HARDMAN&CO.

2022 Pharma Statistics

8.7% growth – but worrying signs

Dr Martin Hall,

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8.7% growth – but worrying signs

An efficient reporting system has seen all the listed multinational pharmaceutical companies announcing results for 2022, which has given us the opportunity to update our industry statistics and drug database. This report provides the first snapshot of the global and US rankings of the top 20 drug companies for 2022. 2022 was characterised by 8.7% underlying growth, offset by a large forex impact (-12%), due to USD strength. Much of the growth was driven by antibody-derived drugs and vaccines for treatment and prevention of COVID-19. A worrying sign was the unusually large number of drugs that saw sales decline in the past year.

- **Global market:** Hardman & Co estimates that the underlying global prescription drug (Rx) market grew 8.7% in 2022, to $1,056bn, from $1,059bn in 2021. Underlying growth, excluding COVID-19 vaccines and therapies, was 6.4%, which is consistent with figures given in the annual reports of some drug companies.

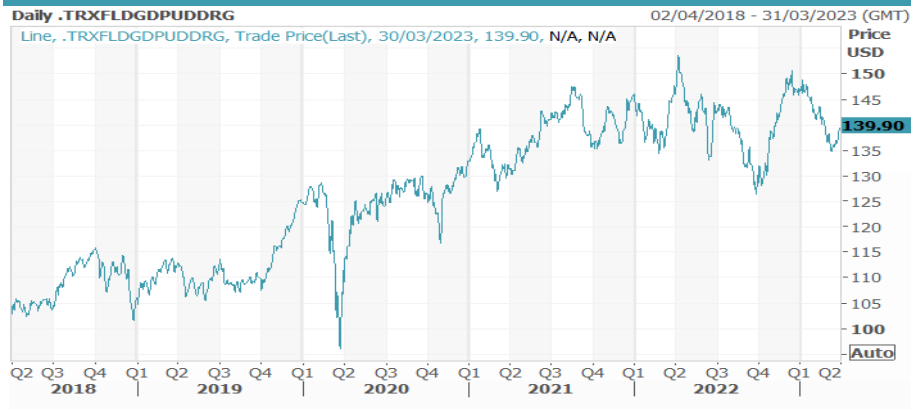
- **US market:** Growth in the US market was well below historical levels, rising just 5.0%, to $443bn, from $422bn in 2021, representing 42% of the global market. However, much of this was due to COVID-19 products. Excluding these, US market growth was only 3.4%, not helped by only 37 (down from 50 in 2021) new chemical entities (NCEs) and biologics being approved by the FDA.

- **Oncology:** Drugs to treat cancer are perceived as an important growth driver. However, our preliminary analysis shows a disappointing rate of sales growth, at 0.7%, to $185bn, in 2022. The patient population, efficacy, slow approval rate, loss of patent protection and negative forex are all contributory factors.

- **Best-selling drugs:** COVID-19 vaccination and treatment programmes continued to have a major effect on the numbers. Comirnaty (Pfizer) was the best-selling product in 2022, with sales of $37.8bn ($36.8bn). Humira (AbbVie) was the biggest drug, with sales of $21.2bn (+2.6%, vs. $20.7bn). The top 10 drugs had global sales of $167.9bn in 2022, representing 15.9% of the entire market.

- **R&D investment:** The top 20 drug companies by sales reinvested 19.2% of Rx drug sales into new drug development, spending $138bn out of the total spend of $161bn by the 41 largest companies. The average R&D spend was $6.9bn, ranging from $12.9bn (Roche) to $2.5bn (Vertex).

Global pharmaceutical sector performance



Source: Refinitiv

Dataset constituents

This short report represents an executive summary of our extensive pharmaceutical database. The themes highlighted in this summary have been expanded, with detailed information about individual company operating performance versus industry weighted averages.

Current constituents of dataset

Companies currently analysed			
Company	**Ticker**	**Company**	**Ticker**
AbbVie	ABBV	Merck & Co	MRK.N
Amgen	AMGN	Merck KGaA	MRK.DE
Astellas	4503.T	Mitsubishi Pharma	8058.T
AstraZeneca	AZN	Moderna	MRNA
Bausch Health	BHC	Novartis	NOVN
Bayer	BAYGN	Novo Nordisk	NOVO
Biogen	BIIB	Otsuka Holdings	4578.T
Boehringer Ingelheim	-	Pfizer	PFE
Bristol-Myers Squibb	BMY	Regeneron	REGN
Daiichi Sankyo	4568.T	Roche	ROG
Eisai	4523.T	Sanofi	SAN
Eli Lilly	LLY	Seagen	SGEN
Gilead Sciences	GILD	Shionogi	4507.T
GlaxoSmithKline	GSK	Sumitomo Dainippon	4506.T
Hikma	HIK	Takeda	4502.T
Horizon Therapeutics	HZNP	Teva	TEVA
Incyte	INCY	UCB	UCB
Ipsen	-	United Therapeutics	UTHR
Jazz Pharma	JAZZ	Vertex	VRTX
Johnson & Johnson	JNJ	Viatris	VTRS
Lundbeck	LUN		

Source: Hardman & Co Life Sciences Research

Companies included historically

Companies included in historical data		
Abbott Labs	Daiichi	Schering
Actavis/Watson	Fisons	Schering-Plough
Actelion	Forest Labs	Schwarz Pharma
Akzo Nobel	Fujisawa	Serono
Alexion Pharma	Genentech	Shire Pharma
Allergan	Genzyme	SmithKline Beckman
Ares-Serono	Green Cross	Solvay
Astra	Hafslund Nycomed	Sumitomo
Altana	Hoechst	Syntex
Aventis	Ivax	Synthélabo
Banyu	Kyowa Hakko	Tanabe
Barr Labs.	Marion Merrell Dow	Taisho
BASF-Boots	Meiji Seika	Teijin
Baxalta (Baxter)	Mitsubishi Tanabe	Upjohn
Beecham	Monsanto	Valeant
Boehringer Mannheim	Mylan Labs	Warner-Lambert
Boots	Nycomed Altana	Wellcome
Celgene	Ono	Wyeth
Celltech	Pharmacia Corp	Yamanouchi
Chugai	Rhone-Poulenc	Yoshitomi
Ciba	Roussel Uclaf	Zeneca
Cyanamid	Sandoz	

Source: Hardman & Co Life Sciences Research

2022 global pharma market

Background

Updating our industry database and generating first cut of global 2022 rankings…

Although the focus of Hardman & Co is predominantly on companies in the small- to mid-sized market capitalisation range, when writing research reports, it is important to position them relative to the industry in which they operate. All the major global pharmaceutical companies, including three private companies (Boehringer Ingelheim, Servier and Ipsen), have reported results for 2022 in the past few weeks; therefore, we have taken the opportunity to update our industry database and generate the first cut of global rankings for 2022. Results from the Japanese companies, which mostly report results for a fiscal year ending in March, have been corrected for a December year-end by analysing the quarterly data. For an industry that requires a long investment cycle – it still takes, on average, 10 years from discovery to launch of a new drug – decisions made many years ago have important consequences on current financial results. Therefore, looking back at operational performance over 20 years reveals how different company strategies have panned out.

Our pharmaceutical database

…basing our analysis on annual accounts of 41 multinational companies

Whatever the size of a company, it is imperative to outline the commercial market opportunity that the company's (often disruptive) technology is targeting. While such work requires significant research, it often constitutes only a very small part of the overall report. It does, however, have the advantage of providing us with a global commercial dataset that is reliable and independent of third-party input.

Pharmaceutical sales are defined as anything that requires a prescription (Rx), and specifically excludes over-the-counter (OTC) and consumer products. It is important to note that this does include generic drugs, biosimilars and vaccines, all of which require a prescription.

Our database of pharmaceutical companies and drugs goes back to 1985. All the data are based on net ex-factory sales reported by companies in their annual reports and stock exchange filings, and exclude all discounts and allowances, chargebacks, returns and government rebates, such as Medicaid and Medicare. All reported numbers are converted into USD at daily average exchange rates – available from the Bank of England website. These data, therefore, have been compiled consistently and with great care, so that direct comparisons among companies can be made.

We have based our analysis on the annual accounts of, currently, 41 multinational companies (historically, this equates to more than 100 companies, including all those that have been acquired or merged), which cover 79% of the global pharmaceutical market and 93% of the US drug market. Market-share statistics have been calculated from our provisional estimate for the global prescription drug market.

Data from the large Chinese companies are either inconsistent and/or difficult to find, and represent the only notable omission from our dataset. However, data from western companies operating in China and consolidated within accounts are included. The Chinese market is known to be one of the leading pharmaceutical markets worldwide, and is viewed as a significant growth opportunity.

Continuing impact of COVID-19

COVID-19 made stock markets more appreciative of science and technology

Over the past two years, COVID-19 has greatly influenced the global pharma industry. Initially, many countries adopted lockdowns in an attempt to curtail the spread of the virus, which had an impact on the ability of patients to attend hospitals and specialist clinics or to see their general practitioners. This, in turn, had an effect on certain drug sales. After the development and approval of vaccines, this was

followed by global vaccination programmes to prevent the spread of the virus, This has been followed, mostly in 2022, by the availability of COVID-19 treatments. While the past two years have been challenging, they will also likely be chronicled as one of the best periods for the recognition and appreciation of science.

2022: underlying growth offset by forex

Underlying global Rx drug market growth estimated at 8.7% in 2022…

Based on the reported sales outcomes from 41 major pharmaceutical companies around the world, Hardman & Co estimates that the global Rx drug market had underlying growth of 8.7% in 2022 but, in reported terms, this translated to a fall of 0.3%, to $1,056bn, due to the strength of the USD, from $1,059bn in 2021. A key driver of this performance was the contribution from COVID-19 vaccines and drugs. These products generated reported sales of $93.7bn ($102.8bn excluding forex, vs. $73.7bn in 2021), excluding the Chinese (Sinopharm and Sinovac) and Russian (Sputnik V) vaccines.

…but much of this was derived from sales of COVID-19 vaccines and therapies…

…with underlying growth of 6.4%, excluding COVID-19-related products

However, excluding all COVID-19-related vaccines and treatments, the global market grew at a more modest rate of 6.4%. This underlying growth rate is similar to IQVIA market research estimates, which have appeared in a number of annual reports, indicating that the MAT (moving annual turnover) for the global pharma market to September 2022 was in the range 6.0%-6.5%.

The derivation of these market growth rates is shown in the following table. It highlights how the markets outside the US fared better than the US itself, which is quite unusual. Part of the expectation for this is that Rest of World (RoW) markets recovered more slowly from the pandemic – so there has been an element of catch-up. Also, the rate of drug approvals, particularly in the EU, was strong last year, leading to a sustained level of new drug launches.

Global pharmaceutical market – calculation of growth

$bn	2020	2021	2022	Δ ('22/'21)
US				
Underlying market	375	399	413	+3.5%
COVID-19-related products	1	23	30	+31.2%
US reported sales	**376**	**422**	**443**	**+5.0%**
RoW				
Underlying market	554	577	624	+8.1%
COVID-19-related products	1	50	73	+46.0%
Underlying sales	555	627	697	+12.4%
Impact of forex	-	+10	-84	
RoW reported sales	**555**	**637**	**613**	**-3.8%**
Global market				
Underlying market	930	975	1037	+6.4%
COVID-19-related products	1	74	103	+25.5%
Underlying sales	931	1049	1140	+8.7%
Impact of forex	-	+10	-84	
Global reported sales	**931**	**1,059**	**1,056**	**-0.3%**

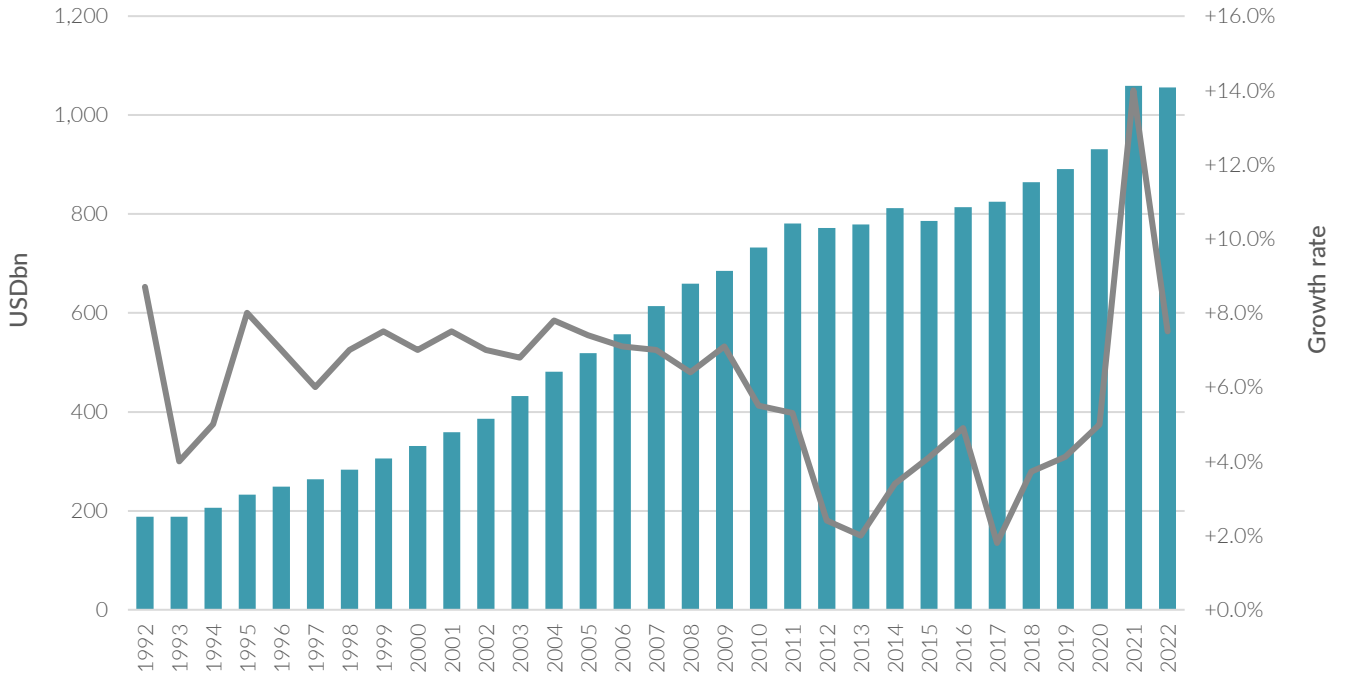
Source: Hardman & Co Life Sciences Research

CAGR over period 2017-22 was 5.06%…

…or 3.13%, excluding COVID-19 products – a concerning long-term trend

Following a long period (1995-2017) during which the rate of growth of the drug industry was trending downwards, the period 2017-2021 saw a strong return to growth. In the 10-year period 1996-2016, the CAGR of the global pharmaceutical market was 3.87%, whereas, over the past five years (2017-2022), the rate of growth rose to 5.06%. However, excluding the COVID-19-related products, the CAGR for the industry over the past five years has been broadly the same as the long-term average, at 3.13%. The pharma industry growth rate is always a fine balance between the pricing of disruptive and novel new drugs against the loss of patent protection/competition from cheaper generics, government-imposed price reductions, and the ability of payors to pay for the increased demand for medicines.

Global prescription drug market, 1992-2022



Source: Hardman & Co Life Sciences Research

Key drivers

Top 20 companies increase market share to 69.6% in 2022

The top 20 ranked drug companies increased, significantly, their share of the world market in 2022, to 69.6%, compared with 65.6% in 2021. The main contributor to this increase was Pfizer, benefiting from sales of COVID-19-related products and the benefits of M&A activity.

COVID-19

Although the impact of COVID-19 on world populations was far less severe in 2022, governments still preferred to retain their vaccination programmes to prevent further outbreaks and to protect the more vulnerable people in society. Also, following approvals in 2021, drugs to treat COVID-19 saw significant sales in 2022. Unusually, sales of COVID-19 products outside the US are more than double the level derived in the US, and grew 46% in 2022. In the US, COVID-related products grew 31.2%, to $30.5bn. In 2023, in the absence of another major outbreak, we expect sales of COVID-19 vaccines and treatments to decline.

US market

US market remains an important contributor to global growth…

Historically, the US market has been an important contributor of growth to the global outcome. However, because COVID-19 was a global phenomenon, again in 2022, growth outside the US exceeded growth in the US. However, as shown in the previous table, even excluding COVID-19-related products, growth outside the US exceeded growth in the US, but this was hidden on translation into USD.

…rising 5.0%, to $443bn, in 2022…

…equating 42.0% of the global market

But growth was only 3.5% excluding COVID-19 vaccines and drugs

Adding together the ex-factory sales in the US reported by the 41 companies in our dataset, Hardman & Co estimates that the rate of growth for the US prescription drug market in 2022 was $443bn, a rise of 5.0%, from $422bn in 2021. On this basis, the US contribution to the global market rose to 42.0% in 2022, up from 39.8% in 2021, due to the impact of forex on non-US sales. Validation of this estimate is derived from the fact that US sales reported by the top 20 companies grew by a weighted average of 5.0% in 2022. Excluding COVID-19-related products, Hardman & Co estimates that the US market grew just 3.5% in 2022.

Fundamentals remain solid…but vigilance is needed

- **Demographics:** Populations globally are ageing, with rising per capita income, changing lifestyles and dietary preferences, and improved access to healthcare. However, we are wary that the average life expectancy in developed countries may have peaked because of lifestyle decisions, with diets, particularly of processed foods, containing far too much salt, sugar and other harmful additives.
- **Unmet medical needs:** A number of diseases are currently untreatable, or are poorly treated by current therapy options. Treatment of chronic diseases, such as diabetes, respiratory and mental health conditions, will continue to witness increasing demand globally. But our concern here is that drug companies are focusing R&D resources into rare diseases, rather than the high-volume markets.
- **Innovation:** New and innovative products that aim to satisfy unmet medical needs continue to be developed and launched, particularly in pharmaceutical markets in developed countries. There is also the emergence of gene and cell therapies for personalised medicine.
- **Access/demand:** Global demand through increased access to healthcare, coupled with an expansion in national healthcare budgets, per capita income and insurance coverage, particularly in developing countries and emerging drug markets, will continue to drive overall growth in pharmaceutical consumption.
- **Regulation:** Over the next five years, 50-60 new drug approvals are expected each year. However, we are wary of the low number of drugs being approved that have been derived and developed by the major companies, increasing their reliance on the small, innovative companies. This is only a short-term solution.

Macroeconomics

- **Economic growth:** Although short-term economic growth looks restricted, sustained economic growth in the long term will remain a key catalyst for global pharmaceutical growth.
- **Payors/drug pricing:** There is a fine balance between generating a sensible return on R&D investment and affordability. Payors will want to see strong pharmaco-economic evidence that drug pricing is supported by improved patient outcomes. As an example of government intervention, the Chinese recently slashed the national reimbursement list price for oncology drugs. Also, the passing of drug pricing provisions by the US senate occurred in 2022.
- **Inflation:** 2022 saw a return of global inflation. In our 2021 report, there were early signs that the world was entering a period of significant inflation, and we cautioned that it was likely to be much higher than economists were forecasting. This proved to be the case. This year, we caution that elevated global inflation is likely to persist for much longer than forecasters and governments are indicating.
- **Capital:** Development of drugs is capital-intensive. The interlink between inflation and interest rates could lead to a financing crunch. As we progressed through 2022, it was clear that the ability of drug and biotech companies to raise more capital was getting increasingly difficult, as markets became more risk-averse. At the time of writing, there are 10 UK healthcare companies that will need to raise capital in the coming six months.
- **Global politics:** While there is undoubtedly recognition of the rising demand for pharmaceuticals, questions remain about how, ultimately, governments will be able to afford this increased burden. In addition, at the time of writing, there is considerable uncertainty over both the outcome of, and the potential time taken to reach an end to, the current conflict in Eastern Europe.

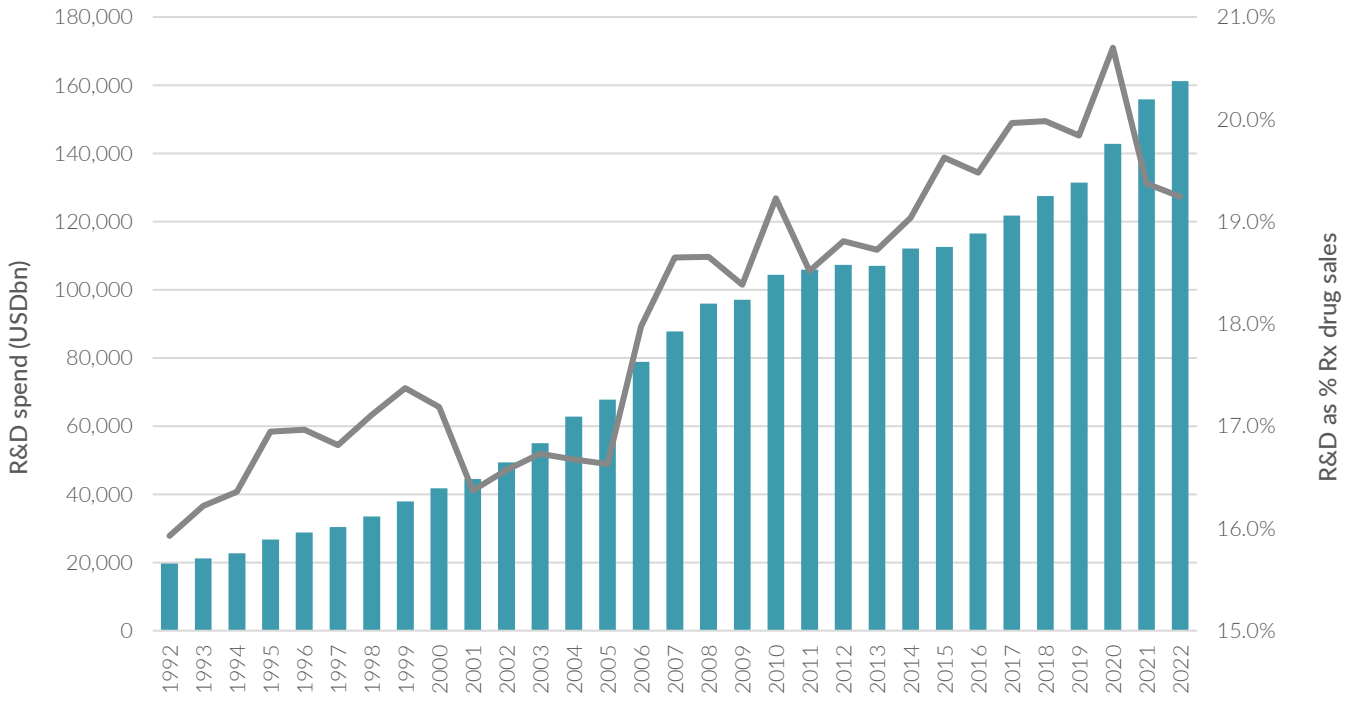
Investment in R&D remains solid

- The total R&D spend on pharmaceuticals declared in the audited accounts of 41 drug companies was $161.2bn in 2022, an increase of 12.9%, compared with $155.8bn in 2021. There is probably an unquantifiable additional 15%-20% (guesstimate only) being invested by small companies, biotech industry and research laboratories.
- Cumulative R&D spend by the top 20 companies was $138.4bn in 2022 ($120.8bn in 2021), out of a total spend of $155.9bn by the top 30 companies, highlighting the enormous difference between the major companies and the smaller players.
- The average R&D spend of the top 20 companies in 2022 was $6.9bn ($6.7bn in 2021) – ranging from $12.9bn (Roche) to $2.5bn (Vertex).
- In 2022, the top 20 companies reinvested a weighted average of 19.2% of Rx drug sales into new drug development, compared with 19.8% in 2021. This is the third year running that that we have observed this downward trend. For our entire universe, the R&D spend was 19.2% of sales.
- A slight note of caution, as for sales, the absolute numbers will have been affected also by currency on translation. However, the percentages should be reliable, with both sales and R&D spend being equally affected by forex.

CAGR in R&D spend by top 20 companies has been 5.1% over past decade

Over the past 10 years, the top 20 companies by R&D spend have increased investment at a CAGR of 5.1%, from $83.7bn (19.7% of pharma sales) to $138.4bn (19.2%). In 2022, the highest relative spenders were Regeneron (52.1% of sales), Vertex (28.4%) and Biogen (27.9%), while the lowest spenders were AbbVie (11.2%), Pfizer (12.8%) and Novo Nordisk (13.6%). It should be noted that the 20 constituent companies that comprise the top 20 are different each year. Other companies further down the ranking reinvest a considerably higher percentage of sales back into R&D – e.g. Seagen (78.8%) and Incyte (57.7%).

Pharmaceutical R&D investment, 1992-2022



Source: Hardman & Co Life Sciences Research

Focus on oncology

Incidence of, and mortality from, cancer remains a global problem

The burden of cancer was emphasised in a detailed report[1] published by the World Health Organisation (WHO) in 2020, which also emphasised the need for immediate action. The report highlighted both the global incidence and high mortality rates. Radiation remains the first-line treatment for cancer patients, and this is frequently followed with chemotherapy. Consequently, this is viewed by many commentators as a high-growth opportunity for the drug industry, and there are many companies, both large and small, that are focused on this area.

Good growth in sales…

…but not as high as expected

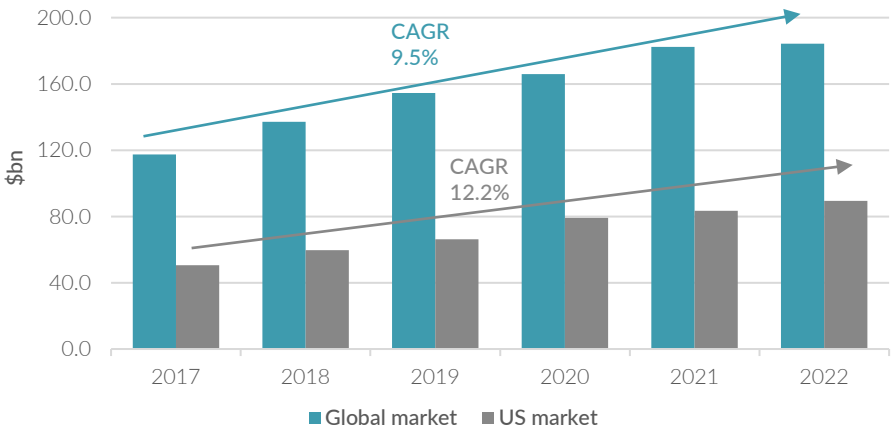
Despite all the statistics, positive signals, drug launches and increases in five-year life expectancy, when ex-factory sales data are released each year, it always surprises me that the overall growth rate seems muted, compared with expectations. Yes, there are some drugs with extremely large sales, but these are being offset by other factors that are limiting overall growth.

Global market grew 0.7%, to $185bn, in 2022…

…but 7.2% growth in US market, to $89.6bn, likely more representative

In 2022, sales from the 175 oncology drugs that we monitor rose only 0.7%, to $185bn, representing ca.18% of the global Rx market. Clearly, translation of non-US sales into USD had an impact on these numbers. Growth in the US market, valued at ca.48% of the global market, would be more representative of the underlying growth rate, as currency fluctuations are eliminated. In 2022, the US oncology market grew 7.2%, to $89.6bn, based on data for 75 drugs. The five-year CAGRs (2017-22) for the global and US oncology markets have been 9.5% and 12.2%, respectively.

Oncology market trends – global and US



Source: Hardman & Co Life Sciences Research

Effectiveness should focus on mortality rates, rather than five-year life expectancy, to eliminate other influences, such as early diagnosis

Positive influences on the market include the demographics and incidence of the disease, and the introduction of new, often targeted, drugs. One could argue that the rate of market growth is limited by the fact that chemotherapy is administered via a number of short courses, rather than continuous therapy, thereby limiting sales. Companies will always highlight that the five-year survival rates have improved. However, there are clearly some negative influences, the most obvious being that the effectiveness of chemotherapy is still far too low, and that the mortality rates from cancer remain high. The key question for me is whether these drugs have altered the mortality rates – i.e. has the number of deaths from prostate cancer per 100,000 of males dropped over the past 10 years? The same could be said for breast cancer in females. There is a risk that the five-year survival rates are improving because of earlier diagnosis, which is hiding the true position. This situation is likely to be exacerbated further through the introduction highly sensitive liquid biopsies.

[1] WHO report on cancer: *Setting priorities, investing wisely and providing care for all.* Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0 IGO.

Cost and margin analysis

The full report contains an analysis of the core elements of the income statement to generate a weighted industry average for each element. This allows peer comparisons and an assessment of company performance against the industry average. A key differentiating feature of our analysis is that it investigates the pharmaceutical component of each company only, which is important when considering companies that have multiple divisions, e.g. Bayer (Crop Sciences, Consumer Health) and Johnson & Johnson (Consumer, MedTech).

Although accounting standards have changed over the years, and IFRS captures all costs in an attempt to be as transparent as possible, this can lead to some variance and discrepancy – the most obvious being the amortisation of goodwill following acquisitions. All companies try to show themselves in the best possible light, often because executive bonuses are determined by such factors, and generate "adjusted" or "core" figures. However, this also leads to discrepancies. For example, US companies generally have very large share-based costs, and eliminate them from non-GAAP earnings. In contrast, Roche considers them to be an essential operating cost, and an integral part of attracting and retaining key staff – so does not eliminate them. Therefore, in order to make direct comparisons among companies, wherever possible, we endeavour to adopt the following approach to each pharmaceutical income statement.

Income statement	
Core element	**Comment**
Net sales	Included: Rx drugs, vaccines, generics Excluded: OTC, consumer medicines
Cost of goods sold (COGS)	
Selling, general & administration (SG&A)	
Research & development (R&D)	
Share-based costs	Under IFRS, included in COGS, SG&A, R&D
Other operating income:	
Alliance/co-marketing income	
Royalties	
Licensing income	
Milestone receipts	
Legal settlements	
Grants	
Other operating expenses:	
Alliance/co-marketing costs	
Restructuring charges	Usually cash, and often recurring
Legal costs	Protection of IP is part of normal operations
Acquisition costs	Part of growing the business
Underlying EBIT	
Amortisation of goodwill	Following acquisition
Impairment charges	Asset writedowns
In-process acquired R&D	Following acquisition

Source: Hardman & Co Life Sciences Research

- **Sales:** Our analysis is based on consolidated net sales of drugs, generics and vaccines, after all discounts and rebates. It specifically excludes OTC, consumer medicines and drugs for animal health. We are careful not to use the word "revenues", and specifically treat items like royalties, alliance/co-marketing income, etc., as "other operating income". This is important when looking at the cost ratios as a percentage of sales.
- **Share-based costs:** Although these are non-cash, they are included in our costs, as they are under IFRS, because they form an essential part of operations to recruit and retain staff.

- **Legal settlements and costs:** Legal costs are an everyday part of operations in the pharmaceutical industry, and a genuine cost of doing business and protecting the IP. Therefore, once again, such items should not be added back in an attempt to boost apparent operating performance, as they are recurring every year, albeit the quantum can be quite volatile.
- **Restructuring charges:** The costs of restructuring, mostly a cash item, are frequently added back to profits, as most management teams consider them to be "one-off". However, we believe that restructuring charges simply reflect that the company is inefficient, and that operating costs have got out of control and need to be reined in. So, to align with cash earnings, our policy is to not add them back. Furthermore, an investigation of the annual reports and regulatory filings of most companies indicates that they are often substantial, and appear every year over many years – so they can hardly be considered "one-off"!
- **Amortisation/in-process R&D:** While there is a cost associated with acquisitions, which must be recognised, in order to compare the operating performance among companies that have made acquisitions and those that have not, we also exclude amortisation charges from the calculation of underlying EBIT. However, it is important to understand how much money the industry writes off each year, and so we maintain a list of such charges – amortisation of goodwill, in-process acquired R&D writedowns and asset impairment charges.

The vast majority of companies produce numbers that are transparent and consistent. However, there are some exceptions where the transition from IFRS to their definition of core earnings is "purposely" obscure.

Our analysis is based on the pharmaceutical segment from 41 of the top-selling drug companies by sales. It should be pointed out that there are three notable omissions from the analysis, largely because of the lack of relevant information. These include:

- **Servier:** This is a private multinational company based in France that specialises in oncology and cardiovascular medicines. In the year to end-September 2022, Servier reported branded and generic drug sales of €4,723m, or $4,961m, which would position it at #34 in our ranking. However, insufficient consistent information is provided on an annual basis for us to be able to include the company in our margin analysis. The company moved up the ranking in 2022, following its acquisition of oncology company, Agios Pharmaceuticals, which drove a 41% increase in sales of cancer drugs.
- **Sun Pharmaceuticals:** Sun is the largest Indian pharmaceutical company, specialising in the manufacture and commercialisation of generic drugs. It is ranked #1 in India, and is thought to be the 10th largest supplier of generics in the US market. Sun is a listed entity (SUNPHARMA.NS), and, consequently, it does have an informative annual report and presentation. However, while the sales would allow us to place it at #33 in our ranking, the presentation of costs – manufacturing, marketing and R&D – excludes the personnel costs, which are stated separately, and, therefore, on a different basis from the standard IFRS presentation – so the data are not included currently in our margin analysis.
- **Chinese drug companies:** Although there is a considerable amount of information on Chinese-based drug companies, it can be difficult to interpret, and it is unclear whether the data are presented on a like-for-like IFRS basis. Again, for reasons of inconsistency, data on the Chinese companies are not included in our analysis. However, we note that the Chinese market is well within the top 10 markets in the world, and that there are some large, local drug companies that operate in that market and ought to be included in our global drug ranking.

About the author

Dr Martin Hall

Martin started in the City as a pharmaceuticals and healthcare analyst in 1987, working at Morgan Grenfell. Initially analysing UK companies, he quickly raised this to European coverage at UBS from 1990, and then on to global coverage at HSBC from 1992, where he became Head of Global Pharmaceutical/Healthcare Equity Research. In 2005, he set up as an independent Life Sciences Analyst and Corporate Broker under the umbrella of Eden Financial Limited. Martin is acknowledged for his thought-provoking and opinionated research. He has one of the most extensive global industry databases and is a passionate follower of pharmaceutical, healthcare and life science facts and figures, which are adapted for use in his research reports. He joined Hardman & Co in June 2013.

Martin qualified as a pharmacist (B.Pharm.Hons) at the School of Pharmacy, University of London, and has a PhD in Neuropharmacology, also from the University of London. After two years of post-doctoral research under a Royal Society Fellowship at the Collège de France, Paris, he became leader in Biochemical Pharmacology at the Parke-Davis Research Centre in Cambridge (then part of Warner-Lambert Corporation, now Pfizer). Martin is a member of the Royal Pharmaceutical Society of Great Britain.

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