

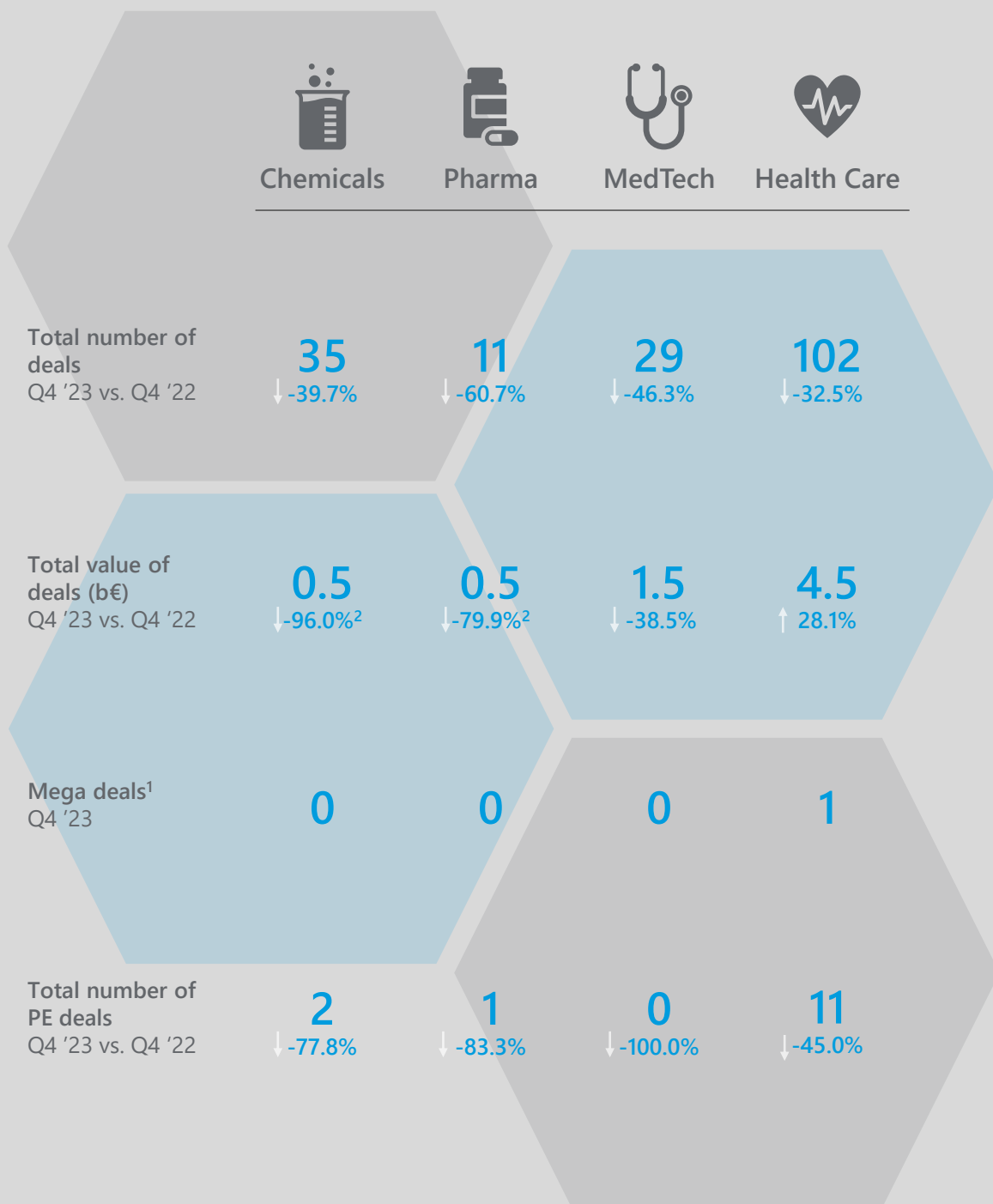
M&A Industry Quarterly

Chemicals | Pharma | MedTech | Health Care



Edition Focus
Sustainability in
Health Care

M&A metrics at a glance



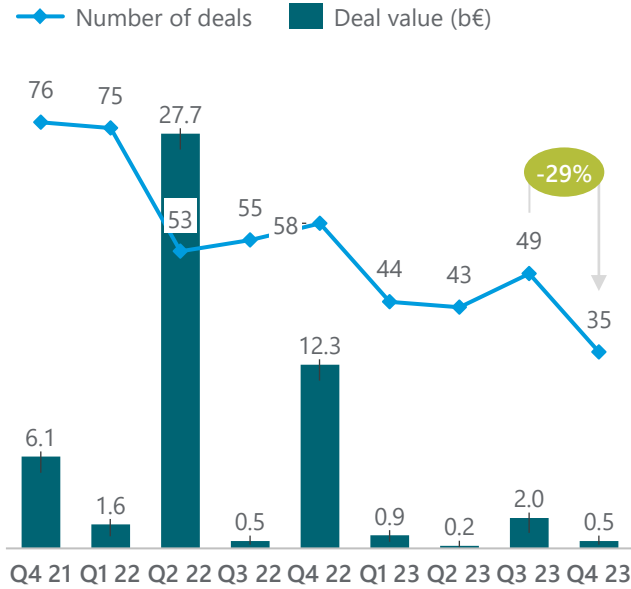
Note: 1) Mega Deals > 1 b€; 2) high difference is due to low number of disclosed deal values in Q4 '22 / Q4 '23 respectively

Source: RSM ES MC Research, Capital IQ

RSM Ebner Stolz Management Consultants GmbH

European Chemicals: European deal activity slides further downwards

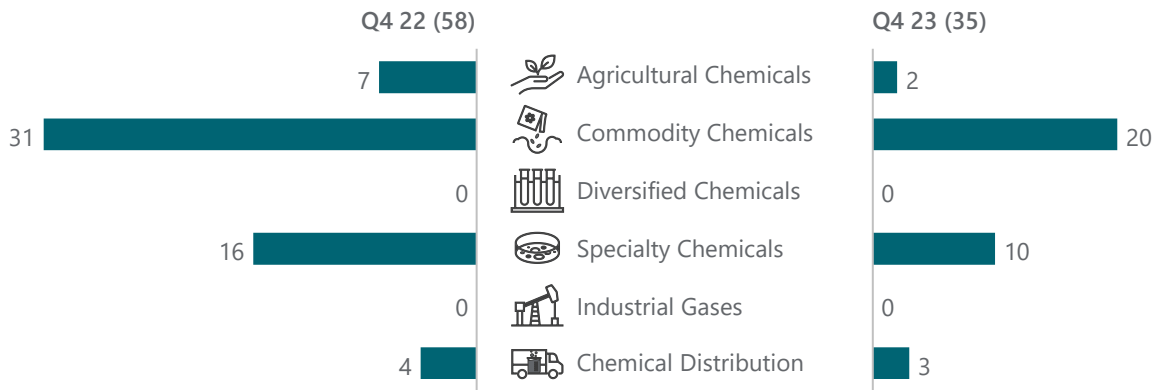
Value & number of deals – Chemicals Europe¹



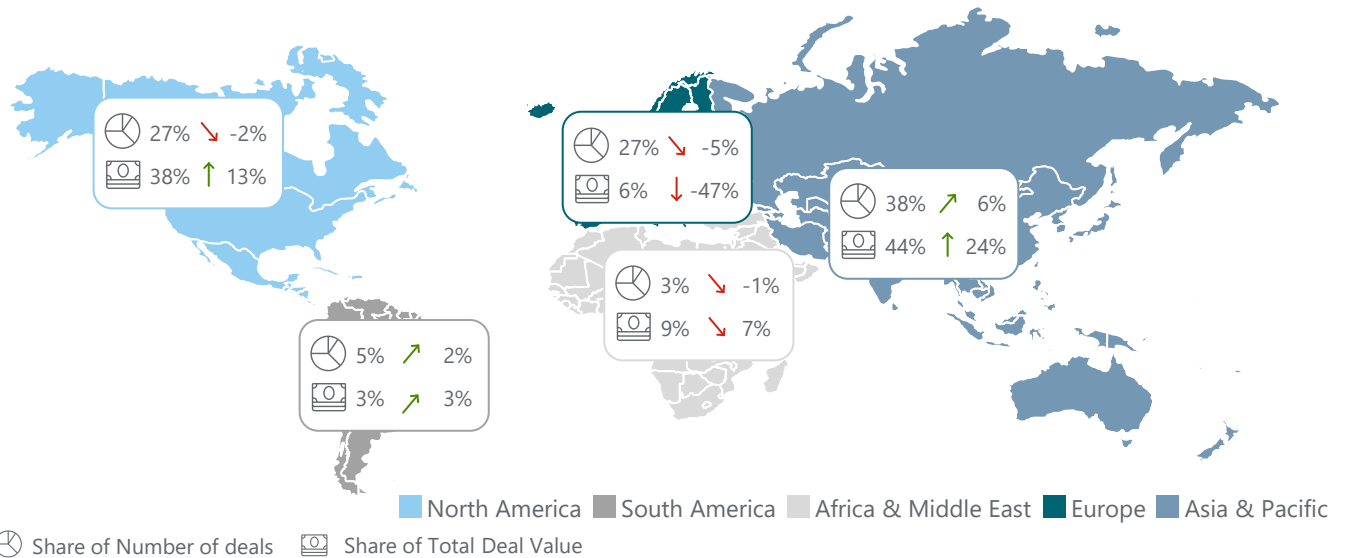
Comments

- After a strong 2022 with 5 mega deals and a total deal value of more than 40 b€, 2023 witnessed significantly lower number of deals (-92%) with only one mega deal in Q3 23
- In addition, the average number of deals per quarter has also fallen from around 60 deals per quarter in 2022 to 43 deals per quarter in 2023
- Q4 2023 was another low point compared to the previous three quarters with only 35 deals and a downturn in activity compared to Q4 22 across all subsegments
- We expect early 2024 to be still of depressed levels given the overall outlook of the industry

Number of European Chemicals deals as per subsegment

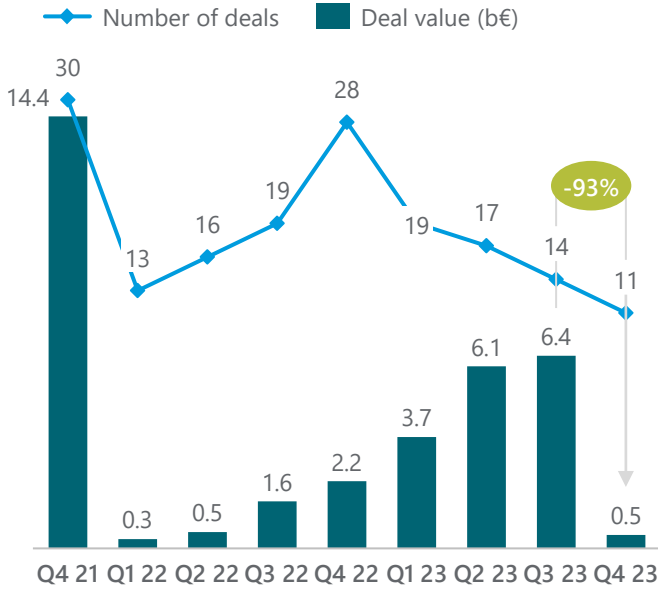


Geographic overview of global Chemicals deals activity YTD (Q4/23 versus Q4/22)



European Pharma: Q4 23 weakest quarter both in terms of number of deals and the total deal value

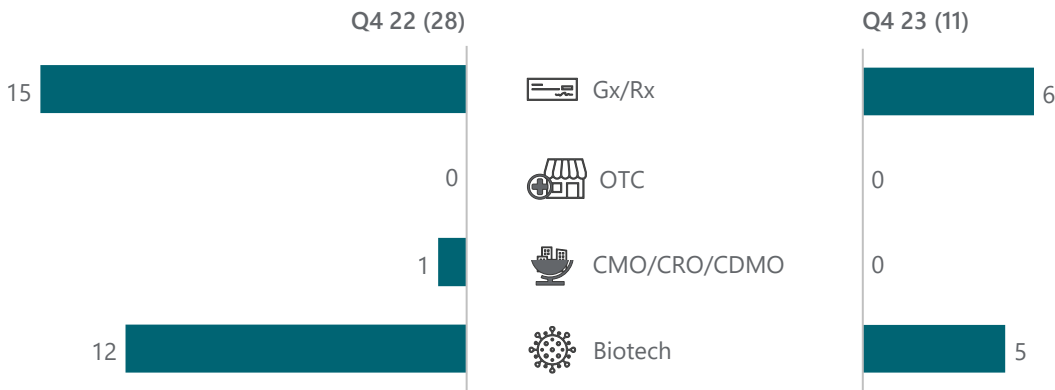
Value & number of deals – Pharma Europe¹



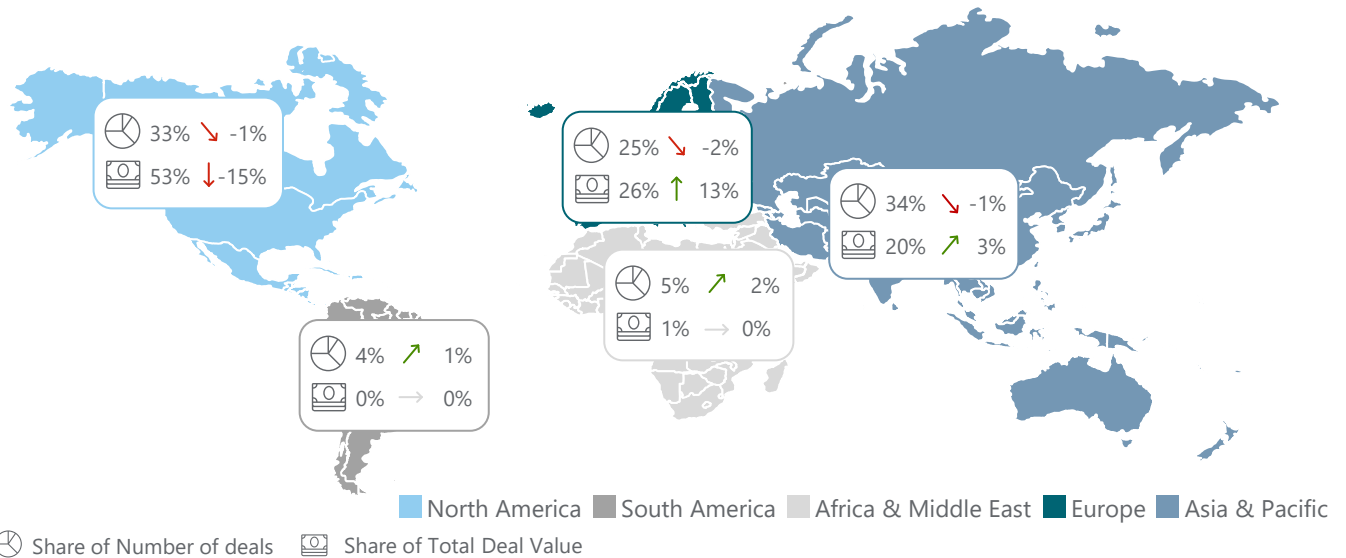
Comments

- › In contrast to Chemicals, the majority of 2023 in European Pharma was characterized by significantly larger deals in relation to 2022 (+258% increase in total deal value)
- › However, Q4 23 was the weakest quarter in 2023 both in deal activity and value, the first decline in deal value since Q1 22 and a new low in deal activity over the entire period under review (Q4 21 – Q4 23)
- › While the increase in deal value in recent quarters was mainly attributable to mega deals, the sustained downward trend in deal activity was confirmed in Q4 23, with the difference that no mega deals took place and deal value therefore also fell significantly

Number of European Pharma deals as per subsegment



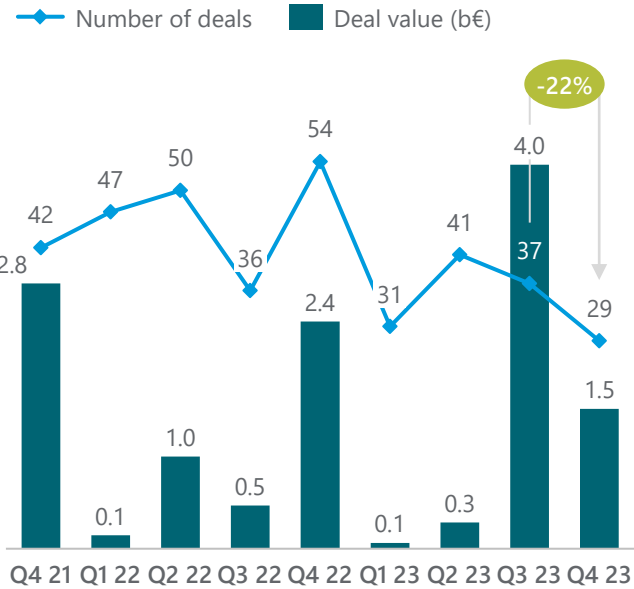
Geographic overview of global Pharma deals activity YTD (Q4/23 versus Q4/22)



Source: RSM ES MC Research, Capital IQ; 1) Includes transactions where due to the small size no details (deal value / multiples) are available
RSM Ebner Stolz Management Consultants GmbH

European MedTech: Q4 23 missed out on the typical year end rallye of previous years

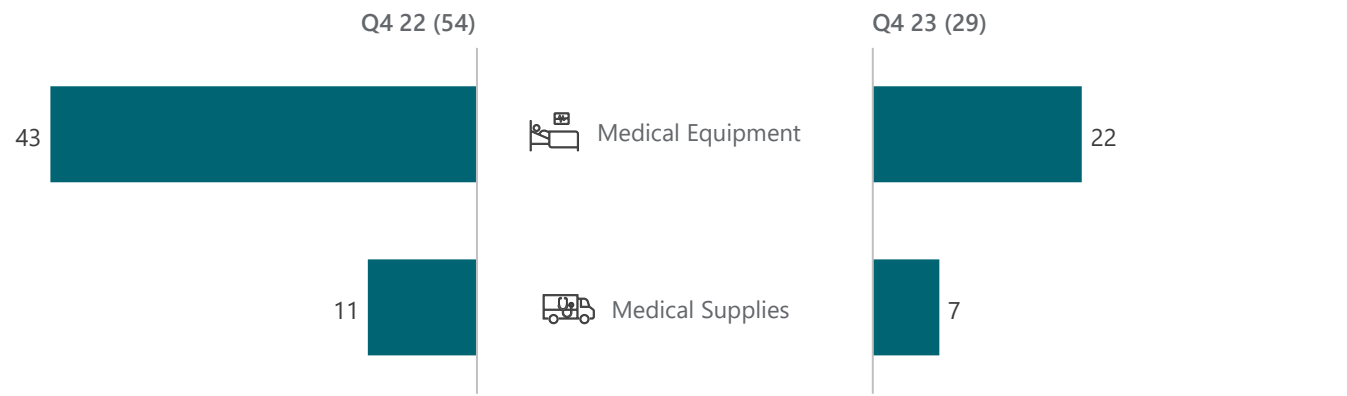
Value & number of deals – MedTech Europe¹



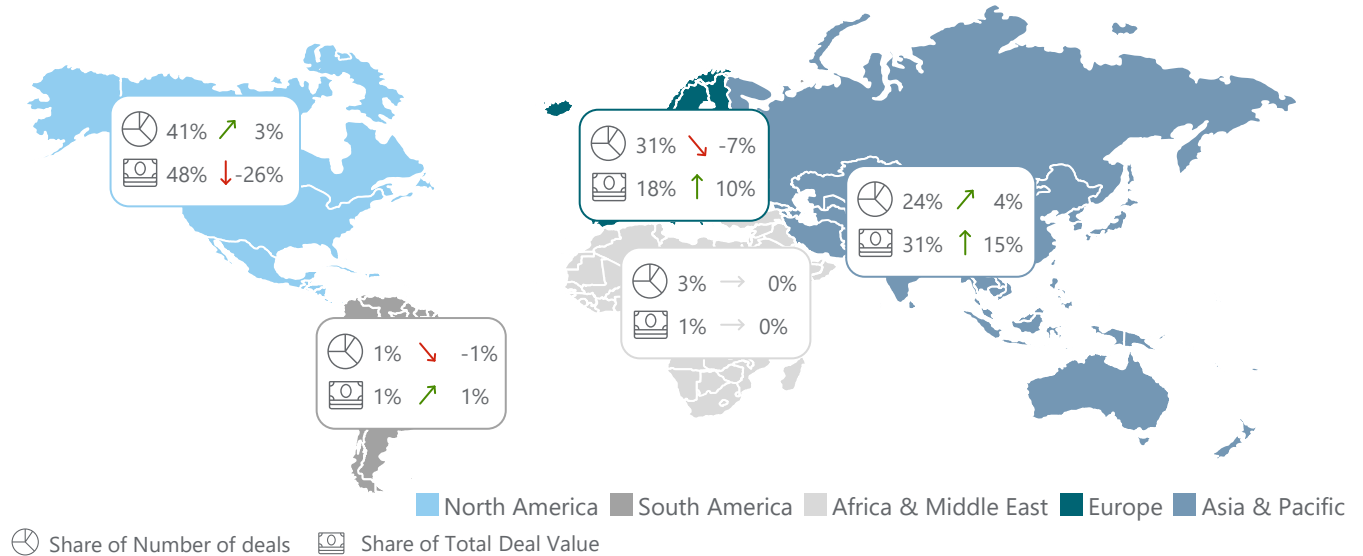
Comments

- › After a slow start to transaction activity in 2023 and a nascent recovery in Q2 and Q3, deal activity in Q4 23 declined to an extent that in Q4 23 only 29 deals were announced which is the lowest for any quarter since more than the last two years
- › While Q3 23 was characterized by the mega deal of Exor (Buyer) committing to be a long-term minority investor (~15% stake) of Philips (Target) for 2.5 b€, the largest transaction in Q4 23 was acquisition of Dutch Ophthalmic Research Center by Carl Zeiss Meditec AG for a total transaction value of 985 m€

Number of European MedTech deals as per subsegment



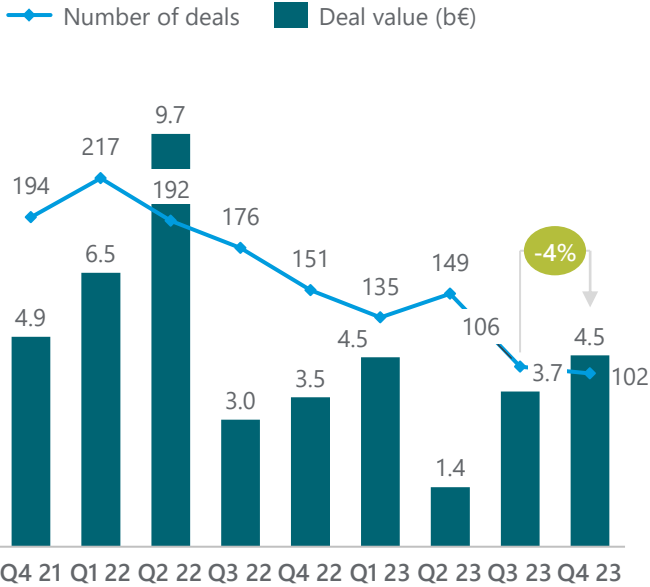
Geographic overview of global MedTech deals activity YTD (Q4/23 versus Q4/22)



Source: RSM ES MC Research, Capital IQ; 1) Includes transactions where due to the small size no details (deal value / multiples) are available
RSM Ebner Stolz Management Consultants GmbH

European Health Care: Has the downward trend in Health Care been reversed?

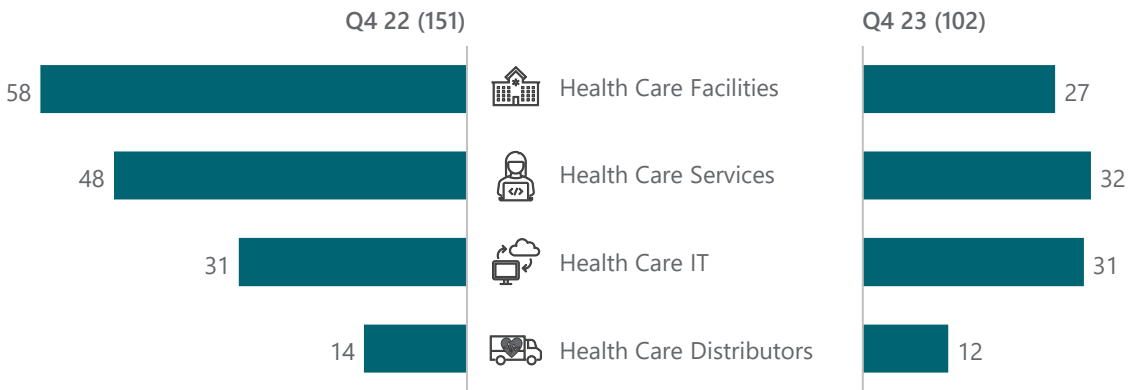
Value & number of deals – Health Care Europe¹



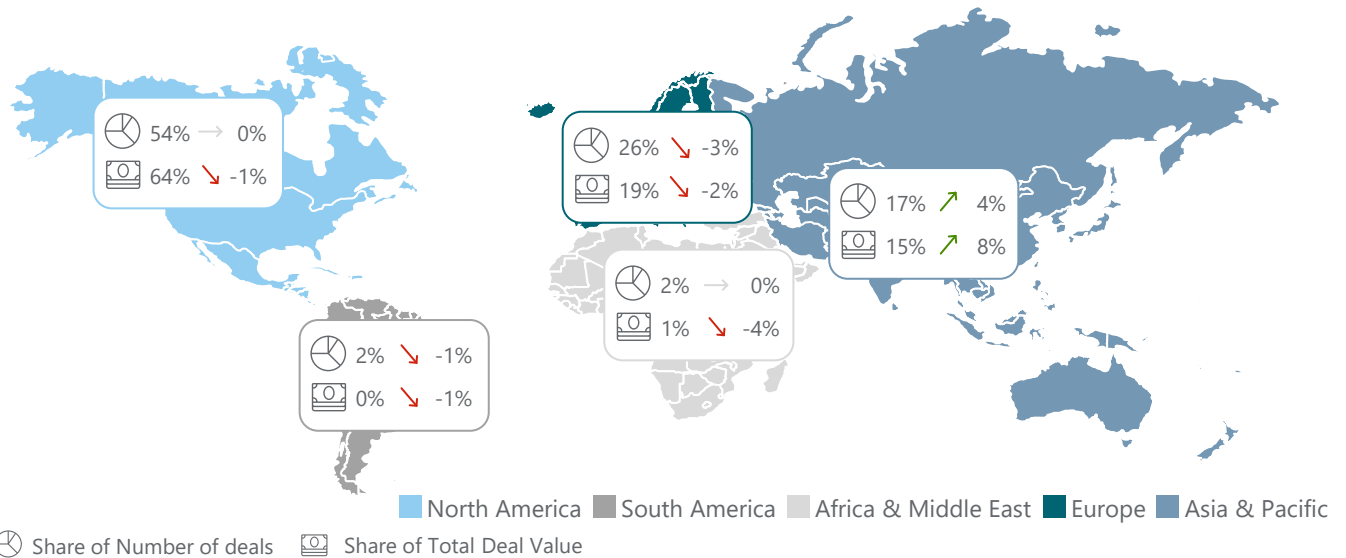
Comments

- Over the last two years (since Q1 22), deal activity in the Health Care sector has been on a decline and it is, yet, to be seen whether this trend has come to an end and we will see a “recovery” in 2024
- Only one mega deal was announced in Q4 23 which was the acquisition of Olink Holding AB by Thermo Fisher Scientific for a transaction volume of over 3 b€
- It might also just be a short break given the persistent regulatory uncertainties

Number of European Health Care deals as per subsegment



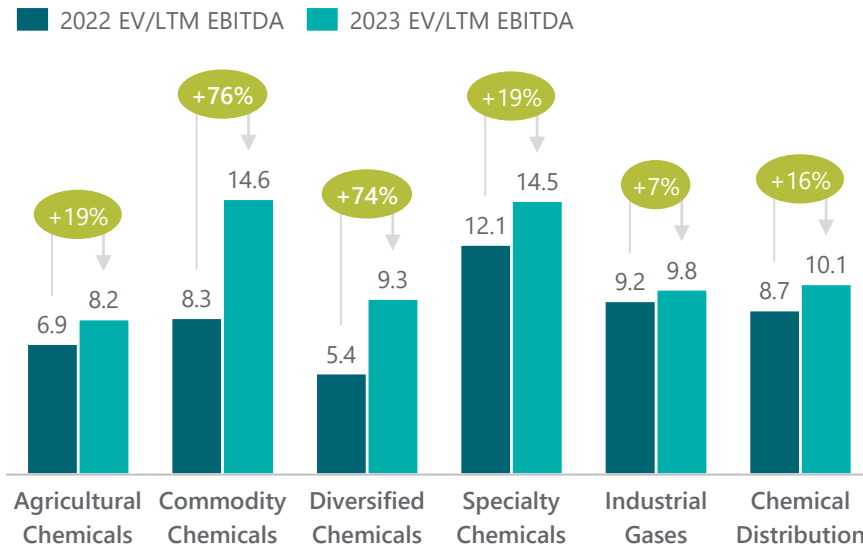
Geographic overview of global Health Care deals activity YTD (Q4/23 versus Q4/22)



Source: RSM ES MC Research, Capital IQ; 1) Includes transactions where due to the small size no details (deal value / multiples) are available
RSM Ebner Stolz Management Consultants GmbH

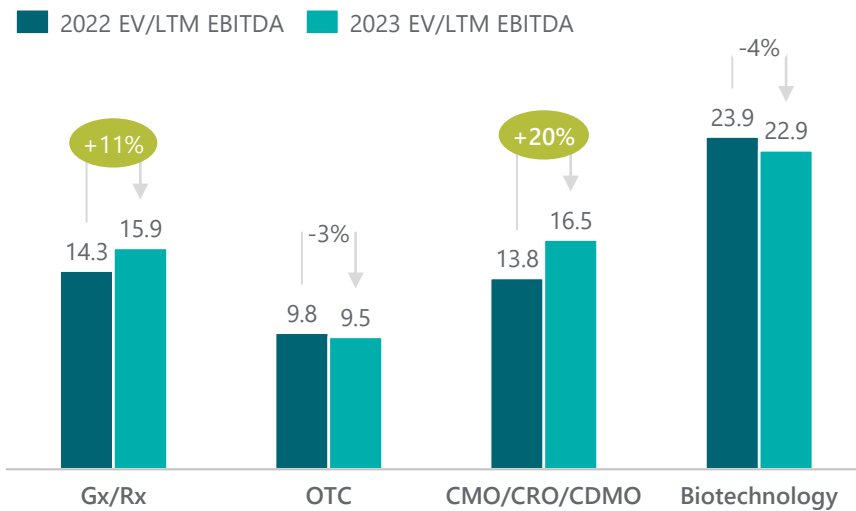
Despite gloomy deal activity, trading multiples in 2023 have either risen or remained at similar levels...

Chemicals multiples (x) per subsegment (publicly traded companies)



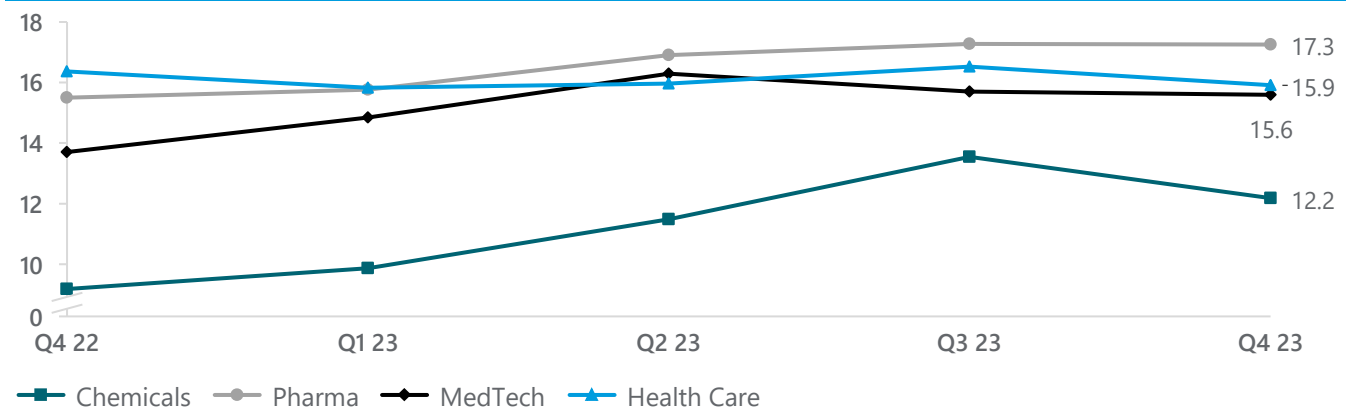
- › Multiples increased across all sub-segments, with Commodity Chemicals and Diversified Chemicals segments witnessing strongest valuation gains in 2023
- › Responsible for the sharp rise in Commodity Chemicals are primarily plastics and petrochemicals companies from Asia / Pacific that benefit from globally strong rising price increases
- › In the Diversified Chemicals segment, the sharp rise in multiples is unlikely to be sustainable, as they are mainly driven by falling profitability levels of US and European companies that are not yet reflected in stock valuations

Pharma multiples (x) per subsegment (publicly traded companies)



- › After a sharp drop in valuation multiples from 2021 to 2022 (~-40%), valuation multiples within CMO/CRO/CDMO saw a strong recovery in 2023 with an increase by 20% when compared to 2022 level
- › OTC multiples, however, witnessed slight decline due to uncertainty in the market and the disrupted global supply chains for most part of the year
- › Gx/Rx multiples rise as patents of branded drugs have expired, fueling new drug development and innovation which leads to optimism for future revenue potentials

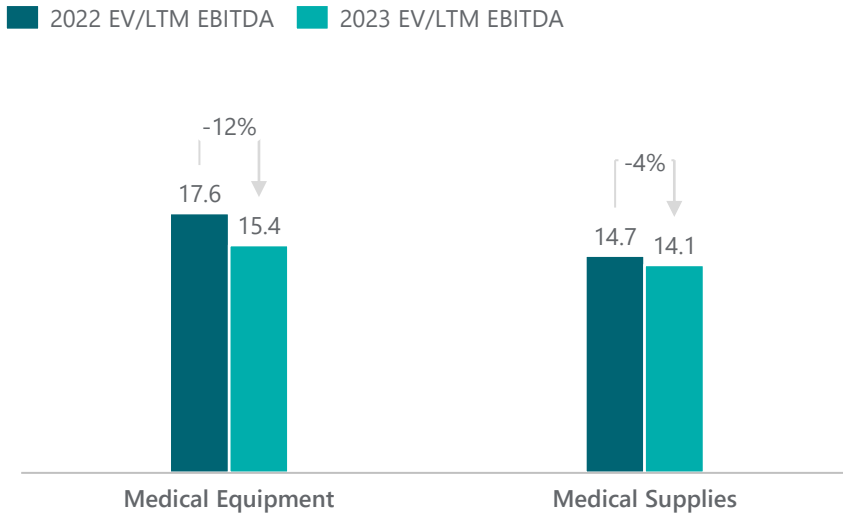
Development of the EV / EBITDA multiples over time per industry



Source: RSM ES MC Research, Capital IQ
RSM Ebner Stolz Management Consultants GmbH

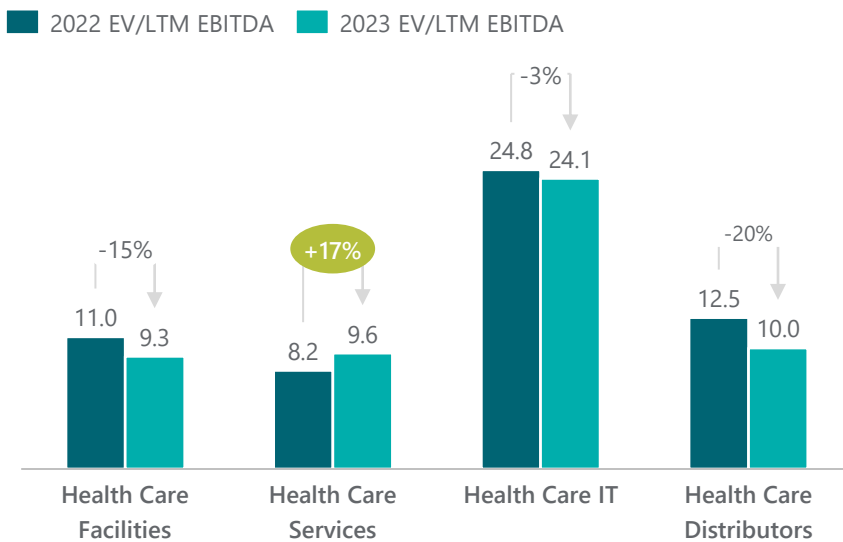
...when compared to their level in Q4 2022 with only Health Care multiples witnessing strong corrections

MedTech multiples (x) per subsegment (publicly traded companies)



› In the MedTech industry, both sub-industries Medical Equipment and Medical Supplies are declining in their valuation, but remain at an overall high level of well over 10x EV/EBITDA

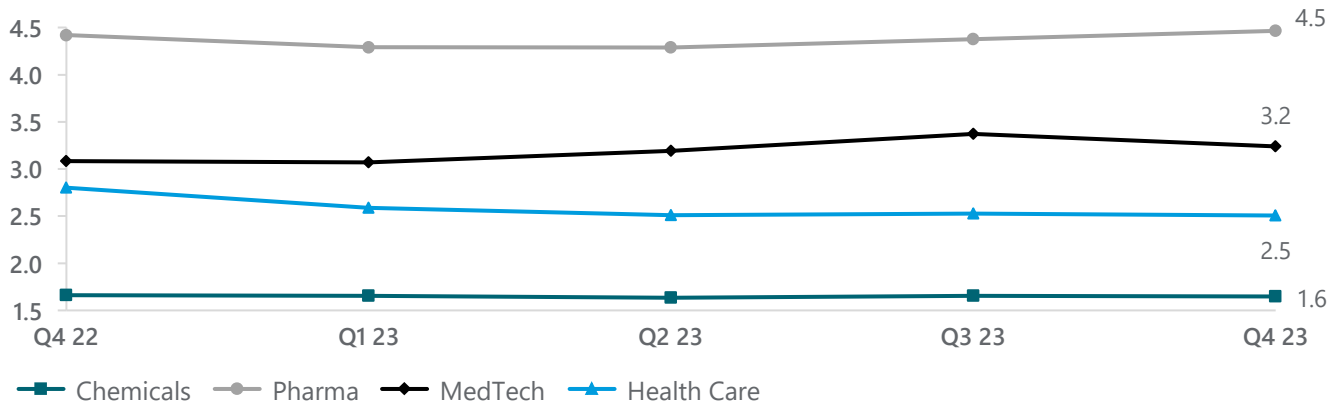
Health Care multiples (x) per subsegment (publicly traded companies)



› In parallel to the decrease in deals activity, valuation multiples across subsegments in Health Care experienced corrections in 2023 with the exception of Health Care services due to an increasing demand for consolidation and new technologies to increase efficiencies

› Based on the broadly acknowledged need to inject fresh capital into European Health Care systems, we expect this trend to stabilize within H1 2024

Development of the EV / Revenue multiples over time per industry



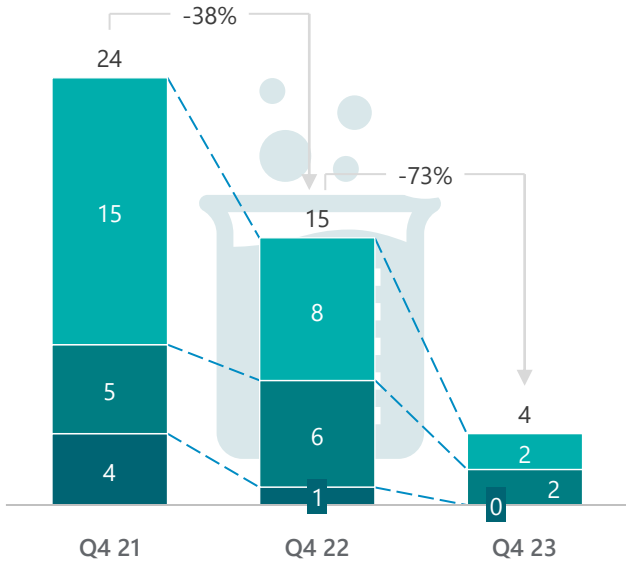
Source: RSM ES MC Research, Capital IQ
RSM Ebner Stolz Management Consultants GmbH

PE activity nose dives in Q4 2023 across all industry sectors covered in this publication

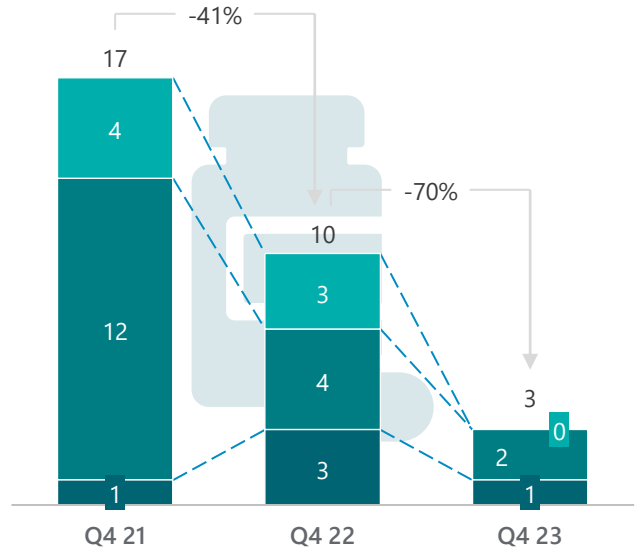
Number of deals driven by PE as buyer / seller

PE Buyer PE Seller PE-to-PE

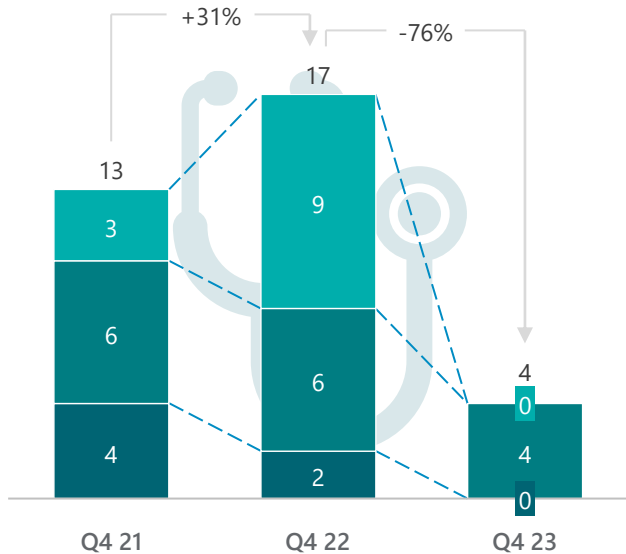
Chemicals



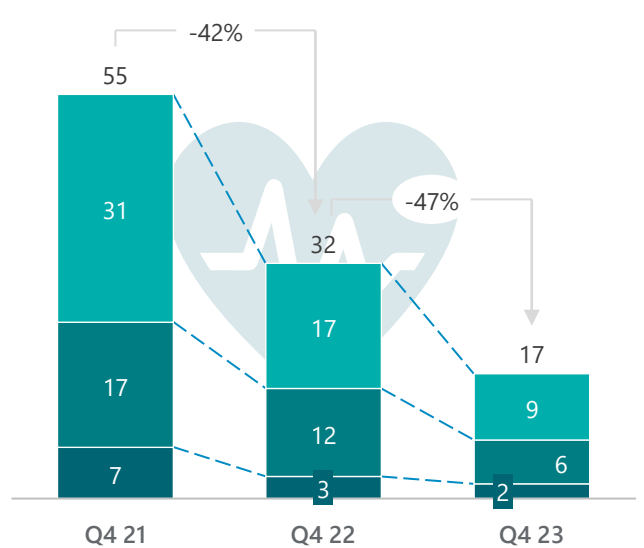
Pharma



MedTech



Health Care



Q4 2023

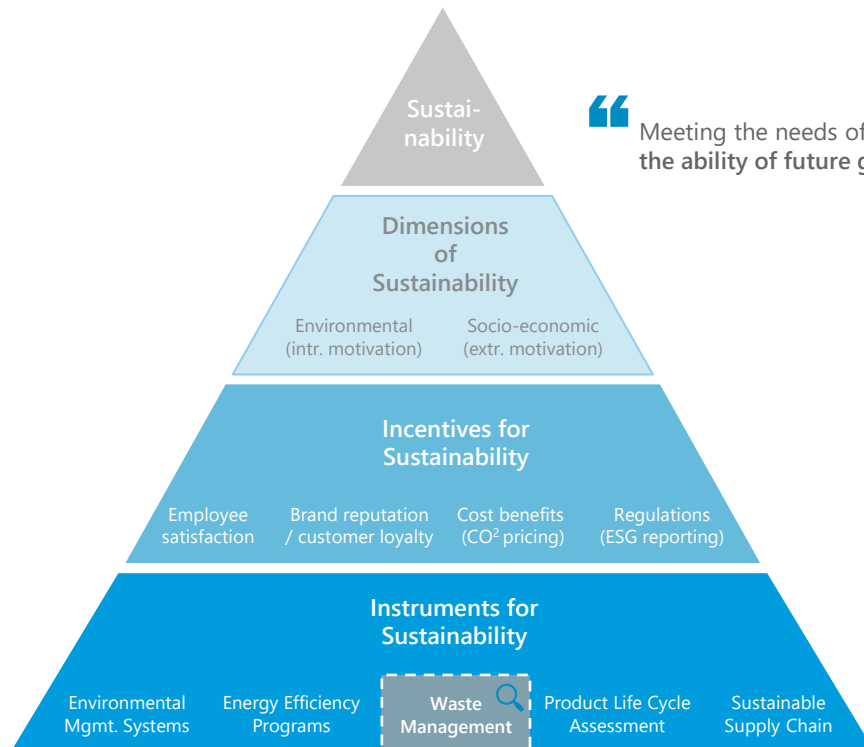
Deals with PE as buyer	.....	Σ 11	.....	6.2% of total deals
Deals with PE as seller	.....	Σ 14	.....	7.9% of total deals
PE-to-PE deals	.....	Σ 3	.....	1.7% of total deals



Focus piece

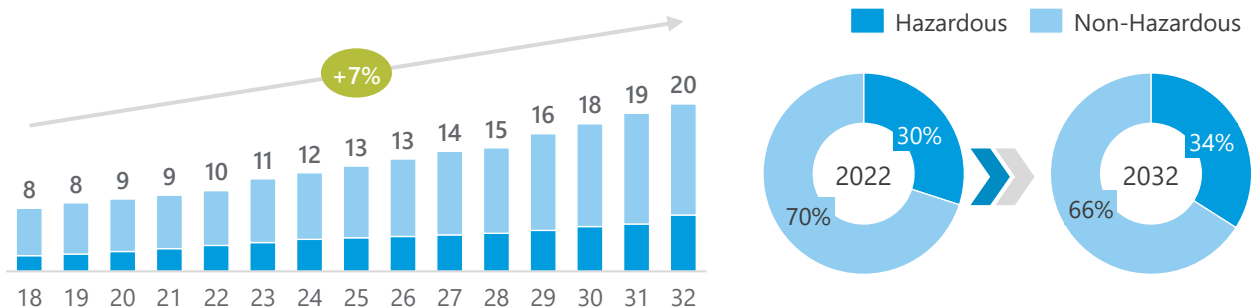
Sustainability as a task in Health Care and the strong lever of waste management

Sustainability as a global task in Health Care



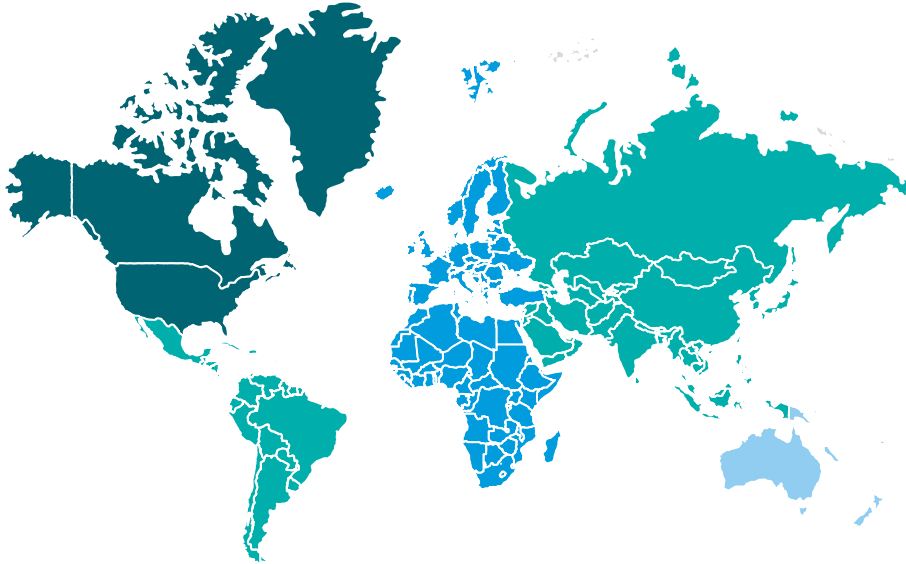
“ Meeting the needs of the present **without compromising the ability of future generations to meet their own needs** ”
 WHO Sustainability Definition

Global Health Care waste management Market Size & Growth 2018 - 2032 (b€)



The largest Health Care waste producers are North & South America with high upside potential for plastic recycling

Overview global Health Care waste distribution

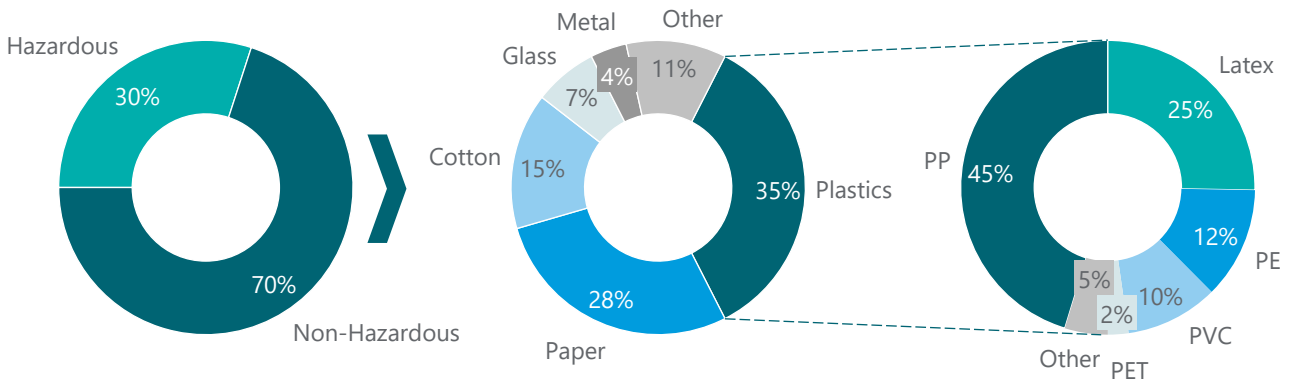


- > The highest Health Care waste burden is found in North America with >4 kg/bed/day closely followed by Asia and South America
- > Europe and Africa follow suit although Africa suffers from a negative reporting bias
- > Oceania leads the field according to few studies with institutionalized procedures in hospitals

Region with median Health Care waste of:



Health Care waste composition 2022

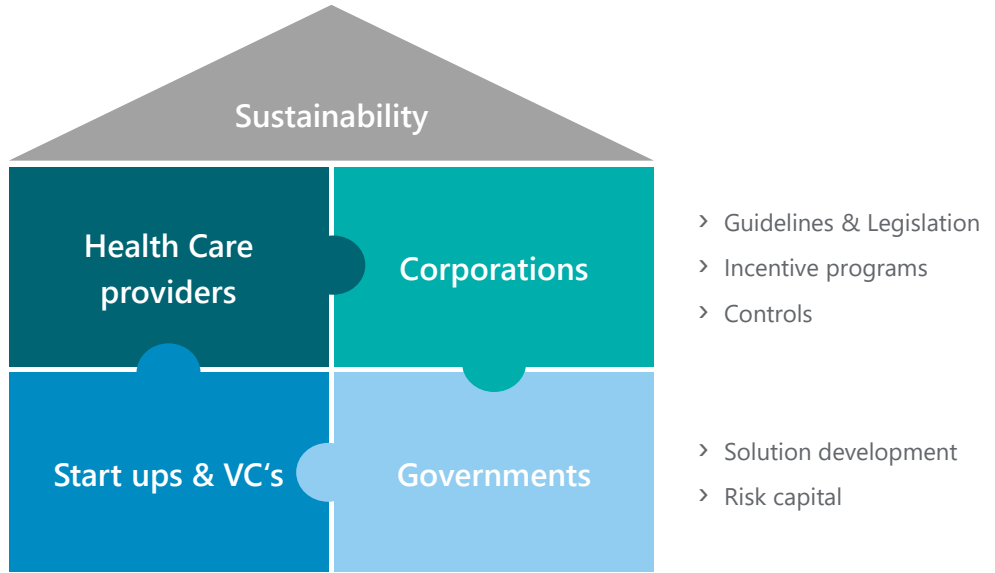


Recycling methods	Explanation	Costs	Advantages & Applications
Mechanical	Grinding of plastic into pellets and pressing into new forms.	450 €/t	Can be used for all plastic types; Plastic stays plastic but previous energy used for generation is retained.
Chemical	Breaking plastic polymers down into original hydrocarbons and using for new plastics.	4000 €/t	Can be used for all plastics; Hydrogen-carbons become available as source for any type of petrol product.
Thermal	Refers to burning plastic and using the energy for other processes and melting down plastics into new shapes	2500 €/t	Usable for all plastics; Previous production energy is wasted; Can be used as energy source for new products.

Source: Kenny et al. in Healthcare (2021), Gomes Mol et al. in Environmental Science and Pollution Research (2022), UNDP Global Healthcare Waste Project, Gill et al. in Environmental Science and Pollution Research (2022), Janik-Karpinska et al. in Healthcare (2023), Nikiema et al. in Environmental Science and Pollution Research (2021), ARD Mediathek Plusminus "Einmal benutzt und gleich in den Müll".
RSM Ebner Stolz Management Consultants GmbH

Health Care providers, governments, corporations and start ups are the key players to meet WHO's sustainability goals

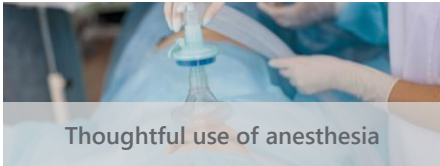
Roles of key players in Health Care waste management



Case study Health Care providers: Uniklinikum Bonn



Goal of UKB Green: “[...] increasingly design work processes according to the 5 Rs of sustainability (Recycle, Reduce, Reuse, Refuse, Rethink).”



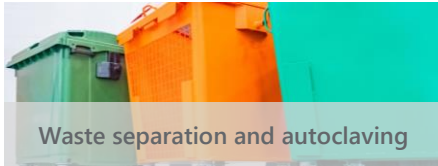
Thoughtful use of anesthesia

- > Switch from common anesthetics Isoflurane (510x CO₂ equivalent) and Desflurane (2540x CO₂) to less harmful Sevofluran (130x CO₂)
- > Routine use of Minimal-Flow and Metabolic-Flow to reduce the use of anesthesia to the minimum
- > Flurane waste capturing in hydroxy-carbonates and selling to chemicals industry as raw product



-80%

Gas usage and costs reduction



Waste separation and autoclaving

- > “ShrinkMyTrash” project: Professional waste management to increase recycling rate and ensure correct disposal of medicines
- > Expanding the waste management infrastructure and building up knowledge through training measures and information materials
- > Software-supported life cycle assessments



-10%

Waste disposal costs p.a.



Sustainable energy

- > Conversion of the heating systems to block heating systems, in which 100% of the heating and cooling and 76% of the electricity is produced
- > 26 photovoltaic systems to be installed by 2025



100%

Climate neutrality after installation



The market has so far been driven by start-ups, with diversified corporations progressively entering Health Care

Established company



Solution provider for hazardous waste treatment and disposal



BIO MEDICAL WASTE SOLUTIONS

STERILIS SOLUTIONS

HYDROCLAVE Infectious Waste Solutions

Tesalys
Making biomedical waste safe

HAZARDOUS WASTE EXPERTS

TRIUMVIRATE ENVIRONMENTAL

Multi-industrial waste and recycling company



VEOLIA ENVIRONNEMENT

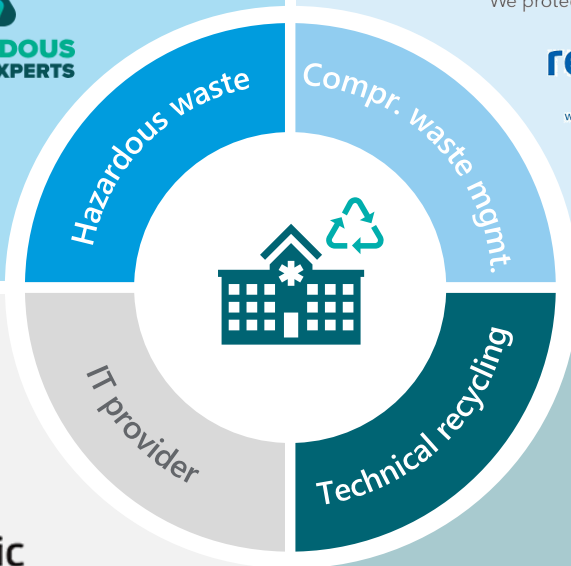
WM WASTE MANAGEMENT

CleanHarbors

Stericycle
We protect what matters.

renewi
waste no more

Solmetex



RUBICON

Quentic

denxpert

R Resourcify

Globechain



recircula solutions

System provider for tracking and managing waste in hospitals

Daniels

REMONDIS MEDISON

MP+ MedPro DISPOSAL

padcare



ECOMED SERVICES

Solution provider for mechanical, thermal or chemical recycling



Startup



As a key player in sustainability, governments can incentivize or discipline firms to comply with sustainability measures

Leverage levels of governments

Economic incentives

Prospect of rewards and cost savings through the pursuit of sustainability goals



Legislation

Rules for compliance with limit values and implementation of sustainable processes

1 CO² emission certificate pricing

- › Cost saving potentials if less CO² certificates are needed
- › Price for certificates increased to 45 €/t in Germany as of 2024

2 Environmental funds

- › Governments offer funds for the pursuit of sustainability goals, e.g.,:
 - Horizon HLTH Fund (EU): 0.24 b\$ to research decarbonization solutions of hospitals
 - UNIDO Fund (India): 10.00 b\$ to reduce organic pollutants in Health Care
 - GE Fund (China): 11.65 b\$ to minimize waste of the medical sector

1 Corporate due diligence obligations in supply chains

- Ensure human rights, environmental standards and good corporate governance throughout supply chains

2 Sustainable Finance Disclosure regulations (ESG reporting)

- Classification of stocks and investment products into grey, green and dark green according to ESG criteria
- Future ban from greenwashed and grey financial products



Selection of announced Waste Management deals 2020 – 2023

Ann. Date	Investor	Target	Investor Country	Target Country	Value [m€]	Strategic [PE-backed  / Financial
Sep 23	Vorwerk Ventures (& more)	Resourcify			14	Funding
Jun 23	Solmetex	Impladent Ltd.			n/a	Strategic 
Feb 22	Amanda Impact Vent., Speedinvest (& more)	Resourcify			5	Funding
Apr 22	Solmetex	Sterisil			n/a	Strategic 
Jan 19	iXO Private Equity & Sigma Gestion	Tesalys			6	Financial
Aug 18	Rubicon Global LLC	RiverRoad Waste Solutions Inc.			n/a	Strategic

Our key takeaways



Q4 23 witnessed subdued deal activity across all focus industries driven among other things, by historically weak PE activity



Despite lower deal volume, trading valuation multiples at the end of 2023 are at a higher level than at the end of 2022, with the exception of Health Care, which recorded a slight decline



A slight upturn in deal values (esp. in MedTech and Health Care) combined with a virtual absence of mega deals clearly point to an increase in small to medium-sized deals



Due to the increase in valuation multiples and an upward trend in total deal values, we expect mega deals to occur more frequently again as soon as the financing situation eases



Next M&A Quarterly: Q1/2024

Edition Focus: Hidden champions drive German MedTech

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