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Undergraduate Dissertation

Sustainability analysis of eleven pharmaceutical companies: Assessing access to medicines in low-and-middle income countries (LMICs)

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Abstract

This dissertation aims to create a framework that allows to analyse and compare the information that pharmaceutical companies provide in their integrated reports, annual reports, and websites. Attention will be paid to the measures of access to medicines that different companies offer especially targeted at low- and middle-income countries.

The purpose of this research project is to create a ranking of the pharmaceutical companies that offer the greatest access measures in these countries, aiming to discover which ones are being implemented and which ones could be introduced in order to further ensure and improve access to medicines.

Due to the relevance that Environmental Social Governance (ESG) criteria have acquired in recent times, there is a need to create a framework that allows us to compare the information that the different companies offer in order to make an analysis not only transversal (between different companies) but also longitudinal (over time).

Key words: ESG, pharmaceutical companies, access to medicines, LMICs, corporate social responsibility.

Resumen

Este trabajo final de grado (TFG) tiene como objetivo crear un marco de trabajo que permita analizar y comparar la información que las empresas farmacéuticas ofrecen en sus informes integrados, informes anuales y páginas web. Se prestará atención a las medidas de acceso a medicinas que las distintas compañías ofrecen especialmente dirigidas a los países con ingresos medios y bajos.

Se trata de un trabajo de investigación que busca crear un ranking ordenando las empresas farmacéuticas que mayores medidas de acceso ofrecen en estos países, buscando conocer cuáles son y cuáles podrían implementarse para seguir asegurando y mejorando el acceso a medicinas.

Debido a la relevancia que han adquirido los criterios ambientales, sociales y de gobernanza (ASG) en los últimos tiempos, surge la necesidad de crear un marco que nos permita comparar la información que las distintas compañías ofrecen para poder así hacer un análisis no solo transversal (entre distintas compañías) sino también longitudinal (a lo largo del tiempo).

Palabras clave: ASG, empresas farmacéuticas, acceso a medicinas, países con rentas medias y bajas, responsabilidad social corporativa

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1. INTRODUCTION:

Pharmaceutical companies play a critical role in the modern healthcare landscape. Their products, ranging from prescription medications to over-the-counter drugs, are used to treat a wide range of medical conditions and improve the quality of life for millions of people around the world. However, the impact of pharmaceutical companies extends beyond the realm of healthcare. These companies have significant social and economic influence, affecting everything from public health policy to the global economy.

Nevertheless, their impact is not evenly distributed. Low and middle-income countries (LMICs) face a unique set of challenges when it comes to accessing the medications these countries need. Access to essential medicines is problematic for one third of all persons worldwide. The price of many medicines (i.e., drugs, vaccines, and diagnostics) is unaffordable to the majority of the population in need, especially in least-developed countries, but also increasingly in middle-income countries (Stevens et al., 2017).

Pharmaceutical companies have contributed to significant improvements in global health outcomes by investing in research and development of life-saving drugs, vaccines, and treatments. However, these advancements are often out of reach for people in LMICs due to high prices and lack of access to healthcare services. Additionally, some pharmaceutical companies have been criticised for engaging in unethical practices, such as price gouging and patent abuse, that make it even harder for people in LMICs to access essential medications (Intelligence & Intelligence, 2021).

The industry has come a long way over the last few years in terms of socially responsible behaviour and is trying to clean legacy issues with disclosure and selling practices. While more needs to be done in improving global access to medicines and addressing antimicrobial resistance (AMR), the COVID-19 pandemic has underlined how the industry can come together to translate scientific innovation into profound societal benefits (Mather et al., 2022).

Even though innovation has been the underlying driver of pharma sector shareholder's returns over the past decades, it is no longer like this, or at least not exclusively so. Environmental, Social and Governance (ESG) metrics are increasingly important. As it has been proved, there is a strengthening correlation between ethical behaviours, ESG policies and underlying share price performance (Mather et al., 2022).

First, it should be explained what ESG investing refers to. It is a set of standards related to a company's behaviour used by socially conscious investors to screen potential investments.

Environmental criteria consider how a company safeguards the environment, including corporate policies addressing climate change, for example. Social criteria examine how it manages relationships with employees, suppliers, customers, and the communities where it operates. Governance deals with a company's leadership, executive pay, audits, internal controls, and shareholder rights (Investopedia Team, 2023).

There is no doubt that ESG is becoming an increasingly important part of the investment decision making process. ESG is not a short-term trend and is increasingly a driver in investment decisions, investors have started integrating ESG considerations into their fundamental research. This is represented in the cumulative inflows of ESG active equity funds vs. an outflow elsewhere. Good examples could be found especially within Pharma over the recent years when ESG factors have impacted the performance of stocks – there is alpha in integrating ESG considerations into the investment process (Kapadia et al., 2022).

Before diving deeper into the different ESG ratings, let's take a look at the ESG reporting framework to identify the key factors that need to be included and how to measure them. Companies have been progressively increasing their disclosure of ESG-related projects and data in their annual sustainability, corporate social responsibility (CSR), or annual financial reports. There are several reporting frameworks that aim to guide companies on how to measure, assess and report their ESG initiatives, risks, and opportunities. The main reporting frameworks and standards for ESG reporting are:

- Global Reporting Initiative (GRI)¹: The GRI Standards make it possible for any organisation, regardless of size, sector, or public or private status, to understand and report on its effects on the economy, environment, and population in a comparable and reliable manner, improving transparency on its contribution to sustainable development.
- Sustainability Accounting Standards Board (SASB)²: Organisations can give industry-based sustainability disclosures based on SASB Standards regarding

¹ See <https://www.globalreporting.org/standards> accessed in May 2023

² See <https://www.sasb.org/standards/> accessed in May 2023

opportunities and risks that have an impact on enterprise value. They determine the subset of environmental, social, and governance issues that have the most impact on 77 industries' financial performance and corporate value.

- United Nations Sustainable Development Goals (UN SDGs)³: The UN SDGs are a collection of 17 goals adopted by the UN member states in 2015 to achieve the 2030 Agenda for Sustainable Development. The SDGs provide a blueprint for countries to achieve a more sustainable future, including ending poverty and hunger, improving health and education, combating climate change, and protecting oceans and forests.
- European Union (EU) Taxonomy⁴: The European Commission's Technical Expert Group on sustainable finance (TEG) has developed a classification system, or taxonomy, for environmentally sustainable economic activities. In order to create a framework for identifying the components of an enterprise that have a materially positive impact on the climate, the group screened activities across a wide range of industries, including energy, transport, agriculture, manufacturing, and real estate. The taxonomy offers guidance on the parameters of adverse impact with do-no-harm standards.

Following the frameworks, the companies identify the key ESG issues they prioritise, which forms the basis of their ESG assessment and reporting. Afterwards, several ESG rating providers evaluate companies based on disclosed ESG information. The two most important are:

- Sustainalytics⁵: measures a company's exposure to material ESG risks that are specific to its industry and how well it is managing those risks. Each of the three ESG pillars are subdivided into small categories. There are five risk categories indicating the level of ESG risk to a company's enterprise value: Negligible (0-10), Low (10-20), Medium (20-30), High (30-40), Severe (40+).
- Morgan Stanley Capital International (MSCI) ESG rating⁶: determines how resilient a company is to long-term, financially significant ESG risks. The methodology first identifies significant industry risks, assigns a weight to these

³ See <https://sdgs.un.org/goals> accessed in May 2023

⁴ See https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en accessed in May 2023

⁵ See <https://www.sustainalytics.com/esg-data> accessed in May 2023

⁶ See <https://www.msci.com/our-solutions/esg-investing/esg-ratings> accessed in May 2023

issues, and then evaluates a company's exposure and risk management strategy. The final weighted average letter rating is the result of adding up the scores for each of the ESG pillars. On a scale from AAA (best) to CCC (worst),

However, there is also one rating that should be mentioned as it addresses similar targets to the framework that will be created for this dissertation.

- Access To Medicine (ATM) Index⁷: evaluates businesses' performance on key issues related to patient access to medicine, identifies best practices and case studies, and highlights areas where improvements have been made and those that urgent action is still needed.

This dissertation will be divided into several parts, first, it will be analysed the need of this research and why it is useful, afterwards, the methodology followed to do the research will be explained. On a later stage, the results will be shown and commented. Finally, the conclusions and limitations that have arisen will be explained.

2. NEED ANALYSIS:

This dissertation tends to satisfy the need of three different target groups. First of all, it will be considered the double materiality assessment that companies show in their integrated reports. As a general trend, companies include Access to healthcare as a priority for both *internal and external stakeholders*. This could be seen in Image 2.1, which displays the double materiality assessment of Sanofi considering the impact on the business value (financial materiality) and the impact on society (impact materiality). “Accessible and Affordable medicines” that is closely related to Access to medicines, appears in the top right section meaning that it is key for both groups.

Additionally in Image 2.2 a similar matrix is found for GlaxoSmithKline (GSK) representing the ESG issues that pose the most significant risks and opportunities to the business, and upon which GSK has the most significant impact. Healthcare access and affordability is considered to have very high importance for both external stakeholders and to the business.

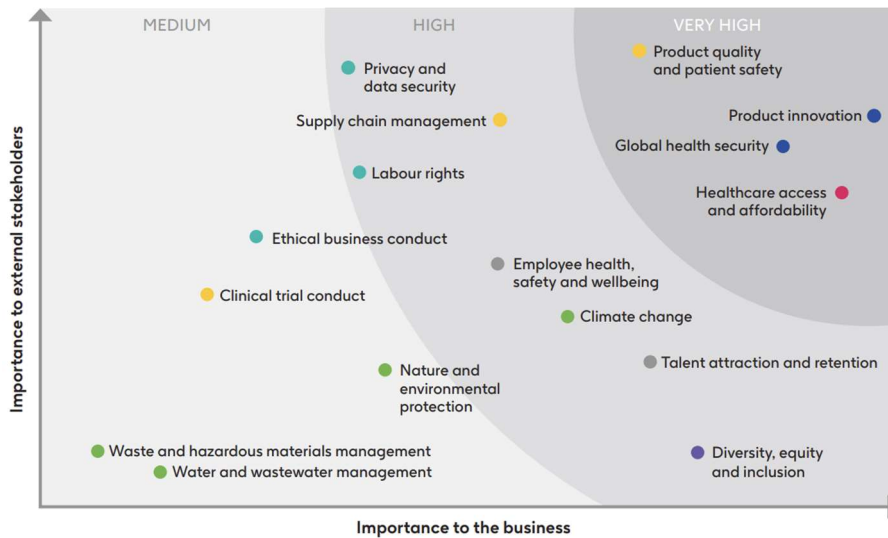
⁷ See <https://accesstomedicinefoundation.org/resource/2022-access-to-medicine-index> accessed in May 2023

Image 2.1: Sanofi's double materiality assessment



Source: (Sanofi - Our Double Materiality Assessment, n. d.).

Image 2.2: GSK's materiality matrix



Source: (GSK - Materiality assessment, n. d.)

Moreover, this research is also important for *investment funds and portfolio managers* as this work is pioneer in terms of comparability of impact information among large pharmaceutical companies and helps in the selection of portfolio companies.

The introduction of ESG criteria for investment analysis is already an essential part of the fundamental analysis of portfolio companies. There are links between ESG risks and operational-financial risks, both explicit and implicit. It is from a reputational and (positive) impact point of view that access to medicines and, more broadly, access to health, has been placed at the epicentre of the analysis of companies in the health sector.

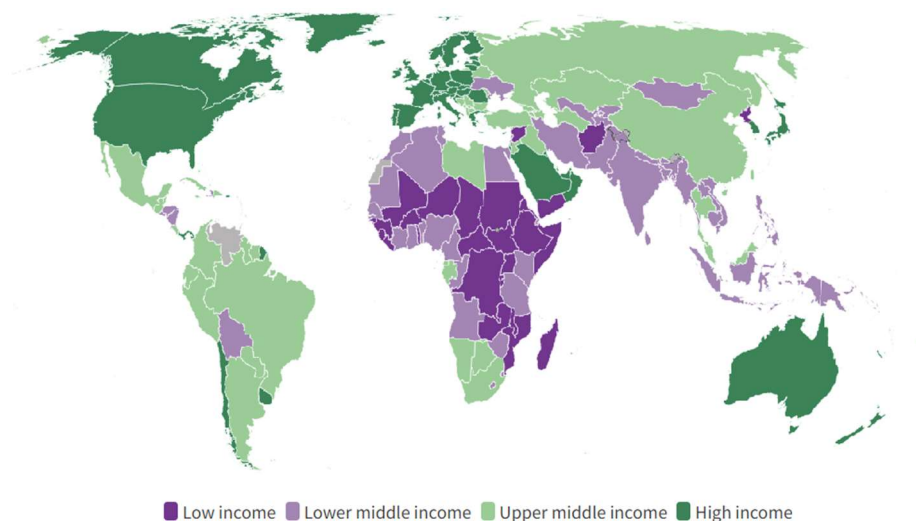
The fight against Covid was a before and after in the introduction of pharmaceutical companies in sustainable investment portfolios and from there and together with ATM Index Benchmark the "wanting to know more" about their actions and impacts on the expansion of access to healthcare, especially in emerging/LMICs.

The construction of Article 9 and 8 portfolios under the Sustainable Finance Disclosure Regulation (SFDR) with a percentage of sustainable investment according to Art. 2.17 SFDR, linked to the achievement of SDG 3, also triggers interest in the subject matter of this dissertation.

3. METHODOLOGY

The research arose from the need to expand and gather the information provided by the different pharmaceutical companies regarding access to medicines in low- and middle-income countries (LICs and LMICs). First of all, it should be specified what is understood by LMICs. The World Bank⁸ specifies that for the current 2023 fiscal year, low-income economies (LIC) are defined as those with a Gross National Income (GNI) per capita, calculated using the World Bank Atlas method, of \$1,085 or less in 2021; lower middle-income economies (LMIC) are those with a GNI per capita between \$1,086 and \$4,255. For the sake of simplicity, from now on, LICs will also be considered when talking about LMICs. On Image X3, it could be seen a graphical representation of the different countries/economies grouped by income level.

Image 3.1: The world divided by GNI per capita.



Source: (World Development Indicators - The World by Income and Region, n. d.)

⁸ See <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups> accessed in May 2023

In order to make this information available, the different annual and integrated reports that the companies publish on their websites were consulted. The research has been carried out using the data provided in the 2022 integrated reports, thus providing the most up-to-date information available to date on the companies. Additionally, all the companies were contacted via email in order to have more specific information about the details that were not displayed on their integrated reports. Finally, to complete the remaining information ATM Index results were used as some companies have not replied or the information they gave, did not answer the question.

The selection of the companies was firstly based on the screening carried out by Access to Medicines (ATM) in which 20 of the most important international pharmaceutical companies were pre-selected based on their potential to offer access to medicines strategies. A second selection was made based on the time available to carry out the research, considering only those companies whose 2022 reports have been published. Additionally, the relevance of the selected companies for Ibercaja Gestión was considered since this research, as mentioned previously has been carried out under the Cátedra Ibercaja: Finanzas Sostenible. Thus, eleven companies have been selected to be investigated and analysed under this research.

The companies of the sample are AbbVie, AstraZeneca plc, Bayer AG, Gilead Sciences, GSK plc, Merck KGaA, Novartis AG, Novo Nordisk A/S, Pfizer Inc, Roche Holding AG and Sanofi.

In order to be able to compare the companies, a framework has been developed to evaluate the different companies under the same conditions, thus creating a ranking in which the impact of each of the companies in terms of access to medicines can be compared. When selecting the variables to be included in the framework, a homogeneous approach was taken, which means that a prior research was carried out to acquire the necessary knowledge to be able to establish the variables that would be analysed; to do this, the index taken as a reference (ATM) and the different variables taken into account in it were analysed, followed by a review of several integrated reports, in order to have a real vision of the information displayed by the different companies and therefore be aware of the information that will be available when carrying out the research.

Taking as a reference the variables studied in ATM and the information that several of the companies shared in their integrated reports, often guided by SASB and GRI

standards, it was decided to divide the framework into three different groups: Research and Development, Product Delivery and Governance of Access. In each of these groups, different key performance indicators (KPI) are examined. The KPI's under study in each of the groups are detailed more specifically below, including a brief description of each variable and its relevance to access to medicines. Afterwards, it will be explained how each of the variables will be assessed, explaining the different scores that can be obtained and the objectives that must be met in order to achieve them.

Starting with **Research & Development**, three KPI's are analysed to assess the companies' R&D efforts in relation to the diseases that cause the most problems in countries with low- and middle-income countries. Firstly, the *pipeline* of the different companies is analysed, by pipeline⁹ we should consider all medications in development, either being studied for first-time approval or expanded indications. The drug pipeline is very important to a drug manufacturer; whether or not a company has promising therapies in the pipeline can determine its future viability and also the future solutions that will be provided to help society.

Therefore, taking as a reference the list of prioritised diseases offered by the **World Health Organization (WHO)**, [i.e.: COVID-19, Crimean-Congo haemorrhagic fever, Ebola virus disease and Marburg virus disease, Lassa fever Middle East respiratory syndrome coronavirus (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS), Nipah and henipaviral diseases, Rift Valley fever, Zika and “Disease X”]¹⁰ and that of **Policy Cures Research (PCR)**, [i.e.: *Neglected diseases* such as: Bacterial pneumonia & meningitis, Buruli ulcer, Cryptococcal meningitis, Dengue, Diarrhoeal diseases, Helminth infections, Hepatitis B, Hepatitis C, Histoplasmosis, HIV/AIDS, diseases, Leprosy, Leptospirosis, Malaria, Mycetoma, Rheumatic fever, Salmonella infections, Scabies, Snakebite envenoming, Trachoma, Tuberculosis and Yaws; *Emerging infectious diseases*: same list as prioritised diseases WHO and Sexual and *Reproductive health issues*: Contraception, Hepatitis B, HIV/AIDS, HPV and HPV-related cervical cancer, Multipurpose prevention technologies (MPTs), Pre-eclampsia and eclampsia, Post-partum haemorrhage (PPH) and Sexually transmitted infections (STIs)]¹¹ it will be studied for which of those, the different companies are putting R&D efforts to find a

⁹ See <https://www.pharmacytimes.com/view/the-drug-pipeline-whats-in-the-works> accessed in May 2023

¹⁰ See <https://www.who.int/activities/prioritizing-diseases-for-research-and-development-in-emergency-contexts> accessed in May 2023

¹¹ See <https://www.policycuresresearch.org/rd-needs-for-global-health/> accessed in May 2023

cure. This variable acquires relevance as if companies include this set of prioritised diseases into their pipeline, they will be part of the problem's solution as they will try to find its cure.

Next to this, it is also considered the *project specific plans related with planning for access*, this meaning that companies set challenging but achievable objectives to be accomplished in the following years regarding the above-mentioned list of prioritised diseases. Usually, they set 2025 or 2030 as the limit date to achieve them depending on the degree of difficulty and current progress. If the company sets targets regarding project objectives, they will do their best to achieve them, it is not only a matter of achieving them or not but also the effort put into its achievement.

The last KPI studied within R&D is *Pipeline status disclosure*, under this variable, it is analysed the accuracy of the information, whether the information is updated or not and the easiness to find it, as usually it takes a long time to find this type of information and once you find it, it is not updated.

Secondly, **Product Delivery** is also considered. It will be assessed if companies are using access strategies to expand the scope of their products in low-and-middle income countries, therefore six variables are analysed to study how well companies are doing in what product delivery concerns. The first one includes the *number of patients reached* in LMICs through access strategies, this variable is the most general within this category, it is fundamental to understand the impact the company has on these countries, we will highlight the patients that have taken advantage of any of the different measures that boost product delivery and consequently access.

The second variable studied in this section is *Equitable pricing strategy*, in order to ensure proper product delivery in countries with medium and low income it will be considered that the companies consider customers' ability to pay in those specific countries. Additionally, *patent filing and enforcement* is analysed in order to examine the (not) filing or enforcement of patents related to the diseases that are harming more in LMICs favouring is those cases a cheaper and affordable medicines' production.

Another important issue to be considered is the *prevention of submedicines and falsifications* as it could be harmful for the patients, especially on LMIC's, therefore companies should introduce specific measures that help to detect substandard and falsified medicines. Moreover, in this group it is also assessed if the companies engage

in initiatives that *strengthen the health system*, in order to achieve health for all, it is imperative to help health professionals and patients make informed decisions about treatment paths. This support includes building health capacity as well as awareness. As a prerequisite, health systems need to be strong and benefit from solid collaborations to build resilience against crises and emergencies.

A special comment should be made regarding equitable pricing and patent filing and enforcement. The reference index (ATM) considers them within the group of R&D. However, for the purpose of this dissertation, they are included under Product Delivery as the measures considered are linked to the direct consequences related to the proper delivery of the products.

The last variable considered in this group is the *donations* made by the companies not only in the short term to face the unforeseen needs that may occur such as the Ukraine war, earthquakes, or any other natural disasters, they help to exceptionally recover to these extreme situations. It is also considered those made in the long run creating sustainable donation programmes for those societies without resources.

Finally, the last group of the framework is **Governance of Access**, we will see if the different businesses are being led in an ethical and responsible manner integrating access principles into their day-to-day activities. To do so, the first step is to start analysing whether the *Named Executive Officers (NEOs) remuneration is based on ST/LT incentives related to access*, by including access KPI's in the remuneration of the NEOs, they will commit to accomplish them and therefore will take them more into account. On the other hand, it also includes the *Integration of ATM principles into the strategy* of the company. If the company includes these principles in its strategy, it will serve as a commitment for stakeholders and for the firm itself to accomplish them. Finally, the last variable taken into account is the *existence of an Access Accountable Body* that evaluates the performance of the firm and takes measures every time that is needed, it is also evaluable if in the case of not having a specific access committee, the ESG Committee evaluates yearly those principles.

Now, it is explained how these variables will be evaluated. The principal aim of this framework is evaluating the performance of the different companies regarding access to medicine in low- and middle-income countries, therefore different weights will be set for each of the above-mentioned variables.

As it has been explained the framework is not only divided into three main groups but also, subcategories were created, that is to say, each group will be analysed through different key performance indicators (KPI's). It is important to set weights according to the level of importance the variables have, therefore the following weights have been assigned:

- R&D: the total amount assigned is 25%, divided into 3 KPI's:
 - Pipeline: Prioritised diseases: 10%
 - Planning for access: project-specific plans: 10%
 - Patent status disclosure: 5%
- Product Delivery: this group is the main element of the framework; therefore, it represents 55% of total score divided into 6 different KPI's:
 - Number of patients reached: 15%
 - Equitable pricing strategy: 10%
 - Patent filing and enforcement: 10%
 - Prevention of submedicines and falsifications: 5%
 - Strengthening the health system: 10%
 - Ad-hoc donations: 5%
- Governance of Access: the weight of this group is the lowest of the three, however it includes KPI's that are also key to assure proper access to medicines. It weights for a 20% of the total, the KPI's under study and their weight are:
 - NEOs remuneration based on long/short term incentives related to access: 10%
 - Integration of Access to Medicines principles on the company strategy: 5%
 - Existence of an Accountable Access body: 5%

Finally, it should be explained how each variable will be evaluated. The first KPI analysed is the pipeline, 2,5% is assigned for each disease included within the pipeline of the company achieving the maximum grade if they include 4 or more different diseases into its research and development process, still in this group, it is studied the project specific plans companies have for such diseases. Therefore 5% was assigned for each achievable and challenging objective for 2025/2030 set, being able to obtain a

maximum of 10%. Finally, the last variable studied related to R&D is the pipeline status disclosure, under this one, subjectivity plays a fundamental role as it is evaluated on the quality, easiness to find, accuracy and update of the information the companies provided about their pipeline.

Furthermore, moving now to the second section of the framework, the product delivery, the first KPI concerns the total number of patients reached in LMICs, three different targets were set, if the company reached more than 60.000.000 people, they will obtain the maximum score (15%), if they reach 30.000.000, they obtain 10% and finally if they reach 10.000.000, they get 5%. If the number of people reached is located inside these ranges, they obtain the average between the two, e.g.: if a company reached 44.000.000, it would obtain 12.5%. Then, for the next KPI, it is analysed if the company set inter-country and/or intra-country tiered pricing based on affordability, if the answer is AND, the score is 10%, if on the other hand it is OR, they will receive 5%, in the case that no tiered pricing strategy is established, they will receive 0%. Additionally, the patent filing and enforcement of companies in LMICs is considered; if all the company do neither file for nor enforce patents in the sub-set of Index countries for all the products in scope, they will receive 10%, however if they only apply this to a set of patents, they will receive half the score (5%).

Continuing with the product delivery part, another variable is the prevention of submedicines and falsifications, they will receive the highest score if they are tangible proofs that measures are being taken in LMICs (5%), if they mention these measures but do not clearly specify that they took place in the countries under study, the score assigned is 2,5%. The framework also includes a variable regarding the strengthening of the health system, in which 2% is assigned if they educate patients, 3% if they train professionals and 5% if they create facilities that help to strengthen the health system, being able to acquire a maximum of 10%. Finally, within product delivery it is also considered the donation programs the companies have assigned 2.5% if the programs are focused on the long term and 2,5% if they are in the short term, if both types of donations appear, the maximum score is given (5%).

Last but not least, with the Governance of access, it is evaluated whether the Named Executive Officers remuneration includes long term and/or short-term incentives related to access, if the answer is or, a score of 5% is assigned, if it is and, they will receive 10%. Not only this, but also if the company has integrated access principles into its

strategy its evaluated (5%). Lastly, the existence of an access accountable body is considered, assigning 5% if the company creates a specific body and 2.5% if another committee evaluates specific access measures periodically.

4. SAMPLE RESEARCH:

AbbVie Inc is a specialty biopharmaceutical company, which finds, develops, produces, and sells medicines to treat chronic and complicated disorders. Through own distribution centres and open warehouses, they sell its goods directly to wholesalers, distributors, healthcare facilities, governmental organisations, specialty pharmacies, and independent merchants (*Areas of Focus*, n. d.). AbbVie's area of focus is:

- Immunology: investigate new disease areas, develop a more patient-centric discovery and development process, and provide treatments for a wider range of patient groups.
- Oncology: use cutting-edge research methods and in-depth knowledge of human biology to uncover novel approaches for enhancing the quality of life for cancer patients. The therapy of blood cancer has greatly benefited from scientific advancements, and they are broadening knowledge to study solid tumours.
- Neuroscience: looking into novel, disease-modifying treatments for some of the most common and severe illnesses, including schizophrenia, migraine, stroke, Parkinson's, Alzheimer's, and other types of movement disorders.
- Eye care: the cutting-edge portfolio and upcoming breakthroughs aim to preserve vision and fend against blindness.
- Aesthetics: identify and advance comprehensive, evidence-based solutions with focus on new indications, superior patient outcomes and improved delivery methods.

AstraZeneca is a pharmaceutical company with a focus on patients, led by science. They are committed to revolutionising healthcare in the future by utilising the potential of science to benefit individuals, society, and the environment. Many of the illnesses of today's population will be treated in the future by identifying newly developing or undiscovered processes. Focusing on cutting-edge research to identify these pathways and create unique, tailored medicines that interact with them is the greatest way to aid patients (*Our therapy areas - AstraZeneca*, n. d.). Their focus is on the following:

- Oncology: push the limits of knowledge in order to alter medical practice and improve the quality of life for cancer patients.
- Cardiovascular, Renal & Metabolism (CVRM): science is continually revealing connections between metabolism, heart failure, arterial vascular disease, and renal illness—four separates but connected areas.
- Respiratory & Immunology: humanity is entering a period of unmatched potential for scientific advancement in the fields of asthma, chronic obstructive pulmonary disease, idiopathic pulmonary fibrosis, and chronic cough.
- Vaccines and Immune Therapies: the goal is to create and distribute revolutionary vaccines and antibodies that will give millions of individuals in areas with high disease burdens long-lasting immunity.
- Rare Disease: the goal is to improve the lives of people who suffer from rare diseases and other debilitating disorders.

Bayer has a history lasting more than 150 years and acquiring fundamental expertise in both healthcare and agriculture, Bayer is a life science corporation. They help to find solutions to some of the biggest problems facing our society today with the help of cutting-edge products (*Names, Facts, Figures about Bayer*, n. d.). Three divisions make up the Bayer Group:

- Pharmaceuticals: specialised treatments in the fields of oncology, haematology, and ophthalmology, as well as prescription products, particularly for cardiology and women's healthcare. The division also includes the radiology division.
- Consumer health: markets mainly non-prescription products in the dermatology, nutritional supplement, analgesic, digestive health, cold, allergy, sinus and flu categories.
- Crop Science: a leading global agriculture company with operations in the seed, crop protection, and non-agricultural pest management industries. They distribute a wide range of premium seeds and cutting-edge pest control methods while also offering substantial customer service for sustainable agriculture.

Gilead Sciences Inc. is a research-based biopharmaceutical company that finds, creates, and sells cutting-edge medications in unmet medical needs. They aim to enhance the care of patients with life-threatening diseases all across the world with each new

discovery and experimental medication candidate (*Advancing Therapeutics. Improving Lives.*, n. d.). Gilead's primary areas of focus include:

- Human Immunodeficiency Virus (HIV)/ Acquired Immunodeficiency Syndrome (AIDS): lowering HIV care and prevention disparities, advancing healthcare professionals' education, and assisting the communities where they work.
- Inflammation diseases: developing novel therapies with the aim of improving care to enable individuals with a variety of inflammatory disorders.
- Hepatitis C, B, and D Viruses: in less than four years, four curative therapies for chronic hepatitis C virus were administered. They have also been at the forefront of changing how chronic hepatitis B virus patients are treated, and they are currently investigating numerous research avenues in the pursuit of a potential cure.
- Cancer and inflammation: aiming to raise the standard for treatment of solid tumours and blood cancers. The objective is to achieve 20+ revolutionary indication approvals by 2030.

GlaxoSmithKline has ambitious goals for patients are reflected in new agreements to growth and a step-change in performance. Prioritise innovation in vaccines and specialty medicines, maximising the growing opportunities for preventing and curing disease. GSK is a biopharma company with the desire and purpose to unite science, technology, and talent to get ahead of disease. They aim to impact the health of 2.5 billion people over the next 10 years (*United Kingdom - GSK*, n. d.). They focus on four therapeutic areas:

- Infectious diseases: at the forefront of developing cutting-edge technologies and research methodologies to assist in preventing the spread of infectious diseases brought on by bacteria, viruses, and parasites.
- HIV: ViiV Healthcare, a global leader in HIV care, is totally committed to ensuring that no person living with HIV is left behind.
- Oncology: provide cutting-edge cancer therapies to those who need them the most thanks to their oncology expertise.
- Immunology/respiratory: concentrating on revealing the immune system's research to comprehend how the body's defence system responds to illness.

- Opportunity-driven: committed to seeking additional science-led opportunities outside of their four primary therapeutic areas in order to stay ahead of disease.

Merck KGaA also known as Merck Group is a global leader in the chemical, pharmaceutical and life science industries. Their objective is to assist people at every stage in order to help them develop, enhance, and prolong life. With the use of their products, services, and online platform, they seek to make research easier to understand, more precise, and more effective in producing breakthroughs. Thanks to the precision of their testing and the reliability of their medications, they offer innovative treatment options that assist in enhancing access to health (*Merck Group - We are Merck*, n. d.). They are active on different business sectors:

- Healthcare: by putting patients at the heart of all they do, they can improve the lives of millions of people.
- Life science: enables scientists to make breakthroughs by giving them access to cutting-edge tools, services, and knowledge so they may conduct tests and develop new products.
- Electronics: They enable high-tech products and solutions that are essential to daily life thanks to their contribution to the electronic sector.

Novartis AG is a healthcare firm that specialises in the development, production, and marketing of prescription and over-the-counter medicines, as well as products for eye care. Through Sandoz, the business provides biosimilars and generic medications (*Novartis AG Overview*, n. d.). To enhance and lengthen people's lives, Novartis is rethinking medicine. As a preeminent global pharmaceutical firm, they develop game-changing therapies in areas of urgent medical need using cutting-edge research and digital technology (*Innovative Medicines*, n. d.). Novartis core therapeutic areas are:

- Cardiovascular: utilisation of early interventions, the production of groundbreaking therapies from management to prevention, as well as the development of creative access models.
- Haematology: pioneer in the development of cancer targeted therapeutics and in examining how these drugs can improve patient outcomes.

- Solid tumours: pushing the boundaries of science to find and create next-generation therapies that could offer significant benefits to patients with the most common and deadly cancers.
- Immunology: developing and delivering cutting-edge medications for difficult-to-treat immunological conditions like lupus, hidradenitis suppurativa, Sjogren's syndrome, and osteoarthritis.
- Neuroscience: provide treatments and solutions that can change people's lives, rethinking neuroscience and enhancing people's lives by innovating together.

Novo Nordisk A/S has been developing cutting-edge medications and delivery technologies to address the unmet medical requirements of those dealing with significant chronic diseases for over a century. Millions of people with diabetes, obesity, unusual bleeding disorders, and problems linked to growth hormones are being helped by their medicines. They are finding and creating cutting-edge biological therapies and making them available to patients all around the world (*What We Do | Novo Nordisk U.S.*, n. d.). The main diseases areas in which Novo Nordisk is helping are:

- Diabetes: experts are pursuing research to decrease the amount of insulin injections needed to maintain good glycaemic control and to prevent low blood sugar (hypoglycaemic) episodes.
- Obesity: dedicated to bringing about a shift in how obesity is seen, prevented, and dealt with globally. They try to eliminate the stigma associated with obesity, make it a healthcare priority, and enable greater access to evidence-based care as pioneers in the field of obesity research.
- Haemophilia: devoted to advancing change towards a time when everyone with haemophilia and other uncommon bleeding diseases may access the care they require and lead as normal of a life as possible.
- Growth hormone-related disorders: advancing change to ensure that all children can live up to their full potential through their research and therapy advancements in growth hormone insufficiency.
- Rare diseases: to change how they identify, treat, and care for people with rare diseases, they foster innovation in the search for novel drugs and technology.

Pfizer uses science and its extensive worldwide resources to develop therapies that help people live longer and significantly better lives. In the research, development, and production of health care goods, they work hard to establish the benchmark for quality, safety, and value. In addition to several of the most well-known consumer health care items in the world, their global range also includes pharmaceuticals and vaccines. Pfizer seeks to enhance health, prevention, treatments, and cures that take on the most feared diseases of our time in both developed and emerging countries (*Pfizer Company Fact Sheet | Key Pharma & Consumer Health Products*, n. d.). Their areas of innovation are:

- Gene therapy: has the potential to revolutionise clinical outcomes for eligible people with rare genetic illnesses and enhance quality of life.
- Medicinal sciences: investing in the newest research and technology so tomorrow's treatments can be created and, perhaps, assist people today all across the world.
- Precision medicine: by examining the underlying causes of diseases, precision medicine seeks to design novel treatments that are specifically suited to the individuals who would benefit from them.
- Maternal immunisation: investigate and create vaccines that, when administered to pregnant women, may shield young children from specific diseases.
- Messenger Ribonucleic Acid (mRNA) Technology: the quick development of the first mRNA-based COVID-19 vaccine brought attention to the promise of mRNA technology, but it is believed that science is just now starting to fully utilize it.

Roche is a world leader in medicines and diagnostics committed to advancing science and enhancing the lives of people. Roche is able to provide genuinely customised healthcare thanks to the strengths of medicines and diagnostics combined, as well as expanding capabilities in the area of data-driven medical insights (*Roche | Focus areas*, 2023). Roche focus areas are:

- Cardiometabolic diseases: main goal is to neutralise the threat with cutting-edge diagnostic and preventive measures.
- Haematology: finding novel treatments for people with blood illnesses is a top focus at Roche.

- Infectious diseases: are constantly evolving, putting pressure on healthcare systems due to outbreaks, mutations, novel infections, and developing resistances.
- Inflammatory bowel diseases: piecing together the whole picture of inflammatory bowel conditions.
- Neuroscience: pushing the limits of scientific knowledge in the field of neuroscience in order to advance clinical care and find solutions to some of the field's most pressing problems.
- Oncology: to comprehend cancer biology and develop new treatments, scientists adopt a meticulous, all-encompassing strategy.
- Ophthalmology: devoted to developing cutting-edge treatments that prevent against vision loss, seeking for and creating ground-breaking solutions, and attempting to redefine standards of care for those with visual impairments.
- Rare disease: work together to create a better future for those who suffer from rare diseases.
- Respiratory: committed to enhancing patient outcomes in cases of severe respiratory disorders.
- Women's Health: committed to women's health at every stage of her life.

Sanofi is a healthcare organisation that is involved in the development, production, marketing, and discovery of numerous drugs and vaccines. Sanofi's research and development efforts are concentrated on developing a combination therapy to boost treatment efficacy and on developing innovative biologic formulations to create precision medicines (*Sanofi Overview*, n. d.).

Their goal is to make people's lives better all throughout the world by developing cutting-edge vaccinations and medications. Their in-depth knowledge of disease processes enables to focus on precise targets, and their cutting-edge technologies enable to create pharmaceuticals, biologics, and genetic treatments that have the potential to revolutionise medical care (*Sanofi R&D Focus Areas*, n. d.). Their main activities are:

- Technology platforms: they develop novel, cutting-edge methods for preventing diseases or halting their progression using the most cutting-edge tech platforms.

- Data Science: to speed up the diagnostic process, boost public health, and raise the standard for treating diseases, they are creating scalable platforms.
- Therapeutic areas: including immunology and inflammation, oncology, neurology, rare blood diseases, rare diseases, and vaccines.

As it could be seen thanks to the sample research that has been carried out, it should be highlighted that some companies find it easier to provide access than others due to its current portfolio and operational structure. That is to say that the focus area of each company and their business model in some cases offer more possibilities to offer access strategies in some more developed countries than in others that are still being developed. However, for the sake of simplicity that has not been considered for the analysis, but it should be mentioned.

5. RESULTS

A summary table with all the results for the 11 companies is displayed in Figure 5.1 in the following page. Later on, a detailed analysis will be carried out for each of the variables studied and afterwards, the three groups conforming the framework will be also compared considering all the variables that they include providing in this way a more general point of view.

With the help of graphs, it will be analysed the different scores of each of the companies comparing them with the average result of the sample group in order to evaluate the ones who outperforms and those with room for improvement. The order to be followed is: first, overall result and comparison of the companies, second, the analysis of each of the KPIs studied and finally the comparison of the three big groups conforming the framework. We will obtain first an initial image of how the companies have performed to in a second stage go deeper into each of the variables analysed and finally having a material topic performance perspective to understand where each company has performed best.

Figure 5.1: Overall results of the research

IMPACT ANALYSIS FOR 11 PHARMA COMPANIES

| YEAR 2022 | COMPANY | | | | | | | | | | | | |
|--------------------------------|---|-------------|------------------|----------|-----------------|----------|------------|-------------|-----------------|-------------|------------------|--------|---------|
| MATERIAL TOPIC | VARIABLES | AbbVie Inc. | AstraZeneca Plc. | Bayer AG | Gilead Sciences | GSK Plc. | Merck KGaA | Novartis AG | Novo Nordis A/S | Pfizer Inc. | Roche Holding AG | Sanofi | AVERAGE |
| Research and Development (25%) | Pipeline: Prio indexed diseases (10%) | 5 | 2.5 | 10 | 7.5 | 10 | 5 | 10 | 0 | 7.5 | 5 | 10 | 6.6 |
| | Planning for access: Project-specific plans (10%) | 5 | 10 | 5 | 5 | 10 | 10 | 5 | 2.5 | 5 | 5 | 10 | 6.6 |
| | Pipeline status disclosure (5%) | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 5 | 5 | 2.5 | 2.5 | 2.5 | 2.5 | 3.0 |
| Product delivery (55%) | Patients reached (15%) | 0 | 12.5 | 12.5 | 7.5 | 15 | 15 | 12.5 | 12.5 | 15 | 12.5 | 7.5 | 11.1 |
| | Equitable pricing strategy (10%) | 5 | 10 | 5 | 5 | 10 | 10 | 10 | 5 | 10 | 5 | 10 | 7.7 |
| | Patent filing and enforcement (10%) | 5 | 10 | 10 | 5 | 10 | 10 | 10 | 0 | 10 | 10 | 7.5 | 8.0 |
| | Prevention of substandard medicines and falsifications (5%) | 2.5 | 5 | 0 | 0 | 5 | 5 | 5 | 5 | 2.5 | 5 | 5 | 3.6 |
| | Strengthening the health system (10%) | 2 | 10 | 8 | 5 | 10 | 10 | 10 | 5 | 10 | 5 | 8 | 7.5 |
| | Ad-hoc donations (5%) | 5 | 5 | 5 | 5 | 2.5 | 2.5 | 5 | 2.5 | 2.5 | 2.5 | 5 | 3.9 |
| Governance of access (20%) | Board remuneration based on IT or R&D incentives (10%) | 5 | 5 | 5 | 5 | 5 | 5 | 2.5 | 5 | 0 | 5 | 5 | 4.3 |
| | Integration of ATM principles on the strategy (5%) | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5.0 |
| | Accountable access related body (5%) | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 1.5 | 2.5 | 2.5 | 2.5 | 2.4 |
| TOTAL SCORE (MAX 100) | | 44.5 | 80 | 70.5 | 55 | 87.5 | 85 | 82.5 | 46.5 | 72.5 | 65 | 78 | 69.7 |

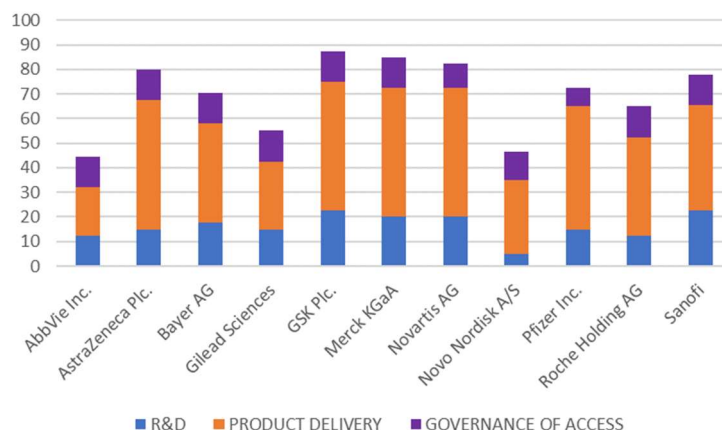
Source: Own creation

Figure 5.2 represents the global score the companies have achieved according to their performance during 2022 for the set of variables studied in the framework. It is evident that companies could be gathered into 3 different groups:

- **Leader companies:** obtaining an average score above 75, here we find the top 5 performing companies in terms of access to medicines in LMICs. They are from highest to lowest score obtained: GSK Plc. (87.5), Merck KGaA (85), Novartis AG (82.5), AstraZeneca Plc. (80), and Sanofi (78).
- **Average companies:** obtaining an average score above 60, in this case we find those companies that perform well but not as good as the previously mentioned, they are quite above/below the average. In descending order, they are Pfizer Inc. (72.5), Bayer AG (70.5) and Roche Holding AG (65). It should also be mentioned that the average score is 69.50.
- **Low-performing companies:** obtaining an average score below 60, these companies are the ones with higher room for improvement, they should maintain and increase their efforts in order to become more accessible in the countries under scope. They are Gilead Sciences (55), Novo Nordisk A/S (46.5) and AbbVie Inc. (44.5).

These scores allow us to create a first image of how well the companies are doing by clearly distinguishing those who have already integrated good access strategy into their businesses from those who still have to develop further on this type of strategy. It would also be good to compare the scores on a yearly basis in order to study the evolution of the performance of the different firms.

Figure 5.2: Total score for each company divided into sections.



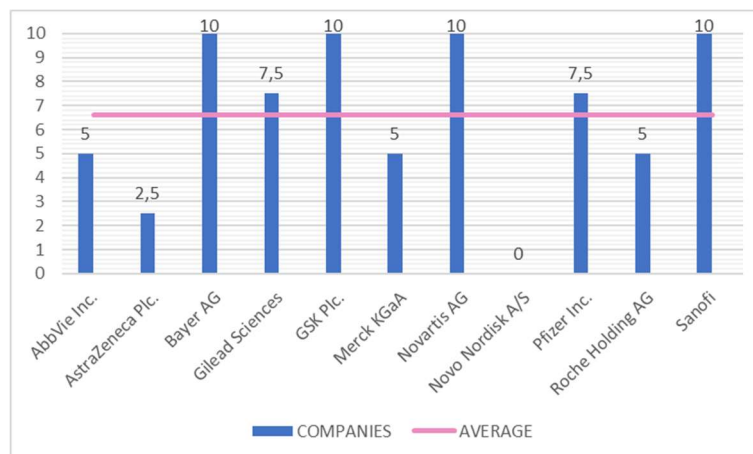
Source: Own creation

Now, the analysis of each independent variable is described, starting with the Research and Development section.

In Figure 5.3, it could be seen that some companies are already committed and put R&D efforts into practice in order to find a cure of the set of prioritised diseases. The companies that obtained 10 points already include at least 4 different diseases into their pipeline, being highlightable the specific case of Sanofi currently doing R&D efforts on: COVID-19, Fexinidazole (T.b. rhodiense), Sleeping Sickness, Acoziborole (T.b. gambiense) and tuberculosis; and that of GSK Plc. investing on COVID 19, pneumonia, HIV, malaria, salmonella and Humanpapillomavirus (HPV).

On the other hand, it can be seen that Novo Nordisk A/S has no score on this variable, which does not mean that they do not put R&D efforts into practice but that the set of diseases under their portfolio do not yet address the specific list of diseases under study.

Figure 5.3: Pipeline: Prioritized diseases



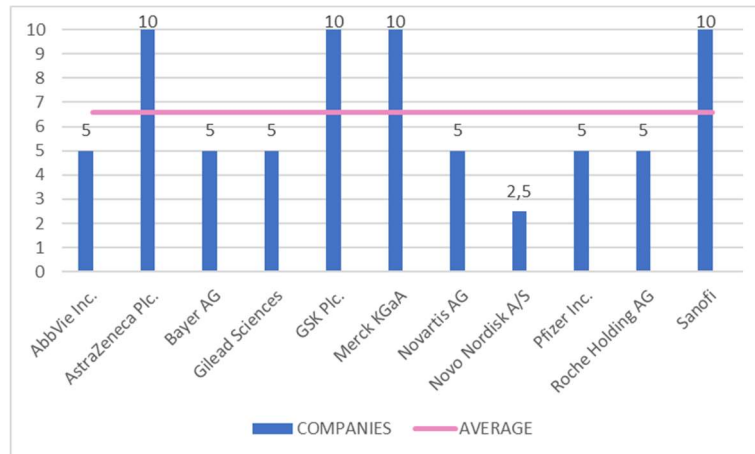
Source: Own creation

In Figure 5.4, it could be found the results regarding the specific plans companies take related with access, in this case, within that companies that achieved the maximum score, special attention should be put on the case of Merck KGaA as they are the representative company for this variable, this meaning the one who set more achievable and challenging objectives. Rephrasing the words extracted from their integrated report we have that: “The ultimate aim of our schistosomiasis-related work is to eliminate the disease as a public health problem in line with the World Health Organization (WHO) NTD Roadmap 2021-2030.” additionally, “to catalyse innovative solutions for global

health challenges, primarily targeting schistosomiasis and malaria. We strive to particularly reach those who are most vulnerable: women and children.”

The companies that did not obtain the whole score, also set objectives however they only target one prioritised disease and/or the challenge set has no specific time limit.

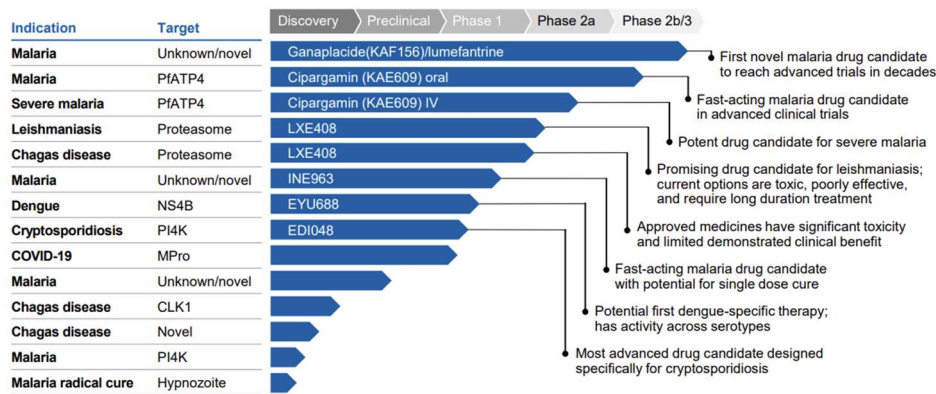
Figure 5.4: Planning for access: Project specific plans



Source: Own creation

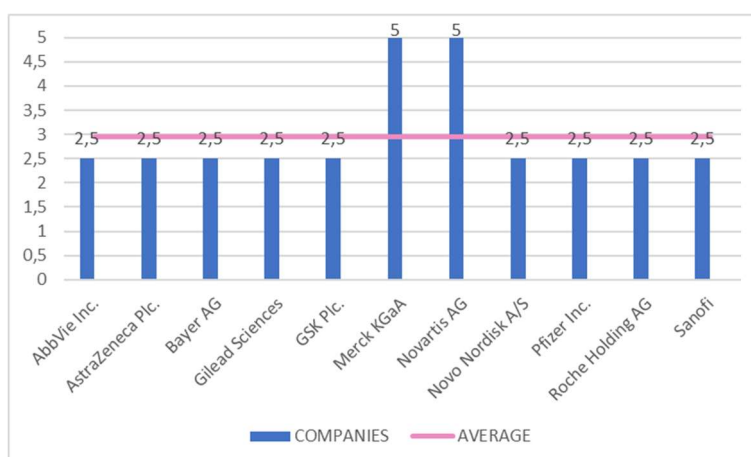
Figure 5.5 represents a subjective evaluation of the different pipeline’s status of the companies, considering the update, quality, and ease of understanding of the information displayed. Overall, the companies display the information in a standardised manner, therefore 2.5 with quite updated information and easily to find, it was rewarded in the case of Merck KGaA and Novartis the ease to understand because of the way in which the information was displayed. Let’s see it through the example of Novartis, which in its last Investor Day deck, displayed the specific pipeline information regarding diseases relevant in LMICs, which can be seen in Image 5.1.

Image 5.1: Novel drug candidates at the Novartis Institute for Tropical Diseases



Source: (Novartis - Investor Update on Access and Sustainability, 2022)

Figure 5.5: Pipeline status disclosure



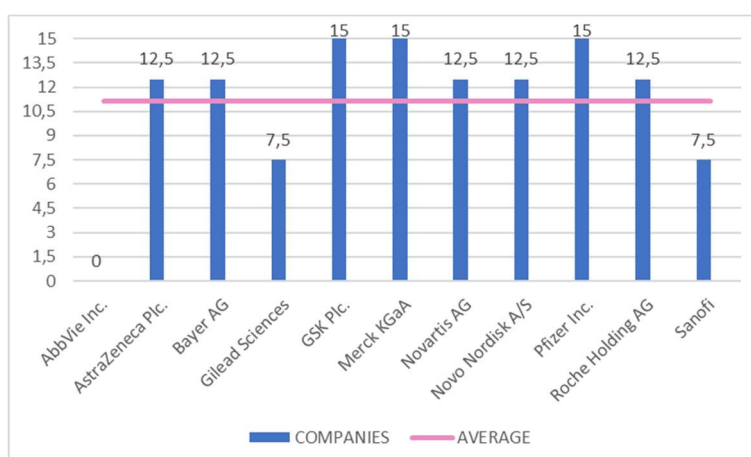
Source: Own creation

Next, moving to the second section of the framework, it will be analysed each of the variables that conform Product Delivery.

Figure 5.6 represents the total number of patients reached in low-and-middle income countries, firms in this case perform well and, in all cases, with the exception of AbbVie who do not disclose this information, reach more than 13,000,000 patients through their access programs and strategies.

This information allows us to discover the potential pharmaceutical companies have to change people's lives and permit them to live safer and better lives.

Figure 5.6: Number of patients reached in LMICs.



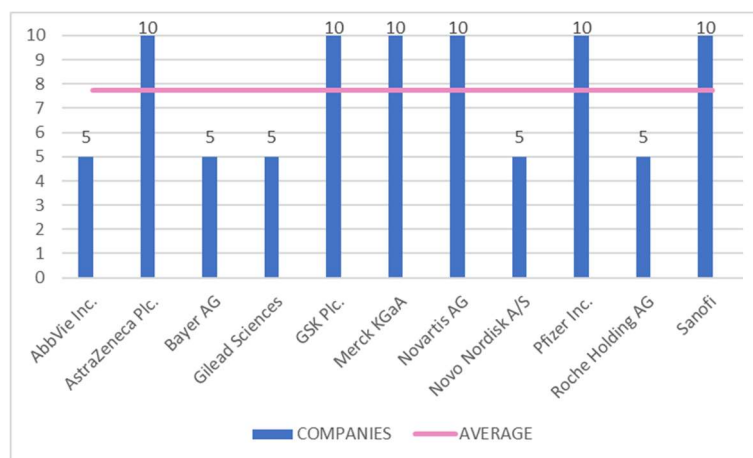
Source: Own creation

Figure 5.7 shows if the companies have established equitable pricing for their products in their countries under scope. All of them have a pricing strategy for at least one of

their products, however it is rewarded in the cases in which this equitable pricing strategy is set for the whole current product portfolio and is guaranteed to be introduced in all the new product releases, additionally, if the pricing strategy considers not only inter-countries factors but also intra-countries ones.

A best practice example could be found in the case of Merck KGaA: “We are committed to fair, flexible, and sustainable pricing – both within and across countries. We therefore adapt our prices based on local market considerations, such as unmet medical and treatment needs, health system capacity, infrastructure, and socioeconomic standards. We also make our products affordable to patients in low- and middle-income countries with an equitable value and access strategy that includes participating in government tenders, providing flexible pricing, establishing high-quality affordable brands or branded generics and operating patient access programs.”

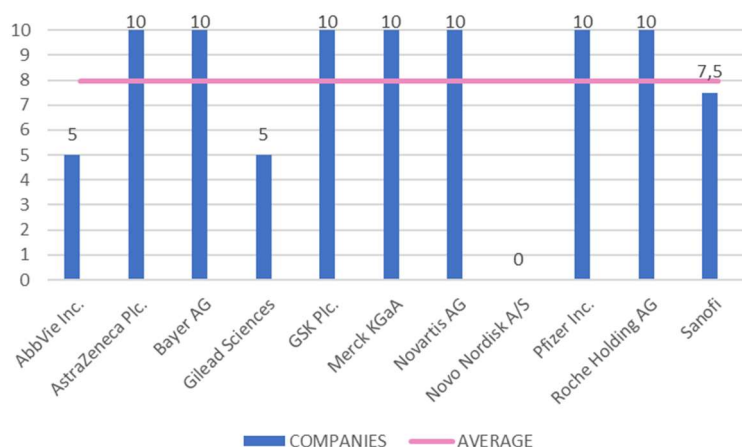
Figure 5.7: Equitable pricing strategy



Source: Own creation

On Figure 5.8 it is displayed the different scores obtained according to the agreements companies established in order to fill in patents and enforce them. All but one, (Novo Nordisk A/S) offer some types of non-enforcement agreement/ do not fill the patent in the countries this framework considers, on the other hand, Novo Nordisk A/S do not use any kind of licensing agreements and they neither engage in voluntary licensing for products in scope of the index.

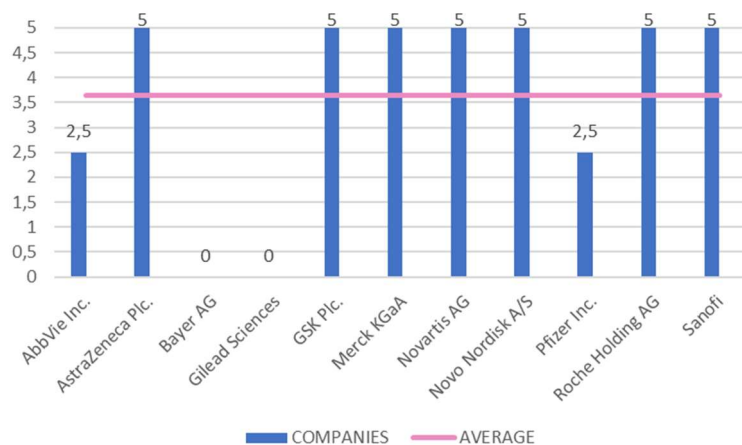
Figure 5.8: Patent filing and enforcement



Source: Own creation

Figure 5.9 represents whether the companies take measures in order to prevent submedicines and identify falsifications. The specific measures Novo Nordisk A/S is taking against anti-counterfeit medicines will be explained as an example of best practice: “To ensure patient safety, we have been implementing a comprehensive anti-counterfeit programme. A cross functional Anti-Counterfeit Working Group, chaired by the head of our Customer Complaint Centre, ensures vigilant risk assessment and implementation of an Anti-Counterfeit Product strategy. We have an ongoing international collaboration with regulatory bodies, scientific and trade organisations, law enforcement agencies and other stakeholders to investigate counterfeit products and to influence legislation regarding new anti-counterfeit measures.”

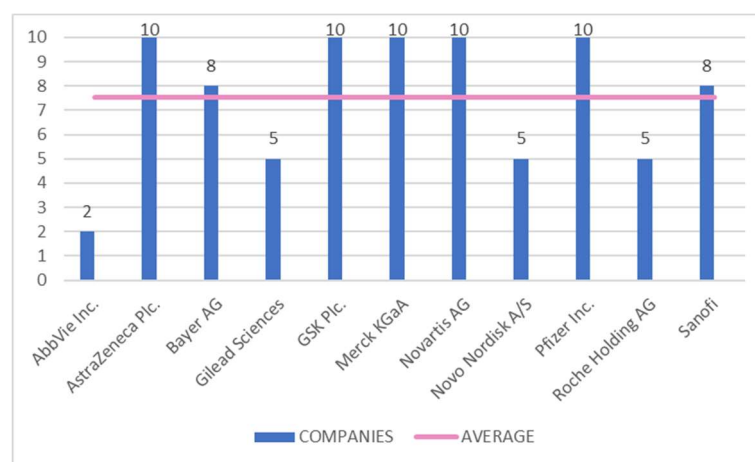
Figure 5.9: Prevention of submedicines and falsifications



Source: Own creation

Figure 5.10 represents the score assigned to the companies depending on the measures they take to strengthen the health system. As it can be seen, all of them take at least one measure, however the potential this type of companies have is remarkable as it can be seen in the case of the measures taken by Pfizer. “The Pfizer Foundation has supported 34 organisations in 21 LMICs across Asia, Africa, and Latin America. These efforts have helped to treat more than six million patients, provide life-saving screening and education for 12.2 million patients, train more than 80,000 healthcare staff and open over 1,000 new health centres.”.

Figure 5.10: Strengthening the health system.

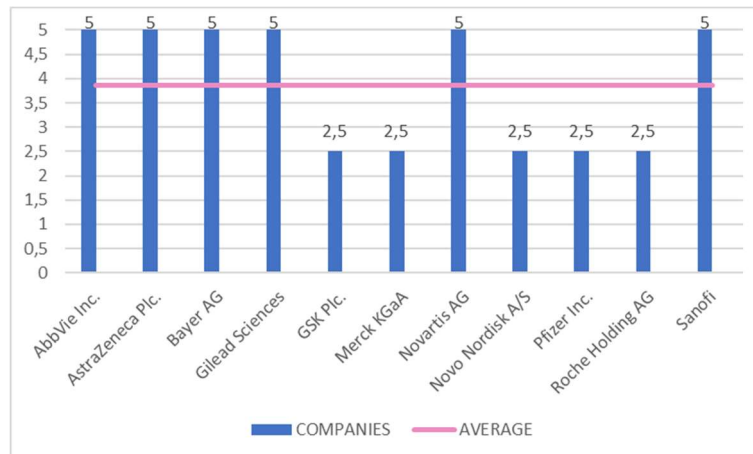


Source: Own creation

The last KPI studied under the section of Product Delivery is Ad-hoc donations and the results obtained could be observed in Figure 5.11. The fact of making both long term and short-term donations is rewarded by obtaining 5 points. Two examples are given:

- AbbVie on its part, made donations valued in \$1M to the International Medical Corps and Project Hope for medical care and supplies for Ukraine and Ukrainian refugees (short-term donation). Additionally, they have seven ongoing medicine donation partnerships with non-governmental organisations providing care in low-and middle-income countries (LMICs) (long term donation).
- Novartis on their side, has donated since 2000, more than 70 million blister packs of multidrug therapy (MDT) valued at approximately USD 124 million, helping to treat more than 7.5 million leprosy patients worldwide through the WHO (long term donation). Additionally, since the start of the war, they have provided 21 million doses of medicine to those in Ukraine and to refugees in border areas, worth more than USD 33 million (short term donation).

Figure 5.11: Ad-hoc donations

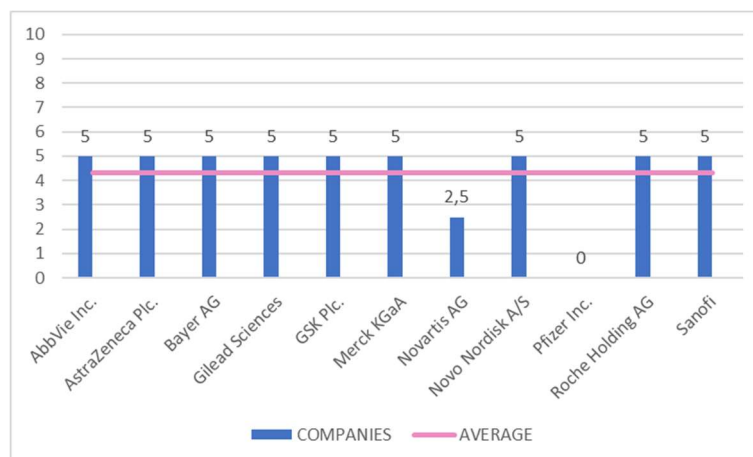


Source: Own creation

Finally, let's move to the third and last section of the framework, the Governance of Access to study the result of the 3 KPI's included.

Figure 5.12 represents the variable in which lowest results have been obtained and therefore greatest room for improvement appears. As it is shown, most companies include either short term or long-term incentives into the Named Executive Officers remuneration, however none of them include both at the same time. It should be highlighted the case of Novartis in which the CEO had targets based on access to medicine for his Annual Incentive, however board members do not receive variable compensation, in line with their focus on corporate strategy, supervision and governance. Board members receive only fixed compensation. As a result, a score of 2.5 points is assigned.

Figure 5.12: NEOs remuneration based on LT/ST incentives.

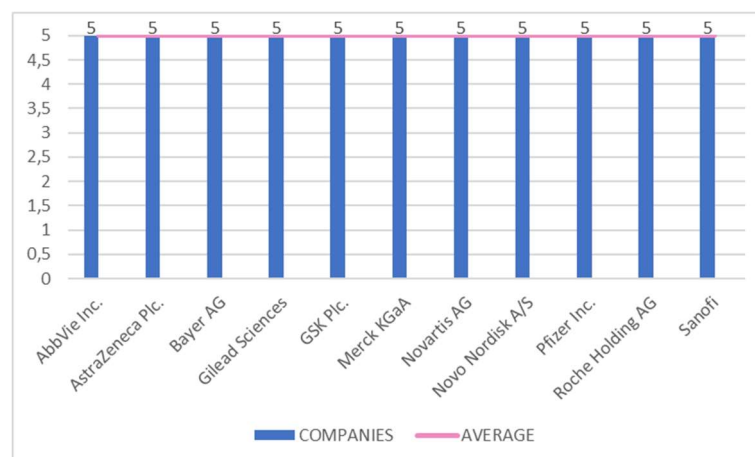


Source: Own creation

Figure 5.13 in contrast, represents the highest grade as all companies already include access to medicine principles in its strategy. Thanks to this it could be proved that even if they are currently performing better or worse, they integrate access principles into their strategy and they aim to improve access. This is the case of:

- Merck KGaA, for them: “Sustainability is firmly anchored in our corporate strategy. Our ambition is to leverage science and technology to achieve lasting progress for mankind. For us, sustainable entrepreneurship and profitable growth go hand in hand. Through our business activities, we want to be economically successful and create value for society. In doing so, we are helping tackle the great challenges facing today’s world, such as disease, poverty, hunger, and climate change.”
- Bayer AG, in their case: “Our strategy is aligned to the global Sustainable Development Goals (SDGs) of the United Nations, the attainment of which is targeted for 2030. We align ourselves here also to the needs of people in LMICs, for whom we make existing products and services accessible and affordable. In accordance with our strategy, we want to fulfil the need of 100 million women in low- and middle-income countries for modern contraception by 2030.”

Figure 5.13: Integration of ATM principles on the strategy

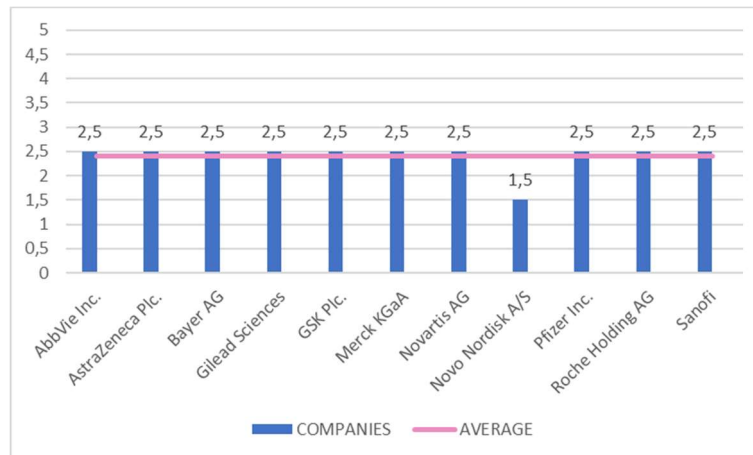


Source: Own creation

The results of the last variable studied could be found on the Figure 5.14, it is analysed the presence of an accountable access related body, no company has a specific body studying the performance of access measures, however the companies who scored 2.5 have a specific ESG Committee that is in charge of analysing among other variables the

access to medicines. Particularly, for Novo Nordisk A/S, the highest responsibility for access lies directly with the board, namely with the Chief Executive Officer (CEO), under the supervision of the Board of Directors but no special committee is created.

Figure 5.14: Accountable access related body

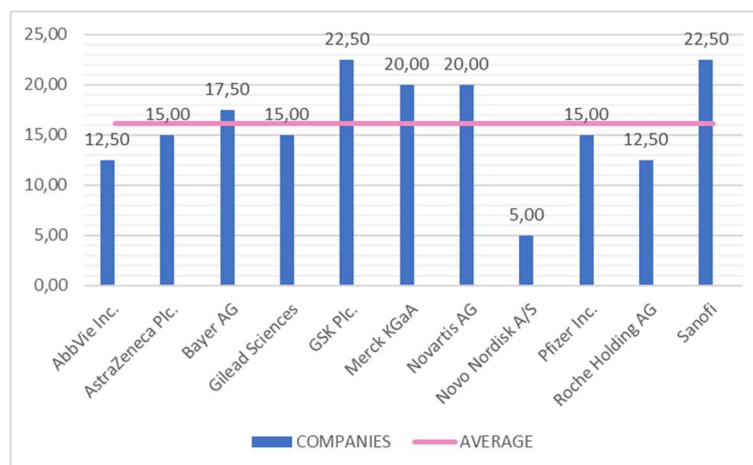


Source: Own creation

Finally, on the following pages, it will be commented on the scores obtained for each of the three groups the framework includes.

Figure 5.15 depicts the total results for the Research and Development part, summing the score obtained in the three variables that conform it. Four companies perform well above the average: GSK Plc, (22.50/25), Sanofi (22.50/25), Merck KGaA (20/25) and Novartis AG (20/25). Following this group of firms, six companies have an average score, close to 16.14. There is one outlier that is Novo Nordisk A/S that performs far below the average obtaining just 5 points.

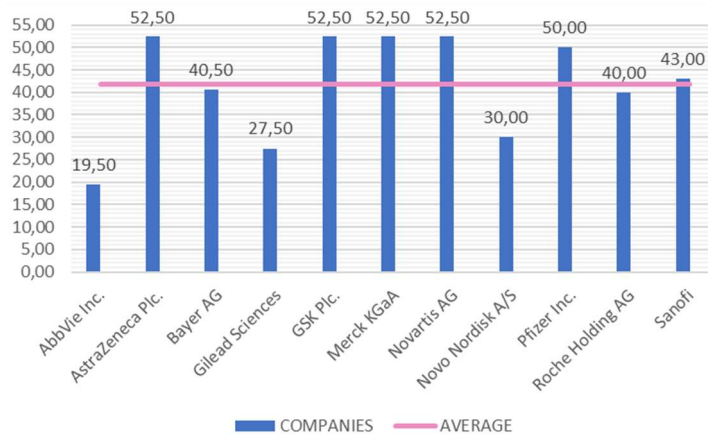
Figure 5.15: Average R&D score



Source: Own creation

Figure 5.16 illustrates the results obtained for Product Delivery; this is the one that weighs more heavily on the framework as it represents more than half of the total score that could be obtained (55%). In this case, there are four leading companies that are AstraZeneca Plc, GSK Plc., Novartis AG and Merck KGaA scoring 52.50 out of 55, closely followed by Pfizer Inc. obtaining 50 points. Sanofi, Bayer AG and Roche Holding AG obtained results that locate them near the average. Novo Nordisk A/S, Gilead Sciences and AbbVie Inc perform poorer than the rest, having the lowest results.

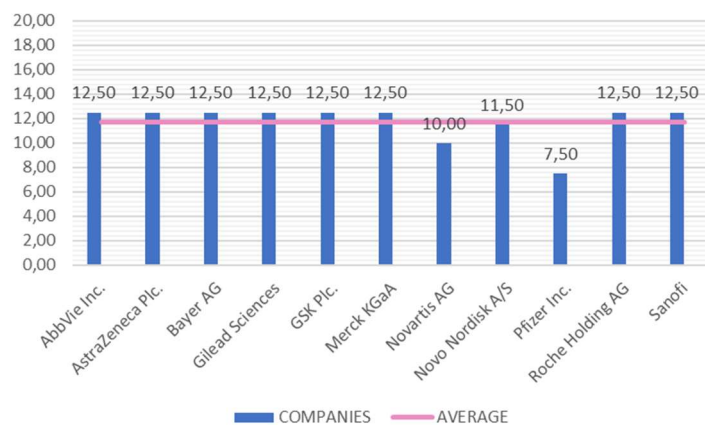
Figure 5.16: Average Product Delivery score



Source: Own creation

The last group that conforms the framework is Governance of Access and on figure 5.17 it represents the results that the companies obtained by summing the 3 different KPIs that define the section. The results obtained show little difference between the companies with none of them outperforming, the scores obtained are really close to 12/20. However, it should be mentioned that Pfizer Inc is performing quite below the average, however the difference is not really significant.

Figure 5.17: Average Governance of Access score



Source: Own creation

6. CONCLUSIONS:

Thanks to the results that have been obtained in the framework, several conclusions could be made. As it has been shown, most of the companies are already offering some type of measure that ensure Access to Medicine in the countries under scope. However, the results of such measures are more visible in some companies than in others. Therefore, we should also make a longitudinal study that compares the evolution that the companies experience in the following years in order to assess if the measures that companies are taking nowadays have an effect in the future and promotes access to medicines in the long run.

Additionally, results have proven that pharmaceutical companies are a cornerstone to assure access in LMICs. They have the possibilities and tools to offer their products in an ethical manner so that people that live in countries with few resources could also access to medicines that are essential for them and that could save their lives. While some companies already help to achieve that, others should continue implementing measures to enable proper access.

It has been thanks to the voluntary application of SASB and GRI standards in some integrated reports of the companies that comparability and measurability has been made easier. Nevertheless, as just mentioned, it is a voluntary adoption to which they are not obliged and therefore some companies do not take them into account when elaborating their integrated reports. If an international regulation obliged all companies to disclose the same type of non-financial information, this type of comparisons (as the one executed in this dissertation) would be much easier to be developed.

A final conclusion should be made regarding the durability of this framework. ESG information is becoming more and more detailed as time passes, therefore the variables that this framework is studying now, could be (or not) subdivided into some other variables in some years. With companies providing each time more and more non-financial information, it is unforeseen the utility this framework will have in the future. What is sure is that this information is expected to be provided in the following years, the only remark is that maybe each of the KPI's that are studied now and that agglutinates a series of different factors, due to the lack of information of each of them separately, could be studied separately in the future.

7. LIMITATIONS:

This dissertation has found several limitations during its development. First, regarding the sample chosen, some companies have not yet published their integrated reports and therefore the information to do the research was missing. Additionally, on a first phase, it was planned not only to compare companies doing a transversal comparison but also compare their performance during the last 3 years doing a longitudinal comparison. It was ambitious research but due to its complexity, as companies' disclosure regarding ESG, advances and changes year after year it was almost impossible to compare the same information during the last 3 years.

Furthermore, it should also be mentioned that as the sample of companies come from different countries and continents, the regulation that their integrated reports follow changes. For the European companies, they all have to follow the EU Taxonomy, however this one does not apply for the companies in the United States. If only all the companies created their integrated reports following the same guidelines, it would make much easier the comparability of the results. Yet, there is still job to do and an international regulation regarding ESG matters is still to be developed.

Moreover, it is a very broad and recent field of study that has acquired significant importance during the last years linked with the creation of the ATM Index. There exist relatively few academic articles related to this issue which as a consequence may attract many authors and researchers to investigate and dig deeper into it.

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9. ANNEXES

| | MATERIAL TOPIC | VARIABLES | How to measure it | Score |
|--------------------|--------------------------------|---|---|-------|
| COMPANY: ABBVIE | Research and Development (25%) | Pipeline: Prioritized diseases (10%) | COVID + HIV | 5 |
| | | Planning for access: Project-specific plans (10%) | In June 2022, AbbVie renewed its commitments to NTDs by signing the Kigali Declaration "Ending the Neglect to Attain the Sustainable Development Goals." Signatories are committed to a new World Health Organization (WHO) roadmap, which aims to prevent, control, eliminate and eradicate a set of 20 NTDs by 2030 + AbbVie's continued commitment to HCV elimination in the US and globally, in line with WHO's 2030 goal for HCV elimination. | 5 |
| | | Patent status disclosure (5%) | https://www.abbvie.com/science/pipeline.html | 2,5 |
| | Product delivery (55%) | Patients reached (15%) | not disclosed | 0 |
| | | Equitable pricing strategy (10%) | We price our medicines to reflect the value they bring to patients and their families, the health system and to society --> AbbVie offers several programs that reduce the out-of-pocket costs patients pay for our medicines, with each program tailored to meet the unique needs of patients within a given geography, disease area and payer context | 5 |
| | | Patent filing and enforcement (10%) | AbbVie entered into licensing agreements with the Medicines Patent Pool (MPP) to increase access to critical medicines for patients in low-and middle-income countries (LMICs). Our MPP agreements span nearly 100 countries for Mavyret, an AbbVie medicine used to treat chronic HCV. For Aluvia FD, an antiviral medicine used to treat HIV, we have MPP agreements in place that cover over 100 countries of which more than 65 are classified as middle-income nations. | 5 |
| | | Prevention of submedicines and falsifications (5%) | AbbVie's Product Security Alert Board is responsible for reviewing and reporting substandard and falsified medicines to the relevant authorities. --> Our Global Anti-Counterfeiting Steering Committee is responsible for identifying and mitigating risks related to AbbVie medicines. They coordinate proactive strategies for preventing counterfeiting and diversion of our medicines and conduct routine monitoring to identify signals of possible counterfeiting or diversion | 2,5 |
| | | Strengthening the health system (10%) | we offer educational programs that empower patients, their families and caregivers with the knowledge and resources to understand their disease and be active participants in their health journeys. We also provide education and support through personalized interactions to help patients adjust to the use of their AbbVie medicine. | 2 |
| | | Ad-hoc donations (5%) | \$1M in donations to the International Medical Corps and Project Hope for medical care and supplies for Ukraine and Ukrainian refugees. + We have seven ongoing medicine donation partnerships with non-governmental organizations providing care in low-and middle-income countries (LMICs) | 5 |
| | Governance of access (20%) | Board remuneration based on LT or ST incentives (10%) | The ESG goal was weighted 10% within the short-term incentive program for each NEO + AbbVie's senior executives have different area of focus regarding driving the company's ESG framework, and together, the executives' ESG accomplishments cover all of AbbVie's ESG material drivers. | 5 |
| | | Integration of ATM principles on the strategy (5%) | AbbVie's strategy is to deliver innovative medicines and to make a remarkable impact on people's lives. This is the reason for our success and why we're able to create value for both our patients and our shareholders. | 5 |
| | | Creation of an ATM Committee (5%) | The ESG Council ensures strategic, enterprise-aligned delivery on AbbVie's ESG framework. --> Board committees that oversee ESG topics include the Public Policy & Sustainability, Nomination & Governance, Audit, and Compensation committees. Examples of this oversight involving ESG topics include: (1) review of the product innovation pipeline, (2) oversight of employee health and safety data and priorities, (3) reviewing the company's commitments to pay equity, environmental sustainability efforts, ethics and compliance, risk management and other priorities, (4) reviewing results of the biennial all employee survey and (5) oversight of the company's Equity, Equality, Diversity and Inclusion (EEDI) strategy | 2,5 |

| COMPANY: ASTRAZENECA | MATERIAL TOPIC | VARIABLES | How to measure it | Score | |
|----------------------------|---|---|---|--|-----|
| | Research and Development (25%) | Pipeline: Prioritized diseases (10%) | | COVID x2 | 2,5 |
| | | Planning for access: Project-specific plans (10%) | | **WAITING ANSWER --> It publicly discloses commitments, measurable goals, objectives and 2025 targets for improving access to healthcare in countries in scope. (from ATM) | 10 |
| | | Patent status disclosure (5%) | | https://www.astrazeneca.com/our-therapy-areas/pipeline.html | 2,5 |
| Product delivery (55%) | Patients reached (15%) | | More than 44,63 million people reached (cumulative) through Healthy Heart Africa | 12,5 | |
| | Equitable pricing strategy (10%) | | Patient affordability programmes aim to close the gap in the ability to pay for out-of-pocket patients (paying for their own medicines) and are active in more than 20 low- and middle-income countries (LMICs) | 10 | |
| | Patent filing and enforcement (10%) | | **waiting answer --> AstraZeneca publicly pledges to neither file nor enforce patents in a sub-set of index countries. This commitment applies to 80 countries in scope of the Index, of which all Least Developed Countries and LICs in scope, and a subset of LMICs and UMICs (from ATM) | 10 | |
| | Prevention of submedicines and falsifications (5%) | | Through the implementation of a range of additional anti-counterfeiting measures on our packaging and products, we continue to go above and beyond compliance with serialization and traceability legislations introduced by health authorities around the globe + We triage and record every report of illegal trade in AstraZeneca product. We confirm cases of counterfeit product, illegal diversion or theft and report them at the earliest opportunity to domestic regulatory bodies, and the World Health Organization (WHO) and to law enforcement agencies, where appropriate | 5 | |
| | Strengthening the health system (10%) | | 1,258 health facilities activated (cumulative) through Healthy Heart Africa programme + In 2022, we connected 1,200 students from 12 universities in seven African countries. // More than 126,600 healthcare workers trained (cumulative) | 10 | |
| | Ad-hoc donations (5%) | | 3100,2 million dollars through patient assistance programmes | 5 | |
| Governance of access (20%) | Board remuneration based on LT or ST incentives (10%) | | **Waiting answer --> from ATM --> It incentivises select senior executives and in-country managers to perform on access to medicine with financial and non-financial rewards and the CEO has a access-related incentives linked to its ESG performance. For example, AstraZeneca's "Contribution to society KPI" measures progress on annual and long-term targets and includes "Access to healthcare" as one of three pillars of sustainability. | 5 | |
| | Integration of ATM principles on the strategy (5%) | | We are focused on creating genuinely innovative medicines and improving access to them. In this way, we deliver the greatest benefit to patients, healthcare systems and societies globally. --> Progressing our Sustainability strategy across three integrated priority pillars: access to healthcare, environmental protection, and ethics and transparency. | 5 | |
| | Creation of an ATM Committee (5%) | | In 2021, the Board established a Sustainability Committee to monitor the implementation of our sustainability strategy, oversee communication of sustainability activities with stakeholders, and provide input to the Board and other Board Committees on sustainability matters. + reviewing the enterprise-wide approach to our Access to healthcare strategy; and supporting work on the compensation of ESG objectives | 2,5 | |

| | MATERIAL TOPIC | VARIABLES | How to measure it | Score |
|-------------------|--------------------------------|---|---|-------|
| COMPANY: BAYER | Research and Development (25%) | Pipeline: Prioritized diseases (10%) | 1.9 m€ Development cost Contraception + 5 m€ Development cost NTD (Emodepside / River Blindness and Nifurtimox / Chagas) | 10 |
| | | Planning for access: Project-specific plans (10%) | o eliminate the malaria pathogen by 2040, through the use of innovative vector control, various treatment forms and preventive measures. | 5 |
| | | Patent status disclosure (5%) | http://www.bayer.com/en/pharma/development-pipeline | 2,5 |
| | Product delivery (55%) | Patients reached (15%) | In 2022, we already reached 44 million women in LMICs (3 million in 2022) | 12,5 |
| | | Equitable pricing strategy (10%) | enabling these products to be offered in LMICs while taking into account the local purchasing power. In this, we work together with patients, charitable organizations, governmental authorities and other players to enable easier, sustainable access to our products based on adjusted pricing -> For some of our most important products including specific new launches, we have established the framework conditions for adjusted, equitable pricing. | 5 |
| | | Patent filing and enforcement (10%) | Our patient access programs help patients in LMICs to better overcome financial obstacles to reliable drug access -> In low-income countries (LICs), Bayer does not register or enforce patents for human pharmaceuticals. This applies as long as a country retains the status of an LIC according to the World Bank classification and the country's government does not take any measures that would justify a change in that status. | 10 |
| | | Prevention of submedicines and falsifications (5%) | Not disclosed | 0 |
| | | Strengthening the health system (10%) | we partner with the organization reach52 to support people in rural communities with health education and access to everyday health solutions by training community health workers to provide healthcare using their "offline-first" health technology platform | 8 |
| | | Ad-hoc donations (5%) | Bayer partners with the World Health Organization (WHO) and supported the WHO Roadmap 2030 with monetary and product donations to the amount of €2 million (book value) in 2022. + 35 million product + cash (66% of total) -> 66% of our contributions (cash and product) went to low- and middle-income countries to strengthen the capacity of underserved communities and combat social inequality. | 5 |
| | Governance of access (20%) | Board remuneration based on LT or ST incentives (10%) | the compensation system is designed in such a way that it provides real incentives to achieve the sustainability targets. -> Number of women in low- and middle-income countries (LMICs) who have their need for modern contraception satisfied due to interventions supported by Bayer + Number of people in underserved communities whose self-care is supported by interventions from Bayer | 5 |
| | | Integration of ATM principles on the strategy (5%) | Our strategy is aligned to the global Sustainable Development Goals (SDGs) of the United Nations, the attainment of which is targeted for 2030. -> We align ourselves here also to the needs of people in LMICs, for whom we make existing products and services accessible and affordable. | 5 |
| | | creation of an ATM Committee (5%) | At the beginning of 2022, an ESG Committee was established within Bayer's Supervisory Board to deal with ecological and social responsibility matters and sustainable corporate governance. | 2,5 |

| COMPANY: | MATERIAL TOPIC | VARIABLES | Data from report | Score |
|---|---|---|--|--|
| | GILEAD | Research and Development (25%) | Pipeline: Prioritized diseases (10%) | 13 different programs for HIV + COVID + Hepatitis B (3 programs) |
| Planning for access: Project-specific plans (10%) | | | FROM ATM -> It publicly discloses its commitments, measurable goals, objectives and targets for improving access in countries in scope of the Index. It shares information on the outcomes of only a subset of its access initiatives | 5 |
| Patent status disclosure (5%) | | | https://www.gilead.com/science-and-medicine/pipeline | 2,5 |
| Product delivery (55%) | | Patients reached (15%) | more than 20 million HIV treatments based on Gilead's innovation were made available in low- and lowermiddle-income countries. | 7,5 |
| | | Equitable pricing strategy (10%) | Gilead used a tiered pricing for MIC and voluntary licensing for LIC to ensure access possible to remdesivir . | 5 |
| | | Patent filing and enforcement (10%) | Gilead has signed non-exclusive voluntary licensing agreements with nine generic pharmaceutical manufacturers to expand the supply of remdesivir | 5 |
| | | Prevention of submedicines and falsifications (5%) | FROM ATM -> Does not have a policy for reporting substandard and falsified (SF) medicines in countries in scope of the Index. Gilead does not disclose, publicly or to the Index, evidence of a policy in place to report SF medicines to the relevant health authorities. | 0 |
| | | Strengthening the health system (10%) | Gilead also works to strengthen health systems to overcome access barriers by raising awareness of the need for and driving commitment to implement diagnostic treatment and surveillance capacity. -> 1.3 M EDUCATIONAL TOUCH POINTS WITH HEALTHCARE PROVIDERS IN 2022 | 5 |
| | | Ad-hoc donations (5%) | \$296M DONATED GLOBALLY IN 2022 -> \$53M DONATED TO SUPPORT UKRAINIAN RELIEF EFFORTS | 5 |
| Governance of access (20%) | Board remuneration based on LT or ST incentives (10%) | FROM ATM -> It incentivises its senior executives and in-country managers to take action on access to medicine. The CEO also has incentives, linked to its performance in expanding access to HCV products. | 5 | |
| | Integration of ATM principles on the strategy (5%) | Our commitment to ESG topics plays a critical role in helping us achieve our mission in a way that is socially responsible and environmentally sustainable. | 5 | |
| | Creation of an ATM Committee (5%) | Corporate Responsibility Committee is tasked with managing ESG issues | 2,5 | |

| | MATERIAL TOPIC | VARIABLES | How to measure it | Score |
|--------------|--------------------------------|---|--|-------|
| COMPANY: GSK | Research and Development (25%) | Pipeline: Prioritized diseases (10%) | COVID 19 + pneumonia + HIV + malaria + salmonella + Human papillomavirus (HPV) | 10 |
| | | Planning for access: Project-specific plans (10%) | In 2022, we progressed 12 Global Health pipeline assets to address priority WHO diseases, exceeding our target of three. + R&D projects across medicines and vaccines (13 deemed 'critical' or 'urgent' by the WHO) | 10 |
| | | Patent status disclosure (5%) | https://www.gsk.com/en-gb/innovation/pipeline/ | 2,5 |
| | Product delivery (55%) | Patients reached (15%) | In 2022, we reached 73 million people with our products --> people reached in LMICS = 73,011. In total 323382 | 15 |
| | | Equitable pricing strategy (10%) | Our tiered pricing model is based on World Bank Gross National Income (GNI) classifications. Price ceilings and price floors exist for each tier, with these decreasing from high to low-income countries | 10 |
| | | Patent filing and enforcement (10%) | For medicines in low-income countries, we do not file patents for our medicines or enforce historic patents. This lets other companies manufacture and supply generic versions of GSK medicines in those countries. | 10 |
| | | Prevention of submedicines and falsifications (5%) | We have a robust approach to handling all falsified product incidents, ensuring that cases of confirmed counterfeit products are reported to the WHO and to relevant regulatory authorities. | 5 |
| | | Strengthening the health system (10%) | Through the TB and malaria programme, over 2,500 healthcare workers have been trained across both countries in 2022 + Bill & Melinda Gates CEO Roundtable programme trained around 3,000 healthcare workers in 2022 | 10 |
| | | Ad-hoc donations (5%) | donated albendazole tablets to the WHO 533 million in 2022. | 2,5 |
| | Governance of access (20%) | Board remuneration based on LT or ST incentives (10%) | In 2022, the Remuneration Committee, with the support of the CRC, introduced ESG performance measures into both our short- and long-term incentive plans, to reward delivery of key ESG commitments. --> introduction of an ESG: DEI (diversity/equity/inclusion) measure in the annual bonus arrangements for our Executive Directors and other GLT members. | 5 |
| | | Integration of ATM principles on the strategy (5%) | Being a responsible business means getting ahead of disease together in the right way. We therefore need to consider ESG impacts across everything we do, from the lab to the patient. We have identified six ESG focus areas that address what is most material to our business and the issues that matter to our stakeholders. These focus areas are access to healthcare, global health and health security, environment, diversity, equity and inclusion, ethical standards, product governance. | 5 |
| | | Creation of an ATM Committee (5%) | Our ESG performance is monitored regularly by both our Board level Corporate Responsibility Committee (CRC) and the GSK Leadership Team (GLT). The CRC oversees our progress against our commitments, including performance and how we are meeting the expectations of our stakeholders. | 2,5 |

| COMPANY: MERCK KGaA | MATERIAL TOPIC | VARIABLES | Data from report | Score | |
|----------------------------|---|---|--|---|----|
| | Research and Development (25%) | Pipeline: Prioritized diseases (10%) | | Malaria (5 different programs) + Schistosomiasis (6 different programs) | 5 |
| | | Planning for access: Project-specific plans (10%) | The ultimate aim of our schistosomiasis-related work is to eliminate the disease as a public health problem in line with the World Health Organization (WHO) NTD Roadmap 2021-2030. + To catalyze innovative solutions for global health challenges, primarily targeting schistosomiasis and malaria. We strive to particularly reach those who are most vulnerable: women and children. | | 10 |
| | | Patent status disclosure (5%) | | We report on the patent status of our products via the publicly accessible database Pat-INFORMED. | 5 |
| Product delivery (55%) | Patients reached (15%) | | In 2022, our Healthcare medicines were used to treat around 174 million patients globally. → meeting Miriam = 50 cartera HC+ 70 praziquantel = 120 million in LMICs We aim to increase the impact of our Healthcare innovations by driving our access efforts to reach more than 60 million patients per year in LMICs by 2030. In addition, we plan to continue our schistosomiasis elimination program by treating up to 90 million patients suffering from schistosomiasis. This means we are aiming on the treatment of 170 patients in low- and middle income countries. | 15 | |
| | Equitable pricing strategy (10%) | | We also make our products affordable to patients in low- and middle-income countries with an equitable value and access strategy that includes participating in government tenders, providing flexible pricing, establishing high-quality affordable brands or branded generics and operating patient access programs. | 10 | |
| | Patent filing and enforcement (10%) | | none of the medicines that address the highest burden of disease in low- and middle-income countries are protected by patents. | 10 | |
| | Prevention of submedicines and falsifications (5%) | | These include the good pharmacovigilance practice guideline that was published in August 2022. In 2022, we continued to raise awareness for Patient Safety Day via our affiliates in several countries, | 5 | |
| | Strengthening the health system (10%) | | we organize non-promotional medical education programs worldwide + funding three schools with currently around 500 students as well as five vocational training centers | 10 | |
| | Ad-hoc donations (5%) | | We donate up to 250 million tablets of praziquantel to endemic countries every year in partnership with WHO. | 2,5 | |
| Governance of access (20%) | Board remuneration based on LT or ST incentives (10%) | | we added a sustainability factor to the Merck Long-Term Incentive Plan (LTIP) in 2022. It measures the performance of three selected sustainability goals over a period of three years | 5 | |
| | Integration of ATM principles on the strategy (5%) | Sustainability is firmly anchored in our corporate strategy. Our ambition is to leverage science and technology to achieve lasting progress for mankind. For us, sustainable entrepreneurship and profitable growth go hand in hand. Through our business activities, we want to be economically successful and create value for society. In doing so, we are helping tackle the great challenges facing today's world, such as disease, poverty, hunger, and climate change. | | 5 | |
| | Accountable Access related body (5%) | | The Group Corporate Sustainability unit is responsible for developing and shaping the sustainability strategy | 2,5 | |

| | MATERIAL TOPIC | VARIABLES | How to measure it | Score |
|--|--------------------------------|--|---|-------|
| COMPANY: NOVARTIS | Research and Development (25%) | Pipeline: Prioritized diseases (10%) | COVID-19, Nipah and henipa viral diseases (WHO) + Malaria, dengue, leishmaniasis, Chagas disease, cryptosporidiosis (diarrheal disease), leprosy (PCR) | 10 |
| | | Planning for access: Project-specific plans (10%) | we endorsed the Kigali Declaration on Neglected Tropical Diseases and pledged USD 250 million over five years (2021- 2025) to advance new treatments for NTDs and malaria + not disclosed any specific target | 5 |
| | | Patent status disclosure (5%) | https://www.novartis.com/sites/novartis_com/files/2022-11-novartis-invest-or-update-a-access-sustainability.pdf--2_page_11 | 5 |
| | Product delivery (55%) | Patients reached (15%) | 54,6M patients reached through access programs, predominantly in LMIC's | 12,5 |
| | | Equitable pricing strategy (10%) | In LMICs, we implement tiered pricing for launches of our strategic innovative therapies, taking income levels, local affordability barriers and economic realities into consideration. This approach supports governments in responding to unmet medical needs in a way that is sustainable for our business. All our medicine launches in 2022 included a tiered pricing strategy for LMICs. | 10 |
| | | Patent filing and enforcement (10%) | To further improve access, we do not file or enforce patents in low-income countries. | 10 |
| | | Prevention of submedicines and falsifications (5%) | Thanks to the measures to prevent submedicines --> Out of the 213 incidents in 48 countries – 85 occurred in Lower & Middle-income countries and 4 occurred in Low-income countries. Novartis Position on Falsified Medical Products based on: Intelligence + Prevention + Enforcement + Stakeholder engagement | 5 |
| | | Strengthening the health system (10%) | 4477 health educators trained + 12035 healthcare providers trained + 12960922 people reached at awareness events | 10 |
| | | Ad-hoc donations (5%) | Since 2000, through the WHO, Novartis has donated more than 70 million blister packs of multidrug therapy (MDT) valued at approximately USD 124 million, helping to treat more than 7.5 million leprosy patients worldwide. // Since the start of the war, we have provided 21 million doses of medicine to those in Ukraine and to refugees in border areas, worth more than USD 33 million. • We donated USD 3 million to organizations working with refugees and displaced people, including Save the Children, the International Rescue Committee and the Red Cross, and allocated a further USD 1 million to patient organizations supporting displaced refugees | 5 |
| | Governance of access (20%) | Board remuneration based on LT or ST incentives (10%) | The CEO had targets based on access to medicine for his Annual Incentive. // Board members do not receive variable compensation, in line with their focus on corporate strategy, supervision and governance. Board members receive only fixed compensation | 2,5 |
| Integration of ATM principles on the strategy (5%) | | Our strategy is to deliver high-value medicines that alleviate society's greatest disease burdens through technology leadership in R&D and novel access approaches. | 5 | |
| Creation of an ATM Committee (5%) | | the Governance, Sustainability and Nomination Committee (GSNC) oversees performance regarding governance and ESG matters, including access to medicines, global health, environmental sustainability, and human capital management | 2,5 | |

| | MATERIAL TOPIC | VARIABLES | How to measure it | Score |
|--------------------------|--------------------------------|---|--|-------|
| COMPANY: NOVO NORDISK | Research and Development (25%) | Pipeline: Prioritized diseases (10%) | none | 0 |
| | | Planning for access: Project-specific plans (10%) | The storage instructions for insulin vary, but for most, the recommendation from the moment of manufacture up until the product is in-use to keep the insulin cool – at refrigerator temperatures around 2°C – 8°C range. In many low- and middle-income countries and humanitarian settings, temperatures often exceed this range, and refrigeration may not always be available, affordable, or reliable for people with diabetes → We sought to address this barrier by challenging and re-evaluating the thermal stability of our short-acting and intermediate-acting human insulin products. | 2,5 |
| | | Patent status disclosure (5%) | https://www.novonordisk.com/science-and-technology/r-d-pipeline.html | 2,5 |
| | Product delivery (55%) | Patients reached (15%) | 36,3 million patients reached with Novo Nordisk's Diabetes care products + 1,8 million through Access to Insulin Commitment + 30,000 children in LMICS | 12,5 |
| | | Equitable pricing strategy (10%) | We will guarantee to provide low-priced human insulin in the poorest parts of the world for many years to come, including Least Developed Countries (LDCs) as defined by the UN, other low-income countries as defined by the World Bank and middle-income countries where large low-income populations lack sufficient health coverage → price ceiling 3USD per vial | 5 |
| | | Patent filing and enforcement (10%) | From ATM → No use of licensing agreements. Novo Nordisk does not engage in voluntary licensing for products in scope of the Index. | 0 |
| | | Prevention of submedicines and falsifications (5%) | To ensure patient safety, we have been implementing a comprehensive anti-counterfeit programme. A cross functional Anti-Counterfeit Working Group, chaired by the head of our Customer Complaint Centre, ensures vigilant risk assessment and implementation of an Anti-Counterfeit Product strategy. → We have an ongoing international collaboration with regulatory bodies, scientific and trade organisations, law enforcement agencies and other stakeholders to investigate counterfeit products and to influence legislation regarding new anti-counterfeit measures. | 5 |
| | | Strengthening the health system (10%) | Cities Changing Diabetes (CCD) is a partnership programme to accelerate the prevention of diabetes and obesity by addressing the systemic change in urban environments: which are home to two-thirds of people with diabetes. | 5 |
| | | Ad-hoc donations (5%) | 126 million DKK (amount for LMICs?? → extract from MSCI | 2,5 |
| | Governance of access (20%) | Board remuneration based on LT or ST incentives (10%) | As described in the Remuneration Report, executive remuneration is linked to performance on financials as well as non-financials (e.g., innovation, sustainability). → Reach more vulnerable people with diabetes with access and affordability efforts | 5 |
| | | Integration of ATM principles on the strategy (5%) | • Being respected for adding value to society + see webpage | 5 |
| | | Creation of an ATM Committee (5%) | From ATM → The highest responsibility for access lies directly with the board, namely with the CEO, under the supervision of the Board of Directors. | 1,5 |

| | MATERIAL TOPIC | VARIABLES | How to measure it | Score |
|--------------------|--------------------------------|---|--|-------|
| | Research and Development (25%) | Pipeline: Prioritized diseases (10%) | COVID + SARS + Hepatitis | 7,5 |
| | | Planning for access: Project-specific plans (10%) | It publicly discloses its commitment to global public health, including new commitments in response to the COVID-19 pandemic, measurable goals, objectives and targets for improving access to medicine in countries in scope of the Index. (ATM) | 5 |
| | | Patent status disclosure (5%) | https://cdn.pfizer.com/pfizercom/product-pipeline/Pipeline_Update_02MAY2023_0.pdf?so7s1OH2hw6vg5Ner3aA09.FRlGpcRO | 2,5 |
| COMPANY: PFIZER | Product delivery (55%) | Patients reached (15%) | Pfizer is working to co-create scalable, sustainable solutions to enable greater access to healthcare innovation for 1.2 billion people living in 45 lower-income countries around the world. | 15 |
| | | Equitable pricing strategy (10%) | Pfizer's broad-based core methods to reduce the number of people who cannot afford -> • Innovative financing mechanisms, including differential pricing, microfinancing, peer-to-peer lending, subscription models, and flexible payment options, to help reduce out-of-pocket costs for patients on a sustained basis | 10 |
| | | Patent filing and enforcement (10%) | The portfolio offered by Pfizer on a not-for-profit basis through the Accord expanded from 23 to hundreds of patented and off-patent products that help treat or prevent many of the greatest infectious and non-communicable disease threats faced today in lower-income countries. Nearly 40 percent of the medicines and vaccines now offered are part of the World Health Organization's (WHO) list of essential medicines. As Pfizer introduces new medicines and vaccines, those products will also be included in the Accord portfolio. | 10 |
| | | Prevention of submedicines and falsifications (5%) | Counterfeit medicines pose a significant risk to patient health and safety. To protect our patients, we take a proactive approach to product safety by investing in an enterprise-wide, global strategy to combat counterfeit threats through patient education, legislative advocacy, surveillance, and interdiction | 2,5 |
| | | Strengthening the health system (10%) | The Pfizer Foundation has supported 34 organizations in 21 countries across Asia Africa, and Latin America. These efforts have helped to treat more than six million patients, provide life-saving screening and education for 12.2 million patients, train more than 80,000 healthcare staff and open over 1,000 new health centers. | 10 |
| | | Ad-hoc donations (5%) | pledge to make available at least 2 billion doses of the Pfizer-BioNTech COVID-19 vaccine to low- and middle-income countries through 2022. As of the end of 2022, Pfizer met the demand for the vaccine from these markets, delivering nearly 1.7 billion doses | 2,5 |
| | Governance of access (20%) | Board remuneration based on LT or ST incentives (10%) | We also were asked about the process for choosing our ESG metrics, and whether other metrics, such as access to medicines and vaccines, were considered, as well as our plans to potentially include additional metrics in the future (NOT YET INCLUDED -> MINORITIES + WOMEN + GREENHOUSE | 0 |
| | | Integration of ATM principles on the strategy (5%) | In 2023, we aim to further integrate ESG into our corporate strategy, reinforcing our commitment to being a purpose-driven organization. By embedding ESG into our strategy, we can make it the common denominator that underpins how we fulfill our commitments to our stakeholders | 5 |
| | | Creation of an ATM Committee (5%) | Our cross-functional Sustainability Steering Committee advises on key issues and guides the integration and implementation of Pfizer's non-financial reporting related to ESG. -> overseeing the company's ESG strategy and reporting and maintaining an informed status on political spending and lobbying priorities and activities | 2,5 |

| | MATERIAL TOPIC | VARIABLES | How to measure it | Score |
|-------------------|--------------------------------|---|---|-------|
| COMPANY: ROCHE | Research and Development (25%) | Pipeline: Prioritized diseases (10%) | COVID + COVID pneumonia + hepatitis b | 5 |
| | | Planning for access: Project-specific plans (10%) | From ATM --> It publicly discloses its commitments, measurable goals, objectives and targets for improving access to medicine in countries in scope of the Index | 5 |
| | | Patent status disclosure (5%) | https://www.roche.com/solutions/pipeline/ | 2,5 |
| | Product delivery (55%) | Patients reached (15%) | total people reached in LMICs 41,747 + 360,000 women screened for cervical cancer | 12,5 |
| | | Equitable pricing strategy (10%) | Value based pricing --> we apply International Differential Pricing, which provides a framework for aligning prices to a country's GDP, as well as to the UN's Human Development Index and public healthcare investment. To achieve this, we work closely with payers and governments all over the world to develop flexible and tailored pricing solutions, as well as patient support programmes to mitigate financial uncertainty and support those who have to pay for treatment themselves | 5 |
| | | Patent filing and enforcement (10%) | From ATM --> Roche publicly pledges to neither file for nor enforce patents in all Least Developed Countries and LICs within the scope of the Index. | 10 |
| | | Prevention of submedicines and falsifications (5%) | According to MSCI --> Systematic and regular audit systems | 5 |
| | | Strengthening the health system (10%) | 30 programme trainers were certified, 50 nurses were certified in basic oncology nursing training and 31 students + in Malawi, where we are helping to keep girls in school through a menstrual health hygiene campaign (hundreds of healthcare professionals are being trained, and testing capacity has been enabled and expanded) | 5 |
| | | Ad-hoc donations (5%) | FROM ATM --> Roche has public policies and supply processes in place to ensure donations are carried out rapidly in response to expressed need, and it monitors the delivery of donations until they reach the patient. + Has no long-term donation programmes for neglected tropical diseases (NTDs) or malaria that are eligible for analysis under this indicator. | 2,5 |
| | Governance of access (20%) | Board remuneration based on LT or ST incentives (10%) | FROM ATM --> Roche performs well. It incentivises its CEO, senior executives and in-country managers to perform on access to medicine with financial and non-financial rewards. | 5 |
| | | Integration of ATM principles on the strategy (5%) | We focus on finding new medicines and diagnostics and establishing data-based insights that evolve the practice of medicine and help patients live longer, better lives. --> Our approach to increasing access to healthcare ensures our life-changing solutions reach people around the world. | 5 |
| | | Creation of an ATM Committee (5%) | The Corporate Governance and Sustainability Committee of Roche Holding Ltd is responsible for the preparation and presentation of the non-financial information (including the GHG emissions) in accordance with the document "Basis for Preparation of Non-financial Information 2022". | 2,5 |

| COMPANY: SANOFI | MATERIAL TOPIC | VARIABLES | How to measure it | Score | |
|----------------------------|---|---|---|-------|-----|
| | Research and Development (25%) | Pipeline: Prioritized diseases (10%) | For WHO prioritized diseases, Sanofi R&D only has COVID-19 now in Life cycle Management (LCM). For Policy Cures Research (G-Finder) Sanofi has Fexinidazole (T. b. rhodiense) - Sleeping Sickness, Acoziborole (T. b. gambiense) Sleeping Sickness, LCM projects for tuberculosis. Malaria has been stopped. | | 10 |
| | | Planning for access: Project-specific plans (10%) | Eliminate sleeping sickness by 2030 (dana ted 1105 to do so) + eradicate polio + improve prevention, treatment and care for diabetes by 2030 | | 10 |
| | | Patent status disclosure (5%) | https://www.sanofi.com/assets/dotcom/pages/docs/our-science/our-pipeline/Sanofi_Q4_2022_Pipeline.pdf + https://www.sanofi.com/minisites/pipeline/en/index.html | | 2,5 |
| Product delivery (55%) | Patients reached (15%) | 2,835,392 malaria + 138,599 tuberculosis + 185,151 (non communicable diseases + ... = 13,159,106 | | 7,5 | |
| | Equitable pricing strategy (10%) | Inclusion of affordability criteria into pricing considerations for new launches. For all new product launches considers country affordability (capacity to pay) through different indicators published by the World Bank and International Monetary Fund on an annual basis; country wealth (GDP per capita and growth rate); healthcare system ability to pay (public health spending); and the burden of health cost on individuals | | 10 | |
| | Patent filing and enforcement (10%) | Sanofi has also confirmed that it will not file or enforce patents in Least Developed Countries (LDCs) or Low-income Countries (LICs). This also applies to some lower-middle and upper-middle income countries | | 7,5 | |
| | Prevention of submedicines and falsifications (5%) | The Sanofi Global Security network supports the implementation of actions to combat falsified medicine and illicit trafficking in liaison with the industry, law enforcement, and health authorities. This provides a capacity to detect medicine trafficking globally and to deploy a consistent level of security measures to prevent risks to products and patients. | | 5 | |
| | Strengthening the health system (10%) | As the provision of medicines is not enough in itself to meet unmet needs, the GHU will also work with local health authorities and care providers to train healthcare professionals and raise disease awareness, | | 8 | |
| | Ad-hoc donations (5%) | more than 120,000 vials were shipped, enabling more than 1,100 patients with rare diseases to receive treatment + essential medicines equivalent to 45 million daily treatments to treat 22 million patients. The value of these donated products was approximately €26 million. + Financial contribution of €4 million to the Red Cross to support people in Ukraine and neighboring countries, and €1 million to UNHCR to assist refugees | | 5 | |
| Governance of access (20%) | Board remuneration based on LT or ST incentives (10%) | (15%) Successful launch of the Global Health Unit (GHU) in July 2022: Launch of non-profit impact brand for 30 medicines in low-income countries, first concrete investment in Dec 2022 | | 5 | |
| | Integration of ATM principles on the strategy (5%) | Creation of a integrated CSR strategy --> We commit to affordable access, ensuring global access and affordability to health, while helping healthcare systems to remain sustainable + We are at the cutting edge of Research and Development for unmet needs, helping people live fully. | | 5 | |
| | Creation of an ATM Committee (5%) | The highest responsibility for access lies indirectly with the board, namely with the Corporate Social Responsibility (CSR) committee. | | 2,5 | |