

AUDIT & ASSURANCE | TAX & LEGAL | ADVISORY

M&A - SOFTWARE SECTOR UPDATE Q4-2022

January 2023

Software Outlook 2023: Finally, light at the end of the tunnel?

The software sector experienced a largely difficult and painful year 2022 driven by rising interest rates, increasing concerns about a (global) recession and investors' fear of weaker spending trends into 2023. However, the basis for a constructive investment backdrop is certainly there:

Attractive valuation multiples

- Share prices within our software universe experienced a sharp decline over the last year, correcting implied valuations back towards more attractive levels
- Equity research notes that valuations have pulled back -31% in 2022 vs. only -5% retracement of FY2023 sales expectations
- Especially growth stocks such as SaaS demonstrated the worst share price performance within our universe in 2022 (-44.5%)
- Potentially, 2023 will look like a two stage set-up where stage one will contain further estimate revisions after the Q4-22 reporting season while stage two with stabilizing interest rates and better prospects into 2024 should turn investors to focus on high growth/high quality assets in the second half of the year

Focus on operating profits & margins

- An uncertain macro climate combined with rising cost of capital led many tech companies to reassess growth plans and reprioritize profitability and cash flows
- Focus on leaner operations and cost control led to a surge in layoffs and slowed headcount growth
- This will support operating margins but won't lead to a massive uplift, i.e. will rather correct outsized sales growth expectations

Strong M&A activities

- Vendor consolidation trend will continue into 2023 as customers look to manage their cost base more effectively
- Primarily smaller tech-vendors might be impacted with larger rivals looking for tuck-in acquisitions to complete more integrated solutions
- In Germany, yearly software sector deal count increased from 179 to 205 (+15%) in 2022 with strategic buyers backing 60% of these deals

M&A sentiment & KPIs Q4-2022

M&A sentiment software sector – the “big picture”



Global



No. of deals

775 in Q4-2022
722 in Q4-2021



Transaction
Volume

€44bn in Q4-2022
€177bn in Q4-2021**



EV/Sales (x)
(median-based)

4.6x in 2022
4.2x in 2021



Germany



No. of deals with
German targets

51 in Q4-2022
37 in Q4-2021



Private Equity
involvement

37% in Q4-2022
47% global in Q4-2022

Implied software sector trading multiples* & KPIs (median-based)

Subsector	EV/Sales 23E	EV/EBITDA 23E	Sales growth 23E	EBITDA-margin 23E
SaaS	6.6x	23.8x	19.6%	17.6%
SCM	8.7x	30.0x	10.6%	29.1%
PLM & Engineering	7.7x	22.4x	8.3%	37.4%
HCM	7.8x	21.4x	17.2%	27.9%
ERP	6.7x	22.9x	15.7%	26.3%
Cyber-security	5.4x	19.1x	17.4%	21.5%
Large platforms	5.1x	12.8x	8.7%	39.3%

Sources: Mergermarket, CapitalIQ, BDO analysis

Note: M&A sentiment transaction volume based on deals with disclosed figures. EV = Enterprise value (median-based) per 13th January 2023

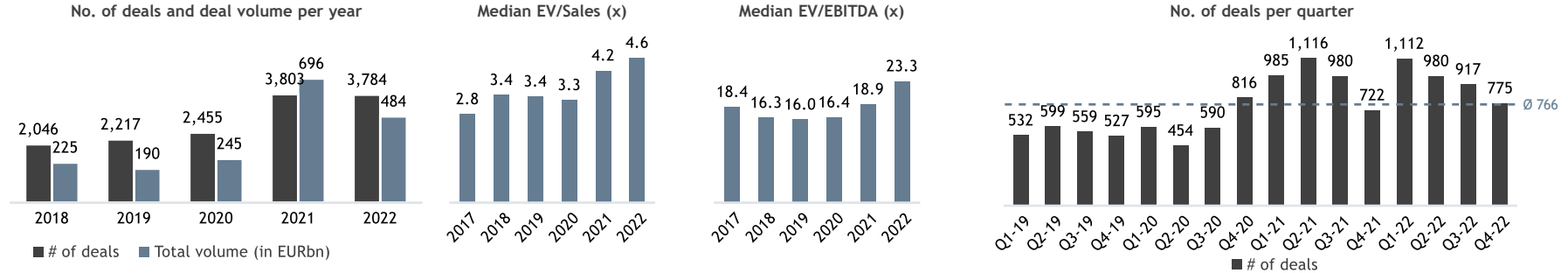
*) Implied multiples in excess of 25x (EV/Sales) or 50x (EV/EBITDA) have been excluded

**) Q4-2021 includes acquisitions such as Cerner by Oracle (€26bn); McAfee by Permira (€21bn) and Aspen Technology by Emerson (€9.5bn)

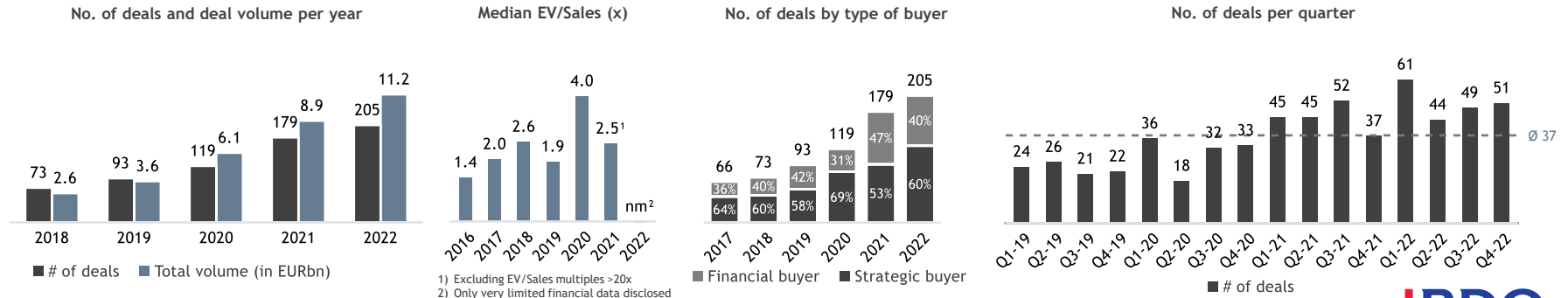
M&A activity over time

Global software sector deal activity in Q4-2022 was in line with the three year average, while German deal activity remained strong

Global M&A activity (based on announced deals)



German M&A activity (based on announced deals, German targets)



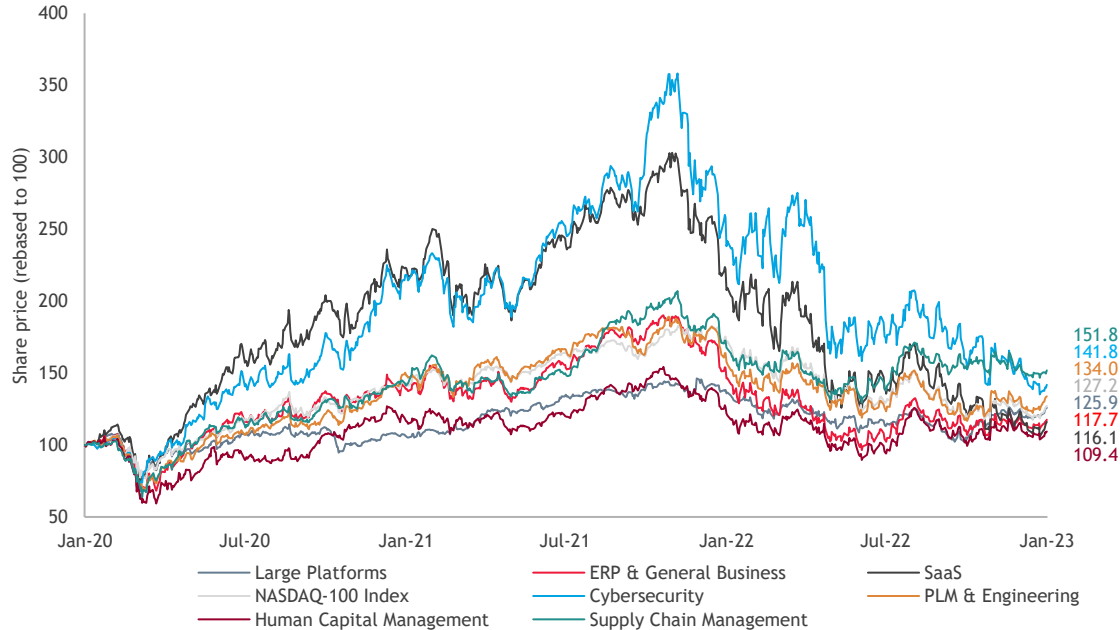
Sources: Mergermarket, BDO analysis

Note: Figures are subject to limited disclosed deal information; nm = not meaningful

Recent software sector share price performance

2022 is characterized by weak share price performance across all software subsegments with SaaS and Cybersecurity being the worst performing segments of our universe – but recent 4W price trends signal a potential trough level

Share price performance over time (by selected software subsector)



Software subsector	Change (%)		
	3-year	1-Year	4-week
Supply Chain Management	51.8%	(9.0%)	0.2%
Cybersecurity	41.8%	(41.4%)	(5.6%)
PLM & Engineering	34.0%	(14.1%)	5.9%
NASDAQ-100 Index	27.2%	(26.1%)	(2.6%)
Large Platforms	25.9%	(7.8%)	5.2%
ERP & General Business	17.7%	(19.5%)	2.5%
SaaS	16.1%	(44.5%)	(0.7%)
Human Capital Management	9.4%	(9.1%)	(0.2%)

Sources: CapitalIQ, Equity Research, BDO analysis

Note: Market data as of 13th January 2023. Subsector constituents limited to top 10 companies by market capitalization

Full peer group constituents are listed on pages 10-25



Appendix

Selected M&A transactions & implied trading multiples

Selected M&A transactions Q4-2022 (1/3)



Germany

Date	Target	Target activity	Buyer	EV (€m)	EV/Sales(x)	EV/EBITDA(x)
Dec-2022	CYRES CONSULTING	Technical and compliance consultancy in the field of cyber security for the automotive industry, with a focus on the entire production chain	Sesa VARGROUP	n.a.	n.a.	n.a.
Dec-2022	TRANSPOREON	Provider of cloud-based logistics platforms	Trimble	2,183	n.a.	n.a.
Dec-2022	LIS Logistik-Informationssysteme AG	Developer of transport management and forwarding software	DKV	n.a.	n.a.	n.a.
Dec-2022	GORILLAS	Online groceries ordering and delivery company	getir	1,137	n.a.	n.a.
Dec-2022	evidanza.	Software provider of business intelligence solutions	CSS	n.a.	n.a.	n.a.
Dec-2022	VERSO	Provider of software solutions for CSR management and communications	NORD HOLDING	n.a.	n.a.	n.a.
Dec-2022	DYNA MORE	Developer and seller of explicit simulation solutions to the automotive industry	Ansys	n.a.	n.a.	n.a.
Nov-2022	artegic	Provider of marketing automation SaaS solutions	DuMont UNITED LOGISTICS	n.a.	n.a.	n.a.
Nov-2022	active logistics	Provider of complete IT solutions for logistics companies and the manufacturing industry	proLogistik GROUP	n.a.	n.a.	n.a.
Oct-2022	GSG	ERP software provider for businesses in manufacturing, retail, distribution, public and laboratories sectors	Elvaston	n.a.	n.a.	n.a.
Oct-2022	GreenPlan GmbH	Provider of route planning software	EPG Ehrhardt Partner Group Smarter Connected Logistics	n.a.	n.a.	n.a.

Selected M&A transactions Q4-2022 (2/3)



Global

Date	Target	Target activity	Buyer	EV (€m)	EV/Sales(x)	EV/EBITDA(x)
Dec-2022	coupa	Provider of cloud-based applications for finance	THOMABRAVO	7,919	<i>n.a.</i>	<i>n.a.</i>
Dec-2022	Mistral	Company engaged in providing ERP software and computer programming services	aptean	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Nov-2022	FieldConnect <small>CONNECTING YOUR PEOPLE AND PROCESS</small>	Software company providing mobile field service management software	Cordance.	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Nov-2022	SERVICEMAX	Service management software business	ptc	1,409	<i>n.a.</i>	<i>n.a.</i>
Nov-2022	rewst	Software company which develops a robotic process automation technology for smaller managed services providers	OPENVIEW	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Nov-2022	Integrho	Software company engaged in supplier of payroll software	sdworx	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	INTELLIGO	Supplier of HR and payroll software and outsourcing services	sdworx	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	OutSmart	Software company engaged with field service management software for small and medium-sized enterprises	VISMA	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	SKILLSURVEY	Provider of cloud-based talent acquisition and assessment products for human capital management professionals	icims	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	valence	Software-cybersecurity company engaged with SaaS data, supply chain and identity risks through automated policy enforcement	M12 & 5 other investors	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	Finexio	Accounts payable automation software firm	MVP National Bank Holdings & 5 other investors	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

Sources: Mergermarket, CapitalIQ, BDO analysis
n.a. = not available

Selected M&A transactions Q4-2022 (3/3)



Global

Date	Target	Target activity	Buyer	EV (€m)	EV/Sales(x)	EV/EBITDA(x)
Oct-2022	MAGG	Software company providing billing, accounting and carrier access billing systems software	HARRIS	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	Talos360	Human capital management solutions provider	LDC	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	utmost	First extended workforce system	Beeline	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	BYFR	Company engaged in providing anti-cheat security solutions	Rovio	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	Factorial	Software company engaged with developing a business and employee management software	atomico & 5 other investors	1,030	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	workterra	Provider of cloud-based benefits administration and talent management solutions	businessolver	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	TEMPO	Developer of software suite for time tracking, resource management and budgeting	DIVERSIS CAPITAL	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	btc	Provider of accountancy software	Bright	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	tines	Provider of cybersecurity automation solutions	Felicis Ventures & 5 other investors	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	BILLIE HEXAGON	Provider of artificial Intelligence based malware detection solutions	Qualys	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oct-2022	GREENSHADES	Provider of payroll tax and human capital management (HCM) information and software solutions for mid-sized businesses	WAYPOINT CAPITAL PARTNERS GearBox Capital	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

Sources: Mergermarket, CapitalIQ, BDO analysis
n.a. = not available

Implied multiples

SaaS players (1/2)

Companies	Market cap	EV	EV / Sales			EV / EBITDA			EV / EBIT			P / E		
	(EURm)	(EURm)	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E
SaaS														
Salesforce	136,948	139,468	4.4x	3.9x	3.4x	18.5x	16.4x	15.1x	20.0x	16.6x	13.4x	nm	75.1x	41.5x
ServiceNow	77,316	75,623	9.3x	7.6x	6.1x	28.9x	22.8x	18.8x	35.5x	27.9x	21.6x	nm	nm	84.7x
Shopify	45,727	42,360	6.9x	5.5x	4.2x	nm	nm	nm	nm	nm	64.6x	nm	nm	nm
Snowflake	41,874	38,476	14.2x	10.0x	6.7x	nm	nm	nm	nm	nm	72.9x	nm	nm	nm
Block Inc.	39,740	39,893	2.1x	1.8x	1.6x	33.4x	23.1x	17.8x	nm	nm	50.1x	nm	nm	51.1x
Workday	39,708	37,646	5.7x	4.8x	4.1x	21.4x	17.2x	12.2x	27.1x	21.6x	16.3x	nm	nm	80.9x
Atlassian	34,954	34,740	9.7x	7.7x	5.9x	nm	41.5x	na	60.6x	42.8x	26.8x	nm	nm	nm
Veeva	23,635	20,898	9.5x	8.1x	7.2x	24.5x	20.6x	17.5x	25.4x	21.4x	18.8x	57.8x	45.9x	38.7x
CrowdStrike	21,563	20,016	7.4x	5.7x	4.2x	36.7x	25.6x	na	45.0x	30.9x	21.1x	nm	nm	nm
Datadog	20,684	19,825	9.7x	7.2x	4.9x	50.0x	34.1x	na	55.7x	38.0x	18.1x	nm	nm	45.2x
DiDi	20,638	15,738	0.6x	na	na	na	na	na	na	na	na	na	na	na
Zoom	18,776	14,094	3.3x	3.1x	2.7x	10.4x	9.9x	na	10.8x	10.3x	9.1x	nm	nm	33.1x
Roblox	18,443	17,018	5.7x	5.0x	4.3x	nm	nm	39.0x	nm	nm	nm	nm	nm	nm
Paycom	16,284	16,018	10.3x	8.4x	7.1x	24.9x	20.1x	16.7x	29.8x	24.1x	19.2x	51.5x	39.4x	29.2x
Check Point Software	14,952	13,481	6.0x	5.7x	5.7x	13.3x	12.8x	na	13.5x	12.9x	13.1x	19.8x	19.2x	18.5x
Zscaler	14,303	13,743	8.7x	6.8x	4.9x	nm	36.8x	na	68.5x	47.2x	na	nm	nm	nm
HubSpot	14,175	13,668	7.2x	5.8x	4.7x	nm	42.7x	27.7x	nm	57.2x	31.3x	nm	nm	nm
Splunk	13,436	15,575	4.2x	3.6x	3.1x	23.1x	17.0x	na	29.1x	20.8x	14.9x	nm	nm	61.6x
Palantir	13,382	11,327	5.3x	4.3x	2.8x	23.8x	16.8x	na	26.2x	19.6x	na	nm	nm	30.0x
Cloudflare	13,344	13,280	10.9x	8.2x	5.7x	nm	nm	42.9x	nm	nm	70.0x	nm	nm	nm

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023, “na” = not available

“nm” refers to implied multiples in excess of 25x (EV/Sales), 50x (EV/EBITDA), 75x (EV/EBIT) or 100x (P/E)

Implied multiples

SaaS players (2/2)

Companies	Market cap	EV	EV / Sales			EV / EBITDA			EV / EBIT			P / E			
	(EURm)	(EURm)	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	
SaaS															
MongoDB	12,650	12,140	8.5x	6.6x	5.0x	nm	nm	43.3x	nm	nm	60.9x	nm	nm	nm	
Unity	11,761	11,876	5.9x	4.9x	4.4x	nm	25.2x	17.7x	nm	33.4x	26.5x	nm	nm	nm	
DocuSign	10,843	10,715	4.3x	4.0x	3.5x	19.1x	16.6x	14.9x	21.2x	18.7x	15.0x	nm	nm	54.2x	
Okta	10,328	10,243	5.2x	4.4x	3.4x	nm	nm	na	nm	nm	43.3x	nm	nm	nm	
Bill.com	10,091	9,374	8.8x	6.9x	5.6x	nm	nm	40.2x	nm	nm	48.0x	nm	nm	nm	
Paylocity Holding	9,985	9,994	8.7x	7.2x	6.1x	28.4x	22.8x	18.5x	33.5x	27.0x	22.3x	76.8x	59.4x	42.8x	
Dynatrace	9,847	9,587	8.1x	6.7x	5.5x	30.2x	25.0x	na	32.7x	26.6x	na	nm	78.9x	50.5x	
Ceridian	9,600	10,405	7.8x	6.6x	5.7x	37.8x	28.7x	22.6x	52.7x	37.7x	31.7x	nm	nm	90.3x	
Twilio	9,204	6,472	1.6x	1.3x	1.1x	18.9x	13.8x	na	nm	38.4x	15.8x	nm	nm	nm	
Dropbox	7,506	8,270	3.7x	3.4x	3.5x	10.0x	9.5x	8.9x	11.9x	11.0x	na	23.7x	22.3x	17.3x	
UiPath	7,057	5,564	5.0x	4.2x	3.6x	nm	33.2x	30.5x	nm	52.7x	31.8x	nm	nm	na	
Xero Limited	6,859	6,924	7.3x	6.2x	5.2x	33.2x	25.1x	18.0x	nm	56.2x	35.7x	nm	81.1x	44.4x	
GitLab	6,220	5,410	10.1x	7.4x	na	nm	nm	na	nm	nm	na	nm	nm	na	
Qualtrics	5,782	5,360	3.4x	2.9x	2.4x	36.9x	24.2x	na	60.9x	34.2x	13.0x	nm	nm	na	
Confluent	5,403	4,644	6.6x	5.0x	na	nm	nm	na	nm	nm	na	nm	nm	na	
HashiCorp	5,084	3,920	7.3x	5.7x	4.3x	nm	nm	na	nm	nm	nm	nm	nm	nm	
Sinch	3,942	4,853	1.7x	1.5x	1.3x	14.5x	12.2x	9.8x	17.1x	17.2x	na	93.2x	37.7x	na	
AppLovin	3,714	5,878	2.3x	2.0x	2.0x	5.9x	5.1x	4.6x	23.0x	12.2x	7.9x	45.4x	12.3x	8.0x	
RingCentral	3,218	4,670	2.2x	1.9x	1.5x	11.7x	9.2x	7.5x	14.0x	11.0x	10.2x	nm	nm	nm	
			Median	6.6x	5.6x	4.3x	23.8x	21.7x	17.8x	28.1x	26.6x	21.6x	51.5x	42.7x	43.6x
			Average	6.4x	5.3x	4.3x	24.2x	21.7x	21.2x	32.5x	28.4x	29.1x	52.6x	47.1x	45.7x

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023, “na” = not available

“nm” refers to implied multiples in excess of 25x (EV/Sales), 50x (EV/EBITDA), 75x (EV/EBIT) or 100x (P/E)

Sales growth rates & operating margins

SaaS players (1/2)

Companies	Sales growth			EBITDA margin			EBIT margin			Net income margin			CAGR 23E-25E			
	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	Sales	EBITDA	EBIT	N.I.
SaaS																
Salesforce	11.1%	12.6%	14.5%	23.9%	24.0%	22.8%	22.2%	23.7%	25.7%	3.2%	5.1%	8.1%	13.5%	10.8%	22.2%	80.4%
ServiceNow	21.6%	22.4%	23.9%	32.1%	33.2%	32.5%	26.2%	27.2%	28.4%	5.1%	6.0%	7.4%	23.2%	24.0%	28.3%	47.9%
Shopify	20.6%	24.7%	32.2%	0.9%	5.1%	6.5%	(0.6%)	2.5%	6.5%	(10.5%)	(7.3%)	(1.4%)	28.4%	256.2%	na	(52.4%)
Snowflake	48.4%	41.1%	49.0%	7.6%	10.2%	11.1%	5.2%	7.9%	9.2%	(29.1%)	(20.2%)	2.4%	45.0%	75.4%	93.6%	na
Block Inc.	14.9%	17.2%	16.5%	6.4%	7.9%	8.9%	(0.9%)	1.2%	3.1%	(1.0%)	1.2%	3.1%	16.8%	37.2%	na	na
Workday	17.4%	17.8%	18.5%	26.5%	28.1%	33.4%	20.9%	22.3%	24.9%	(2.3%)	0.8%	5.3%	18.1%	32.5%	28.9%	na
Atlassian	23.7%	25.8%	29.6%	16.9%	18.6%	na	16.0%	18.0%	22.2%	(8.1%)	(5.5%)	(0.4%)	27.7%	na	50.3%	(73.1%)
Veeva	12.8%	16.2%	13.6%	38.7%	39.4%	40.9%	37.2%	38.0%	38.0%	18.5%	20.1%	20.9%	14.9%	18.3%	16.3%	22.2%
CrowdStrike	34.5%	30.5%	35.0%	20.2%	22.2%	na	16.5%	18.4%	20.0%	(5.0%)	(1.6%)	3.5%	32.7%	na	46.2%	na
Datadog	33.3%	34.9%	45.8%	19.5%	21.1%	na	17.5%	19.0%	27.3%	(3.1%)	0.5%	11.4%	40.3%	na	75.5%	na
DiDi	1.5%	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Zoom	5.8%	5.9%	14.8%	31.9%	31.5%	na	30.6%	30.3%	29.8%	0.5%	1.3%	11.0%	10.3%	na	8.7%	404.9%
Roblox	15.9%	14.8%	16.1%	7.9%	9.5%	11.0%	(34.5%)	(31.7%)	(24.3%)	(34.6%)	(32.7%)	(24.6%)	15.5%	36.3%	(3.1%)	(2.7%)
Paycom	22.9%	21.6%	18.9%	41.3%	42.1%	42.4%	34.5%	35.1%	37.0%	20.3%	21.8%	24.7%	20.2%	21.9%	24.6%	32.7%
Check Point Software Tec.	5.0%	4.1%	1.2%	45.0%	44.7%	na	44.3%	44.4%	43.3%	33.5%	33.1%	33.9%	2.7%	na	1.5%	3.2%
Zscaler	34.9%	27.9%	38.4%	16.3%	18.4%	na	12.7%	14.4%	na	(16.6%)	(13.9%)	(8.1%)	33.1%	na	na	(7.0%)
HubSpot	20.5%	23.8%	23.8%	12.2%	13.6%	16.9%	8.4%	10.2%	15.0%	(7.6%)	(5.1%)	1.8%	23.8%	45.8%	65.1%	na
Splunk	16.8%	18.1%	17.4%	18.3%	21.1%	na	14.5%	17.3%	20.4%	(10.9%)	(8.4%)	4.3%	17.8%	na	39.7%	na
Palantir	21.2%	23.9%	50.8%	22.3%	25.5%	na	20.3%	21.9%	na	(6.6%)	0.4%	11.2%	36.7%	na	na	na
Cloudflare	35.1%	33.5%	43.1%	13.6%	13.5%	13.3%	3.7%	4.9%	8.2%	(16.4%)	(12.6%)	(7.8%)	38.2%	36.8%	104.7%	(4.5%)

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023

“na” = not available

Sales growth rates & operating margins

SaaS players (2/2)

Companies	Sales growth			EBITDA margin			EBIT margin			Net income margin			CAGR 23E-25E			
	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	Sales	EBITDA	EBIT	N.I.
SaaS																
MongoDB	26.4%	27.9%	31.6%	4.6%	6.8%	11.6%	3.4%	5.3%	8.3%	(26.0%)	(20.7%)	(5.4%)	29.7%	106.2%	101.3%	(40.8%)
Unity	58.8%	19.2%	13.2%	10.0%	19.6%	24.7%	7.2%	14.8%	16.5%	(31.2%)	(21.9%)	(14.7%)	16.2%	82.4%	76.1%	(20.3%)
DocuSign	8.6%	8.9%	14.7%	22.7%	24.0%	23.2%	20.4%	21.3%	23.1%	(3.5%)	(1.8%)	6.5%	11.8%	13.1%	19.0%	na
Okta	19.6%	18.6%	27.4%	3.5%	7.3%	na	2.1%	5.4%	7.9%	(34.8%)	(27.7%)	(20.4%)	22.9%	na	137.1%	(6.0%)
Bill.com	39.8%	28.6%	23.8%	7.8%	10.5%	13.8%	5.0%	7.2%	11.6%	(27.9%)	(18.8%)	(8.5%)	26.2%	68.0%	91.5%	(30.5%)
Paylocity Holding	26.3%	20.1%	18.3%	30.5%	31.6%	32.9%	25.8%	26.7%	27.3%	11.3%	12.1%	14.2%	19.2%	23.8%	22.6%	33.9%
Dynatrace	19.6%	21.0%	20.2%	26.7%	26.7%	na	24.7%	25.0%	na	6.3%	8.7%	11.3%	20.6%	na	na	61.8%
Ceridian	17.2%	16.9%	16.0%	20.6%	23.2%	25.4%	14.8%	17.6%	18.1%	0.3%	2.1%	5.9%	16.5%	29.5%	28.9%	437.1%
Twilio	16.7%	18.6%	18.6%	8.4%	9.6%	na	1.4%	3.5%	7.1%	(25.6%)	(23.0%)	(13.1%)	18.6%	na	170.4%	(15.1%)
Dropbox	5.6%	6.3%	(1.3%)	36.5%	36.2%	39.1%	30.8%	31.3%	na	14.0%	14.0%	18.2%	2.4%	6.1%	na	16.9%
UiPath	17.9%	18.9%	18.6%	7.7%	12.7%	11.7%	5.7%	8.0%	11.2%	(21.6%)	(16.4%)	na	18.7%	46.6%	66.7%	na
Xero Limited	21.4%	18.0%	17.9%	21.9%	24.6%	29.0%	7.6%	11.0%	14.7%	4.7%	7.5%	11.7%	17.9%	35.8%	64.2%	85.6%
GitLab	41.6%	37.1%	na	(14.6%)	(3.9%)	na	(16.2%)	(7.6%)	na	(39.8%)	(26.3%)	na	na	na	na	na
Qualtrics	16.6%	17.8%	22.2%	9.3%	12.0%	na	5.6%	8.5%	18.3%	(52.8%)	(36.0%)	na	20.0%	na	116.4%	na
Confluent	32.2%	31.9%	na	(18.9%)	(3.9%)	na	(20.8%)	(6.2%)	na	(57.7%)	(38.7%)	na	na	na	na	na
HashiCorp	28.7%	28.4%	31.2%	(25.1%)	(16.1%)	na	(26.3%)	(17.2%)	(7.5%)	(55.5%)	(41.6%)	(28.2%)	29.8%	na	(30.9%)	(7.4%)
Sinch	13.1%	12.9%	18.2%	11.7%	12.4%	13.0%	9.9%	8.8%	na	1.5%	3.2%	na	15.5%	21.6%	na	na
AppLovin	(0.0%)	10.7%	3.9%	38.1%	40.3%	42.4%	9.8%	16.8%	24.9%	3.1%	10.5%	15.4%	7.2%	13.1%	70.9%	137.7%
RingCentral	17.3%	16.6%	20.3%	18.5%	20.1%	20.4%	15.5%	16.8%	15.1%	(12.6%)	(11.8%)	(5.2%)	18.4%	24.4%	17.0%	(24.0%)
Median	19.6%	19.1%	18.7%	17.6%	19.8%	22.8%	11.3%	15.8%	18.1%	(7.1%)	(3.5%)	4.3%	19.0%	32.5%	46.2%	0.3%
Average	21.7%	20.9%	22.7%	16.3%	19.0%	22.9%	11.1%	13.7%	17.1%	(11.0%)	(6.4%)	2.9%	21.4%	46.3%	53.6%	45.0%

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023

“na” = not available

Implied multiples

Supply chain management

Companies	Market cap	EV	EV / Sales			EV / EBITDA			EV / EBIT			P / E		
	(EURm)	(EURm)	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E
Supplychain & Logistics														
Dassault Systèmes	46,801	47,024	7.7x	7.0x	6.3x	20.1x	18.3x	na	22.9x	20.7x	18.8x	42.1x	35.4x	31.1x
Aspen	11,975	11,954	10.5x	9.2x	7.7x	22.0x	18.7x	15.5x	23.1x	20.5x	na	nm	84.6x	46.8x
WiseTech Global	10,825	10,538	19.1x	15.7x	12.8x	35.9x	28.7x	23.2x	42.8x	33.5x	27.1x	60.4x	47.5x	38.6x
Manhattan Associates	7,059	6,899	9.2x	8.2x	7.2x	34.6x	30.3x	24.2x	35.8x	31.1x	na	67.8x	57.5x	41.3x
Descartes	5,564	5,348	10.9x	9.9x	8.5x	24.4x	21.8x	19.1x	37.3x	30.7x	27.5x	53.6x	45.2x	38.1x
SPS Commerce	4,427	4,225	8.7x	7.6x	na	30.0x	25.2x	na	34.8x	29.5x	na	82.7x	67.2x	na
Kinaxis	2,721	2,555	6.6x	5.7x	4.5x	38.9x	30.6x	na	nm	70.7x	31.0x	nm	nm	42.5x
American Software	463	365	3.0x	2.8x	na	18.6x	16.2x	na	21.4x	na	na	45.7x	44.1x	na
Tecsys	280	261	2.4x	2.2x	na	32.5x	17.3x	na	47.7x	na	na	63.7x	na	na
		Median	8.7x	7.6x	7.4x	30.0x	21.8x	21.2x	35.3x	30.7x	27.3x	60.4x	47.5x	39.9x
		Average	8.7x	7.6x	7.8x	28.6x	23.0x	20.5x	33.2x	33.8x	26.1x	59.4x	54.5x	39.7x

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023, “na” = not available
“nm” refers to implied multiples in excess of 25x (EV/Sales), 50x (EV/EBITDA), 75x (EV/EBIT) or 100x (P/E)

Sales growth rates & operating margins

Supply chain management

Companies	Sales growth			EBITDA margin			EBIT margin			Net income margin			CAGR 23E-25E			
	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	Sales	EBITDA	EBIT	N.I.
Supplychain & Logistics																
Dassault Systèmes	8.6%	9.2%	11.8%	38.2%	38.4%	na	33.5%	34.0%	33.4%	18.2%	19.8%	20.1%	10.5%	na	10.3%	16.3%
Aspen	44.5%	13.5%	20.2%	47.5%	49.4%	49.4%	45.3%	44.9%	na	1.5%	10.9%	16.4%	16.8%	19.0%	na	282.9%
WiseTech Global	22.1%	21.2%	23.3%	53.1%	54.9%	55.0%	44.5%	47.0%	47.2%	32.4%	34.0%	34.0%	22.2%	24.4%	25.8%	25.2%
Manhattan Associates	8.2%	11.6%	14.1%	26.5%	27.1%	29.7%	25.6%	26.4%	na	13.9%	14.6%	17.9%	12.8%	19.5%	na	28.1%
Descartes	10.6%	11.0%	15.4%	44.9%	45.3%	44.8%	29.4%	32.1%	31.1%	21.2%	22.7%	23.4%	13.2%	13.1%	16.4%	18.7%
SPS Commerce	16.7%	14.5%	na	29.1%	30.2%	na	25.0%	25.8%	na	11.0%	11.9%	na	na	na	na	na
Kinaxis	12.2%	16.3%	26.8%	17.0%	18.6%	na	4.0%	8.1%	14.5%	2.1%	4.0%	11.3%	21.4%	na	130.8%	182.4%
American Software	4.5%	7.6%	na	16.1%	17.2%	na	14.0%	na	na	8.3%	8.0%	na	na	na	na	na
Tecsys	9.3%	11.3%	na	7.4%	12.5%	na	5.1%	na	na	4.1%	na	na	na	na	na	na
Median	10.6%	11.6%	17.8%	29.1%	30.2%	47.1%	25.6%	32.1%	32.2%	11.0%	13.3%	19.0%	15.0%	19.3%	21.1%	26.7%
Average	15.2%	12.9%	18.6%	31.1%	32.6%	44.7%	25.2%	31.2%	31.5%	12.5%	15.7%	20.5%	16.2%	19.0%	45.8%	92.3%

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023

“na” = not available

Implied multiples

PLM & Engineering

Companies	Market cap	EV	EV / Sales			EV / EBITDA			EV / EBIT			P / E		
	(EURm)	(EURm)	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E
PLM & Engineering														
Dassault Systèmes	46,801	47,024	7.7x	7.0x	6.3x	20.1x	18.3x	na	22.9x	20.7x	18.8x	42.1x	35.4x	31.1x
Cadence Design	42,916	42,705	10.9x	9.9x	8.8x	23.5x	20.7x	na	26.1x	22.2x	na	44.9x	34.8x	28.6x
Autodesk	40,004	41,142	8.2x	7.3x	6.4x	21.7x	19.0x	15.6x	22.7x	19.6x	16.5x	48.4x	38.0x	26.7x
Hexagon	28,769	32,204	6.1x	5.6x	5.4x	16.4x	14.9x	13.4x	21.3x	19.2x	18.1x	25.4x	22.6x	21.6x
ANSYS	20,460	20,691	10.2x	9.4x	8.5x	23.0x	21.3x	na	24.4x	22.2x	18.0x	42.6x	38.5x	30.0x
PTC	14,163	15,335	7.7x	6.9x	na	19.1x	16.9x	na	21.2x	18.5x	na	40.6x	34.1x	na
Trimble	12,426	13,705	3.8x	3.7x	na	14.5x	13.4x	na	16.0x	15.1x	na	25.3x	22.7x	na
Bentley Systems	10,880	12,500	11.3x	10.1x	8.9x	32.7x	28.3x	24.4x	35.1x	29.8x	25.5x	60.5x	49.0x	36.5x
Nemetschek	6,299	6,271	7.3x	6.4x	5.6x	23.2x	19.9x	17.8x	28.3x	23.6x	19.0x	37.0x	30.5x	24.2x
Altair Engineering	3,687	3,726	6.7x	6.2x	5.6x	36.3x	30.0x	na	40.0x	33.0x	na	nm	nm	na
		Median	7.7x	7.0x	6.4x	22.4x	19.5x	16.7x	23.6x	21.4x	18.5x	42.1x	34.8x	28.6x
		Average	8.0x	7.3x	6.9x	23.0x	20.3x	17.8x	25.8x	22.4x	19.3x	40.8x	34.0x	28.4x

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023, “na” = not available

“nm” refers to implied multiples in excess of 25x (EV/Sales), 50x (EV/EBITDA), 75x (EV/EBIT) or 100x (P/E)

Sales growth rates & operating margins

PLM & Engineering

Companies	Sales growth			EBITDA margin			EBIT margin			Net income margin			CAGR 23E-25E			
	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	Sales	EBITDA	EBIT	N.I.
PLM & Engineering																
Dassault Systèmes	8.6%	9.2%	11.8%	38.2%	38.4%	na	33.5%	34.0%	33.4%	18.2%	19.8%	20.1%	10.5%	na	10.3%	16.3%
Cadence Design	10.7%	9.7%	12.8%	46.2%	47.7%	na	41.6%	44.5%	na	24.3%	28.5%	30.8%	11.2%	na	na	25.3%
Autodesk	9.5%	11.9%	14.3%	37.8%	38.6%	41.2%	36.2%	37.4%	38.9%	16.5%	18.8%	23.4%	13.1%	18.0%	17.4%	34.5%
Hexagon	4.2%	7.7%	4.3%	37.0%	37.8%	40.4%	28.4%	29.3%	29.8%	21.3%	22.2%	22.3%	6.0%	10.7%	8.5%	8.4%
ANSYS	7.9%	8.8%	10.7%	44.4%	44.1%	na	42.0%	42.3%	47.2%	23.7%	24.2%	28.0%	9.7%	na	16.3%	19.2%
PTC	8.7%	11.7%	na	40.5%	41.1%	na	36.6%	37.5%	na	17.6%	18.8%	na	na	na	na	na
Trimble	5.5%	2.4%	na	26.3%	27.8%	na	23.8%	24.6%	na	13.6%	14.8%	na	na	na	na	na
Bentley Systems	9.3%	11.5%	13.7%	34.7%	35.9%	36.6%	32.3%	34.0%	35.0%	16.3%	18.0%	21.3%	12.6%	15.7%	17.4%	28.7%
Nemetschek	7.7%	12.7%	14.6%	31.3%	32.3%	31.6%	25.6%	27.3%	29.6%	19.7%	21.2%	23.3%	13.6%	14.1%	22.1%	23.6%
Altair Engineering	7.9%	7.8%	11.2%	18.5%	20.7%	na	16.8%	18.9%	na	(5.5%)	(3.0%)	na	9.5%	na	na	na
Median	8.3%	9.4%	12.3%	37.4%	38.1%	38.5%	32.9%	34.0%	34.2%	17.9%	19.3%	23.3%	10.9%	14.9%	16.8%	23.6%
Average	8.0%	9.3%	11.7%	35.5%	36.4%	37.4%	31.7%	33.0%	35.7%	16.6%	18.3%	24.2%	10.8%	14.6%	15.3%	22.3%

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023

“na” = not available

Implied multiples

Human Capital Management

Companies	Market cap	EV	EV / Sales			EV / EBITDA			EV / EBIT			P / E		
	(EURm)	(EURm)	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E
Human Capital Management														
Automatic Data Processing	94,077	96,261	5.6x	5.3x	4.9x	20.2x	18.5x	17.3x	22.4x	20.6x	19.1x	28.8x	26.3x	24.5x
Paychex	40,085	39,727	8.3x	7.9x	7.4x	18.6x	17.2x	15.8x	20.4x	19.0x	17.7x	27.0x	25.4x	23.3x
Workday	39,708	37,646	5.7x	4.8x	4.1x	21.4x	17.2x	12.2x	27.1x	21.6x	16.3x	nm	nm	80.9x
Paycom	16,284	16,018	10.3x	8.4x	7.1x	24.9x	20.1x	16.7x	29.8x	24.1x	19.2x	51.5x	39.4x	29.2x
Paylocity	9,985	9,994	8.7x	7.2x	6.1x	28.4x	22.8x	18.5x	33.5x	27.0x	22.3x	76.8x	59.4x	42.8x
Ceridian	9,600	10,405	7.8x	6.6x	5.7x	37.8x	28.7x	22.6x	52.7x	37.7x	31.7x	nm	nm	90.3x
Benefitfocus	334	538	2.3x	2.2x	2.1x	13.1x	9.6x	9.0x	28.6x	18.4x	17.1x	nm	na	na
		Median	7.8x	6.6x	5.7x	21.4x	18.5x	16.7x	28.6x	21.6x	19.1x	40.1x	32.9x	36.0x
		Average	6.9x	6.1x	5.3x	23.5x	19.1x	16.0x	30.6x	24.1x	20.5x	46.0x	37.6x	48.5x

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023, “na” = not available
“nm” refers to implied multiples in excess of 25x (EV/Sales), 50x (EV/EBITDA), 75x (EV/EBIT) or 100x (P/E)

Sales growth rates & operating margins

Human Capital Management

Companies	Sales growth			EBITDA margin			EBIT margin			Net income margin			CAGR 23E-25E				
	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	Sales	EBITDA	EBIT	N.I.	
Human Capital Management																	
Automatic Data Processing	7.7%	6.8%	6.4%	27.9%	28.4%	28.6%	25.1%	25.6%	25.9%	19.1%	19.5%	19.7%	6.6%	8.1%	8.4%	8.5%	
Paychex	6.8%	6.0%	6.7%	44.9%	45.6%	46.7%	40.9%	41.4%	41.7%	31.1%	31.2%	32.0%	6.4%	8.4%	7.4%	7.7%	
Workday	17.4%	17.8%	18.5%	26.5%	28.1%	33.4%	20.9%	22.3%	24.9%	(2.3%)	0.8%	5.3%	18.1%	32.5%	28.9%	na	
Paycom	22.9%	21.6%	18.9%	41.3%	42.1%	42.4%	34.5%	35.1%	37.0%	20.3%	21.8%	24.7%	20.2%	21.9%	24.6%	32.7%	
Paylocity	26.3%	20.1%	18.3%	30.5%	31.6%	32.9%	25.8%	26.7%	27.3%	11.3%	12.1%	14.2%	19.2%	23.8%	22.6%	33.9%	
Ceridian	17.2%	16.9%	16.0%	20.6%	23.2%	25.4%	14.8%	17.6%	18.1%	0.3%	2.1%	5.9%	16.5%	29.5%	28.9%	437.1%	
Benefitfocus	1.8%	3.0%	5.4%	17.2%	22.9%	23.2%	7.9%	11.9%	12.2%	(6.1%)	na	na	4.2%	20.9%	29.3%	na	
Median	17.2%	16.9%	16.0%	27.9%	28.4%	32.9%	25.1%	25.6%	25.9%	11.3%	15.8%	17.0%	16.5%	21.9%	24.6%	32.7%	
Average	14.3%	13.2%	12.9%	29.8%	31.7%	33.2%	24.3%	25.8%	26.7%	10.5%	14.6%	17.0%	13.0%	20.7%	21.5%	104.0%	

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023

“na” = not available

Implied multiples

ERP & General Business

Companies	Market cap	EV	EV / Sales			EV / EBITDA			EV / EBIT			P / E		
	(EURm)	(EURm)	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E
ERP & General Business														
Salesforce	136,948	139,468	4.4x	3.9x	3.4x	18.5x	16.4x	15.1x	20.0x	16.6x	13.4x	nm	75.1x	41.5x
Shopify	45,727	42,360	6.9x	5.5x	4.2x	nm	nm	nm	nm	nm	64.6x	nm	nm	nm
Workday	39,708	37,646	5.7x	4.8x	4.1x	21.4x	17.2x	12.2x	27.1x	21.6x	16.3x	nm	nm	80.9x
Constellation	33,043	34,516	4.9x	4.3x	na	18.6x	16.2x	na	31.2x	29.9x	na	82.3x	72.2x	na
Paycom	16,284	16,018	10.3x	8.4x	7.1x	24.9x	20.1x	16.7x	29.8x	24.1x	19.2x	51.5x	39.4x	29.2x
Paylocity	9,985	9,994	8.7x	7.2x	6.1x	28.4x	22.8x	18.5x	33.5x	27.0x	22.3x	76.8x	59.4x	42.8x
Ceridian	9,600	10,405	7.8x	6.6x	5.7x	37.8x	28.7x	22.6x	52.7x	37.7x	31.7x	nm	nm	90.3x
Sage Group	8,912	9,760	3.9x	3.7x	3.4x	16.7x	15.2x	14.3x	19.3x	17.3x	16.0x	26.5x	23.7x	22.1x
Manhattan Associates	7,059	6,899	9.2x	8.2x	7.2x	34.6x	30.3x	24.2x	35.8x	31.1x	na	67.8x	57.5x	41.3x
Descartes Systems	5,564	5,348	10.9x	9.9x	8.5x	24.4x	21.8x	19.1x	37.3x	30.7x	27.5x	53.6x	45.2x	38.1x
Smartsheet	5,142	4,805	5.5x	4.3x	3.6x	nm	nm	22.8x	nm	nm	31.5x	nm	nm	na
Monday.com	4,832	4,122	6.7x	5.1x	3.8x	nm	nm	na	nm	nm	nm	nm	nm	nm
SPS Commerce	4,427	4,225	8.7x	7.6x	na	30.0x	25.2x	na	34.8x	29.5x	na	82.7x	67.2x	na
Workiva	4,351	4,296	7.5x	6.2x	5.3x	nm	nm	na	nm	nm	na	nm	nm	na
Ziff Davis	3,665	4,020	3.0x	2.8x	na	8.2x	7.6x	na	9.7x	na	na	18.3x	15.6x	na
Technology One	2,817	2,726	9.8x	8.7x	7.7x	22.9x	19.7x	17.1x	31.4x	27.1x	23.3x	42.6x	36.6x	31.5x
Enghouse Systems	1,500	1,358	4.4x	na	na	13.3x	na	na	19.1x	na	na	25.6x	na	na
C3.ai	1,289	542	2.0x	1.7x	1.3x	nm	nm	na	nm	nm	38.2x	nm	nm	na
BigCommerce	696	736	2.5x	2.1x	na	nm	nm	na	nm	nm	na	nm	nm	na
Median			6.7x	5.3x	4.8x	22.9x	19.9x	17.8x	31.2x	27.1x	23.3x	52.6x	51.3x	41.3x
Average			6.5x	5.6x	5.1x	23.1x	20.1x	18.3x	29.4x	26.6x	27.6x	52.8x	49.2x	46.4x

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023, "na" = not available

"nm" refers to implied multiples in excess of 25x (EV/Sales), 50x (EV/EBITDA), 75x (EV/EBIT) or 100x (P/E)

Sales growth rates & operating margins

ERP & General Business

Companies	Sales growth			EBITDA margin			EBIT margin			Net income margin			CAGR 23E-25E			
	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	Sales	EBITDA	EBIT	N.I.
ERP & General Business																
Salesforce	11.1%	12.6%	14.5%	23.9%	24.0%	22.8%	22.2%	23.7%	25.7%	3.3%	5.1%	8.1%	13.5%	10.8%	22.2%	79.5%
Shopify	20.6%	24.7%	32.2%	0.9%	5.1%	6.5%	(0.6%)	2.5%	6.5%	(10.5%)	(7.3%)	(1.4%)	28.4%	256.2%	na	(52.4%)
Workday	17.4%	17.8%	18.5%	26.5%	28.1%	33.4%	20.9%	22.3%	24.9%	(2.3%)	0.8%	5.3%	18.1%	32.5%	28.9%	na
Constellation	15.7%	14.5%	na	26.3%	26.3%	na	15.6%	14.2%	na	5.7%	5.6%	na	na	na	na	na
Paycom	22.9%	21.6%	18.9%	41.3%	42.1%	42.4%	34.5%	35.1%	37.0%	20.3%	21.8%	24.7%	20.2%	21.9%	24.6%	32.7%
Paylocity	26.3%	20.1%	18.3%	30.5%	31.6%	32.9%	25.8%	26.7%	27.3%	11.3%	12.1%	14.2%	19.2%	23.8%	22.6%	33.9%
Ceridian	17.2%	16.9%	16.0%	20.6%	23.2%	25.4%	14.8%	17.6%	18.1%	0.3%	2.1%	5.9%	16.5%	29.5%	28.9%	437.1%
Sage Group	9.8%	7.9%	8.8%	23.5%	24.0%	23.4%	20.4%	21.2%	20.9%	13.6%	14.1%	13.9%	8.4%	8.1%	9.8%	9.6%
Manhattan Associates	8.2%	11.6%	14.1%	26.5%	27.1%	29.7%	25.6%	26.4%	na	13.9%	14.6%	17.9%	12.8%	19.5%	na	28.1%
Descartes Systems	10.6%	11.0%	15.4%	44.9%	45.3%	44.8%	29.4%	32.1%	31.1%	21.2%	22.7%	23.4%	13.2%	13.1%	16.4%	18.7%
Smartsheet	27.2%	26.5%	21.6%	0.5%	3.7%	15.7%	(1.5%)	1.8%	11.4%	(23.7%)	(19.7%)	na	24.0%	600.6%	na	na
Monday.com	29.8%	31.5%	34.3%	(9.5%)	(3.8%)	na	(11.9%)	(5.8%)	(2.0%)	(28.7%)	(21.4%)	(20.0%)	32.9%	na	(45.8%)	11.0%
SPS Commerce	16.7%	14.5%	na	29.1%	30.2%	na	25.0%	25.8%	na	11.0%	11.9%	na	na	na	na	na
Workiva	16.5%	20.5%	16.1%	1.1%	6.8%	na	(0.1%)	5.4%	na	(12.1%)	(11.0%)	na	18.3%	na	na	na
Ziff Davis	3.7%	7.5%	na	36.9%	36.8%	na	31.0%	na	na	15.0%	16.4%	na	na	na	na	na
Technology One	13.3%	12.8%	12.8%	43.0%	44.4%	45.1%	31.3%	32.2%	33.2%	23.8%	24.6%	25.4%	12.8%	15.5%	16.2%	16.3%
Enghouse Systems	4.5%	na	na	32.9%	na	na	23.0%	na	na	18.9%	na	na	na	na	na	na
C3.ai	14.8%	19.6%	27.6%	(20.1%)	(8.0%)	na	(21.6%)	(7.9%)	3.4%	(93.5%)	(71.3%)	na	23.5%	na	na	na
BigCommerce	14.4%	17.8%	na	(5.5%)	0.8%	na	(8.1%)	(0.8%)	na	(22.4%)	(16.3%)	na	na	na	na	na
Median	15.7%	17.3%	17.2%	26.3%	25.2%	29.7%	20.9%	21.2%	22.9%	5.7%	5.4%	13.9%	18.2%	21.9%	22.2%	23.4%
Average	15.8%	17.2%	19.2%	19.6%	21.5%	29.3%	14.5%	16.0%	19.8%	(1.8%)	0.3%	10.7%	18.7%	93.8%	13.8%	61.5%

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023

“na” = not available

Implied multiples Cybersecurity

Companies	Market cap (EURm)	EV (EURm)	EV / Sales			EV / EBITDA			EV / EBIT			P / E			
			2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	
Cybersecurity															
Vmware	49,125	56,284	4.3x	3.9x	3.4x	11.3x	na	na	15.2x	13.7x	na	32.4x	25.6x	20.8x	
Palo Alto Networks	38,807	38,953	5.6x	4.7x	3.9x	23.2x	18.7x	na	28.0x	22.6x	17.7x	nm	nm	53.0x	
Fortinet	35,289	34,615	7.0x	5.8x	4.7x	24.1x	20.0x	na	26.5x	21.6x	18.1x	40.9x	33.6x	27.5x	
CrowdStrike Holdings	21,563	20,016	7.4x	5.7x	4.2x	36.7x	25.6x	na	45.0x	30.9x	21.1x	nm	nm	nm	
Check Point	14,952	13,481	6.0x	5.7x	5.7x	13.3x	12.8x	na	13.5x	12.9x	13.1x	19.8x	19.2x	18.5x	
Zscaler	14,303	13,743	8.7x	6.8x	4.9x	nm	36.8x	na	68.5x	47.2x	na	nm	nm	nm	
Gen Digital Inc.	13,762	22,106	6.4x	5.8x	5.3x	12.6x	11.8x	na	12.8x	10.7x	10.6x	17.2x	12.0x	10.0x	
Splunk	13,436	15,575	4.2x	3.6x	3.1x	23.1x	17.0x	na	29.1x	20.8x	14.9x	nm	nm	61.6x	
Cloudflare	13,344	13,280	10.9x	8.2x	5.7x	nm	nm	42.9x	nm	nm	70.0x	nm	nm	nm	
Nice	11,541	10,892	4.9x	4.3x	3.7x	14.9x	13.4x	10.9x	16.5x	14.3x	14.0x	32.5x	28.4x	27.7x	
DocuSign	10,843	10,715	4.3x	4.0x	3.5x	19.1x	16.6x	14.9x	21.2x	18.7x	15.0x	nm	nm	54.2x	
OKTA	10,328	10,243	5.2x	4.4x	3.4x	nm	nm	na	nm	nm	43.3x	nm	nm	nm	
Trend Micro	6,045	4,315	2.4x	2.3x	2.2x	9.7x	9.0x	na	14.4x	12.9x	11.8x	27.6x	24.8x	22.8x	
CyberArk	4,513	4,161	6.2x	5.0x	4.2x	nm	nm	na	nm	nm	38.4x	nm	nm	nm	
Tenable	3,851	3,737	5.0x	4.1x	3.4x	37.5x	25.3x	15.4x	44.0x	30.9x	18.3x	nm	nm	nm	
Qualys	3,704	3,385	6.5x	5.7x	5.0x	15.7x	13.8x	na	18.0x	15.7x	na	38.1x	32.3x	na	
BlackBerry	2,048	2,071	3.2x	2.6x	na	nm	41.1x	12.5x	nm	nm	na	nm	nm	nm	
Rapid7	1,857	2,472	3.4x	2.8x	2.5x	41.3x	21.7x	na	53.9x	33.2x	22.1x	nm	nm	na	
			Median	5.4x	4.5x	3.9x	19.1x	17.9x	14.9x	23.9x	19.7x	17.9x	32.4x	25.6x	27.5x
			Average	5.6x	4.7x	4.1x	21.7x	20.3x	19.3x	29.0x	21.9x	23.5x	29.8x	25.1x	32.9x

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023, "na" = not available
 "nm" refers to implied multiples in excess of 25x (EV/Sales), 50x (EV/EBITDA), 75x (EV/EBIT) or 100x (P/E)

Sales growth rates & operating margins

Cybersecurity

Companies	Sales growth			EBITDA margin			EBIT margin			Net income margin			CAGR 23E-25E				
	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	Sales	EBITDA	EBIT	N.I.	
Cybersecurity																	
VMware	6.6%	9.6%	13.4%	37.7%	na	na	28.2%	28.6%	na	11.5%	13.3%	14.4%	11.5%	na	na	24.8%	
Palo Alto Networks	23.4%	20.4%	19.3%	24.2%	24.9%	na	20.0%	20.7%	22.1%	2.0%	3.4%	7.4%	19.9%	na	26.0%	129.8%	
Fortinet	21.1%	19.6%	24.0%	28.9%	29.2%	na	26.4%	27.0%	25.9%	17.4%	17.7%	17.5%	21.8%	na	20.8%	21.9%	
CrowdStrike Holdings	34.5%	30.5%	35.0%	20.2%	22.2%	na	16.5%	18.4%	20.0%	(5.0%)	(1.6%)	3.5%	32.7%	na	46.2%	na	
Check Point	5.0%	4.1%	1.2%	45.0%	44.7%	na	44.3%	44.4%	43.3%	33.5%	33.1%	33.9%	2.7%	na	1.5%	3.2%	
Zscaler	34.9%	27.9%	38.4%	16.3%	18.4%	na	12.7%	14.4%	na	(16.6%)	(13.9%)	(8.1%)	33.1%	na	na	(7.0%)	
Gen Digital Inc.	17.9%	10.5%	8.8%	50.8%	49.4%	na	50.1%	54.3%	50.3%	23.3%	30.3%	33.2%	9.6%	na	9.8%	30.8%	
Splunk	16.8%	18.1%	17.4%	18.3%	21.1%	na	14.5%	17.3%	20.4%	(10.9%)	(8.4%)	4.3%	17.8%	na	39.7%	na	
Cloudflare	35.1%	33.5%	43.1%	13.6%	13.5%	13.3%	3.7%	4.9%	8.2%	(16.4%)	(12.6%)	(7.8%)	38.2%	36.8%	104.7%	(4.5%)	
Nice	7.5%	13.4%	17.1%	32.8%	32.2%	33.9%	29.7%	30.0%	26.2%	15.9%	16.1%	14.1%	15.3%	17.0%	8.3%	8.3%	
DocuSign	8.6%	8.9%	14.7%	22.7%	24.0%	23.2%	20.4%	21.3%	23.1%	(3.5%)	(1.8%)	6.5%	11.8%	13.1%	19.0%	na	
OKTA	19.6%	18.6%	27.4%	3.5%	7.3%	na	2.1%	5.4%	7.9%	(34.8%)	(27.7%)	(20.4%)	22.9%	na	137.1%	(6.0%)	
Trend Micro	9.6%	7.2%	5.7%	25.2%	25.3%	na	16.9%	17.6%	18.3%	12.4%	12.9%	13.3%	6.4%	na	10.7%	10.2%	
CyberArk	21.8%	23.2%	20.1%	2.7%	9.1%	na	(0.0%)	5.5%	10.9%	(17.6%)	(11.9%)	(7.8%)	21.7%	na	na	(19.0%)	
Tenable	20.1%	19.3%	20.4%	13.2%	16.4%	22.3%	11.2%	13.4%	18.8%	(11.2%)	(9.4%)	(3.3%)	19.8%	55.9%	55.1%	(34.7%)	
Qualys	15.6%	13.5%	13.1%	41.3%	41.3%	na	36.1%	36.2%	na	18.6%	19.3%	na	13.3%	na	na	na	
BlackBerry	3.8%	23.3%	na	(6.8%)	6.3%	na	(14.6%)	(3.0%)	na	(46.4%)	(16.6%)	na	na	na	na	(59.7%)	
Rapid7	16.7%	18.9%	12.1%	8.2%	13.0%	na	6.3%	8.5%	11.5%	(13.8%)	(9.5%)	na	15.4%	na	56.2%	na	
Median	17.4%	18.8%	17.4%	21.5%	22.2%	22.8%	16.7%	18.0%	20.2%	(4.2%)	(1.7%)	6.5%	17.8%	26.9%	26.0%	3.2%	
Average	17.7%	17.8%	19.5%	22.1%	23.4%	23.2%	18.0%	20.3%	21.9%	(2.3%)	1.8%	6.7%	18.5%	30.7%	41.2%	7.5%	

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023

“na” = not available

Implied multiples

Large Platforms

Companies	Market cap (EURm)	EV (EURm)	EV / Sales			EV / EBITDA			EV / EBIT			P / E		
			2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E
Large platforms														
Microsoft	1,648,784	1,620,955	7.7x	6.8x	5.9x	15.9x	13.7x	na	18.6x	16.0x	13.8x	23.1x	19.8x	17.0x
Oracle	222,300	299,977	6.2x	5.8x	5.3x	13.4x	12.2x	na	14.8x	13.4x	11.9x	25.0x	19.7x	18.5x
SAP	125,381	129,220	3.9x	3.6x	3.3x	12.2x	10.7x	na	14.3x	12.5x	10.4x	30.9x	25.1x	19.1x
IBM	121,918	173,760	3.1x	3.0x	2.7x	12.0x	11.4x	na	17.1x	16.4x	na	20.9x	19.1x	na
		Median	5.1x	4.7x	4.3x	12.8x	11.8x	na	16.0x	14.7x	11.9x	24.1x	19.7x	18.5x
		Average	5.2x	4.8x	4.3x	13.4x	12.0x	na	16.2x	14.6x	12.0x	25.0x	20.9x	18.2x

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023

“na” = not available

Sales growth rates & operating margins

Large Platforms

Companies	Sales growth			EBITDA margin			EBIT margin			Net income margin			CAGR 23E-25E			
	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	Sales	EBITDA	EBIT	N.I.
Large platforms																
Microsoft	10.2%	13.7%	14.9%	48.7%	49.9%	na	41.6%	42.5%	42.9%	34.1%	35.0%	35.4%	14.3%	na	16.1%	16.5%
Oracle	11.3%	7.9%	10.1%	46.5%	47.4%	na	42.2%	43.1%	44.2%	18.5%	21.8%	21.0%	9.0%	na	11.6%	16.3%
SAP	7.2%	8.1%	9.4%	32.1%	33.8%	na	27.3%	29.0%	31.8%	12.3%	14.0%	16.8%	8.7%	na	17.3%	27.2%
IBM	0.5%	5.3%	9.4%	26.0%	26.0%	na	18.2%	18.0%	na	10.4%	10.8%	na	7.3%	na	na	na
Median	8.7%	8.0%	9.8%	39.3%	40.6%	na	34.4%	35.7%	42.9%	15.4%	17.9%	21.0%	8.9%	na	16.1%	16.5%
Average	7.3%	8.8%	11.0%	38.3%	39.3%	na	32.3%	33.1%	39.6%	18.8%	20.4%	24.4%	9.9%	na	15.0%	20.0%

Source: CapitalIQ

Note: Financials calendarised to 31st December, market data as of 13th January 2023

“na” = not available

Contact details

AUTHOR



OLIVER BACH

Senior Manager, Corporate Finance - M&A
BDO AG Wirtschaftsprüfungsgesellschaft
Hanauer Landstraße 115
60314 Frankfurt am Main
Phone: +49 69 95941-127
oliver.bach@bdo.de



HANS-JÜRGEN RONDORFF

Partner, Corporate Finance - M&A
BDO AG Wirtschaftsprüfungsgesellschaft
Hanauer Landstraße 115
60314 Frankfurt am Main
Phone: +49 69 95941-118
hans-juergen.rondorff@bdo.de



Jane Evans

Senior Manager, Corporate Finance - M&A
BDO AG Wirtschaftsprüfungsgesellschaft
Georg-Glock-Str. 8
40474 Düsseldorf
Phone: +49 211 1371-192
jane.evans@bdo.de



Dietmar Flügel

Partner, Head of Corporate Finance
BDO AG Wirtschaftsprüfungsgesellschaft
Georg-Glock-Str. 8
40474 Düsseldorf
Phone: +49 211 1371-162
dietmar.fluegel@bdo.de



IMPORTANT NOTICE

This document and its content are solely for client use. Neither the whole nor any part of the information in this document may be disclosed to, relied upon, or used by any other person or used for any purpose without the prior written consent of BDO. The Information contained herein may include unpublished sensitive information, the misuse of which may result in civil and/or criminal proceedings.

The information in this document, and the information upon which this document relies on, is derived from publicly available sources or has been disclosed otherwise. None of it has been independently verified by BDO or any of its Affiliates. Accordingly, neither BDO nor any of its Affiliates make any representation or warranty, expressly or implied, with regard to the accuracy or completeness of the information nor do BDO or its Affiliates accept any liability related thereto, if and to the extent legally possible.

All Information in this document has been prepared on the bases and assumptions described herein and is preliminary and can be read cautiously only. Nothing in this document is, or should be relied on as a promise or prediction of/as to future developments or should be considered as legal, economic or tax advice or recommendation. Each recipient of this document is recommended to make his or her own legal, economic or tax assessment of the matters contained through internal and external counsel. This document should not be used as a basis of any investment or disinvestment decision. No person has been authorised by BDO or its Affiliates to give any information not already contained in this document.

This document is a marketing document and not a financial analysis for the purpose of the German Securities Trading Act. It neither fulfils all requirements on financial analyses.

In this notice, “BDO” means BDO AG Wirtschaftsprüfungsgesellschaft. “Affiliates” means affiliated companies (within the meaning of section 15 German Stock Corporation Act, *Aktiengesetz*) and the directors, employees, agents of BDO AG Wirtschaftsprüfungsgesellschaft.

By accepting this document you agree to be bound by the above conditions and limitations.

BDO AG Wirtschaftsprüfungsgesellschaft, a German company limited by shares, is a member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of independent member firms.
BDO is the brand name for the BDO network and for each of the BDO Member Firms.

BDO