

# Desautels Capital Management

Honours in Investment Management

## Industry Overview

Fall 2023

### Healthcare

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October 25, 2023

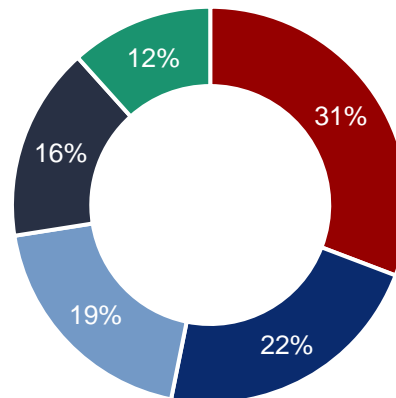


# Executive Summary

## Sector Description

- The Healthcare sector encompasses multiple subsections to group different companies based on their primary activities
- Activities include manufacturing healthcare equipment & services, biotechnology, pharmaceuticals, life science tools, and more

## S&P Healthcare Sub-Sector Weighting



- Pharmaceuticals
- Health Care Providers & Services
- Health Care Equipment & Supplies
- Biotechnology
- Life Sciences Tools & Services

## Key Healthcare Trends

1

### Inflation Reduction Act

The inflation reduction act is not as impactful to our holdings as it may first seem

2

### GLP-1RA & Weight Loss Drugs

GLP-1RA leads the transformation of the global era of reducing blood sugar and weight loss

3

### Water & Wastewater Treatment

Danaher's spin-off company, Veralto, now focuses on the growing water and wastewater treatment industry

# Outline

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## **I. Industry Overview**

- a. Healthcare Industry Analysis
- b. Sub-Industries
  - a. Healthcare Services
  - b. Healthcare Equipment
  - c. Healthcare Technology
  - d. Biotechnology
  - e. Pharmaceutical & Generic Drugs

## **II. Analysis of disruptions**

- a. Inflation Reduction Act
- b. Weight Loss Drugs
- c. Water Treatment

## **III. Appendix**

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## Benchmark Analysis

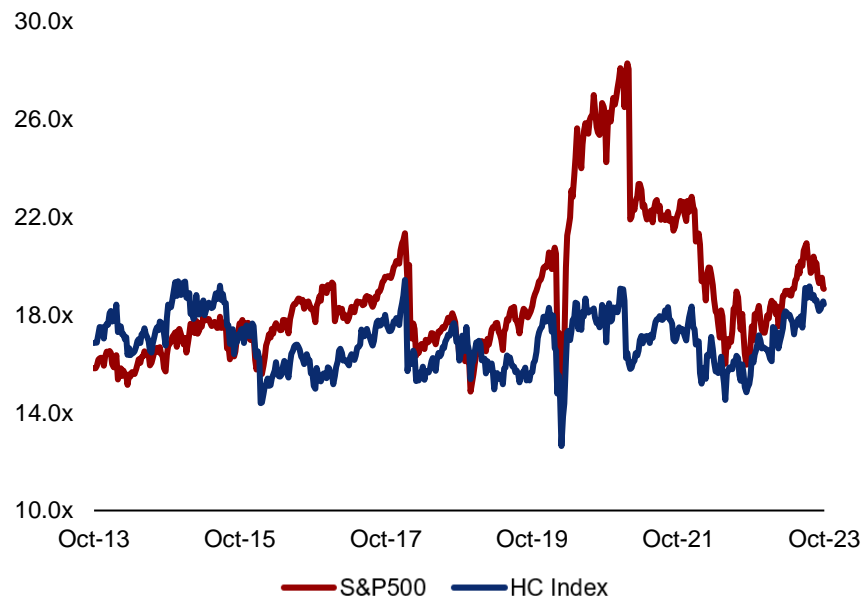
Section II



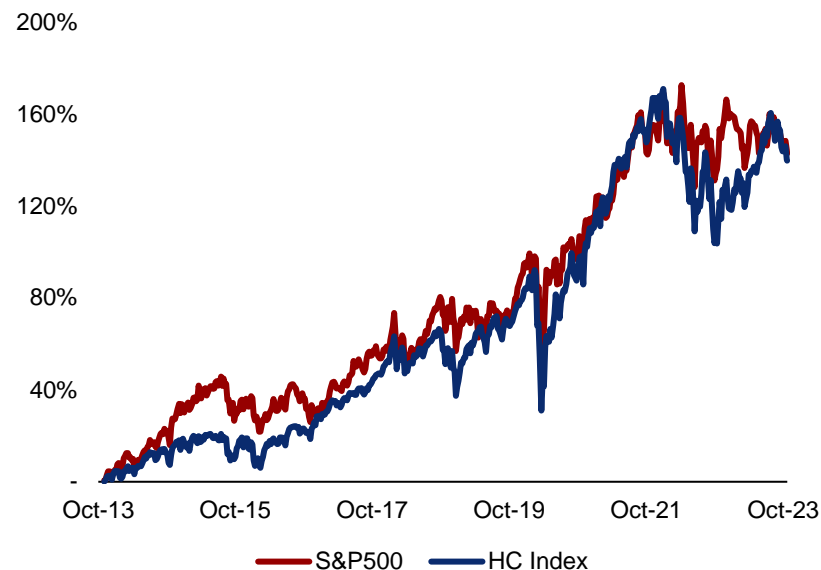
# Benchmark Performance & Valuation Since 2008 Crisis

## Healthcare benchmark 101 – Historical long-term landscape

### S&P 500 vs. S&P 500 HC of 10 years P/E Ratio



### Healthcare Performance vs S&P Performance over 10 years



#### What's with the broader market?

- Higher volatility in multiple valuation
- Significant drop in multiple valuation post-pandemic
- Implication on overvaluation in 2021 as rates hike / markets becomes more risk-averse
- Higher valuation multiple hike = investor ready to pay more for growth vs. HC being more stable, with harder to predict growth

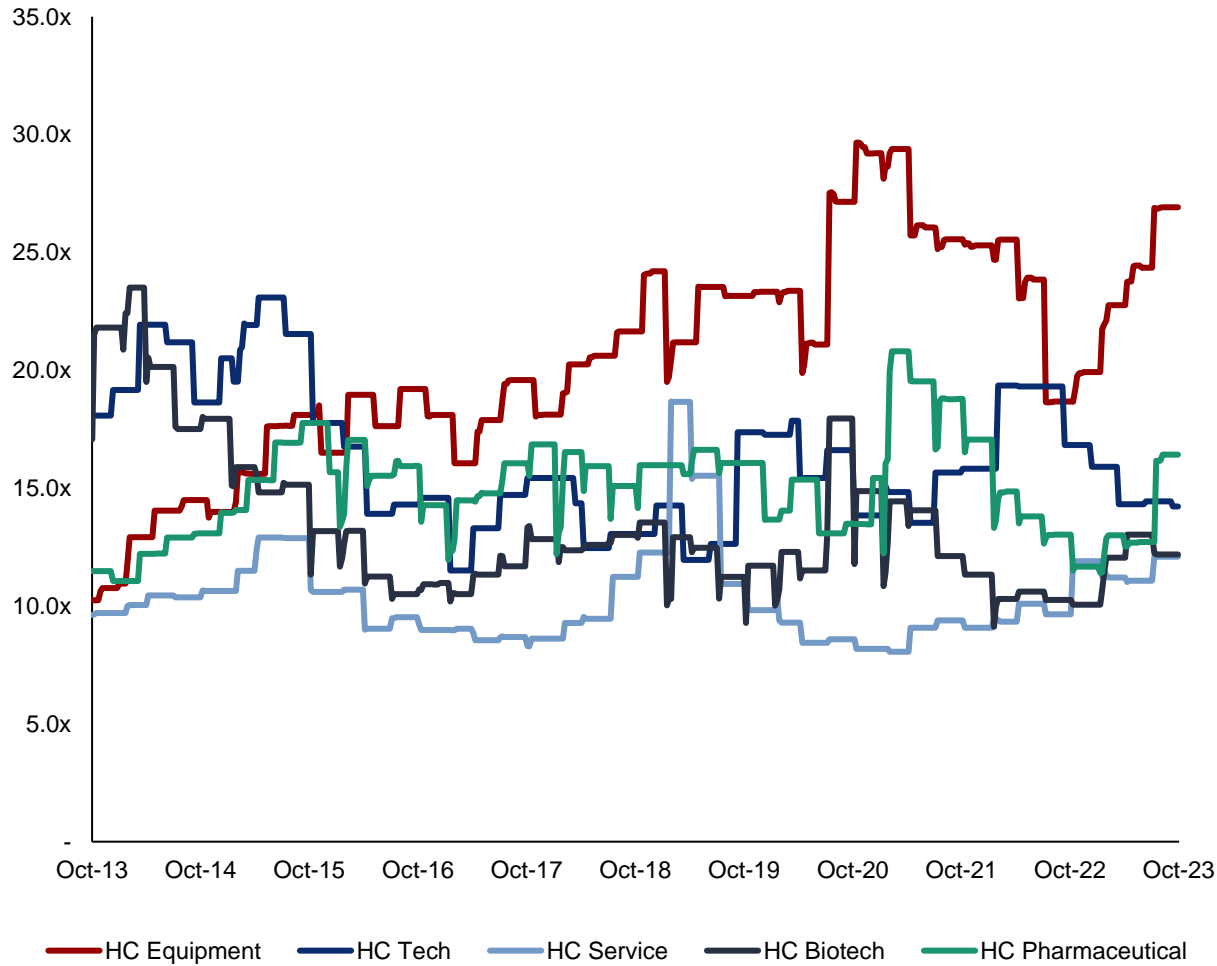
#### What's with the HC industry?

- Lower discount rate given recession-proven industry landscape
- HC has performed relatively in-line with the broader market, lagging during the pandemic where it saw less radical growth, but catching up in 2023
- Most importantly, HC tends to be a long-term performer and requires patience

Source: DCM, CapIQ

# Benchmark Analysis – Sub-Industries Performance

## EV/LTM EBITDA Evolution Since 2013



## Valuation Summary (Oct-23)



Stock



Multiple

General	14.0x
HC Equipment	26.9x
Pharmaceutical	16.4x
HC Technology*	14.2x
Biotech	12.2x
HC Services	12.09x

### Key Takeaways on Multiple Evolution

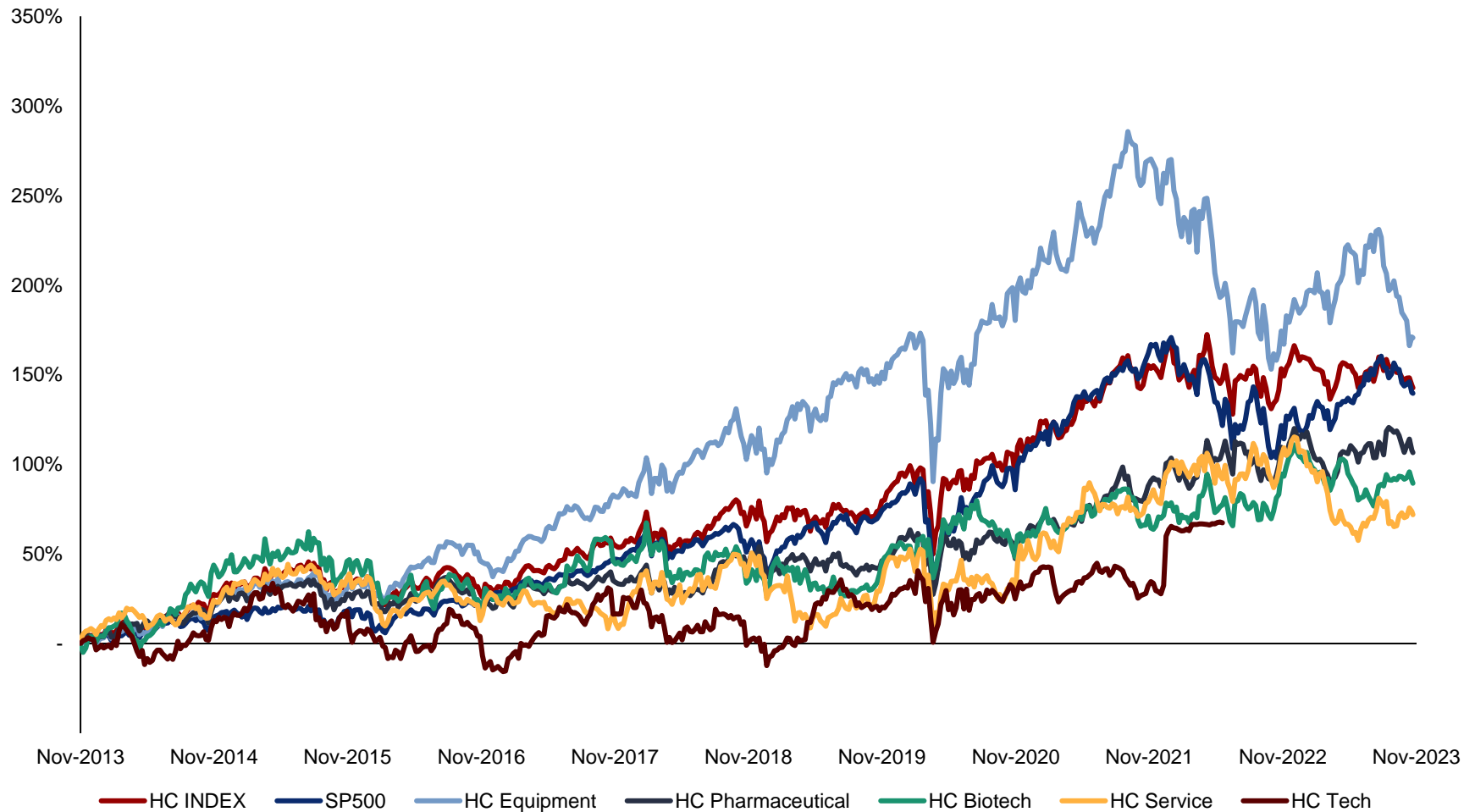
- Market conditions have led to the highest expansion of tech with extremely priced growth value
- **High volume** of activities in **growth equity and capital raising** during those times
- Medical equipment benefitting from **continuous digitalization** and **automation of medical support**

Note: Tech index taken as S&P 600 given lack of sample companies within S&P500

Source: DCM, CapIQ

# Benchmark Analysis – Historical Reference

## Performance of all HC Sub-Sectors over 10 years



Source: Bloomberg

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## Sub-Industry Overviews

Section II





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## Sub-Industry: Healthcare Technology

Section II



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## Sub-Industry: Healthcare Equipment

Section II



# Healthcare Sub-Sector Overview: Healthcare Technology

## Healthcare Technology Has Underperformed The Broader S&P 500 Healthcare Index YTD

### Sector Description: $\beta$ : 1.314

Healthcare Technology offer a wide range of products and solutions that contribute to a more effective and efficient healthcare infrastructure:

- Enterprise Software
- Data Management & Services
- Administrative and Financial Management
- Drug Discovery & Clinical Research
- Virtual Care / Telehealth
- Imaging & Diagnostics

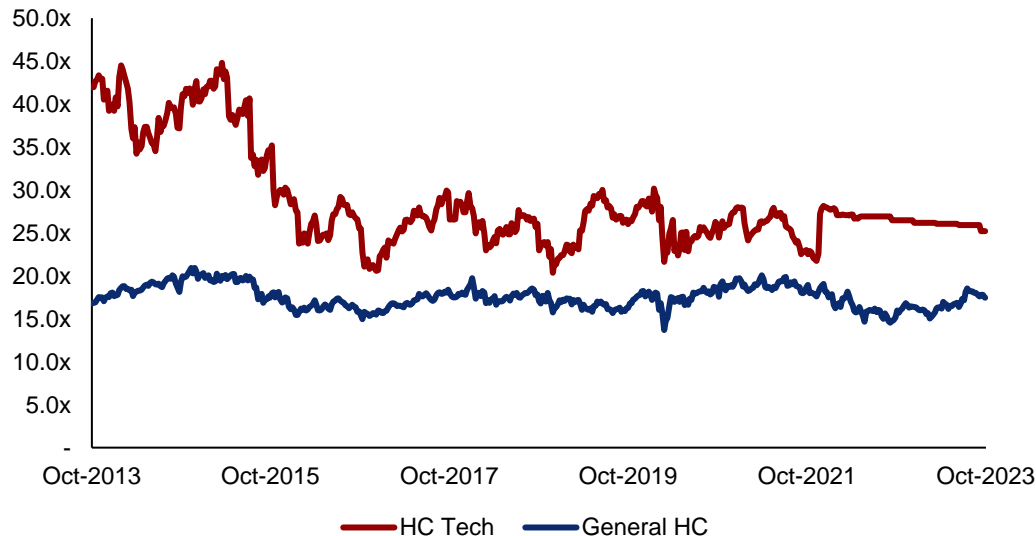


accesshealthcare

Bristol Myers Squibb



### P/E Ratio of Healthcare Technology Over time



Source: CapIQ, Market Research

### Sector Dynamics

#### 1 Macro Factors

- Demand for improved quality of care
- Digitalization trend accelerated by COVID
  - More convenient
  - Alleviates staffing issues
- Technological Advances
  - Artificial Intelligence

#### 2 Suppliers (bargaining power)

- High in specialized sectors
  - Ex: precision surgical tools
- Low in most sectors
  - Ex: Health IT services, CRM

#### 3 Threat of Entrants

- HC is highly regulated with lots of legal compliance

#### 4 Threat of Substitutes

- Some clear market leaders in spaces
- Constant development and upgrades to solutions

#### 5 Buyers (Bargaining Power)

- Moderate/High
  - Lots of options in most spaces
  - Government reimbursements

#### 6 Industry Rivalry

- Sub-industries within technology have different levels of rivalry dependent on current adoption levels

# Healthcare Sub-Sector Overview: Healthcare Equipment

Just like every other healthcare sub-sector, equipment can refer to many different things

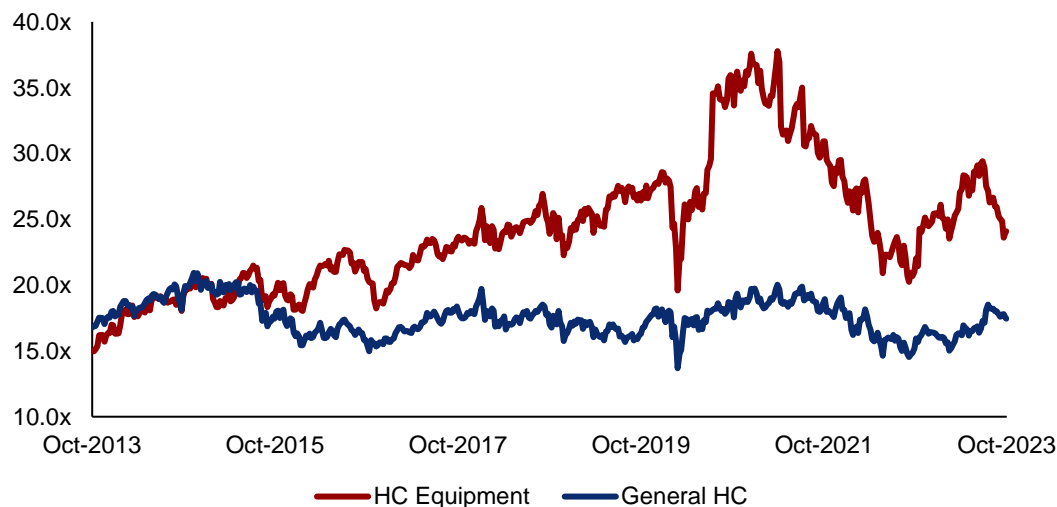
## Sector Description $\beta$ : 1.289

Manufacturers of health care equipment and devices, such as:

- Medical instruments
- Drug delivery systems
- Cardiovascular & orthopedic devices
- Diagnostic equipment
- Surgical robots
- And more!
- Reticence to upgrade equipment, but resilience due to servicing model



## P/E ratio of HC Equipment Over Time



Source: CapIQ, KPMG, JP Morgan

## Sector Dynamics

- 1 Macro Factors**
  - Rising interest rates leading to delay of purchases of new equipment
  - Previous supply chain issues have improved.
  - Aging population leading to higher volumes
- 2 Bargaining Power (Suppliers/Buyers)**
  - Depending on size of company, variable amount of bargaining power
- 3 Threat of Entrants**
  - High capital requirements
  - Regulatory barriers
  - Existing economies of scale
  - Strong brands and customer loyalty
- 4 Threat of substitutes**
  - Companies constantly developing new technology which could create redundancies in the industry

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## Sub-Industry: Biotechnology

Section II



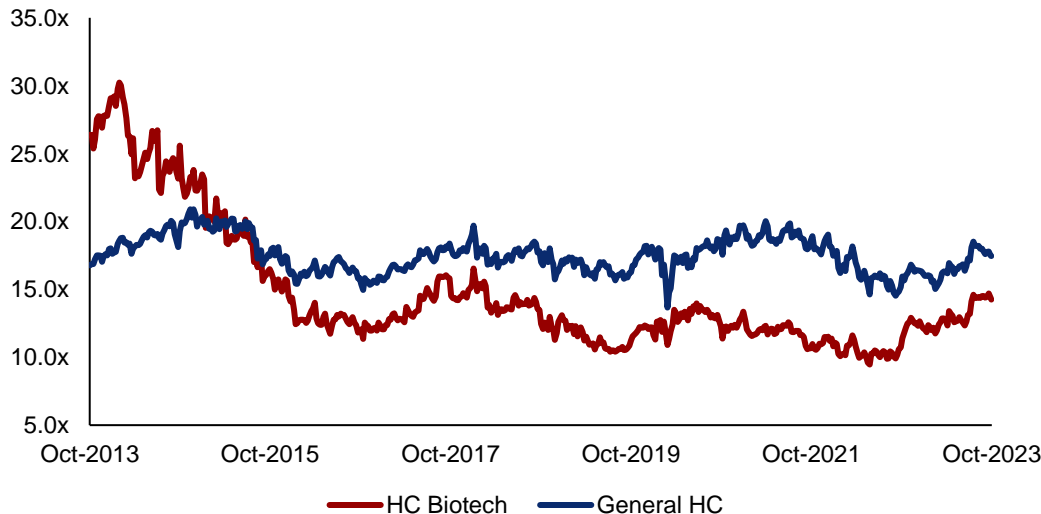
# Healthcare Sub-Sector Overview: Biotech

Biotech Sub-Industry has a 5-year Beta of 0.897 vs 0.778 of the S&P 500 Healthcare Index

**Sector Description**  $\beta$  : 0.897

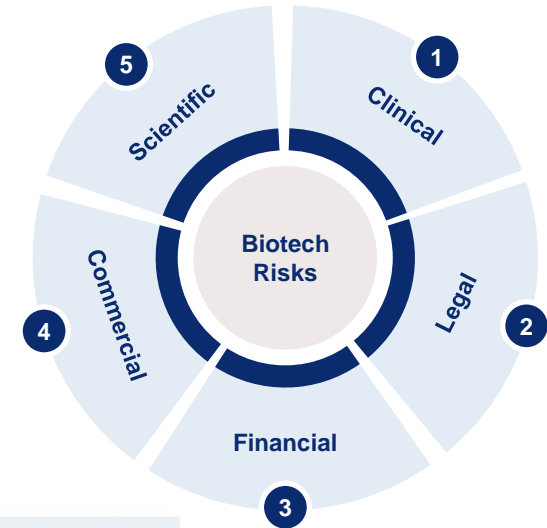
What differentiates Bio from Pharma?	Main Risks
<ul style="list-style-type: none"> <li>➤ Biotechnology companies are usually focused on a <b>niche therapeutic area(s)</b> or a specific technology platform</li> <li>➤ Through <b>R&amp;D</b> investment, biotech companies are capable of achieving high revenue growth and margins if successful</li> <li>➤ Unlike most pharma, Biotech drugs are biologics (drugs manufactured using biological processes, i.e. cellular therapies, gene editing, gene, therapies, antibodies, RNA, peptides – <b>thus more complex and expensive</b>)</li> </ul>	<ul style="list-style-type: none"> <li>➤ <b>Clinical:</b> Review of NDA/BLA by FDA is gate to approval</li> <li>➤ <b>Legal &amp; Regulatory:</b> Market exclusivity is needed to achieve high ROI and warrant investment</li> <li>➤ <b>Financial:</b> Liquidity and lack of cash runway predictability makes financing info asymptotic</li> <li>➤ <b>Commercial:</b> The commercial environment in biotechnology is driven by payer dynamics and competition &amp; supply chain is complex</li> </ul>

## P/E ratio of Biotech Over time



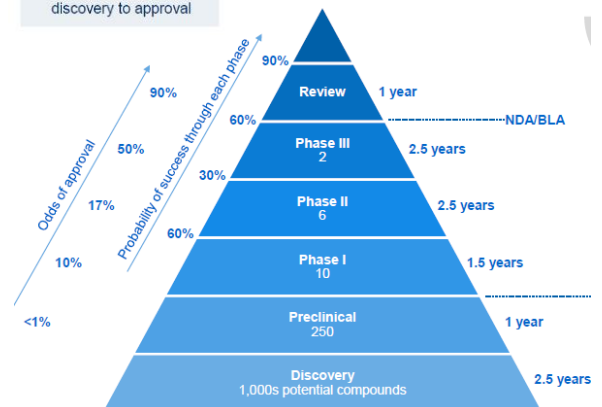
Source: CapIQ, Market Research

## Sector Dynamics



**Key figures**

- 1 out of 10 drugs entering clinical development ultimately approved
- 10-15 years from discovery to approval



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## Sub-Industry: Pharmaceuticals

Section II



# Healthcare Sub-Sector Overview: Pharmaceuticals

Death, taxes, and opioids

**Sector Description**  $\beta$  : 0.847

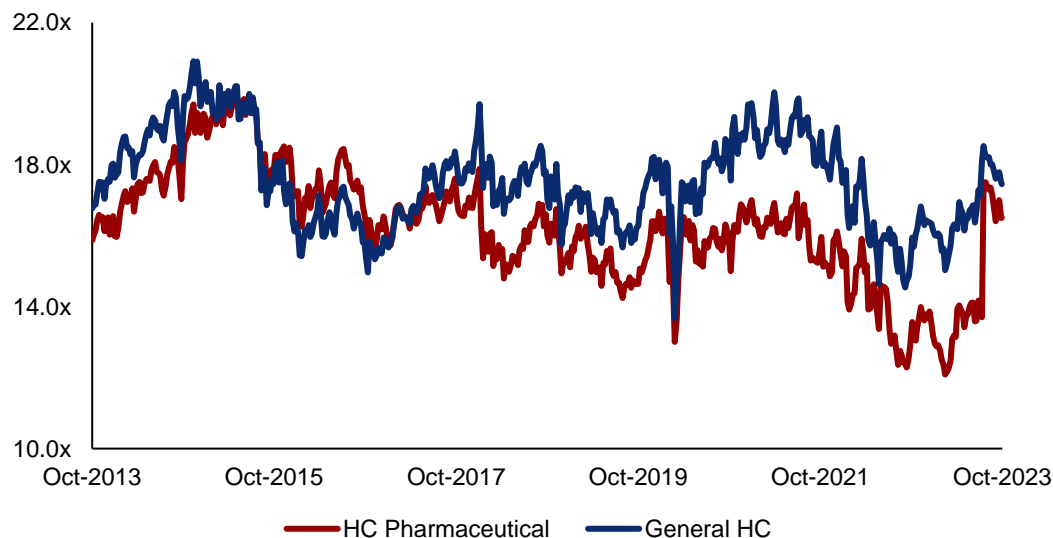
The pharmaceutical industry **discovers, develops, produces, and markets drugs** or pharmaceutical drugs for use as medications to be administered to patients.

Categories of pharmaceuticals include:

- Name-brand medications
- Generic drugs
- Vaccines
- Over-the-counter remedies



## P/E Ratio of Pharmaceuticals



Source: CapIQ, Company Filings

## Sector Dynamics

### 1 Macro Factors

- Demand for more affordable medication
- Aging population requiring more medication
- Increasing obesity and disease rates
- Growing societal health trend

### 2 Threat of Entrants

- Difficult space to enter. Regulatory, financial, and knowledge barriers make it difficult for new players to develop a meaningful presence.

### 3 Buyers (Bargaining Power)

- Dependent on the type of medication, but oftentimes, the product is a necessity for the client.

### 4 Threat of substitutes

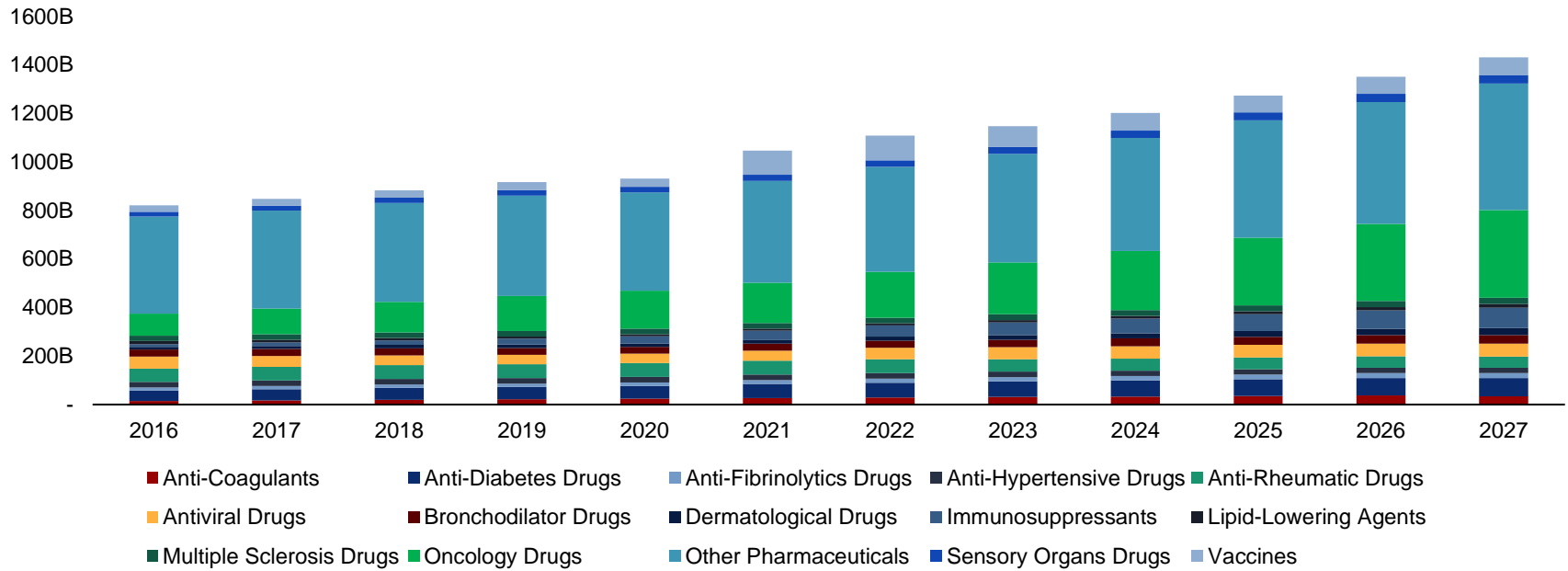
- Generic drugs can often be an attractive substitute when drugs are no longer protected by a patent
- Introduction of biosimilars



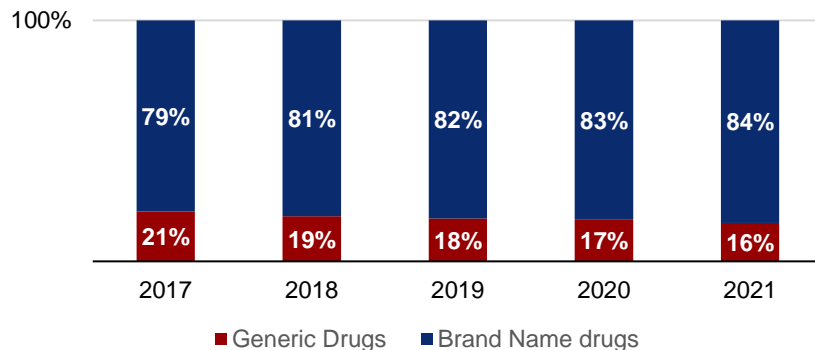
# Complexities of the Pharmaceuticals Industry

Although simpler than Biotech, not simple

## Almost all segments of pharmaceuticals are growing, albeit at different rates



## Spending on Generic vs Name Brand Drugs



- **90% of all prescriptions** dispensed in the U.S. are for generic drugs
- However, they only represent **~20% of drug spending**
- Since 2014, prices for common generic drugs have **dropped by 37%**, while branded drug prices have **increased by 60%**

Source: Statista, USC

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## Sub-Industry: Healthcare Services

Section II



# Healthcare Sub-Sector Overview: Healthcare Services

DCM is currently exposed to the Managed Care through UNH

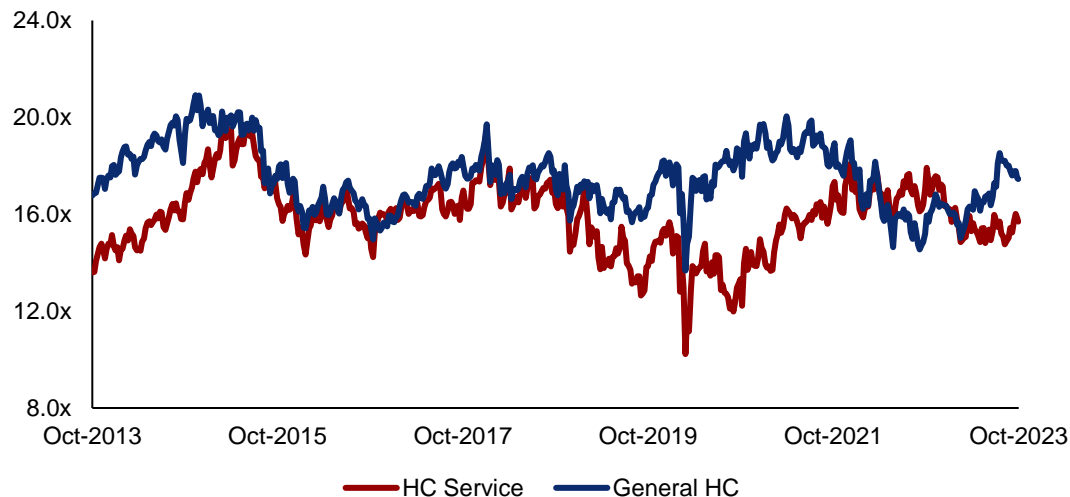
## Sector Description $\beta : 1.052$

Health services can include **any company offering a service related to patients' health**

- Adult nursing
- Medically complex patient care
- Rehabilitation centers
- Home Health Hospice
- Speech and language therapy
- And more!
- June 2022: Proposed rate cut to the Home Health industry for 2023



## P/E ratio of Healthcare Services over time



Source: CapIQ, KPMG, JP Morgan

## Sector Dynamics

### 1 Macro Factors

- Labour shortage affects the industry heavily
- Increase in chronic disease prevalence
- Aging population leading to higher volumes
- Reimbursement rates play a large role

### 2 Suppliers (bargaining power)

- Most bargaining takes place with regulators setting reimbursement rates for Medicare & Medicaid, there is lobbying for higher rates but limited bargaining power

### 3 Threat of Entrants

- Companies rely on their large presences to obtain more favourable rates, so it is difficult for companies to enter the space, more so with the current macro climate

### 4 Threat of substitutes

- Industry leaders continue to merge to create larger companies which allow them to better weather the labour shortage

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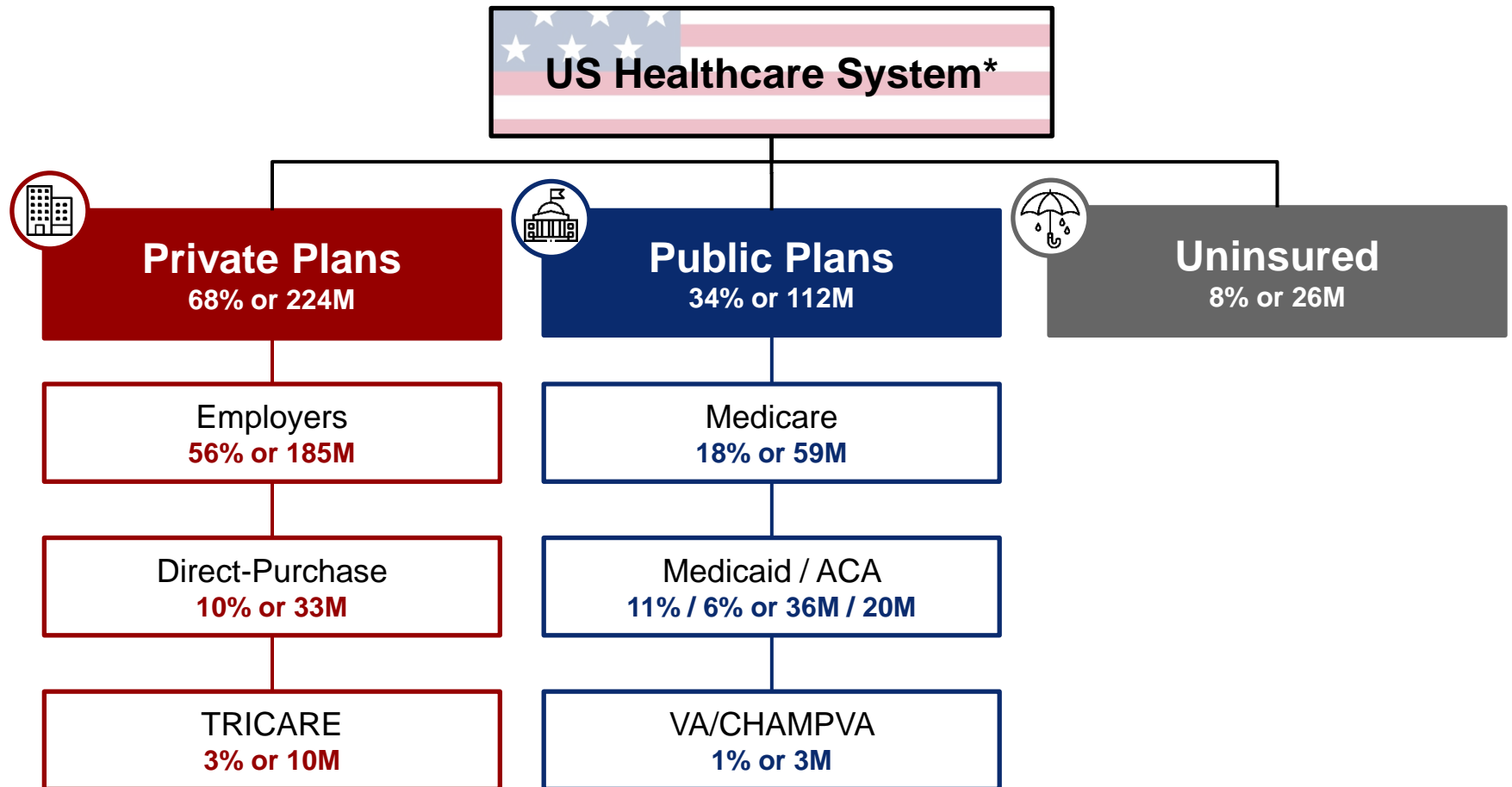
## Inflation Reduction Act

Section III



# Healthcare Insurance Primer

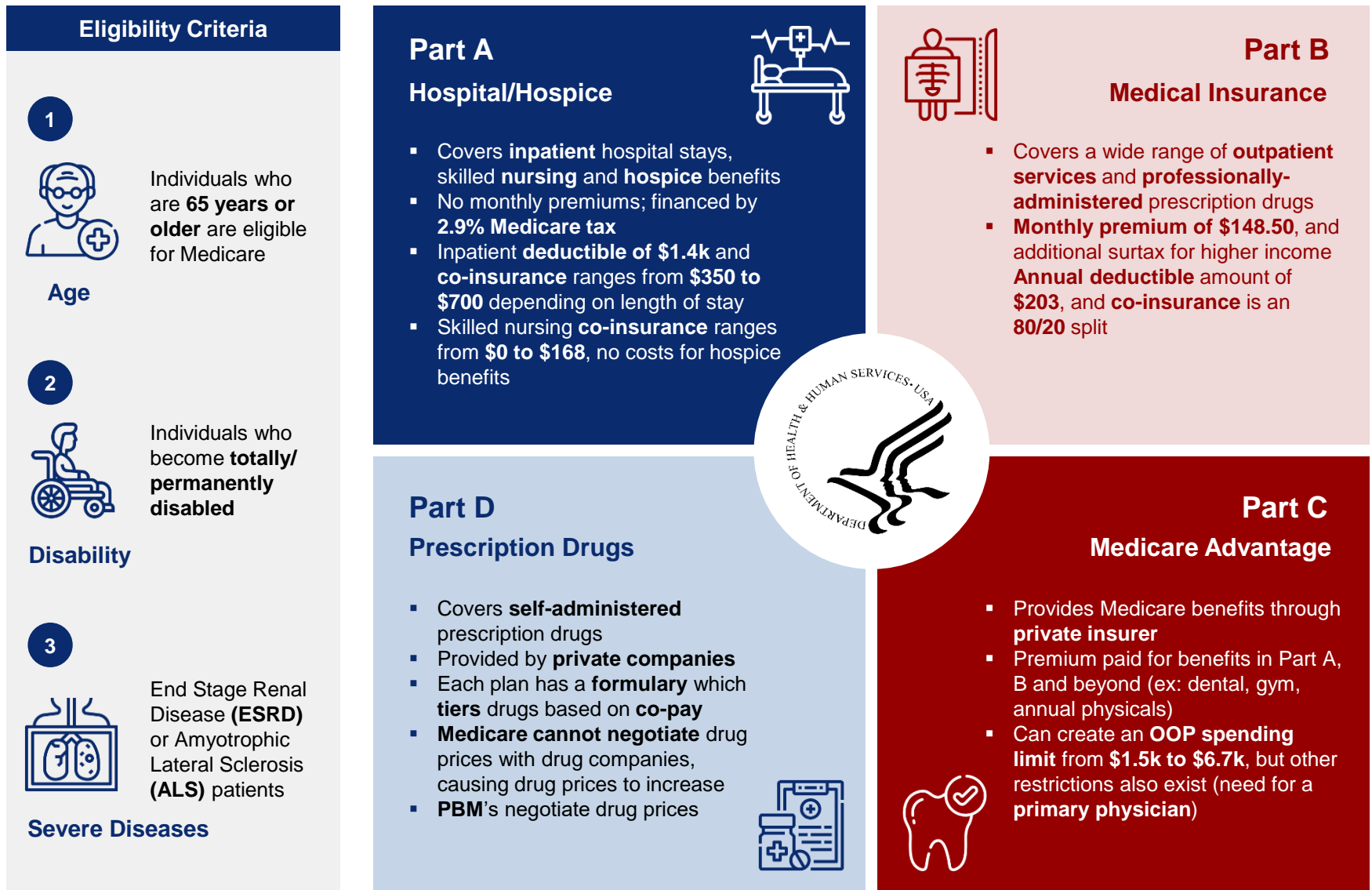
Breakdown by key payers (2019)



Source: U.S. Census Bureau \*types of coverage are not mutually exclusive

# Medicare

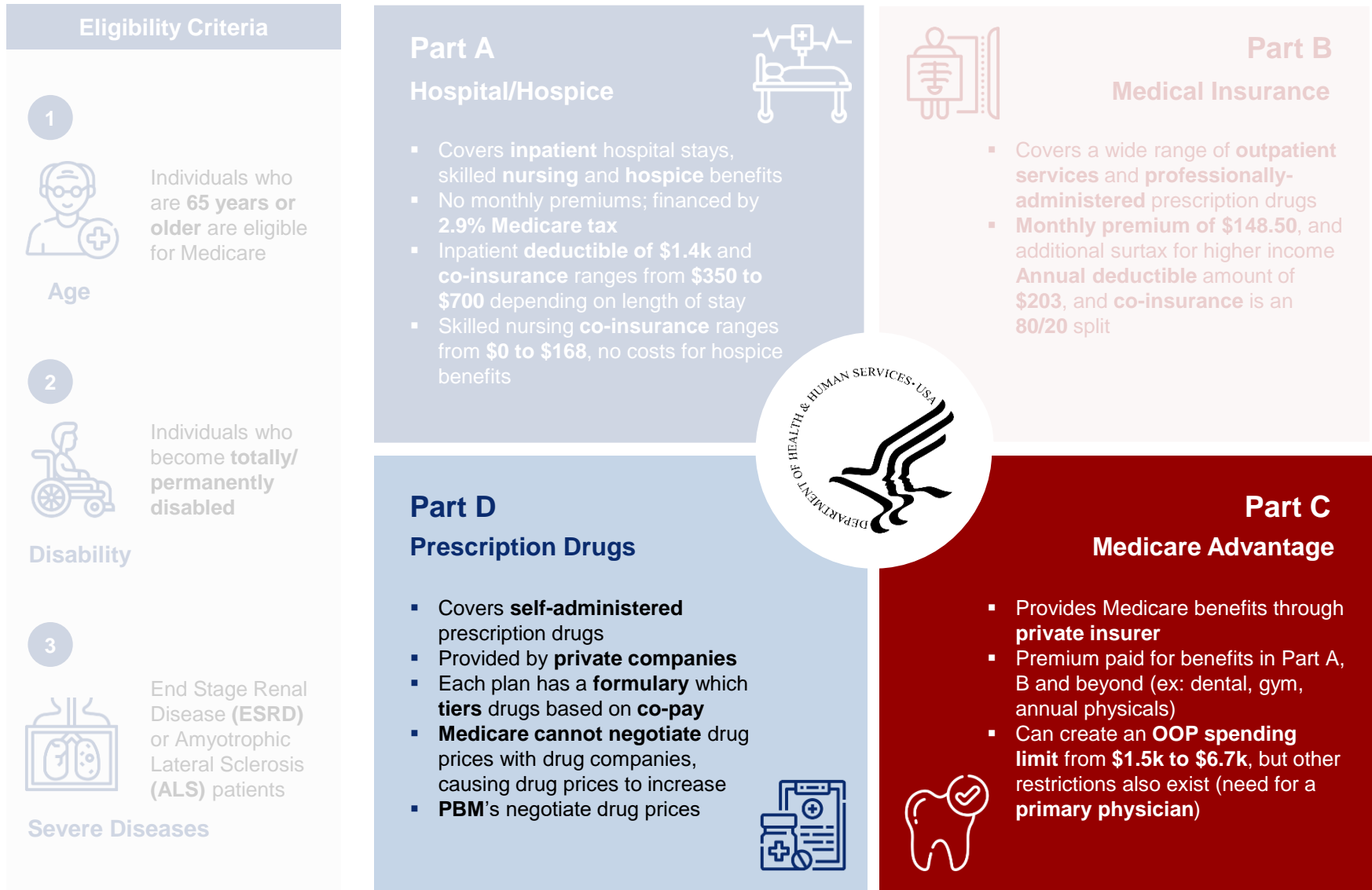
Medicare is divided into 4 parts, each with different benefits and structure



Source: Medicare.gov, U.S. Census Bureau

# Medicare

Medicare is divided into 4 parts, each with different benefits and structure

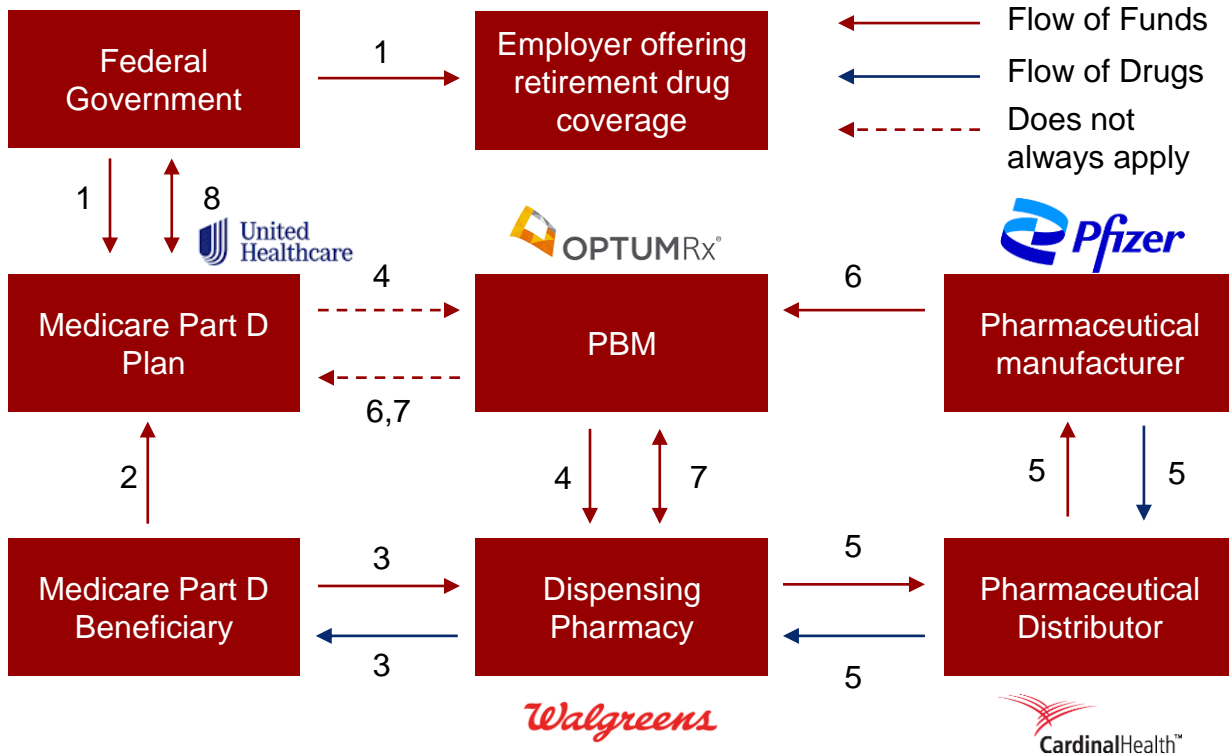


Source: Medicare.gov, U.S. Census Bureau


# Medicare part D

Slangin' racks and packs

## Flow of Dollars and Drugs under Medicare Part D



1. Federal gov. pays the direct subsidy to the plan and also provides RDS to eligible employers
2. The beneficiary pays the plan
3. The beneficiary receives their drugs
4. PBM reimburses the pharmacy
5. Distributors source drugs from manufacturers and supply dispensers
6. Manufacturers reimburse PBMs
7. Dispensers pay applicable DIR fees to PBM
- 8. Risk corridor payments take place**

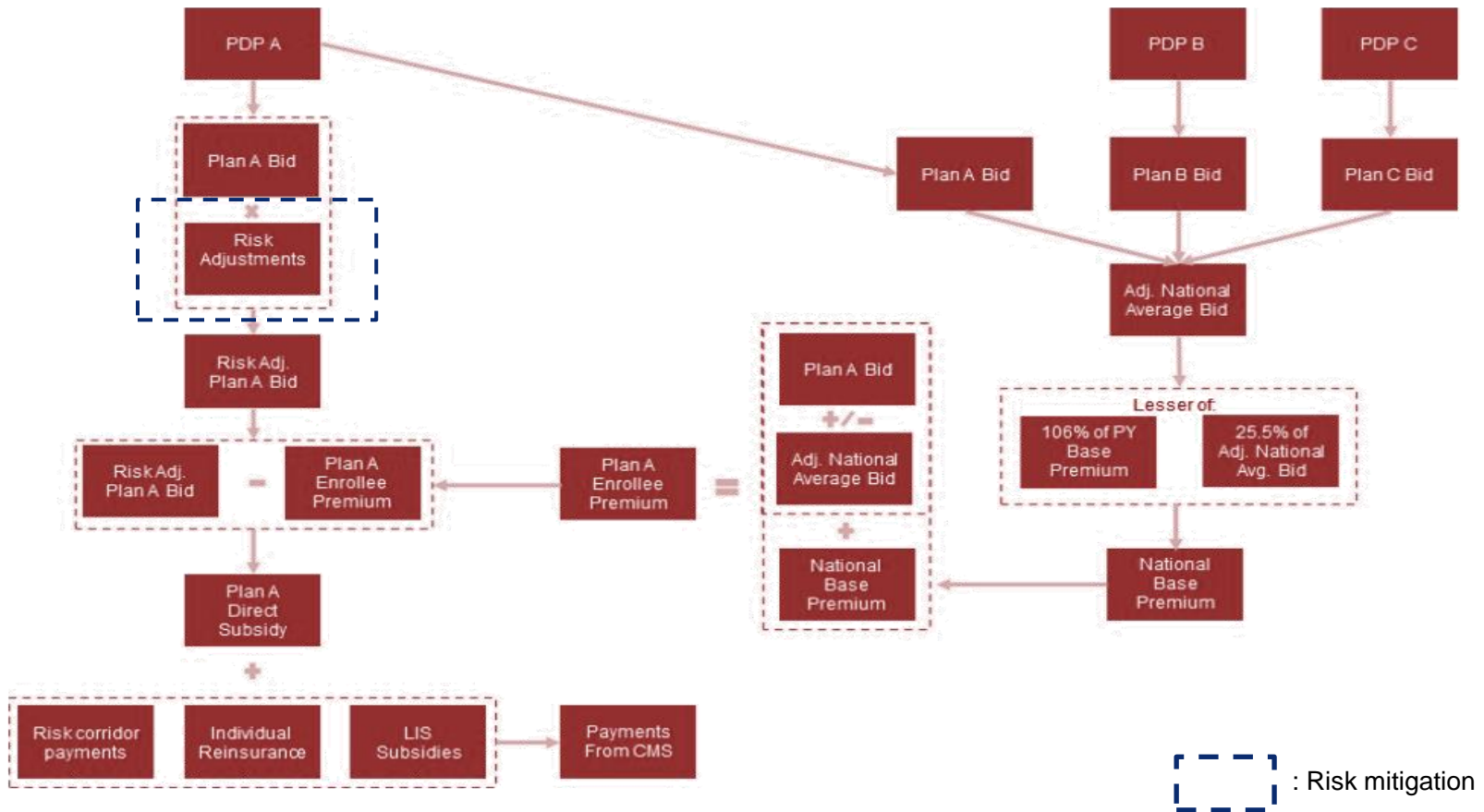
 : Risk mitigation



# Medicare Part D

Because universal healthcare is simply too complicated...

## Bid and Premium Setting under Medicare Part D

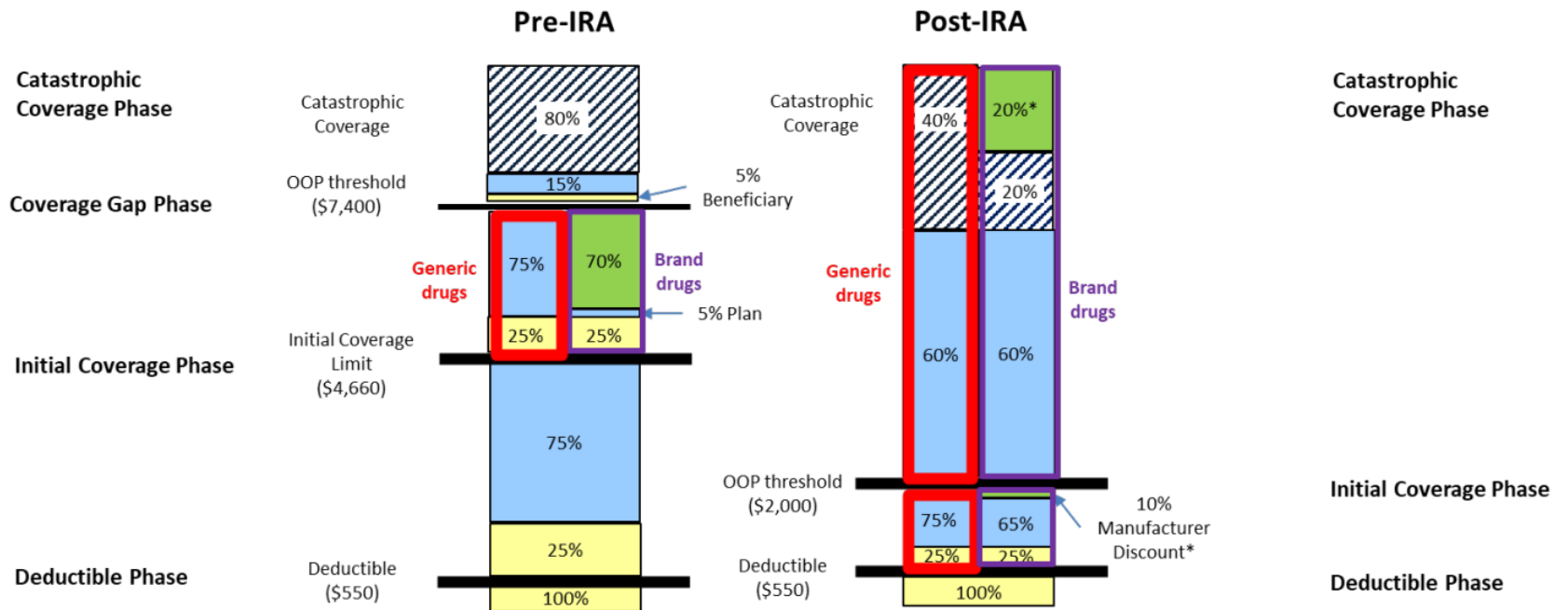


The IRA helps consumers without hitting insurers too hard

Source: HHS & CMS, JPMorgan

# IRA Changes to Medicare Part D

No more donut hole!



: Risk mitigation

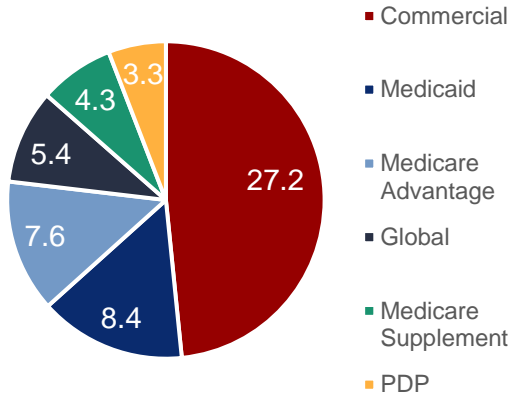
The true danger could lie within the reinsurance decrease in catastrophic coverage

Source: HHS & CMS Research series

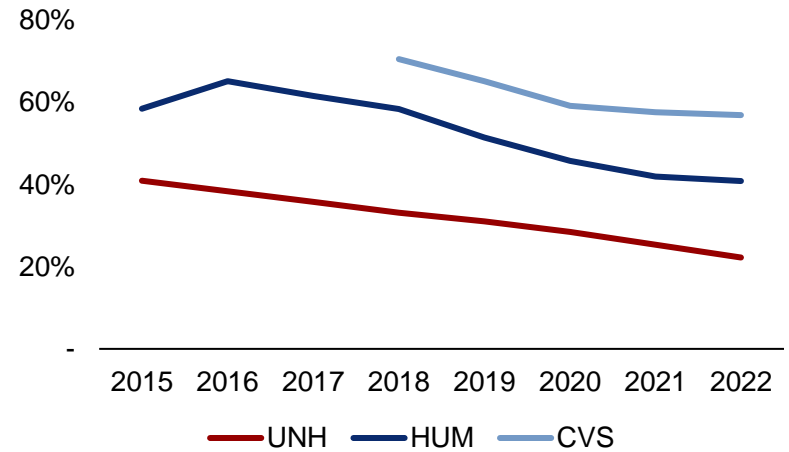
# UNH's low-exposure

A relatively small portion of beneficiaries actually use PDP

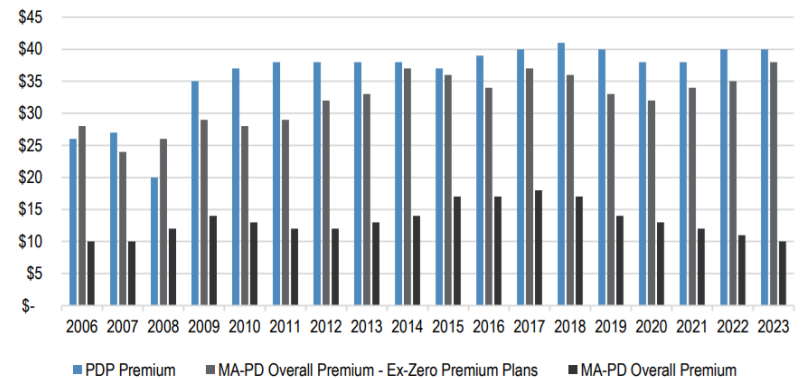
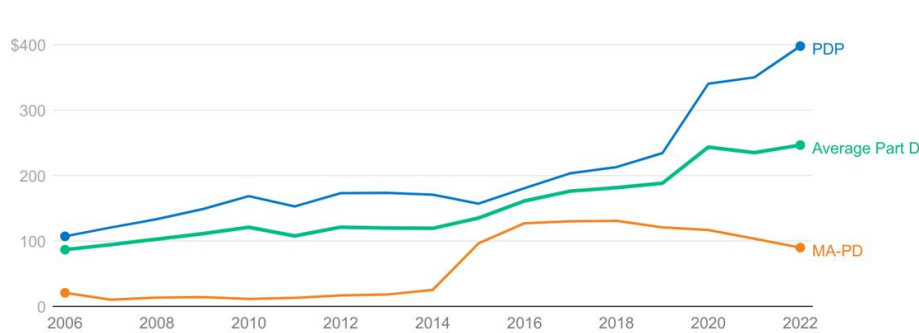
## Coverage per UnitedHealthcare segment in 2022



## PDP as % of Total Medicare Membership per Company



## PDP deductibles and premiums are higher than MAPD



UNH will be able to continue converting their PDP beneficiaries to MAPD plans

Source: KFF, UNH financials, DeutscheBank, JPMorgan

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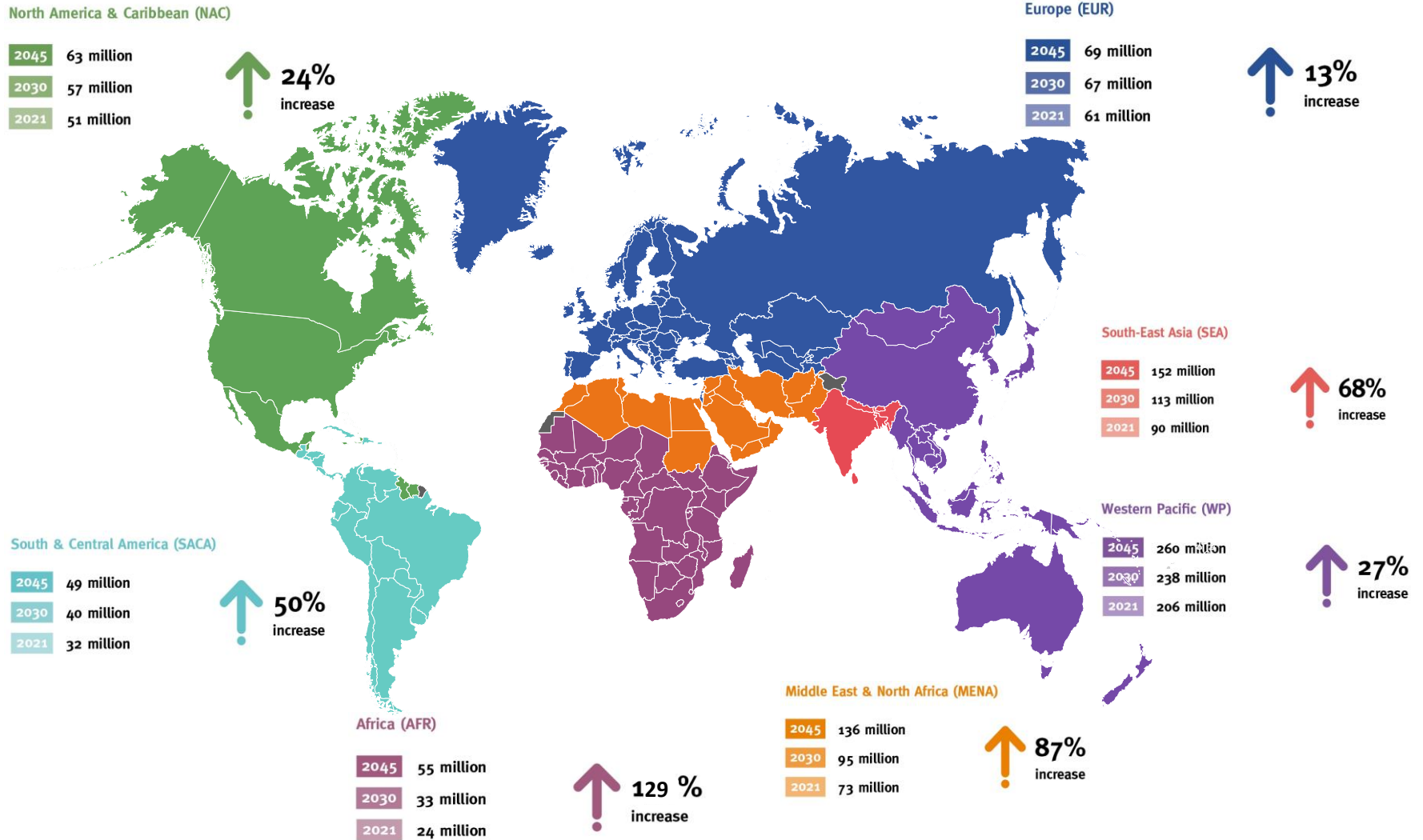
## Weight Loss Drugs

Section III



# Number of people with diabetes globally

The hyperglycemic treatment is long-term and inevitable



The global incidence rate of diabetes continues to rise, and the hyperglycemic treatment has the attributes of long-term and immediate needs

Source: IDF Atlas

# Comparison of main drugs in diabetes market

The iteration of hypoglycemic drug updates is accelerating

Type	HBA1c reduction amplitude (%)	Risk of hypoglycemia	Weight change	Cardiovascular effects		Common adverse reactions
				ASCVD	HF	
Insulin	1.5-3.5	High	Increase	Neutral	Neutral	hypoglycemia
GLP-1 RA	1.0-1.5	Low	Decrease	<b>Beneficial</b>	Neutral	Intestinal discomfort
Biguanide	1.0-1.5	Low	Slightly Decrease	Neutral	Neutral	lactic acidosis
α glucosidase inhibitor	0.5-1.0	Low	Neutral	Neutral	Neutral	Intestinal discomfort
Sulfonylurea	1.0-1.5	Medium	Increase	Neutral	Neutral	hypoglycemia
Glinides	0.5-1.5	Medium	Increase	N/A	Neutral	hypoglycemia
TZDs	0.7-1.0	Low	Increase	Neutral	Increase	HF
DPP-4	0.4-0.9	Low	Neutral	Neutral	Increase	<b>Upper respiratory tract infection</b>
SGLT-2	0.5-1.0	Low	Decrease	Beneficial	Decrease	<b>Urogenital infections</b>

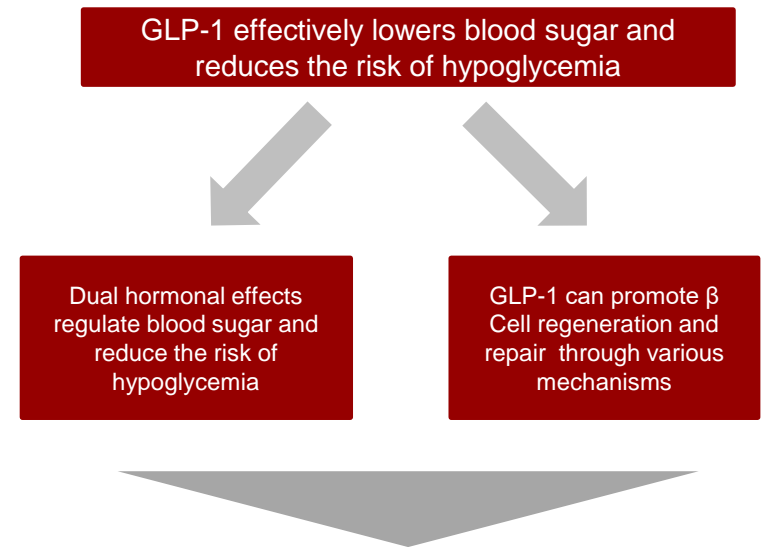
Sources: Implementation of Good Laboratory Practices (GLP) in basic scientific research: Translating the concept beyond regulatory compliance

# GLP-1RA leads the transformation of the global era of reducing blood sugar and weight loss

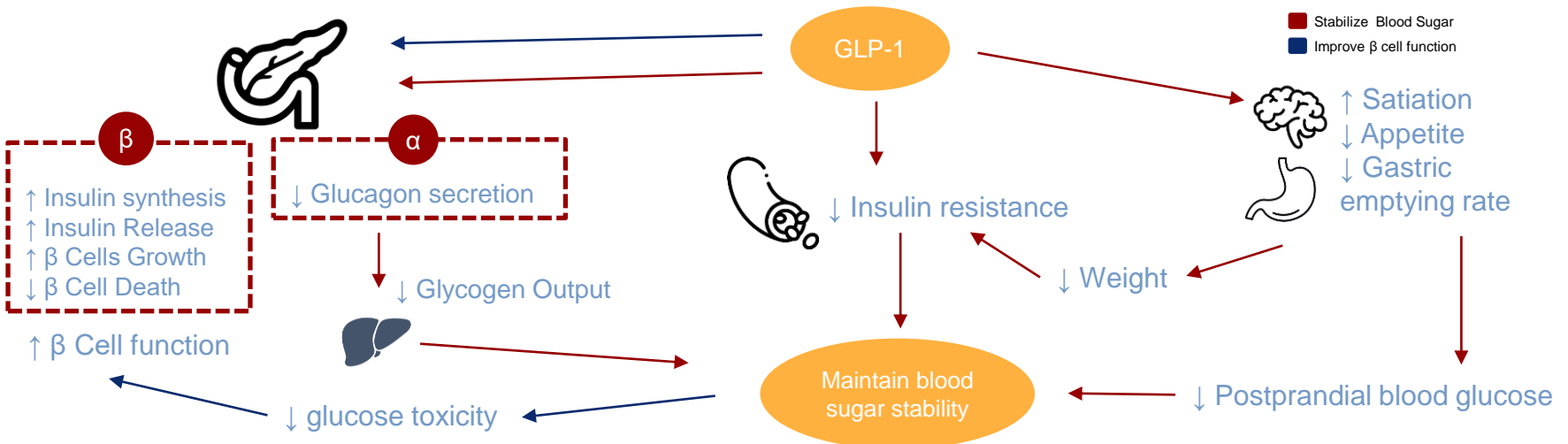
## What are Weight Loss Drugs? How it works?

### GLP-1RA

- Glucagon like peptide is an intestinal hormone secreted by L cells in the intestinal mucosa during the feeding process
- Help T2DM patients** since their contribution of pancreatic stimulating hormone to overall insulin secretion is less than 20%, which normally **60%-70%**
- By stimulation  $\beta$  Cell and inhibition  $\alpha$  Cells participate in the body's blood glucose regulation in a **glucose concentration dependent manner**. When blood glucose is lower than 50mg/dL, the insulin stimulating effect of GLP-1 disappears, which can avoid the risk of hypoglycemia caused by diabetes drugs



### Multiple hypoglycemic mechanisms of GLP-1



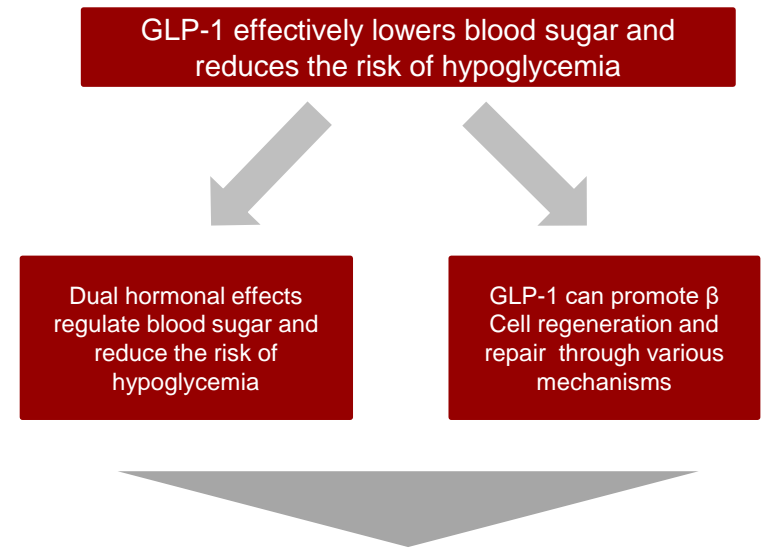
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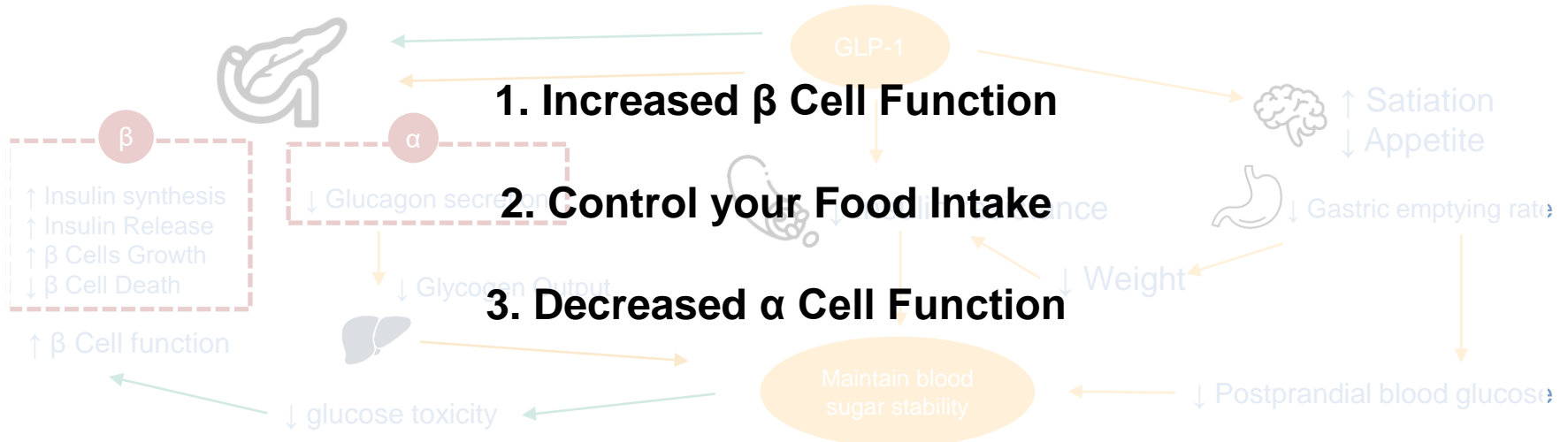
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### Multiple hypoglycemic mechanisms of GLP-1



Sources: GLP-1 Research Paper



# GLP-1RA leads the transformation of the global era of reducing blood sugar and weight loss

GLP-1RA has significant hypoglycemic effects and is ideal for patients with obesity and cardiovascular complications

## GLP-1 has Cardiovascular benefits

### Cardiovascular protection mechanisms



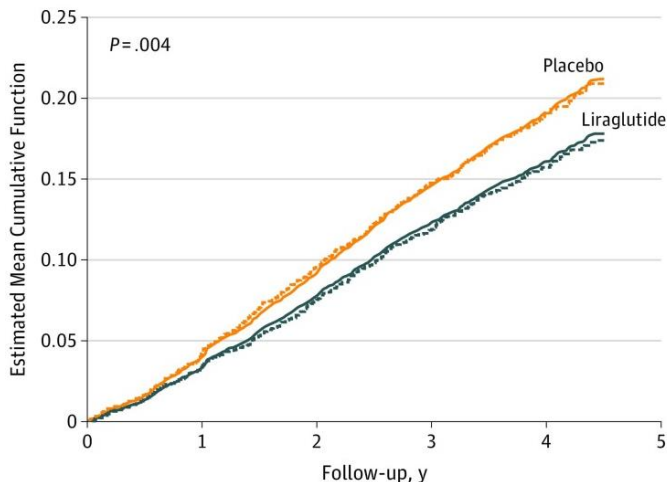
1. Relax coronary blood vessels
2. Increase coronary blood flow
3. Increase glucose uptake rate of myocardial cells
4. Increase myocardial contractility
5. Alleviate inflammatory and superoxide damage to coronary endothelial cells

### Clinical trials shown a reduction in cardiovascular risk



According to a trial with 9340 type 2 diabetes patients involved, the test results showed that the risk of major cardiovascular events and death in the Semaglutide group was 13% lower than placebo group, and the risk of cardiovascular death was 22% lower, similar results for Semaglutide

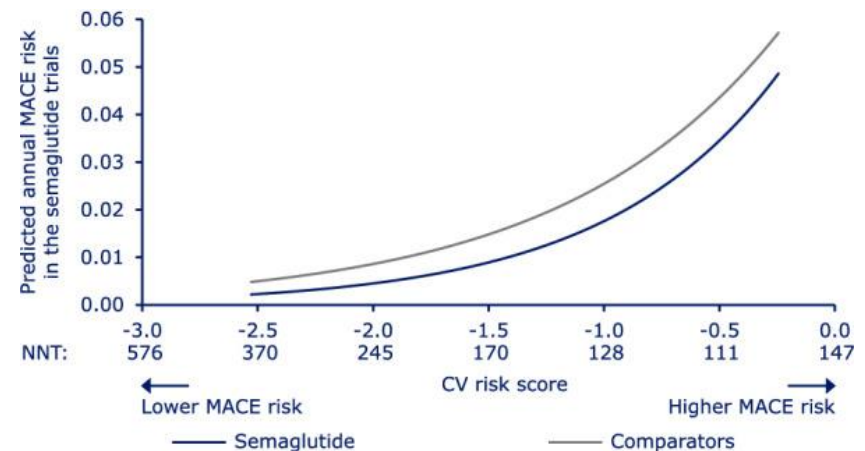
### Incidence of ACVE with Sexanda



Source: Statista

Notes: ACVE: adverse cardiovascular events

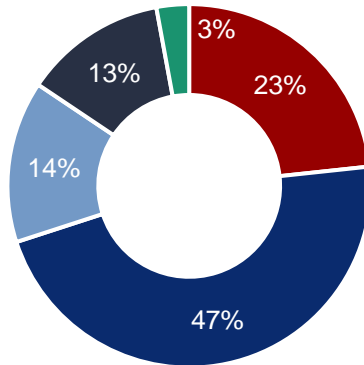
### Incidence of ACVE with Semaglutide



# The competition in the hypoglycemic market is fierce

Although there are different drugs for diabetes, GLP-1 leads in the market

## Global Diabetes Drug Market 2022



■ Insulin ■ GLP-1 ■ DPP4 Inhibitor ■ SGLT2 Inhibitor ■ Others

## Major Company Involved in GLP-1RA market



## Different products of GLP-1RA

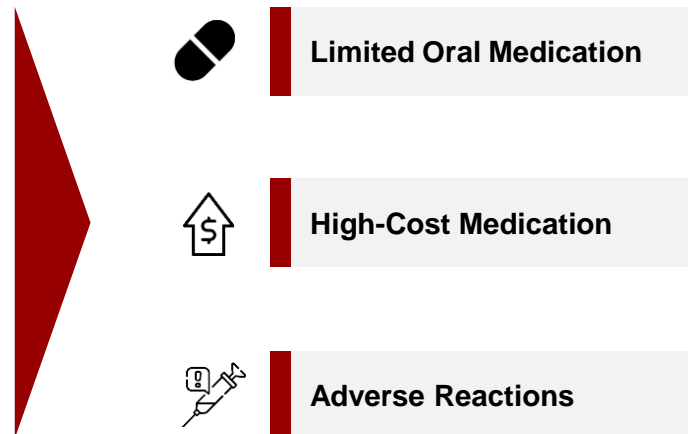
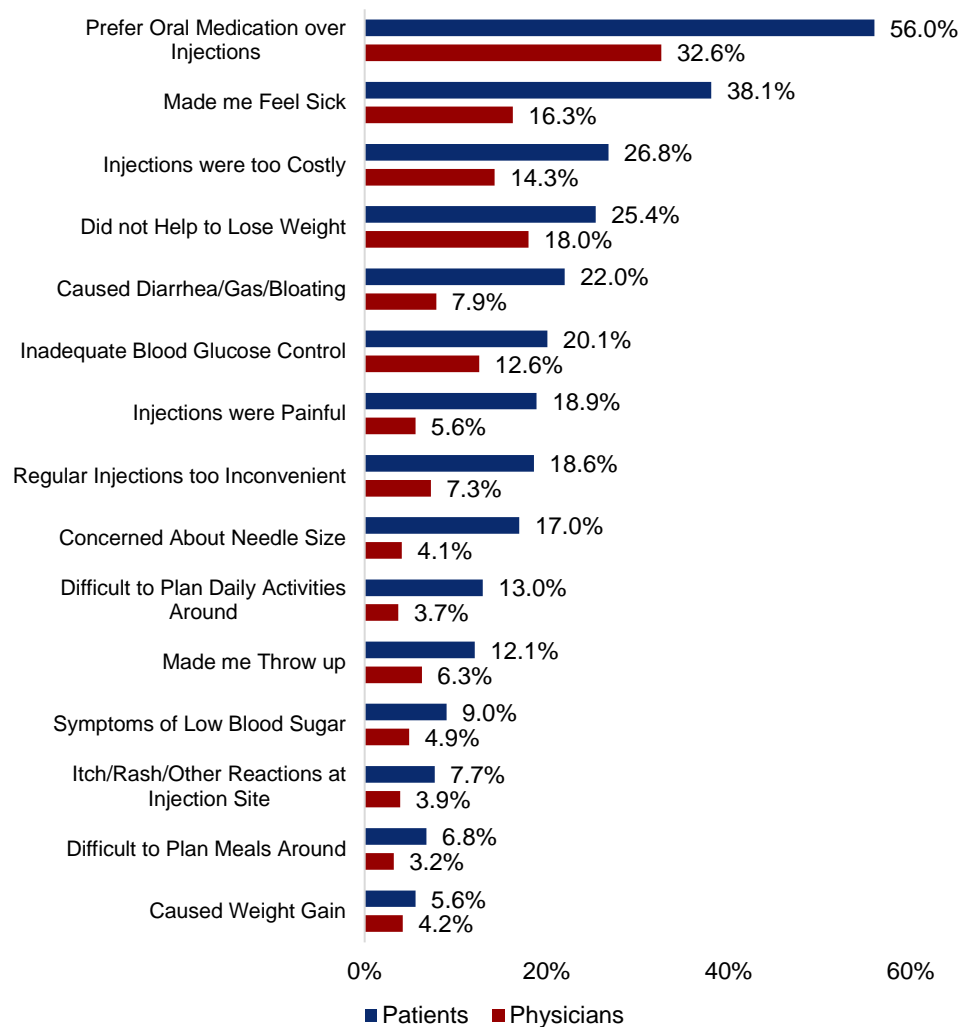
Name	Phase	HBA1c	Half-life period	Weight loss
Sexanda	FDA	High	Daily	Low
Semaglutide (Injection)	FDA	High	weekly	High
Semaglutide (oral)	FDA	Medium	Daily	High
Tirzepatide	FDA	High	Weekly	Best
Mazdutide	II	High	Weekly	Medium
Dulaglutide	FDA	High	Weekly	Medium
Tanzeum	FDA	Medium	Weekly	Medium
Beinaglutide	FDA	High	3times/day	Neutral

Source: Novo Nordisk filings

# Obstacles of GLP-1 Product

The average fee for treatment is too high without Insurance

## Major Concerns From Patients



## Cost of Different Types of GLP-1 Medicines

Name	Cost with Insurance (monthly)	Cost without Insurance (Monthly)
Ozempic	25\$-35\$	936\$
Wegovy	45\$-60\$	1349\$
Rybelsus	10\$-25\$	995\$
Tirzepatide	25\$-35\$	1023\$
Dulaglutide	10\$-30\$	930\$

Source: Fibt, Health Solution

# Ozempic and Weight Loss Drugs

## How does it affect other sub-sectors

### Major Impacts on HC Insurance Companies

- **Hard to capture the trend:** The federal health insurance program has been explicitly forbidden by law from providing coverage for weight-loss treatments since 2003
- **Cost remain too high:** People typically need to take the drugs indefinitely to keep weight off
- **Customers have low willingness to pay high insurance fees:** “You’re going to have to pay more for premiums”, which will turn some people away

### Should HC Insurance include Weight-Loss drugs?

- **Demand boom still needs to be captured:** Weight-Loss drugs may help HC insurance attract more customers
- **Potential long cost for long term:** Danger for bariatric surgery is higher, Weight-loss drug may potentially work the same as the “Physical Examination Services”
- **The “monopoly” of Novo won’t exist for too long:** More and more emerging GLP-1RA products will gradually compete with each other and drive the cost down



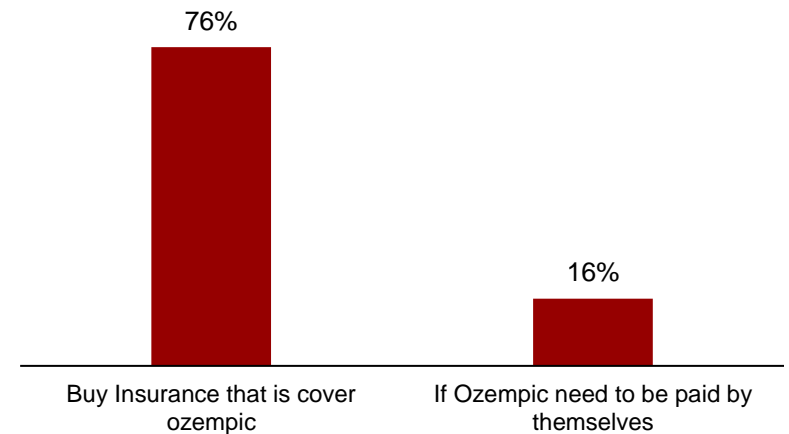
Andrew Philip Witty  
CEO of UNH

“We need the manufacturers to move, we are waiting for new payment model, it’s as simple as that.”

It’s hard to prescribe Ozempic to patients who cannot afford it



### People’s Willingness to Pay for Ozempic



HC insurance companies are hesitating to cover weight loss drugs, but long-term potential should not be ignored

# Future Development Trends of GLP-1

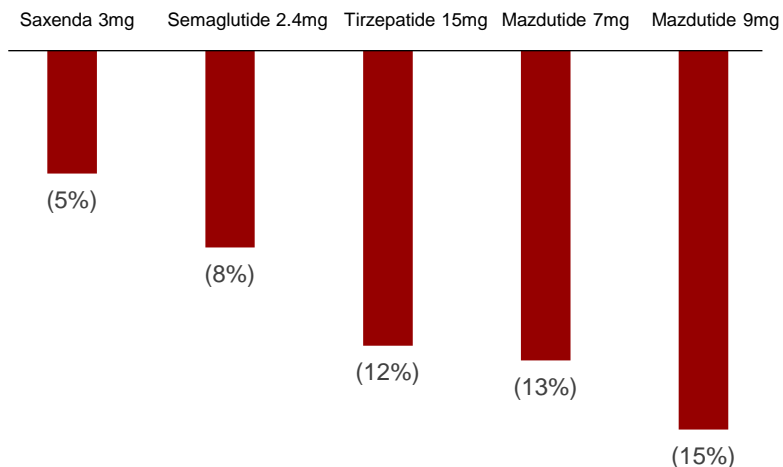
Explore the application prospects of multiple indications

## Multi target agonists become future research and development priorities

· As of August 2023, multiple dual/multi target agonists have entered clinical practice through research pipelines worldwide, concentrated in combinations such as GLP-1R/GIPR, GLP-1R/GCGR, even triple incentives.

## Mazdutide (GLP-1R/GCGR dual agonist) Phase III clinical

After 24 weeks of treatment, body weight decreased by 15.4% compared to placebo at baseline



## More oral medication are in progress

· **Peptide oral formulations are safer** and more effective in reducing blood sugar compared to injections

· **Small molecule GLP-1RA is more convenient** to administer than oral peptide drugs: 1. High bioavailability of oral drugs 2. The production cost of small molecule drugs is much lower than that of biopharmaceuticals

## Semaglutide holds a plethora of therapeutic opportunities



**NASH(non-alcoholic steatohepatitis)**



**Alzheimer's Disease**



**Chronic Kidney Disease**



**Peripheral artery disease**



**Heart Failure & Cardiovascular**

Multiple future developments that we can foresee for GLP-1RA

# Desautels Capital Management

Honours in Investment Management

## Water treatment

Section III



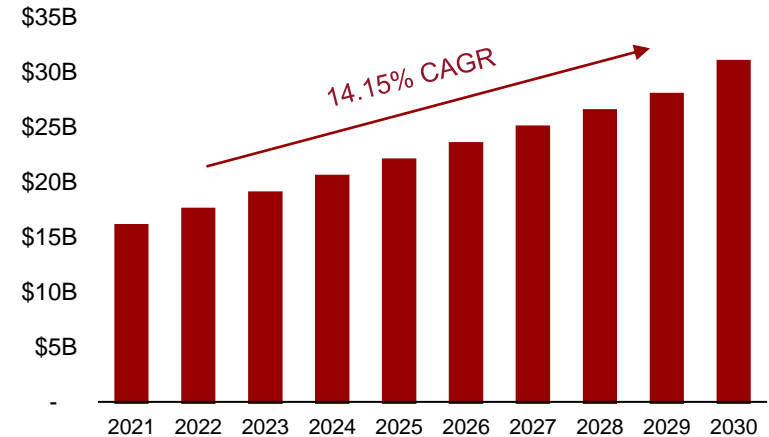
# Prominent and Increasing Demand for Water Treatment Solutions

Numerous factors driving the water market, more specifically the wastewater treatment sector.

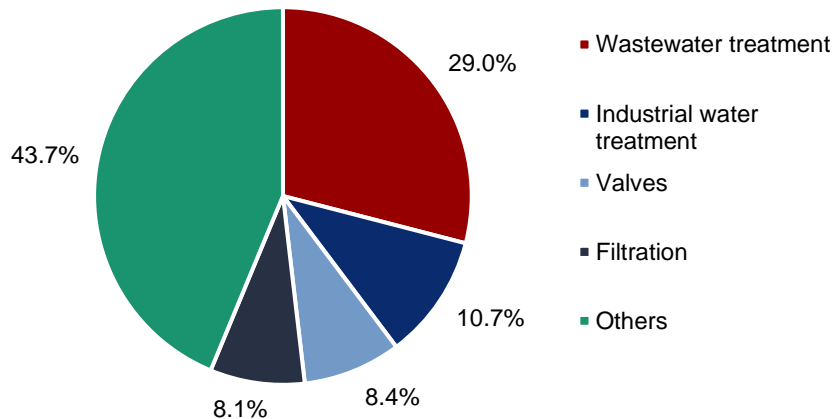
## Key Drivers

- **Water Scarcity:**
  - WWF: 2/3 of world will face water shortages by 2025
  - Causes: pollution, climate change, overuse
- **Pollution:**
  - 44% of all wastewater on Earth currently returns to the environment untreated
  - Caused by industrial, agricultural and sewage discharge
- **Tighter Laws and Regulations:**
  - Clean Water Act: regulates the discharge and treatment of wastewater → permits required for discharge

## Water Recycling and Reuse Market Size



## Water Markets by Subsector (2021)



## Aging Water Treatment Infrastructure In USA



Estimated costs to replace : \$US 800bn over 20 years

Source: Statista, Environmental Protection Agency, RBC Capital Markets,

# Understanding Water Treatment: Municipal and Industrial Applications

## Focus on Industrial Water Treatment

### Municipal Water Treatment

#### Treatment of water for consumption:

- Residential & commercial applications
- Includes: sourcing, treating and distributing drinking water

#### Treatment of wastewater:

- Sewage systems: Collecting, cleaning and discharging wastewater from the public sewage system.

#### Heavy governmental participation:

- Most facilities = owned/ran by local governments
- Private markets → supplying machinery/equipment through contracts

### Industrial Water Treatment

#### Pre-Treatment of water:

- Remove corrosive salts and contaminants from water
- Can cause harm to equipment & compromise quality control

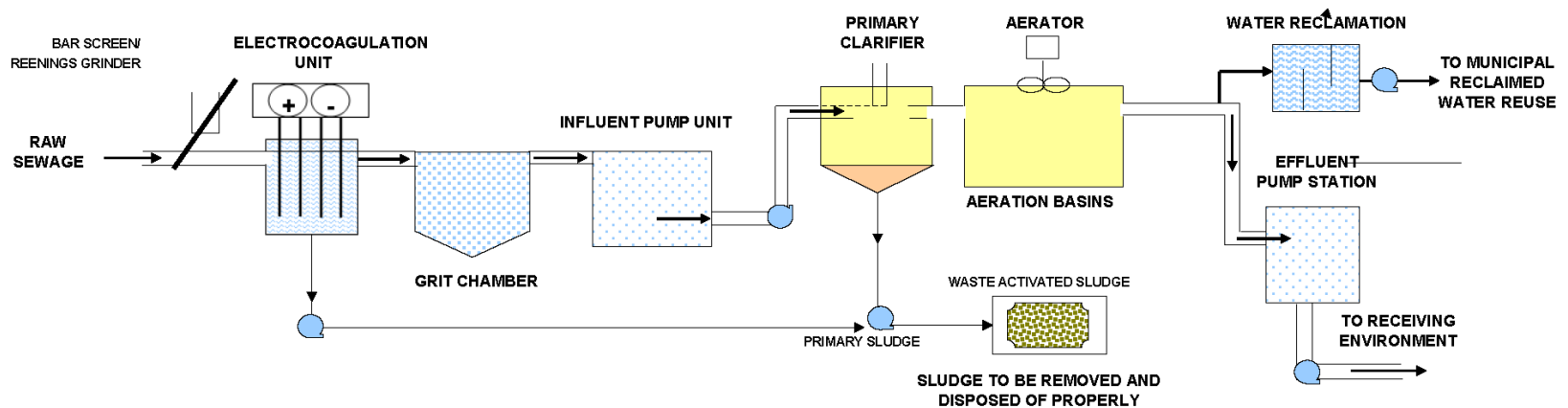
#### Treatment of Industrial wastewater:

- Purifies water after industrial use for safe discharge
- Heavily polluted with metals, debris chemicals etc..
- Treat water according to regulation before disposing.

#### Disposal / Reuse

- After treatment, water is disposed in sewers, bodies of water or reused

## Process of Wastewater Treatment





## Danaher Spun Off Veralto

### Business Description

- Veralto separated from its former parent, Danaher Corporation, on September 30, 2023
- Veralto is a **global leader in essential water and product quality solutions** dedicated to safeguarding the World's most vital resources
- Operates 13 companies that:
  - Aid in the **treatment and recycling** of 12 trillion gallons of water annually
  - Help ensure 3.4 billion people (40% of the world's population) have **safe drinking water** every day

### Business Segments

- **Water Quality:** Provides water analytics and differentiated water treatment solutions that enable reliable delivery of safe drinking water by public and private utilities



- **Product Quality & Innovation:** Provides solutions for brand owners and consumer packaged goods companies that enable speed to market, traceability and quality control of their products

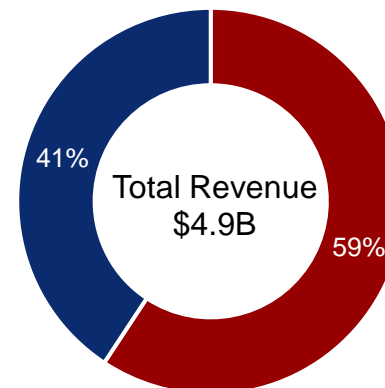


Source: Company filings

### Key Financial Information

Ticker	NYSE: VLTO
Share Price (20-Oct-23)	\$69.93
52 Week High-Low	\$89.00 – \$68.90
Market Capitalization	\$17.2B
Enterprise Value	\$17.4B
LTM Revenue	\$4.9B
LTM EV/Revenue	3.5x
LTM EV/EBITDA	13.3x

### FY 2022 Segmented Revenue Breakdown



■ Water Quality    ■ Product Quality & Innovation

A global leader in water analytics and water treatment

## Water Analytics



- A global leader in water analytics with deep expertise in applied chemistry & biology

## Water Treatment



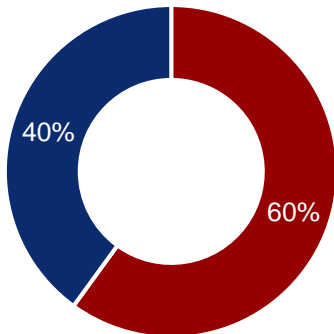
- A leader in industrial water treatment in North America



- A global leader in UV disinfection & membrane filtration

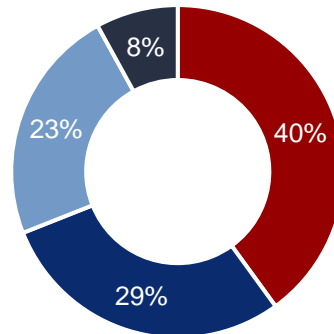
## Key Water Quality 2022 Revenue Breakdowns

Revenue by Application



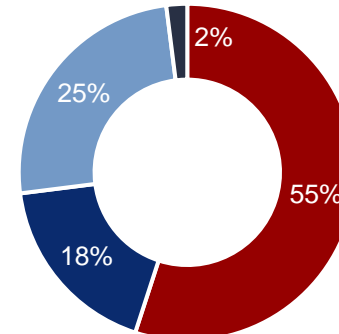
■ Water Analytics ■ Water Treatment

Revenue by Market



■ Municipal ■ Industrial  
■ Other ■ CPG

Revenue by Geography



■ North America ■ Western Europe  
■ High Growth Markets ■ Other

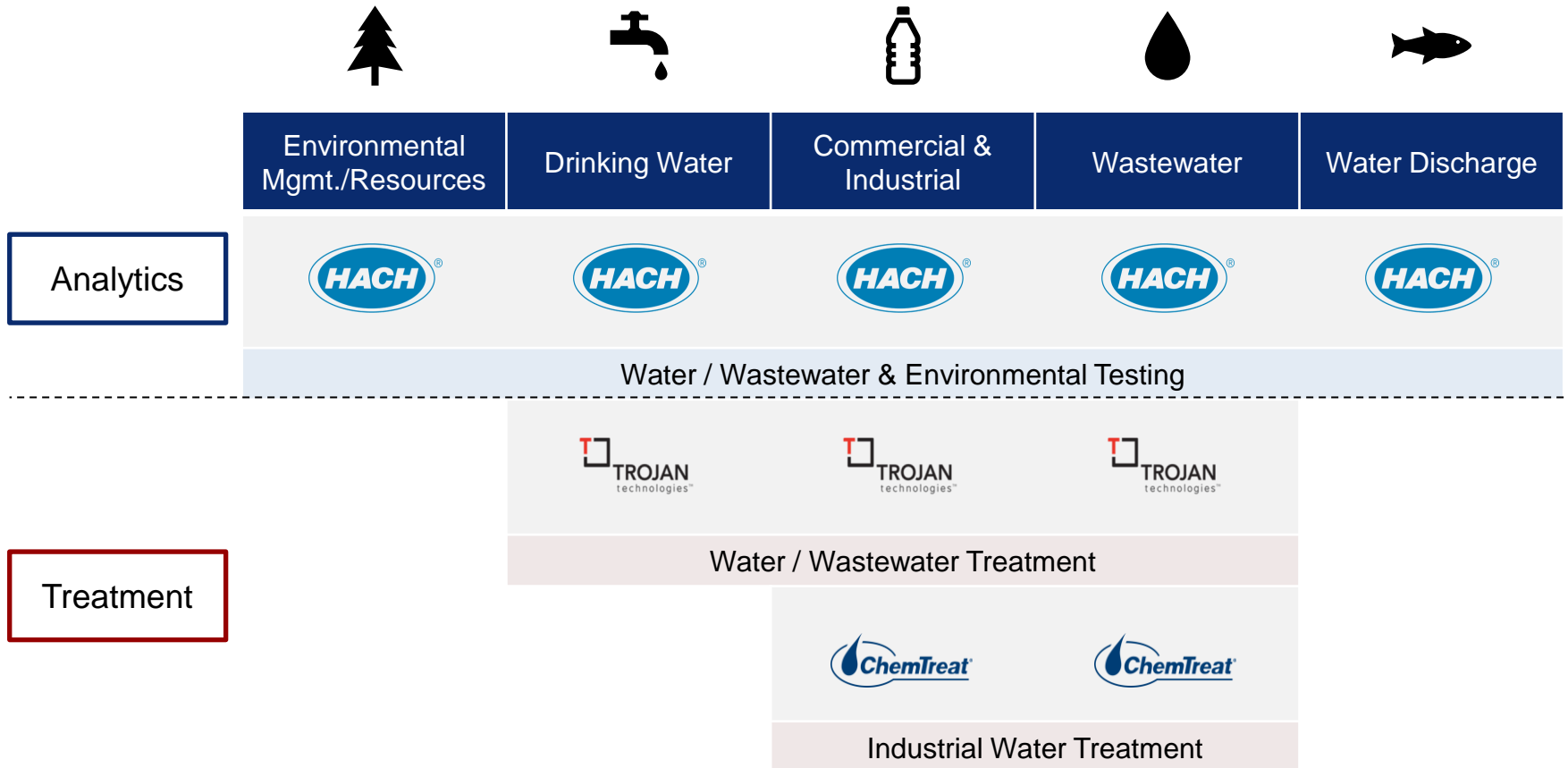
Segment Revenue  
**\$2.9B**

Recurring Revenue  
**56%**

Operating Profit Margin  
**23%**

Source: Company filings

Well-positioned in the most attractive areas of water quality

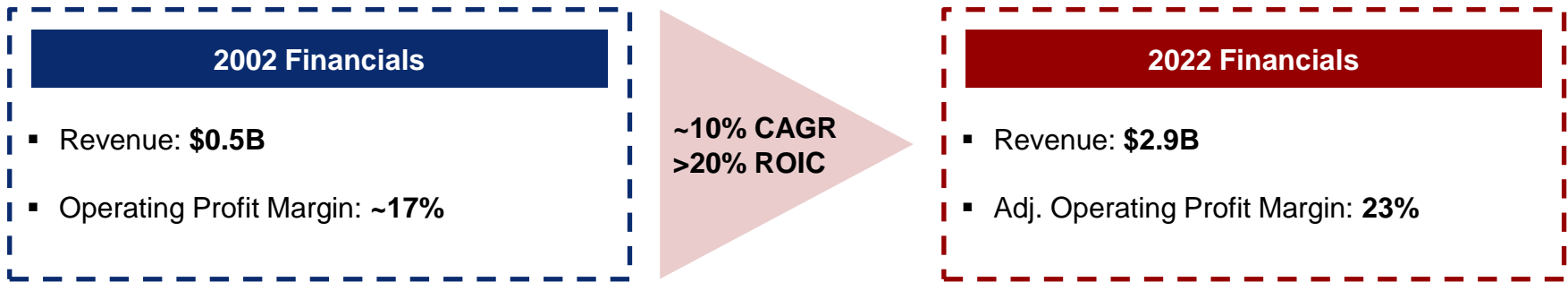


Water analytics and treatment solutions across the value chain

Source: Company filings

## Strong Historical Growth

### 20-Year Growth Strategy



## Strong Position



Veralto

**2-4x** consumable sales vs value of original equipment sale

**2-10x** cost of facility downtime versus cost of annual treatment

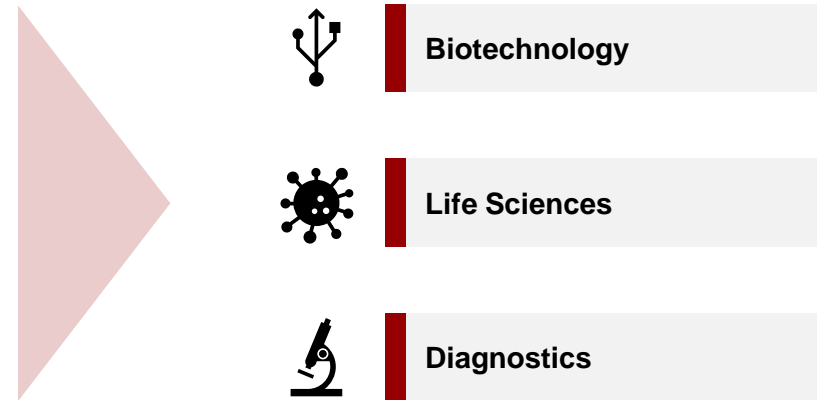
**AAA** MSCI ESG Rating

Durable business model with 56% recurring revenue

Source: Company filings

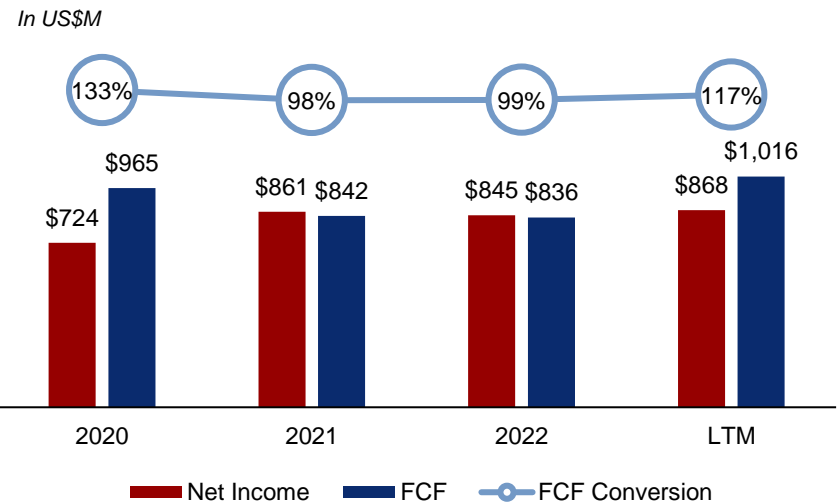
## Danaher's Investment Thesis

- Acquisition Investment Thesis **Holds**
- Danaher prioritized M&A in Healthcare the last several years with very few deals in the EAS segment, now Veralto
- Strong Cash Flow Generation
- Experience management team
- Diversifying Danaher's portfolio of companies



## Veralto's Potential

- Veralto has generated \$800-1,000 million of FCF annually for capital deployment
- FCF Conversion ~100% allowing for M&A opportunities
- Executive team has >100 years of combined Danaher experience and >50 for CEO and Water and Product; will ensure continuity of DBS operating principles optimized for new organizational structure
- Risk with a new team as only 60% from Danaher



Source: Company filings, DCM

# Desautels Capital Management

Honours in Investment Management

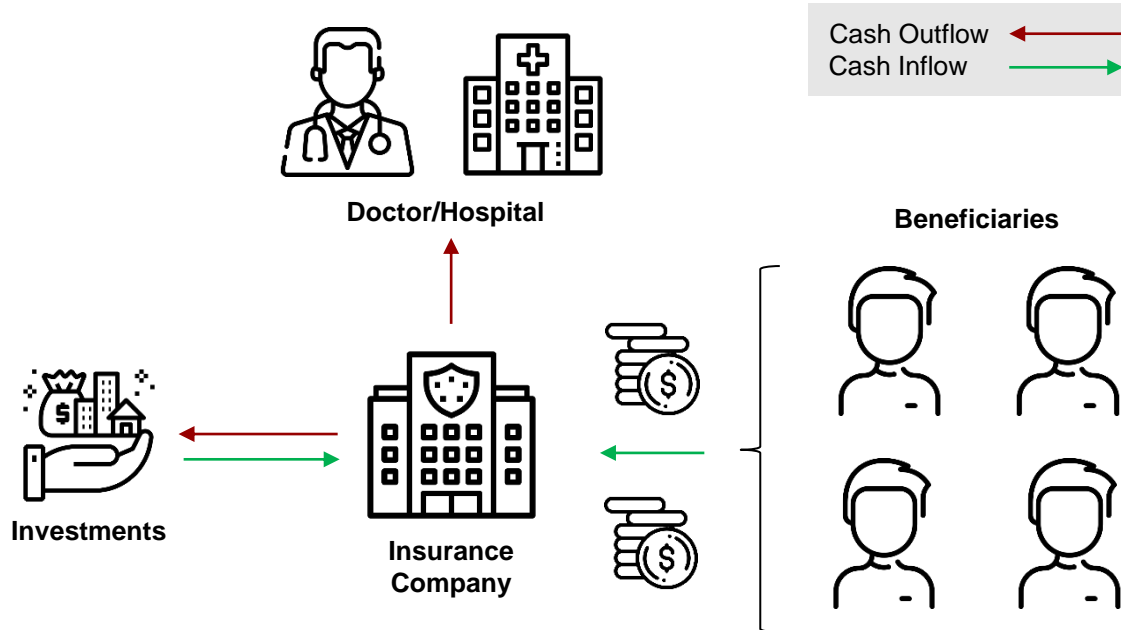
## Appendix

Section III



# Business Model

Risk diversification forms the basis of the insurance business model



## Key Principles

1

### Risk Diversification

By charging a premium to several beneficiaries, the insurance company diversifies the already low risk of payout



2

### Overcharging

Insurance will always be priced higher than needed to pay out due to overheads, SG&A, etc.



3

### Investments

The premiums are invested mostly into safe assets such as bonds, and a small portion into riskier assets



?

### How do insurance companies assess risk?

By assessing the proportion of unhealthy people in the risk pool. The lower the risk, the lower the chance of making a potential payout to the beneficiary, and hence, lower the premiums.

Average Age: 65 vs 30



\$\$\$



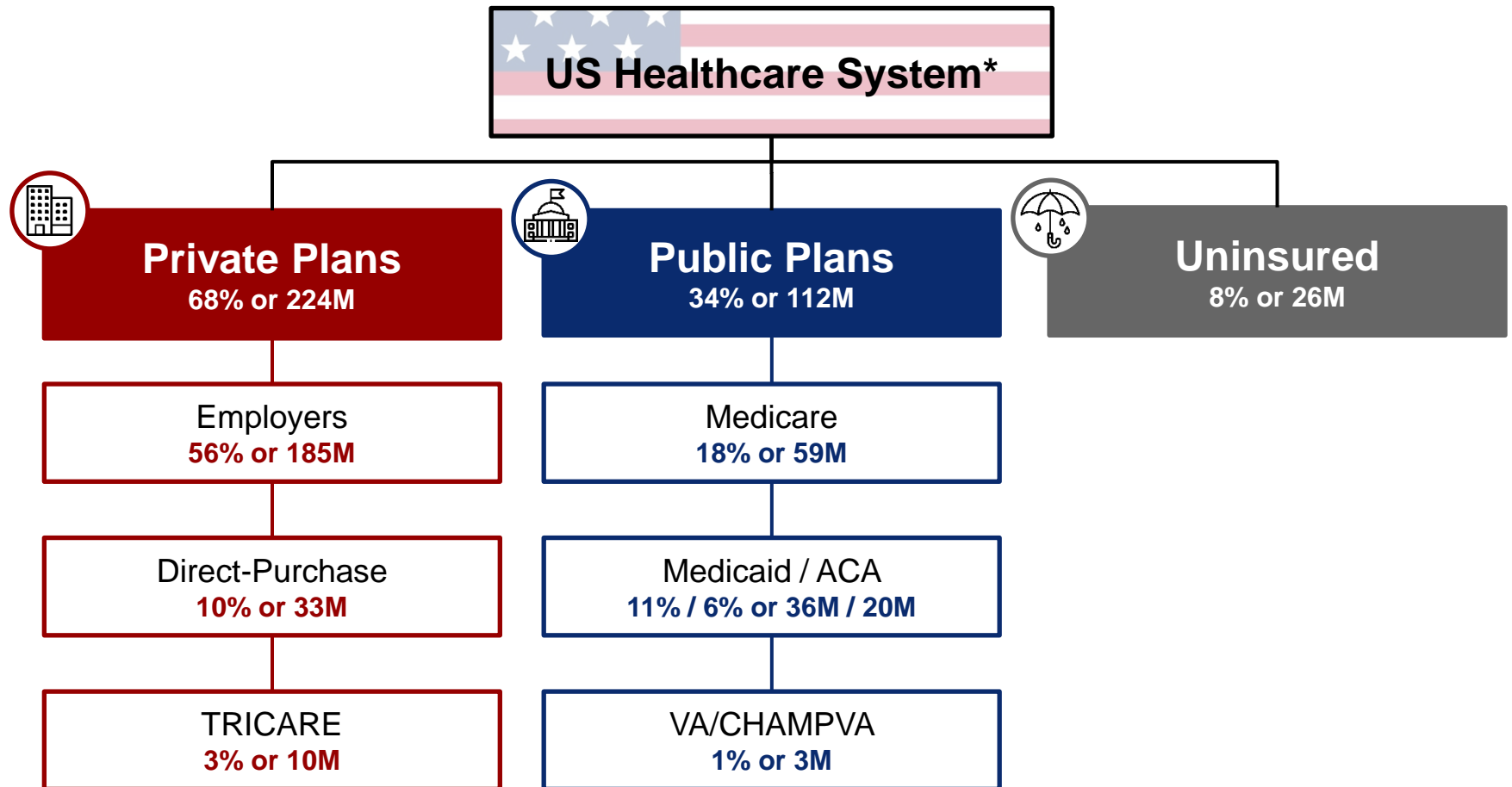
\$

Insurance companies generate revenue through risk diversification and overcharging, investing the premiums to generate returns

Source: Investopedia, Thomson One

# Healthcare Insurance Primer

Breakdown by key payers (2019)

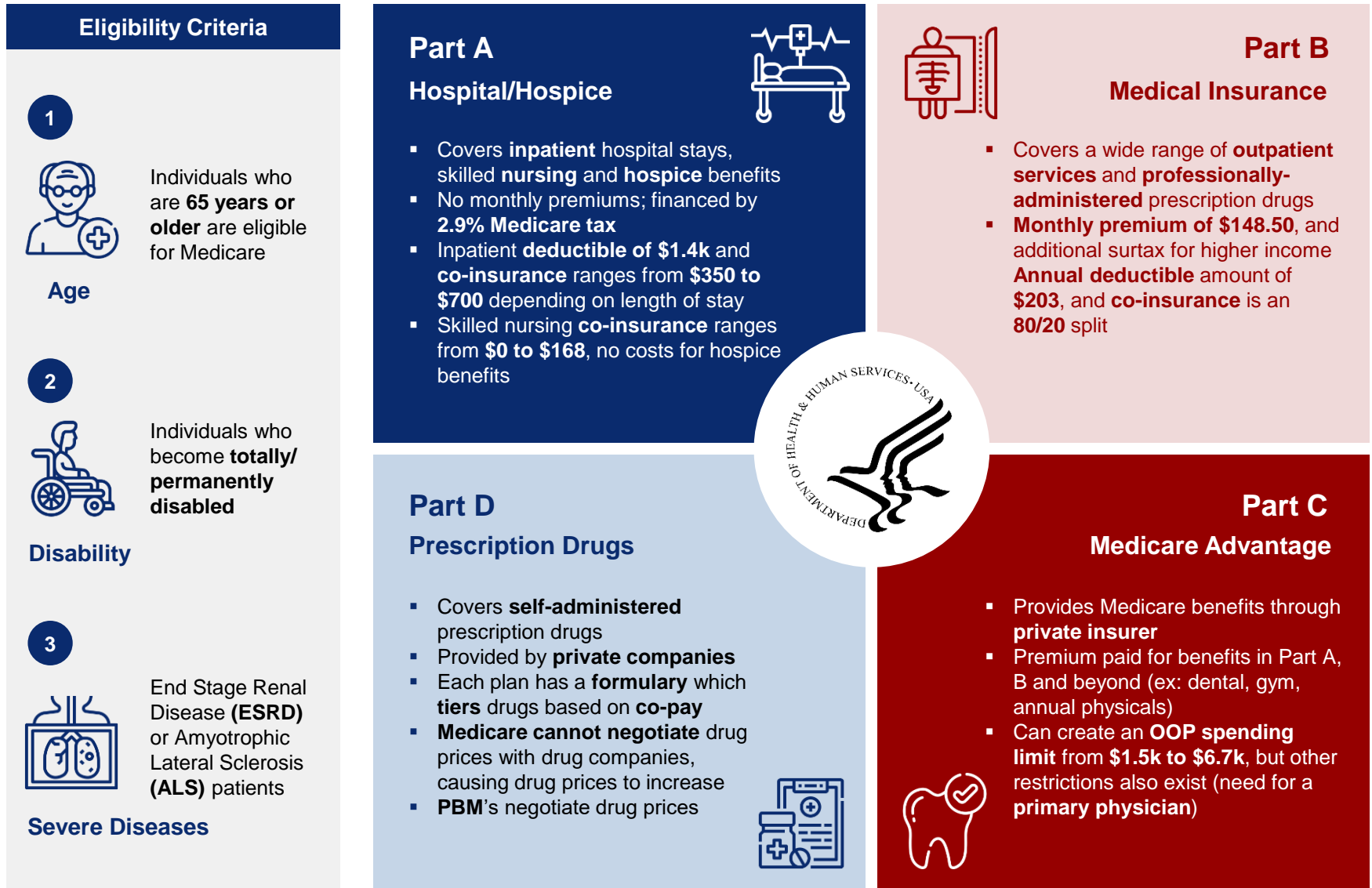


Source: U.S. Census Bureau \*types of coverage are not mutually exclusive



# Medicare








Medicare is divided into 4 parts, each with different benefits and structure



Source: Medicare.gov, U.S. Census Bureau

# Medicaid

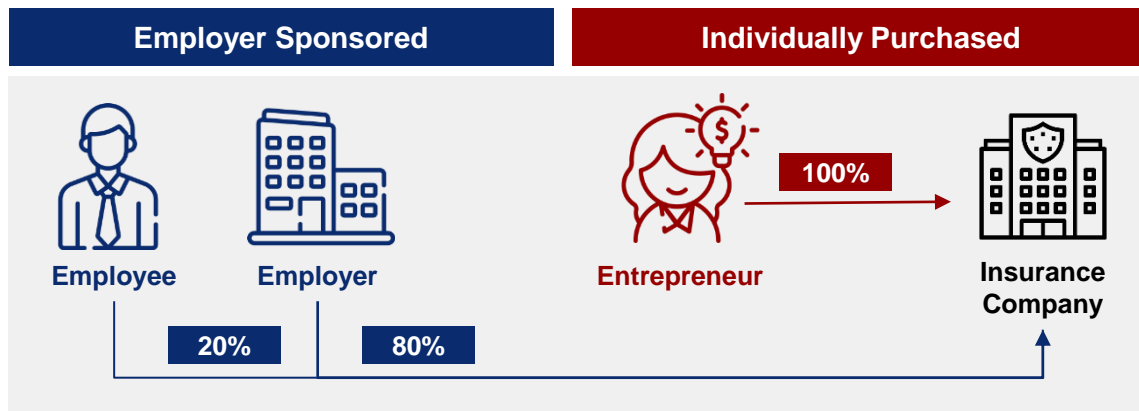
Medicaid ≠ Medicare, the former is for very low-income individuals

Eligibility Criteria	Medicaid Features	Medicare vs Medicaid	
<p><b>1 Low Income</b></p>  <p>People eligible for aid to families with dependent children (<b>AFDC</b>)</p> <p><b>2 Disability</b></p>  <p>People eligible for supplemental security income (<b>SSI</b>) for the aged and disabled</p> <p><b>3 Citizenship</b></p>  <p>US citizens/qualified non-citizens are eligible for Medicaid</p>	<p><b>1 Benefits</b></p>  <p><b>Dental, EPSDT, newly discovered condition</b> requiring treatment</p> <p><b>2 Managed Care</b></p>  <p>Medicaid recipients are enrolled in a <b>private health plan</b> Mostly for poor children and parents</p> <p><b>3 Low Cost</b></p>  <p><b>Free/very low co-pay</b> health insurance funded by the federal and state government</p>	<p></p> <p><b>1</b> Not needs-based</p> <p><b>2</b> Funded at the federal level</p> <p><b>3</b> Focuses on elderly population</p> <p><b>4</b> Divided into 4 parts for each healthcare benefit</p>	<p><b>Medicaid</b></p> <p><b>1</b> Means-tested needs-based</p> <p><b>2</b> Funded at federal and state level</p> <p><b>3</b> Focuses on low-income population</p> <p><b>4</b> Only 1 part, and offers wider range of health services</p>

Source: Medicare.gov, Medicaid.gov, U.S. Census Bureau

# Private Plans

Private plans are mostly employer sponsored, and more beneficial than public options



- Usually, employers cover ~80% of an employee's premiums
- Individual purchasers pay 100%
- Private plans can also be sponsored by universities
- There are many different types of private plans (shown below)

	Low deductible	Low premiums	Referrals needed	OON* coverage
HMO	✓	✓	✓	
POS	✓	✓	✓	✓
PPO	Some plans			✓
EPO		✓	Some plans	
HDHP		✓		Some plans

### Leading Private Insurers

*By direct written premiums in 2019*

Source: Aetna, Statista, Washington Post \*Out-of-network

# Key Drivers of Profit

2020 was a great year for insurance companies despite the negative impact on key drivers

## Key Drivers and their impact on Revenue and Profit

### 1 Median Age of Population



### 2 # of Employees



### 3 Total Health Expenditure



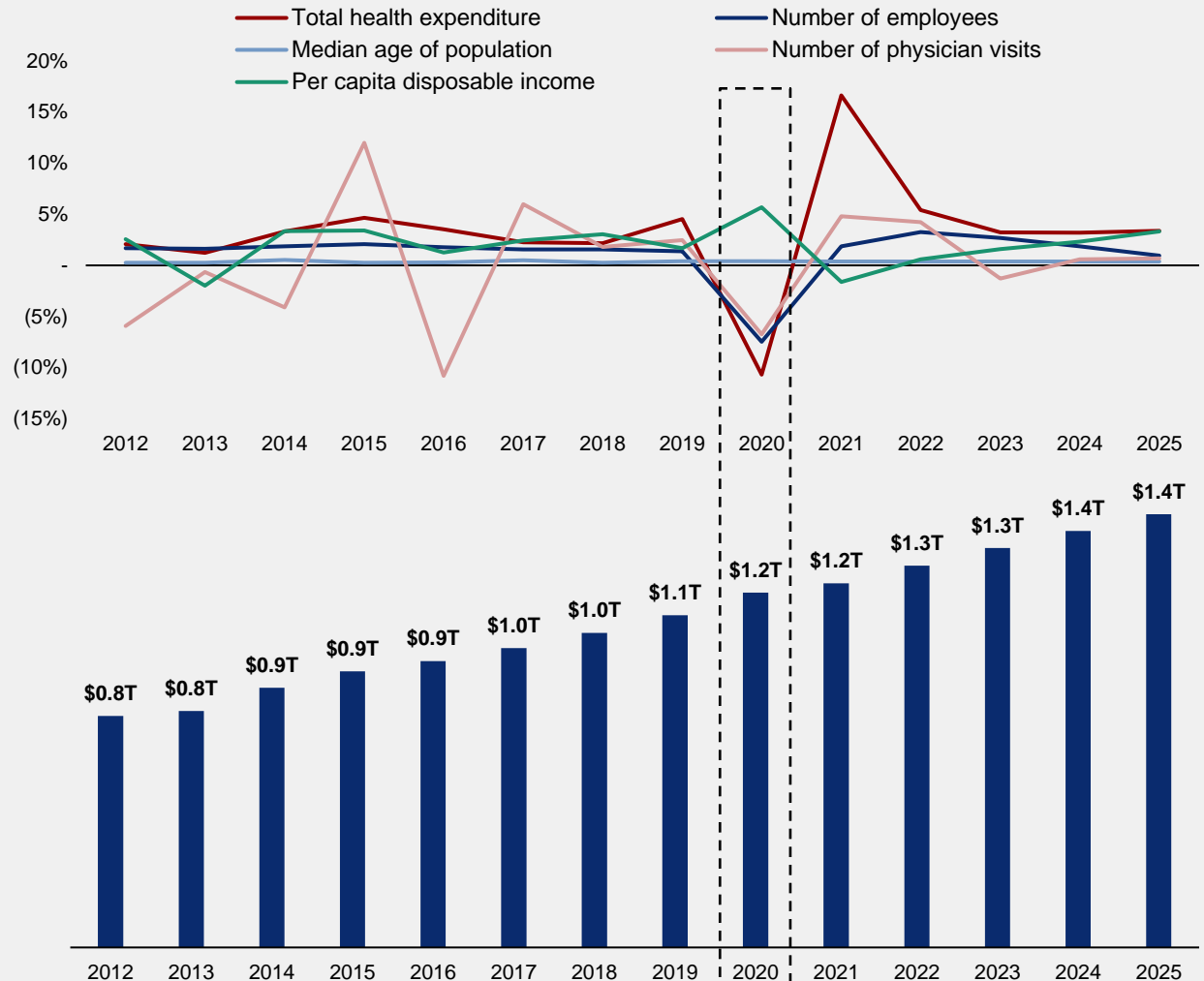
### 4 # of Physician Visits



### 5 Per Capita Disp. Income

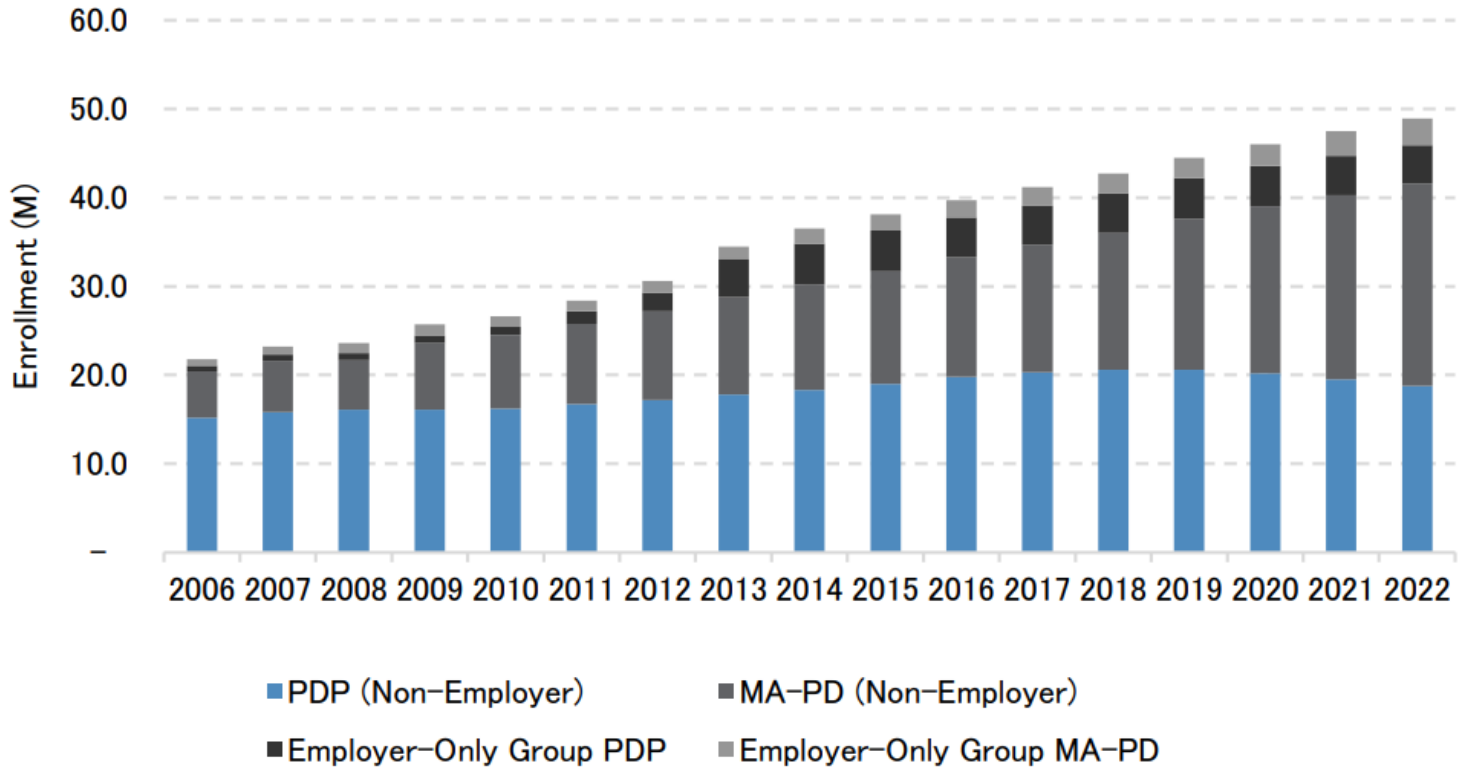


## Change in key drivers vs total industry revenue (2012 – 2025E)



Source: IBISWorld

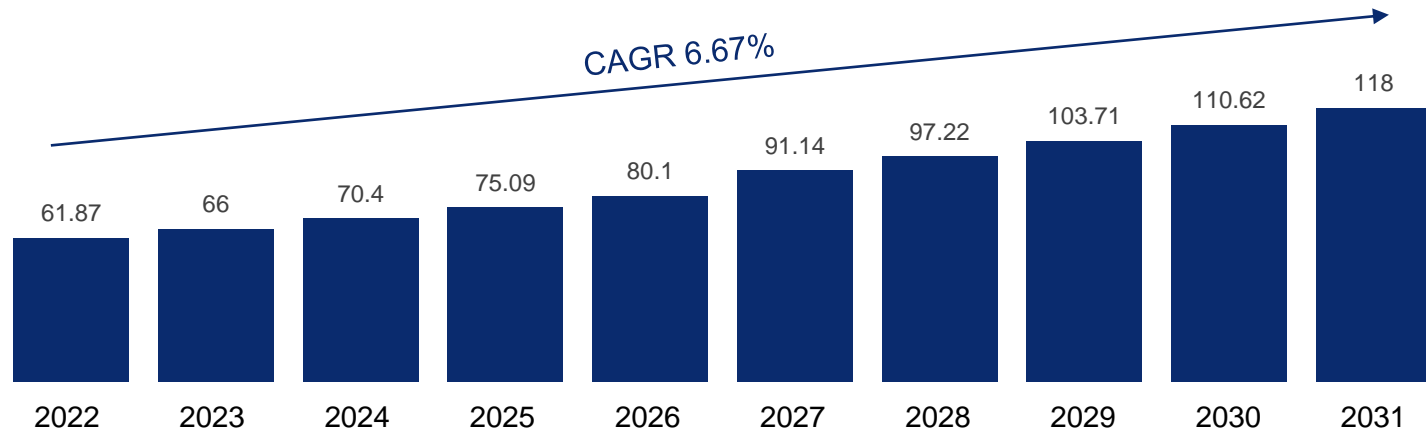
Figure 2: Medicare Part D enrollment by plan type



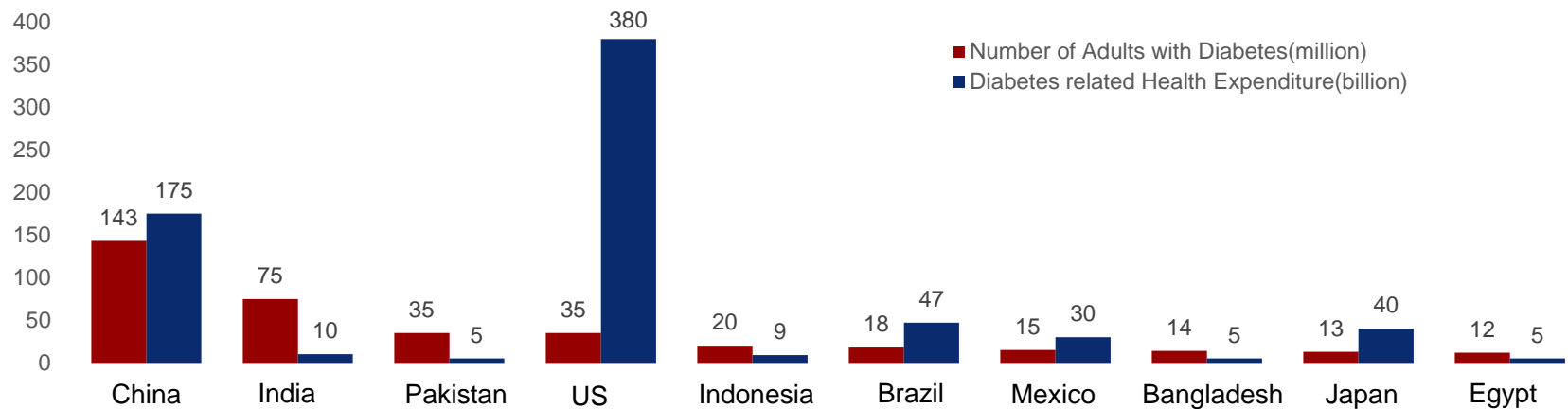
# The global market of GLP-1

Global market is increasing, demand overweight the supply

## Diabetes Drug Market Estimation(billion)



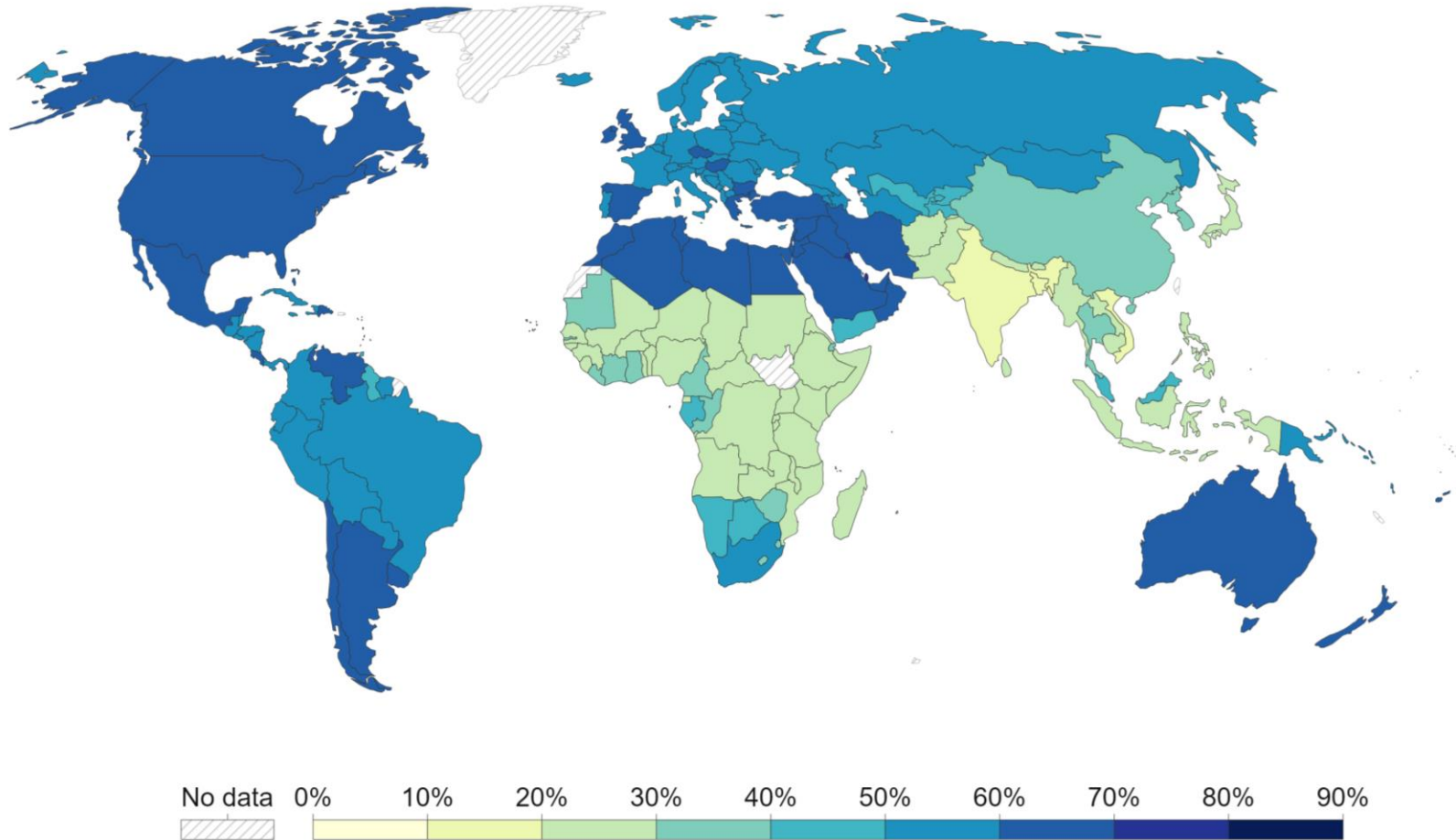
## Key Water Top ten countries with Diabetes



Except for North America, there are significant potential market opportunities globally

# Obesity rate globally

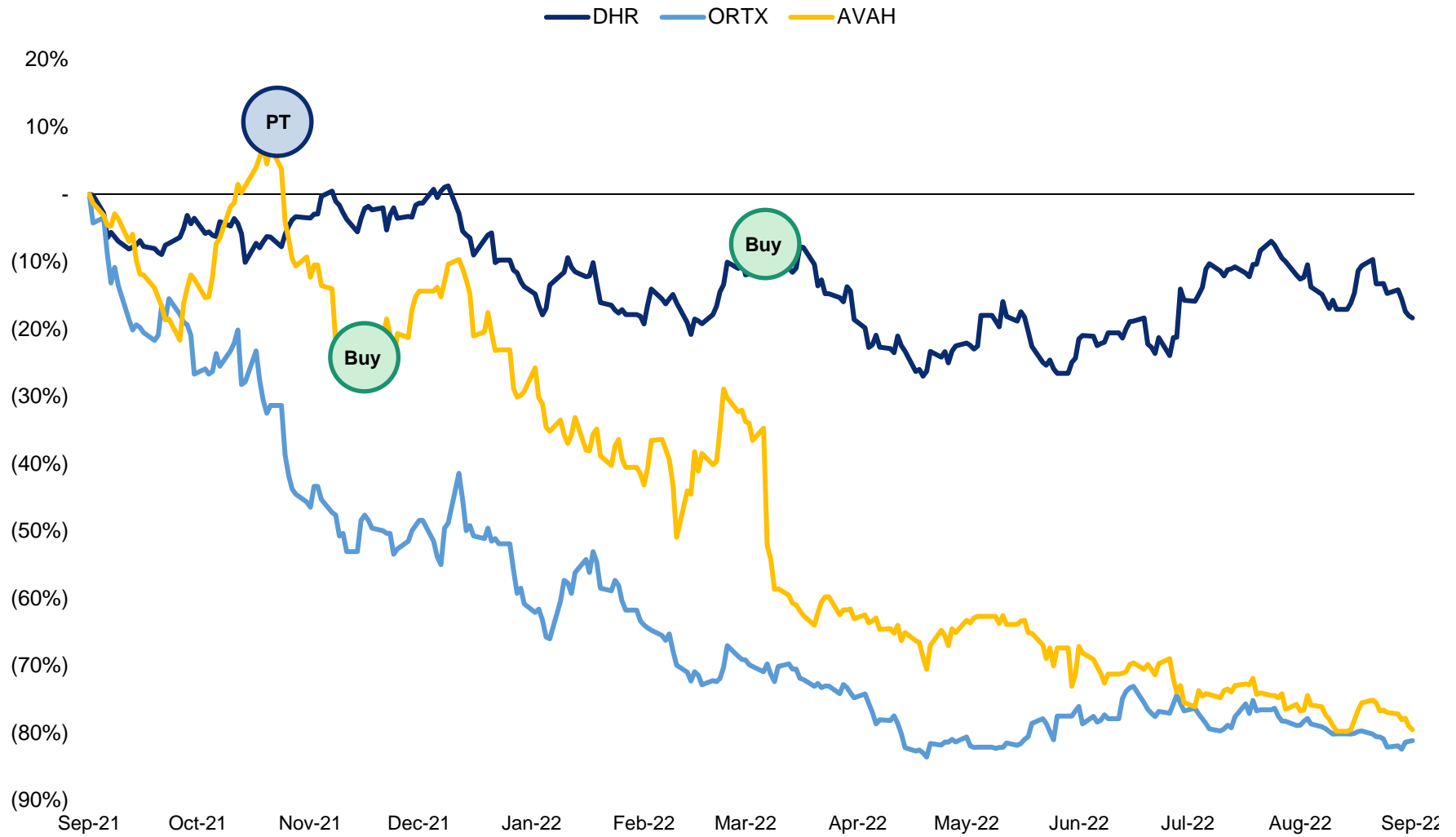
The hyperglycemic treatment is long-term and inevitable



The global incidence rate of diabetes continues to rise, and the hypoglycemic treatment has the attributes of long-term and immediate needs

# LTM Sector Performance

DCM Healthcare returned **xxx** in 2021 compared to the benchmark return of **xxx**



DCM Healthcare underperformed the benchmark by

Source: DCM

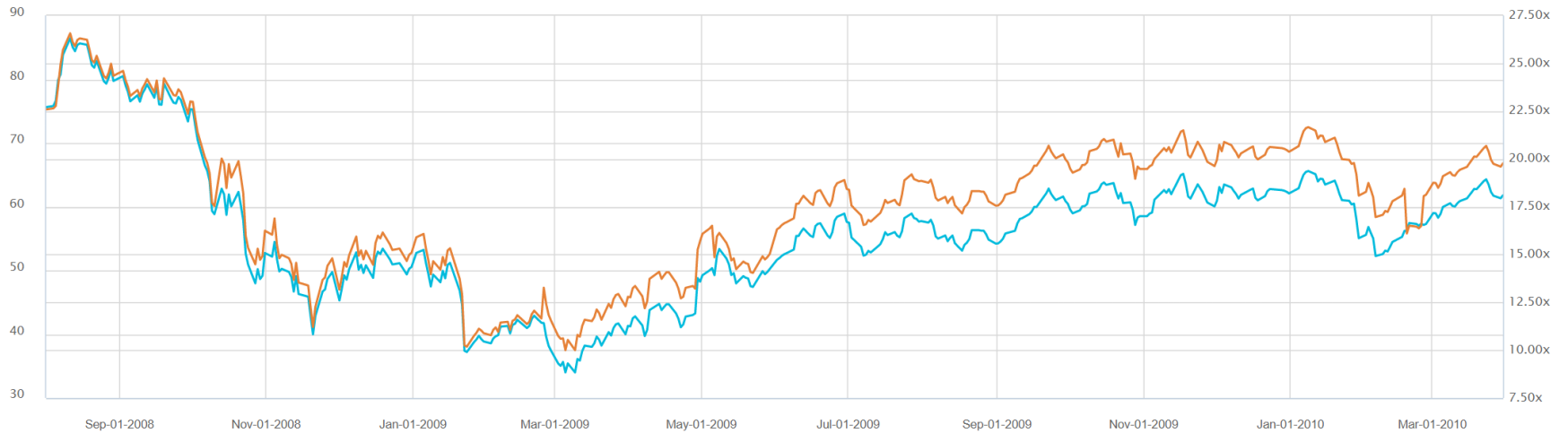


# Appendix – Benchmark Analysis

S&P 600 - Health Care Technolo... [^SP600-351030] Index Value : 61.79

S&P 600 - Health Care Technolo... [^SP600-351030] Daily TEV/EBITDA : 19.77

Pane 1 Right click in the pane to export and for more options

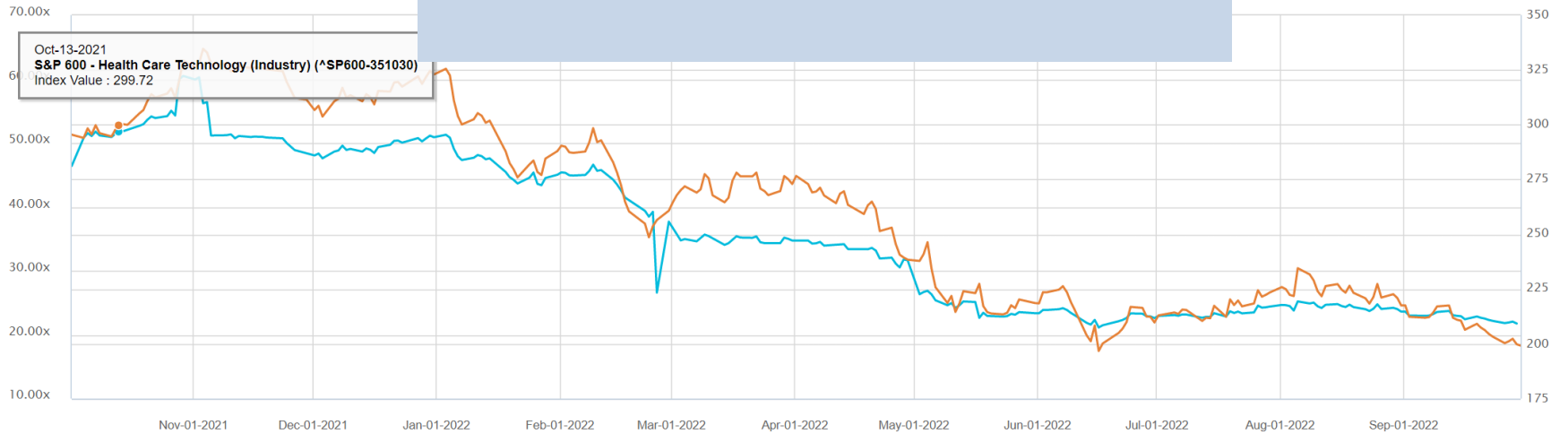


S&P 600 - Health Care Technolo... [^SP600-351030] Daily TEV/EBITDA : 51.79

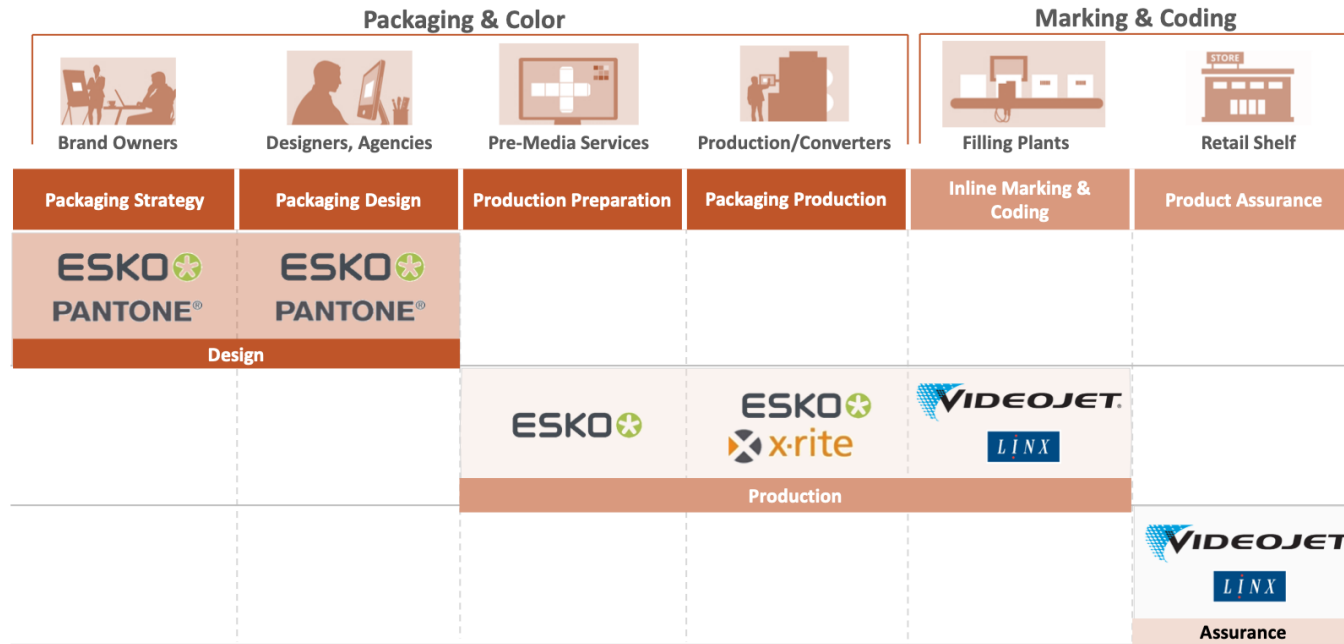
S&P 600 - Health Care Technolo... [^SP600-351030] Index Value : 299.72

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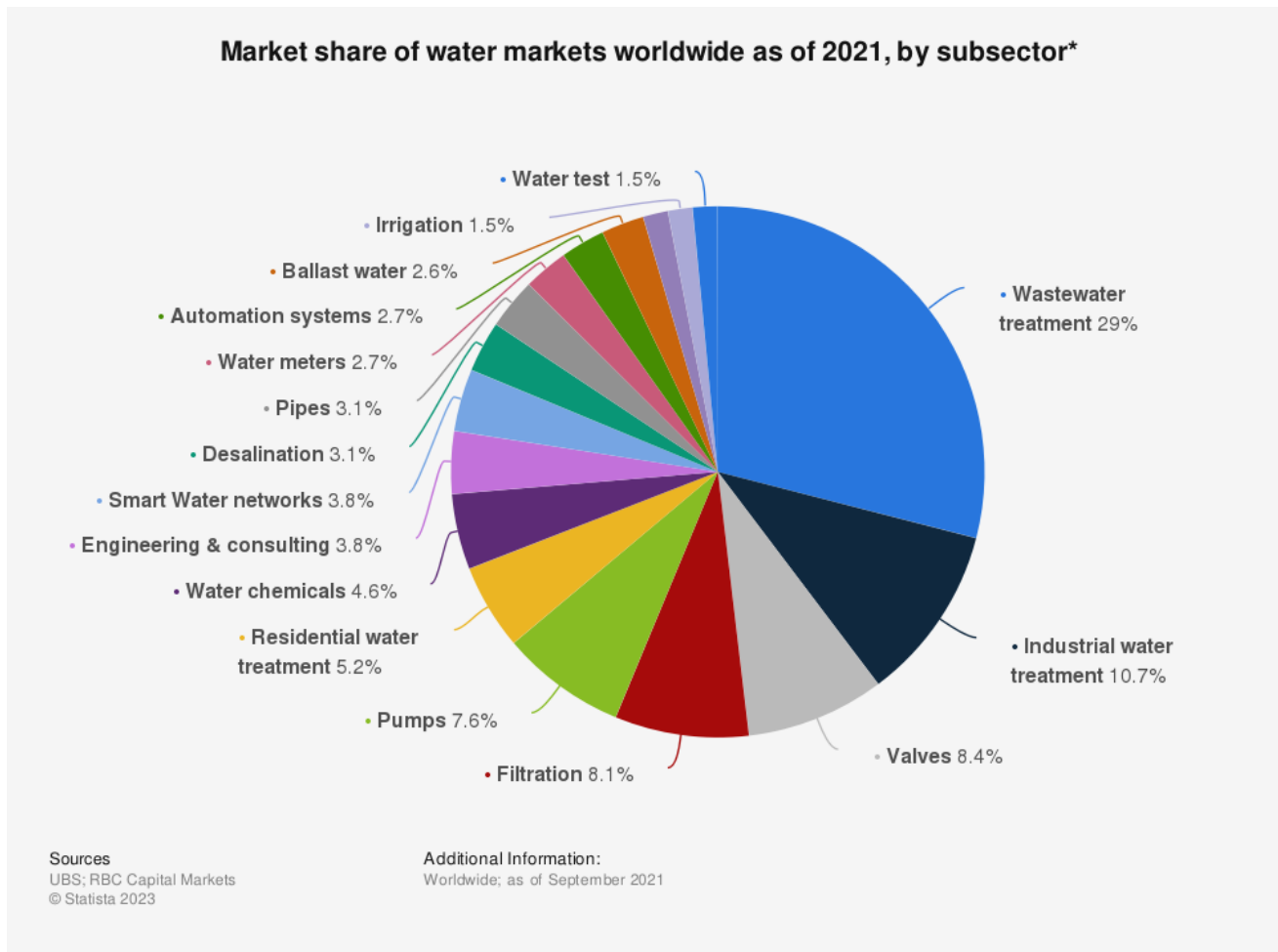


## PQI / Well-positioned across the packaging value chain



**Leading Global Player Helping Customers Accelerate Workflows**

# Water Markets by Sector



# Disclaimer

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