Trends in Profitability and Compensation of PBMs & PBM Contracting Entities

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EXECUTIVE SUMMARY

Nephron Research analysis of the primary sources of pharmacy benefit manager (PBM) profitability finds a significant shift over the last decade. While the value of rebates paid to PBMs continues to grow, fees and specialty pharmacy now drive a greater share of PBM profits, with estimated PBM profits derived from fees increasing fourfold and specialty pharmacy more than doubling since 2012 (Fig 1).

As a complement to our historic profit analysis, Nephron Research designed and conducted a survey of PBM and PBM contracting entity (a.k.a, PBM Group Purchasing Organization, or GPO[1]) compensation from pharmaceutical manufacturers between 2018 and 2022. This analysis helps validate the historical Nephron Research PBM profit model and provides incremental insight into the evolution of the PBM business model.

- The quantitative survey of pharma manufacturers found that over the period 2018-2022, traditional PBM fees expanded while novel fee sources proliferated. We extrapolate that total PBM compensation tied to fees doubled from $3.8 billion in 2018 to $7.6 billion in 2022. This growth was fueled by increases in traditional administrative fees as well as the emergence of new data and PBM contracting entity fees (referred to as 'vendor fees' in this analysis). These new fees have grown from near zero in 2018 to greater than $1.7 billion in 2022.
- The qualitative survey of pharma manufacturers made clear that PBM fees are most frequently tied to list prices, an important nuance to note given the ongoing debate on delinking. Respondents perceived the link to list price as a constraint to manufacturers' ability to lower list prices.
- Independent of the survey, Nephron's qualitative research in support of the analysis found that PBMs are directing a growing share of fee compensation toward PBM contracting entities as opposed to traditional PBM operations, potentially reducing fee pass through and transparency to sponsors and patients.
- While our analysis focuses on new PBM profitability drivers, it is important to note that projected manufacturer commercial market rebates, the traditional and better-known source of PBM compensation, increased 64%, or $25 billion, from 2018 to 2022, well above commercial brand sales growth of 39% over this period.

Putting it all together, we find that while increased pass through of rebates and price protection to plan sponsors have reduced these traditional sources of PBM profitability, novel PBM fees associated with contracting entities are more than offsetting this decline while expansion of specialty pharmacy is now the leading driver of PBM profit growth.

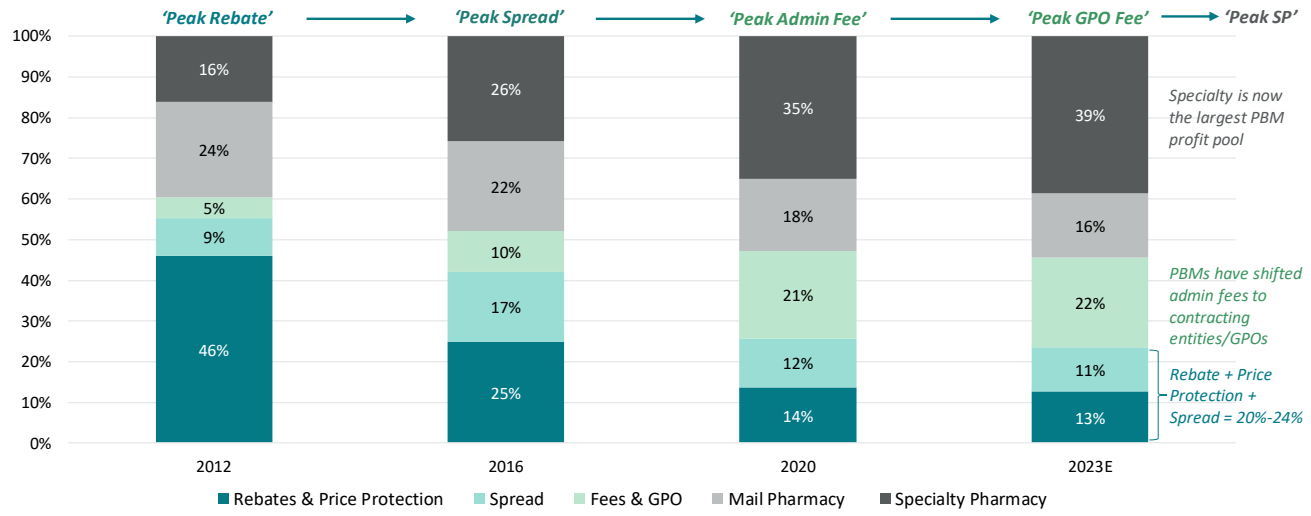
[1] PBM operators initially resisted calling the contracting entities introduced 2019-2021 group purchasing organizations, or GPOs, but have more recently adopted this terminology. For the purposes of this report the terms *PBM contracting entity* and *PBM GPO* should be considered interchangeable.

Sources of PBM Profits Over Time

Incorporating quantitative and qualitative survey data into Nephron Research's historic PBM gross profit model analysis, we find the primary sources of PBM profitability have continued to shift over the last decade, transitioning away from retention of manufacturer rebates and spread toward profits derived from fees and captive PBM specialty pharmacies.

- While contributions from commercial rebate retention decreased from 46% of estimated profit in 2012 to 13% in 2022 as a greater share of rebates were passed through to plan sponsors, the share of PBM profits derived from fees that are less likely to be shared with plan sponsors has grown from 5% in 2012 to 22% in 2023.
- Contributions from spread pricing (the difference between the prices PBMs charge to payors and prices they reimburse to pharmacies) and price protection appear to have peaked around 2016 but have been more than offset by novel fees associated with new contracting entities launched 2019-2021.
- Looking beyond historic PBM rebate, spread, and price protection profit drivers and more recent PBM contracting entity profit drivers, we find that specialty pharmacy, inclusive of compensation from payors and manufacturers, is now the single most important growth component, accounting for 39% of PBM profits.

Fig. 1: Source of PBM Gross Profits Over Time: A Shift from Rebates and Spread to Fees and Specialty Pharmacy



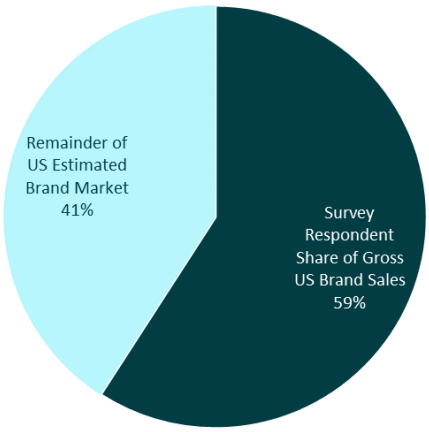
Source: Nephron Research PBM Gross Profit Model, August 2023

Surveying Pharma Compensation of PBMs & PBM Contracting Entities

As a complement to our PBM profitability analysis and to provide additional insight into the evolution of the PBM business model, Nephron Research designed and conducted a survey of the components of PBM and PBM contracting entity (CE) compensation derived from pharmaceutical manufacturers between 2018 and 2022. The results of this survey are presented here at an aggregate level along with Nephron Research's interpretation of the survey results and extrapolations of the findings to the broader U.S. commercial marketplace. The survey was conducted from July to August 2023. *For more information on survey design and execution please see the Appendix.*

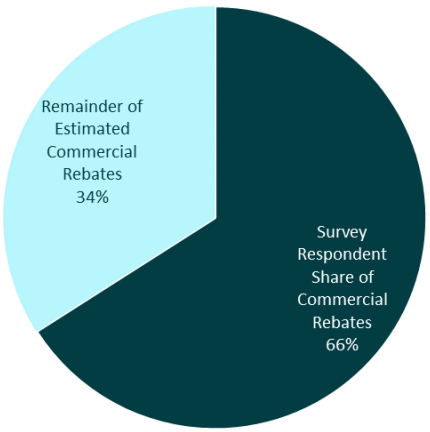
The quantitative portion of the survey of pharma compensation to PBMs and PBM contracting entities (CEs) was completed by sixteen pharma manufacturers while the qualitative portion was completed by nineteen manufacturers. Nephron Research calculates that for 2022 the sixteen quantitative survey respondents accounted for 59% of gross U.S. brand pharmaceutical sales[2] and 66% of commercial rebates[3].

Fig. 2: Survey Respondents Accounted for 59% of 2022 Gross US Brand Pharmaceutical Sales



Source: Nephron Research analysis of 8/2023 manufacturer survey, IQVIA WAC Brand Sales 2018-2021, Nephron Research estimate of WAC Brand Sales for 2022

Fig. 3: Survey Respondents Accounted for 66% of Nephron Estimated 2022 Commercial Rebates



Source: Nephron Research analysis of 8/2023 manufacturer survey, Nephron Research Estimates, Nephron Research Integrated Pharma Expenditure Model (8/2023)

[2] IQVIA estimates of WAC brand drug spending 2018-2021, Nephron Research estimate of WAC brand drug spend 2022
[3] Nephron Research estimate of 2018-2022 commercial rebates, Nephron Research Integrated Pharma Expenditure Model (August 2023)

Segmenting Sources of PBM Compensation

For context, we note that the manufacturer rebates and fees examined in this report are just one of several sources of PBM income, alongside compensation from payors and the spread between the prices PBM charge to payors and the prices they pay to pharmacies. Figure 4 outlines major sources of PBM compensation with payments from manufacturers captured by the survey denoted in orange.

- The survey focuses on commercial market manufacturer rebates and fees obtained by PBMs and PBM contracting entities.
- The ultimate level of PBM profitability will depend on the degree to which these potential profit pools are passed along to reduce costs for plan sponsors and patients.

Fig. 4: Nephron Research Segmentation of PBM & PBM Contracting Entity Profit Pools

Profit Pool	Paid By
Payor Admin Fees	
• Payor Claim/Formulary/Network Admin Fee	Payor
Rebate & Discount Retention	
• **Manufacturer Rebate/Discount/Concession**	**Manufacturer**
• **Manufacturer Price Protection**	**Manufacturer**
Manufacturer Fees	
• **PBM/Contracting Entity Rebate Admin Fee**	**Manufacturer**
• **Contracting Entity Vendor Fee**	**Manufacturer**
• **Any Uncategorized Fees (include FMV fees)**	**Manufacturer**
Data/Portal	
• **Contracting Entity Data/Data Portal Fee**	**Manufacturer**
Network Spread & Discount Card Fees	
• PBM Spread on Pharmacy + DIR	Payor
• Disc Card Fees	Pharmacy
• Copay Fee + Accum	Manufacturer
Spec Pharmacy Fullfillment	
• SP Dispensing Spread	Payor
• Manufacturer Invoice Discount	Manufacturer
• SP Clinical Program Fees	Manufacturer/Payor
• SP Data Fees, & Any Uncategorized Fee	Manufacturer
• Copay Maximizer Retention & Admin Fees	Manufacturer/Payor
• 340B Contract Pharmacy	Manufacturer/Covered Entity
Mail Fulfillment	
• Mail Dispensing Spread	Payor
• Manufacturer Invoice Discount	Manufacturer

Source: Nephron Research PBM Gross Profit Pool Model (August 2023)

Quantitative Survey Findings: Traditional Sources of PBM Compensation

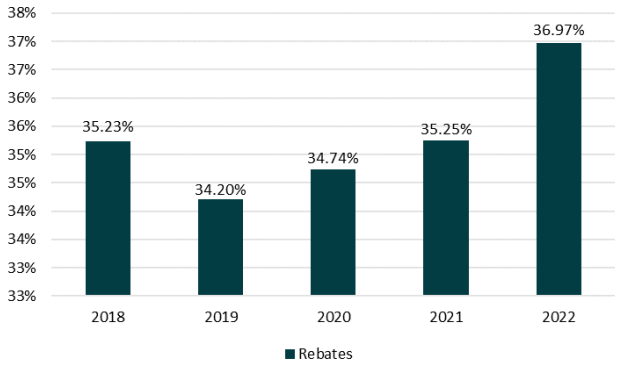
Traditional Compensation: Rebates, Administrative Fees & Price Protection

1. **For our sample set, manufacturer rebates grew to 36.97% of estimated US brand commercial sales managed by PBMs or via PBM contracting entities[4] in 2022, up 1.74 percentage points from 35.23% in 2018, with a substantial uptick observable 2021 to 2022.**

    a. **For our sample set, manufacturer rebates obtained by PBMs and PBM contracting entities increased by 107% from 2018 to 2022, outpacing gross commercial brand sales growth for the sample set of 97% by a full ten percentage points[5].**

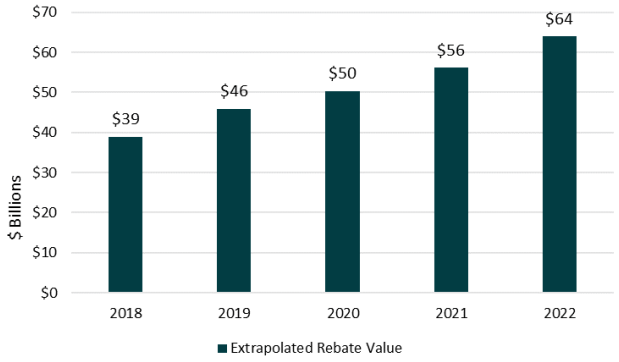
    b. **Extrapolating rebate levels reported by survey respondents to the total market, Nephron Research estimates that U.S. commercial rebates expanded by 64% from $46bn in 2018 to $64bn in 2022, outpacing total market gross commercial brand sales growth of 39%.** Had rebates remained at 2018 levels, they would have totaled $61bn, or $3bn lower, in 2022.

Fig. 5: Rebates as a percentage of US gross brand sales to commercial payors



Source: Nephron Research analysis of 8/2023 manufacturer survey (n=16)
Note: Rebates exclude price protection, administrative and other fees

Fig. 6: Nephron Research extrapolation of US commercial rebates



Source: Nephron Research extrapolation of rebate value from survey respondents to the full U.S. commercial market (i.e.: all manufacturers)

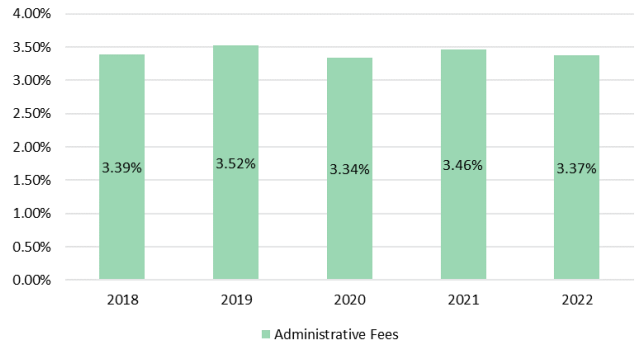
[4] Gross U.S. commercial sales, measured at WAC. This measure excludes Medicare and managed Medicaid as well as non-rebate eligible product sales. COVID-19 sales and 340B discounts are excluded from all analyses and extrapolations.
[5] Gross U.S. commercial sales for our sample set increased 97% 2018 to 2022, above total market growth of 39%. All extrapolations adjust for the higher growth rate and higher rebate level of the sample set.

2. **<u>Manufacturer administrative fees</u> obtained by PBMs and PBM contracting entities remained relatively steady as a share of US commercial sales, starting the survey period at 3.39% and ending the survey period at 3.37%.** Despite little change in the percentage share, the absolute value of administrative fees extrapolated across the market increased by $2.1bn. This increase excludes new types of fees introduced by PBM contracting entities over the 2019-2022 period (more on these new fees on pages 9-10). **Qualitative commentary indicates that PBMs have systematically shifted fees from PBMs to PBM contracting entities which add additional non-transparent layers to the system between manufacturers and sponsors.**

    a. For our sample set, on an absolute basis, administrative fees paid to PBMs and PBM contracting entities increased by 96% from 2018 to 2022, in line with the increase in sample set commercial brand sales of 97%.

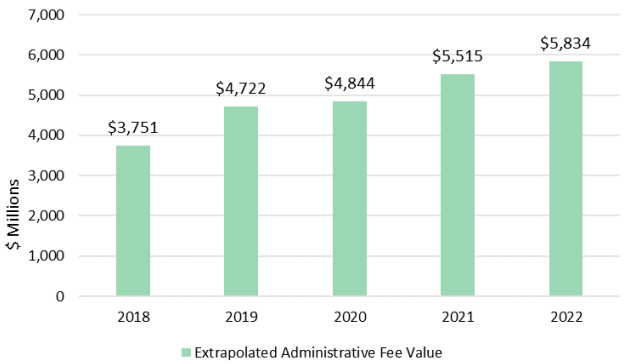
    b. Extrapolating administrative fee levels reported by survey respondents to the broader market, **Nephron Research estimates that administrative fees expanded to $5.8bn in 2022, up 56% from $3.8bn in 2018, an absolute increase of $2.1bn and above total commercial brand sales growth of 39%**.

Fig. 7: Administrative Fees as a percentage of US gross brand sales to commercial payors



Source: Nephron Research analysis of 8/2023 manufacturer survey (n=16)

Fig. 8: Nephron Research extrapolation of Administrative Fees

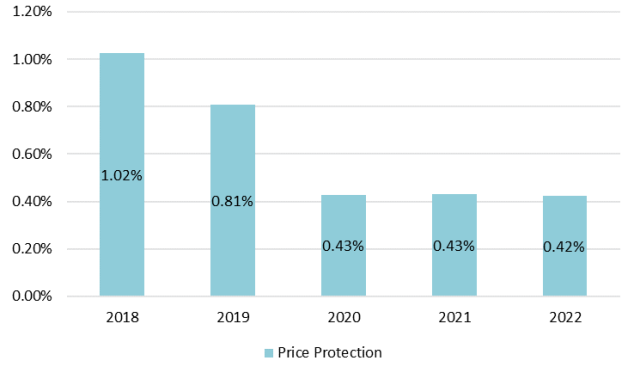


Source: Nephron Research extrapolation of Administrative Fees paid to both PBMs and PBM CEs across the full U.S. commercial market (i.e.: all manufacturers)

3. **Over this same period, manufacturer price protection payments declined to 0.42% of commercial sales in 2022, from 1.02% in 2018** (Fig 9)**.** The -0.60 percentage point decline in price protection reflects the significant deceleration of list price increases that occurred over the survey period. **However, PBMs appear to have offset the -0.60 percentage point decline in price protection as a percentage of commercial sales with the +1.74 percentage point increase in rebates as a percentage of commercial sales outlined in finding #1.**

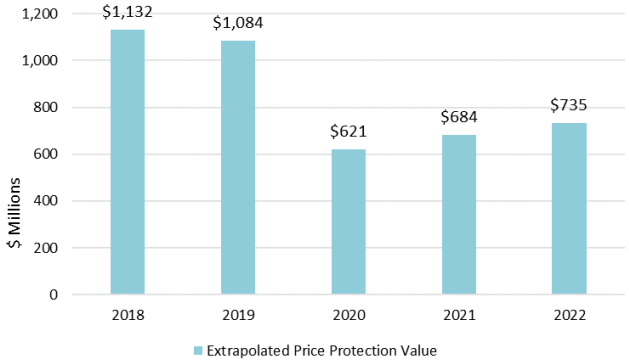
   a. **Despite a -59% decline in the rate of price protection 2018-2022, the absolute value of price protection declined by only -35% on continued gross brand sales expansion.** Extrapolating price protection levels reported by survey respondents to the broader market, Nephron Research estimates that price protection compensation declined from $1.132bn in 2018 to $735mn in 2022 (Fig 10). This reflects a significant deceleration in the pace of list price increases, offset by PBM extension of price protection to ever lower inflation levels.

Fig. 9: Price Protection as a percentage of gross US brand sales to commercial payors



Source: Nephron Research analysis of 8/2023 manufacturer survey (n=16)

Fig. 10: Nephron Research extrapolation of Price Protection



Source: Nephron Research extrapolation of Price Protection value for the full U.S. commercial market (i.e.: all manufacturers)

Quantitative Survey Findings: Novel Sources of PBM Compensation

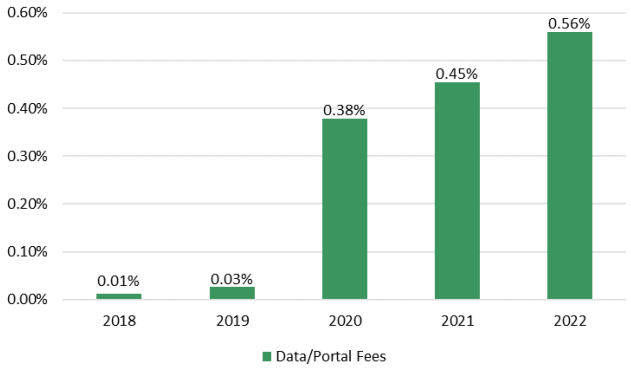
Novel Compensation: Contracting Entity Data & Data Portal Fees

4. **The emergence of significant PBM contracting entity fees associated with data and data portals was evidenced in the survey, with manufacturer data/portal fees expanding from effectively zero in 2018 to 0.56% of US commercial brand sales in 2022.** This new source of fees obtained by PBMs & PBM contracting entities is incremental to the traditional PBM compensation from rebates, price protection, and administrative fees quantified in our analysis above.

    a. For our sample set, data and data portal fees obtained by PBMs and PBM contracting entities increased from just 0.03% of commercial sales in 2019, the year Cigna/Evernorth introduced Ascent Health Services and partnered with Prime Therapeutics, to 0.56% in 2022, following the introduction of CVS's Zinc Health Services in 2020 and OptumRx's Emisar Pharma Services in 2021.

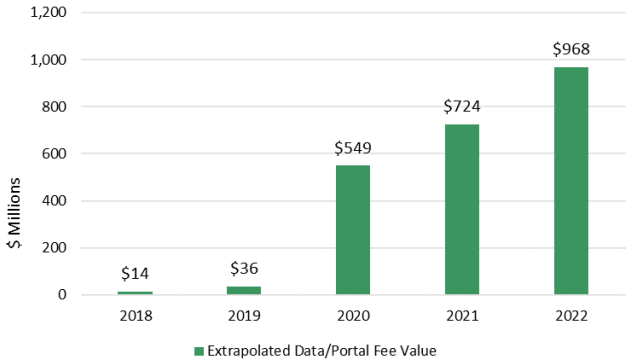
    b. Nephron Research extrapolation of the data and data portal fee levels collected from survey respondents to the broader commercial market, leads us to project that **data and data portal compensation has grown from near zero in 2018 to $968mn in 2022.**

Fig. 11: Data & Data Portal fees grew from near zero in 2018 to 0.56% of US commercial brand sales in 2022



Source: Nephron Research analysis of 8/2023 manufacturer survey (n=16)

Fig. 12: Nephron Research extrapolation suggests PBM compensation for Data and Data Portals neared $1bn in 2022



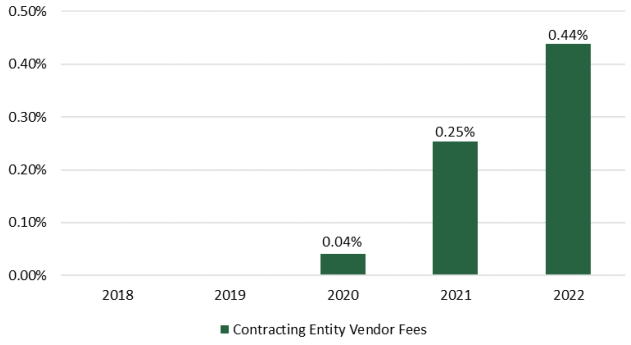
Source: Nephron Research extrapolation of Data/Portal Fees paid to both PBMs & PBM CEs across full U.S. commercial market (i.e.: all manufacturers)

5. **A similar trend is seen with respect to <u>contracting entity vendor fees</u> associated with the number of lives managed by the CE.** These fees did not exist prior to the introduction of PBM contracting entities 2019 to 2021.

   a. For our sample set, CE vendor fees increased from just above zero in 2018, prior to the launch of the first CE, to 0.44% in 2022.

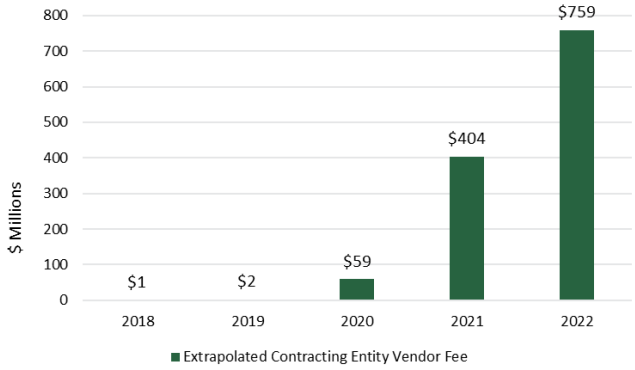
   b. Nephron Research extrapolation of CE vendor fee levels collected from survey respondents to the broader commercial market leads us to project that **CE vendor fees have grown from near zero in 2018 to $759mn in 2022.**

Fig. 13: PBM Contracting Entity vendor fees grew from zero in 2018 to 0.44% of US commercial sales in 2022



Source: Nephron Research analysis of 8/2023 manufacturer survey (n=16)

Fig. 14: Nephron Research extrapolation suggests CE vendor fees exceeded $750mn in 2022



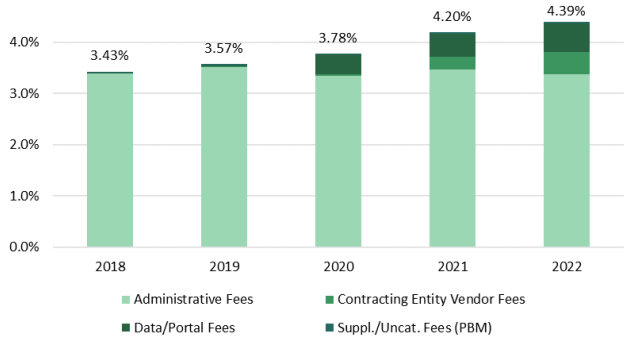
Source: Nephron Research extrapolation of CE vendor fees paid to both PBMs & PBM CEs across full U.S. commercial market (i.e.: all manufacturers)

Putting It All Together: Quantitative Survey

Putting it all together, we find that growth in manufacturer rebates exceeded growth in brand sales to commercial payors for our sample set, administrative fees grew in line with gross sales but PBMs have systematically shifted fees to new contracting entities, and a modest decline in price protection relative to commercial brand sales growth was more than offset by significant new PBM compensation stemming from data portals and contracting entity vendor fees.

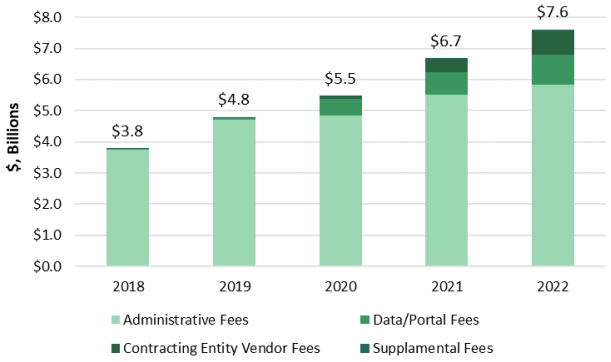
- Setting rebates and price protection to the side, our sample set indicates that **the combination of administrative fees, contracting entity vendor fees, data/portal fees and supplemental or uncategorized fees increased from 3.43% of U.S. commercial brand sales in 2018 to 4.39% in 2022**, up 0.96 percentage points despite a modest decline in administrative fees over this period (Fig. 15).
- **On an absolute basis, administrative fees and novel data and CE vendor fees are projected to have expanded from $3.8bn in 2018 to $7.6bn in 2022, a 100% increase.** Nephron extrapolation finds that a $2.1bn absolute increase in administrative fees was bolstered by the establishment of new CE centric data/portal vendor fees totaling an incremental $1.7bn in 2022. Supplemental and uncategorized fees paid by manufacturers to PBMs and PBM contracting entities accounted for an incremental $40mn.
- **Independent of the survey, Nephron Research finds that PBMs have shifted administrative fees from PBMs to PBM CEs.** Plan sponsors and PBM consultants indicate lower levels of pass through to sponsors and greater opacity associated with PBM CEs. At a minimum the shift of administrative fees to PBM contracting entities and expansion of data and vendor fees adds an additional non-transparent layer between manufacturers, plan sponsors and ultimately, patients.

Fig. 15: Administrative, data and other contracting entity fees as a percentage of US gross brand sales to commercial



Source: Nephron Research analysis of 8/2023 manufacturer survey (n=16)

Fig. 16: Nephron Research extrapolation finds admin fees and new contracting entity fees increased 100% 2018-2022

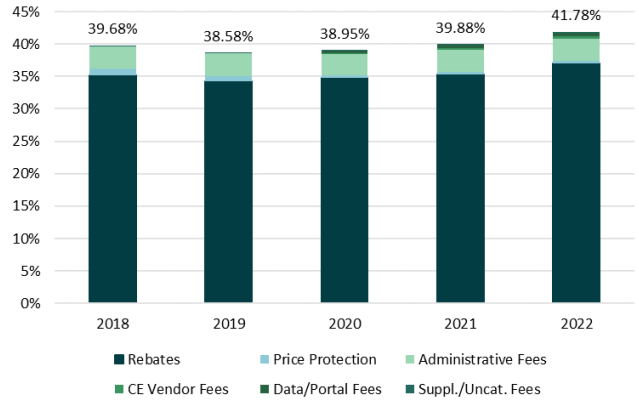


Source: Nephron Research extrapolation of PBMs & PBM contracting entity fee pools across the full U.S. commercial market (i.e.: all mfrs.)

- Expanding our perspective to include both traditional rebates, price protection and fees as well as novel PBM data and contracting entity fees, we find that total manufacturer compensation to PBMs and PBM contracting entities associated with

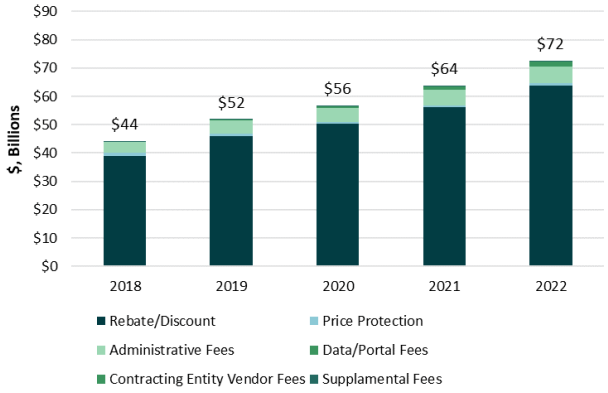
commercial brand sales **increased from 39.68% of U.S. commercial brand sales in 2018 to 41.78% in 2022 (Fig 17).** Nephron Research extrapolation of combined PBM and CE fees collected from survey respondents to the broader commercial market leads us to project that **total manufacturer compensation to PBMs and CEs for commercial brand sales grew 65% over this period, from $44bn in 2018 to $72bn in 2022, outpacing total gross commercial brand sales growth of 39% (Fig 18).**

Fig. 17: Combined PBM & contracting entity compensation as a percentage of US gross brand sales to commercial



Source: Nephron Research analysis of 8/2023 manufacturer survey (n=16)

Fig. 18: Nephron Research extrapolation finds combined compensation increased 65% 2018-2022



Source: Nephron Research extrapolation of PBMs & PBM contracting entity fee pools across the full U.S. commercial market (i.e.: all Mfrs.)

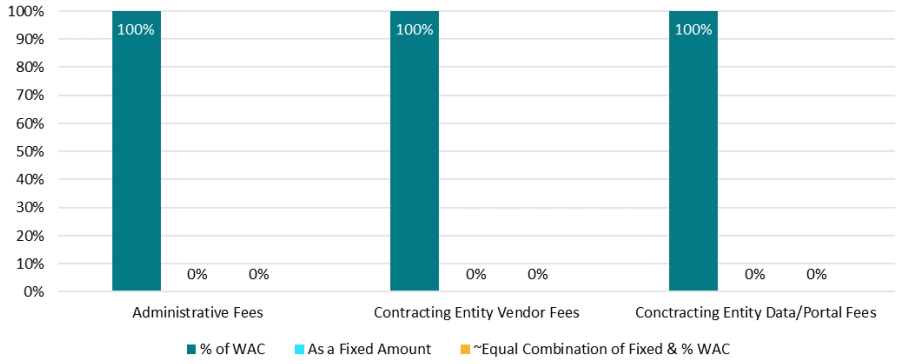
Further Findings: Qualitative Survey

Fees Are Predominately Based on WAC and WAC Contracting is Perceived as a Barrier to Lowering List Prices

The qualitative portion of the survey was completed by nineteen pharma manufacturers.

6. **PBM and PBM contracting entities commonly obtain fees that are calculated as a percentage of list prices (also known at wholesale acquisition cost or WAC) as opposed to flat fees (Fig 19).** Survey respondents indicated that administrative, vendor and data fees are most frequently contracted as a percentage of WAC.

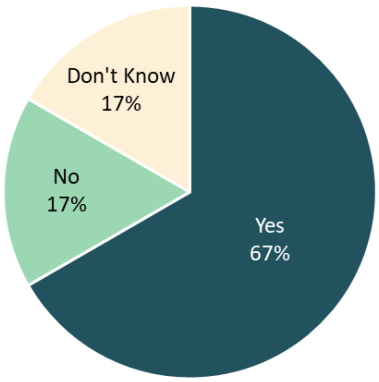
Fig. 19: Contracting entity administrative fees, CE vendor fees and data/data portal fees are most frequently contracted as a percentage of WAC



Source: Nephron Research, analysis of 8/2023 pharma manufacturer survey data
(n= of 18 for admin and data, n=17 for contracting entity vendor fees)

7. **Building off the uniform survey responses indicating PBMs most frequently obtain fees tied to WAC, 67% of manufacturer survey respondents perceive WAC-based fees as a barrier to lowering list prices.**

Fig. 20: 67% of respondents perceive WAC-based fees as a barrier to lowering list price

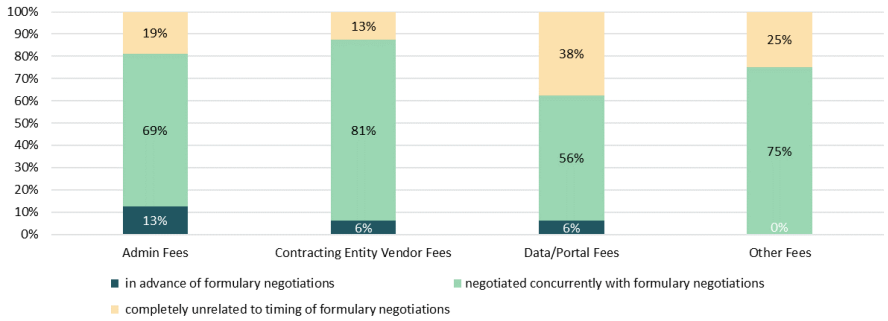


Source: Nephron Research, analysis of 8/2023 manufacturer survey (n=12)

8. **Administrative, data, and other PBM and contracting entity fees are understood to be commonly negotiated in parallel with negotiations for formulary placement.** The majority of survey respondents indicated that PBM and PBM contract entity fee negotiations are commonly performed concurrently with formulary rebate

negotiations, with 69% indicating concurrent negotiation for administrative fees, 81% for PBM CE vendor fees and 56% for data/data portal fees.

Fig. 21: Most common sequence of PBM and PBM contracting entity negotiation of fees, relative to formulary placement



Source: Nephron Research, analysis of 8/2023 manufacturer survey
(n= of 16 for admin fees, contract entity vendor fees, and data fees, n=8 for other fees)

Appendix: Survey Design & Execution

In response to increasing interest in our historical analysis of the key components of PBM profitability, Nephron Research designed a pharma manufacturer survey of the components of PBM and PBM contracting entity compensation which was fielded July to August 2023. The blinded results of this survey are presented here at an aggregate level along with Nephron Research's interpretation of the survey and extrapolation of survey results to the broader marketplace.

Survey Design: The quantitative and qualitative survey instruments were designed by Nephron Research.

Survey Execution: Responses were submitted to an independent third-party which anonymized and de-identified all survey results before they were shared with Nephron Research. To protect the confidentiality of survey respondents, Nephron Research received no company specific data with respect to both pharma manufacturers (survey submitters) and specific PBMs and PBM contracting entities.

Survey Respondents: The quantitative portion of the survey of pharma compensation of PBMs and PBM contracting entities was completed by sixteen manufacturers while the qualitative portion was completed by nineteen manufacturers.

Editorial Independence and Compensation: Nephron Research was compensated by PhRMA for survey design and independent data analysis. To ensure the independence and objectivity of this report PhRMA provided no input into the conclusions drawn from Nephron Research analyses and Nephron Research maintained full editorial control of all research stemming from the survey, including this report.

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