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Taking Stock of Insurer Financial Performance in the Individual Health Insurance Market Through 2017

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USC-Brookings Schaeffer Initiative for Health Policy

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EDITOR’S NOTE

This white paper is part of the USC-Brookings Schaeffer Initiative for Health Policy, which is a partnership between the Center for Health Policy at Brookings and the USC Schaeffer Center for Health Policy & Economics. The Initiative aims to inform the national health care debate with rigorous, evidence-based analysis leading to practical recommendations using the collaborative strengths of USC and Brookings.

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Introduction

The Affordable Care Act (ACA) implemented wide-ranging reforms to the individual health insurance market starting in 2014, most importantly by barring insurers from denying coverage or varying premiums based on health status, requiring all plans to cover certain services and provide a basic level of financial protection, providing subsidies to help low- and moderate-income people afford coverage, and requiring all individuals to have coverage or pay a penalty. This analysis takes a detailed look at insurers' financial performance in this new institutional environment, as well the economic forces that have shaped that performance.

To do so, the analysis relies primarily on data insurers report to federal and state regulators, including preliminary reports for 2017, supplemented with certain other information described in the main text. I use these data to estimate each major component of insurers' cash flow related to individual market policies, including premiums, claims, administrative costs, and taxes, as well their overall individual market profit margins for 2011 through 2017. For years 2014 and later, I focus solely on insurance policies subject to the ACA's main regulatory reforms—commonly called ACA-compliant policies—since these policies now account for the vast majority of individual market enrollment and receive the most public attention. In interpreting the results, I also draw upon the growing research literature on the how the individual market has functioned under the ACA.

My analysis supports two main conclusions about the state of the individual market in 2017 and how the market would have evolved in 2018 in the absence of recent changes in policy:

- **Insurers were on track to break even or make modest profits on ACA-compliant policies in 2017, on average, before the administration ended cost-sharing reduction payments:** The report estimates that insurers were on track to incur small losses averaging 0.4 percent of premium revenue on ACA-compliant policies in 2017 before the Trump Administration ended cost-sharing reduction payments for the final quarter of the year. Furthermore, there is reason to believe that the data used in this analysis may systematically understate insurers' actual financial performance, suggesting that insurers were, in fact, on track to make modest profits on ACA-compliant policies in 2017, on average nationwide.
- **In a stable policy environment, 2018 premium increases for ACA-compliant policies would likely have been in the mid-to-high single digits, on average:** With premiums at an approximately sustainable level in 2017, premium increases for 2018 would only have needed to accommodate underlying cost trends and the expiration of the one-year moratorium on the ACA's health insurance fee if federal policy toward the individual market had remained where it was at the start of 2017. Taken together, those factors would likely have generated premium increases in the mid-to-high single digits on average nationwide.

It is clear that individual market premiums will increase by substantially more than this in 2018. These larger increases likely primarily reflect the unsettled federal policy environment. During 2017, Congress undertook a lengthy debate over possible legislative changes to the ACA, which included immediate repeal of the individual mandate. The Trump Administration has also repeatedly threatened to take actions that would weaken the individual market, and it has acted on some of these threats, including by ending cost-sharing reduction payments to insurers.

This analysis also facilitates a granular look at how insurer financial performance in the ACA-compliant individual market has evolved since 2014. I reach several conclusions:

- **The losses insurers incurred on ACA-compliant policies in 2014 are readily explained by a variety of transitional factors:** Insurers incurred losses of 5.7 percent of premium revenue on ACA-compliant policies in 2014. As other authors have noted, these losses are comparatively easy to explain. Insurers had limited information about the likely composition of the individual market risk pool when they set 2014 premiums and may have intentionally underpriced in an effort to gain market share in the early years of the new market.
- **Insurers' losses on ACA-compliant policies deepened in 2015 and 2016 because of puzzlingly small premium increases, not rapid growth in claims spending:** Insurers' losses on ACA-compliant policies deepened to between 11 and 12 percent of premium revenue in 2015 and 2016. The deterioration in insurers' performance was not driven by particularly rapid claims growth. Per member per month claims spending in ACA-compliant plans is estimated to have grown 3.2 percent in 2015 and 1.5 percent in 2016, slower than the claims growth observed in employer-sponsored insurance in these years. Slow growth in claims spending likely reflected a stable or improving risk mix in ACA-compliant plans during these two years, insurer plan changes aimed at reducing costs, and other factors.

Nevertheless, insurers' losses deepened in 2015 and remained sizeable in 2016 because insurers' moderate premium increases were insufficient to offset the combination of slow claims growth and, more importantly, the scheduled phasedown of the ACA's transitional reinsurance program. The reinsurance program defrayed a portion of insurers' costs for high-cost enrollees from 2014 through 2016, but became less generous over time, removing the equivalent of 8.2 percent of per member per month premium revenue in 2015 and another 6.9 percent in 2016.

It is unclear why insurers failed to implement larger premium increases in 2015 and, particularly, 2016, the first year in which insurers had a full year of claims experience to look at when setting premiums. However, these decisions could reflect factors similar to those that led insurers to underprice in 2014, namely uncertainty about how claims costs would evolve in the years immediately after 2014 and strategic decisions to underprice in order to gain market share.

- **In contrast to 2015 and 2016, the premium increases insurers implemented for 2017 were more than sufficient to offset slow claims growth and the final step in the phasedown of the reinsurance program, facilitating the sharp improvement in margins seen in 2017:** Premiums in the ACA-compliant market are estimated to have risen by 20.5 percent on a per member per month basis in 2017. Offsetting the final step in the phasedown of the transitional reinsurance program only absorbed 5.9 percentage points of this increase, and data to date imply that claims growth would only have absorbed an additional 2.7 percentage points had cost-sharing reduction payments continued. As a result, this year's premium increases have allowed insurers to sharply improve the financial performance of their ACA-compliant plans.
- **Continued slow claims growth in 2017 shows that the 2017 premium increases did not meaningfully damage the individual market risk pool, consistent with pre-ACA evidence:** Some observers argued that the large premium increases insurers implemented for 2017 would drive many healthy enrollees from the individual market, causing large

increases in average claims costs that would keep insurers from returning to profitability. In fact, data to date indicate that per member per month claims spending in the ACA-compliant market was on track to rise just 2.7 percent in 2017 if cost-sharing reduction payments had continued.

This outcome was entirely predictable. More than half of enrollees in ACA-compliant plans receive tax credits that protect them from premium increases, and pre-ACA evidence implied that reductions in enrollment among unsubsidized enrollees would be modest in size and only moderately tilted toward healthier enrollees. In light of these facts, I estimate that the premium increases implemented for 2017 should only have been expected to increase average claims costs in the ACA-compliant market by 1.6 percent, providing only a slight headwind to insurers' efforts to return to profitability by raising premiums.

The remainder of the paper proceeds as follows. The first section provides a brief description of the methodology used to estimate insurers' financial performance. The second section presents the resulting estimates of insurer financial performance and provides a detailed year-by-year discussion of the forces that shaped that performance. The third section uses these results to estimate how premiums for ACA-compliant plans would have evolved in 2018 in a stable policy environment. The final section discusses the implications of the results for current and future policy choices.

Methodology for Estimating Financial Performance

This analysis focuses on aggregate insurer financial performance in the individual market. For the purposes of this analysis, I group insurer revenues and expenses into five mutually exclusive categories: (1) premium revenue; (2) payments from the ACA's transitional reinsurance program, which reimbursed insurers for a portion of the costs incurred by high-cost enrollees from 2014 through 2016; (3) claims spending net of cost-sharing reduction payments; (4) administrative costs; and (5) taxes and fees.¹ I use these five components to compute aggregate individual market profit margins. The resulting measure of profit margins is commonly referred to as an "underwriting margin," meaning that it reflects total non-investment revenue minus total costs.

The universe of individual market plans included in the analysis differs by year. For years prior to 2014, the estimates reflect the entirety of the individual market. For years 2014 and later, the universe includes only ACA-compliant individual market plans and excludes grandfathered and transitional plans. ACA-compliant plans account for the large majority of individual market enrollment today and will account for the entirety of the enrollment in the long run, and public discussion of individual market premium increases focuses on premium changes for ACA-compliant plans. The financial performance of these plans is thus what is most relevant to evaluating the current state and future trajectory of the individual market.²

I estimate insurer margins primarily using data from insurer filings with state and federal regulators. For years 2011 through 2015, I rely on insurers' Medical Loss Ratio (MLR) filings with the Centers for Medicare and Medicaid Services (CMS), which provide detailed information on insurers' financial performance and enrollment. Notably, for 2014 and 2015, insurers separately report information for the individual market as a whole and for the subset of plans subject to the risk corridor program. The risk corridor universe is nearly coextensive with the universe of ACA-compliant plans, so the amounts reported in the risk corridor portion of the MLR filings can be used to gauge insurers' experience on their ACA-compliant plans.³

For 2016 and 2017, I estimate each component of insurer revenues and expenses by starting with per member per month estimates of these quantities from the 2015 MLR data and trending them forward using the best available data. In general, these data are either CMS reports or insurer filings with state regulators compiled by the National Association of Insurance Commissioners (NAIC). Some of these data sources provided data for the individual market as a whole, not just the ACA-compliant market. In these instances, I make adjustments to the raw data to account for the

¹ Risk adjustment payments and revenues net to zero at the market level, so I ignore them for the purposes of this analysis, with one minor exception described in the Appendix. For similar reasons, I also ignore risk corridor payments and revenue in this analysis.

² For 2014, 2015, and likely 2016 as well, non-ACA-compliant plans were much more profitable than ACA-compliant plans, so including non-ACA-compliant plans in the analysis would improve insurers' overall individual market margins during these years. The effect of excluding these plans is likely considerably smaller in 2017 due to the large improvement in the financial performance of ACA-compliant plans in 2017 and the relatively small share of individual market enrollment accounted for by non-ACA-compliant plans in 2017.

³ In detail, the risk corridor universe reflects experience for on-Marketplace plans and off-Marketplace ACA-compliant plans offered by insurers that offered some on-Marketplace plans. This universe includes virtually all ACA-compliant plans. In both 2014 and 2015, the number of member months reported in the risk corridor portions of the MLR filings was 95 percent of total ACA-compliant enrollment as reported in CMS' premium stabilization program reports (in the 48 states plus the District of Columbia for which the premium stabilization program reports include data). Similarly, the vast majority of payments by the ACA's transitional reinsurance program, which included all ACA-compliant plans, were attributed to plans inside the risk corridor universe in the MLR data (91 percent in 2014 and 94 percent in 2015).

differences in scope, as described in detail in Appendix A. Additionally, my base estimates for 2017 reflect a scenario in which cost-sharing reduction payments continued as scheduled through the end of 2017, but I discuss how 2017 profitability will differ if, consistent with the Trump Administration’s recent decision, cost-sharing reduction payments are not made.

It is important to note that the estimates for 2016 and, particularly, 2017 are more uncertain because they are based on preliminary and incomplete data. However, it is unlikely that the final data will change the main qualitative findings of this analysis. It is also important to note that these results reflect national averages. In all of these years, some insurers and geographic areas saw results that were better than average and others saw results that were worse than average. The full set of data sources is summarized in Table 1, and Appendix A provides additional methodological detail.

Table 1: Summary of Data Sources and Methodology

Category	Calendar Year		
	2011-2015	2016	2017
<i>Premium revenue</i>	Direct calculation from MLR public use file	Trended using data from CMS premium stabilization program reports	Trended using data in HHS enrollment reports
<i>Reinsurance payments</i>			Zero
<i>Net claims spending</i>		Trended using data from insurers’ annual NAIC filings	Trended using data from insurers’ quarterly NAIC filings
<i>Administrative spending</i>			Trended using GDP price index
<i>Taxes and fees</i>		Trended using disaggregated approach described in Appendix	

Note: “Net claims spending” refers to claims spending net of cost-sharing reduction payments.

This analysis is closely related to other recent analyses of insurer financial performance published by the Kaiser Family Foundation (Semanskee and Levitt, 2017) and Mark Farrah Associates (2017). This analysis draws on similar data sources, and in the case of estimating claims trends during 2017, I build directly on the estimates published by Mark Farrah Associates. Consistent with the similarity of the underlying data sources, these analyses reach qualitatively similar conclusions. However, this analysis differs from these earlier analyses in two important respects. First, for years 2014 and later, this analysis focuses solely on the ACA-compliant individual market, rather than the individual market as a whole. Second, this analysis focuses on insurers’ total margins for individual market coverage, after accounting for reinsurance program payments, administrative costs, and taxes, while the other analyses focus solely on trends in premiums and claims.

When interpreting the results presented below, it is worth noting that the data presented in MLR filings may understate insurers’ profitability to some degree. CMS uses MLR filings to determine whether insurers spend at least 80 percent of premium revenue on claims, and insurers that fail to

meet this standard are required to pay rebates to enrollees.⁴ As a result, insurers have an incentive to overstate their claims costs and understate their premium revenue, which would make them look less profitable than they actually are. Looking beyond the incentives created by MLR regulations in particular, insurers may also wish to understate their profitability in regulatory filings in order to increase their leverage when negotiating with regulators over rate setting and other topics.

Research in other areas, notably tax policy, shows that firms frequently do alter their financial reporting in response to economic incentives (e.g., Clausen, 2016). In this case, insurers likely have a variety of concrete strategies for increasing reported claims spending at the margin. For example, Eastman and Eckles (2017) present evidence that insurers who are subject to MLR requirements systematically overestimate the aggregate amount of claims incurred during the plan year that have not yet been received by the insurer. As another example, insurers may also be able to increase claims spending in the individual market by negotiating higher provider payment rates in their individual market plans in exchange for lower payment rates in other lines of business.⁵ It is likely that other strategies exist as well.

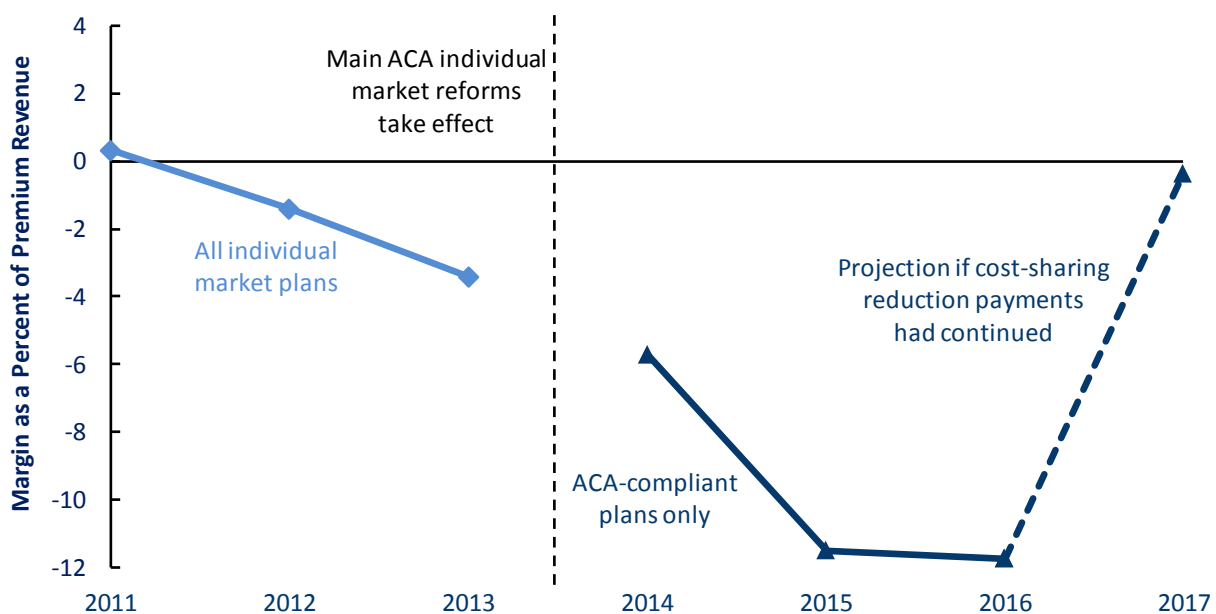
⁴ The definitions of premiums and claims used in the context of the MLR program differ in certain respects from the definitions used in this paper.

⁵ The American Academy of Actuaries and both of the largest insurer trade associations have suggested that insurers might pursue similar contracting strategies in the context of an individual market reinsurance program (American Academy of Actuaries 2016; AHIP 2016; BCBCA 2016). Specifically, they have suggested that insurers may offer providers higher payment rates for care provided to patients who are likely to be subject to the reinsurance program in exchange for lower payment rates for care provided to patients who are unlikely to be subject to the program.

Evolution of Insurer Profit Margins, 2011 - 2017

Figure 1 presents the resulting estimates of aggregate insurer margins as a share of premium revenue for 2011 through 2017. The per member per month amounts underlying Figure 1 are reported in Appendix Table B1. This section focuses on insurers' financial performance after the ACA's main insurance market reforms took effect in 2014 in detail, but it is worth briefly considering the estimates reported for 2011 through 2013, as they provide a baseline for interpreting subsequent years' results.

Figure 1: Individual Market Profit Margins as a Percent of Premiums, 2011-2017



Source: Author's calculations based on CMS, NAIC, and CBO data and Mark Farrah Associates analysis of NAIC data.

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Taken at face value, these estimates imply that insurers either roughly broke even or incurred modest losses on their individual market business in 2011 through 2013. However, as noted above, there is reason to believe that these data understate insurers' actual performance to some degree. Indeed, it would be somewhat surprising if insurers had incurred losses during these years since the rules governing the individual market had been relatively stable for some time, which should have made setting premiums comparatively straightforward. Similarly, the overall number of insurers participating in the individual market was relatively stable during this period, which is inconsistent with the view that insurers were experiencing financial distress.⁶ This suggests that measured margins in this range may, in fact, be what one would expect if insurers were making modest profits.

⁶ According to tabulations of insurers' filings with state regulators reported by the Kaiser Family Foundation (2017), 12 states saw an increase in the number of insurers participating in their individual markets from 2011 to 2013, while 11 states saw a decrease in the number of participating insurers.

The observed deterioration in insurers' margins from 2011 through 2013 could also be, at least to some extent, a reporting-driven phenomenon. Federal MLR regulations first took effect for the 2011 plan year, and it may have taken insurers a couple of years to alter their reporting behavior in response to the change in incentives. Of course, real changes in premiums and claims in response to the introduction of MLR regulations could also have played a role in the deterioration in insurer margins during this period (Cox, Claxton, and Levitt, 2013; Cicala, Lieber, and Marone, 2017).

Insurers Incurred Losses on ACA-Compliant Policies in 2014

Insurers incurred losses of 5.7 percent of premium revenue on ACA-compliant policies in 2014, somewhat worse than the loss of 3.4 percent of premium that they recorded in the individual market as a whole in 2013. It is not particularly surprising that insurers incurred losses on ACA-compliant policies in 2014. These losses likely reflect several factors, although the relative importance of these factors is not clear:

- **Difficulty predicting average claims spending in the new market:** Federal policy toward the individual market changed dramatically in 2014. The ACA's reforms barring insurers from varying premiums and other contract terms based on health status allowed many people with serious health care needs who had previously been locked out of the individual market to obtain coverage. The ACA's premium tax credit, cost-sharing reductions, and individual mandate similarly pulled many new enrollees into the market. These large changes in the size and composition of the individual market made it challenging for insurers to predict average claims costs, which in turn made it hard to set premiums at an appropriate level.

While this type of uncertainty could have caused individual insurers to set premiums either too high or too low, it may have been particularly likely that uncertainty would cause premiums to be set too low in the aggregate. Enrollees likely gravitated toward insurers that happened to underestimate claims costs and thus set premiums too low, an example of a phenomenon commonly known as the "winner's curse" (Thaler, 1988). In principle, insurers could have guarded against this outcome by being intentionally conservative in setting 2014 premiums, but if even a modest minority of insurers failed to take a conservative approach to pricing, a "winner's curse" outcome would still have occurred.

- **Strategic underpricing to gain market share:** Some insurers may have *intentionally* set premiums too low initially on the theory that many of the people entering the individual market would stick with the plan they initially selected in subsequent years, thereby allowing insurers to trade short-run losses for higher market share and higher profits in the long run. This type of "invest then harvest" strategy has been observed in a range of health insurance markets (Cebul et al. 2011; Marzilli Ericson 2014; Miller 2016). The ACA's risk corridor program, which was designed to provide payments to insurers that incurred large losses during 2014, 2015, and 2016 (and collect payments from insurers that made large profits in those years), may have made this type of pricing strategy appear particularly attractive (Layton, McGuire, and Sinaiko 2016).⁷

⁷ CMS ultimately made only a small portion of the risk corridor payments due for the 2014 program year due to a lack of available funds and has yet to make any payments for the 2015 program year, while results for the 2016 program year have not yet been announced (CCIIO 2015b; CCIIO 2016a). However, as discussed in greater detail below, the existence of a risk corridor shortfall did not become fully clear until October 2015, at which point it was likely too late for insurers to incorporate this fact into 2016 pricing or participation decisions.

As it turned out, features of the individual market structure created by the ACA may have made an “invest then harvest” strategy ineffective. Tenure in the individual market is often relatively short; more than one-third of those who enrolled in Marketplace coverage in the states using the HealthCare.gov platform during the 2015 open enrollment period had disenrolled by year end (Apostle 2016). Individual market enrollees have also proven quite willing to switch plans in order to secure a lower premium (ASPE, 2016a). But these features of the new market may have been hard for insurers to anticipate.

- **Unexpected policy changes:** CMS implemented two significant policy changes after premiums were set for 2014 that affected insurers’ ultimate performance, although these changes likely had roughly offsetting effects on insurers’ financial performance. The first was the “transitional policy,” which allowed certain non-ACA-compliant individual market policies to continue through 2014 and beyond. This decision likely removed some comparatively healthy individuals from the ACA-compliant market and thereby increased average claims costs (Huth and Karcher 2016; Jacobs, Cohen, and Keenan 2017). Although additional research on the effects of the transitional policy would be welcome, it likely reduced 2014 margins in the ACA-compliant market by several percent of premium revenue.⁸ The second was CMS’ decision to make the ACA’s transitional reinsurance program more generous for the 2014 plan year. That decision improved ACA-compliant plans margins by 4.4 percent of premium revenue for 2014.⁹

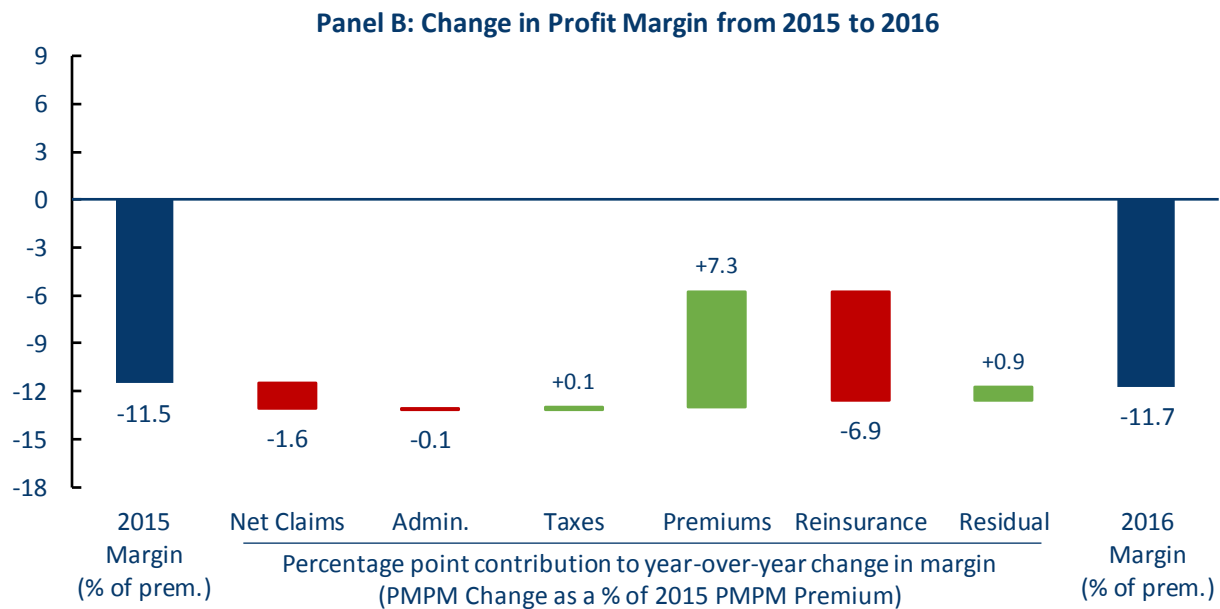
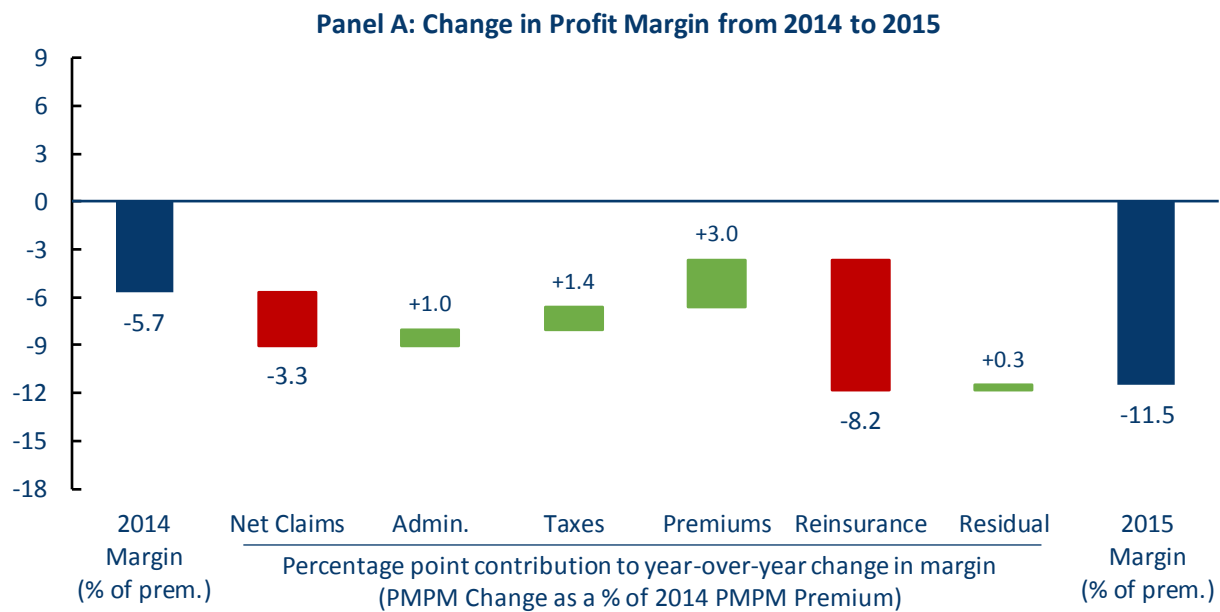
Insurers’ Incurred Considerably Deeper Losses in 2015 and 2016

Insurers’ losses deepened considerably in 2015 to 11.5 percent of premium revenue. To provide additional insight into the factors behind this change, Panel A of Figure 2 decomposes the year-over-year change in insurer margins from 2014 to 2015 across several categories of insurer expenses and revenues.

⁸ It is possible to produce rough estimates of the policy’s likely effect. Data from CMS’ premium stabilization program report for 2014, supplemented with data from the MLR filings for Massachusetts and Vermont, implies that around 8.3 million people were enrolled in ACA-compliant coverage in that year (CCHIO, 2015c). Combining the MLR data with estimates of transitional policy penetration published by CCHIO (2015a), I estimate that 1.6 million individuals were enrolled in individual market transitional plans on average during 2014. Using the MLR data and the approach described in the appendix, I estimate that claims spending in ACA-compliant plans was \$361 per member per month in 2014, compared to \$198 per member per month in non-ACA-compliant plans. Under the extreme assumptions that all individuals enrolled in transitional policies would otherwise have been enrolled in ACA-compliant policies and the entire difference between claims spending in the two markets reflected differences in health status (rather than differences in plan design), these data imply that permitting transitional policies increased average claims spending in the ACA-compliant market by \$27 per member per month in 2014 or 7.9 percent of per member per month premium revenue. The true effect of the transitional policy on claims spending in the ACA-compliant market was surely considerably smaller than this, but this calculation provides useful guidance on the likely order of magnitude of its effects.

⁹ For the 2014 plan year, the transitional reinsurance program was originally scheduled to reimburse insurers for 80 percent of claims between an attachment point of \$45,000 and a cap of \$250,000 incurred by individual enrolled in ACA-compliant plans, but the program ultimately reimbursed insurers for 100 percent of such claims. Actual reinsurance payments in the ACA-compliant market in 2014 amounted to \$74 per member per month, so expected payments were presumably around 20 percent smaller, equivalent to around \$15 per member per month or 4.4 percent of per member per month premium revenue.

Figure 2: Decomposition of Year-Over-Year Changes in Profit Margins



Source: Author's calculations based on CMS, NAIC, and CBO data and Mark Farrah Associates analysis of NAIC data.

In detail, the estimate reported for each category is the per member per month nominal dollar change in that category as a share of per member per month premium revenue in the base year (multiplied by negative one for categories that represent insurer expenses rather than revenues).¹⁰ For example, in Panel A of Figure 2, the -3.3 percentage point contribution for claims indicates that the increase in per member per month claims spending from 2014 to 2015 was 3.3 percent of per member per month premium revenue in 2014. Correspondingly, had claims costs been the only thing that changed from 2014 to 2015, a 3.3 percent premium increase would have been sufficient to hold insurers' margins roughly fixed.¹¹

Panel A of Figure 2 illustrates that the deterioration in insurers' margins in 2015 occurred despite slow growth in claims spending. Claims spending in the ACA-compliant market grew 3.2 percent in 2015 in per member per month terms (an increase that, as shown in Panel A of Figure 2, corresponded to 3.3 percent of 2014 per member per month premiums). This growth rate was somewhat lower than the growth rate of medical costs in private insurance writ large. Drawing on claims data from several major insurers, the Health Care Cost Institute (2016) estimated that per enrollee claims spending in employer coverage rose 4.6 percent in 2015, and Standard and Poor's used similar data to estimate that per member per month claims growth in employer coverage was around 5 percent in 2015 (S&P Dow Jones Indices, 2017).¹²

Why the ACA-compliant market saw such slow claims growth is not completely clear. Enrollment in the ACA-compliant market increased sharply from 2014 to 2015, from around 8 million in 2014 to around 14 million in 2015, reflecting both overall gains in insurance coverage and a reduction in the size of the non-ACA-compliant individual market.¹³ It is plausible that the new enrollees were healthier than incumbent enrollees, and Fiedler (2017) presents some evidence that areas seeing faster growth in ACA-compliant enrollment saw slower growth in claims spending. Slower growth in claims spending could also reflect the waning of "pent up demand" for health care among newly insured enrollees (Katterman, 2013; Owen and Maeng, 2015), as well as shifts in enrollment toward lower-cost plan designs (McKinsey, 2016).

Looking beyond claims growth, the main driver of the deterioration in insurers' overall financial performance in 2015 was the phasedown of the ACA's transitional reinsurance program. That program reimbursed insurers for a portion of individual market claims costs starting in 2014, and then gradually phased down (as scheduled) before disappearing entirely in 2017. In 2015, that phasedown reduced insurers' revenue by an amount equivalent to 8.2 percent of 2014 per member per month premiums.

¹⁰ There is also a small residual category in each year because the contributions from each individual category do not add precisely to the total change in margin. This occurs because each year's actual overall margin is expressed as a share of *current year* premium revenue. Because each of the individual category contributions are scaled by per member per month premiums in the prior year, the individual category contributions do not account for the change in the denominator of this fraction.

¹¹ The change required to keep the margin unchanged as a share of premiums would have been very slightly smaller than this because margins are reported as a share of current year premiums and the premium increase would also have increased the denominator in the margin calculation, slightly diluting the existing negative margin.

¹² Standard and Poor's reported claims growth of 6.8 percent for private insurance as a whole and 24.7 percent for the individual market (including both ACA-compliant and non-ACA-compliant plans) in 2015. Based on the individual market's share of total enrollment in private insurance in 2014, these estimates imply that claims growth in employer coverage was around 5 percent.

¹³ These estimates are based on the amounts reported in CMS' premium stabilization program reports for 2014 and 2015 (CCIIO, 2015c; CCIIO 2016c). These reports do not include data for Massachusetts and Vermont. Including Massachusetts and Vermont would be unlikely to change the rounding of these estimates.

Insurers continued to incur significant losses in 2016. Panel B of Figure 2 illustrates that the underlying pattern of changes in insurers' revenues and expenses had much in common with 2015. Claims spending in the ACA-compliant market grew an estimated 1.5 percent in 2016 in per member per month terms (which, as shown in Panel B of Figure 2, was also 1.6 percent of 2015 per member per month premiums), even slower than in 2015 and well below the roughly 5 percent growth rate for per member per month claims spending in employer coverage implied by data reported by Standard and Poor's (S&P Dow Jones Indices, 2017).¹⁴ But the reinsurance program phasedown removed revenue equivalent to 6.9 percent of 2015 per member per month premium revenue. As a result, the larger premium increases insurers implemented for 2016 were enough to roughly tread water, but not enough to allow them to make progress in stemming their losses.

A puzzle that emerges from these results is why insurers did not raise premiums more than they did in 2015 and 2016. The phasedown in the reinsurance program was entirely predictable, and the industry was clearly aware that the program's phasedown would necessitate significant premium increases (American Academy of Actuaries 2014; American Academy of Actuaries 2015). Furthermore, by the time insurers were setting premiums for 2016, they had relatively complete claims data for 2014. Thus, insurers should have known that their post-2014 premium increases needed to correct for the fact that premiums had started off too low in 2014, in addition to accommodating the phasedown of the reinsurance program and underlying trends in claims and other costs.

While this question merits further research, there are at least a few possibilities, and it is possible that more than one of them played a role in generating this outcome:

- **Over-optimism regarding post-2014 claims growth:** While the ACA-compliant market saw relatively slow claims growth in 2015 and 2016, insurers could have expected even slower claims growth. Indeed, just as insurers faced challenges in forecasting the initial level of claims costs in the ACA-compliant market 2014, they also faced challenges in forecasting how claims costs in that market would evolve in the years immediately after 2014.

For example, it was uncertain how many additional individuals would join the individual market in 2015 and 2016 and what their risk profile would be. It was also uncertain how the utilization decisions of previously uninsured enrollees would evolve over time. One view, noted above, was that utilization in this population would be high initially and then fall as these enrollees' "pent-up demand" for health care services waned. However, it was also possible that utilization in this group could rise over time as enrollees formed relationships with providers and received treatment for previously undiagnosed conditions. If insurers were overly optimistic about how these various dynamics would play out, that could have led them to implement inadequate rate increases for 2015 and 2016. It could also explain why insurers did not begin correcting their pricing in 2016, as they would have had little data showing that actual claims trends in 2015 were inconsistent with their assumptions by the time they set 2016 rates.

This explanation has one major virtue: it can make sense of the fact that many insurers portrayed the depth of their 2015 and 2016 losses on ACA-compliant plans as reflecting higher-than-expected claims costs (Aetna 2016; Anthem 2016). However, for over-optimism about claims trends to explain why insurers failed to fully stem their losses by 2016, insurers

¹⁴ Standard and Poor's reported claims growth of 4.9 percent for private insurance as a whole and 2.0 percent for the individual market (both ACA-compliant and non-ACA-compliant) in 2016. Based on the individual market's share of enrollment in 2015, these estimates imply that growth in per member per month claims in employer coverage was around 5 percent. The Health Care Cost Institute data cited above are not yet available for 2016.

would have needed to overestimate claims growth by around 6 percentage points per year in both 2015 and 2016 or, equivalently, to have expected that per member per month claims spending would fall by a cumulative 8 percent in nominal terms from 2014 to 2016. This degree of over-optimism seems implausible. While a “winner’s curse” dynamic like the one discussed for 2014 could have led to this type of outcome even if many insurers made more conservative assumptions, it still seems difficult to believe that over-optimism can be the sole explanation for why insurers did not raise premiums more aggressively through 2016.

- **Continued strategic underpricing:** Another possibility is that insurers intentionally incurred losses in 2015 and 2016 because they were continuing to follow a risk-corridor-backed “invest then harvest” pricing strategy, which was discussed above in the context of 2014. For two reasons, this type of strategy could have caused insurers to underprice by more in 2015 and 2016 than in 2014.

First, some insurers priced particularly aggressively in 2014, and their competitors may have felt compelled to chase those price leaders in subsequent years; this seems to have occurred in at least one of the markets where insurers incurred the deepest losses (Wilde Mathews 2016). Second, the risk corridor program made “harvesting” profits from existing enrollees comparatively unattractive in 2015 and 2016 since the risk corridor formula would have clawed back a portion of any unusually large profits. This meant that the incentive to “invest” in buying market share by underpricing was likely larger in 2015 and, particularly, 2016, than it was in 2014 since the expiration of the risk corridor program was closer at hand.

One potential challenge to an explanation focused on the risk corridor program is that CMS did not ultimately make full risk corridor payments because the program operated at a loss and Congress did not appropriate the funds required to cover the shortfall. However, CMS did not announce that it would be unable to make full risk corridor payments until October 2015, too late for insurers to adjust their 2016 pricing decisions (CCIIO, 2015b). While insurers had some advance warning of this outcome since Congress had taken action to block CMS from using certain specific funding streams to make risk corridor payments in late 2014 and some private analysts had predicted that the risk corridor program would experience a shortfall earlier in 2015 (Banerjee, Marinucci, and Sung, 2015), those warnings may not have been fully absorbed, particularly given CMS’s position that the ACA required the Secretary to make risk corridor payments (CMS, 2015).

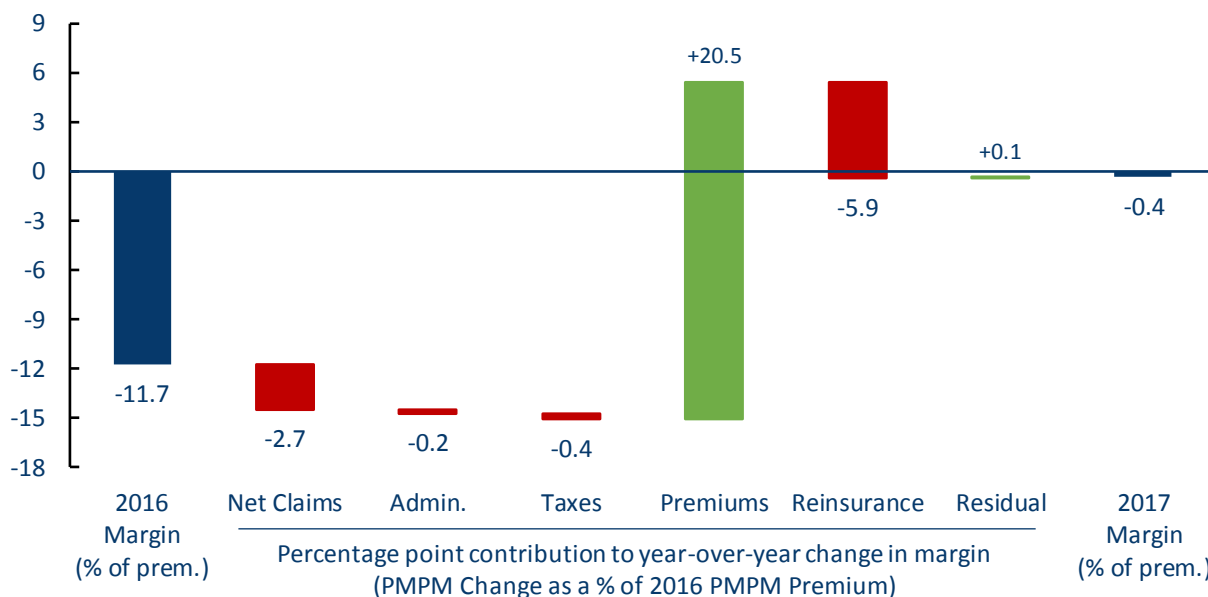
- **Regulatory barriers:** Another possibility is that insurers attempted to increase premiums but were blocked from doing so by state regulators. In many states, state regulators must approve insurers’ rates, and they frequently direct insurers to reduce their rates during the review process, sometimes significantly (HHS 2015). It is unclear, however, why regulators would have directed insurers to implement rates that were clearly inadequate, and why insurers would have continued to participate if they expected to operate at a significant loss. This explanation therefore seems like the least plausible of the three listed here.

Insurer Margins Improved Markedly in 2017

Whatever the reason insurers did not raise premiums more aggressively in 2015 and 2016, a significant correction did occur in 2017. As illustrated in Figure 3, premium revenue in the ACA-compliant market rose by an estimated 20.5 percent on a per member per month basis in 2017. Based on data for the year to date, this premium increase appears to have been more than sufficient to offset continued slow growth in claims costs, as well as the final step in the phasedown of the transitional reinsurance program. As a result, had cost-sharing reduction payments continued, insurers would

have returned to a roughly breakeven position in 2017. In fact, because these estimates likely understate insurers' actual financial performance, it is plausible that insurers were on track to earn modest profits on their ACA-compliant individual market business in 2017 before the administration ended cost-sharing reduction payments.

Figure 3: Decomposition of Change in Profit Margin from 2016 to 2017



Source: Author's calculations based on CMS, NAIC, and CBO data and Mark Farrah Associates analysis of NAIC data.

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The loss of cost-sharing reduction payments for the final three months of 2017 will meaningfully worsen insurers' margins on ACA-compliant plans for the 2017 plan year. I estimate that the loss of these payments would increase insurers' measured losses on ACA-compliant policies in 2017 from 0.4 percent of premiums to 2.7 percent of premiums. Of course, insurers may not ultimately incur these additional losses if Congress steps in to resume the payments or if, as appears likely, insurers are ultimately able to recover the lost payments through the courts (Bagley 2017). Regardless, the ultimate outcome related to cost-sharing reductions will have meaningful implications for insurers' financial performance in 2017.

Regardless of what ultimately occurs with cost-sharing reductions, it is clear that the premium increases insurers implemented for 2017 were highly effective in stemming their losses. However, heading into 2017, it was controversial whether that would turn out to be the case. Some policymakers, analysts, and market participants argued that the individual market was in the midst of a "death spiral" (Cannon 2016; Pramuk 2016; Johnson 2017). Advocates of this view argued that higher premiums would spur large reductions in individual market enrollment, particularly among healthy individuals. Those skewed reductions in enrollment would, in turn, sharply increase average claims costs, causing insurers' losses after the premium increases to be as large or larger than they were before the premium increases.

The failure of a “death spiral” to materialize in practice was entirely predictable in light of prior research on how insurance markets function. To understand why, note that the effect of premium increases on claims spending in the ACA-compliant market depends on three factors:¹⁵

- **The share of enrollees affected by premium increases:** The first factor is what share of enrollees in ACA-compliant plans were actually exposed to premium increases. In practice, most enrollees in the ACA-compliant market—around 57 percent in 2016—are insulated against premium increases because they receive premium tax credits.¹⁶ This is because the value of the premium tax credit is based on the cost of a benchmark plan available to each enrollee, so the premium tax credit increases dollar-for-dollar when the benchmark premium rises, thereby leaving the enrollee’s net premium for the benchmark plan approximately unchanged.
- **The share of enrollees affected by premium increases who drop coverage:** The second factor is what share of the people exposed to premium increases would actually be expected to drop insurance coverage. A middle-of-the-road estimate based on the pre-ACA literature is that the elasticity of individual market insurance enrollment with respect to the cost of individual market coverage is -0.5, meaning that a 10 percent increase in cost reduces enrollment by 5 percent.¹⁷

When applying this elasticity, it is important to correctly measure changes in the cost of insurance coverage, which requires taking account of the ACA’s individual mandate. In particular, by raising the cost of being uninsured, the individual mandate reduces the effective cost of purchasing insurance coverage. Because the amount of the mandate penalty does not rise in proportion to premiums in most cases, a given percentage increase in the gross premium typically corresponds to a larger percentage increase in the effective cost of insurance coverage. Using the approach described in Appendix A, I estimate that the 20.5 percent increase in average ACA-compliant premiums from 2016 to 2017 would result in a 30.0 percent increase in the effective cost of insurance coverage for a representative unsubsidized individual market enrollee.

- **The relative health care needs of enrollees who drop coverage:** The final factor is how the health care needs of enrollees who do drop coverage—the “marginal” enrollees in economic parlance—compare to those of individual market enrollees overall. Hackmann, Kolstad, and Kowalski (2015) examined the effect of introducing an individual mandate in Massachusetts. Their estimates imply that the enrollees just tipped into enrolling by the mandate’s introduction had claims costs 27 percent lower than other enrollees.¹⁸ Although

¹⁵ The calculations presented below are similar to calculations presented in an analysis by the Council of Economic Advisers (2017). I was Chief Economist at the Council at the time and oversaw the production of this report.

¹⁶ The CMS premium stabilization program report for the 2016 program year shows that there were 14.8 million people enrolled in ACA-compliant individual market plans nationwide on average over the course of 2016 (after an adjustment to account for the fact that the CMS report does not include data for Massachusetts and Vermont). Separately, CMS’s final effectuated report on effectuated enrollment during 2016 showed that 8.4 million people received advance premium tax credits on average during 2016, 57 percent of the 14.8 million figure above (CMS, 2017).

¹⁷ The -0.5 elasticity estimate reported here is the average across the studies reviewed in Table 1 of Marquis et al. (2004), the estimates reported by Marquis et al. themselves, and the estimate reported by Auerbach and Ohri (2006). For studies that report a range of estimates, I use the midpoint of the range to calculate the average reported here, and for studies for which multiple sets of estimates are reported, I use the estimate most relevant to the population being examined here.

¹⁸ The estimates Hackmann, Kolstad, and Kowalski report in Table 2 indicate that Massachusetts health reform increased enrollment by 32.0 log points, while reducing claims by 8.7 log points. Using these point estimates to fit a log-log

this evidence was not available until this spring, Finkelstein, Hendren, and Shepard (2017) examine other aspects of Massachusetts health reform and find that marginal enrollees had costs between 16 percent and 45 percent lower than other enrollees, depending on the precise population examined.¹⁹ In light of this evidence, a reasonable assumption was that enrollees induced to leave by higher premiums would have claims costs around 30 percent lower than those who remain.

These estimates imply that premium increases like those seen in 2017 would have only a modest effect on claims spending in the ACA-compliant market. In particular, based on the estimates presented in the first two bullets above, the 20.5 percent increase in ACA-compliant premiums for 2017 would have been expected to reduce enrollment in the ACA-compliant market by 5.3 percent, reflecting a 12.3 percent reduction in enrollment among the unsubsidized population and no reduction in enrollment among the subsidized population.²⁰ The estimates described in the third bullet imply that this reduction in enrollment would, in turn, have been expected to increase per member per month claims spending in the ACA-compliant market by 1.6 percentage points, reflecting a 4.0 percent increase in average claims spending in the unsubsidized population and no change in the subsidized population.²¹

Consistent with this analysis, claims growth in the ACA-compliant market has remained slow so far in 2017. I estimate that, before the administration's decision to end cost-sharing reduction payments, net claims spending in the ACA-compliant market was on track to rise only 2.7 percent on per member per month basis in 2017. For comparison, using data from insurer financial filings, Mark Farrah Associates (2017) indicate that claims spending in group coverage is up 5.6 percent on a per member per month basis in the first half of 2017. Slow growth in claims spending in the ACA-compliant market in 2017 may reflect many of the same factors that contributed to slow claims growth in the ACA-compliant market in 2015 and 2016, potentially including continued waning of "pent-up demand" and shifts toward lower-cost plan designs (McKinsey 2016). Exits by insurers that had less success managing the care delivered to individual market enrollees could also have played a role (Garthwaite and Graves, 2017).

The decline in individual market enrollment from 2016 to 2017 does appear to have been larger than this analysis suggests. Based on analysis of insurers' quarterly filings with state regulators, Mark Farrah Associates (2017) estimates that individual market enrollment during the first two quarters of 2017 is down 10.3 percent relative to the same period in 2016, compared to the 5.3 percent predicted above.

relationship between enrollment and average claims costs would generate a slope coefficient of -0.27. It is straightforward to show that this slope coefficient can be interpreted as the percentage difference in claims costs between the marginal enrollee and all other enrollees.

¹⁹ The regression discontinuity estimates that Finkelstein, Hendren, and Shepard report in Table 6 can be used to perform calculations identical to those described in footnote 18 for the Hackmann, Kolstad, and Kowalski paper. The lower estimate cited in the main text results from examining the discontinuity at 250 percent of the federal poverty level, while the lower estimate cited in the main text results from examining the discontinuity at 150 percent of the federal poverty level. The estimate for the discontinuity at 200 percent of the federal poverty level is between the two estimates cited in the main text.

²⁰ The 12.3 percent enrollment reduction among unsubsidized enrollees can be calculated as $1 - \exp[-0.5 \cdot \ln(1+0.300)] = 0.123$. The overall 5.3 percent reduction in enrollment is then given by $(1-0.57) \cdot 0.123 = 0.053$.

²¹ Using the results in the preceding footnote, average claims spending in the unsubsidized population after the premium increase can be calculated as $\exp[-0.3 \cdot \ln(1 - 0.123)] = 1.040$. The new average claims spending, accounting for the reduction in total enrollment constituted by unsubsidized enrollees, can then be calculated as $0.57 + (1-0.57) \cdot (1-0.123) \cdot 1.040 = 1.016$. Note that this calculation assumes that average claims spending in the unsubsidized population started out at the same level as in the subsidized population. To the extent that this assumption is inaccurate, the actual change in average claims costs could be modestly higher or lower.

It is likely, however, that the additional reduction in enrollment primarily reflects factors other than higher premiums. Notably, Fiedler (2017) documents that while states using the HealthCare.gov enrollment platform saw a 5 percent overall reduction in Marketplace plan selections in 2017, there was no correlation between the size of a state's decline in plan selections and the size of its premium increase, as expected given that the vast majority of Marketplace enrollees are eligible for tax credits. This suggests that there were non-premium factors that weighed on individual market enrollment in 2017. While it is not entirely clear what these non-premium factors may have been, the Trump Administration's decision to curtail outreach activities at the end of the 2017 open enrollment season, as well as consumer uncertainty about whether the individual mandate would be enforced and whether the ACA as a whole might be repealed could have played a role. Whatever the source of this reduction in enrollment, the continued slow claims growth in the ACA-compliant market during 2017 indicates that it has not done significant damage to the risk pool.

How Would Individual Market Premiums Have Evolved in 2018 in a Stable Policy Environment?

This section of the paper uses the estimates presented above to examine how premiums for ACA-compliant plans would have evolved in 2018 if federal policymakers' posture toward the individual market had remained as it was when the Trump Administration began in January.

In estimating the counterfactual premium increase for 2018, I focus on estimating the percent change in the average per member per month premiums throughout the ACA-compliant market. In a stable policy environment, the percent change in premiums under this metric would likely be similar to the percent change in the second-lowest-cost silver or "benchmark" premium.²²

These two metrics generally diverge only to the extent that there are significant year-over-year changes in relative premiums across metal tiers or in the age, geographic, or actuarial value mix of ACA-compliant enrollment, which generally would not occur absent changes in policy. (Given the actual stance of policy, these two metrics are likely to diverge significantly in reality in 2018 since most states have directed insurers to reflect the entire shortfall created by the end of cost-sharing reduction payments in premiums for silver plans (Gaba, 2017a).)

To construct my estimates of counterfactual 2018 premiums, I use the fact that premiums are generally set to cover insurers' claims and other costs, plus a profit margin that depends on market conditions. This fact implies that premium *growth* in any particular year will reflect two broad factors: (1) the expected year-over-year increase in claims and other costs; and (2) an adjustment required to close any gap that exists between the realized current year profit margin and the equilibrium profit margin.

It is relatively straightforward to estimate the first of these factors by separately analyzing how insurers would have expected each component of their costs to change in a stable policy environment:

- **Net claims spending:** The ACA-compliant market appears to have seen slower claims growth than private insurance as a whole over the last three years. However, this was unlikely to last indefinitely, even in a stable policy environment, and it is plausible that insurers would have expected claims growth to normalize in 2018. Under that assumption, it would have been reasonable to assume that per member per month claims spending in the ACA-compliant individual market would grow around 5 percent in 2018, roughly matching trends seen in the employer coverage in recent years. The estimates from the last section imply that claims spending would have been around 86 percent of premium revenue in ACA-compliant plans in 2017 if cost-sharing reduction payments had continued, so accommodating this increase in claims costs would require an increase in per member per month premiums of 4.3 percent.
- **Administrative costs:** A reasonable expectation is that growth in administrative costs during 2018 will roughly match growth in the prices of all goods and services in the economy. The Congressional Budget Office projected in June 2017 that the Gross Domestic Product

²² Average rate increases as reported on insurer rate filings are typically somewhat higher than these two estimates. An important reason for this is that these average rate increases assume that all enrollees remain enrolled in their existing plans and thus do not account for the introduction of lower-priced plans. The other two metrics either implicitly or explicitly account for the introduction of new plans.

price index would increase by 2.0 percent from 2017 to 2018 (CBO, 2017). Administrative spending was around 11 percent of premium revenue in 2017, so offsetting this increase in administrative costs would require an additional 0.2 percentage point increase in per member per month premiums.

- **Taxes and fees:** The most important change affecting taxes and fees is the expiration of the one-year moratorium on the ACA's health insurance fee that was in place for the 2017 fee year.²³ Using the methodology described in Appendix A, I estimate that the return of that fee, together with increases in federal income tax liability stemming from the fact that the fee is not deductible for income tax purposes, as well as various smaller changes in other taxes and fees would necessitate an additional 2.4 percentage point premium increase for 2018.

The much harder question is whether an additional premium increase would have been required to close any remaining gap between insurers' 2017 profit margins (if cost-sharing reduction payments had continued) and their equilibrium profit margins.²⁴ On its face, the fact that the estimates presented in Figure 1 show that insurers were on track to incur a small loss in 2017 implies that a modest additional pricing correction would have been required for 2018. As noted previously, however, it is likely that the estimates presented in this analysis understate insurers' true profitability to some degree. In particular, as noted at the start of the prior section, there is reason to believe that the margins insurers recorded for 2011 through 2013 were close to the margins that would be expected to prevail in equilibrium. The margin insurers were on track to achieve for 2017 was at the high end of the range of margins achieved during this period, suggesting that this margin would have been close to the equilibrium level.

Of course, it is possible that equilibrium margins in today's market differ from those in the past. As noted earlier in this analysis, it is conceivable that as insurers have gotten somewhat better at finding ways to understate their profitability on MLR filings over time, in which case we might expect the *measured* equilibrium margin to be lower than in the past. The ACA's main individual market reforms could also have changed the *actual* equilibrium margin. The ACA's ban on underwriting, product standardization, and creation of Marketplaces has plausibly facilitated greater comparison shopping that might reduce margins in equilibrium relative to the past; these changes could also have helped facilitate entry into these markets. On the other hand, some recent research has suggested that the design of the premium tax credit may put upward pressure on margins in some instances (Jaffe and

²³ What year the health insurance moratorium should actually be considered to have affected is a complicated and controversial question. The health insurance fee collected during a year is allocated across health insurers based on their premium revenue in the *prior* year. Due to this structure, the moratorium for the 2017 fee year is arguably best thought of as having (retroactively) suspended a tax on 2016 policies, rather than 2017 policies.

However, insurer financial filings and the regulatory rate review process generally account for this fee in the year in which it is actually collected, not the year that serves the basis for allocating fee liability. The estimates of insurer margins presented in this analysis follow this accounting convention. I take this approach both to minimize confusion and because it is possible that the accounting treatment may shift the actual economic effect of the tax to some degree in practice by obscuring the actual economic incentives it creates.

Regardless, reflecting the health insurance fee in the year that serves as the basis for calculating fee liability would not change the overall results of this analysis. Under the alternative approach, the effect of the moratorium would appear in 2016 rather than 2017, so losses would be somewhat smaller in 2016 and somewhat deeper in 2017. The estimated premium increase required for 2018 would be unchanged since the large premium increases required to account for the larger loss incurred in 2017 would be exactly offset by the fact that the fee was already in effect in 2017 and, thus, would not contribute to an increase in the taxes owed by these plans in 2018.

²⁴ Technically, what matters for pricing purposes is how insurers *expected* their 2017 margins to compare to equilibrium profit margins when setting premiums. For the purposes of this analysis, I assume that insurers had accurate expectations regarding their 2017 performance, on average.

Shepard 2017). Disruptions associated with the transition to the new institutional environment could also have temporarily reduced competition below its equilibrium level. The net effect of these various factors is unclear, so I assume for the purposes of this exercise that margins were on track to roughly return to their equilibrium level in 2017. However, it is conceivable that some additional correction would have been required or that margins overshot their equilibrium level in 2017.

Putting all of these factors together implies that, in a stable policy environment, average per member per month premiums in ACA-compliant policies would have been 6.9 percent higher in 2018 than in 2017. There is of course, meaningful uncertainty around this estimate, driven primarily by uncertainty about how insurers would have expected claims costs to evolve in a stable policy environment and where margins would actually have settled in steady state. Under most plausible alternative assumptions, however, the increase in premiums for 2018 would have remained in the mid-to-high single digits.

In interpreting this estimate, it is important to keep in mind that this is a national average. The actual premium increases that occur will vary based on the market conditions in any particular geographic area and the circumstances of any particular insurer. As a result, increases will be larger than this for some insurers and in some geographic areas and smaller for other insurers and in other geographic areas. This type of heterogeneity is a natural feature of this market, and it would persist over the long term under any policy regime since both the underlying cost of health care and consumer behavior are unlikely to unfold in the same way in all areas and different insurers may be affected by the same changes in market conditions in different ways depending on the types of products they offer.

Comprehensive analyses of premium increases for 2018 are just beginning to come available at the time of this writing, and they indicate that actual premium increases will be considerably higher than the mid-to-high single digits (Gaba, 2017; Pearson and Sloan, 2017). Both analyses provide evidence that these higher increases result from, in significant part, the administration's threats and subsequent action to cease cost-sharing reduction payments, as well as concerns that the individual mandate would not be enforced for 2018, whether due to legislative or administrative action.

Other actions by federal policymakers may also have affected premiums for 2018 in ways that are harder to quantify from rate filings. Concerns that the administration would curtail outreach activities for 2018 open enrollment, as it ultimately did, could have caused insurers to fear that they would face a smaller and potentially sicker enrollee mix in 2018. The totality of the administration's actions and statements may also have caused insurers to worry that the administration was seeking to actively undermine the individual market. That may have caused insurers to fear additional adverse actions were possible, causing them to set higher premiums as protection against those as yet unknown risks.

Conclusion

The estimates presented in this paper demonstrate that, after three years in which insurers incurred significant losses on ACA-compliant individual market policies, insurers appear to have been on track to break even or make modest profits on ACA-compliant policies in 2017 had cost-sharing reduction payments continued. These findings have at least two significant implications.

First, these findings demonstrate that the premium increases for ACA-compliant individual market policies that insurers will implement for 2018 were largely avoidable. With insurers' margins having returned to a roughly sustainable level in 2017, a stable policy environment would have allowed individual market premiums to grow at a moderate pace in 2018. The fact that premiums will rise more significantly reflects the adverse effects of decisions made by federal policymakers over the course of this year.

Second, these findings can help inform the debate over the future of the ACA. Many policymakers who supported repealing major provisions of the ACA justified their position by arguing that the individual market was at imminent risk of collapse, which necessitated radical and disruptive action. The fact that the individual market was poised to stabilize in 2017 absent changes in policy seriously undermines this argument. Correspondingly, these findings should make an approach that builds on the policy framework established by the ACA look more attractive.

This paper also suggests some directions for future research. A fully satisfying account of why insurers incurred significant losses in 2014 and, particularly, why those losses persisted through 2016 remains elusive. Better understanding what made the transition to the new institutional environment created by the ACA challenging may help policymakers manage future policy transitions more effectively.

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Appendix A: Additional Methodological Detail

The methodological appendix provides additional detail on the data sources and methodology used to produce the estimates in this analysis. I discuss several aspects of the methodology in turn.

Estimating Insurer Margins for 2011 through 2015

As described in the main text, for years 2011 through 2015, I measure insurers' financial performance using insurers' MLR filings with CMS, for which CMS releases an annual public use file (CCIIO, 2017a). I define the five categories of revenues and expenses used in this analysis as follows:

- Premium revenue: This category includes premium revenue from all sources. This amount is calculated by first summing the following amounts: direct premium revenue (Part 2, Line 1.1 of the MLR form), receipts from federal and state high risk pools (Part 1, Lines 1.2 and 1.3 of the MLR form), group conversion revenue (Part 2, Line 1.8 of the MLR form), and premium paid in the prior year toward current year coverage (Part 2, Line 1.2 of the MLR form). I then subtract premium balances written off (Part 2, Line 1.7 of the MLR form) and premiums paid in the current year toward a subsequent year's coverage (Part 2, Line 1.3 of the MLR form) to obtain the final estimate of premium revenue for the current coverage year.
- Transitional reinsurance program receipts: This category consists solely of receipts from the transitional reinsurance program. These amounts are reported at Part 2, Line 1.9 of the MLR form.
- Net claims costs: This category is defined as total incurred claims (Part 1, Line 2.1 of the MLR form) net of cost-sharing reduction receipts (Part 2, Line 2.18 in the applicable years).
- Administrative costs: This category includes all spending other than spending on claims, taxes, and fees; this includes amounts treated as "quality improvement expenses" under the MLR program. This category is calculated by summing: (1) the "non-claims costs" reported on Part 1, Section 5 of the MLR form, excluding the "other taxes" reported in Line 5.5 and items marked "information only"; and (2) the quality improvement costs reported on Section 4 of Part 1 of the MLR form.
- Taxes and fees: This category includes all taxes and fees. This category is calculated by summing all line items reported in the taxes and fees section of the MLR form (Part 1, Section 3) and the "other taxes" reported on Part 1, Line 5.5a and Line 5.5b of the MLR form.

As also noted in the main text, for years 2014 and later, I focus on experience for ACA-compliant plans. I use the information report on the MLR form for plans subject to the risk corridor program as a proxy for insurers' experience on ACA-compliant plans since the risk corridor universe is nearly coextensive with the universe of ACA-compliant plans. One complication created by this approach is risk adjustment transfers need not net to zero inside the risk corridor universe. In practice, plans in the risk corridor universe made small net risk adjustment transfers to plans outside the risk corridor universe of \$4 per member per month (PMPM) in 2014 and \$2 PMPM in 2015.

For the purposes of this analysis, I treat these net risk adjustment payments as additional claims costs. The rationale for this approach is that, if risk adjustment is operating appropriately (and plans inside and outside the risk corridor universe are broadly similar in design), then the per member per month risk adjustment transfer from plans inside the risk corridor universe to plans outside the risk corridor universe should approximately equal the difference in average claims costs between the two sets of plans. In any case, the precise method of handling these payments has little effect on the ultimate results.

Estimating Insurer Margins for 2016

As described in the main text, MLR filings for 2016 will not be publicly available until later this year, so I use a combination of data sources to estimate insurers' financial performance during 2016. In general, to estimate each component of insurer revenues and expenses in 2016, I start with the MLR-based PMPM estimate of that category for 2015. I then increase that amount by a "trend percentage" that reflects the best available data on how that category of revenues or expenses changed from 2015 to 2016. The one exception is federal income tax liabilities, for which I use a different approach. The data and methods used to calculate the trend percentage for each category, as well as the approach used for federal income tax liabilities, are described in detail below.

Premiums and reinsurance program payments

To estimate the trend percentage for premiums and reinsurance program payments, I rely on data from CMS' premium stabilization program reports for the 2015 and 2016 program years (CCIIO, 2016c; CCIIO, 2017a). For premiums, these data show that the national weighted average PMPM premium in the ACA-compliant market increased by 7.3 percent from 2015 to 2016, and I use that percentage as the trend percentage. The premium stabilization program reports do not include data for Massachusetts or Vermont, but this omission is unlikely to meaningfully affect the results since these states accounted for less than 2 percent of individual market enrollment in 2015.

For reinsurance payments, I first compute the PMPM reinsurance outlay in the ACA-compliant market for 2015 and 2016 by dividing the aggregate reinsurance outlay for each program year by the total number of ACA-compliant member months reported in the premium stabilization program data, with a small adjustment to account for the lack of enrollment data for Massachusetts and Vermont in the premium stabilization program reports. These calculations show that PMPM reinsurance payments fell by 52 percent in 2016. I use that estimate as the trend percentage.

Claims spending and administrative spending

To estimate the trend percentage for claims and administrative spending, I rely on data from Supplemental Health Care Exhibits (SHCEs) that insurers filed with state regulators and compiled by the NAIC for 2015 and 2016. One important limitation of the SHCE is that it does not separately report experience for ACA-compliant and non-ACA-compliant plans. That poses a significant challenge for this analysis because of the ongoing shift in enrollment toward ACA-compliant plans.

Both claims spending and administrative spending tend to be higher in ACA-compliant policies as a result of their more generous benefits and availability to individuals with significant health care needs. As a result, the compositional shift in enrollment has caused claims growth in the individual market as a whole to be considerably higher than claims growth in the ACA-compliant market. For example, the MLR data show that PMPM claims spending rose by 16 percent in the individual market as a whole in 2015, but rose only 3 percent in the ACA-compliant market.

In light of this complication, I proceed as follows. First, I use the SHCE data to estimate PMPM claims and administrative spending for the individual market as a whole (including both ACA-compliant and non-ACA-compliant plans) for 2015 and 2016. I do so using the following fields of the SHCE:

- *Net claims spending:* I estimate net claims using the “total incurred claims” line (Part 1, Line 5.0). Cost-sharing reductions are not reported separately on the SHCE but are supposed to be netted out of incurred claims, so this estimate is conceptually comparable to the estimate of net claims obtained from the MLR data. The amounts reported in the two fields for 2015 are similar.
- *Administrative spending:* I estimate administrative spending as the sum of general and administrative expenses (Part 1, Line 10.5), claims adjustment expenses (Part 1, line 8.3), and health care quality expenses (Part 1, Line 6.6).

Second, I adjust the raw SHCE data for compositional changes as follows:

- *Step 1 – Estimate claims and administrative costs for ACA-compliant and non-ACA-compliant policies in 2015 using MLR data:* The first step is to use the MLR data to estimate PMPM claims and administrative spending in 2015. I estimate PMPM amounts for ACA-compliant plans in 2015 using the same used in the rest of the analysis. To estimate PMPM amounts for non-ACA-compliant plans, I use the experience reported for plans outside the risk corridor universe and then make an adjustment to reflect the fact that a small number of plans outside the risk corridor universe are, in fact, ACA-compliant.

In detail, I start by assuming that experience for ACA-compliant plans outside the risk corridor universe is the same as experience for plans inside the risk corridor universe. Under this assumption, the fact that average PMPM reinsurance payments to plans outside the risk corridor universe are approximately one-fifth as large as payments to plans inside the risk corridor universe implies that ACA-compliant plans account for approximately one-fifth of enrollment outside the risk corridor universe. This estimated enrollment share, together with the initial assumption, makes it possible to infer experience for non-ACA-compliant plans.

- *Step 2 – Scale the 2015 estimates from step 1 to match the SHCE data:* Due to slight reporting and conceptual differences, the dollar amounts reported in the SHCE data do not exactly match with the amounts reported in MLR data. I thus scale the PMPM amounts calculated in step 1 based on the percentage difference between the *market-wide* PMPM amounts calculated using the MLR data and the SHCE data.
- *Step 3 – Make an assumption about how PMPM costs for non-ACA-compliant plans evolved in 2016:* While the number of individuals enrolled in non-ACA-compliant plans is shrinking steadily over time, the types of individuals enrolled in those plans and the types of plans they are enrolled in are likely relatively stable. This implies that claims and administrative costs in these plans are likely to rise roughly in accordance with the underlying costs of the relevant services. Consistent with this, I assume that PMPM claims costs in non-ACA-compliant plans rose by 5 percent in 2016 and PMPM, roughly consistent with estimates of growth of per enrollee claims costs in employer coverage. I assume that PMPM administrative costs rose by 1.3 percent, matching the increase in the Gross Domestic Product (GDP) price index in 2016. Plausible alternative assumptions would not meaningfully change the results. For example, increasing the assumed growth rate of PMPM claims costs in non-ACA-compliant plans from 5 percent to 10 percent would reduce the implied growth rate of PMPM claims costs for ACA-compliant plans by only 0.5 percentage points.

- *Step 4 – Estimate the share of individual market enrollment in non-ACA-compliant plans in 2016 using SHCE and CMS data:* To estimate this share, I use the SHCE data to estimate total enrollment in the individual market in 2016. I then use the CMS premium stabilization program reports discussed above to estimate total enrollment in the ACA-compliant plans in 2016. (As noted above, the CMS premium stabilization reports do not include data for Massachusetts and Vermont, so I use the MLR data for 2015 to produce a rough estimate of the missing ACA-compliant enrollment.) The enrollment share of interest is just the ratio of these two quantities.
- *Step 5 – Infer ACA-compliant dollar amounts for 2016:* The market-wide estimates of PMPM claims and administrative spending in 2016 from the SHCE, together with the results from steps 3 and 4, can be used to back out implied PMPM amounts for ACA-compliant plans.

Applying this algorithm implies that PMPM claims spending in the ACA-compliant market grew 1.5 percent in 2016, compared to an unadjusted 5.0 percent growth rate in the individual market as a whole. The algorithm implies that PMPM administrative spending in the ACA-compliant market grew 1.4 percent in 2016, compared to an unadjusted 3.4 percent growth rate in the individual market as a whole. I use the adjusted growth rates as the trend percentages for the applicable categories.

As a final note, one additional shortcoming of the SHCE data is that they do not include information for most California insurers since most California insurers report to the Department of Managed Health Care, which uses a different financial reporting system. Because observing only a small slice of a state’s market can generate misleading results if there are significant changes in market share from one year to the next, I entirely exclude California from the calculations described above. This approach could cause me to modestly overestimate or underestimate actual national trends in 2016 to the extent that the trends in California differed from the trends in the nation as a whole.

Taxes and fees

To estimate how taxes and fees evolved in 2016, I use a disaggregated approach that takes account of the rules governing each of these taxes and fees. For most categories of taxes and fees, I start with the MLR-based estimate of the PMPM amount paid toward those taxes and fees in 2015 and trend the amount forward using a trend percentage. The exception, as described below, is federal income tax liabilities. In detail, I handle each category of taxes and fees as follows:

- *Patient Centered Outcomes Research Institute (PCORI) fee:* The trend percentage for this fee is the percent change in the amount of the PCORI fee from the 2015 plan year to the 2016 plan year, as reported in Internal Revenue Service (2017).
- *Transitional reinsurance program contributions:* The trend percentage for this fee is the percent change in the required PMPM reinsurance program contribution from the 2015 benefit year to the 2016 benefit year, as published by CMS (CCIIO, 2016b).
- *ACA health insurance fee:* The ACA specifies the total amount to be collected under this fee (\$11.3 billion for both the 2015 and 2016 calendar years) and directs IRS to allocate that amount across insurers based on their total premium revenue in the prior year. In light of this structure, I estimate the trend percentage for this category as follows.

First, I estimate the amount of tax due per dollar of premium in the prior year using data published by IRS for the 2015 and 2016 fee years. Second, I estimate the aggregate amount

of tax due in 2015 and 2016 that is attributable to individual market business by multiplying this tax rate by aggregate individual market premium revenue in the prior year. Third, I assume that the percentage change from 2015 to 2016 in the amount of health insurance fee reported on MLR filings will match the percentage change in these amounts. Fourth, to compute a PMPM percentage change that can be used as a trend percentage, I assume that individual market enrollment was approximately unchanged nationwide from 2015 to 2016, consistent with the enrollment trends shown in the SHCE data and CMS premium stabilization program reports.

- *State taxes and fees:* This category consists of the amounts reported on Part 1, Line 3.2a-3.2c of the MLR form, which includes state income and excise taxes, state premium taxes, and state-mandated community benefit expenditures. The PMPM amount of these assessments was basically unchanged in inflation-adjusted terms from 2011 to 2015, so I use a trend percentage of 1.3 percent, the percent change in the GDP price index in 2016.
- *Federal income taxes:* Federal income tax liability can flip from positive to negative depending on financial performance, so the trend percentage approach used for other categories can give poor results for federal income taxes. Instead, I exploit the fact that there is a tight linear relationship between the market-wide PMPM underwriting margin (excluding federal income taxes and the ACA health insurance fee, which is non-deductible for income tax purposes) and market-wide PMPM federal income tax liabilities during the 2011 to 2015 period. I estimate that relationship using a simple linear regression, and I then use the estimated relationship and my predictions for all other categories of revenues and expenses to predict the PMPM federal income tax liability that will be reported on MLR filings for 2016.
- *All other taxes and fees:* This category consists of all taxes and fees not included in one of the categories described above. The user fee paid by insurers that offer coverage on the Health Insurance Marketplace accounts for the large majority, but not the entirety, of this category. Unfortunately, the user fee is not separately reported on the MLR filings. To cope with this structure, I estimate the trend percentage as follows.

First, I estimate the PMPM amounts attributable to all taxes and fees other than Marketplace user fees in both 2015 and 2016 by taking the amount reported in this category on the MLR filings in 2013 and trending it forward based on the observed change in the GDP price index. Second, I estimate the PMPM amount attributable to the Marketplace user fee by taking my estimate of PMPM premium revenue for 2016, multiplying it by the federal user fee percentage of 3.5 percent, and multiplying this amount by 0.68 to reflect the share of ACA-compliant market enrollment that was inside the Marketplace based on CMS' premium stabilization and effectuated enrollment reports (CCIIO, 2017b; CMS, 2017). This approach does not account for the fact that State-based Marketplaces generally have different user fee structures (Miskell et al. 2015). However, accounting for this difference is unlikely to dramatically change the results. Finally, I total these two subcomponents and compute the overall percentage change from 2015 to 2016; I use this percentage as the trend percentage.

As an alternative to the disaggregated approach described above, I considered using an approach based on the SHCE data, like the approach for claims and administrative costs described above. However, taxes are reported at a much higher level of aggregation on the SHCE than on the MLR filings, which would have made it challenging to use the resulting estimates for 2016 as a jumping off point for producing estimates for 2017. In addition, for unknown reasons, the tax amounts reported on the SHCE are considerably lower than the amounts reported on the MLR filings, and it is unclear

that the two data sources are measuring the same quantity. In any case, because taxes accounted for only around 4 percent of premium revenue in the ACA-compliant market in 2015, the method used for these purposes has little effect on the overall results.

Projecting Insurer Margins for 2017

Because 2017 is not yet over, data on insurers' financial performance is necessarily incomplete. Nevertheless, data that are already available can be used to construct a reasonable projection of insurers' performance in 2017. Similar to the approach used to estimate financial performance for 2016, I start with the PMPM estimates for 2016 and increase them by a "trend percentage" that reflects the best available information on how that category of revenues or expenses changed from 2016 to 2017. Once again, the exception to this approach is federal income tax liabilities, for which I use a different methodology. I describe the approach for each category in detail below:

- Premium revenue: To estimate the premiums trend percentage, I rely upon data from HHS and state regulators. In particular HHS data show that, in the states using the HealthCare.gov enrollment platform, average PMPM premiums were 23.3 percent higher at the end of 2017 open enrollment than at the end of 2016 open enrollment among individuals with Marketplace plan selections (ASPE, 2016b; CCIIO, 2017c). Other data show that benchmark premium changes were 3.0 percentage points lower nationwide than in states using the HealthCare.gov platform and that average approved rate increases were 2.6 percentage points lower nationwide than in these states (APSPE, 2016b; Gaba, 2016). It is likely that the increase in PMPM premiums was, similarly, lower nationwide than in HealthCare.gov states. Thus, I use a trend percentage of 20.5 percent, 2.8 percentage points lower than the HHS figure for the Healthcare.gov states.
- Reinsurance program payments: Consistent with the expiration of the transitional reinsurance program for 2017, I assume that reinsurance payments will fall to zero in 2017.
- Claims spending: To estimate the trend percentage for claims spending, I rely upon an analysis of insurers' quarterly filings with state regulators by Mark Farrah Associates (2017). That analysis finds that PMPM claims spending in the individual market as a whole through the first two quarters of 2017 was 4.7 percent higher than the same period in 2016.

I then use a method very similar to the method applied in 2016 to adjust this growth rate for the increased penetration of ACA-compliant plans in 2017, with the following modifications. First, in lieu of the amounts calculated in steps 1 and 2 of the compositional adjustment, I use my final estimates of claims spending by ACA-compliance status for 2016. Second, in step 4 of the compositional adjustment, I compute the compliant share for 2017 under the assumption that market-wide growth in enrollment matches what is reported in the Mark Farrah Associates analysis and non-compliant enrollment declined at the same rate in 2017 as it declined in 2016. Third, for the calculations in step 5 of the computational adjustment, I estimate market-wide per member per month claims spending by trending my final 2016 estimates forward to 2017 using the Mark Farrah Associates estimates. The final adjusted growth rate is 2.7 percent, and I use this amount as the trend percentage for claims spending in the base scenario in which cost-sharing reduction payments continued.

To estimate 2017 margins in the scenario in which no cost-sharing reduction payments are made for the final three months of 2017, I start with the estimate of PMPM cost-sharing

reduction payments in ACA-compliant plans from the MLR data for 2015. I then trend this amount forward to 2017 based on the overall trend in PMPM claims costs in the ACA-compliant market, estimated as described above. I then add one quarter of this amount to PMPM claims spending for 2017.

- **Administrative spending:** Little information on the evolution of administrative spending during 2017 is available, so I assume a trend percentage of 1.8 percent for this category, consistent with Congressional Budget Office's June 2017 projection of the increase in the GDP price index in 2017 (CBO, 2017). Because of the relatively small size of this category, the precise assumptions made about how it has grown in 2017 has little effect on the final results.
- **Taxes and fees:** I project taxes and fees using the same disaggregated approach used for 2016, which was described above. In doing so, I take account of the changes in policy affecting these taxes in 2017, notably the suspension of the ACA's health insurance fee and the end of contributions to the ACA's transitional reinsurance program. Similarly, I trend the PMPM amount of the PCORI fee forward to 2018 based on the percent change in per enrollee private insurance spending from 2016 to 2017 reported in CMS' most recent National Health Expenditure projections, consistent with the statutory methodology for updating the fee amount (OACT, 2017).

Estimating the Change in the Effective Cost of Insurance Coverage for Unsubsidized Enrollees in 2017

As described in the main text, to calculate the expected change in enrollment among unsubsidized enrollees, I need to estimate the year-over-year change in the effective cost of purchasing insurance coverage, meaning the premium minus the individual mandate penalty, for this group.

To do so, I use 2016 data on income and insurance coverage from the Current Population Survey. I start by grouping individuals into tax units based on a simplified version of IRS rules. For each individual in the dataset, I then calculate how the penalty liability of that individual's tax unit would change if the individual dropped insurance coverage. I then calculate the average of these amounts among current individual market enrollees in tax units with incomes above 400 percent of the federal poverty level. I find an average penalty of \$2,165 in 2016. I also find that the average penalty would rise to \$2,384 in 2017. The average penalty increases mainly because the maximum individual mandate penalty is based on the national average premium for a bronze plan, which I assume will rise in parallel with overall premiums.

My main results, reported in Appendix Table B2, imply that the average ACA-compliant per member per year premium was \$4,520 in 2016. Combining this estimate with the mandate penalty estimates above implies that the 20.5 percent increase in ACA-compliant premiums that occurred in 2017 translated to a 30.0 percent $(=[1.205*\$4,520 - \$2,384]/[\$4,520 - \$2,164])$ increase in the effective cost of insurance coverage for a representative individual market enrollee with income above 400 percent of the federal poverty level.

For the purposes of constructing the mandate penalty estimates described above, I assumed that each person makes an individual decision about whether to drop insurance coverage. However, I also considered a scenario in which all members of a family enrolled in the individual market make the same decision about whether to drop insurance coverage. Because of the structure of the ACA's individual mandate, this approach leads to an average mandate penalty of \$1,402 per person dropping coverage in 2016 and \$1,464 in 2017, averaged over the same group of enrollees as above.

These amounts lead to a slightly smaller year-over-year increase in the effective cost of insurance coverage of 27.7 percent. While there are arguments for preferring this smaller estimate, I use the higher estimate to be conservative.

Projecting 2018 Premium Changes in a Stable Policy Environment

Most of the methods used to estimate the amount that ACA-compliant premiums would have risen for 2018 in a stable policy environment are described in the main text. The exception is the methodology used to project changes in taxes and fees for 2018. In general, these methods are the same as those used for 2016 and 2017, which were described above. There are, however, some narrow exceptions.

In particular, the methodology for projecting ACA's health insurance fee required two modifications. First, when estimating these amounts for the 2016 fee year, I was able to rely on published IRS data on the aggregate amount of premium revenue subject to the fee for the 2016 fee year, but similar information is not yet available for the 2018 fee year. To obtain a comparable estimate, I trend the 2016 amount forward to 2018 based on the percent change in aggregate private insurance spending in CMS' most recent National Health Expenditure projections (OACT, 2017). Second, when computing the PMPM amount in the individual market, I assume that total individual market enrollment for 2018 will be 15.8 million, reflecting an assumption that enrollment was flat from 2015 to 2016, fell by slightly more than 10 percent in accordance with the Mark Farrah Associates estimates cited above, and would remain flat from 2017 to 2018 absent changes in policy.

Additionally, some components of taxes, notably federal income taxes and Marketplace user fee payments, depend directly on the level of 2018 premiums. To account for this interaction, I solved for the year-over-year change in premiums that held insurers' overall margin constant as a percent of premiums, accounting for this interaction with tax liabilities. Thus, the increase in taxes reported in the main text is consistent with the final 6.9 percent premium increase estimated for 2018.

Appendix B: Table of Year-by-Year Estimates

Table B1: Per Member Per Month Estimates by Year

Year	Premiums	Reinsurance Payments	Net Claims Spending	Admin. Costs	Taxes and Fees	Overall Margin
Full Individual Market						
2011	230	0	186	38	6	1
2012	236	0	197	38	5	-3
2013	245	0	208	43	3	-8
ACA-Compliant Market						
2014	341	74	361	54	20	-19
2015	351	46	373	50	15	-40
2016	377	22	378	50	14	-44
2017	454	0	388	51	16	-2

Source: Author's calculations based on CMS, NAIC, and CBO data and Mark Farrah Associates analysis of NAIC data.