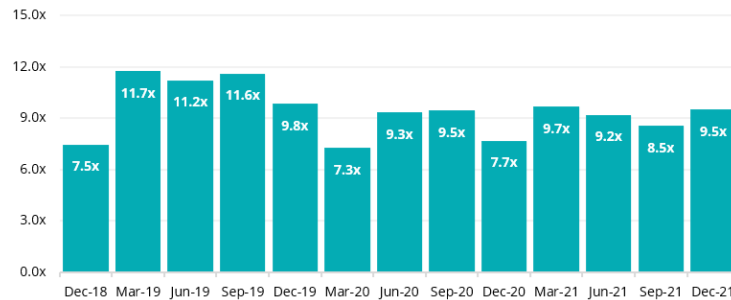


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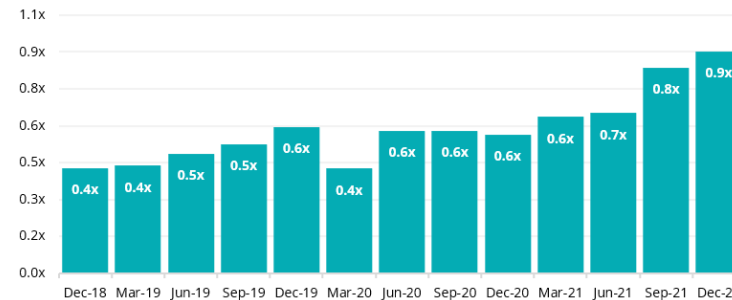
Public Comparables

Electronics and Appliance Stores

Electronics and Appliance Stores | Median EBITDA Multiples



Electronics and Appliance Stores | Median Revenue Multiples



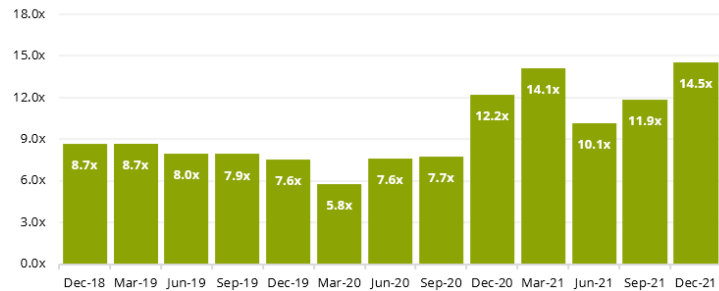
Company \$USD in Millions	Share Price	Shares O/S	Market Cap	Enterprise Value	Revenues (LTM)	EBITDA (LTM)	Enterprise Value /	
							Revenues	EBITDA
Best Buy Co., Inc.	\$101.60	241	\$24,441	\$24,788	\$52,333	\$4,198	0.5x	5.9x
Brimag Digital Age Ltd	\$12.47	10	\$126	\$163	\$161	\$26	1.0x	6.2x
Com7 Public Co. Ltd.	\$2.45	1,200	\$2,937	\$3,016	\$1,470	\$108	2.1x	28.0x
Copperwired Public Co. Ltd.	\$0.18	600	\$110	\$109	\$128	\$7	0.9x	15.5x
ePlus inc.	\$53.88	27	\$1,456	\$1,476	\$1,634	\$134	0.9x	11.1x
Frontier Developments Plc	\$24.11	39	\$950	\$928	\$142	\$50	6.6x	18.7x
GameStop Corp. Class A	\$148.39	76	\$11,330	\$10,545	\$5,879	(\$100)	1.8x	NM
PC Depot Corporation	\$2.71	53	\$143	\$96	\$330	\$24	0.3x	3.9x
Syscom Computer Engineering Co., Ltd.	\$1.05	100	\$105	\$101	\$208	\$13	0.5x	7.9x
Paltek Corporation	NM	NM	NM	NM	\$282	\$4	NM	NM
Mean				\$4,580	\$6,257	\$446	1.6x	12.2x
Median				\$928	\$306	\$25	0.9x	9.5x

Source: FactSet

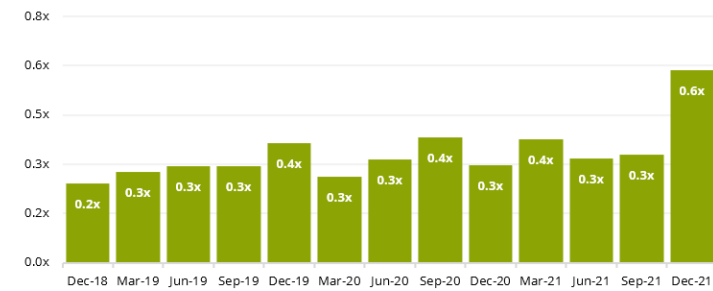
Public Comparables

Professional, Commercial Equipment, Supplies Merchant Wholesalers

Professional, Commercial Equipment, Supplies Merchant Wholesalers | Median EBITDA Multiples



Professional, Commercial Equipment, Supplies Merchant Wholesalers | Median Revenue Multiples

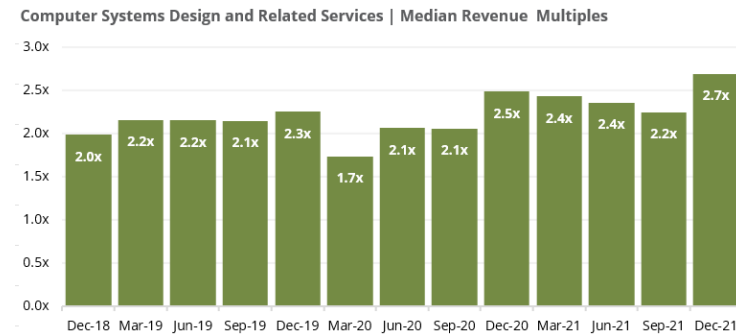
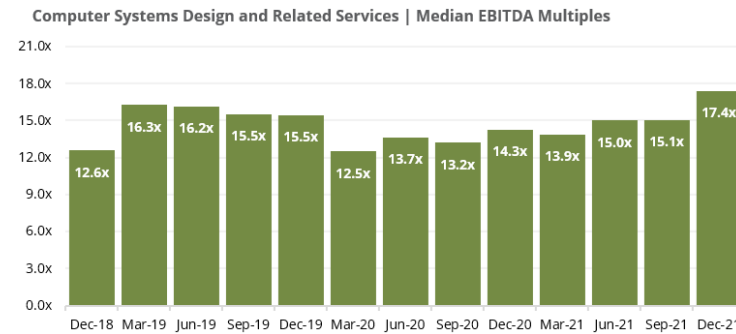


Company \$USD in Millions	Share Price	Shares O/S	Market Cap	Enterprise Value	Revenues (LTM)	EBITDA (LTM)	Enterprise Value /	
							Revenues	EBITDA
Action S.A.	\$3.64	20	\$73	\$63	\$593	\$26	0.1x	2.4x
Argo Blockchain Plc	\$1.32	468	\$620	\$586	\$52	\$33	11.2x	17.8x
D-Link Corporation	\$0.69	600	\$412	\$321	\$547	\$16	0.6x	20.5x
Digiworld Corp.	\$5.44	88	\$481	\$503	\$741	\$19	0.7x	27.0x
Dyntek, Inc.	\$19.00	2	\$43	NM	\$196	\$10	NM	NM
Intevac, Inc.	\$4.71	25	\$116	\$79	\$73	(\$12)	1.1x	NM
Paragon Technologies, Inc.	\$6.80	2	\$11	\$20	\$132	\$8	0.1x	2.5x
ScanSource, Inc.	\$35.08	26	\$900	\$1,062	\$3,251	\$126	0.3x	8.5x
SoftwareONE Holding Ltd.	\$21.63	159	\$3,429	\$2,886	\$8,994	\$192	0.3x	15.0x
TD SYNEX Corporation	\$114.36	96	\$10,929	\$14,072	\$23,417	\$1,001	0.6x	14.1x
Mean				\$2,177	\$3,800	\$142	1.7x	13.5x
Median				\$503	\$570	\$22	0.6x	14.5x

Source: FactSet

Public Comparables

Computer Systems Design and Related Services



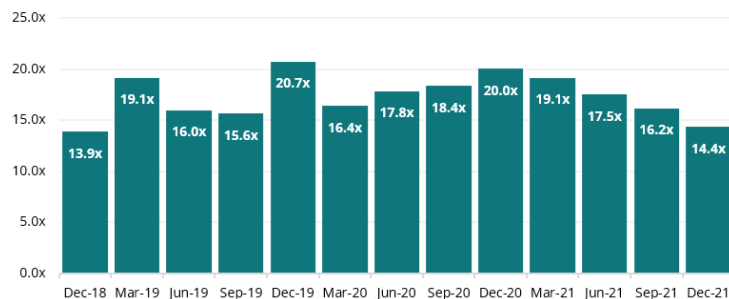
Company \$USD in Millions	Share Price	Shares O/S	Market Cap	Enterprise Value	Revenues (LTM)	EBITDA (LTM)	Enterprise Value /	
							Revenues	EBITDA
Amdocs Limited	\$74.84	125	\$9,327	\$9,285	\$4,289	\$768	2.2x	12.1x
Beyondsoft Corporation Class A	\$1.83	577	\$1,058	\$892	\$769	NM	1.2x	NM
CDW Corp.	\$204.78	136	\$27,793	\$32,114	\$20,240	\$1,628	1.6x	19.7x
Cerner Corporation	\$92.87	292	\$27,138	\$28,192	\$5,708	\$1,457	4.9x	19.4x
Cognizant Technology Solutions Corporation Class A	\$88.72	525	\$46,600	\$45,865	\$17,914	\$3,118	2.6x	14.7x
Jack Henry & Associates, Inc.	\$166.99	74	\$12,364	\$12,443	\$1,794	\$715	6.9x	17.4x
NetScout Systems, Inc.	\$33.08	74	\$2,444	\$2,386	\$844	\$158	2.8x	15.1x
Perficient, Inc.	\$129.29	33	\$4,259	\$4,425	\$709	\$128	6.2x	34.6x
Science Applications International Corp.	\$83.59	57	\$4,760	\$7,371	\$7,329	\$683	1.0x	10.8x
VeriSign, Inc.	\$253.82	111	\$28,194	\$28,783	\$1,308	\$897	22.0x	32.1x
Mean				\$17,176	\$6,090	\$1,061	5.1x	19.5x
Median				\$10,864	\$3,042	\$768	2.7x	17.4x

Source: FactSet

Public Comparables

Data Processing, Hosting, and Related Services

Data Processing, Hosting, and Related Services | Median EBITDA Multiples



Data Processing, Hosting, and Related Services | Median Revenue Multiples



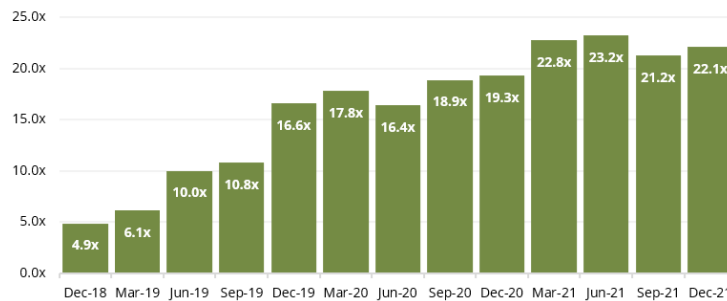
Company \$USD in Millions	Share Price	Shares O/S	Market Cap	Enterprise Value	Revenues (LTM)	EBITDA (LTM)	Enterprise Value /	
							Revenues	EBITDA
Alliance Data Systems Corporation	\$66.57	50	\$3,314	\$16,116	\$4,306	\$1,841	3.7x	8.8x
Automatic Data Processing, Inc.	\$246.58	421	\$103,905	\$105,706	\$15,367	\$3,968	6.9x	26.6x
Blucora, Inc.	\$17.32	49	\$844	\$1,252	\$862	\$116	1.5x	10.8x
Computer Services, Inc.	\$53.20	28	\$1,477	\$1,405	\$299	\$94	4.7x	14.9x
Dropbox, Inc. Class A	\$24.54	310	\$7,605	\$10,212	\$2,097	\$422	4.9x	24.2x
Equinix, Inc.	\$845.84	90	\$76,160	\$89,831	\$6,519	\$4,485	13.8x	20.0x
FactSet Research Systems Inc.	\$486.01	38	\$18,370	\$18,504	\$1,628	\$598	11.4x	31.0x
Global Payments Inc.	\$135.18	290	\$39,223	\$48,299	\$8,260	\$3,500	5.8x	13.8x
IDE Group Holdings Plc	\$0.02	497	\$8	\$30	\$34	\$3	0.9x	11.7x
Rackspace Technology, Inc.	\$13.47	210	\$2,829	\$6,603	\$2,948	\$526	2.2x	12.6x
Mean				\$29,796	\$4,232	\$1,555	5.6x	17.4x
Median				\$13,164	\$2,522	\$562	4.8x	14.4x

Source: FactSet

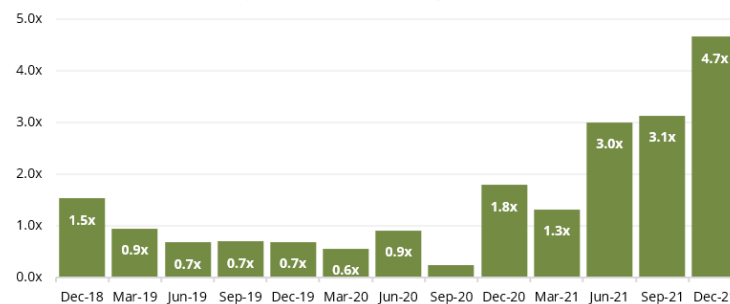
Public Comparables

Other Telecommunications

Other Telecommunications | Median EBITDA Multiples



Other Telecommunications | Median Revenue Multiples



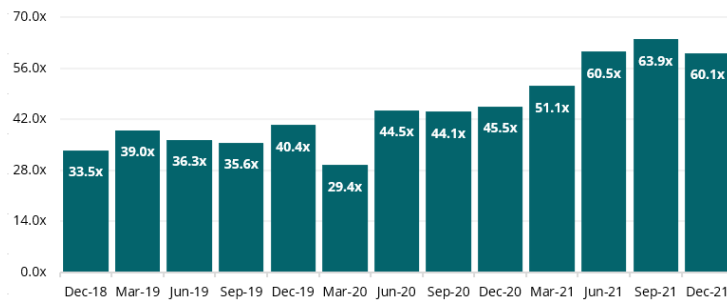
Company \$USD in Millions	Share Price	Shares O/S	Market Cap	Enterprise Value	Revenues (LTM)	EBITDA (LTM)	Enterprise Value /	
							Revenues	EBITDA
Alliance Creative Group, Inc.	\$0.28	1	\$0	\$2	\$11	\$0	0.2x	11.6x
Cogent Communications Holdings Inc	\$73.18	48	\$3,489	\$4,401	\$586	\$200	7.5x	22.1x
KonaTel, Inc.	\$1.75	41	\$72	\$71	\$12	\$1	6.2x	55.3x
Liberated Syndication Inc.	\$3.56	35	\$125	\$117	\$25	\$5	4.7x	23.0x
LiveWorld, Inc.	\$0.18	46	\$8	\$5	\$10	\$1	0.5x	6.3x
Mean				\$919	\$129	\$41	3.8x	23.6x
Median				\$71	\$12	\$1	4.7x	22.1x

Source: FactSet

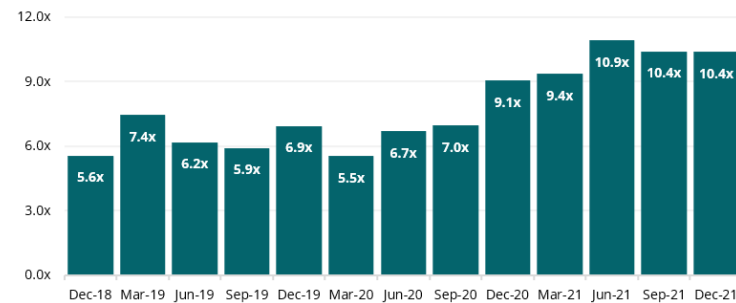
Public Comparables

Software Publishers

Software Publishers | Median EBITDA Multiples



Software Publishers | Median Revenue Multiples



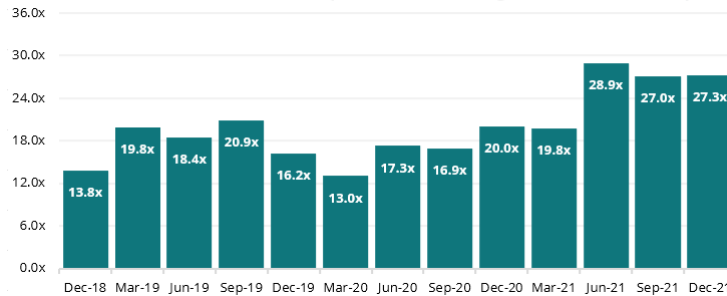
Company \$USD in Millions	Share Price	Shares O/S	Market Cap	Enterprise Value	Revenues (LTM)	EBITDA (LTM)	Enterprise Value /	
							Revenues	EBITDA
Bentley Systems, Incorporated Class B	\$48.33	271	\$13,085	\$14,811	\$913	\$170	16.2x	86.9x
Citrix Systems, Inc.	\$94.59	125	\$11,798	\$14,857	\$3,176	\$711	4.7x	20.9x
Digital Turbine, Inc.	\$60.99	97	\$5,893	\$6,075	\$706	\$101	8.6x	60.1x
Electronic Arts Inc.	\$131.90	283	\$37,302	\$37,275	\$6,475	\$1,492	5.8x	25.0x
Fortinet, Inc.	\$359.40	163	\$58,762	\$56,730	\$3,127	\$676	18.1x	83.9x
McAfee Corp. Class A	\$25.79	183	\$4,711	\$12,321	\$2,177	\$642	5.7x	19.2x
Palo Alto Networks, Inc.	\$556.76	99	\$54,934	\$55,439	\$4,558	(\$4)	12.2x	NM
Paycom Software, Inc.	\$415.19	60	\$24,922	\$21,917	\$991	\$333	22.1x	65.8x
Tyler Technologies, Inc.	\$537.95	41	\$22,043	\$23,235	\$1,442	\$332	16.1x	70.0x
VMware, Inc. Class A	\$115.88	420	\$48,712	\$47,862	\$12,614	\$3,464	3.8x	13.8x
Mean				\$29,052	\$3,618	\$792	11.3x	49.5x
Median				\$22,576	\$2,652	\$488	10.4x	60.1x

Source: FactSet

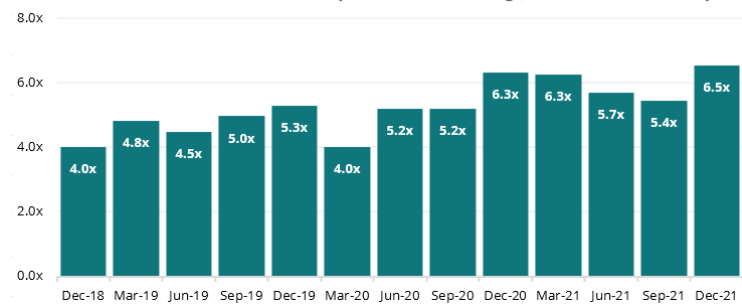
Public Comparables

Semiconductor and Other Electronic Component Manufacturing

Semiconductor and Other Electronic Component Manufacturing | Median EBITDA Multiples



Semiconductor and Other Electronic Component Manufacturing | Median Revenue Multiples



Company \$USD in Millions	Share Price	Shares O/S	Market Cap	Enterprise Value	Revenues (LTM)	EBITDA (LTM)	Enterprise Value /	
							Revenues	EBITDA
Advanced Micro Devices, Inc.	\$143.90	1,208	\$173,775	\$170,749	\$14,852	\$3,466	11.5x	49.3x
CMC Materials, Inc.	\$191.69	28	\$5,447	\$6,208	\$1,200	\$358	5.2x	17.3x
First Solar, Inc.	\$87.16	106	\$9,267	\$7,810	\$2,625	\$614	3.0x	12.7x
Intel Corporation	\$51.50	4,067	\$209,451	\$215,120	\$78,474	\$34,516	2.7x	6.2x
LightPath Technologies, Inc. Class A	\$2.44	27	\$66	\$77	\$38	\$1	2.0x	113.6x
Micron Technology, Inc.	\$93.15	1,120	\$104,307	\$102,351	\$29,619	\$14,956	3.5x	6.8x
Monolithic Power Systems, Inc.	\$493.33	46	\$22,739	\$22,003	\$1,104	\$258	19.9x	85.4x
NVIDIA Corporation	\$294.11	2,500	\$735,275	\$728,392	\$24,274	\$10,259	30.0x	71.0x
Semtech Corporation	\$88.93	64	\$5,730	\$5,641	\$715	\$157	7.9x	35.9x
Texas Instruments Incorporated	\$188.47	924	\$174,057	\$172,014	\$17,588	\$9,245	9.8x	18.6x
Mean				\$143,036	\$17,049	\$7,383	9.5x	41.7x
Median				\$62,177	\$8,739	\$2,040	6.5x	27.3x

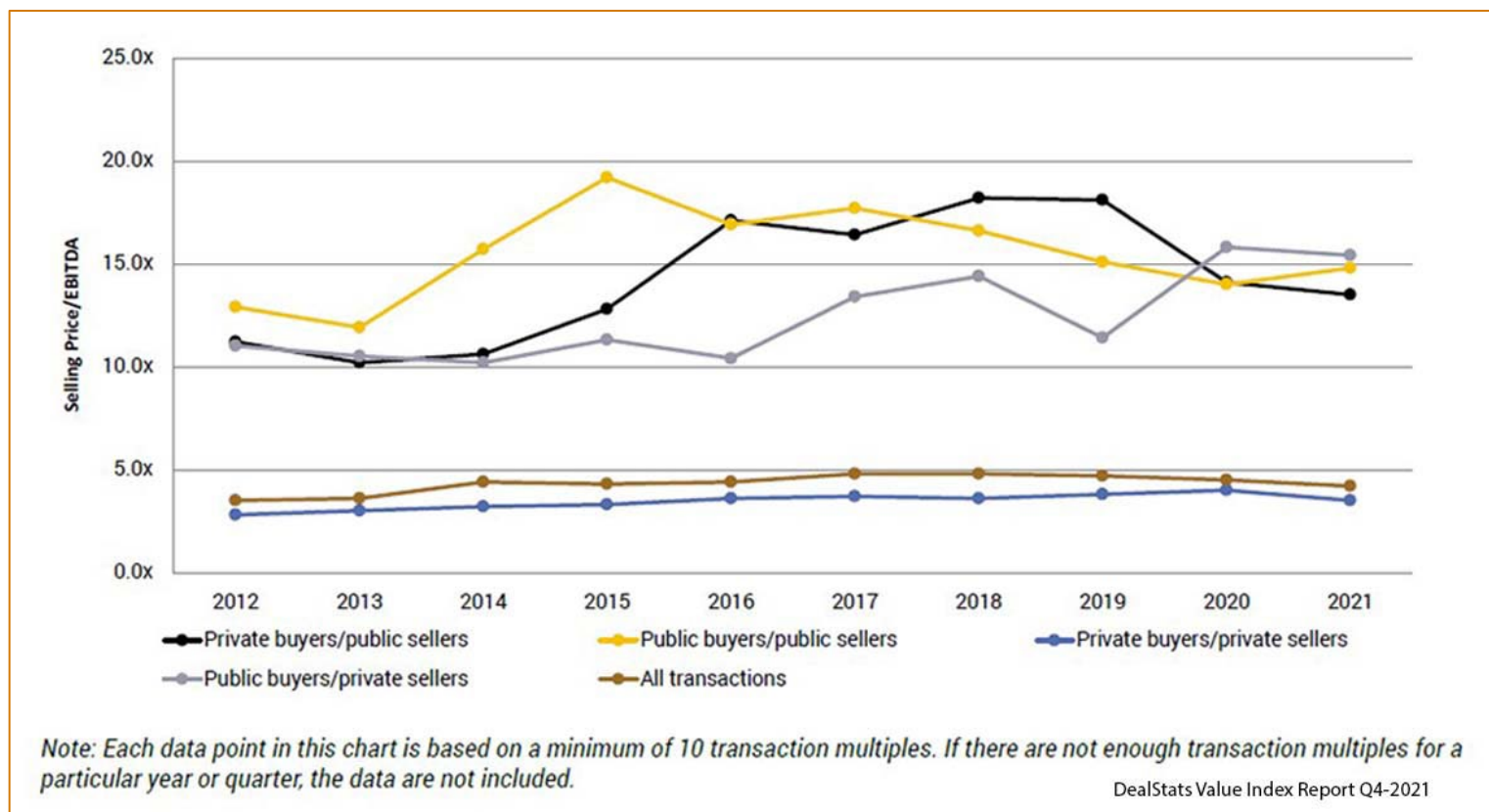
Source: FactSet

Public Vs. Private Comparables

Valuation Premiums Can Be Considerable

Regardless of industry, publicly traded companies often trade at premium valuations to privately held companies. This is reflected in M&A transactions and can lead to unrealistic value expectations for some business owners. The chart below illustrates this variance and shows that the variance has been both long term and growing.

Transactions between private buyer and private seller tend to be small by comparison and thus do not benefit from a “size” premium that is associated with transactions in general. While this chart does not breakout private equity transactions, our analysis indicates those transactions usually fall between public and private and move closer to public as size increases.





CFA Overview

About CFA

Who We Are / What We Do

Corporate Finance Associates (CFA) is an independent international investment banking firm serving middle-market businesses. For over 60 years Corporate Finance Associates has been advocating on behalf of business owners who are restructuring a company, either through divestiture, merger, acquisition or recapitalization. Combining the knowledge and leverage of a larger bank with the customer focused detail of a boutique firm, from inception to completion, our senior principals provide hands-on expertise to clients buying, selling or recapitalizing a business.

This Technology, Media & Telecom Industry Practice Group was established to draw on the experience of CFA advisors, many of whom as former business owners and CEOs, have first-hand knowledge and have completed many transactions in this industry. Working with your local CFA representative, you can be sure that the collective wealth of knowledge is available to every CFA client.



Sell-Side Advisory

Whether as a divestiture strategy or a recapitalization strategy selling all or part of a business requires equal parts creative thinking, critical analysis, expert advice, sound planning and flawless execution. Having the right team of investment banking professionals working for you is critical to ensure success.



Capital Markets

Our commitment to remaining independent from any investment or lending affiliates ensures that we deliver unbiased guidance. It also promotes maximum competition among lending sources, helping to fully leverage value for our clients. Our role is to help you raise the type of capital that best fits your needs.



Buy-Side Advisory

Growth through acquisition is a complex process. It involves strategy, planning, critical analysis, coordination and negotiation. When you want to take advantage of the fast growth offered by a consolidation or roll-up, CFA's broad reach, sources of financing and efficient closings can help you achieve your business growth goals.



Financial Advisory

Now that you have made the decision to raise capital for your business, choosing the right investment banker is critical. Whether you are buying out a partner, financing an acquisition or seeking growth capital, CFA is the right choice to help you achieve your financing goals.



Exit Planning

Every business will ultimately undergo a transfer via sale or merger, a charitable donation, a transfer to a child or relative or even bankruptcy, liquidation or death. Every ownership transfer carries with it a unique set of consequences and the best consequences usually begin with a clearly defined exit plan.



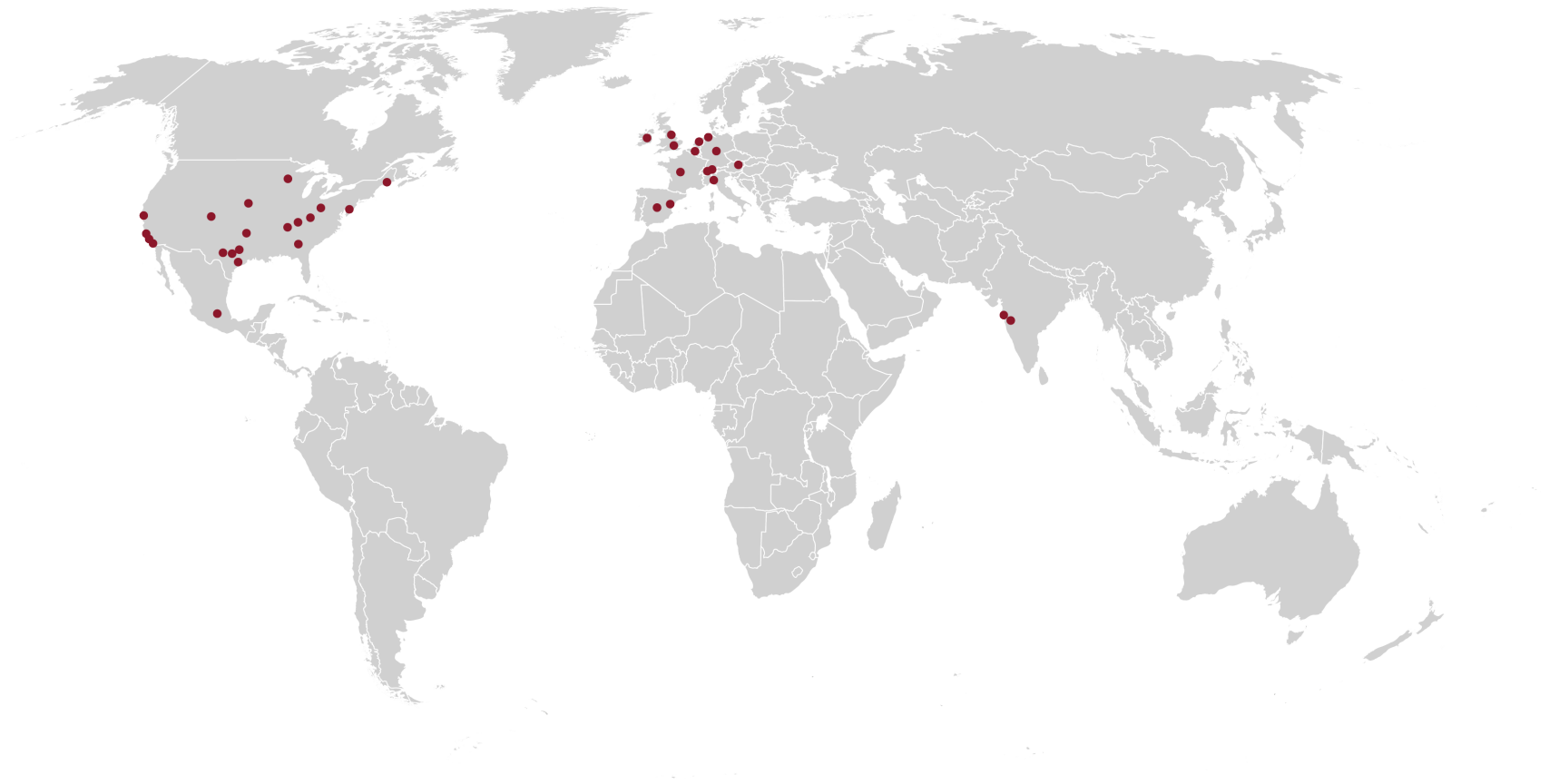
Business Valuation

"What is my business worth" is a question we often hear from business owners contemplating a business sale, merger or recapitalization. Answering this question depends on many factors, including the business valuation methods that are employed in the calculation.

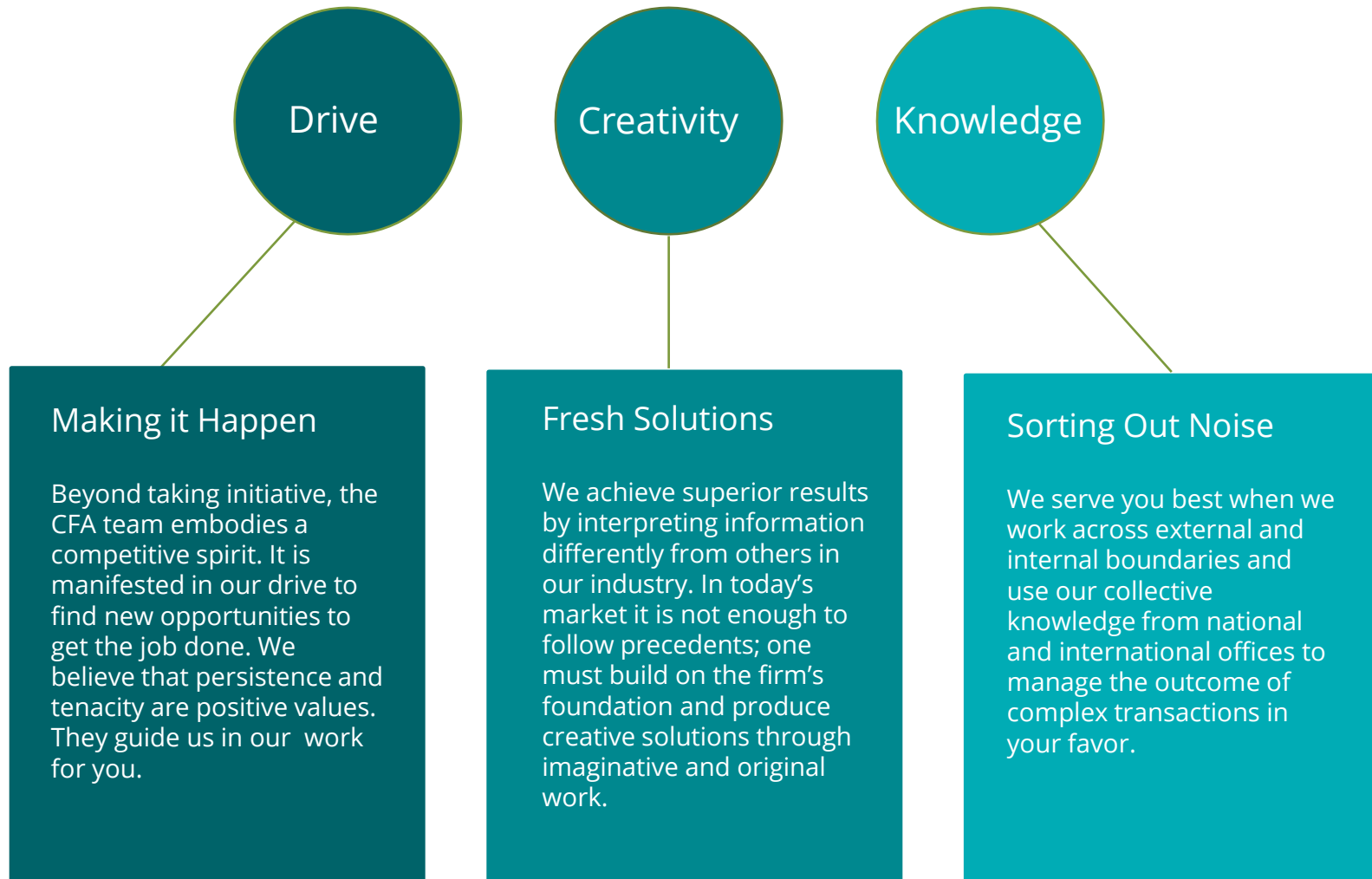
Local Service, Global Reach

Where We Are

With offices across the USA and in Mexico, India, Austria, Belgium, France, Germany, Ireland, Italy, Netherlands, Spain, Switzerland and the United Kingdom providing middle-market companies with a wide range of M&A, financial advisory services and access to capital resources.



Delivering Results



Founded in 1956 • 70 Managing Directors • 37 Offices Worldwide • Billions in M&A Transactions

Worldwide Transactions

This announcement appears as a matter of record only

LAKE2i2
Be Smart

has been acquired by

TRANSPLACE
The 2nd. Financial Company
A Portfolio Company of
GREENBRIAR
EQUITY GROUP LLC

The undersigned initiated and acted as exclusive financial advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

Harrison Pet Products Inc.

has been acquired by

bosch
bosch Tiernahrung GmbH & Co. KG

The undersigned initiated and acted as financial advisor in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

CHARTER BUS LINES
of British Columbia

has merged with

TRAXX
COACHLINES

The undersigned initiated and acted as financial advisor in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

EWEN ENGINEERING
United Kingdom

has been acquired by

VELJAN
India

CFA London initiated and acted as advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

neratec
services & consulting
Sweden

has been acquired by

WESTERMO
a division of
Beijer
TECHNICALS
Sweden

CFA Zurich initiated and acted as advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

OPEN-G
ASSOCIATION

has been acquired by

INDEFF

The undersigned initiated and acted as advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

FUN COMPANY
Louis
www.louis.fr

has been acquired by

BERKSHIRE HATHAWAY

The undersigned acted as an advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Member Associated through Corporate Finance Associates, Inc.

This announcement appears as a matter of record only

CERVA
Czech Republic

has acquired

GROUP TB
TUBOS BORDO
Spain

CFA Dublin initiated and acted as advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

South Coast Sales
division of

SASTA
Sustainable Solutions
Ireland

has been acquired by

BASTA
Ireland

CFA Dublin initiated and acted as advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

CyberMetric

has been acquired by

SGS
(SGSN)

The undersigned initiated and acted as financial advisor in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Member Associated through Corporate Finance Associates, Inc.

This announcement appears as a matter of record only

TRIO
SUPPLY COMPANY

has been acquired by

Office DEPOT

The undersigned initiated the transaction and acted as the exclusive investment banker to the seller

cfa CORPORATE FINANCE ASSOCIATES
Member Associated through Corporate Finance Associates, Inc.

This announcement appears as a matter of record only

creamedix BIOLAB
Germany

has been acquired by

WESTLAK PARTNERS
China

CFA Zurich initiated and acted as advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

CORAL SPRINGS
MEDICAL TECHNOLOGY

has been acquired by

encore
VET GROUP

The undersigned initiated the transaction and acted as the exclusive investment banker to the seller

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

FAICHI
San Jose, California

has been acquired by

SAKSOFT
SAP CONSULTING PARTNERSHIP
Pune, India and Jersey City, New Jersey

The undersigned initiated and acted as exclusive investment banker to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

tyco

Exclusive financial advisor to Earth Tech Mexico, S.A. of C.A. of TFC's subsidiary in connection with the refinancing of any new debt with a USD100,000,000 loan due 2022, for the subsidiaries, Mexico, Argentina and Chile. Please register under treatment plans.

PEMEX

A member of the Financial Services Industry Practice Group was the exclusive advisor to Earth Tech Mexico S.A. in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

McDonald's

Exclusive financial advisor to ASEA in connection with the acquisition of Restoran Indonesia, S.L.C., the exclusive operator of Burger King in Indonesia and Chile, from Quad C Management, L.L.C. (Quad C), a leading US private equity group.

Alsea

A member of the Food & Beverage Industry Practice Group acted as exclusive financial advisor to Alsea

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

HeadFirst

has acquired

STERIKSEN

Equity Backed By **KARTISA** Legal Advisor **HOBBIUS CLEMENT**

CFA Amsterdam initiated and acted as advisor to the buyer in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

MEDI PRODUCTIONS
France

has been acquired by

Carus
GLOBAL MEDIA

a division of
KE
Korea Sejuip
Consortium
United Kingdom/Japan

The undersigned was the exclusive advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Member Associated through Corporate Finance Associates, Inc.

This announcement appears as a matter of record only

MINT ARCHITECTURE
Sweden

has been acquired by

APP
architekten
ingenieurs
Austria

CFA Zurich initiated and acted as advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

AMT
APPLIED MEDICAL TECHNOLOGY
United Kingdom

has been acquired by

CANE
MEDICAL TECHNOLOGY
Italy

The undersigned initiated and acted as advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

CERQUISA
Spain

has been acquired by

UPL
United Phosphorus Limited
United Kingdom

CFA London initiated and acted as advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

SPEAR
Contract Logistics

has been acquired by

FM LOGISTIC

The undersigned acted as financial advisor in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

exult.

has been acquired by

newgen
KnowledgeWorks

The undersigned initiated and acted as advisor in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

DGAR
Grupo Dgari

has been acquired by

Dr. Oetker
Dr. Oetker

The undersigned initiated and acted as exclusive financial advisor to the shareholders of Grupo Dgari in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

Restaurants Sudamerica, L.C.
exclusive operators of Burger King in Argentina and Chile

Exclusive financial advisor to ASEA in connection with the acquisition of Restoran Indonesia, S.L.C., the exclusive operator of the Burger King brand in Argentina and Chile, from Quad C Management, L.L.C. (Quad C), a leading US private equity group.

Alsea

A member of the Food & Beverage Industry Practice Group acted as exclusive financial advisor to Alsea

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

HeadFirst

has acquired

STERIKSEN

Equity Backed By **KARTISA** Legal Advisor **HOBBIUS CLEMENT**

CFA Amsterdam initiated and acted as advisor to the buyer in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

MEDI PRODUCTIONS
France

has been acquired by

Carus
GLOBAL MEDIA

a division of
KE
Korea Sejuip
Consortium
United Kingdom/Japan

The undersigned was the exclusive advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Member Associated through Corporate Finance Associates, Inc.

This announcement appears as a matter of record only

MINT ARCHITECTURE
Sweden

has been acquired by

APP
architekten
ingenieurs
Austria

CFA Zurich initiated and acted as advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

AMT
APPLIED MEDICAL TECHNOLOGY
United Kingdom

has been acquired by

CANE
MEDICAL TECHNOLOGY
Italy

The undersigned initiated and acted as advisor to the seller in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

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United Kingdom

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cfa CORPORATE FINANCE ASSOCIATES
Since 1956

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SPEAR
Contract Logistics

has been acquired by

FM LOGISTIC

The undersigned acted as financial advisor in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

This announcement appears as a matter of record only

exult.

has been acquired by

newgen
KnowledgeWorks

The undersigned initiated and acted as advisor in the transaction

cfa CORPORATE FINANCE ASSOCIATES
Since 1956

Industry Practice Groups

Technology, Media & Telecom



Technology, Media & Telecom practice group is comprised of accomplished dealmakers with extensive experience in advising both public and private companies in the industry. These dealmakers offer expert service in acquisitions, divestitures, financing, and strategic planning to a wide range of companies operating in multiple subsectors including:

Technology

- IT Services & Business Process Outsourcing
- Servers, Equipment & Systems
- Semiconductors
- Software, including embedded applications
- Web, Mobile and Social Network Applications & Services

Media

- Broadcasting & Entertainment
- Digital Marketing & Media
- Diversified Media & Publishing

Telecommunications

- Broadband Networks
- Maritime Communications
- Satellite Communications
- Wireless & Wireline Communications
- Content Delivery Networks

Agriculture
Aerospace/Defense/Government
Business Services
Commercial Real Estate
Consumer Retail
Energy
Engineering/Construction
Equipment
Financial Services
Food/Beverage
Healthcare
Hospitality/Leisure
Industrials
Metal Fabrication
Plastics/Rubber
Print/Packaging
Semi Conductor
Technology/Media/Telecom
Transportation/Logistics/Supply Chain
Wholesale Distribution

Recent Industry Transactions

This announcement appears as a matter of record only

eGroup
together we make IT happen

*has been acquired by
The Leadership Team and*

EVOLUTE
Capital

HUNT TECHNOLOGY VENTURES, L.P.

The undersigned acted on behalf of eGroup

cfa | CORPORATE FINANCE ASSOCIATES
WORLDWIDE
Securities transacted through Corporate Finance Securities, Inc.

This announcement appears as a matter of record only

HiQo
solutions

has been acquired by

LIBERTY STREET
GLOBAL MACRO INVESTMENTS

The undersigned initiated and acted as the exclusive investment banker to the seller in the transaction

cfa | CORPORATE FINANCE ASSOCIATES
WORLDWIDE
Securities transacted through Corporate Finance Securities, Inc.

This announcement appears as a matter of record only

3D-P
Technology is Connected

has been acquired by

Epiroc

The undersigned initiated the transaction and acted as the exclusive investment banker to the seller

cfa | CORPORATE FINANCE ASSOCIATES
WORLDWIDE
Securities transacted through Corporate Finance Securities, Inc.

This announcement appears as a matter of record only

Educator
by
Vanenburg
software

has been acquired by

breens network

Equity Backed By **Capital-A** Legal Advisor **FMIS**

CFAW Amsterdam initiated and acted as advisor to the seller in the transaction

cfa | CORPORATE FINANCE ASSOCIATES
WORLDWIDE
Since 1956

This announcement appears as a matter of record only

data respons
EMBEDDED SOLUTIONS
Hovik, Norway

a subsidiary of the listed French-Belgian company AKKA Technologies SE, indirectly acquires 100% of the shares of

frobese
Hannover, Germany

CFAW Frankfurt initiated and acted as advisor to the seller in the transaction

cfa | CORPORATE FINANCE ASSOCIATES
WORLDWIDE
Since 1956

This announcement appears as a matter of record only

American TeleTech, Inc.
Fort Collins, Colorado

has been acquired by

Yeti Networks, Inc.
Gillette, Wyoming

The undersigned initiated and acted as the exclusive investment banker to the seller in the transaction

cfa | CORPORATE FINANCE ASSOCIATES
WORLDWIDE
Securities transacted through Silver Oak Securities, Inc.

This announcement appears as a matter of record only

NATIONAL
COMMUNICATIONS SERVICES INC.

has been acquired by

AFFINITECH

The undersigned initiated the transaction and acted as the exclusive investment banker to the seller

cfa | CORPORATE FINANCE ASSOCIATES
WORLDWIDE
Since 1956

This announcement appears as a matter of record only

LimelightHealth

has been acquired by

FINEOS

The undersigned acted as Purchaser Representative to shareholders of Limelight Health, Inc.

cfa | CORPORATE FINANCE ASSOCIATES
WORLDWIDE
Since 1956

This announcement appears as a matter of record only

Alliance of Computer Professionals

has been acquired by

DIVERSANT.
Empowered by Difference

The undersigned initiated the transaction and acted as the exclusive investment banker to the seller

cfa | CORPORATE FINANCE ASSOCIATES
WORLDWIDE
Securities transacted through Corporate Finance Securities, Inc.

This announcement appears as a matter of record only

architel
CLOUD EXPERTS

has been acquired by

Centre
TECHNOLOGIES

The undersigned initiated and acted as financial advisor in the transaction

cfa | CORPORATE FINANCE ASSOCIATES
WORLDWIDE
Securities transacted through Corporate Finance Securities, Inc.