



May 12, 2022

Re: Solicitation for Public Comments on the Business Practices of Pharmacy Benefit Managers and Their Impact on Independent Pharmacies and Consumers

To Whom It May Concern:

My name is Alex Brill, and I am the founder and CEO of Matrix Global Advisors (MGA), an economic policy consulting firm in Washington, DC. I am also a senior fellow at the American Enterprise Institute. Previously, I served as chief economist and policy director to the House Committee on Ways and Means and on the staff of the White House Council of Economic Advisers.

Thank you for the opportunity to comment on the Federal Trade Commission's Request for Information regarding the impact of pharmacy benefit managers (PBMs). My comments pertain to the potential effect of rebates on drug list prices.

One of the functions PBMs perform is establishing formularies that encourage patients to choose the most appropriate, cost-effective medicines. Because formulary placement drives higher utilization of products on the formulary, PBMs can negotiate volume rebates from manufacturers. These rebates end up having a threefold benefit to the healthcare system: they lower health insurance premiums for beneficiaries, they drive price competition among drug manufacturers, and they help facilitate PBMs' clinical tools.

For several years, policymakers and others have claimed, without reliable supporting evidence, that PBM rebates are a cause of increasing drug prices.¹ In a recently published analysis, I find evidence to the contrary: my results show that price changes from 2018 to 2021 are generally comparable for drugs identified as likely rebated and drugs identified as likely non-rebated.²

This letter discusses my findings and provides further detail on the data and methodology I employed. I also present results from the analysis that were not included in the report but offer additional support for the findings.

¹ For example, the minority staff of the House Committee on Oversight and Reform recently asserted, "Drug manufacturers actually raise their prices due to PBMs. As PBMs demand larger and larger rebates or discounts, manufacturers offset these reductions by raising the 'list' prices for their drugs. PBMs encourage this practice because they pocket the higher rebates received from higher priced drugs." ("A View from Congress: Role of Pharmacy Benefit Managers in Pharmaceutical Markets." December 10, 2021. <https://republicans-oversight.house.gov/wp-content/uploads/2021/12/PBM-Report-12102021.pdf>.)

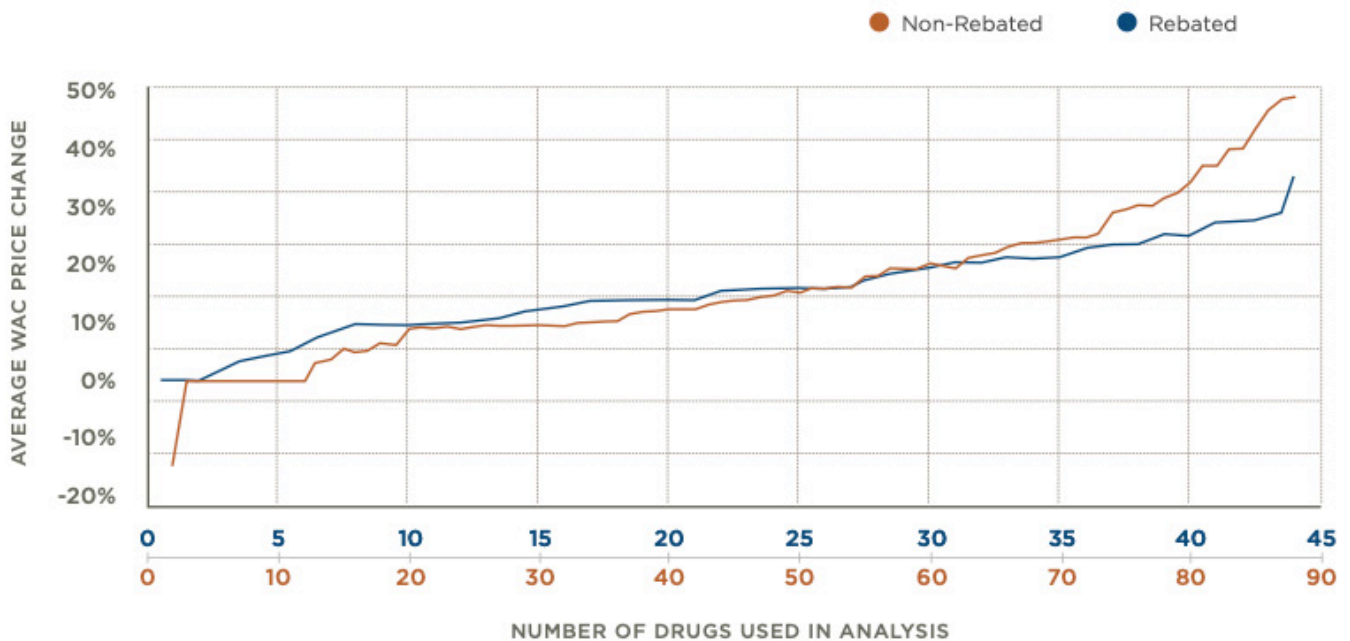
² Brill, Alex. 2022. "Understanding Drug Rebates and Their Role in Promoting Competition." Matrix Global Advisors. March. <https://www.getmga.com/wp-content/uploads/2022/03/UDRTRPC.pdf>. This research received financial support from the Coalition for Affordable Prescription Drugs (CAPD), but views expressed in that report and this comment are only attributable to the author.

Evidence on Price Trends for Rebated and Non-Rebated Drugs

Using the methodology described later in this letter, my recent analysis identified 92 likely non-rebated drugs and 39 likely rebated drugs and compared trends in wholesale acquisition cost (WAC)³ between the two groups. As shown in Chart 1, which presents each of the identified drugs ranked by its price change, my analysis finds that changes in average WAC from 2018 to 2021 were roughly the same for the sample of likely rebated drugs and the sample of likely non-rebated drugs. The 25th–75th percentile range of WAC price changes was 9.0–23.7 percent for rebated drugs and 9.4–21.0 percent for non-rebated drugs. The median price change was 15.6 percent for rebated drugs and 13.9 percent for non-rebated drugs. (See Chart 2 on the next page.)

If PBM rebates are a causal driver of WAC price increases, one would expect to find a significant difference in the price change of drugs that are likely rebated and those that are not. Instead, the results show that price increases are comparable for both sets of drugs. In short, I find no evidence that PBM rebates caused WAC prices to rise during the period analyzed.

Chart 1. WAC Price Changes 2018–2021: Rebated vs. Non-Rebated Drugs, Ranked



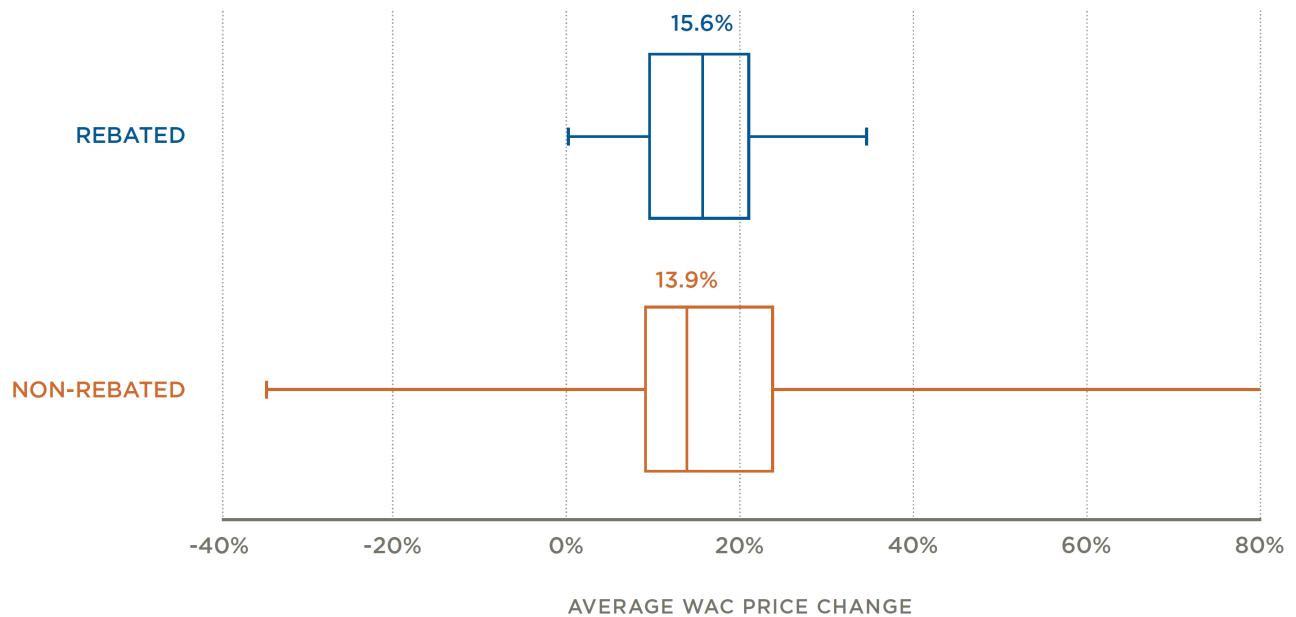
Source: Brill, Alex. 2022. “Understanding Drug Rebates and Their Role in Promoting Competition.” Matrix Global Advisors. March. <https://www.getmga.com/wp-content/uploads/2022/03/UDRTRPC.pdf>.

Note: Five non-rebated drugs are not shown because of the impact they would have on the scale. One product experienced a WAC price decrease of 35%, and four products experienced WAC price increases of 104%, 238%, 367%, and 884%.

³ WAC is an estimate of manufacturers’ list prices, not including discounts or rebates.



Chart 2. Box and Whisker Plot for WAC Price Changes 2018–2021: Rebated vs. Non-Rebated Drugs



Source: Author’s calculations using data from Brill, Alex. 2022. “Understanding Drug Rebates and Their Role in Promoting Competition.” Matrix Global Advisors. March. <https://www.getmga.com/wp-content/uploads/2022/03/UDRTRPC.pdf>.

Sample Construction and Methodology

Because rebate agreements between PBMs and drug manufacturers are confidential, I relied on publicly available formularies of the three largest PBMs (CVS Caremark, Express Scripts, and OptumRx) to construct samples of likely rebated and likely non-rebated retail prescription drugs for each year from 2018 through 2021. I extracted tabular data from each PBM formulary and employed a partial string similarity matching algorithm⁴ on the 2021 formularies to identify drugs that met predetermined sample inclusion criteria, discussed below. This list of drugs was then checked against data extracted from the 2018–2020 formularies, and drugs that met the inclusion criteria were retained for analysis. I believe this methodology captured current, reliable, and unbiased drug samples for analysis.

Using WAC prices from the Medi-Span PriceRx database, I calculated the simple average WAC price for each drug’s national drug codes and the percentage change in average WAC price per drug over the period. As reported above, I also calculated the median and 25th–75th percentile range of price changes for each group.

⁴ Drugs are listed similarly but not always identically on each formulary. To match drugs across formularies, I forced all characters in a drug name’s string to lowercase and removed all punctuation and trailing and leading white spaces. The algorithm then compares partials of each standardized string and returns a ratio score between 0 and 100 for each string comparison. As a general rule, scores over 60 indicate that two strings are closely matched. I limit matches to those with a score greater than or equal to 90 and combine the data from each formulary based on this matching procedure.



Drug Sample Inclusion Criteria

Typically, insurers offer the most robust coverage for medicines preferred on the pharmacy benefit formulary, and formulary exclusions suggest that patients will pay the full list price for a product. Because preference on a formulary drives sales volume for listed products, manufacturers are more willing to provide higher rebates for preferred products. This function of rebates informed my inclusion criteria as follows.

The OptumRx formularies identify three tiers of drugs: Tier 1 are the lowest-cost drugs (primarily generics), Tier 2 are midrange-cost drugs (preferred brand drugs), and Tier 3 are the highest-cost drugs (non-preferred). The Express Scripts formularies list preferred drugs and excluded medications, and CVS Caremark's formularies list preferred drugs and drugs with preferred options.

Non-rebated sample. I assumed drugs were most likely non-rebated if they were excluded or listed as non-preferred on all three PBM formularies for every year. Specifically, drugs were classified as most likely non-rebated if they were listed as Tier 3 on OptumRx formularies, were excluded on Express Scripts formularies, or had preferred options on CVS Caremark formularies. If a drug was preferred on any of the three formularies for any year, it was excluded from the non-rebated sample.

Rebated sample. For rebated drugs, I limited my search to drugs within the top 200 prescription drugs by retail sales, based on 2020 data from LePro PharmaCompass. I assumed drugs were most likely rebated if they were listed as preferred on at least one of the three PBM formularies for every year. Specifically, I classified drugs as most likely rebated if they were listed as Tier 1 or Tier 2 on OptumRx formularies, were preferred on Express Scripts formularies, or were preferred on CVS Caremark formularies.

Further Sample Refinement

I restricted both samples to single-source brand-name drugs, using data from the Food and Drug Administration's (FDA) Drugs@FDA database and the "Purple Book," the FDA's database on biological products. The remaining drugs were then checked against data extracted from the 2018–2020 formularies, and drugs that met the inclusion criteria were retained for analysis (44 rebated drugs and 167 non-rebated drugs). I then excluded drugs that launched during 2018–2021 and drugs for which all four years of WAC pricing data were unavailable. My final samples comprised 39 drugs that are most likely rebated and 92 drugs that are most likely non-rebated.

Additional Analysis on Price Trends

To provide a fuller view of the results beyond those released in my recent report, Table 1 shows the WAC price change distribution by year from 2018 to 2021 for the rebated and non-rebated drug samples.



Table 1. WAC Price Change Sample Statistics by Year: Rebated vs. Non-Rebated Drugs

	2018–2019		2019–2020		2020–2021		2018–2021	
	Non-Rebated	Rebated	Non-Rebated	Rebated	Non-Rebated	Rebated	Non-Rebated	Rebated
Mean	20.4%	7.0%	11.8%	6.9%	8.5%	6.3%	31.9%	15.7%
25th Percentile	2.9%	3.0%	2.3%	4.0%	0.0%	3.3%	9.0%	9.4%
Median	7.4%	6.1%	6.1%	6.0%	5.6%	6.0%	13.9%	15.6%
75th Percentile	12.6%	10.9%	10.7%	10.2%	9.4%	9.7%	23.7%	21.0%
Price-Weighted Average	12.1%	3.7%	6.0%	3.3%	6.7%	2.8%	20.8%	7.6%

Source: Author’s calculations using data from Brill, Alex. 2022. “Understanding Drug Rebates and Their Role in Promoting Competition.” Matrix Global Advisors. March. <https://www.getmga.com/wp-content/uploads/2022/03/UDRTRPC.pdf>.

While the *median* WAC price change was roughly the same for both groups of drugs over the full period, as reported above, *average* WAC price changes are significantly higher for non-rebated drugs by year and over the full period. However, removing outliers (defined as WAC price changes greater than two standard deviations from the mean) from both samples eliminates this effect. Average WAC price changes, excluding outliers, for non-rebated drugs are all within 1.2 percentage points of average WAC price changes for rebated drugs.

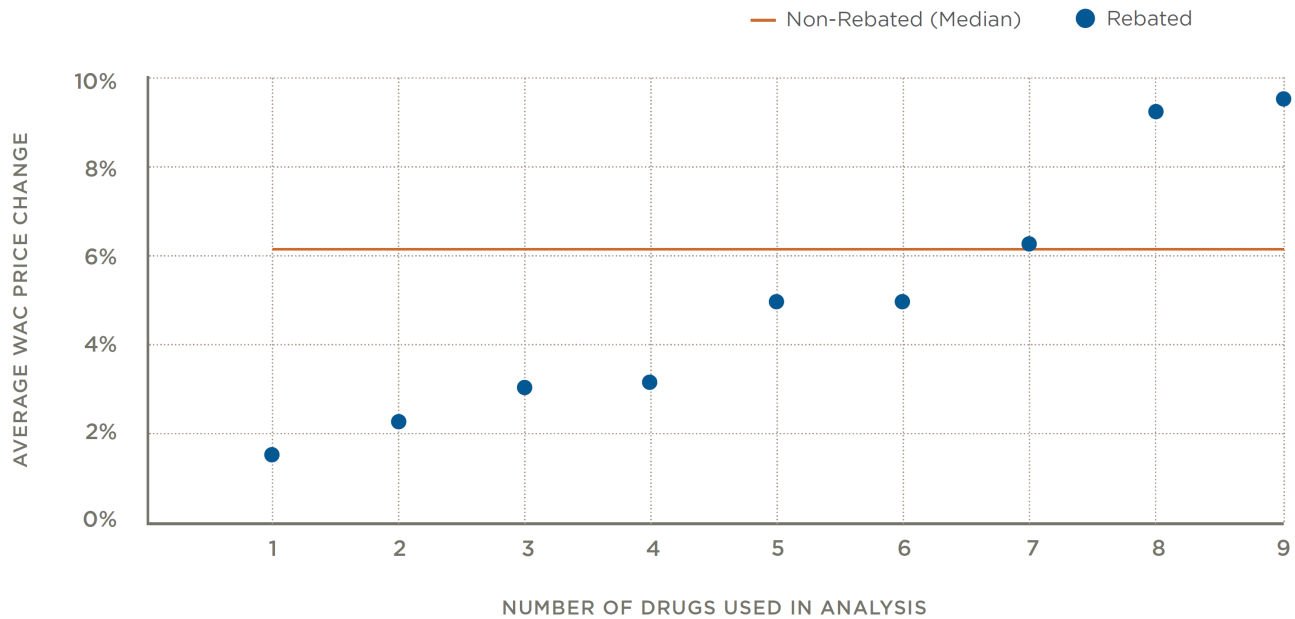
The price-weighted average WAC price change (drugs with larger WAC prices contribute more to the final average) is much larger for non-rebated drugs both by year and over the full period. Removing outliers reduces the gap between non-rebated and rebated weighted averages, but the non-rebated weighted average price change is still 10.3 percentage points higher over the full period than the rebated weighted average. When compared to the simple averages, these results suggest that average price increases in the non-rebated sample are driven by the more expensive non-rebated drugs. In contrast, average price increases in the rebated sample are driven by those drugs with lower WAC prices.

I also investigate if an increase in the number of formularies on which a drug is preferred—potentially an indication of increasing rebates—is associated with a larger increase in WAC price in the year in which the drug is added to an additional formulary. Between 2018 and 2019, five drugs from the rebated sample moved from a preferred status on a single formulary to a preferred status on two or three formularies. Between 2019 and 2020, four rebated drugs moved from a preferred status on one or two formularies to a preferred status on two or three formularies.

The average and median single-year WAC price change for these nine drugs was 5.0 percent. The median WAC price change for non-rebated drugs from 2018 to 2020 was 6.1 percent. (See Chart 3.) Though this sample size is relatively small, it suggests that more PBMs preferring a product (thus likely more rebates for that product) is not associated with larger WAC price increases on average.



Chart 3. Single-Year WAC Price Changes for Rebated Drugs Appearing on Additional Formularies



Source: Author’s calculations using data from Brill, Alex. 2022. “Understanding Drug Rebates and Their Role in Promoting Competition.” Matrix Global Advisors. March. <https://www.getmga.com/wp-content/uploads/2022/03/UDRTRPC.pdf>.

Conclusion

Policymakers are rightly concerned about the rising cost of prescription medicines if such cost increases unduly limit patient access to appropriate medicines or do not represent a commensurate increase in the value of these medicines. However, claims that PBM rebates are a cause of increasing drug prices seem to be unfounded.

Thank you for the opportunity to comment on this matter. I would be happy to answer any questions you may have. Please feel free to contact me at alex.brill@getmga.com.

Sincerely,

Alex Brill
CEO

