



**TECHNOLOGY**  
**SECTOR UPDATE AND M&A TRENDS**  
Q3 2022

**ALMA**.advisors

# Hawkish monetary policy, geopolitical tensions and supply chain disruptions continue to hurt the sector's performance

## Sector overview

### Macroeconomic developments in the quarter

- A sharp slowdown in Eurozone's growth is considered imminent due to **sharp deterioration in the terms of trade primarily for energy** due to the ongoing war in Ukraine, which has **pushed inflation to record highs** and **consumer confidence to record lows**
- Following the 50bps rate hike in July, the ECB increased interest rates by another 75bps in September to combat surging inflation
- Hawkish monetary policy, ongoing global supply chain issues and geopolitical tensions have triggered a **steep sell-off across markets and regions** that brought tech valuations below their five-year average

### Technology sector trends

#### API-centric security solutions

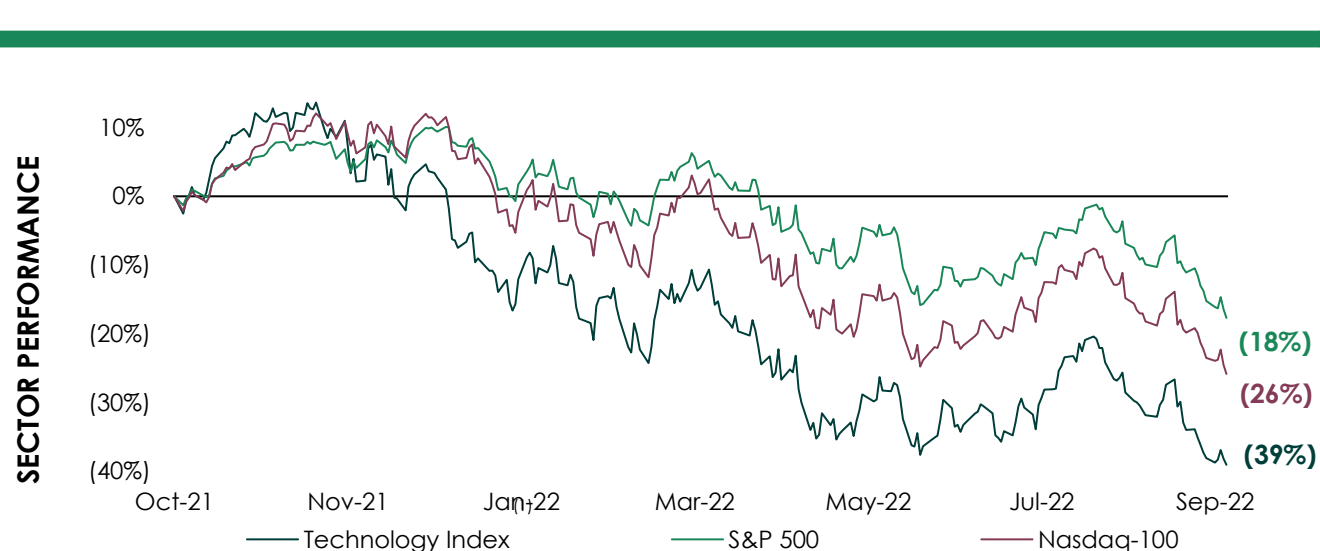
- **Global surge in APIs numbers and complexity** has made API-centric security solutions more urgent → **rapid customer adoption**

#### ML as a Service

- Machine learning **has started playing a larger role** in SaaS space
- Demand for better AI-based SaaS control is driving MLaaS → companies are **integrating MLaaS into their cloud platforms**

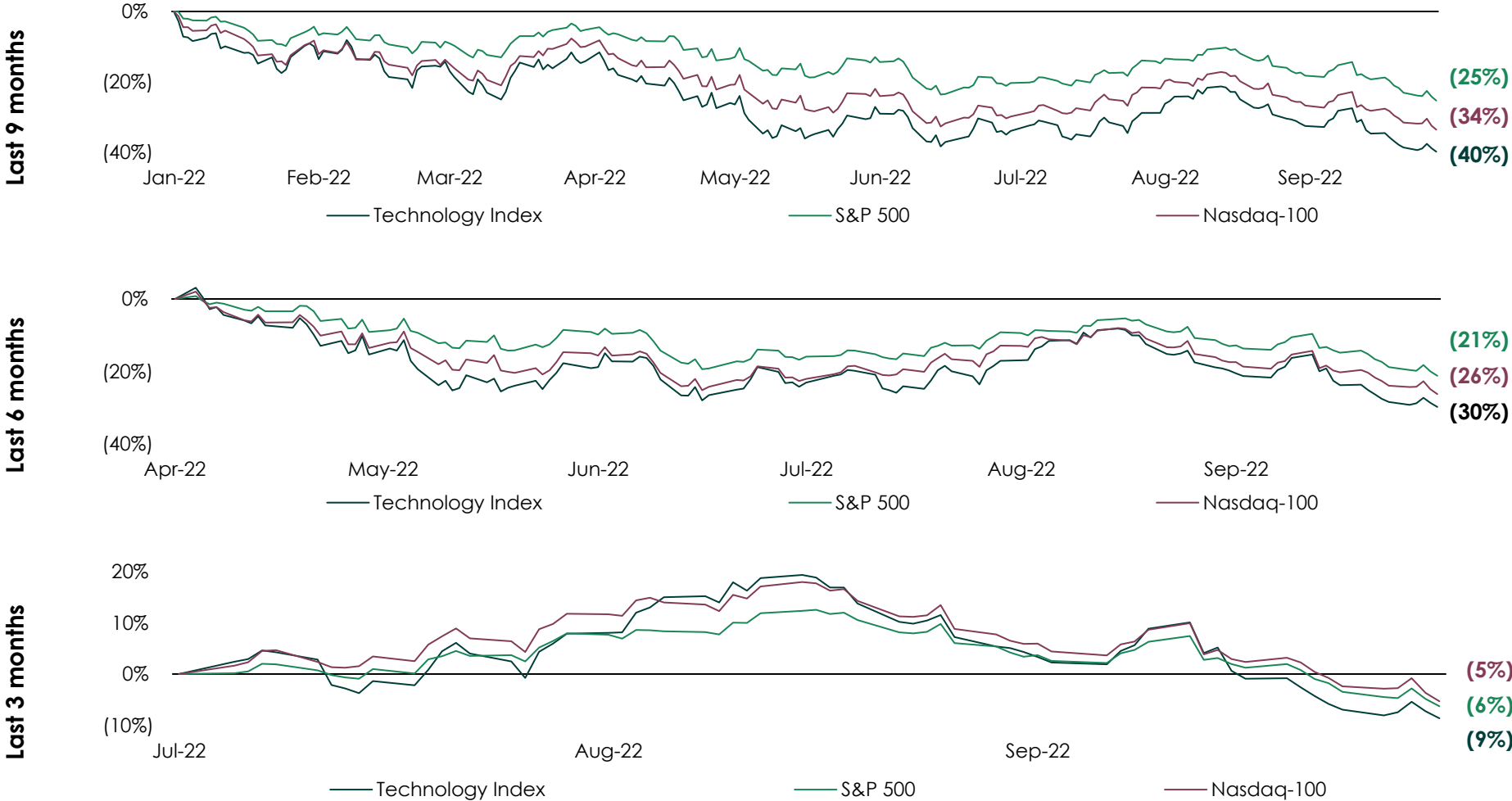
#### Rise of vertical SaaS

- Vertical SaaS solutions are becoming more widespread due to their **industry specific applications**
- Offer **cost benefits** compared to standardized platforms
- Continues shift towards cloud computing acts as a **major driver**



# Technology sector continued to underperformed the broader market over the past quarter

## Sector performance

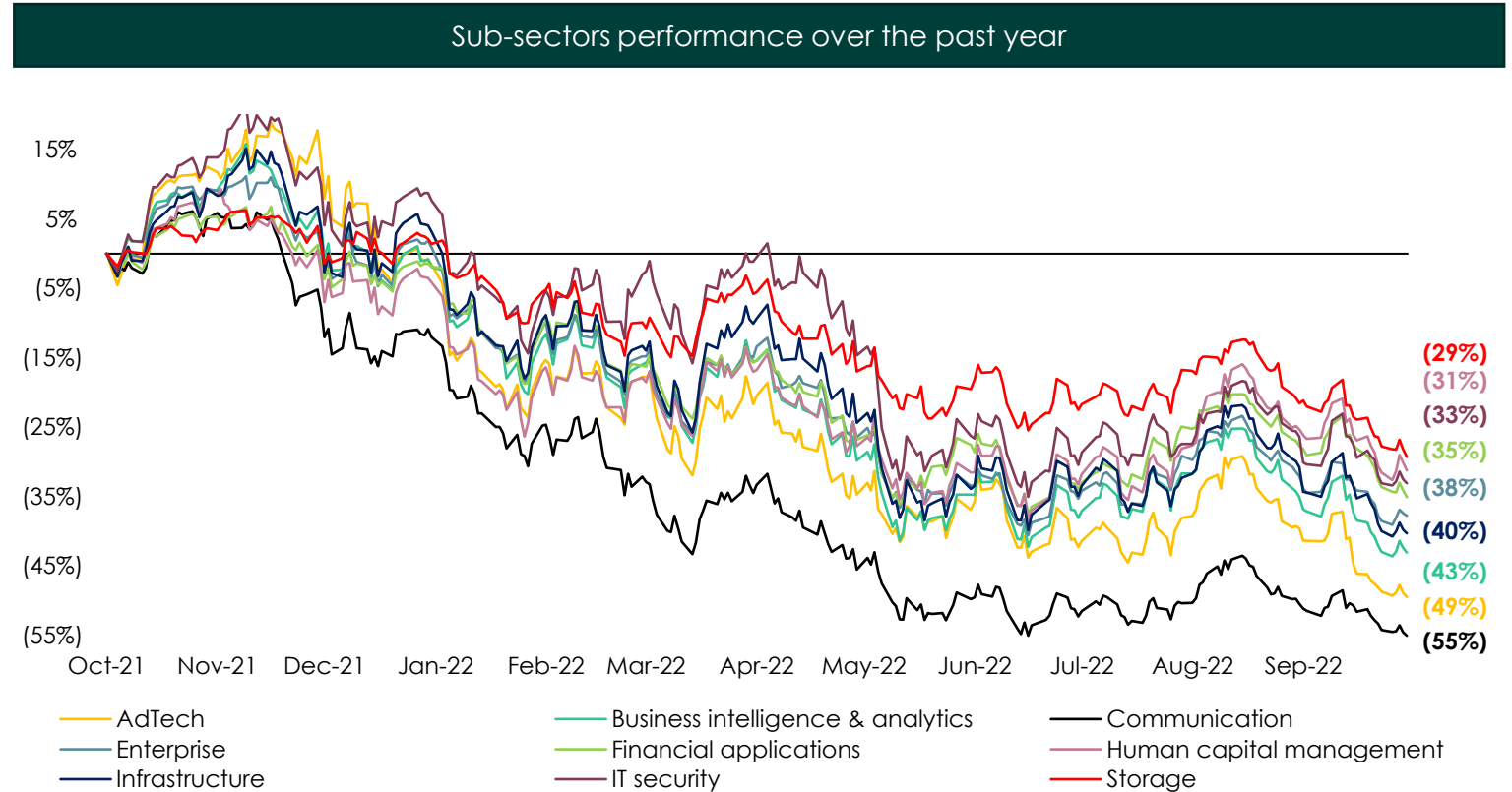


Notes: Data as of 30/09/2022; Index constituents: GOOGL, ADBE, CRM, MSFT, CSCO, TEAM, SAP, NOW, SHOP, INTU, SQ, FISV, ADP, WDAY, VMW, FTNT, NET, AMZN  
Sources: FactSet

# Storage and human capital management segments have outperformed the rest of the sector; communication lags

Publicly traded companies overview per sub-sector

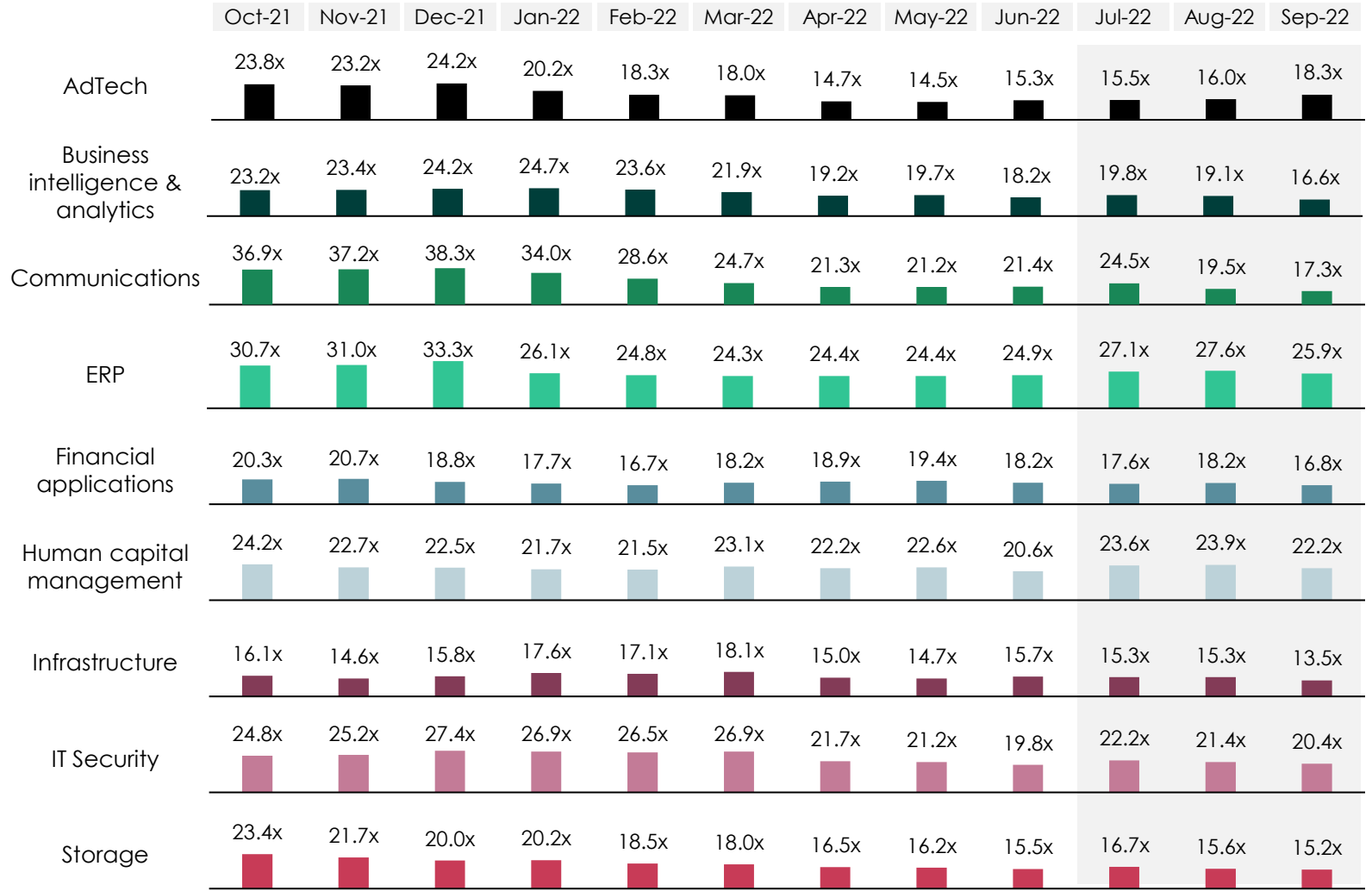
- None of the technology industry sub-sectors has managed to avoid the current market turmoil
- Storage and human capital management providers have outperformed the rest of the sector, recording losses of 29% and 31% respectively over the LTM
- Communication index continues to lag the rest of the sector as the economic reopening and the return of workforce back to offices has reduced the need for video communication software



# Industry multiples have witnessed a drop over the past quarter with the exception of AdTech

Median LTM EV/EBITDA multiples<sup>(1)</sup>

- All nine segments of the technology industry have witnessed a significant decrease in their valuation multiples over the LTM
- The largest drop is spotted in the communication segment as the reopening of the economy has weighted on the sector's demand
- ERP's valuation multiples are the highest among the sector, while infrastructure multiples are the lowest

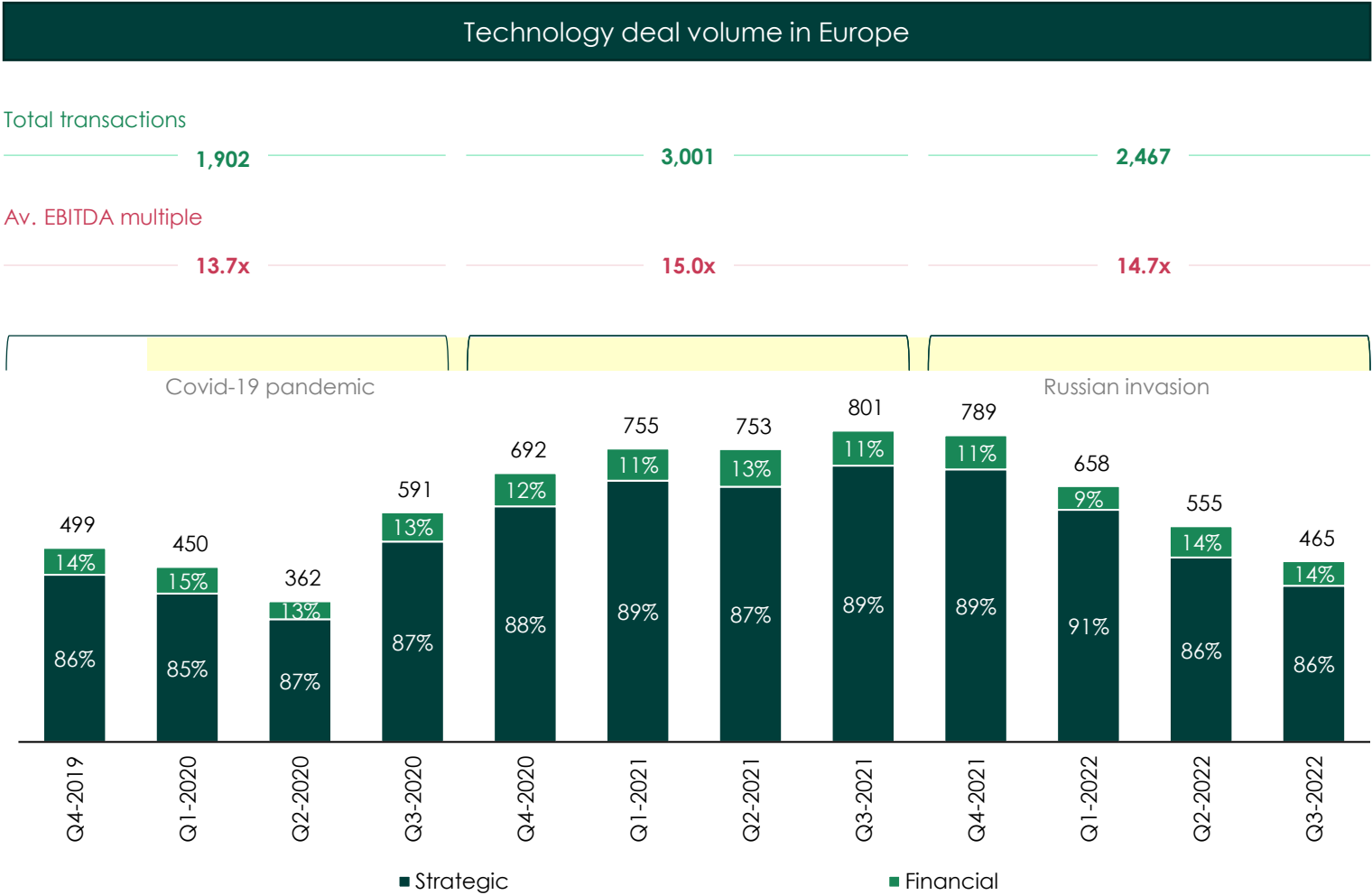


Notes: Only multiples available were used, multiples above 60.0x were excluded; Sub-sector indices can be found on pages 13-23  
Sources: FactSet

# M&A activity continues to edge lower, recording the fourth consecutive quarter of decline

## Europe M&A update

- Despite the drop, technology M&A activity continues to remain in line with its pre-pandemic levels for Q3 2022 despite the ongoing market turmoil
- Strategic buyers consistently accounted for over 85% of the deal count over the last 3 years
- This is expected to continue as strategic acquirers are striving to hold their technological edge through inorganic expansion



Data as of 30/09/2022  
Sources: FactSet

# Selected European technology M&A transactions (1/4)<sup>(1)</sup>

End of Q3 2022



<i>(Figures in €m)</i>						
Date	Target	Buyer	EV	EV/Revenue	EV/EBITDA	
Sep-2022	Audioteka	Wirtualna Polska Holding	36.5	2.0x	12.7x	
Sep-2022	Digitally Inspired	Intellias	-	-	-	
Sep-2022	Koala Crypto	Professional Diversity Network	15.4	-	-	
Sep-2022	Chapter	Saxo.com	0.0	-	-	
Sep-2022	PayXpert	Société Générale	-	-	-	
Sep-2022	Elmleigh Electrical Systems	Leadec Holding	-	-	-	
Sep-2022	Empiriu	Sirma Business Consulting	-	-	-	
Sep-2022	Sinch	Salvis Investment; Neqst D2; Sinch	1164.2	-	-	
Sep-2022	simplesurance	Allianz X	-	-	-	
Sep-2022	Learnd	GFJ ESG Acquisition	97.9	6.0x	-	
Sep-2022	Attraqt Group	CrownPeak Technology	66.2	2.0x	-	
Sep-2022	JUMP Technology	Clearwater Analytics Holdings	75.0	-	-	
Sep-2022	Atos / Evidian Business	Intermediate Capital; Groupe Onepoint; Atos	4200.0	-	-	
Sep-2022	Lola Tech	DataArt Solutions	-	-	-	
Sep-2022	Sysdata	Globant	-	-	-	
Sep-2022	Tutor House	Faith Capital Holding; Oktopi.ai	-	-	-	
Sep-2022	INPLAN	Valsoft Corp.	-	-	-	
Sep-2022	Earthware	Levine Leichtman Capital Partners	-	-	-	
Sep-2022	Infinica	Doxee	10.3	-	-	
Sep-2022	apinity	Münchener Rückversicherungs-Gesellschaft	-	-	-	
Sep-2022	Remazing	IK Partners Norden	-	-	-	
Sep-2022	Computer Line Associates	Cadmatic	-	-	-	
Sep-2022	Specter Solutions	Electric Solidus	-	-	-	
Sep-2022	Rentancy	Chime Technologies	-	-	-	
Sep-2022	Mindpool	Calculus Capital; Octopus Ventures; Wazoku	-	-	-	

Notes: (1) Transactions also include non-EU European countries  
Sources: FactSet

# Selected European technology M&A transactions (2/4)<sup>(1)</sup>

End of Q3 2022



<i>(Figures in €m)</i>						
Date	Target	Buyer	EV	EV/Revenue	EV/EBITDA	
Sep-2022	AMAN Media	AndCo	-	-	-	-
Sep-2022	Emerson Electric	Emerson Electric / Management	-	-	-	-
Sep-2022	My Com Cyprus	My Com Cyprus / Chachava	665.4	-	-	-
Sep-2022	YodelTalk	Sendinblue	-	-	-	-
Sep-2022	MPS Monitor	Valsoft Corp.	-	-	-	-
Sep-2022	PZEM	Energetický a Průmyslový Holding	-	-	-	-
Sep-2022	Onior Group	ProcessMaker	-	-	-	-
Sep-2022	Grey Monarch	Pathlock	-	-	-	-
Sep-2022	Eleven Sports Network	DAZN Group	-	-	-	-
Sep-2022	Pikabu	Altair Media	-	-	-	-
Sep-2022	Eurofins Digital Product Testing	Stirling Square Capital Partners	220.0	-	-	-
Sep-2022	calimoto	Russmedia Equity Partners	-	-	-	-
Sep-2022	Medavis	Bregal Unternehmerkapital	-	-	-	-
Sep-2022	Atari	Irata	79.8	4.5x	-	-
Sep-2022	House of Control Group	Visma Norge Holding	65.0	2.7x	-	-
Sep-2022	House of Control Group	Visma	65.0	2.7x	-	-
Sep-2022	Roxor Gaming	Aristocrat Leisure	-	-	-	-
Sep-2022	Impact Data Solutions	Hexatronic Group	-	-	-	-
Sep-2022	Antyweb	Grupa Interia.pl	-	-	-	-
Sep-2022	Audicon	CaseWare International	-	-	-	-
Sep-2022	Evo-soft	ECI Partners; BCN Group	-	-	-	-
Sep-2022	Screen9	Quickchannel	-	-	-	-
Sep-2022	MATESO	TA Associates Management; Netwrix Corp.	-	-	-	-
Sep-2022	Auto Imaging	CitNOW Video	-	-	-	-
Sep-2022	Secret Group	TodayTix	114.7	-	-	-

Notes: (1) Transactions also include non-EU European countries  
Sources: FactSet



# Selected European technology M&A transactions (3/4)<sup>(1)</sup>

End of Q3 2022



(Figures in €m)

Date	Target	Buyer	EV	EV/Revenue	EV/EBITDA
Sep-2022	Aiuken Solutions	Trill Impact; Allurity	-	-	-
Sep-2022	Deveryware	ChapsVision	-	-	-
Sep-2022	Fido Tech	SKion Water	-	-	-
Sep-2022	Makronet Bilgi Teknolojileri	Softline Holding	-	-	-
Sep-2022	The Technology Forge	Civica Group; Partners Group	-	-	-
Sep-2022	Altacogni	Nordomatic	-	-	-
Sep-2022	IntellectMoney	QIWI	-	-	-
Sep-2022	Graduateland	JobTeaser	-	-	-
Sep-2022	iSystem AG für Informatiksysteme	Tasking Germany	-	-	-
Sep-2022	Ordi	Klick Eesti	-	-	-
Sep-2022	COMPEON	Crosscard; Claret Capital Partners	-	-	-
Sep-2022	Triternion	Tencent Holdings	-	-	-
Sep-2022	Benchmark	Wirtualna Polska Holding	3.0	3.0x	7.4x
Sep-2022	Mooza Inspire	Nextview Netherlands	-	-	-
Sep-2022	Nau-Servis	Naumen	-	-	-
Sep-2022	Addinsoft	TA Associates	-	-	-
Sep-2022	Bki Sb	Bki Sb / Private Group	-	-	-
Sep-2022	Wanko Information Logistics	Main Capital Partners	-	-	-
Sep-2022	Saxo Bank	Disruptive Capital Acquisition	2000.0	-	-
Sep-2022	Arcida Advisors	Barton Group	-	-	-
Sep-2022	Computer Service Centre	Acora	-	-	-
Sep-2022	United Star Software	777 Partners	-	-	-
Sep-2022	7Pace	Appfire Technologies	-	-	-
Sep-2022	RatedPower	Enverus	-	-	-
Sep-2022	Cryptosense	SB Technology	-	-	-

Notes: (1) Transactions also include non-EU European countries  
Sources: FactSet

# Selected European technology M&A transactions (4/4)<sup>(1)</sup>

End of Q3 2022



<i>(Figures in €m)</i>						
Date	Target	Buyer	EV	EV/Revenue	EV/EBITDA	
Sep-2022	Yieldplanet	Guesty	-	-	-	
Sep-2022	DriversCheck	HRworks	-	-	-	
Sep-2022	MiQ Digital	Bridgepoint Advisers	-	-	-	
Sep-2022	Ennova	TXT e-solutions	29.9	0.5x	5.6x	
Sep-2022	riskmethods	Blackstone Corporate; Sphera Solutions	-	-	-	
Sep-2022	Oasis Hub	dClimate	-	-	-	
Sep-2022	Joyn	ProSiebenSat.1 Media	-	-	-	
Sep-2022	Shapeholdings	CENTRED Ventures	-	-	-	
Sep-2022	Tiger Eye Consulting	Tenzing Private Equity; Converge-IT.Net	-	-	-	
Sep-2022	HotelonCloud	Epsilon Net	0.3	-	-	
Sep-2022	Hotel Availabilities	Epsilon Net	0.1	-	-	
Sep-2022	Bookonlinenow	Epsilon Net	0.4	-	-	
Sep-2022	MailInBlack	Apax Partners; NewAlpha Asset Management	-	-	-	
Sep-2022	WW1 Game Series	Focus Entertainment	-	-	-	
Sep-2022	Orchard House Solutions	Vision 33	-	-	-	
Sep-2022	Stiftung Ethereum	Purpose Investments	-	-	-	
Sep-2022	HotelPlus	Savanna Sunrise	-	-	-	
Sep-2022	SanoPass	Med Life	-	-	-	
Sep-2022	Filanco	Group of Cos. FSK	56.5	2.9x	-	
Sep-2022	Enjoy Mon	Edenred	-	-	-	
Sep-2022	Cimteq	UL Solutions	-	-	-	
Sep-2022	Eddy Travels	TripAdd	-	-	-	
Sep-2022	CAST	Bridgepoint Development Capital	138.1	-	-	
Sep-2022	Hasty	CloudFactory USA	-	-	-	
Sep-2022	Flow & Form	Robin Powered	-	-	-	

Notes: (1) Transactions also include non-EU European countries  
Sources: FactSet

# Notable technology M&A transactions in Greece (1/2)

2020 to Q3 2022



(Figures in €m)

Date	Target	Buyer	EV	EV/Revenue	EV/EBITDA
Sep-2022	Bookonlinenow	Epsilon Net	-	-	-
Sep-2022	MailInBlack	Apax Partners; NewAlpha Asset Management	-	-	-
Jun-2022	inAccess Networks	Power Factors	-	-	-
Jun-2022	Carge	PPC Group	-	-	-
Apr-2022	Netbull Information Services	ADACOM	6.3	1.2x	6.0x
Apr-2022	DIGITAL4U	Epsilon Net	-	-	-
Apr-2022	Loceye!	Neurons Inc.	-	-	-
Feb-2022	Regate	Softone	-	-	-
Feb-2022	Accusonus	Meta Platforms	-	-	-
Feb-2022	Encode	Obrela Security Industries	-	-	-
Feb-2022	Pollfish	Prodege	-	-	-
Jan-2022	Viva Wallet Holdings Software Development	JPMorgan Chase & Co	-	-	-
Jan-2022	Mantis Informatics	ecovium Holding	-	-	-
Jan-2022	Archeiothiki	EOS Capital Partners	-	-	-
Jan-2022	Sotiris Matsoukas	Epsilon Net	2.7	1.0x	6.0x
Jan-2022	Logon	Entersoft	1.3	0.7x	7.5x
Dec-2021	Merchant acquiring business of NBG	EVO Payments	-	-	-
Dec-2021	Cube Revenue Management	Runa Capital Management; Marathon VC	-	-	-
Dec-2021	ZuluTrade	Finvasia Securities	-	-	-
Dec-2021	SenseOne Technologies	Space Hellas	-	-	-
Nov-2021	Exothermia	Gamma Technologies	-	-	-
Nov-2021	Professional Computer Services	Epsilon Net	2.5	1.2x	12.5x
Oct-2021	Intelli Solutions	Uni Systems Information Technology Systems	-	-	-
Sep-2021	iQom	Epsilon SingularLogic	-	-	-
Sep-2021	Tensorfin \ Daedalus Technologies	Qualco	-	-	-

# Notable technology M&A transactions in Greece (2/2)

2020 to Q3 2022



(Figures in €m)

Date	Target	Buyer	EV	EV/Revenue	EV/EBITDA
Aug-2021	Merchant acquiring business of Alpha Bank	Nexi	-	-	-
Jul-2021	Deep Sea Technologies	Emerald Technology; ETF Partners; Nabtesco	-	-	-
Jul-2021	Intelli Solutions	Uni Systems Information Technology Systems	-	-	-
Jul-2021	Epsilon SingularLogic	Space Hellas	-	-	-
May-2021	Cardlink	Worldline	-	-	-
May-2021	Data Communication	Epsilon Net	2.8	0.5x	3.4x
Apr-2021	Viva Wallet Holdings Software Development	European Bank; Tencent Holdings; Breyer	-	-	-
Apr-2021	Enartia Societe Anonyme	team.blue	-	-	-
Mar-2021	Merchant Acquiring Business of Piraeus Bank	Euronet Worldwide	-	-	-
Mar-2021	Team Candi	Info Quest Technologies	-	-	-
Jan-2021	Consulting BU of Convert Group	Ernst & Young Greece	-	-	-
Dec-2020	Optimum	Entersoft	5.1	2.2x	11.6x
Nov-2020	SingularLogic	Space Hellas; Epsilon Net	-	-	-
Nov-2020	LAMDA Hellix	Interxion	-	-	-
Sep-2020	[i2.d] technologies	Metavallon VC	-	-	-
Jul-2020	Fieldscale	Big Pi Ventures Sarl	-	-	-
Jun-2020	Dataviva EPE	Big Pi Ventures Sarl	-	-	-
Jun-2020	Useberry	Metavallon VC	-	-	-
May-2020	Agricultural Applications	Space Hellas	-	-	-
Apr-2020	Deep Sea Technologies	ETF Partners	-	-	-
Mar-2020	Loctio	Metavallon VC	-	-	-
Mar-2020	Convert Group	Equipfund	-	-	-

# Trading comps

## AdTech

ADTECH										
Company <i>(figures in €m)</i>	Market cap.	EV	Sales 2022E	EBITDA 2022E	EV / Sales			EV / EBITDA		
					LTM	2022E	2023E	LTM	2022E	2023E
Alphabet	1,276,936	1,181,785	291,657	116,170	4.2x	4.0x	3.6x	11.9x	10.0x	8.9x
Adobe	130,598	129,481	17,820	8,753	7.4x	7.2x	6.4x	18.3x	14.4x	13.1x
Salesforce	146,828	147,599	31,411	10,023	4.9x	4.7x	4.1x	N.M.	14.5x	13.2x
Trade Desk	29,779	28,875	1,608	634	20.3x	17.8x	14.2x	N.M.	44.9x	36.0x
HubSpot	13,240	12,762	1,712	205	8.2x	7.4x	5.9x	N.M.	N.M.	46.1x
Teradata	3,259	3,346	1,814	431	1.8x	1.8x	1.8x	10.3x	7.7x	7.2x
DoubleVerify Holdings	4,580	4,447	454	139	11.0x	9.7x	7.8x	48.9x	31.5x	24.9x
TechTarget	1,783	1,865	319	130	6.2x	5.8x	5.1x	25.3x	14.3x	12.2x
Criteo	1,672	1,265	981	273	0.6x	1.2x	1.1x	4.6x	4.1x	3.7x
ChannelAdvisor	665	589	180	38	3.3x	3.2x	2.9x	25.9x	15.2x	13.3x
<b>Average</b>					<b>6.8x</b>	<b>6.3x</b>	<b>5.3x</b>	<b>20.7x</b>	<b>17.4x</b>	<b>17.9x</b>
<b>Median</b>					<b>5.6x</b>	<b>5.2x</b>	<b>4.6x</b>	<b>18.3x</b>	<b>14.4x</b>	<b>13.1x</b>

# Trading comps

## Business intelligence & analytics

### BUSINESS INTELLIGENCE & ANALYTICS

Company (figures in €m)	Market cap.	EV	Sales 2022E	EBITDA 2022E	EV / Sales			EV / EBITDA		
					LTM	2022E	2023E	LTM	2022E	2023E
Alphabet	1,276,936	1,181,785	291,657	116,170	4.2x	4.0x	3.6x	11.9x	10.0x	8.9x
Adobe	130,598	129,481	17,820	8,753	7.4x	7.2x	6.4x	18.3x	14.4x	13.1x
Salesforce	146,828	147,599	31,411	10,023	4.9x	4.7x	4.1x	N.M.	14.5x	13.2x
SAP	103,342	106,683	30,639	8,430	3.8x	3.5x	3.3x	14.9x	11.6x	10.6x
IBM	109,536	154,734	60,727	15,207	2.5x	2.5x	2.5x	11.2x	9.7x	9.4x
ServiceNow	77,862	76,239	7,387	2,306	11.3x	10.2x	8.3x	N.M.	32.6x	25.8x
Shopify	34,961	29,216	5,547	(86)	5.6x	5.2x	4.2x	N.M.	N.M.	N.M.
Snowflake	55,517	51,877	2,078	17	30.9x	24.8x	16.5x	N.M.	N.M.	N.M.
Datadog	28,678	27,824	1,651	307	19.9x	16.8x	12.4x	N.M.	N.M.	N.M.
Veeva Systems	26,135	23,335	2,182	855	11.4x	10.6x	9.2x	43.6x	26.8x	23.0x
Palantir Tchnlg	17,130	14,998	1,923	364	8.3x	7.7x	6.2x	N.M.	40.2x	27.0x
Splunk	12,489	14,776	3,427	342	4.8x	4.3x	3.6x	N.M.	39.7x	28.2x
NetApp	13,723	13,258	6,842	1,811	2.0x	1.9x	1.8x	8.6x	7.2x	6.6x
Fair Isaac	10,620	12,385	1,390	682	9.0x	8.9x	8.3x	21.5x	18.1x	16.9x
Elastic	6,956	6,702	1,098	21	7.1x	6.0x	4.7x	N.M.	N.M.	N.M.
Workiva	4,157	4,105	541	(22)	8.1x	7.5x	6.3x	N.M.	N.M.	N.M.
MicroStrategy	2,450	4,718	510	87	9.5x	9.4x	9.1x	N.M.	55.6x	46.4x
Teradata	3,259	3,346	1,814	431	1.8x	1.8x	1.8x	10.3x	7.7x	7.2x
Alteryx	3,904	4,439	784	6	6.9x	5.7x	4.7x	N.M.	N.M.	N.M.
New Relic	3,943	3,659	931	37	4.3x	3.9x	3.3x	N.M.	59.4x	37.6x
Verint Systems	2,235	2,880	931	250	3.2x	3.1x	2.8x	25.6x	11.8x	10.4x
Blackbaud	2,385	3,311	1,072	257	3.3x	3.1x	3.0x	35.2x	13.0x	11.9x
LivePerson	721	1,027	522	3	2.0x	2.0x	1.8x	N.M.	N.M.	15.3x
SEMrush Holdings	1,616	1,378	255	(23)	6.0x	5.3x	4.3x	N.M.	N.M.	N.M.
Sumo Logic	908	600	295	(81)	2.1x	2.0x	1.7x	N.M.	N.M.	N.M.
Yext	562	500	406	6	1.2x	1.2x	1.1x	N.M.	N.M.	17.9x
<b>Average</b>					<b>7.0x</b>	<b>6.3x</b>	<b>5.2x</b>	<b>20.1x</b>	<b>23.3x</b>	<b>18.3x</b>
<b>Median</b>					<b>5.3x</b>	<b>4.9x</b>	<b>4.1x</b>	<b>16.6x</b>	<b>14.5x</b>	<b>14.2x</b>

Data as of 30/09/2022

Notes: Multiples above 60.0x and below 0.0x are considered as non-material (N.M.) and are therefore excluded from the calculations

# Trading comps

## Enterprise/ERP

ENTERPRISE/ERP										
Company <i>(figures in €m)</i>	Market cap.	EV	Sales 2022E	EBITDA 2022E	EV / Sales			EV / EBITDA		
					LTM	2022E	2023E	LTM	2022E	2023E
SAP	103,342	106,683	30,639	8,430	3.8x	3.5x	3.3x	14.9x	11.6x	10.6x
ServiceNow	77,862	76,239	7,387	2,306	11.3x	10.2x	8.3x	N.M.	32.6x	25.8x
Shopify	34,961	29,216	5,547	(86)	5.6x	5.2x	4.2x	N.M.	N.M.	N.M.
Atlassian	54,803	54,666	2,757	671	19.1x	19.1x	14.9x	N.M.	N.M.	N.M.
Snowflake	55,517	51,877	2,078	17	30.9x	24.8x	16.5x	N.M.	N.M.	N.M.
Workday	39,778	37,938	6,276	1,590	6.5x	6.0x	5.0x	N.M.	23.7x	19.3x
Datadog	28,678	27,824	1,651	307	19.9x	16.8x	12.4x	N.M.	N.M.	N.M.
Cloudflare	18,488	18,408	982	107	22.2x	18.6x	13.6x	N.M.	N.M.	N.M.
Constellation Software CA	30,260	31,809	6,666	1,743	5.9x	4.8x	4.0x	21.4x	18.0x	15.0x
Veeva Systems	26,135	23,335	2,182	855	11.4x	10.6x	9.2x	43.6x	26.8x	23.0x
Palantir Tchnlg	17,130	14,998	1,923	364	8.3x	7.7x	6.2x	N.M.	40.2x	27.0x
Okta	9,223	9,100	1,842	(90)	5.6x	4.9x	3.8x	N.M.	N.M.	N.M.
Tyler Technologies	14,750	15,727	1,884	480	8.5x	8.3x	7.6x	40.2x	32.6x	30.3x
Qualtrics Intl	6,085	5,670	1,462	116	4.0x	3.9x	3.3x	N.M.	56.1x	39.0x
Zendesk	9,591	9,782	1,704	175	6.3x	5.7x	4.9x	N.M.	56.6x	41.4x
WiseTech Glob	11,161	10,750	437	221	25.9x	25.9x	21.2x	50.9x	51.3x	40.5x
Yonyou Network Technology	8,700	8,448	1,473	158	6.4x	5.5x	4.5x	N.M.	47.2x	36.5x
UiPath	7,075	5,434	1,019	(2)	5.3x	5.2x	4.4x	N.M.	N.M.	N.M.
Confluent	6,841	6,038	577	(193)	12.0x	10.3x	7.7x	N.M.	N.M.	N.M.
Anaplan	-	-	753	2	-	N.M.	N.M.	N.M.	N.M.	N.M.
AVEVA Group	10,813	11,389	1,559	430	8.4x	7.4x	6.8x	30.8x	26.1x	22.6x
Sage Group	8,100	8,856	2,220	523	4.2x	4.0x	3.7x	19.4x	16.8x	15.2x
Guidewire Software	5,285	4,795	817	(28)	5.8x	5.8x	5.3x	N.M.	N.M.	N.M.
Procore Tech	6,910	6,457	701	(58)	10.3x	9.1x	7.4x	N.M.	N.M.	N.M.
Five9	5,366	5,643	793	141	7.9x	7.1x	5.8x	N.M.	40.3x	31.3x
Asana	4,351	4,361	552	(251)	9.1x	7.8x	6.0x	N.M.	N.M.	N.M.
monday.com	5,216	4,474	507	(119)	10.6x	8.7x	6.5x	N.M.	N.M.	N.M.

Data as of 30/09/2022

Notes: Multiples above 60.0x and below 0.0x are considered as non-material (N.M.) and are therefore excluded from the calculations

# Trading comps

## Enterprise/ERP

ENTERPRISE/ERP										
Company <i>(figures in €m)</i>	Market cap.	EV	Sales 2022E	EBITDA 2022E	EV / Sales			EV / EBITDA		
					LTM	2022E	2023E	LTM	2022E	2023E
Workiva	4,157	4,105	541	(22)	8.1x	7.5x	6.3x	N.M.	N.M.	N.M.
Wix com	4,572	4,471	1,400	(40)	3.3x	3.2x	2.9x	N.M.	N.M.	30.9x
Informatica	6,661	7,035	1,567	361	4.6x	4.5x	4.0x	24.3x	19.4x	15.8x
SPS Commerce	4,567	4,337	454	130	10.2x	9.5x	8.2x	48.8x	32.8x	27.3x
Appian	3,020	2,942	472	(53)	6.8x	6.2x	5.2x	N.M.	N.M.	N.M.
Sprinklr	2,447	1,930	625	1	3.3x	3.0x	2.5x	N.M.	N.M.	N.M.
Blackbaud	2,385	3,311	1,072	257	3.3x	3.1x	3.0x	35.2x	13.0x	11.9x
Technology One	2,250	2,194	229	93	9.9x	9.2x	8.3x	24.6x	22.5x	19.7x
JFrog	2,241	1,854	283	(5)	7.3x	6.4x	5.0x	N.M.	N.M.	N.M.
Enghouse Systems	1,191	1,031	312	102	3.2x	3.3x	3.2x	9.5x	10.0x	9.9x
Everbridge	1,246	1,585	435	38	3.9x	3.7x	3.2x	N.M.	41.4x	22.1x
UserTesting	576	433	194	(42)	2.4x	2.2x	1.8x	N.M.	N.M.	N.M.
Sumo Logic	908	600	295	(81)	2.1x	2.0x	1.7x	N.M.	N.M.	N.M.
Model N	1,294	1,262	220	33	5.8x	5.7x	5.1x	N.M.	38.3x	31.0x
Couchbase	652	472	152	(48)	3.2x	3.0x	2.5x	N.M.	N.M.	N.M.
American Software	526	487	135	17	3.6x	3.5x	3.2x	26.6x	28.6x	19.7x
ChannelAdvisor	665	589	180	38	3.3x	3.2x	2.9x	25.9x	15.2x	13.3x
Basware	573	627	159	12	4.0x	3.9x	3.7x	18.2x	52.7x	22.5x
<b>Average</b>						<b>7.5x</b>	<b>6.1x</b>	<b>28.9x</b>	<b>31.4x</b>	<b>24.1x</b>
<b>Median</b>						<b>5.7x</b>	<b>5.0x</b>	<b>25.9x</b>	<b>30.6x</b>	<b>22.6x</b>

Data as of 30/09/2022

Notes: Multiples above 60.0x and below 0.0x are considered as non-material (N.M.) and are therefore excluded from the calculations



# Trading comps

## Communication

COMMUNICATION										
Company <i>(figures in €m)</i>	Market cap.	EV	Sales 2022E	EBITDA 2022E	EV / Sales			EV / EBITDA		
					LTM	2022E	2023E	LTM	2022E	2023E
Microsoft	1,773,024	1,747,812	195,909	97,414	8.6x	8.6x	7.8x	17.3x	17.5x	15.8x
Cisco Systems	167,768	159,229	50,898	19,091	3.0x	3.0x	2.9x	9.6x	8.1x	7.9x
Atlassian	54,803	54,666	2,757	671	19.1x	19.1x	14.9x	N.M.	N.M.	N.M.
Zoom Video Communication	22,359	17,035	4,445	1,531	3.8x	3.8x	3.4x	15.8x	10.8x	10.7x
Twilio	12,924	9,926	3,911	206	2.8x	2.5x	1.9x	N.M.	46.4x	25.3x
NICE	12,406	11,848	2,072	648	6.2x	5.8x	5.2x	27.0x	18.1x	18.3x
RingCentral	3,899	5,403	2,026	309	3.0x	2.7x	2.2x	N.M.	17.4x	13.2x
Asana	4,351	4,361	552	(251)	9.1x	7.8x	6.0x	N.M.	N.M.	N.M.
Sinch	1,161	2,143	2,556	252	1.4x	0.8x	0.7x	19.3x	8.6x	6.6x
LivePerson	721	1,027	522	3	2.0x	2.0x	1.8x	N.M.	N.M.	15.3x
Everbridge	1,246	1,585	435	38	3.9x	3.7x	3.2x	N.M.	41.4x	22.1x
8x8	422	842	762	46	1.3x	1.1x	1.0x	N.M.	19.8x	13.6x
<b>Average</b>					<b>5.4x</b>	<b>5.1x</b>	<b>4.3x</b>	<b>17.8x</b>	<b>20.9x</b>	<b>14.9x</b>
<b>Median</b>					<b>3.4x</b>	<b>3.3x</b>	<b>3.0x</b>	<b>17.3x</b>	<b>17.5x</b>	<b>14.5x</b>

Data as of 30/09/2022

Notes: Multiples above 60.0x and below 0.0x are considered as non-material (N.M.) and are therefore excluded from the calculations

# Trading comps

## Financial applications

FINANCIAL APPLICATIONS										
Company (figures in €m)	Market cap.	EV	Sales 2022E	EBITDA 2022E	EV / Sales			EV / EBITDA		
					LTM	2022E	2023E	LTM	2022E	2023E
Intuit	111,442	115,619	12,736	4,695	8.9x	8.9x	7.8x	32.6x	24.2x	20.6x
Block	33,129	33,074	17,744	785	2.0x	1.8x	1.6x	N.M.	41.6x	28.0x
Fiserv	61,089	81,648	16,942	7,240	4.8x	4.9x	4.5x	13.7x	11.4x	10.4x
Fidelity National Information	46,899	63,200	14,823	6,580	4.4x	4.3x	4.0x	11.8x	9.7x	8.9x
MSCI Inc	34,661	39,257	2,266	1,320	17.3x	17.1x	15.5x	29.2x	29.5x	26.4x
Bill com Holdings	14,166	13,272	639	7	20.2x	20.2x	13.4x	N.M.	N.M.	N.M.
SS&C Technologies Holdings	12,430	19,282	5,432	2,084	3.7x	3.6x	3.4x	10.4x	9.5x	8.7x
Jack Henry & Associates	13,564	13,672	1,912	597	6.9x	6.9x	6.4x	20.5x	22.2x	20.6x
Fair Isaac	10,620	12,385	1,390	682	9.0x	8.9x	8.3x	21.5x	18.1x	16.9x
Black Knight	10,310	13,000	1,616	795	8.4x	8.1x	7.5x	18.1x	16.4x	14.9x
Coupa Software	4,557	5,939	851	196	7.5x	7.0x	5.9x	N.M.	28.8x	26.9x
Temenos	5,233	5,770	984	386	6.1x	5.5x	5.0x	15.4x	11.9x	10.5x
BlackLine	3,646	4,022	531	43	8.4x	7.5x	6.3x	N.M.	N.M.	N.M.
Oracle Financial Svcs	3,233	2,685	712	313	4.0x	3.7x	3.3x	9.1x	7.7x	7.0x
Envestnet	2,502	3,109	1,277	230	2.4x	2.4x	2.2x	27.8x	13.7x	11.3x
Q2	1,884	2,200	586	43	4.1x	3.8x	3.2x	N.M.	50.7x	33.1x
SimCorp	2,342	2,294	546	133	4.6x	4.2x	3.9x	20.1x	17.4x	15.0x
IRESS	1,093	1,328	390	88	3.3x	3.3x	3.1x	13.2x	14.4x	13.4x
AvidXchange	1,703	1,402	313	(29)	4.8x	4.4x	3.7x	N.M.	N.M.	N.M.
Expensify	1,243	1,202	182	49	7.3x	6.5x	5.1x	N.M.	24.2x	17.4x
Ebix Inc	598	1,168	987	159	1.2x	1.2x	1.2x	8.1x	7.5x	6.4x
Enfusion	1,424	829	152	18	6.2x	5.4x	4.2x	N.M.	45.1x	23.2x
<b>Average</b>					<b>6.6x</b>	<b>6.3x</b>	<b>5.4x</b>	<b>17.9x</b>	<b>21.3x</b>	<b>16.8x</b>
<b>Median</b>					<b>4.8x</b>	<b>5.1x</b>	<b>4.4x</b>	<b>16.8x</b>	<b>17.4x</b>	<b>15.0x</b>

Data as of 30/09/2022

Notes: Multiples above 60.0x and below 0.0x are considered as non-material (N.M.) and are therefore excluded from the calculations

# Trading comps

## Infrastructure

INFRASTRUCTURE										
Company <i>(figures in €m)</i>	Market cap.	EV	Sales 2022E	EBITDA 2022E	EV / Sales			EV / EBITDA		
					LTM	2022E	2023E	LTM	2022E	2023E
ServiceNow	77,862	76,239	7,387	2,306	11.3x	10.2x	8.3x	N.M.	32.6x	25.8x
Atlassian	54,803	54,666	2,757	671	19.1x	19.1x	14.9x	N.M.	N.M.	N.M.
VMware	45,971	54,742	13,719	4,650	4.1x	4.0x	3.7x	15.4x	11.7x	10.9x
Datadog	28,678	27,824	1,651	307	19.9x	16.8x	12.4x	N.M.	N.M.	N.M.
Cloudflare	18,488	18,408	982	107	22.2x	18.6x	13.6x	N.M.	N.M.	N.M.
MongoDB	13,926	13,381	1,227	6	12.1x	10.9x	8.5x	N.M.	N.M.	N.M.
Unity Software	9,772	9,831	1,333	(37)	7.9x	7.3x	5.7x	N.M.	N.M.	N.M.
Splunk	12,489	14,776	3,427	342	4.8x	4.3x	3.6x	N.M.	39.7x	28.2x
AppLovin	7,373	9,613	3,000	1,160	3.3x	3.2x	2.7x	17.1x	8.3x	6.9x
Akamai Technologies	13,033	15,456	3,636	1,547	4.3x	4.3x	4.0x	10.5x	10.1x	9.3x
Dynatrace	10,210	9,954	1,141	269	9.9x	8.6x	7.0x	N.M.	36.3x	28.5x
Juniper Networks	8,602	9,278	5,267	1,015	1.9x	1.8x	1.7x	12.6x	9.0x	8.1x
F5	8,800	8,728	2,719	880	3.2x	3.2x	2.9x	13.0x	9.8x	9.0x
Confluent	6,841	6,038	577	(193)	12.0x	10.3x	7.7x	N.M.	N.M.	N.M.
Pure Storage	8,351	7,758	2,784	484	3.0x	2.8x	2.4x	N.M.	15.6x	13.5x
HashiCorp	6,544	4,872	451	(264)	12.0x	10.6x	8.2x	N.M.	N.M.	N.M.
Trend Micro	7,765	6,047	1,510	396	4.2x	3.8x	3.5x	13.5x	13.6x	12.6x
Gitlab	7,986	6,914	419	(124)	20.2x	16.3x	11.5x	N.M.	N.M.	N.M.
Rapid7	2,571	3,217	696	49	5.2x	4.6x	3.8x	N.M.	N.M.	47.1x
Wix com	4,572	4,471	1,400	(40)	3.3x	3.2x	2.9x	N.M.	N.M.	30.9x
Nutanix	4,827	4,941	1,591	2	3.1x	3.1x	2.7x	N.M.	N.M.	40.9x
Qualys	5,459	5,099	495	213	11.1x	10.2x	8.7x	30.2x	23.3x	21.7x
Informatica	6,661	7,035	1,567	361	4.6x	4.5x	4.0x	24.3x	19.4x	15.8x
New Relic	3,943	3,659	931	37	4.3x	3.9x	3.3x	N.M.	59.4x	37.6x
CommVault Systems	2,426	2,192	813	174	2.7x	2.7x	2.5x	40.2x	12.4x	10.3x
JFrog	2,241	1,854	283	(5)	7.3x	6.4x	5.0x	N.M.	N.M.	N.M.
Software	1,740	1,985	950	197	2.3x	2.1x	1.9x	13.6x	10.3x	8.8x

Data as of 30/09/2022

Notes: Multiples above 60.0x and below 0.0x are considered as non-material (N.M.) and are therefore excluded from the calculations

# Trading comps

## Infrastructure

INFRASTRUCTURE										
Company <i>(figures in €m)</i>	Market cap.	EV	Sales 2022E	EBITDA 2022E	EV / Sales			EV / EBITDA		
					LTM	2022E	2023E	LTM	2022E	2023E
NetScout Systems	2,285	2,178	920	215	2.4x	2.3x	2.3x	13.5x	10.0x	9.1x
Rackspace Technology	877	4,402	3,138	590	1.5x	1.5x	1.4x	8.2x	7.8x	9.0x
Progress Software	1,868	2,284	620	273	3.8x	3.7x	3.5x	10.9x	8.3x	8.3x
Zuora	994	807	400	10	2.1x	2.0x	1.7x	N.M.	N.M.	N.M.
Micro Focus International	1,993	5,469	2,596	924	2.3x	2.0x	2.1x	6.8x	5.7x	5.8x
Sumo Logic	908	600	295	(81)	2.1x	2.0x	1.7x	N.M.	N.M.	N.M.
SecureWorks	698	548	467	(64)	1.1x	1.2x	1.1x	N.M.	N.M.	N.M.
A10 Networks	1,032	895	281	59	3.3x	3.1x	2.8x	17.4x	14.9x	12.5x
Couchbase	652	472	152	(48)	3.2x	3.0x	2.5x	N.M.	N.M.	N.M.
Brightcove	269	265	216	20	1.2x	1.2x	1.2x	24.1x	12.9x	10.7x
<b>Average</b>						<b>5.9x</b>	<b>4.8x</b>	<b>17.0x</b>	<b>17.7x</b>	<b>17.6x</b>
<b>Median</b>						<b>3.8x</b>	<b>3.5x</b>	<b>13.5x</b>	<b>12.4x</b>	<b>11.7x</b>

# Trading comps

## Human capital management

HUMAN CAPITAL MANAGEMENT										
Company <i>(figures in €m)</i>	Market cap.	EV	Sales 2022E	EBITDA 2022E	EV / Sales			EV / EBITDA		
					LTM	2022E	2023E	LTM	2022E	2023E
ServiceNow	77,862	76,239	7,387	2,306	11.3x	10.2x	8.3x	N.M.	32.6x	25.8x
ADP	95,938	98,089	16,302	4,221	5.8x	5.8x	5.4x	22.2x	22.8x	19.9x
Workday	39,778	37,938	6,276	1,590	6.5x	6.0x	5.0x	N.M.	23.7x	19.3x
Paycom Software	20,220	19,980	1,370	553	16.1x	14.4x	11.7x	43.8x	35.8x	28.9x
Paylocity Hldg	13,631	13,572	839	234	15.6x	15.6x	12.2x	N.M.	55.9x	42.0x
Ceridian	8,731	9,585	1,242	220	8.3x	7.7x	6.6x	N.M.	43.2x	35.1x
TriNet Group	4,516	3,628	1,339	573	0.7x	2.6x	2.6x	5.9x	6.1x	6.7x
Upland Software	263	634	320	99	2.1x	2.0x	2.0x	14.7x	6.6x	6.3x
Benefitfocus	222	440	256	45	1.7x	1.8x	1.7x	22.8x	10.1x	10.0x
<b>Average</b>					<b>7.6x</b>	<b>7.4x</b>	<b>6.2x</b>	<b>21.9x</b>	<b>26.3x</b>	<b>21.6x</b>
<b>Median</b>					<b>6.5x</b>	<b>6.0x</b>	<b>5.4x</b>	<b>22.2x</b>	<b>23.7x</b>	<b>19.9x</b>

Data as of 30/09/2022

Notes: Multiples above 60.0x and below 0.0x are considered as non-material (N.M.) and are therefore excluded from the calculations

# Trading comps

## IT security

IT SECURITY										
Company <i>(figures in €m)</i>	Market cap.	EV	Sales 2022E	EBITDA 2022E	EV / Sales			EV / EBITDA		
					LTM	2022E	2023E	LTM	2022E	2023E
Cisco Systems	167,768	159,229	50,898	19,091	3.0x	3.0x	2.9x	9.6x	8.1x	7.9x
Fortinet Inc	39,545	38,825	4,437	1,230	10.0x	8.7x	7.2x	46.2x	31.1x	25.4x
Cloudflare	18,488	18,408	982	107	22.2x	18.6x	13.6x	N.M.	N.M.	N.M.
Zscaler	24,002	23,329	1,086	150	20.9x	20.9x	15.2x	N.M.	N.M.	N.M.
VeriSign	19,022	19,780	1,435	992	14.1x	13.7x	12.9x	20.4x	N.M.	N.M.
Splunk	12,489	14,776	3,427	342	4.8x	4.3x	3.6x	N.M.	39.7x	28.2x
Okta	9,223	9,100	1,842	(90)	5.6x	4.9x	3.8x	N.M.	N.M.	N.M.
Check Point Software Tech	14,340	12,741	2,345	1,060	5.5x	5.3x	5.1x	13.6x	11.8x	11.2x
Trend Micro	7,765	6,047	1,510	396	4.2x	3.8x	3.5x	13.5x	13.6x	12.6x
CyberArk Software	6,232	5,875	604	(10)	10.6x	9.6x	7.9x	N.M.	N.M.	N.M.
Rapid7	2,571	3,217	696	49	5.2x	4.6x	3.8x	N.M.	N.M.	47.1x
Tenable Holdings	3,966	3,882	684	62	6.2x	5.6x	4.7x	N.M.	N.M.	40.8x
Qualys	5,459	5,099	495	213	11.1x	10.2x	8.7x	30.2x	23.3x	21.7x
Varonis Systems	2,975	2,526	493	44	5.6x	5.0x	4.1x	N.M.	56.3x	36.0x
Verint Systems	2,235	2,880	931	250	3.2x	3.1x	2.8x	25.6x	11.8x	10.4x
Sumo Logic	908	600	295	(81)	2.1x	2.0x	1.7x	N.M.	N.M.	N.M.
SecureWorks	698	548	467	(64)	1.1x	1.2x	1.1x	N.M.	N.M.	N.M.
WithSecure	280	202	136	(27)	1.1x	1.5x	1.3x	N.M.	N.M.	N.M.
<b>Average</b>					<b>9.5x</b>	<b>7.0x</b>	<b>5.8x</b>	<b>22.7x</b>	<b>24.5x</b>	<b>24.1x</b>
<b>Median</b>					<b>6.2x</b>	<b>5.0x</b>	<b>4.0x</b>	<b>20.4x</b>	<b>18.4x</b>	<b>23.6x</b>

Data as of 30/09/2022

Notes: Multiples above 60.0x and below 0.0x are considered as non-material (N.M.) and are therefore excluded from the calculations

# Trading comps

## Storage

STORAGE										
Company (figures in €m)	Market cap.	EV	Sales 2022E	EBITDA 2022E	EV / Sales			EV / EBITDA		
					LTM	2022E	2023E	LTM	2022E	2023E
Microsoft	1,773,024	1,747,812	195,909	97,414	8.6x	8.6x	7.8x	17.3x	17.5x	15.8x
Alphabet	1,276,936	1,181,785	291,657	116,170	4.2x	4.0x	3.6x	11.9x	10.0x	8.9x
Amazon.com	1,175,107	1,252,727	526,755	73,363	2.5x	2.4x	2.1x	22.1x	16.9x	13.5x
Oracle	168,043	248,380	49,845	24,554	5.6x	5.0x	4.7x	12.9x	9.5x	9.4x
Salesforce	146,828	147,599	31,411	10,023	4.9x	4.7x	4.1x	N.M.	14.5x	13.2x
IBM	109,536	154,734	60,727	15,207	2.5x	2.5x	2.5x	11.2x	9.7x	9.4x
NetApp	13,723	13,258	6,842	1,811	2.0x	1.9x	1.8x	8.6x	7.2x	6.6x
Iron Mountain	13,047	25,163	5,260	1,851	5.3x	4.9x	4.5x	13.6x	13.9x	12.7x
Dropbox	7,569	8,401	2,345	863	3.7x	3.6x	3.4x	15.2x	9.7x	9.1x
Nutanix	4,827	4,941	1,591	2	3.1x	3.1x	2.7x	N.M.	N.M.	40.9x
Box	3,543	4,221	1,006	295	4.4x	4.2x	3.7x	57.3x	14.2x	12.8x
CommVault Systems	2,426	2,192	813	174	2.7x	2.7x	2.5x	40.2x	12.4x	10.3x
Brightcove	269	265	216	20	1.2x	1.2x	1.2x	24.1x	12.9x	10.7x
<b>Average</b>					<b>3.9x</b>	<b>3.7x</b>	<b>3.4x</b>	<b>21.3x</b>	<b>12.4x</b>	<b>13.3x</b>
<b>Median</b>					<b>3.7x</b>	<b>3.6x</b>	<b>3.4x</b>	<b>15.2x</b>	<b>12.7x</b>	<b>10.7x</b>

# Tailored corporate finance services for the European mid-market

## Our firm

Alma Advisors is an independent financial services firm serving the European mid-market. We offer corporate finance solutions to corporates, family businesses and entrepreneurs.



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