






















**M&A Report:
The European Life Sciences Industry 2019**



CARLSQUARE

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1 Study design & definitions



Study design

Structure & methodology

What we analyzed

- ✓ Closed M&A transactions in Europe
- ✓ Aggregated deal values of disclosed transactions
- ✓ Sources: S&P Capital IQ, Mergermarket, Globalscope and Carlsquare market knowledge
- ✓ Both majority and minority deals have been analysed
- ✓ Only transaction targets located in Europe
- ✓ Update of the figures of previous years due to late closing announcements
- ✓ EV/Sales and EV/EBITDA multiples are shown as median

What we excluded

- X Targets located outside of Europe
- X Fundraisings
- X IPOs
- X Pending transactions
- X Transaction stakes smaller than 5%
- X Announced deals that are not closed by December 31st



Definition of Europe

Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, British Virgin Islands, Bulgaria, Channel Islands, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Gibraltar, Greece, Greenland, Hungary, Iceland, Ireland, Italy, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, UK

Life Sciences Segments

We defined 3 segments, 18 sub-segments and 6 cross-overs

I. MedTech		II. Pharma		III. Providers		Cross-overs
I.1	Conventional MedTech Cardiology, dental, disposables, handheld devices, lab & hospital equipment, ophthalmology, orthopedics, pulmonology, surgery, wound care, other implants, other products	II.1	Biotech Generics OTC Patented drugs Drug-device combinations etc.	III.1	Emergency services Homecare Hospitals/private practitioners Insurances Pharmacies, drugstores Rehabilitation etc.	Private Pay, Consumer, Lifestyle
I.2	Diagnostic devices & Imaging CT, endo, ultrasound, radio	II.2	Lab Diagnostics Lab on a chip, point of care diagnostic	III.2	Diagnostic services Radiologists, medical labs	Diagnostics/ analytics
I.3	Intelligent implants Navigation, OR planning	II.3	Big Data Personalized medicine	III.3	Software providers Patient mgmt, HIS, PACS, ERP	Digital Health
I.4	Vet MedTech	II.4	Vet Pharma	III.4	Vet providers Vet hospitals	Vet
I.5	MedTech consulting Regulatory affairs	II.5	Pharma consulting CROs, R&D services	III.5	Healthcare services Consulting, bio databases, education, logistics, wholesale	Supporting services
I.6	MedTech supply Electronics, metals, polymers, automatization, assembly	II.6	Industrial supply Fine chemicals, API, packaging, automatization	III.6	Industrial supply Automatization	Qualified supply industry

2 Underlying trends



The European Life Sciences Industry – Overview

Key trends and developments

- 1 **MDR and IVDR continue to unfold their impact**
- 2 **Continuing consolidation of providers**
- 3 **Medical becomes consumer - Consumer becomes medical**
- 4 **Companies in the Nordics go for IPO**
- 5 **Digitalization - a main driver of change in the industry**
- 6 **Reinvention of Big Pharma**

MDR will aggravate market access

MDR and IVDR are changing the landscape

Facts

- MDR and IVDR continue to unfold their impact**
 In 2017, the European Union published the Medical Device Regulation (MDR) and the In Vitro Diagnostic Regulation (IVDR) which will go into effect in 2020. More products will fall under the category of medical products, that require clinical trials
- R&D costs will increase significantly, as will the time for products to go to market. Clinical trials will become more complex and product approval time will double. As access to market is becoming more difficult and costly, companies will have to evaluate whether the required investment is justified. Mostly small companies, who are often a source of innovation, will suffer under the pressure of MDR and IVDR
- Medical device certification bodies (notified bodies) will face challenges as a result of the new regulation. They not only need to meet their own certification standards; they will also need to manage the additional requirements of the medical device companies. The number of notified bodies in Europe has declined significantly, only 34 have applied to operate under the new rules

Selected deals

Target	Description	Buyer
 A Siemens Healthineers Company	Siemens Healthineers acquired robotic-assisted systems provider Corindus for nearly EUR 1bn and a revenue multiple of 53x	
	CMR Surgical manufactures robotic systems for laparoscopic surgeries and received a EUR 220m investment	
	Eur 50m venture financing of Quanta Dialysis, producer of haemodialysis systems for home-use or clinics	
	UK based BTG, producer of interventional oncology products, was sold to Boston Scientific for EUR 3bn	
	US-based Stryker acquired Dutch Wright Medical Group, a producer of orthopaedic medical devices, for EUR 5bn (not closed)	

Trend: Rising costs of R&D, increasing complexity of clinical trials and the limited number of notified bodies, will lead to longer times for new products to go to market, smaller product portfolios and some companies to go out of business. Corporates will increasingly buy innovation instead of investing in R&D and on the other side smaller companies will depend on larger set ups to approve their products

Sources: EY, Deloitte, L.E.K., Bain






Provider in need to improve economies of scale

Continuing consolidation of providers

Facts

- The main driver for consolidation is still to achieve improvement in economies of scale, as Providers are under pressure for higher efficiency. While medical innovations push treatment costs up, payers are not prepared to fully finance the extra costs
- In addition, increasing competition also appeared as a driver of movements in the sector as there are factors increasing the optimal operational size of healthcare providers
- From operational perspective, higher quality of service requires larger medical teams in each therapeutic area. In addition, increasing importance of quality indicators for patients require better data measurability
- Cross-border Provider deals are gaining momentum, but transactions aiming at domestic consolidation still form the majority of the M&A market
- Importance of Private Equity is on the rise that is expected to continue in the coming years

Selected deals

Target	Description	Buyer
	Greek diagnostic and therapeutic healthcare services provider, hygeia, was acquired by its domestic rival, HHG, for EUR 97,5M.	
Pidji Healthcare Ltd is a hospital operator in Switzerland	The Swiss Hirslanden Clinique La Colline acquired Pidji Healthcare, a hospital operator, for more than EUR 70 M	
	Norwegian healthcare provider that offers services for elderly and people with mental disabilities was acquired by the Swedish Ambea AB, a nursing care facility operator	
	IMAG a Lisbon provider of ambulatory healthcare services was acquired by Base- Servicios Medicos, an ambulatory healthcare service provider from Porto	Base - Servicios Medicos is a provider of ambulatory health care services

Trend: Main driver of M&A activities remains to improve economies of scale. The need of economies of scale has been pushed by efficiency pressure, greater competition and the requirement of better measurability of quality

Sources: EY, Deloitte, L.E.K., Bain

New era of consumer-centric health solutions

Medical becomes Consumer and Consumer becomes Medical

Facts











Consumer becomes Medical

Patients are becoming consumers of healthcare devices and services. These Consumers are taking a greater interest in their health, which is driving demand for more convenient, transparent and personalised healthcare services, which challenges the current business models. Incumbent players are adapting through innovation and acquisitions, but the changing consumer behaviour has provided an opening for new entrants such as large technology firms

Medical becomes Consumer

Informed consumers are driving real change in the healthcare ecosystem and we are seeing a new era of consumer-centric health systems emerge. Medical companies are facing increased pressure from consumers to provide more transparent solutions focused around technology

Selected deals

Target	Description	Buyer
	Fitbit, Inc. was acquired by Google LLC in October 2019 for \$2.1bn	
	Exact Sciences Corp. acquired Genomic Health, a provider of genomic information for cancer treatment for \$2.8bn	
	Health app Preglife, which connects pregnant families and new parents with medical professionals as well as qualified information, relevant services and features	
	Dassault Systèmes acquired Medidata, a cloud-based clinical trial company for \$5.8bn	
	Apple, Inc. quietly acquired asthma monitoring company Tueo Health for an undisclosed amount	

Trend: A new era of consumer-centric health solutions are challenging incumbent players to invest in new innovative technological solutions, while large technology firms are slowly entering the digital health space

Sources: PwC, Deloitte









Life Sciences M&A Trends

IPO in the Nordics

Facts

- The Nordic life-science sector is truly unique. There are five neighboring countries, culturally connected for centuries. Sweden and Denmark are old champions in the field, while Norway, Finland and Iceland are up and coming. Many companies choose to go public, often in Sweden – see for example Herantis Pharma, choosing to do a dual listing
- Finland is a hidden gem of health data – with a 100% population penetration of electronic health records, Norway is emerging as a life sciences nation producing world leading research in oncology, Denmark has a remarkable commitment from the government, and Iceland is working on combining life science with sustainability
- All 5 Nordic countries rank top 20 among world economic forums list of most innovative countries worldwide, which contributes to the strong life science sector
- Between 2007 and 2018, the most common form of financing was from private equity, followed by public stock market and soft financing
- The three main public stock markets – Nasdaq Stockholm, First North and Spotlight – saw IPO activity flat with 14 listings in 2019

Selected IPOs

Company	Description	Country	Pre-money	Post-money
 OSS DESIGN®	A Swedish MedTech company dedicated to creating regenerative implants for improved healing of bone defect		EUR 32m	EUR 52m
 HERANTIS PHARMA	A drug development company aiming to revolutionize the treatment of diseases with unmet clinical needs. The ongoing clinical development programs explore the drug candidates in Parkinson's disease and secondary lymphedema	 	Already listed in Finland.	Market cap: EUR 63m
 ASCELIA PHARMA	Ascelia Pharma is a pharmaceutical company in oncology, specializing in the development of new drugs to improve the life of people living with cancer		EUR 34.8m	EUR 37.5m
 lipidor	Lipidor develops drugs for the treatment of skin diseases such as psoriasis, bacterial skin infections and atopic dermatitis		EUR 11m	EUR 13.4m

Trend: The trends in the Nordic Life Science market is looking positive. Increased financing from public stock market and soft financing, combined with a deeper and broader wish for more collaboration between the Nordic countries' professional organizations and governments. Furthermore, the Nordics have seen a number of life science hubs and clusters across the region that help grow interesting start-ups on the basis of very strong science

Sources: Nordic Life Science News, swedenBIO (2019),

Connected healthcare will innovate the industry

Digitalization - a main driver of change in the industry

Facts

- **Big Data and Artificial Intelligence (AI) become commonplace**
Big Data and analytic capabilities will be essential for success not only in Pharma but also in Healthcare and MedTech as it enables more efficient diagnostics, helps understand diseases or to train AI engines within healthcare institutions to increase physician efficiency. Recent collaborations between pharma and tech companies such as the cooperation between Novartis and Microsoft announced in October 2019 show that Life Sciences companies are actively seeking partners in the tech industry
- **With the raise of Big Data and bundling hardware in connected systems, IT security is moving even more into focus**
With the increased collection of personalized data through wearables or the use of Big Data for R&D and in personalized care; data security, data protection and data compliance will remain key factors in the industry
- **Connected healthcare unfolding its potential**
Cost pressure, the trend to personalized care and the demand of patients to engage more fosters the digitalization in the health care industry. The high number of M&A transactions in this sectors underpins the importance of this development

Selected deals

Target	Description	Buyer
	Klue, Inc. is a digital health technology company, which develops an AI-based software that can detect meals and provide insights into users eating behaviors	
	Evolucare Technologies develops medical software for healthcare institutions incl. a web based integrated solution for medical imaging services incl. facilitate screening of eye pathologies.	
	SimplicityBio SA develops AI-based platform to analyze data streams to extract knowledge and insights that accelerate the development pathway at target identification to pre-clinical and clinical phases.	
	DataCeutics, Inc, provides among others biostatistics and statistical programming for phase I and II-III clinical trials.	

Trend: Digitalization is not a trend anymore but an omnipresent fact especially (but not only) in the Healthcare segment. Companies which do not use the potential of cloud computing and developing technologies in the area of artificial intelligence or blockchain will presumably fail to keep up with the speed in the industry. Acquisitions can be an adequate way to close potential gaps.

Big Pharma companies focus on their core business

Reinvention of Big Pharma

Facts

- The Big Pharma segments sees a lot of rearrangements, due to growing competition and decreased return of investment of R&D, and is cutting back of non-core businesses, like Sanofi ending its diabetes research efforts
- Rising R&D costs cause pharma companies to outsource these processes, by either hiring specialist companies like contract research organizations or by acquiring companies and their innovative products
- To make their research departments more efficient, Big Pharma is investing in new technologies, like AI, to maximize results and facilitate clinical studies
- This disintegration of drug discovery and development could result in a reinvention of the global pharma space, by enabling new entrants to succeed in an industry with high barriers to entry
- In the course of the general consumerization of health, Big Pharma, which is traditionally attracted to large, profitable markets, will experience a shift towards more targeted drugs that will prevent diseases and addressing the need of specific groups of patients

Selected deals

Target	Description	Buyer
	Novartis decided to spin-off its ophthalmology business Alcon for EUR 17bn	IPO
	Roche invests EUR 170m in Flatiron Health, a technology company for AI, databases, analytics for clinical studies and research	
	Irish Shire, specialty pharmaceuticals producer, was sold to Japanese Takeda for EUR 66bn	
	Novartis acquired US-based developer of therapeutics The Medicines Company for EUR 9bn	
	Tesaro, an oncology focused company, was acquired by GlaxoSmithKline for EUR 5bn	

Trend: Following the rising R&D costs and the trend towards consumer-specific pharmaceuticals a reinvention of the pharma industry is expected to occur. While Big Pharma will continue to rearrange itself and focus on its core business, a new class of pharma players will rise. The face of R&D will change, with new technologies facilitating clinical studies and research in general

Sources: PWC, Bloomberg, Forbes, Statnews, Pharmaphorum.com

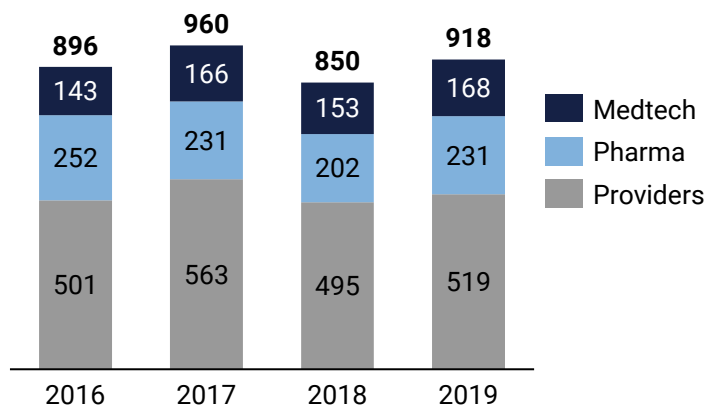
3 M&A overview



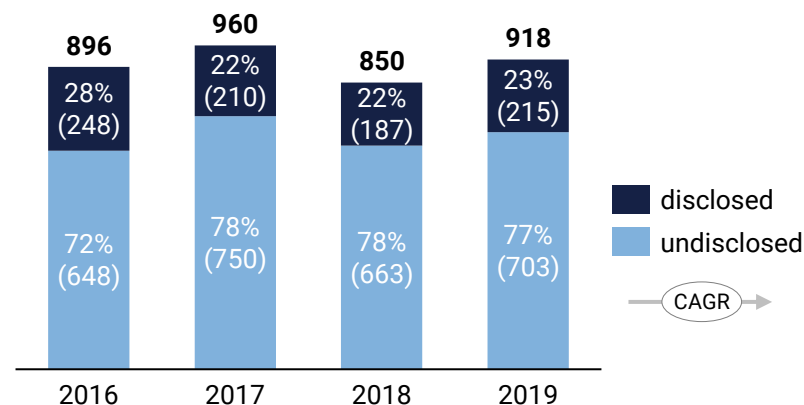
Growing overall number of deals

Number of closed transactions with European targets

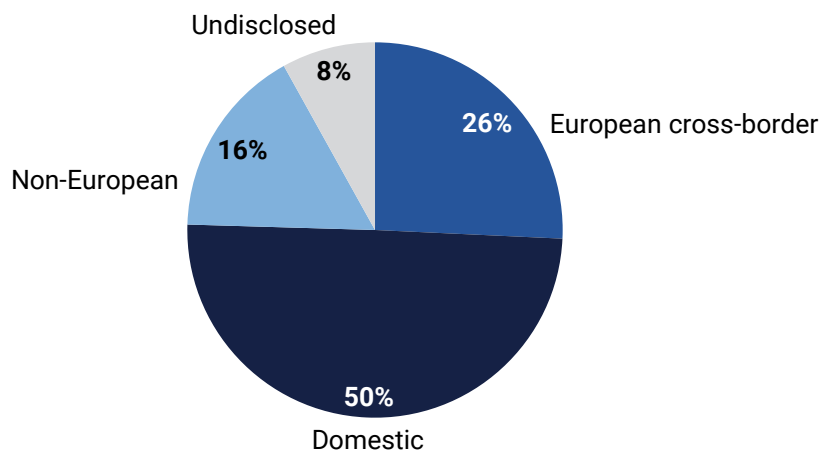
Number of transactions by segment



Disclosed vs. undisclosed



Region of buyer



Comments

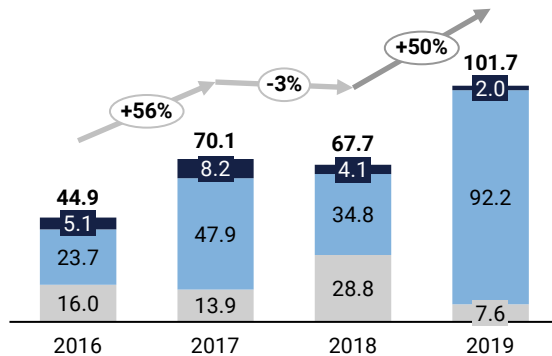
- In 2019 the Life Science deal activity reached its original high level after facing a bump in 2018. Once all deals are published, we expect the number of deals to be on the same level as in 2017
- Due to the trend of consolidation of healthcare institutions, the Provider segment remains the largest by number of deals. MedTech and pharma continue to grow steadily
- Overall, the split 'region of buyer' remained stable compared to the previous year, with half of the buyers being headquartered in the same country as the target

Pharma segment is the largest segment by deal value, thanks to mega deal Shire & Takeda

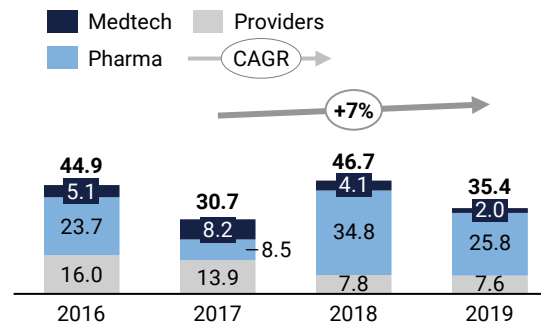
Value of transactions

Total value of disclosed transactions in EURbn

A) As reported



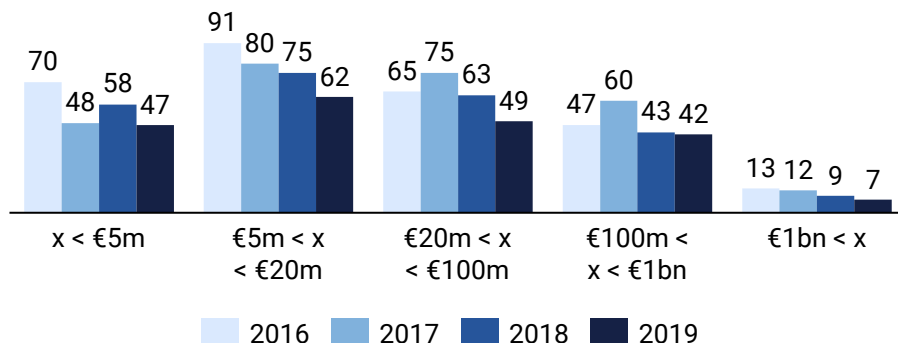
B) Excluding deals > EUR 10bn



Mega deals > EUR 10bn p.a.

- **2019:** Pharma: Takeda Pharmaceutical company acquired Shire PLC for EUR 66bn¹
- **2018:** Provider: RELX PLC acquired RELX NV
- **2017:** Pharma: I) JNJ acquired Actelion for EUR 28.0bn; II) Boehringer Ingelheim acquired Sanofi's Animal Health Business for EUR 11.4bn
- **2016:** No deal > EUR 10bn

Number of deals per value range



Comments

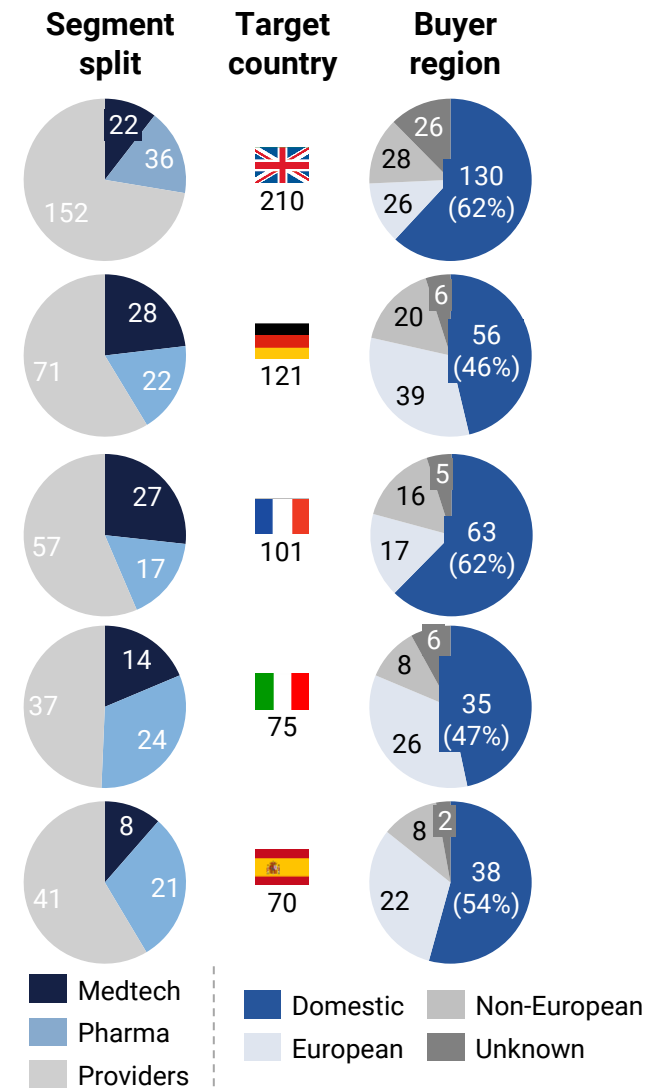
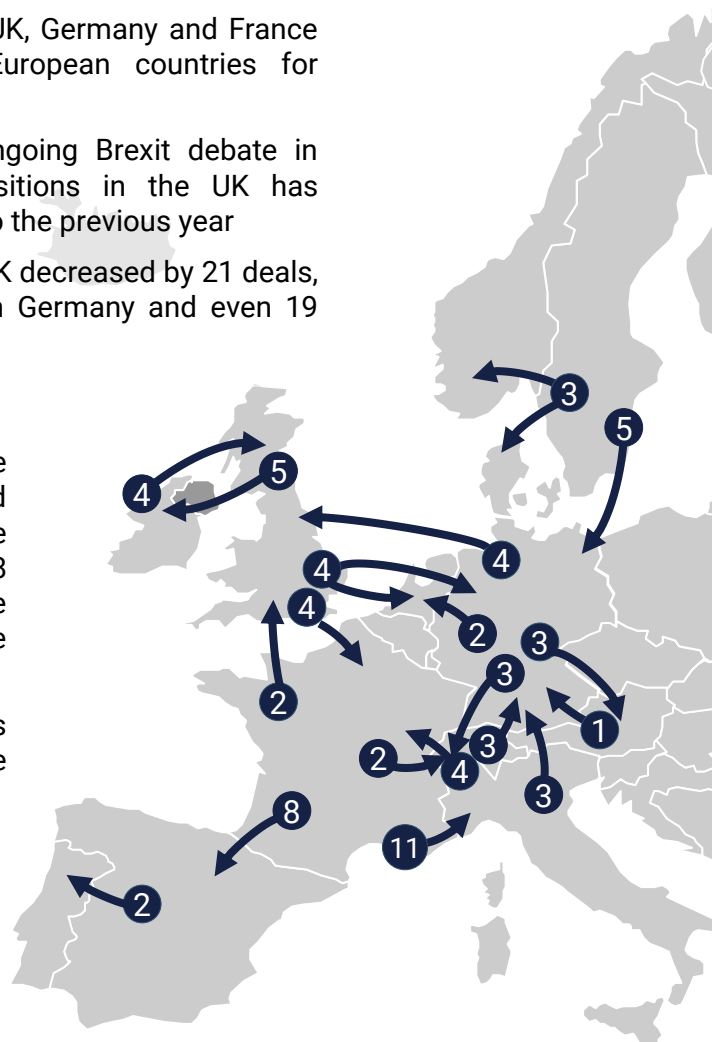
- Chart A) shows the deal values as reported, indicating in which segments mega deals happened
- In chart B) all transaction above EUR 10bn have been excluded. This normalized chart shows a rise of 7% for disclosed transactions, only one deal was normalized in the 2019 figures
- The chart "Number of deals per value range" shows a high activity in the small and mid cap segments. Approx. ¾ of the disclosed deal values (76% in 2019) are less than EUR 100m and more than ½ of the deal values are below EUR 20m

1) Novartis' spin-off of Alcon is not included, as it is no classic M&A transaction

Most acquired targets based in the UK, followed by Germany

Most attractive target countries & intra-European cross-border activities

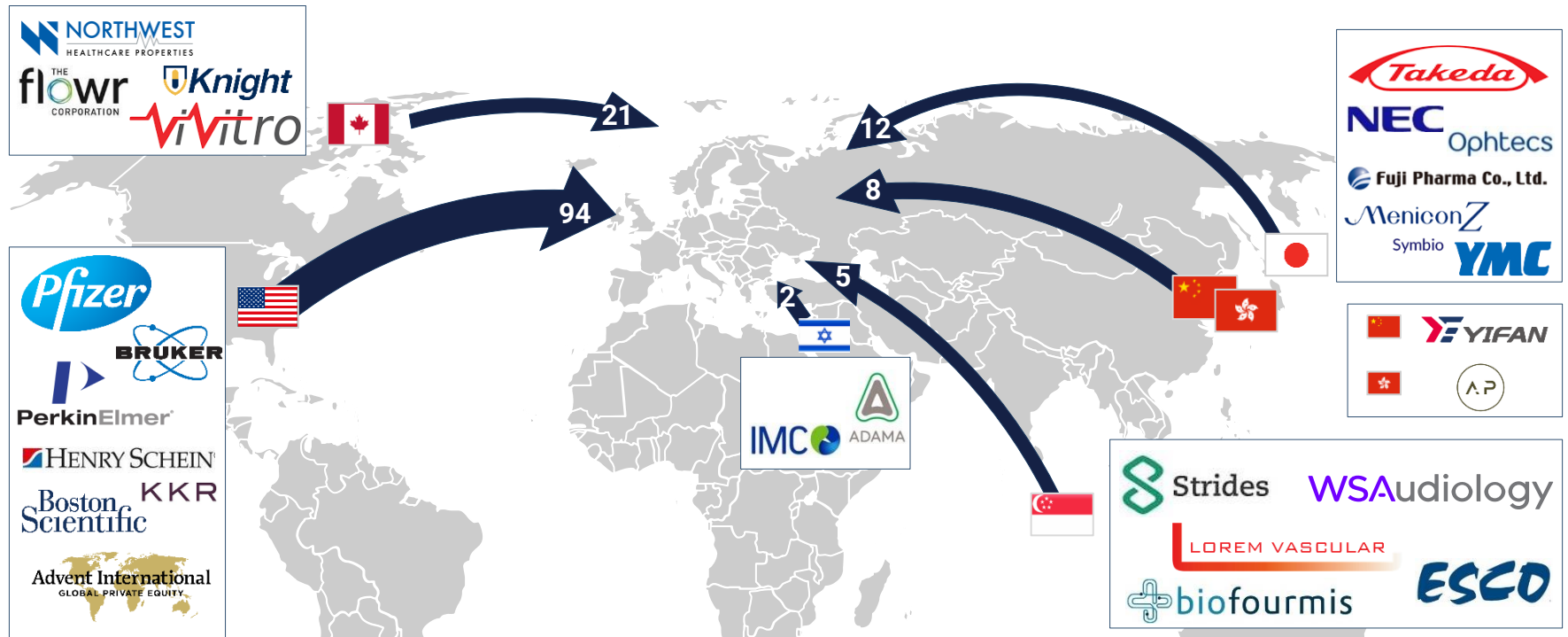
- As in the previous years, the UK, Germany and France were the most attractive European countries for acquisitions
- As a consequence of the ongoing Brexit debate in 2019, the number of acquisitions in the UK has decreased by 10% compared to the previous year
- While the number of deals in UK decreased by 21 deals, 11 more deals were closed in Germany and even 19 more in France
- The UK and Germany are gateways to Europe indicated by the comparably high share of Non-European investors; 28 and 20 respectively. In France most transactions were domestically driven
- In most European countries around half of the deals were closed by domestic acquirers



Arrow indicates direction of cash flow: e.g. 4 UK targets were acquired by German businesses

The US is again the strongest acquirer outside the EU

142 inbound deals (vs. 151 in 2018)



- With 94 transactions, US buyers were again by far the most active non-European investors. The 'US acquisition power' can be explained by the fact that the US market is the largest homogenous domestic healthcare market. Being US market leader often means also being global market leader
- In late 2016 Chinese authorities limited so-called "irrational" or "non-genuine" investments. Market uncertainty and a decline in Chinese outbound investments followed. In August 2017 China's State Council published a set of investment guidelines providing official clarity by classifying overseas investments. As expected China outbound deals picked up in 2019

USA is the most attractive target country for European buyers

122 outbound deals (vs. 111 in 2018)



- In 2019 the largest deals were driven by strategic buyers
- The changes in the US tax regime have removed the incentive to funnel cash reserves of US corporates through European headquarters back to the US by way of M&A

Major deals with European buyers

Segment	2019	Acquisition target	Buyer	Buyer type	Value [EURm]
Pharma	Jan	Tesaro, Inc.	GlaxoSmithKline plc (LSE:GSK)	Strategic	4,815
Pharma	Jul	Xiidra of Shire US, Inc.	Novartis AG	Strategic	4,730
Pharma	Dec	Spark Therapeutics, Inc.	Roche Holding AG (SWX:ROG)	Strategic	4,275
Pharma	Dec	Cambrex Corporation	Permira Advisers Ltd.	Strategic	2,319
Pharma	May	IFM Tre, Inc.	Novartis AG	Strategic	1,404
MedTech	Jan	iKang Healthcare Group, Inc.	Yunfeng Capital; Alibaba Investment Limited	Financial	1,287
Pharma	Oct	Alder BioPharmaceuticals, Inc.	H. Lundbeck A/S (CPSE:LUN)	Strategic	1,283

4

Regional focus



















Germany is the largest Life Sciences market in Europe

Germany and Austria

Market trends

- Highest deal value in Austria and Germany was generated in the pharma segment, most deals by number happened in the provider segment
- Increasing cost pressure is an issue for the entire Life Sciences industry, leading to the consolidation of providers
- Decreasing return on invest in R&D in the pharma and MedTech segments lead to companies increasingly buying innovation, rather than investing in it
- An ageing population and expensive treatment methods are driving the healthcare spending in Germany and Austria. Germany is the largest market for healthcare and Life Sciences products within Europe
- The digitalization of the Life Sciences space, including wearables, telemedicine, mHealth presents a major opportunity for German and Austrian markets and the entire industry. Austria implemented ELGA, an electronic health record system, that can easily be accessed by any medical practitioner, Germany is still one step behind in that aspect
- Most European and global trends also apply to the German and Austrian market, including Big Pharma companies focusing on their core businesses, like Bayer selling its dermatology business and medical becoming consumer and vice-versa, like Dermapharm acquiring Fitvia

Selected deals

Target	Description	Buyers	Value (€m)
 Dermatology	Bayer AG sold its Global Prescription Dermatology Unit to LEO Pharma, specialized on dermatology pharmaceuticals	 	613
 BlueRock Therapeutics	Bayer acquired US-based BlueRock Therapeutics, developer of engineered cell therapies for neurology, cardiology and immunology	 	535
 BREATH THERAPEUTICS	German Breath Therapeutics, developer of drug aerosol therapeutics was sold to Zambon	 	500
 AMAL Therapeutics	Swiss Amal Therapeutics, a developer of vaccines for oncology, was sold to Böhringer Ingelheim	 	425
 MK-KLINIKEN AG	MK-Kliniken sold a portfolio of 19 nursing homes to Icade, a real-estate player	 	266
 fitvia	Dermapharm, a pharmaceuticals company, acquired Fitvia, producer of nutraceuticals	 	-

Sources: Deloitte, GTAI, WKO, McKinsey

Market trends & regional view

The Nordics

Market trends

- Majority of deals in the Nordics originate in Denmark and Sweden with significantly less activity in Finland and Norway
- Market trends include consolidation among players, digitization of healthcare services and merging of the non-medical and the medical
- While the Nordics have been characterized by early implementation of several new technologies such as telemedicine, there is still ample room for growth and wide-scale commercialization
- Denmark has been a frontrunner within eHealth, mainly driven by government initiatives such as the Health Data Programme in 2014 and the web-portal sundhed.dk

Cross-border trends

- 68% of cross-border deals were pharma-related
- International buyers mostly interested in Pharma and MedTech (total 65% of deals)
- Nordic buyers looking internationally mostly invested in provider-related deals (56% of all deals)

Inter-Nordic trends

- 53% of all inter-Nordic deals were provider-related
- Nordic buyers acquired 36 companies, while international buyers investing in the Nordics acquired 37 companies

Selected deals

Target	Description	Buyers	Value (€m)
	H. Lundbeck A/S agreed to acquire Alder BioPharmaceuticals, Inc. – a developer of migraine treatments for \$1.5bn in September 2019	 	1,283
	Fujifilm Diosynth Biotechnologies Inc. agreed to acquire Biogen Denmark from Biogen Inc. for \$890m in March 2019	 	800
	Ambea AB has agreed to acquire care operations in Scandinavia from Aleris AB for SEK 2.6bn.	 	453
	Karo Pharma AB acquired Trimb Healthcare AB from Avista Capital for SEK 3.4bn in June 2019. Trimb Healthcare develops and markets OTC pharmaceuticals and consumer healthcare products	 	320
	Deerland Probiotics & Enzyme, Inc. agreed to acquire Bifodan A/S, a developer and manufacturer of probiotic solutions in November 2019	 	n.a.

Switzerland shows increasing deal number

Switzerland

Market trends

- After a decline in 2018, the M&A market in Switzerland had been more active in 2019 again. The total number of acquisitions with a Swiss target and/or buyer increased from 43 to 50 in 2019
- The total deal value (publicly known) increased despite the fact that no M&A deal had a value above EUR 10bn. Despite the spin-off of Alcon from Novartis, the largest Swiss M&A deal in 2019 was the disposal of Nestlé Skin Health S.A. to the Swedish private equity investor EQT Partners for EUR 9.2bn
- While in 2017 most of the transactions involved companies in the subsector Providers and in 2018 MedTech, the most active subsector in 2019 was Pharma, which accounted for 44% of all transactions followed by Providers (30%) and MedTech (26%)
- Due to the uncertainty regarding the Mutual Recognition Agreement (MRA) with the EU, we expect an increase in transactions in the MedTech segment although most of the producers seems to be prepared if they had to fulfil the requirements of a third state in relation to MDR and MDD
- The trend to cross-border transactions has continued. Overall more than 80% (70% in 2018) of all transactions with Swiss targets or buyers had been cross-border
- Last year foreign buyers accounted for more than two third of the cross-border transactions while in only one third of the transactions Swiss buyers acquired European targets. In contrast, the shares of Swiss and foreign buyers in cross-border transactions were even in 2018

Selected deals

Target	Description	Buyers	Value (€m)
	Nestlé Skin Health providing sun protection, acne and anti-wrinkle products, skin cancer and nail fungus medication, was acquired by a consortium led by financial investor EQT and the Abu Dhabi Investment Authority (ADIA).	  ADIA أبوظبي للاستثمار Abu Dhabi Investment Authority	  9,212
	Therachon a global biotechnology company focused on developing treatments for serious rare conditions was acquired by Pfizer.	  	723
	Novartis sold the worldwide rights to Signifor and OSILODROSTAT for the treatment of Cushing's disease to Italian Recordati.	  	346
	Clinique Matignon, a group of clinics specializing in aesthetic medicine in the French speaking part of Switzerland, was acquired by German Dermedis Group.	  	16
	Galenica acquired the Bichsel Group, which focuses on on the manufacture of medicines and medical devices as well as home care services.	  	n/a
	A.F.T. Micromécanique SA specialized in the manufacture of implants and instruments was acquired by Acrotec Group.	  	n/a

Consolidation among healthcare providers remains key driver

Italy

Market trends

- 75 M&A transactions in 2019 confirm the attractiveness of the sector both for Italian and foreign investors
- During 2019, more than half of the transactions were cross-border (40 vs 35 transactions), among which France, UK, and US (the latter mainly PE funds) were the most active countries
- A large number of deals, approx. 65%, was realized by strategic/industrial investors (incl. investors backed by PEs)
- Approx. 49% of M&A transactions in Italy involved targets operating within the Providers segment, ca. 32% within the Pharma segment and ca. 19% within the MedTech segment, showing an increase in Pharma segment with respect to 2018 (including transactions in the CDMO and nutraceutical/medical devices sector)
- Consolidation among healthcare providers remains a key driver for M&A transactions: laboratories and diagnostic centers hospitals and elderly-care homes (Garofalo Healthcare playing a key role within consolidation in Italy, together with Affidea, Lifebrain, Korian and PE L-Gam), dental chains (i. Denticoop, Medidental and Primo Group) and pharmacy chains (e.g. Pharmacoop, Parashop Italia)
- The large number transactions and high interest from strategic as well as financial investors in nutraceutical and CDMO companies is confirmed in 2019 also driven by: consolidation of a still fragmented sector, convergence of non-medical and medical (e.g. food and healthy products), diversification of revenues and outsourcing of secondary manufacturing from Big Pharma companies

Selected deals

Target	Description	Buyers	Value (€m)
 GENERICI PER SCELTA	One of the leading independent generic pharmaceutical companies	  	1.100
 MEDICAL DEVICES - IN-USE	Leader in the production and distribution of UDCA from ox bile, an API with applications especially for liver diseases such as gallstones, PBC and NASH	  	600
 Quality Since 1975	Developer and manufacturer of nutraceutical, dietary and nutritional supplements	   	200
 BOMI GROUP Logistics and Supply Chain	International group active in the filed of logistics and management of advanced technology healthcare products	   	150
 BioDue S.p.A.	Develops, manufactures, and markets cosmetics, food supplements, and medical devices	   	80
 diagnostica series	Developer of innovative In Vitro Diagnostic systems for infectious and autoimmune diseases, and hematology systems	   	50
 Centro Medico Università Castrense Srl	Hospitals, clinics and diagnostic center and outpatient services	   	na
 CLAIRE biofarma	CDMOs involved in R&D, production and distribution of pharma, nutraceuticals and cosmetic products and medical devices	    Backed by White Bridge Investments	na

Strong growth of the private healthcare market

Hungary

Market trends

- Strong growth of the private healthcare market continued as we estimate the growth of leading providers to be at 15-25% per annum
- Significant investment need arise for providers as patients increasingly look for high quality treatments. Capacity extensions and construction of new private hospitals are under way and further investment plans were announced during 2019
- Consolidation wave continued and was driven by existing players (Affidea) as well as new entrants (MedLife from Romania). Further steps are expected in 2020
- Concentration will help players to deploy capital more efficiently and provide higher quality services while continued market growth will support the return on current investments
- Until now, the consolidation was focused on Budapest. From 2020, we expect that the interest of consolidators will be started to shift towards the countryside and the consolidation wave will become a countrywide trend
- Teva Pharmaceuticals got rid of its Hungary-based Infusion plant, following the trend of Big Pharma focusing on their core business

Selected deals

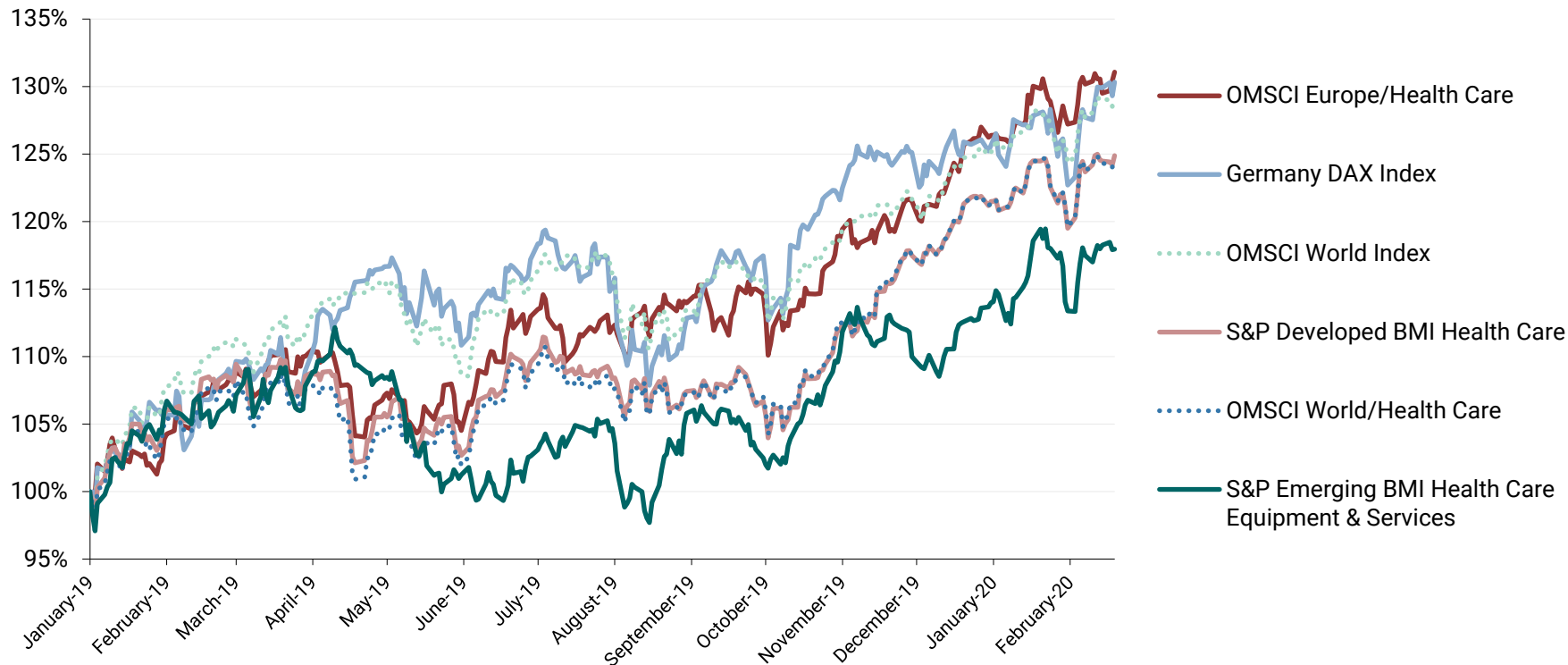
Target	Description	Buyers	Value (€m)
	Medical Service Budapest, which works with 75 doctors to provide walk-in care in 30 specialized areas at its 3 healthcare centres, has been acquired by Affidea Diagnosztika that is the leading provider of advanced diagnostic imaging, outpatient and cancer care services in Europe.	 	1,213
	Hungaro-Gal Kft. provides pharmaceutical contract manufacturing services. The company was founded in 2000 and is headquartered in Kaposvár, Hungary. As of October 9, 2019, Hungaro-Gal Kft. operates as a subsidiary of Vanessa Research Inc.	  	2,73
	Rózsakert Medical Center (RMC) a provider of full spectrum of outpatient care and same-day surgical procedures was acquired by Med Life SA, a Romania-based company which operates over ten clinics, around five hospitals, an ambulatory facilities, over fifteen test laboratories and around five maternity hospitals, among others.	  	Non-disclosed
	Intravenous Infusions Plant of Teva Pharmaceutical Industries Limited was acquired by EuroLife Healthcare Pvt. Ltd. Intravenous Infusions Plant of Teva Pharmaceutical Industries Limited comprises intravenous infusions plant. The asset is located in Hungary.	  	Non-disclosed



DAX outperformed all indices

Sector indices and market benchmarks

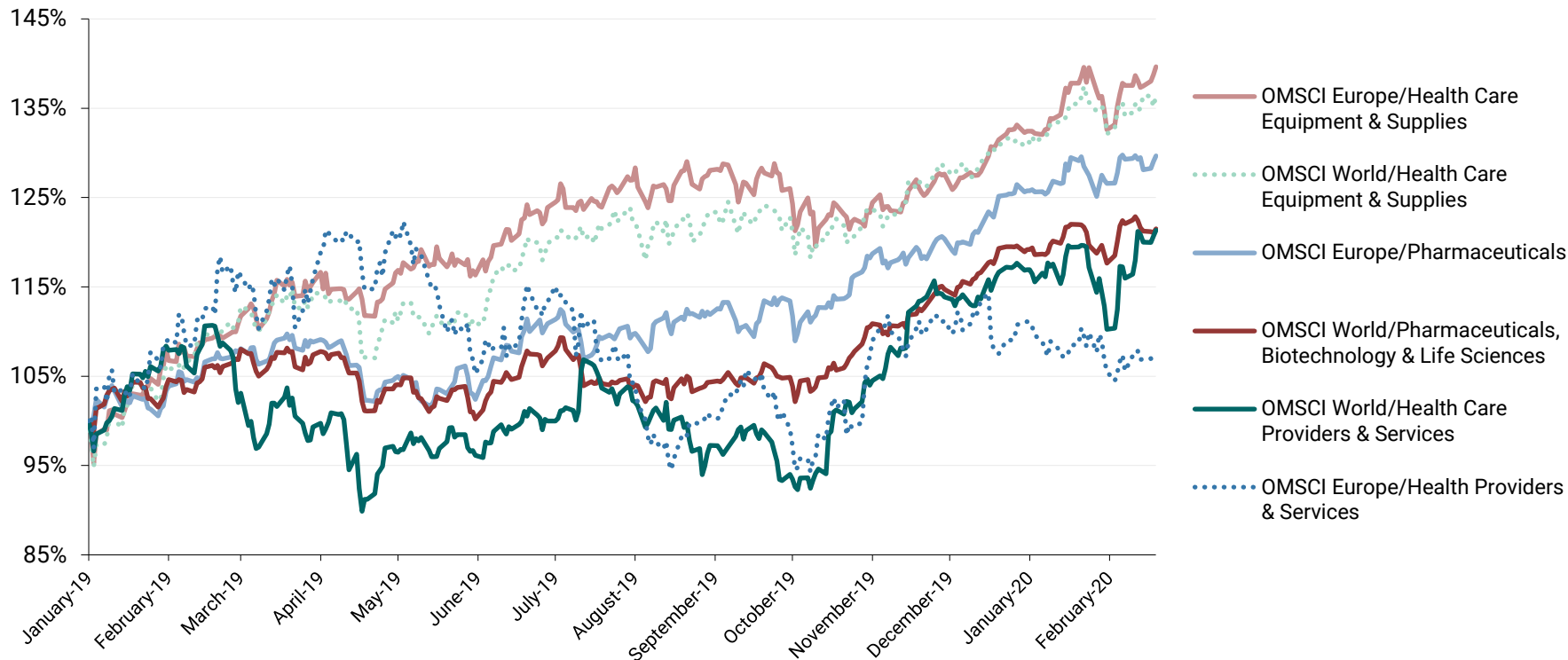
The chart provides an overview at the healthcare indices performance compared to the overall stock market. As market benchmark the OMSCI World and the German DAX have been chosen. In 2019, the German DAX showed a strong performance outperforming all shown indices for several periods.



High volatility in health care provider indices

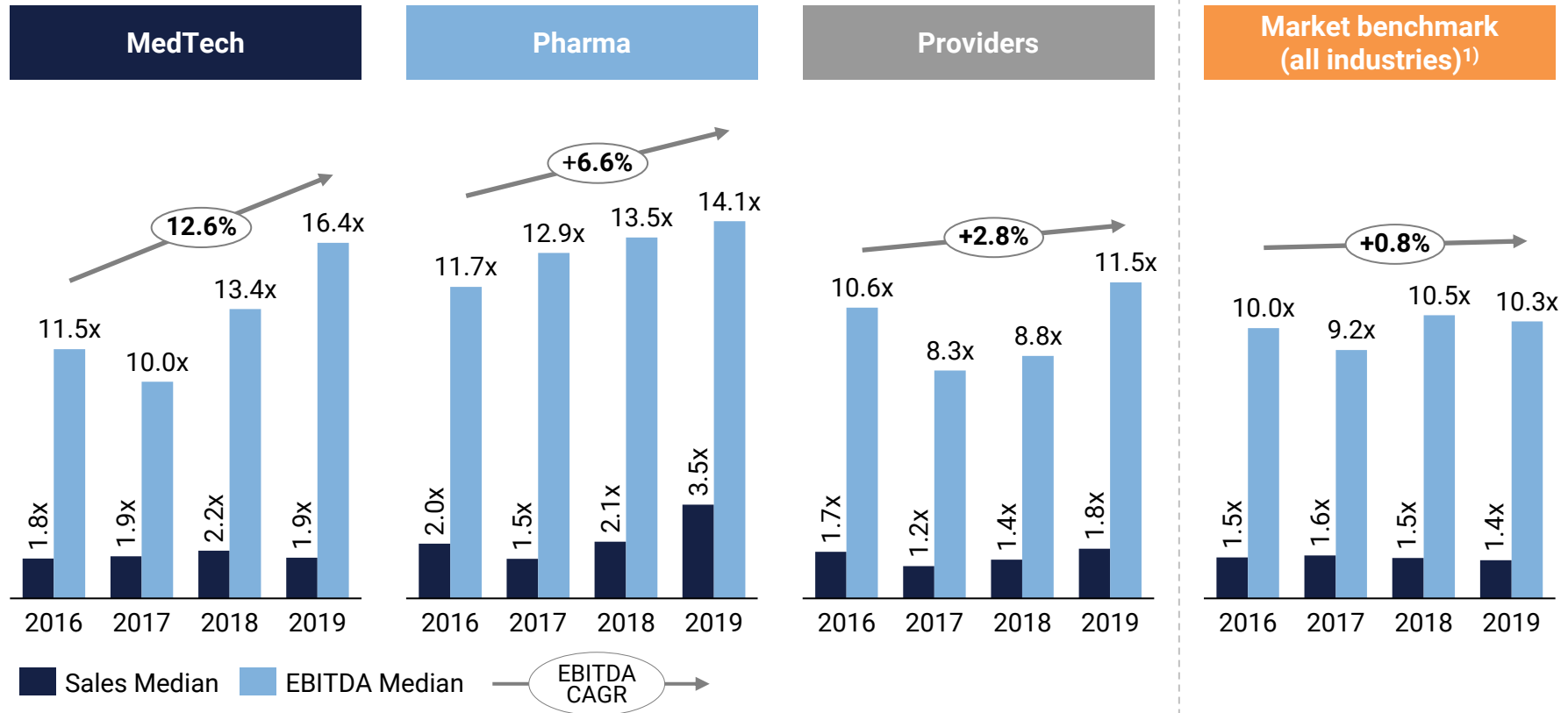
Segment indices

The following chart compares the global and European stock performance of indices, consisting of companies from the segments MedTech, Pharma and Providers. Over the year 2019, the World- and well as the Europe Health Care Providers & Services indice have shown the highest volatility.



Above average valuation

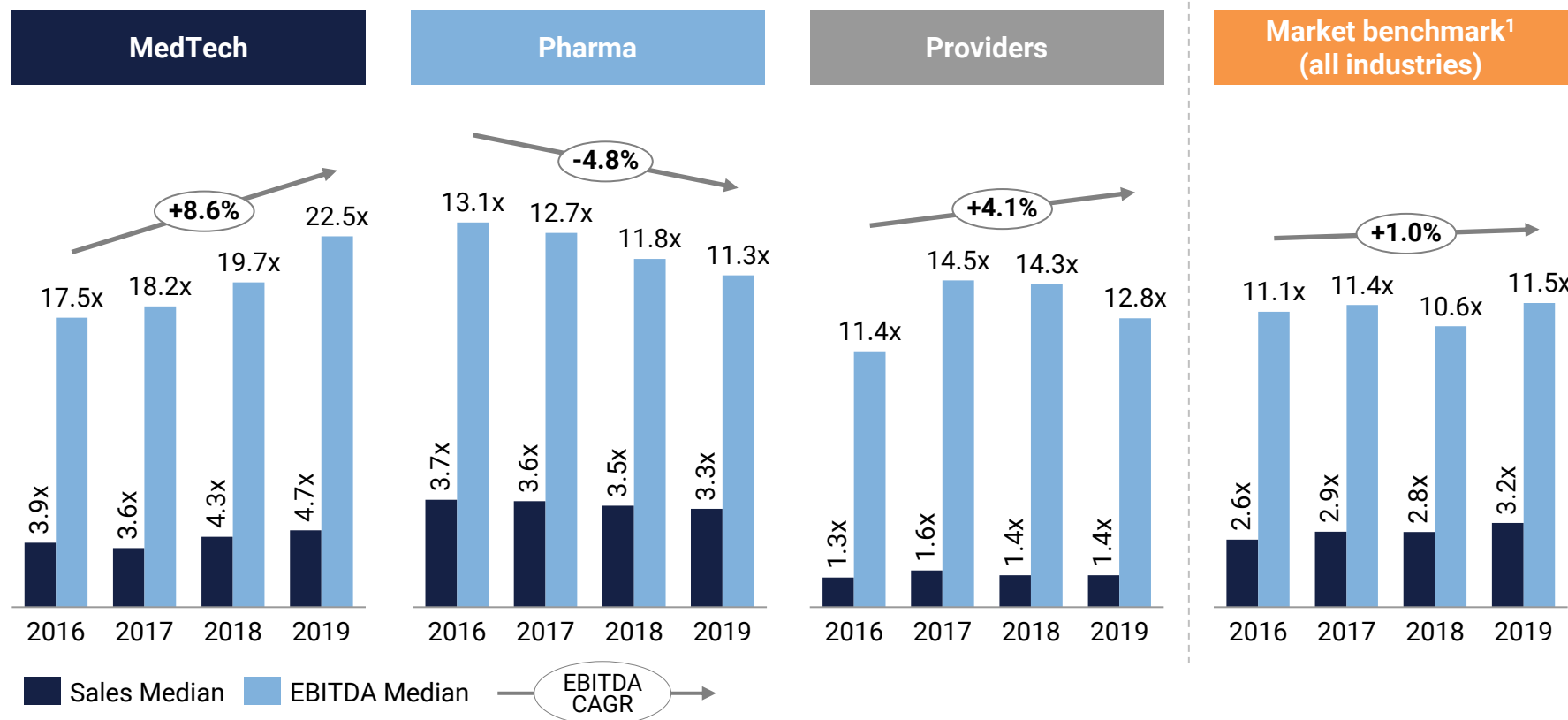
Transaction multiples in Europe



1) Source: Standard & Poor's CIQ – all European M&A deals

MedTech shows continuous growth, while pharma valuation still decreases

Trading multiples of European Blue Chips



1) 20 largest listed companies in Europe from all industries

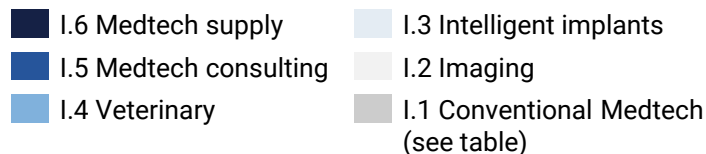
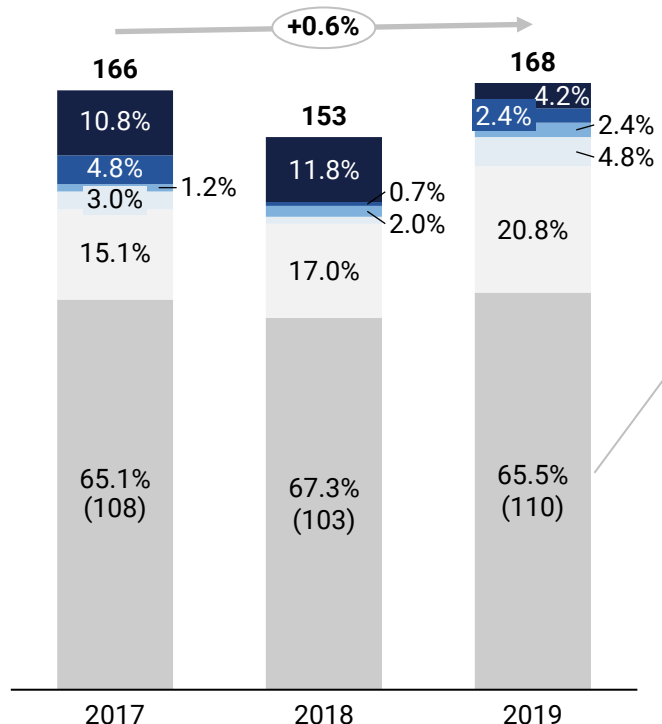
Source: S&P Capital IQ yearly average, historical exchange rates; Basis for segments: 20 largest European segment companies



Growing number of deals

MedTech M&A activity in Europe

Number of transactions



Comments



- As the regulatory hurdles from the MDR regulation start to unfold their impact, increased M&A activity is expected, the new regulation might already have accounted for some of the deals in 2019
- Although there is a slight decrease in deal value in the overall MedTech segment visible, the absolute number of deals has increased by approx. 10 percent compared to 2018
- Similar to the previous year, Conventional MedTech accounts for most deals. Conventional MedTech, especially surgery and ophthalmology shows some growth

I.1 Conventional MedTech	2017	2018	2019
Cardiology	5	1	1
Dental	19	11	12
Disposables	8	10	9
Handheld devices	5	0	2
Lab & hospital equip.	13	15	15
Orthopedics	13	15	12
Pulmonology	1	0	2
Surgery	9	11	13
Wound care	3	4	5
Other products	20	22	26
Ophthalmology	12	14	13

CAGR →

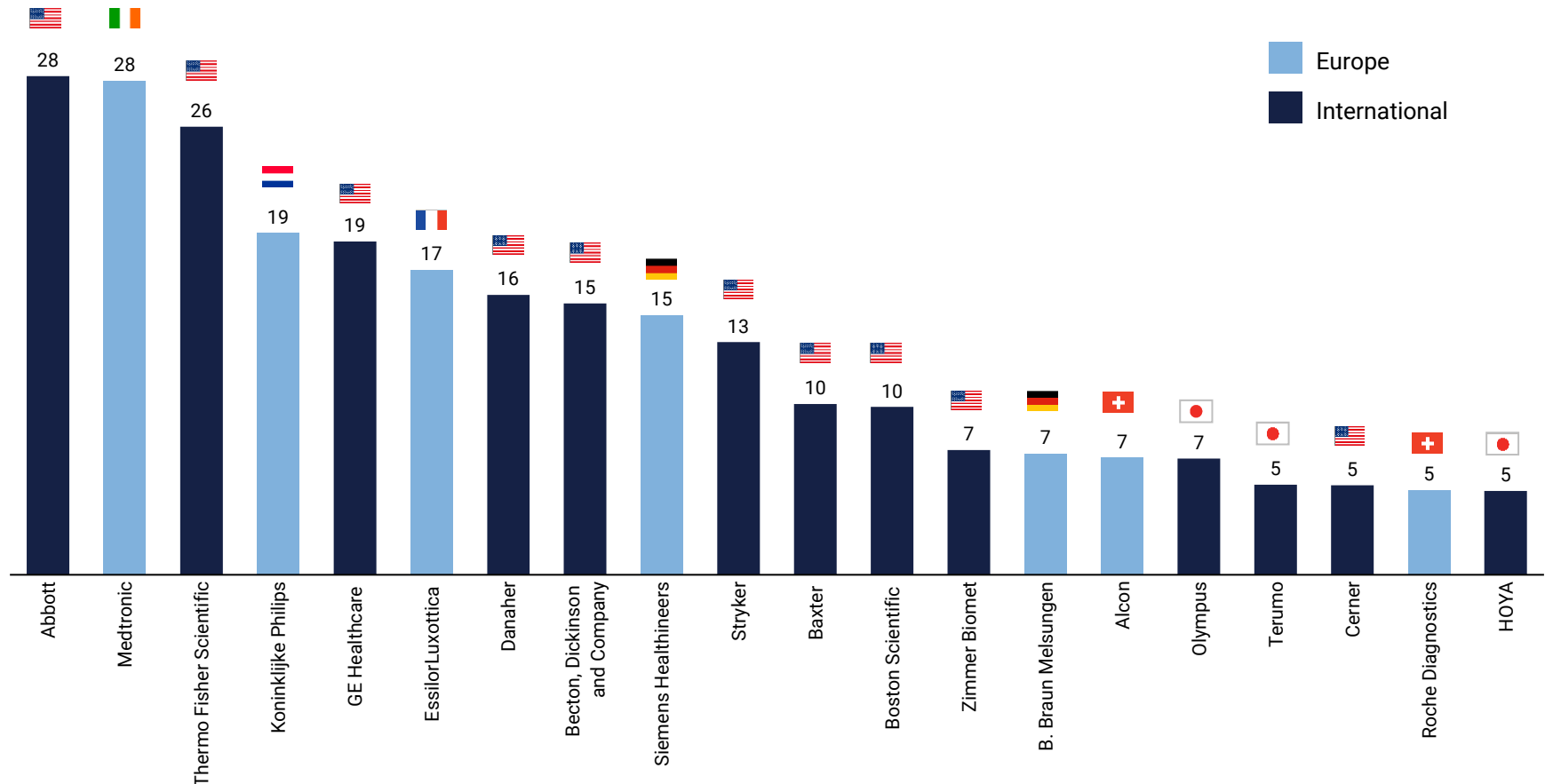
Slight decrease in overall deal value

MedTech top 20 deals in Europe

2019	Acquisition target	Buyer	Value in EURm
25-Apr	 Dutch Ophthalmic Research Center International B.V.	 Eurazeo SE; Eurazeo Capital IV	430
1-Aug	 Blue Earth Diagnostics Limited	 Bracco Imaging S.p.A.	428
24-Apr	 Cisbio Bioassays SAS	 PerkinElmer, Inc.	193
21-Nov	 Silmääsema Oyj	 Coronaria Oy	121
28-Feb	 COMECER S.P.A.	 ATS Automation Tooling Systems Inc. (TSX:ATA)	113
15-Jul	 Robotic Endoscope Business of Schölly Fiberoptic GmbH	 Intuitive Surgical, Inc.	101
3-Jun	 Orthopaedic Joint Reconstruction Business of Brainlab	 Smith & Nephew plc	96
29-Apr	 Direct Conversion AB (publ)	 Varex Imaging Investments B.V.	76
30-Apr	 CenterVue SpA	 Revenio Group Oyj	60
19-Nov	 EPS Group / M3 Medical Limited	 Uniphar plc (ISE:UPR)	40
24-Jul	 Groupe Moria	 Naxicap Partners	39
14-Aug	 Limited Liability Company Nanolek	n/a Not disclosed	32
1-Feb	 OMNIA S.p.A.	 Cantel Medical Corp. (NYSE:CMD)	28
24-Nov	 Revenio Group Oyj (HLSE:REG1V)	 William Demant Invest A/S	21
1-Aug	 UmanDiagnostics AB	 Quanterix Corporation	20
30-Apr	 Business in Surgery and Respiration of Wellspect HealthCare AB	 AddLife AB (publ)	18
2-Apr	 Digital Healthcare Ltd./Medical Imaging UK Ltd./MIDRSS Limited	 Northgate Public Services Limited	17
1-Aug	 SuperSonic Imagine SA	 Hologic, Inc.	16
1-Apr	 Stihler Electronic GmbH	 Gentherm Incorporated	16
25-Jun	 FINANCIERE ACTEON SAS	 FFP Société anonyme	15

Most of the top MedTech companies are based in the US

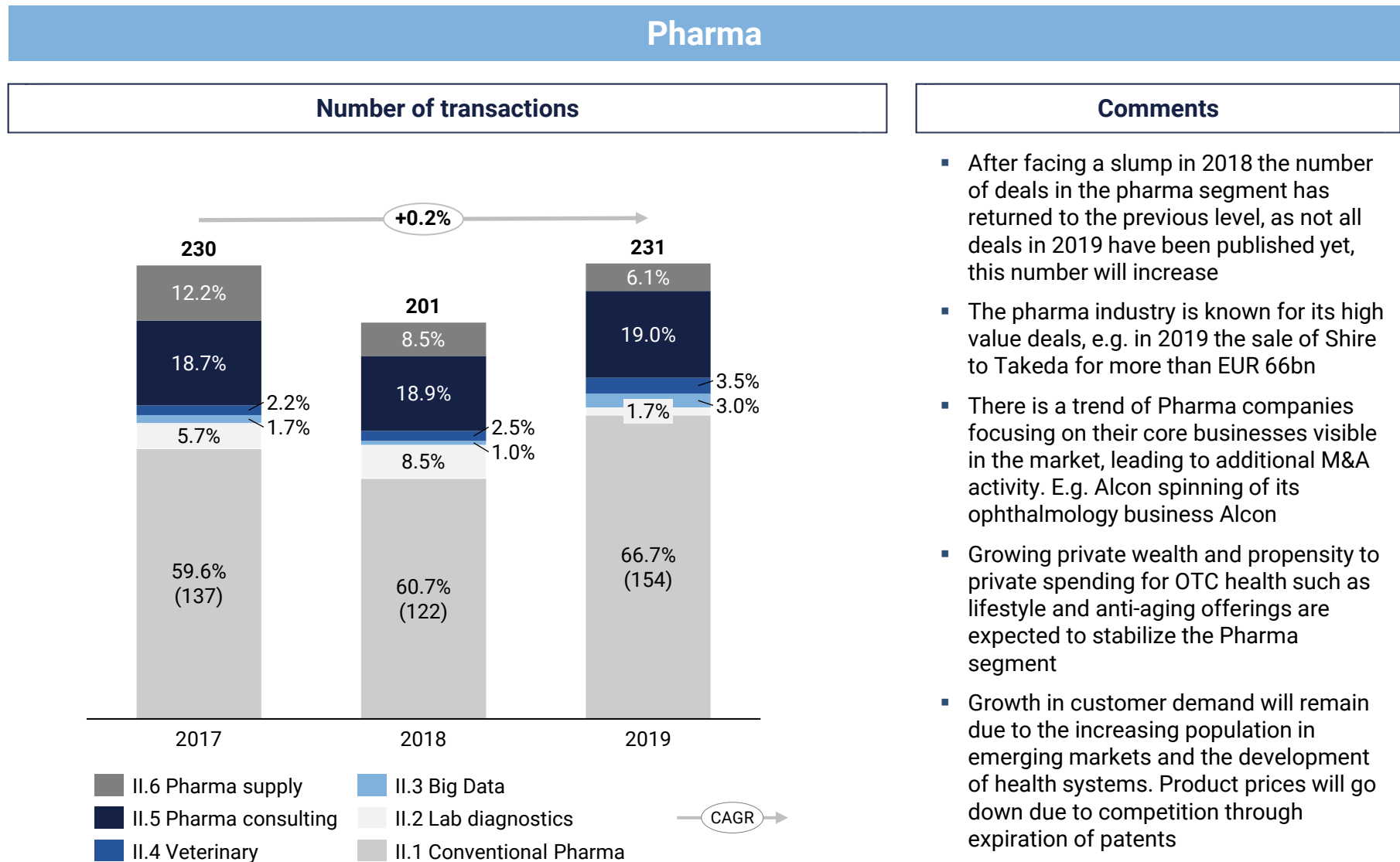
Global top 20 MedTech companies by revenue in EURbn (2019)



Most of the top 20 MedTech companies are headquartered in the US, only 7 in Europe. Novartis decided to spin-off its medical device business Alcon in 2019, following the trend of pharma companies to focus on their core businesses.































Deal activity returning to normal after slump in 2018



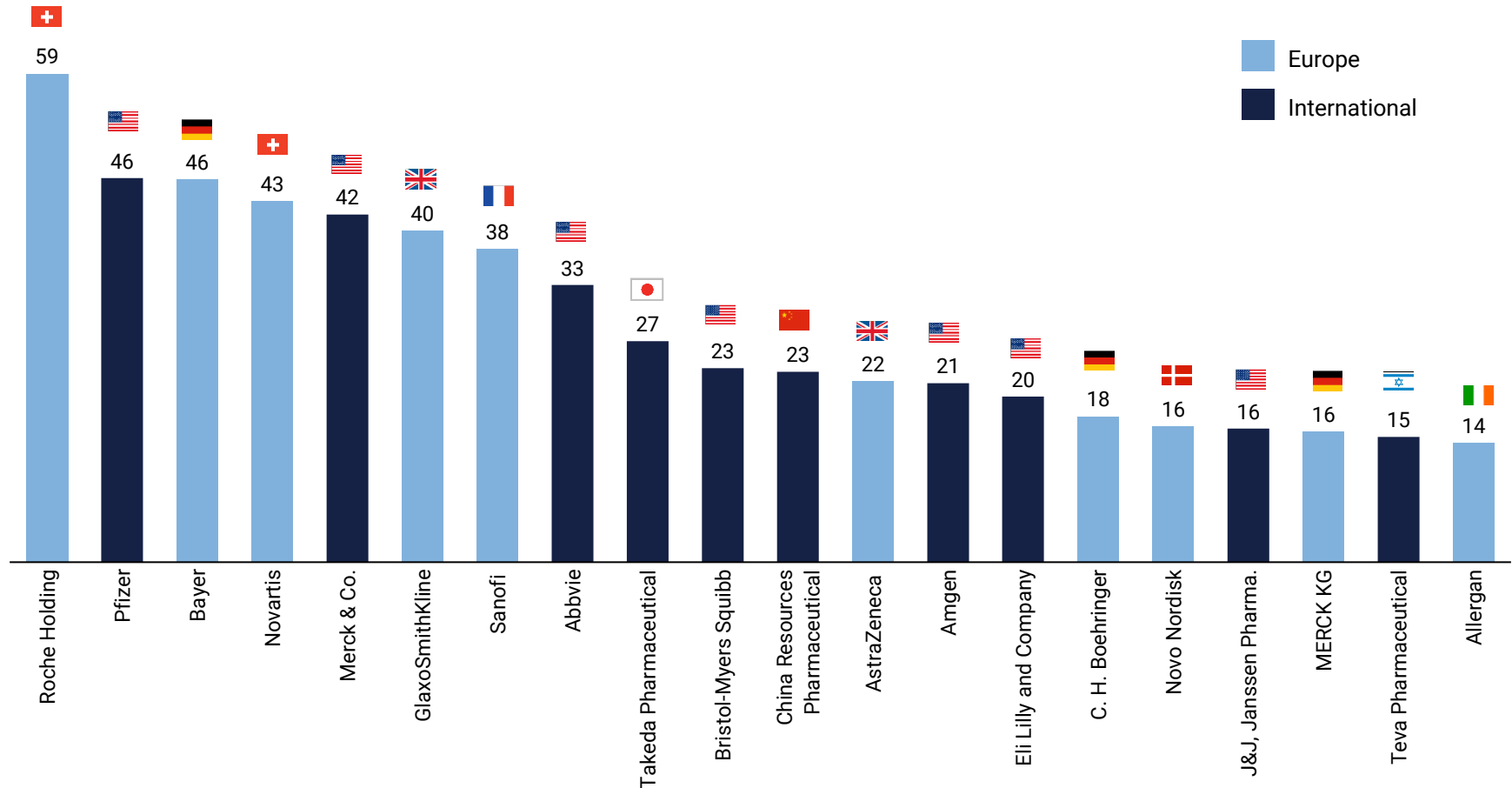
Big pharma getting rid of non-core businesses

Pharma top 20 deals in Europe

2019	Acquisition target	Buyer	Value in EURm
8-Jan	 Shire plc	 Takeda Pharmaceutical Company Limited	66,356
2-Oct	 Nestlé Skin Health S.A.	 EQT Partners AB; EQT VIII	9,212
19-Aug	 BTG International Ltd.	 Boston Scientific Corporation	3,704
1-Feb	 Neovia Sàrl	 Archer-Daniels-Midland Company (NYSE:ADM)	1,544
1-Jul	 UPSA SAS	 Taisho Pharmaceutical Co., Ltd.	1,414
15-Nov	 Kedrion S.p.A.	 FSI SGR S.p.A.	815
1-Aug	 Biogen (Denmark) Manufacturing ApS	 FUJIFILM Diosynth Biotechnologies Inc.	788
7-Jun	 Nightstar Therapeutics plc (nka:Nightstar Therapeutics Limited)	 Biogen Inc.	775
1-Jul	 Therachon AG	 Pfizer Inc.	723
12-Feb	 Karo Pharma AB (publ) (OM:KARO)	 EQT Partners AB	666
1-Jul	 Global Prescription Dermatology Unit of Bayer Aktiengesellschaft	 LEO Pharma A/S	613
25-Jul	 Breath Therapeutics GmbH	 Zambon S.p.A.	500
18-Jul	 Emapalumab and Related Assets of Novimmune SA	 Swedish Orphan Biovitrum AB (publ)	457
29-Apr	 CTL International SAS	 Charles River Nederland BV	448
15-Jul	 Amal Therapeutics SA	 Boehringer Ingelheim GmbH	425
23-Oct	 Worldwide Rights to Signifor and Osilodrostat of Novartis AG	 Recordati Industria Chimica e Farmaceutica S.p.A.	346
12-Sep	 Trimb Healthcare AB	 Karo Pharma AB (publ)	320
13-Mar	 OJSC Biosintez	 Sun Pharma (Netherlands) B.V.	278
30-Apr	 C3 - Cannabionoid Compound Company GmbH	 Canopy Growth Corporation	226
28-Mar	 Esi SpA	 Gruppo Sodalìs Srl	200

Half of the top 20 pharma companies are based in Europe

Global top 20 Pharma companies by revenue in EURbn (2019)



Out of the top 20 global pharma companies, 10 are headquartered in Europe. Since the acquisition of Shire, Japanese Takeda managed to get a place among the top 10 companies.

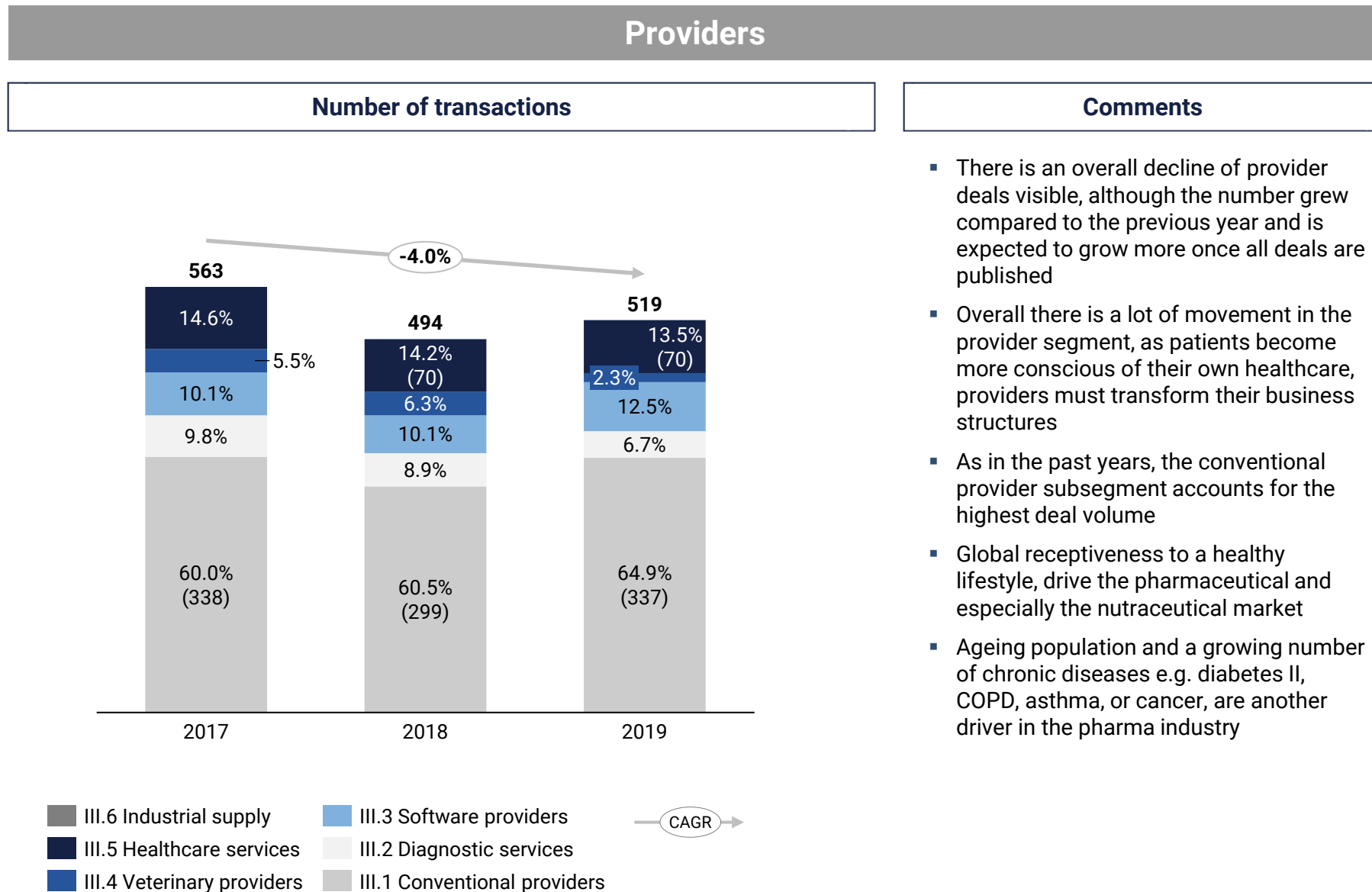
Source: Capital IQ.

8

Provider










































Number of deals grew compared to 2018



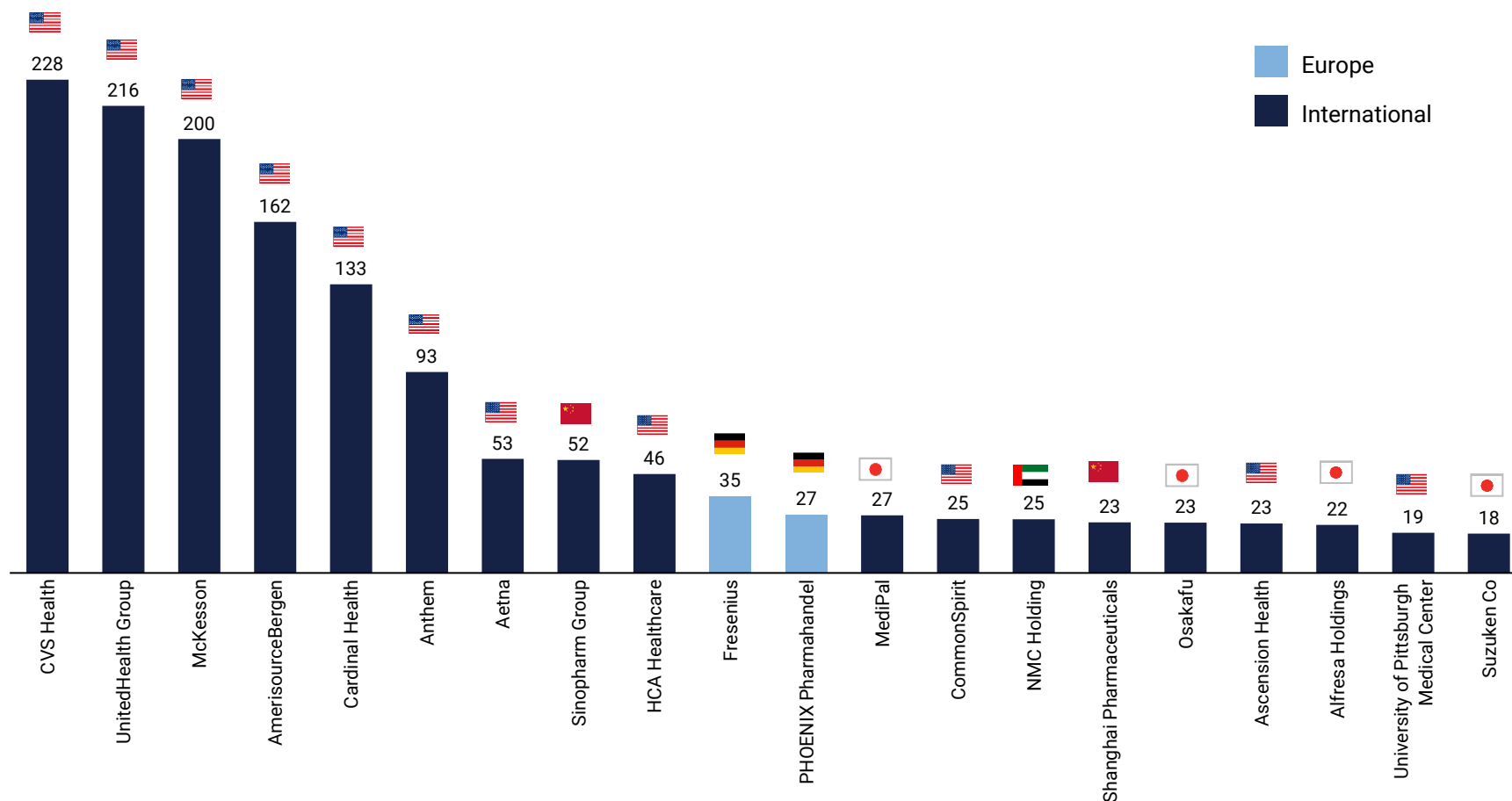
Consolidation of providers in Europe

Provider top 20 deals in Europe

2018	Acquisition target	Buyer	Value in EURm
6-Apr	 Healthy Harmony Holdings, L.P.	 New Frontier Health Corporation (NYSE:NFH)	1,166
25-Oct	 Domidep SAS	 I Squared Capital Advisors, LLC	1,150
31-Mar	 Groupe Emera SA	 Naxicap Partners; Ardian	600
26-Feb	 Portfolio of 92 Healthcare Properties in the United Kingdom	 Aedifica SA (ENXTBR:AED)	512
5-Sep	 Portfolio of Eight Hospitals	 Medical Properties Trust, Inc.	387
30-Nov	 Portfolio of 19 Nursing Homes of MK-Kliniken AG	 Icade Healthcare Europe	266
31-Dec	 IASO S.A.	 OCM Luxembourg Healthcare Greece S.a r.l.	253
31-Dec	 Care Operations in Norway, Sweden and Denmark of Aleris AB	 Ambea AB (publ) (OM:AMBEA)	252
18-Oct	 ADRIATIC SLOVENICA Zavarovalna druzba d.d.	 Generali CEE Holding B.V.	245
9-Nov	 Aleris Healthcare AB/Aleris Imaging AB	 Triton; Triton Fund V L.P.	242
31-May	 Financiere Ionisos SAS	 3i Infrastructure plc	210
15-Jan	 24 Brighterkind Care Homes	 Barchester Healthcare Limited	193
28-Dec	 Portfolio of 12 Medium and Long-Term Care Assets	 Icade Santé SAS	191
4-Jun	 Gyros Protein Technologies AB	 Mesa Laboratories, Inc. (NasdaqGS:MLAB)	163
28-Dec	 Bomi Italia S.p.A.	 ArchiMed SAS; MED Platform I	146
5-Jul	 Zenith Technologies Limited	 Cognizant Technology Solutions Corporation	144
1-Jan	 WeDo Consulting - Sistemas de Informacao, S.A.	 Mobileum Inc.	87
21-Mar	 Fagron NV	n/a Not disclosed	84
31-Oct	 Smile Henkilöstöpalvelut Oyj	 VMP Oyj	82
27-Mar	 Six residences with a plot of land in Spain	 Adriano Care, S.A.	76

Only few large provider companies are based in Europe

Global top 20 provider companies by revenue 2019 (EURbn)



The above list of global providers clearly shows the dominant position of US companies benefitting from their leading position in their home market as service-based economy. Only two of the top 20 companies are based in Europe, both of them in Germany.

Note: Healthcare insurance companies are not considered

9 Carlsquare & Globalscope

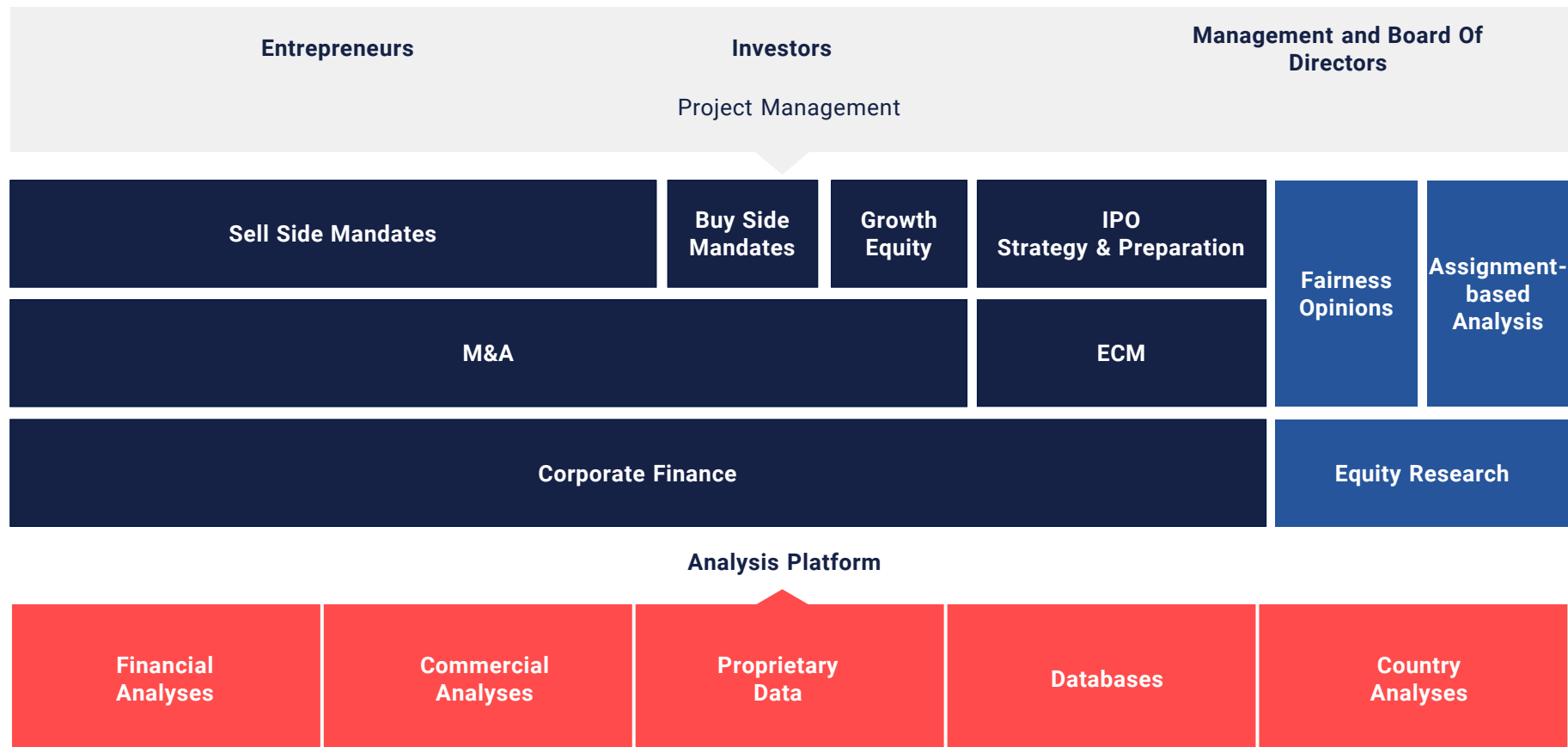


Strong track record and expertise proven by numerous transactions

Profile

Track Record	Focus Areas	Global Reach	Clients	Organization
55 transactions in the past 2 years, >400 transactions over the past 20 years	M&A: 75% sell side and 25% buy-side mandates ECM and Equity Research	Partner of Globalscope International reach: 55 Partners 46 Countries 5 Continents	Entrepreneurs & profitable growth companies Financial investors	70+ employees 12 partners 6 locations

Our business model is designed to assist companies and their owners in maximizing shareholder value throughout the life cycle



Our partners have a proven track record of executing transactions and vast industry expertise.

Carlsquare Partners



Caspar Graf Stauffenberg
Managing Partner
Carlsquare since 2012
Previously Aequos, MAP, Binding Group



Anders Elgemyr
Managing Partner
Carlsquare since 2012
Previously Glitnir, Fischer Partners, MAP



Anders Bo
Managing Partner
Carlsquare since 2019
Previously Westlb, HSH, Dansk Merchant Capital



Dr. Manfred Drax
Partner
Carlsquare since 2014
Previously Dornier, Novartis



Nico Schmidt-Weidemann
Partner
Carlsquare since 2016
Previously CMC, BPCE



Michael Moritz
Managing Partner
Founded Carlsquare in 2000
Previously Treuhandanstalt Berlin, Doertenbach & Co.



Daniel Dies
Partner
Carlsquare since 2011
Previously MCF Conergy



Daniel Garlipp
Managing Partner
Carlsquare since 2011
Previously KPMG, Kuna & Co., Roland Berger



Flemming C. Pedersen
Managing Partner
Carlsquare since 2019
Previously BG Bank, HSH, Dansk Merchant Capital



Morten Kjærulff
Partner
Carlsquare since 2019
Previously Nordea Securities, HSH, Dansk Merchant Capital



Dr. Arnold Holle
Managing Partner
Carlsquare since 2018
Previously World Bank, BCG, UBS, Goldman Sachs



Erik Lundberg
Head of M&A Sweden
Carlsquare since 2017
Previously Stella EOC, EY

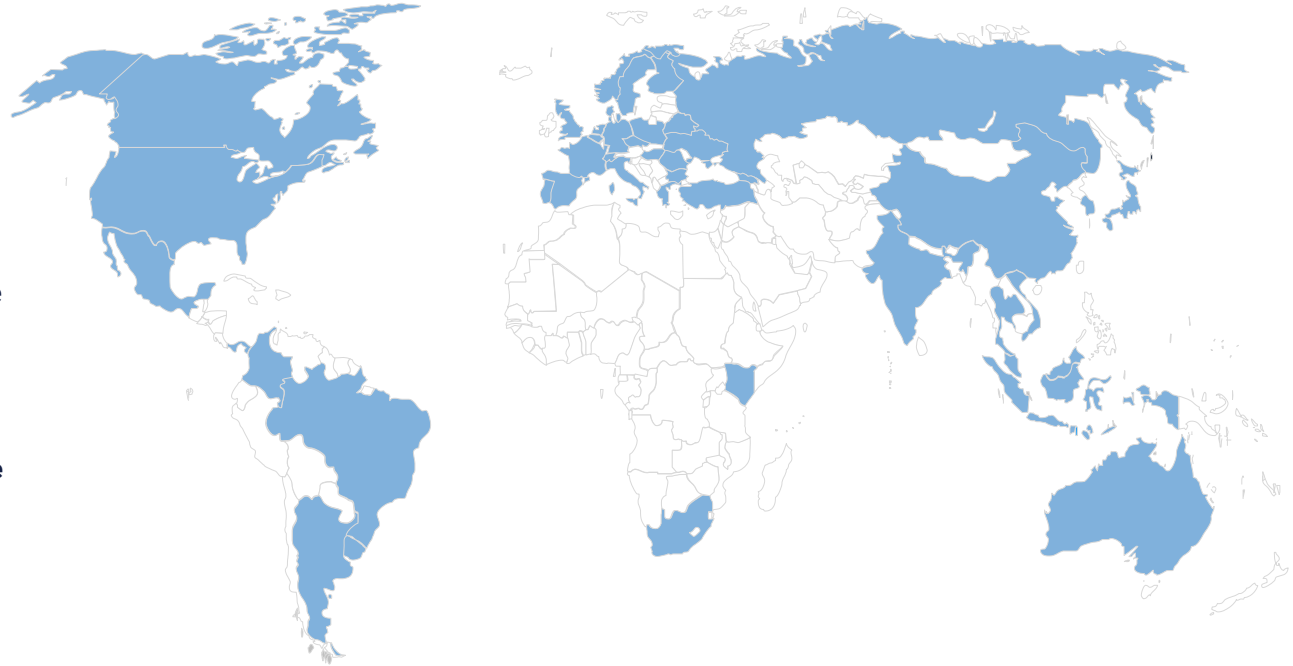


Mark Miller
Managing Partner
Founded Carlsquare In 2000
Previously Deutsche Bank, Bertelsmann

Our Globalscope Partnership gives us access to global buyers and targets

Gobalscope

- Globalscope is an international partnership of mid market M&A boutiques led by entrepreneurs
- Globalscope was founded in 1987 and has 55 partners from 46 countries on 5 continents with more than 600 advisors
- The partnership has closed more than 175 transactions in the last twelve months
- **Carlsquare has been the most active dealmaker in Globalscope 2010-2011 / 2013-2018**
- **Carlsquare also advised on the most valuable deal in Globalscope 2016-2018**



55

Partners

46

Countries

5

Continents

600+

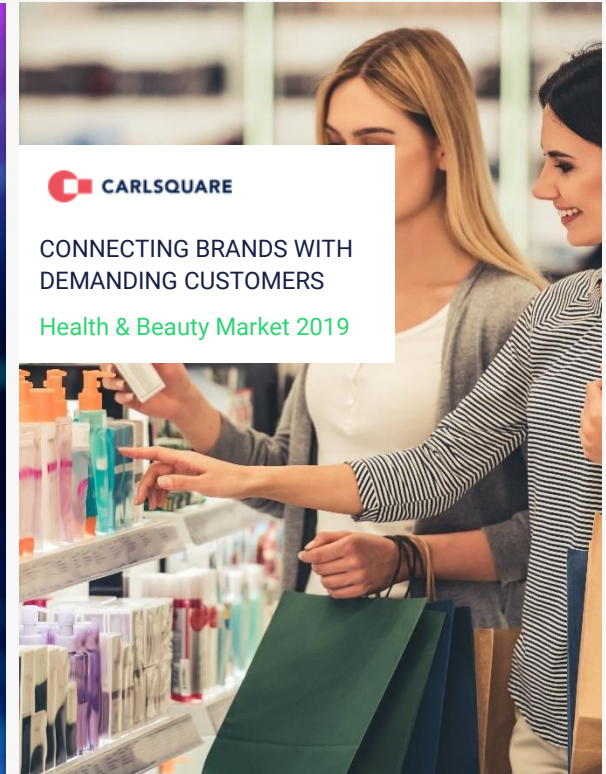
Advisors

175

Transactions
(last 12 Months)

Carlsquare annually publishes industry specific M&A reports

Additional M&A analyses published by Carlsquare



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