

Contrary to What Wall Street and the FTC Say, The PBM Business Model is Misaligned

**By
Lawrence W. Abrams, Ph.D.**

11/10/05

Abstract

Pharmacy benefit managers (PBMs) say that they earn more from mail order generics than brands and that their interests are aligned with clients' interests. Wall Street and the Federal Trade Commission (FTC) concur.

The analysis of both Wall Street and the FTC is flawed. The failure in the analysis can be traced to the use of broad averages of rebate rates in estimates of the relative profitability of drug types.

Both Wall Street and the FTC fail to realize that potential misalignment of interests is limited to situations involving "rebatable" brands and that rebate averages across all brands are significantly less than rebate averages across rebatable brands.

They also failed to realize that business segment profitability is due as much to transaction volume as average unit margin. It turns out that mail order generics are a relatively high average margin, but relatively low volume business for PBMs.

When these failures are corrected, the result is that PBMs earn more per rebatable transaction and in the aggregate from brand name drugs than mail order generics.

A statistical comparison of the business models of Express Scripts and Medco is presented. While both have similar rebates retention rates, Medco extracts significantly higher rebates per prescription. The source of the difference is due to different approaches to formulary compliance, rather than formulary design. We present the case that Medco appears to abstain more from discretionary brand to generic therapeutic interchange than Express Scripts. If any PBM is committing "sins of omission", it is Medco.

Lawrence W. Abrams, Ph.D.
Nu-Retail
P.O. Box 1285
Watsonville, CA. 95077
831-254-7325 (C.)
labrams@nu-retail.com

Disclosures:

I have not received any remuneration for this paper nor have I financial interest in any company cited in this working paper.

I have a Ph.D. in Economics from Washington University in St. Louis and a B.A. in Economics from Amherst College. Other working papers on PBMs can be accessed at www.nu-retail.com.

Introduction

The management of the drug benefit portion of healthcare plans has become the domain of contracted specialists called pharmacy benefit managers (PBMs). The three largest, independent PBMs –Caremark Rx, Medco Health Solutions, and Express Scripts, (known as “The Big 3”) -- have come under attack in the past few years for not acting in the best interest of their clients. The source of the problem is attributed to a business model that is dependent on rebates retained from brand name drug manufacturers.

PBMs say that they earn more from mail order generics than brands and that their interests are aligned with clients’ interests. With few exceptions, Wall Street financial analysts that follow the Big 3 PBMs concur. Consider the following excerpt from a recent column in TheStreet.com that references comments by Merrill Lynch analyst Thomas Gallucci: ¹

The overwhelming positive impact from generics for a PBM is in its mail-order business," wrote Gallucci, who lifted Medco's rating from neutral to buy. "A mail-order generic is the most profitable script a PBM can process."

Unlike his competitor at Goldman Sachs, however, Gallucci chose to focus on positive industry catalysts in this particular arena. Notably, he pointed out, a number of important brand-name drugs -- including blockbusters such as Zocor and Zoloft -- will lose their patents over the next two years. Moreover, he noted, those drugs are designed to treat chronic conditions and therefore "naturally lend themselves to being delivered via mail."

In the meantime, Gallucci illustrated how mail-order generics have benefited Medco already. He said that Medco generates up to four times as much profit on mail-order generics as it does on prescriptions in general and that in fact it relies on those mail-order drugs for more than half of its profits overall.

And here is another excerpt from TheStreet.com that references comments by SunTrust

Robinson Humphrey analyst David MacDonald:²

And it (Caremark) will be relying on the familiar, yet powerful, combination of mail-order sales and generic drug penetration to drive those quarterly results.

Indeed, Wall Street expects such favorable trends to steer the company (Caremark) -- and, in fact, the entire PBM industry -- toward an even rosier future.

"The company is well-positioned to capitalize on increasing prescription cost trends, a mix shift toward mail-order distribution, the aging of the baby boomers and its significant specialty distribution presence," SunTrust Robinson Humphrey analyst David MacDonald wrote late last month. "Combine that with the pending patent expirations of several blockbuster drugs, potential incremental growth from the Medicare drug benefit and strong free cash flow, and the fundamental outlook is bright."

In September of 2005, the Federal Trade Commission (FTC) released a long awaited study of potential conflicts of interest by independent PBMs.³ Congress had specifically requested that the FTC conduct this study in anticipation that PBMs would play a major role in the newly passed Medicare Modernization Act that extended outpatient drug benefits to Medicare recipients.

Like any good study of alleged wrongdoing, the FTC examined both motive and performance.

As to the question of motive, the FTC found that "...generic dispensing at own mail order pharmacies generally is more profitable than brand dispensing." (p.74) and concluded that the interests of independent PBMs are indeed aligned with their clients.

The analysis of both Wall Street and the FTC is flawed. Using the FTC's own data, we will show that the Big 3 PBMs during the study period of 2002-2003 stood to gain more at both the micro-decision level and in the aggregate from brands than mail order generics.

The analysis of Wall Street and the FTC violated a basic principle of economics that decisions are "made at the margin." Potential conflict of interest arises only in situations involving "rebateable" brands and that rebate averages across all brands are significantly less than rebate averages across rebateable brands.

The analysis also failed to consider a basic principle of financial analysis that business segment profitability is due as much to transaction volume as average unit margin. It turns out that mail order generics are a relatively high average margin, but relatively low volume business for PBMs.

When these failures are corrected, the result is that PBMs earn more per rebateable transaction and in the aggregate from brand name drugs than mail order generics

To be fair, business model misalignment does not necessarily mean a misalignment of interests. And, a motive for wrongdoing does not necessarily lead to wrongdoing itself.

Alignment of Interests: Generics Vs. Brands

Independent PBMs have been on the defensive lately countering claims that their interests are not aligned with clients'. As long as a company's interests are aligned with their customers, there is nothing wrong if a company's business model is not so well aligned. Bundle pricing and tied product offerings are commonly used in business today as way of deflecting competitive price comparisons and cherry picking. Such practices create all sorts of misalignment of prices and costs.

Take, for example, General Motors. It aspires to build great cars, yet it earns more on car finance than car sales. McDonalds aspires to offer customers a great tasting hamburger, yet the company has a higher mark-up on a soda that it does on a hamburger. Best Buy recoups slim margins on consumer electronics products with fat margins on extended warranties.

PBMs could have admitted business model misalignment while stressing that their overriding interests are aligned with clients'. This admission might be tolerable to customers of fast food or consumer electronics. But, the relation of PBMs to their customers is different. There are issues of agency and fiduciary duty when it comes to assessing the relation of PBMs to their clients. Hamburger lovers have never accused McDonalds of breach of fiduciary duty.

The FTC was wise to include an investigation of motive in its study of alleged PBM wrongdoing. It gathered data on average unit margins, or spreads in their terminology, for generic and brand drug ingredients by channel of distribution for the Big 3 independent PBMs. The spread earned on drugs dispensed by retail outlets represents the difference between what the PBMs reimburse pharmacies and what they receive as reimbursement from clients.

The spread earned on captive mail order operations is fundamentally different. Instead of a reimbursement spread, PBMs earn a much larger mark-up for value added on prescriptions filled by their captive mail order operations.

In addition to reimbursement and mark-up spreads, PBMs negotiate and receive rebates from brand name manufacturers. The FTC included an amount equal to the average rebate retained per brand drug in their margin analysis.

Brand name drug manufacturers pay these rebates even though their products are patented. This is because they face competition from other chemically different, but patentable, brands and from generics of off-patented brands that have been deemed therapeutic equivalents. Brand name drug manufacturers negotiate rebates with PBMs because they know that the power to affect the demand for brand drugs rest with PBMs and not with pharmacies who have no say in formulary design and compliance.

On the other hand, generic drug manufacturers negotiate discounts with pharmacies, and not PBMs, because they know that pharmacies are empowered to fill any particular generic prescription from an array of manufacturers selling FDA-certified, perfect substitutes. Exhibit 1 presents the FTC data on average unit spreads, including retained rebates, by drug type and by channel for the Big 3 in 2003. The results indicate that, on average, captive mail order generics are more profitable to PBMs than brands.

		Normalized (30 Day Rx)	
		Generic	Brand
Big 3 Captive Mail Order	Table IV-5 p. 73	\$ 8.82	\$ 4.75
Big 3 Retail Network	Table IV-3 p 72	\$ (0.01)	\$ 2.01

The FTC analysis seems to support the Big 3's contention, echoed by Wall Street, that their business model is oriented to benefit from any shift from brands to generics, either at micro-level of individual prescription switches or at the macro-level of drug trends.

The FTC analysis fails on two counts. When these failures are corrected, the result is that PBMs earn more per "rebatable" transaction and in the aggregate from brand name drugs than mail order generics. The current business models of the Big 3 PBMs are **not** aligned with clients' interests.

One fatal flaw in the FTC analysis is the use of rebates averages to represent what PBMs stands to gain and lose on discretionary choices involving brands versus generics. The FTC was aware of large variations in rebate rates by drug. The following three quotes are important:

"Regardless of the PBM category, a majority of these payments were derived from a limited number of brand drugs. The data show that, in 2003, each of PBMs' top 25 brand drugs (in terms of total rebates received) accounted for approximately 71% of its total pharmaceutical payments, on average." (p.48)

When a unique, pioneer drug enters the market, it may be considered to be in a therapeutic class by itself. Market share payment is not provided for such drugs and formulary payments are either small or non-existent because the manufacturer does not need to offer incentives for formulary placement (p.53)

"The brand name manufacturers generally stopped making payments upon generic entry. (p.54)

The FTC failed to understand how this variability might impact their analysis of PBM motivation.

Economic bargaining theory suggests that drug companies would pay the highest rates for top selling drugs under conditions of "bilateral oligopoly". That is, the highest rebates are paid for brand drugs in therapeutic classes where there are a few sellers **and** where there are a few large buyers capable of "moving markets" or at least present a credible threat to do so.

The fact that PBMs stop giving rebates once a therapeutic class faces competition from low-cost generics is consistent with bargaining theory. At the other extreme, it is to be expected that brand name drug manufacturers with monopoly positions would not feel compelled to offer rebates.

Market power on the sell side is also a factor that explains variability of rebates. For example, it is doubtful that substantial rebates are offered for central nervous system drugs such as anti-

depressants and anticonvulsants even though there are a number of potential substitutes in each class. Drug companies realize that the threat of PBM action in these classes is reduced because PBMs are hesitant to override physicians' decisions when there is such a variety of individual reaction to any given drug.

In addition, it is to be expected that rebates are generally higher on drugs for chronic illnesses such as high cholesterol than for drugs for acute illnesses such as infections. The reason has to do with the potential buy-side power to affect demand. PBMs rarely engage in concurrent therapeutic interchange, a key finding (p.84) reported by the FTC. If PBMs engage in any discretionary prescription switching among therapeutic equivalents, it is retrospective – or made on renewals. Because prescriptions treating acute illnesses are rarely renewed, PBMs ability to affect demand is limited. On the other hand, the potential of PBMs to affect the demand for drugs treating chronic illnesses is enormous because prescriptions are renewed over and over again.

Individual economic decisions are based on marginal, not average, consequences. The areas where PBM discretion matters most are concentrated in top selling classes of drugs treating chronic illnesses. Drugs in these classes are the most “rebtable” –facing both limited competition on the Pharma sell side and willingness, whether exercised or not, on the PBM buy side to affect demand through discretionary formulary design and compliance.

The FTC failed in its analysis when it used a broad average for rebates. An estimate of the average rebate on rebatable brands would have been a more accurate reflection of what PBMs stand to gain and lose in any given discretionary choice.

The most rebatable therapeutic classes are: statins (cholesterol lowering), proton pump inhibitors (anti-ulcer), COX-II inhibitors (anti-inflammatory), and 2nd generation antihistamines (seasonal allergies). A few years ago, ACE inhibitors (hypertension) and H2-receptor antagonists (anti-ulcer) were highly rebatable classes, but their “rebatability” has diminished, if not ended, because an increasing number of brands in these classes have lost their patent protection.

Indeed, therapeutic classes can go through a rebatability life cycle with a monopolist phase (no-rebates) followed by an oligopolist phase (rebataable), and then a competitive phase with many generics (no-rebates). The FTC also saw signs that therapeutic classes went through a rebatability life cycle. (P.53-54)

The FTC's had specifically requested that each PBM in the study provide data on gross rebates received per drug. But, they failed to disclose any detail other than the quotes above. While one can respect the FTC's need to maintain confidentiality about rebate rates per drug, disclosing average rebate rates per therapeutic class would not have revealed anything about individual firms.

In any case, we can reconstruct an estimate of the variability of rebates from two disclosures made by the FTC. The first key statistic is that the Big 3 received on average \$6.34 per brand drug in 2003. (p.vii and p.47) The second key statistic is contained in the quote above that 71 % of all rebates received by any PBM were concentrated in 25 brand drugs.

A conservative assumption, from an estimating point, is that the top 25 rebate receiving drugs referenced in the FTC quote represents about 20% of the volume of all brand drug prescriptions.

It follows that $20\% * (X) = 71\% * \$6.34$ where X represents the average rebate for the top 25 rebate receiving drugs. Also, $80\% * (Y) = 29\% * \$6.34$ where Y is the average rebate receive for the rest of the brand drugs. Solving both equations produces the result that the average rebate of the top 25 most rebatable brands is \$22.51 per prescription and the average rebate received for the rest of the brand drugs is \$2.30 per prescription.

The average rebate of \$22.51 per rebatable brand represents a rebate rate 31.9% of wholesale acquisition costs (WAC) where WAC for on-patent brands equals \$70.50. The WAC figure represents an 11% discount – 3% for wholesale margin and 8% for retail margin – from the FTC study supplied statistic of \$78.26 (p.29) for the average ingredient price of an on-patent brand prescription filled through retail channels.

If the overall average of \$ 6.34 were used to represent the rebate negotiating power of the Big 3, it would amount to a rebate percentage of only 9.0% of WAC.

This difference highlights the weakness of using broad averages as a measure of rebate negotiating power. It also highlights the weakness of using broad averages when comparing the rebate negotiation power of the private sector with the rebate negotiating power of the Federal government as measured by the Medicaid “best price” rebate rate.⁴

Exhibit 3 below presents a step-by-step revision of the FTC analysis in light of our estimate of the variability of rebates rates. Exhibit 2 summarized those results. It turns out that PBMs gain more by favoring a rebatable brand prescription over a generic therapeutic equivalent across all fulfillment channels. Alternatively, PBMs stand to gain (lose less) by abstaining from retrospective brand-to-generic therapeutic interchange. At the micro level, the PBM business model is **not** aligned with clients’ interest in containing overall drug costs.

	Generic	Normalized (30 day)	
		Top 25- Brand	Rest-Brand
Big 3 Captive Mail Order	\$ 8.82	\$ 11.21	\$ 3.13
Big 3 Retail Network	\$ (0.01)	\$ 8.47	\$ 0.39

Exhibit 3: Distribution of Ingredient + Rebate Spreads					
			Normalized (30 day)		
Big 3 Captive Mail Order Operations, 2003			Generic	SSB-Top 25	SSB-Rest
Ingredient+Rebate Spreads	R1	Table IV-5 p. 73	\$8.82	\$4.75	\$4.75
Ave Retained Rebate / Brand Rx	R2	estimate above		\$2.54	\$2.54
Ingredient Spreads	R3	R1-R2	\$8.82	\$2.21	\$2.21
Distribution of Retained Rebates	R4	estimate above		\$9.00	\$0.92
Distribution of Ingredient+Rebate Spreads	R5	R3+R4	\$8.82	\$11.21	\$3.13
			Reported (30 Days)		
Big 3 Retail Network, 2003			Generic	SSB-Top 25	SSB-Rest
Ingredient+Rebate Spreads	R1	Table IV-3 p 72	-\$0.01	\$2.01	\$2.01
Ave Retained Rebate / Brand Rx	R2	estimate above		\$2.54	\$2.54
Ingredient Spreads	R3	R1-R2	-\$0.01	-\$0.53	-\$0.53
Distribution of Retained Rebates	R4	estimate above		\$9.00	\$0.92
Distribution of Ingredient+Rebate Spreads	R5	R3+R4	-\$0.01	\$8.47	\$0.39

R1 is what the FTC found for average ingredient + rebates spreads for generics and single source brand (SSB) drugs for mail order and retail. R2 is the estimate of the average of rebates retained by the Big 3. It is equal to the \$6.34 average of gross rebates received as reported by the FTC (p. vii and p. 47) times a 40% average rebate retention rate as reported by the FTC (p. 59). $R3 = R1 - R2$ and represents the average spread net of rebates. R4 is the decomposition of the average retained rebate of \$ 2.54 based on the same algebraic technique used above to decompose gross rebates. $R5 = R3 + R4$ and represents the average ingredient + rebate spreads for generics and single source brands (SSB) taking into the account the variability of rebate rates.

Alignment of Interests: Retail vs. Mail Order

The above analysis deals mainly with alignment of interests by drug type. We turn our attention briefly to the question of alignment of interests by fulfillment channel – retail or mail order. It is obvious what fulfillment channel is preferred by the Big 3 PBMs. They make more on a prescription filled by their captive mail order operations than one filled by some retail outlet or one filled by an independent mail order pharmacy.

The FTC provided a comparison of prices paid by plan sponsors for drugs filled by various channels as evidence of what channel is best for plan sponsors. But, these results merely confirm earlier, credible studies by the GAO and the AARP. The key result was that retail prices were higher than captive mail order prices by 23.9% and 13.9% for generic and on-patent brand drugs, respectively.(p.34) In addition, prices paid by plan sponsors for prescriptions filled by independent mail order pharmacies was higher than prices they paid for drugs filled by captive mail order operations of the Big 3. (p.23)

While the results seem straightforward, caution must be exercised in drawing any conclusions due to the fact that the Big 3 employ a bundle pricing strategy with all sorts of cross-subsidies. PBMs have found it advantageous in contract negotiations to price services like mail order and claims processing low while recouping margin deficiencies through secretive rebate retention. We have analyzed this strategy in another paper.⁵

Alignment of Interests: Macro Drug Trends

FTC did not investigate the question of business model orientation at the aggregate level. A business segment's profitability can be viewed as the product of average unit margin, or spread to use the FTC terminology, multiplied by transaction volume. Even if a business segment has

relatively high average unit margins, its contribution to the overall profitability of the company can be low if its volume of business is low.

It is possible to use FTC data on transaction volume by channel and drug type to derive a 2 X 2 matrix of the share of total transaction volume by business segment. Multiplying this matrix by the matrix of average unit spreads presented earlier in Exhibit 1, when normalized, yields a matrix of the share of total spread earnings by business segment. These calculations are presented below in Exhibit 4.

The result is that mail order generics represent only 13.7% of the Big 3's business by volume while brands across all channel represents 59.5% of their volume. Even though mail order generics yield a relative high average unit spread --\$8.82 versus the \$4.75 on mail order brands and \$2.01 on retail brands – it is a relatively low volume business for the Big 3. When spread margins are combined with volume data, the result is that contribution of mail order generics represents only 39.0% to the Big 3's total spread earnings whereas the contribution of brands across all channels represents 61.1% to total spread earnings.

Exhibit 4: Share of Aggregate Spread by Channel and Drug				
		Generic	Brand	
M1: Average Unit Spreads by Channel and Drug				
Table IV-5 p. 73	Mail Order	\$8.82	\$4.75	
Table IV-3 p. 72	Retail	(\$0.01)	\$2.01	
M2: Share of Volume within Channel by Drug Type				Totals
p.77	Mail Order	35.0%	65.0%	100.0%
p.77	Retail	44.0%	56.0%	100.0%
M3: Share of Volume by Channel				
	Mail Order	39.0%	39.0%	
	Retail	61.0%	61.0%	
	Totals	100.0%	100.0%	
M4: Share of Volume by Channel and Drug				Totals
M2 x M3	Mail Order	13.7%	25.3%	39.0%
M2 x M3	Retail	26.8%	34.2%	61.0%
	Totals	40.5%	59.5%	100.0%
M5: Share of Total Spread by Channel and Drug				
		Generic	Brand	Totals
M1 x M4	Mail Order	39.0%	39.0%	78.0%
M1 x M4	Retail	-0.1%	22.1%	22.0%
	Totals	38.9%	61.1%	100.0%

It is obvious that macro drug trends that favor generics are in the best interest of plan sponsors. The Big 3 PBMs suggest that such trends are also in their own best interests. Wall Street analysts have echoed this sentiment. But, this is incorrect.

It has been widely reported that in 2006 there will be an unusually large number of blockbuster drugs losing patent protection, including Zocor, the drug with the 2nd highest sales. Wall Street financial analysts believe that such events will help, rather than hurt, PBM profitability. But, this

conclusion is based only on a consideration of average unit spreads. The reality is that the replacement of the Zocor by its relatively higher generic, simvastatin, benefits a PBM business segment representing only 13.7% of total volume.

Business Model Differences: Medco vs. Express Scripts

Until recently, none of the Big 3 PBMs disclosed any detail about the share of gross profits derived from drug rebates. On March 28, 2003, Express Scripts, Inc. made a change in the way it accounted for rebates. Instead of accounting for rebates on a net basis, it accounted for them as a reduction in costs. This required them to revise their financial statements for the past three fiscal years by reducing revenue and cost of sales by gross rebates received. Express Scripts stated that:⁶

Therefore, our 2002, 2001 and 2000 revenues have been reduced by \$926,750,000, \$740,782,000, and \$810,393,000, respectively. Cost of revenues has been reduced by the same amounts. These amounts represent the gross amount of rebates and administrative fees received from pharmaceutical manufacturers. Our client's portion, a majority of such amounts, which represents in excess of 50%, will continue to be classified as a reduction of revenues. Our consolidated gross profit was not impacted as a result of this adoption.

The key statistic to understanding the PBM business model is what we have called the rebate retention rate – the percent of rebates from drug manufacturers that it retained as gross profits.⁷ Based on the Express Scripts disclosure, we were able to estimate with some degree of confidence that in 2002, its rebate retention rate was 38% and that retained rebates contributed to 35% to its gross profits.

On October 28, 2004, Medco Health Solutions, Inc. first disclosed that its rebate retention rate was 40.5% of \$754 Million in gross rebates received from pharmaceutical manufacturers during the 3rd quarter of 2004.⁸ Based on that disclosure, it is possible to derive with certainty that 71.7% of Medco's gross profits in 3rd quarter of 2004 came from retained rebates.

The Rebate Bargain as a Source of Business Model Differences

Even though these two PBMs had similar rebate retention rates, the contribution of rebates to gross profits was significantly different. Exhibit 5 presents key statistics that summarize the business model differences of Express Scripts and Medco. The full derivation of these statistics has been presented in previous papers.^{9 10}

Exhibit 5: Business Model Differences		
	Express Scripts FY 2002	Medco 3Q2004
Rebate Retention Rate	38.0%	40.5%
Gross Rebates Received as of % of Reimbursement	6.1%	10.1%
Gross Profit Margin	6.7%	4.9%
Share of Gross Profits:		
Rebates	35.0%	71.7%
Mail Order	34.9%	11.9%
Spread + Claims Fees	21.1%	4.7%
Other Services	9.0%	11.7%
Total	100.0%	100.0%

The summary table indicates that Medco was able to extract more per brand than Express Scripts. Gross rebate received as a percentage of all reimbursements was 10.1% for Medco in 3Q2004 while it was only 6.1% for Express Scripts.

Why was Medco able to extract more on average from Pharma than Express Scripts? Bargaining theory offers some guidance as to the source of this difference. One reason is simply that Medco is about two times larger than Express Scripts in terms of prescriptions managed.

The other reason is that it is likely that Pharma gave more rebates to Medco because Medco gave more to Pharma in terms of favorable formulary designs and compliance. Pharma gave Express Scripts less rebates because Express Scripts gave less in return.

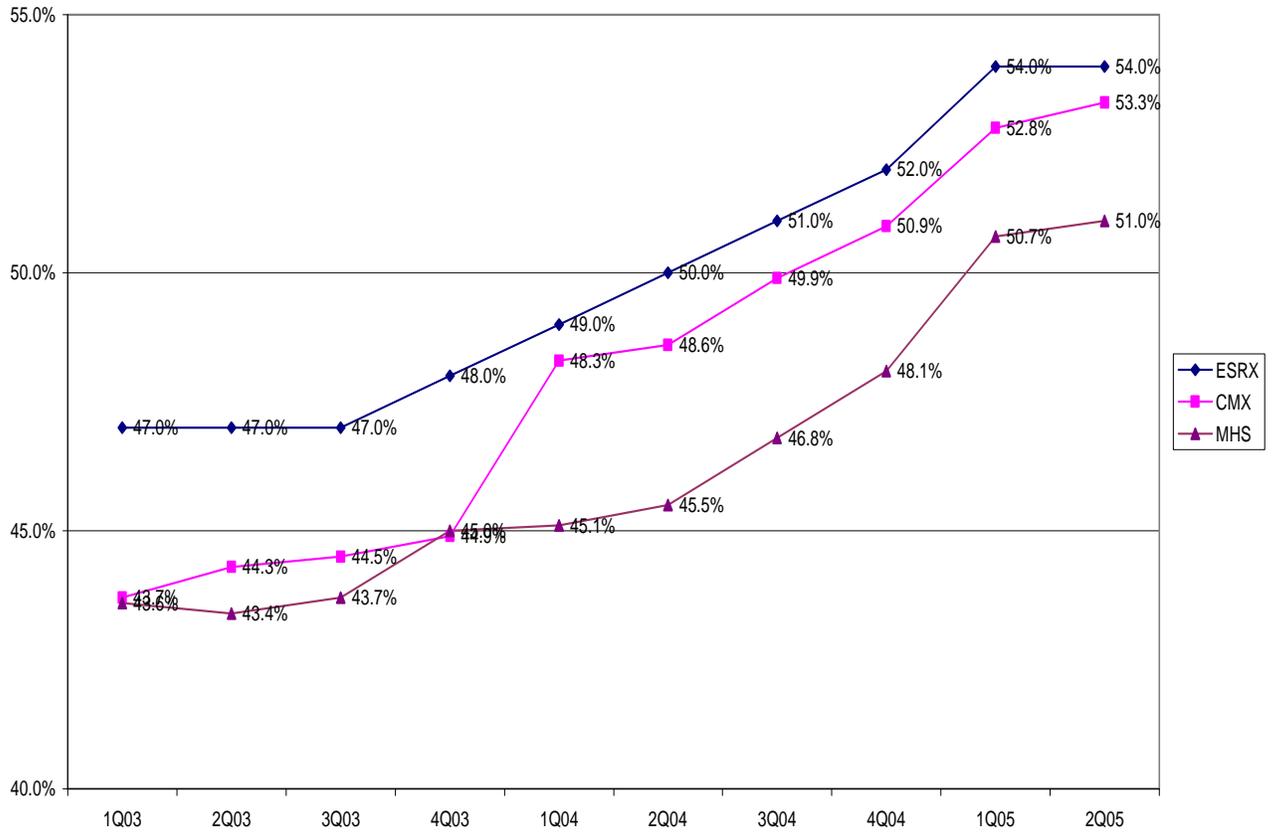
Prior work tends to rule out differences in approach to the design of national formularies as a source. We found in an earlier paper no significant differences among the Big 3 in the number of brands given “Tier 2” preference in highly rebatable therapeutic classes.¹¹

This leaves differences in discretionary formulary compliance as the source of business model differences. There are three possible types of discretionary choices: (1) advantaging a drug through brand for brand therapeutic interchange; (2) not disadvantaging a drug by abstaining from brand for brand therapeutic interchange; and (3) not disadvantaging a drug by abstaining from brand to lower cost generic therapeutic interchange. This last choice is what we have labeled as “sins of omission”.¹²

It is unlikely that data would ever be available to shed light on differences in approaches taken by PBMs in the areas of retrospective therapeutic interchange. We have to look for performance differences as indicative of differences in approaches. The aggregate generic dispensing rate is a measure of PBM performance that can be viewed as reflecting how motivated a PBM is in favoring generics over brands. To be fair, plan sponsor and their members’ “taste” for freedom of choice also may be an important factor in explaining differences in dispensing rates.

The generic dispensing rate is the number of generic prescriptions divided by the number of all prescriptions. The graph below tracks this rate for Medco (MHS), Caremark RX (CMX), and Express Scripts (ESRX) over the past two and a half years.¹³ The data show clearly that Express Scripts has delivered a consistently higher rate than the other two PBMs. And, according to Express Scripts, every percentage point increase in the rate translates into one percentage point decrease in overall plan drug costs.¹⁴

Big 3 PBMs Generic Dispensing Rate



Certainly, differences in client preferences regarding freedom of choice for members may be a significant cause of these differences.

But, differences in generic dispensing rates are correlated with difference in the way Medco and Express Scripts approach therapeutic interchange. Express Scripts has recently made two public announcements indicating their intent to pursue brand to generic therapeutic interchange. Medco has made no such announcements.

Express Scripts recently completed a study of the potential savings that could be obtained if all potential brand to generic therapeutic interchange were realized. This is from their press release announcing the results of the study:¹⁵

We have only scratched the surface in taking advantage of the money- saving potential of clinically sound generic drugs," said Steve Miller, MD, Express Scripts Vice President, Research, and a study author. "As additional generics come to market and the use of prescription drugs grows, the opportunity to lower healthcare costs becomes even more significant. Best of all, using more generics simply requires better education and awareness of alternatives, not a big-dollar up-front investment."

Exhibit 6 summarizes Express Scripts' estimate of the potential for cost-saving switches to generics.

Exhibit 6: Potential Savings Through Generic Therapeutic Interchange			
Therapeutic Class	Actual 2004	Target	Potential Savings if
	Generic Dispensing Rate	Generic Dispensing Rate	Target is Met
Gastrointestinal	31%	95%	\$5.4 Billion
Anti-cholesterol	7%	70%	\$5.1 Billion
Anti-depressants	41%	75%	\$3.2 Billion
NSAIDs	47%	85%	\$3.9 Billion
Anti-hypertensives	48%	75%	\$2.0 Billion
Calcium channel blockers	43%	90%	\$0.5 Billion
Total Potential Saving			\$20.0 Billion
Source: Express Scripts, Inc, 2004 Generic Drug Usage Report			

Express Scripts' second announcement outlined its plan to handle the loss of patent protection by Zocor, an anti-cholesterol drug.¹⁶ Zocor ranks second in drug sales after its archrival, Lipitor. It is also one of the top three rebatable drugs along with Lipitor and Nexium. Express Scripts announced that it would aggressively work to switch users from Lipitor to Zocor a full six month before generic Zocor –simvastatin – would be available. The plan included removing Lipitor from preferred status on Express Scripts' national formulary and directing its call center personnel to begin calling physicians to request prescription switches. As expected, Pfizer, the manufacturer of Lipitor, immediately canceled its rebate contract with Express Scripts.

Switching users to Zocor now will make the switch to simvastatin go faster in six months because generic substitution – Zocor to simvastatin – can be done automatically without physician approval. On the other hand, therapeutic interchange – Lipitor to simvastatin – requires physician approval.

This aggressive move to sacrifice current profits for future client cost savings is indicative of a difference in orientation between Express Scripts and Medco.

Bundle Pricing Strategy as a Source of Business Model Differences

Medco has used its ability to extract rebates from Pharma, coupled with secrecy surrounding its rebate retention rate, to win contracts through low bids on mail order and claims processing. It recoups service margin deficiencies through rebate retention. The epitome of Medco's strategy was its bid on the mail order only contract for the FEHBP, which we believe was a case of predatory pricing.¹⁷

Exhibit 4 highlights the significant differences between Medco and Express Scripts with respect to the share of gross profits contributed by rebates, mail order, and claim processing fees. Express Scripts has the more balanced business model whereas Medco has been heavily dependent on rebates.

While business models of the Big 3 in general are not aligned with clients' interests, Medco stands out as the PBM that has most pursued rebates and employed a deceptive bundle pricing strategy to win contracts. And it is Medco that will have to change the most to meet client requests for a more transparent business model characterized by 100% pass-through of rebates.

Medco's lagging generic dispensing rate is circumstantial evidence of its relative lack of interest in pursuing brand to generic therapeutic interchange.

If any PBM is committing "sins of omission", it is Medco.

Notes:

(1) Melissa Davis, "Medco Fans Checking the Mail," TheStreet.com, September 9, 2005, Available at http://www.thestreet.com/_tscs/stocks/melissadavid/10241717.html

(2) Melissa David, "Caremark's Hefty Load," TheStreet.com, November 7, 2005. Available at http://www.thestreet.com/_yahoo/stocks/melissadavid/10251455.html

(3) Federal Trade Commission, "Pharmacy Benefit Managers: Ownership of Mail Order Pharmacies," September 2005. Available at <http://www.ftc.gov/os/2005/09/index.htm#6>

(4) LW Abrams, "Pharmacy Benefits Managers as Bargaining Agents," Paper Presented at the 80th Western Economic Association International Meeting, July 2005. Available at http://www.nu-retail.com/pbm_bargaining_paper.pdf

(5) LW Abrams, "Exclusionary Practices in the Mail Order Pharmacy Market," Working Paper, September 2005. . Available at http://www.nu-retail.com/mail_order_pharmacy_market.pdf

(6) Securities and Exchange Commission, Express Scripts, Inc, 10-K for the Year Ending December 31, 2002.

(7) LW Abrams, "Estimating the Rebate-Retention Rate of Pharmacy Benefit Managers," April 2003. Available at <http://www.nu-retail.com/rrr.pdf>

(8) Medco Health Solutions, "2004 Analyst Day Presentation," November 11, 2004, slide show available at http://media.corporate-ir.net/media_files/NYS/MHS/presentations/MHS111104.pdf pp. 79–80.

(9) LW Abrams, "Estimating the Rebate-Retention Rate of Pharmacy Benefit Managers," April 2003. Available at <http://www.nu-retail.com/rrr.pdf>

(10) LW Abrams, "Quantifying Medco's Business Model," Working Paper, April 2005. Available at www.nu-retail.com/quantifying_Medco_business_model.pdf

(11) LW Abrams, "The Effect of Corporate Structure on Formulary Design: The Case of Large Insurance Companies," Poster Presentation Paper, ISPOR 10th Annual International Meeting, May 2005. Available at http://www.nu-retail.com/PBM_Corporate_Structure_Formulary_Design.pdf

(12) LW Abrams, "Sins of Omission: A Review of the FTC Study of PBM Conflict of Interest," October 2005. Available at http://www.nu-retail.com/pbm_sins_of_omission.pdf

(13) RM Willoughby, "Pharmacy Benefits Management: An Investor's Perspective, Bank of America Securities, October 24, 2005. p. 10 Available at <http://www.pcmnet.org/events/presentation/PBM%20Annual%20Meeting%20Presentations/Robert%20Willoughby%20-%20Banc%20of%20America%20Securities.pdf>

(14) Forbes, "Express Scripts to Raise Costs for Lipitor," October 5, 2005. Available at <http://www.forbes.com/associatedpress/feeds/ap/2005/10/04/ap2260350.html>

(15) Express Scripts, "Press Release: Study Reveals \$20 Billion in Untapped Generic Drug Savings," October 25, 2005. Available at <http://biz.yahoo.com/prnews/051025/cgtu012a.html?.v=1>

(16) Gloria Lau, "Decision on Lipitor Sets Express Scripts Apart from the Field," Investors' Business Daily. November 4, 2005. Available at <http://www.investors.com/editorial/IBDArticles.asp?artsec=22&issue=20051104>

(17) LW Abrams, "Exclusionary Practices in the Mail Order Pharmacy Market," Working Paper, September 2005. Available at http://www.nu-retail.com/mail_order_pharmacy_market.pdf