COMMENTS ON SELECTED ISSUES RE: THE PROPOSED MERGERS OF AETNA AND CVS

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1 I thank the American Medical Association for supporting my work in preparing this document. These comments reflect my views, not necessarily the views of the American Medical Association or of Northwestern University.
I. Qualifications

I am an Associate Professor of Strategy at the Kellogg School of Management at Northwestern University. I am also a Faculty Research Fellow at the National Bureau of Economic Research (NBER). Much of my research has been focused on health economics and health insurance, particularly on issues involving pharmaceutical markets and regulation. I have published numerous articles on industrial organization, health economics and insurance in journals including the *Review of Economic Studies*, *Review of Economics and Statistics*, *RAND Journal of Economics*, and *Journal of Health Economics*.

II. Introduction and Background

CVS Health operates both a pharmacy benefit manager (PBM) and pharmacies. As a PBM, they design pharmacy benefits for employers and health plans, including their own Medicare Part D Plans through subsidiary SilverScript Insurance Company. They also operate over 9,000 retail pharmacies. Aetna is a large, national insurer. Approximately half of their revenues were from Medicare (Medicare Part D and Medicare Advantage) and Medicaid products, while the remainder comes from the commercial market. In the latter market, they may not actually bear risk for medical or pharmacy benefits.

Both firms operate in highly concentrated industries, and the merged entity will have substantial overlap in the Medicare Part D market in particular. The level of concentration in both the PBM market and health insurance markets, in particular, have been the subject of recent antitrust scrutiny. In addition to potential harms from horizontal consolidation, the welfare effects of the merger depend on the impact of vertical integration on consumers.
In these comments, I do not cover all the issues relevant to an evaluation of the proposed merger. Instead, I concentrate more narrowly on the economic theory and empirical evidence on:

1. the extent to which market power is likely to harm consumers.

2. the extent to which foreclosure in PBM and health insurance markets could harm consumers.

3. the potential merger specific efficiencies.

4. the likelihood of pass-through of any savings to consumers.

In addition to summarizing previous research, I will draw conclusions based on economic theory. When doing so, I will make any assumptions explicit and be clear about my predictions regarding post-merger behavior.

III. Summary of Conclusions

I first review the extent to which the merger is likely to increase concentration in existing markets. Critically, the proposed merger will lead to increased concentration in the Medicare Part D insurance market. In Section IV below, I focus on describing both the market and the potential harms to consumers due to increased consolidation. Currently, Aetna has a 9% market share among Part D plans, with CVS Health (branded as SilverScripts) has an 24% market share; overlap is even greater in a subset of geographic markets. An increase in concentration could increase firm market power, leading to higher premiums. Economic evidence – from the Part D market and others – suggest that premium increases are likely.
Furthermore, I review the level of concentration in various markets in which CVS Health and Aetna currently operate. I describe the PBM industry, noting that approximately 70% of all prescriptions are processed by one of three firms, including CVS/Caremark. I further discuss adjacent markets, focusing on the specialty pharmacy market, in which 60% of all revenues are collected by one of three firms, including CVS.

In addition to these concerns, the proposed merger could also lead to foreclosure in the PBM or retail pharmacy markets. In particular, the merged entity could increase the cost of PBM services to insurers other than Aetna, the cost of prescription drugs to other payers, or make it difficult for other PBMs to attract customers. In doing so, they may reduce the attractiveness or increase the price of rival insurance products or make entry less likely. While the lack of data on these contractual arrangements has prevented careful empirical examination of these issues, I describe the economic theory and potential merger effects below.

However, it is possible that the merger could increase contracting efficiency by aligning incentives within benefit packages to lead to more efficient investment in enrollee health. I discuss the theoretical scope and empirical evidence for benefit design effects. These efficiencies are at least partially specific to integration. However, a potentially large portion of the potential gain could be achieved via contract or the efficiencies could be achieved through the development of an in-house PBM. Given the mix of enrollees in Aetna plans, I also discuss limitations to the size of these efficiencies.

Finally, I explore the extent to which any cost-savings are likely to be passed on to the consumer in the form of lower out-of-pocket costs or premiums. Theoretically, the magnitude of any cost savings for consumers will depend on the nature of competition in the insurance market.
Given the degree of concentration and horizontal consolidation in the insurance industry, it is reasonable to believe that any cost-savings will increase insurer profits, rather than reducing consumer costs. Empirically, there are reasons to be skeptical that the savings will be realized and ultimately captured by the consumer. Therefore, the potential for harm to consumers from this merger is likely to outweigh any gains.

IV. Pharmacy Benefits in the United States

Health insurance plans typically consist of a “medical benefit” and a “pharmacy benefit,” which need not be administered by the same insurer. In particular, health insurers often contract out pharmacy benefits to PBMs, who design formularies, run utilization management programs, establish networks of retail pharmacies, and negotiate rebates from the list prices for pharmaceuticals. Americans obtain pharmacy benefits in a variety of ways. For many, pharmacy benefits are part of the insurance package offered by employers. The insurers who service these contracts with employers may use a PBM to provide drug benefits. There are three large PBMs: Express Scripts, CVS Health, and OptumRx, which is itself owned by UnitedHealth Group. The high level of concentration in the PBM market has attracted attention by antitrust regulators (Brill 2012).

However, not all Americans obtain coverage through an employer. Public financing of pharmacy coverage is also common. In both the Medicaid and Medicare programs, much of the provision of drug coverage is outsourced to private insurers. Duggan and Scott Morton (2006) and Dranove, Ody, and Starc (2018) show that private insurers reduce overall expenditure and prices in the Medicare and Medicaid programs, respectively. However, to understand the impact
of the proposed merger, one must understand prescription drug coverage in the Medicare program in particular.

The Medicare Part D program, enacted under the Medicare Modernization Act in 2003, was introduced in 2006. Medicare beneficiaries can enroll in a private insurance plan that provides prescription drug coverage. For most Medicare beneficiaries not offered a plan by a previous employer, there are two ways to obtain Part D coverage. They can enroll in a stand-alone prescription drug plan (PDP) that only covers prescription drugs or they can enroll in a Medicare Advantage (MA) plan. In MA plans, Medicare pays most or all of the premiums to a private insurer. Most MA plans are managed care plans: in return for reduced choice of providers and utilization review, the Medicare beneficiary obtains more complete coverage, typically including pharmacy coverage. The market share of MA plans have fluctuated over time, primarily because of changes in reimbursement generosity.

Typically, enrollees in PDPs receive their medical coverage from traditional Medicare. Part D is heavily subsidized; as a result, it is financially beneficial for most Medicare beneficiaries to enroll in some form of drug coverage. The program requires insurers to provide coverage at least as generous as the “standard benefit,” which has a nonlinear structure in which the beneficiary pays differing out-of-pocket costs depending on the phase of the benefit design. Despite the large number of plan offerings typically available, markets are typically concentrated. Over 50% of Part D beneficiaries enroll in plans offered by three carriers.

The private insurers participating in the Medicare Part D program are free to negotiate drug prices with drug manufacturers and distributors. Most famously, PBMs can obtain “rebates” from manufacturers in exchange for preferred placement on formularies. Essentially,
pharmaceutical manufacturers give plans a discount in exchange for PBMs steering consumers to their drugs. Less well appreciated is negotiation with pharmaceutical distributors and retail pharmacies in particular. While many studies of drug pricing have focused on manufacturers' market power, pharmacy companies are increasingly concentrated as well.

V. Market Concentration

Health insurers sell policies to consumers, often through groups, and purchase services from health care providers. Insurer market power enables an insurer to charge premiums above average costs. Higher premiums could lead to inefficiently low levels of insurance or degradation of insurance quality. In the case of the proposed merger, harm to consumers is likely.

Economists have established that imperfect competition is likely to exist in many insurance markets, with important implications for policy. Leemore Dafny (2010) tests for the presence of imperfect competition in commercial insurance markets and argues that insurer market power is an important feature of the market she studies. In a 2014 paper, I show that the need to establish a credible “brand” and market to consumers can create a barrier to additional entry. As a result, economists typically model insurers as exerting pricing power in markets ranging from Medicare Part D (of particular interest here, see Ho, Hogan, and Scott Morton 2017) to exchanges (Ericson and Starc 2015, Jaffe and Shepard 2018, Tebaldi 2018).

Economists have further shown that the extent of competition varies across local markets, and explore the implications of local variation for consumers. The weight of the research indicates that more competing firms or less concentrated local markets lead to lower premiums. Leemore Dafny, Mark Duggan and Subramaniam Ramanarayanan used a merger of two large
national health insurance carriers to measure the effect of changes in local market concentration on employer health insurance premiums (2012). The authors found an increase in local concentration to be statistically associated with a significant increase in employer insurance premiums. As summarized by Leemore Dafny in testimony before the Senate, “There are a number of studies documenting lower insurance premiums in areas with more insurers, including on the state health insurance marketplaces, the large group market (self- and fully insured combined), and Medicare Advantage. A recent study suggests premiums for employer-sponsored fully-insured plans are increasing more quickly in areas where insurance market concentration is rising, controlling for other area characteristics such as the hospital market concentration” (Dafny 2015).

In the Medicare Part D context, a number of studies point to insurer pricing power. Francesco Decarolis, Maria Polyakova, and Stephen Ryan (2017) estimate mark-ups over costs in the order of 9 percent on average. As documented by both Keith Ericson (2013) and Kate Ho, Joseph Hogan, and Fiona Scott Morton (2018), premiums have increased over time as switching costs and, correspondingly, pricing power, have risen. Ericson finds that firms engage in an “invest then harvest strategy,” in which initially low premiums grew over time for plans with larger number of enrollees. Ho, Hogan, and Scott Morton explore the impact of alternative policies that reduce consumer switching costs and decrease premiums. Finally, Anna Chorniy, Daniel Miller, and Tilan Tang (2018) find that “premiums that rise by an average of 5.2% across all market and 7.3% in markets in which the merging parties overlap.” They also find limited evidence of lower plan generosity.

The relationship between concentration and the split of consumer and producer surplus is found more broadly. Marika Cabral, Michael Geruso, and Neale Mahoney (2018) find that
higher concentration is associated with higher profitability in the MA market. Leemore Dafny, Jonathan Gruber, and Christopher Ody (2015) show that higher insurer concentration leads to higher premiums in the newly created health insurance marketplaces. David Dranove, Anne Gron and Michael Mazzeo (2003) find that an increase in the number of competing HMOs in a given local market are associated with lower insurer profits.

The PBM market is also highly concentrated. Approximately 70% of all prescriptions are processed by one of three firms: Express Scripts, Caremark (owned by CVS Health) and Optum Rx (owned by UnitedHealth, Fein 2017). Both policymakers and economists have raised serious concerns about the lack of competition in the PBM market and its implications for consumers (Brill 2012, Garthwaite and Scott Morton 2018). Furthermore, the market is characterized by price obfuscation: in the absence of a well-functioning, competitive market, byzantine arrangements may harm consumers. While the nature of contracting also makes it difficult for researchers to evaluate the impact of competition on prices, the simultaneous presence of concentration and high and opaque prices is certainly suggestive. The high level of concentration in the PBM market is likely to persist due, in part, to barriers to entry in the industry. The scale required to negotiate favorable discounts from manufacturers makes it difficult for fringe players to compete.

Similar issues may apply in adjacent markets as well. For example, the specialty pharmacy market represents a growing proportion of drug costs. These pharmacies tend to focus on providing medications for consumers with complex medical conditions, including cancer, autoimmune disorders, cystic fibrosis, and HIV/AIDS. While the number of specialty pharmacy locations has increased over time, the market remains extremely concentrated. Nearly 60% of all specialty pharmacies revenues are collected by three largest firms – owned by CVS Health,
Express Scripts, and Walgreens Boots Alliance (Fein, 2017). While the merger does not entail horizontal overlap in this market, the foreclosure arguments described below are likely to apply in this market as well. For example, Aetna may attempt to steer at least a portion of their consumers to CVS’s specialty pharmacy in ways that may harm competition or overall consumer welfare. Anticompetitive behavior is especially concerning in this setting, as it may have important clinical, in addition to financial, consequences.

VI. **Foreclosure**

Vertical mergers may lead a newly integrated distributor to stop selling products to a downstream firm’s rivals, a practice known as vertical foreclosure. Such arrangements raise antitrust concerns, since rivals may be excluded from a market altogether or, more commonly, forced to use higher cost means to bring their products to market. Empirical evidence on the extent and impact of foreclosure in the health care industry is limited. Therefore, in this section, I outline the likely effects of integration and highlight the potential for vertical foreclosure in the affected markets.

**a. Insurance Markets**

The main concern is that merged entity could raise its rival’s costs along two dimensions. First, the merged entity could increase the cost of PBM services to insurers other than Aetna; price increases could be facilitated by the lack of competition and opaque nature of pricing in the PBM market. Although Aetna is the third largest insurer in the United States, foreclosure may be a risky strategy, as it involves not aggressively bidding for a large fraction of the market. Aggressive bidding is unlikely especially to the extent that it will strengthen the position of Aetna’s rivals in the downstream insurance market. While high market concentration is often a
cause for concern, it is particularly worrisome in the PBM market. Opaque pricing and the rebate structure give both the pharmaceutical manufacturer and the PBM incentives to allow higher list prices and higher rebates.

Second, and perhaps more important, the merged entity could increase the cost of prescription drugs to other payers. This effect may be especially important in the market for generic drugs, which are generally competitive at the wholesale, but not the retail level and represent a large fraction of total fills. In recent years, prices for some generic molecules (even particularly old ones whose branded equivalents' patents expired decades ago) have increased substantially.

b. PBM Markets

The ability to raise rivals’ costs has important implications beyond the firms currently participating in the industry. In particular, the potential for vertical foreclosure could reduce the attractiveness of entry in either the PBM or insurance markets. PBMs know that they will have few potential customers absent Aetna, and, perhaps more importantly, non-integrated insurers will face weakly worse terms. Even if the PBM and health insurance markets were competitive, the merged firm could reduce future competition in the insurance market. If the merged entity is successful, future entry may require capabilities to be a payer, PBM, and provider, which may be difficult and especially costly for potential new entrants to replicate. In addition, the merger could make it less likely that fringe PBMs or new entrants can compete effectively for Aetna’s business; high concentration and existing vertical arrangements between insurers and PBMs exacerbate the extent to which this will harm the profitability of such players.
Furthermore, the proposed merger may lead to fewer competitors in the PBM space for several reasons. First, Aetna has stated publicly that one alternative to the merger would be to build an in-house PBM (Sabatino 2018). Such a PBM could potentially add a meaningful competitor in a concentrated space. Second, despite claims that larger firms such as Amazon are poised to enter this space, the merger may impede future entry. In addition to the proposed merger, additional consolidation, including Cigna’s proposed acquisition of Express Scripts, is likely in this market (Thomas, Abelson, and Bray 2018). Therefore, the merger may have negative implications for consumers in both the health insurance and PBM markets.

VII. Potential Efficiencies

The welfare impacts of vertical mergers depend on both the potential for foreclosure and the potential for efficiencies. CVS and Aetna have cited a number of potential efficiencies that could result from the merger. The merging entities claim that the combined company "could provide integrated community-based health care that would improve patient health outcomes, increased integration of data and analytics that would lower costs, and improved coordination to treat chronic disease" (Garthwaite 2018). In this section, I explore the extent to which improved coordination through combined contracting is likely to arise and to what extent any such efficiencies may be merger-specific.

The merging parties could better align incentives within insurance contracts. Specifically, PBMs may not always design insurance benefits in order to minimize overall medical expenditure if they are not fully at risk. Insurers that offer combined medical and pharmacy benefits may do more to increase drug adherence and reduce hospitalizations: for example, they
may ensure that patients are taking blood pressure medication to prevent cardiac events and avoid the associated costs.

Empirical evidence supports this hypothesis. In work with Robert J. Town, we find Medicare Advantage Part D (MA-PD) plans that cover drug and medical expenditures tend to be designed to keep consumers out of the hospital, as compared to stand-alone PDPs that only cover drugs. MA insurers charge consumers lower copays for preventative medications—which effectively means sending consumers the right price signals. Outside of the direct impact on plan enrollment, the PDPs have little incentive to consider the influence of their benefit design decisions on enrollee medical care utilization.

A potentially large portion of the potential gain could be achieved via contract. An insurer could put the PBM at risk for at least part of medical spending. Under such a contract, there will be an implicit trade-off: as the PBM faces higher powered incentives, they must also be compensated for taking on additional risk. Because insurers will not fully internalize the benefits of optimal insurance design across treatment modalities, it is impossible to achieve the savings without fully internalizing the risk associated with total spending – without taking on all of the risk associated with medical expenditure. Furthermore, as the health care landscape changes and emphasizing paying for value more and more, contracting issues are likely to become more acute.

These efficiencies could be achieved via merger or, alternatively, by developing an in-house PBM. Other players have pursued the latter approach. The savings are also potentially limited to the set of contracts joint to Aetna and CVS in which Aetna does not already control the formulary: plans in which the merged entity is at risk for both medical and pharmacy benefits.
In the Part D market, efficiencies will be limited by the (lack of) consumer switching from stand-alone plans to MA-PD plans. In the commercial market, efficiencies will be limited to fully insured contracts; these efficiencies do not apply to administrative services only contracts, which compose a significant fraction of Aetna’s business.

VIII. Pass-Through of Cost Savings

Any savings obtained as a result of the merger could increase insurer profits or reduce premiums and increase plan generosity. Insurers frequently claim that cost savings will be passed through nearly one-for-one to consumers; however, theoretically, incidence will depend on the degree of competition in the market and enrollee selection. Consider pass-through under monopoly. When the monopolist sets price such that marginal cost is equal to marginal revenue, the decrease in price due to a reduction in marginal costs is smaller than under perfect competition because the marginal revenue curve is steeper than the demand curve. Under linear demand and constant marginal costs, we expect a pass-through rate of one-half, as the marginal revenue curve is twice as steep as the demand curve.

In work with Mark Duggan and Boris Vabson, we found that while an increase in MA reimbursement was successful in attracting more providers, it provided lackluster benefit to consumers. Only about one fifth of the additional reimbursement was passed through in the form of lower premiums, co-pays, or deductibles. The remaining 80 percent went to insurers’ profits and advertising. While other estimates (Cabral, Geruso, and Mahoney 2018)find greater pass-through of reimbursements to consumers, all estimates in the literature imply incomplete pass-through: at least some of the benefits accrue to the supply side of the market. Similarly, we
should be skeptical of claims that the merged entity will naturally craft more competitively priced insurance products for employers and individual consumers.

Furthermore, a separate set of issues arises in the PBM market, in which confidential rebates may or may not be passed along to the consumer. In a competitive market, we expect PBMs to try to attract consumers by promising them a greater share of rebates. However, given firm behavior and price opacity in the PBM market, it is likely that a substantial fraction of any rebates are retained by the PBM. To the extent that the merger increases concentration in the PBM industry, it is even less likely that savings will accrue to the consumer.

IX. Conclusions

My comments do not cover all the issues involved in evaluating the proposed merger. Instead, I focus on the research relevant to insurer market power, foreclosure, a subset of the most achievable efficiencies, and their impact on consumer costs.

I argue that the markets in which CVS Health and Aetna operate are typically highly concentrated. I describe concentration in the PBM industry, the specialty pharmacy market, and, critically, the Medicare Part D market, in which the merging firms have substantial overlap. Economic research has shown that concentration in insurance markets leads to higher premiums for consumers. Furthermore, the merged entity has the potential to foreclose future entry or raise the costs of current rivals. Both insurer market power and the potential for foreclosure are likely to have negative impacts on consumer welfare.

There may be potential efficiencies that are created by the merged entity. I focus on one – the alignment of medical and pharmacy benefits – that may only be fully achieved through
integration, but may be partially achieved via contract or achieved through the development of an in-house PBM. I argue that any cost efficiencies are not likely to translate into lower premiums or more attractive benefit packages for consumers. Therefore, I conclude that the potential harm to consumer welfare from the proposed merger is likely to outweigh the potential gains.
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