How Has the Medical Loss Ratio Impacted the Financial Performance of Insurance Companies?

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Contents

Abstract

With new administration in Washington, the Affordable Care Act is destined to undergo changes, but these changes are not likely to happen fast due to the differing opinions within the Republican Party. During this time of uncertainty, it is important to examine the effects of the ACA and the policies within this program. In addition to insuring millions of Americans, the ACA places restrictions on how health insurance companies operate (Facts on the Affordable Care Act 2017). One of the most prominent regulations is known as the Medical Loss Ratio (MLR). The MLR requires insurance companies to pay out 80-85 percent of the premiums they collect to reimburse clinical expenses for their policyholders, rather than to retain a substantial portion as profits or to spend on administrative costs (Impact of Medical Loss Regulation 2013). If the companies do not meet the threshold, they are required to issue the remainder as a rebate to the enrollee (Medical Loss Ratio Requirements 2014). In my thesis, I analyze the effect of the MLR requirement on health insurers. I use data collected under the MLR reporting requirement of every health insurer in the US for each year between 2012 and 2015. My approach is to assume that since the MLR requirement went into effect in 2012, that I can assess the difference between and insurer's performance in 2012 to 2015 to be due to the effect off the MLR. The data analyzed is collected by the Center for Consumer Information and Insurance Oversight (CCIIO) as a part of the Centers for Medicare and Medicaid Services. Through my research using the data set provided by the CCIIO, I have determined that there is not a direct link between the financial performance of the insurance companies and the MLR. The indicator that leads me to this conclusion is the lack of association between insurance company profit and average rebate per family per year. The profits of insurance companies decrease from

2012-2015 but the amount of rebate does not follow a specific trend. This leads me to conclude that the decrease in profit is attributed to multiple factors within the ACA. The ACA caused many changes in the health insurance industry making it difficult to disentangle the pieces of the ACA and strictly associate changes to one section of the law.

Introduction

In 2010, the Affordable Care act was signed into law by President Barack Obama (Facts on the Affordable Care Act 2017). This landmark legislation changed the healthcare delivery system across the United States. The ACA was met by opposition from all parties throughout the approval process but is the current health legislation. The goal of the ACA is to increase access to healthcare as well as increase the quality of health insurance plans provided to consumers (Priority Setting, Cost-Effectiveness, and the Affordable Care Act 2015). The ACA contains different requirements for enrollees and insurers that rely on each other in order to have a functioning healthcare delivery system. Portions of the ACA are able to survive because all US citizens are required to buy into the new system (Facts on the Affordable Care Act 2017).

The cornerstone of the ACA is the individual and employer mandate. The individual mandate requires all Americans to purchase health insurance coverage. The coverage can be bought on the state marketplaces or provided through an employer (The State of Your Health Insurance Marketplace 2017). If health coverage was not obtained by January 1, 2014, then the individual or family is required to pay a fine that will increase each year health insurance is not obtained (Affordable Care Act Penalty 2016). In addition, the employer mandate states that all employers with 50 or more employees are required to offer health insurance to all employees.

The health plan offered to the employees must meet the minimum standards outlined in the ACA in order to prevent underinsurance. If health insurance coverage is not offered by the employer, then the employer will pay a fine based on the number of employees (Facts on the Affordable Care Act 2017).

Continuing, in the health insurance marketplaces, subsidies and tax credits are available for families and individuals making below 400% of the federal poverty line (Obamacare Facts 2017). Tax credits and subsidies are the mechanisms that allow those who cannot afford health coverage a chance to receive the coverage and care they need. Allowing a larger portion of the population to be able to afford healthcare coverage has increased the size of the individual market.

The ACA includes provisions that are aimed at protecting the consumer while improving the performance of health insurers. The guaranteed renewal prevents insurance companies from dropping those they insure if the customer pays their premiums regularly (Guaranteed Renewal, 2016). Guaranteed renewal protects the insured from losing their coverage if they had a year of bad health and required more than anticipated medical claims, potentially causing the insurance company to lose money. Additionally, to prevent unnecessary spikes in premiums based on geographic location, the community rating was introduced. This section of the ACA specifically states that premium cannot be increased or adjusted based on age, gender, health status, or location (Community Rating 2016).

One controversial insurer oversight within the ACA is called the medical loss ratio. The MLR provision states for every one dollar an insurance company charges in premiums, 80-85

cents must be paid out in medical claims and quality improvement expenses. If the 80-85 percent is not met, then the insurance company owes the payer a rebate. In order to determine what percentage an insurance company must pay out in medical claims, the insurers are split into three sectors. These three sectors include the individual, small, and large markets. The sectors are based on the number of life years insured by the company. If the insurer falls into the small or individual sector, then the company must pay out 80% of the premiums collected to medical claims and quality improvement expenses. If the insurer falls into the large sector, then 85% must be paid out. If the 80-85 percent threshold is not met then a rebate is owed and can be paid out in a variety of ways. The company can issue a check, refund the amount to the associated account, or take the amount of the rebate off of the premium the following year (Medical Loss Ratio Requirements 2014). The main goal of the MLR is to force insurance companies to be more efficient and hold the companies to an affordable standard. Many health economists and policy writers have been researching the effects of the ACA and the MLR in order to help steer the future of healthcare in the United States. Researchers will be taking the data collected within the years that the ACA has been in effect to determine what portions of the ACA have helped increase access and add value to healthcare coverage plans.

Relevant Background Research

Many previous researchers have chosen to look at the ACA and the effect of the MLR on insurance companies. The ACA has required insurance companies to comply with new regulations such as minimum coverage and required reporting. A study published in the summer of 2015 by the Journal of Healthcare Finance looked at the financial performance of insurers who paid a rebate in compliance with the ACA. The authors of this study were Michael

J. McCue and Timothy Stack, both are professors at Virginia Commonwealth University. To begin, the researchers looked credible insurers between the years 2012 and 2013. The study specifically used the median tests in order to see the median values of the financial performance metrics. The categories analyzed were the medical loss ratio, administrative cost ratio, and the profit margin ratio.

One limitation in this study is due to missing data from specific insurers that did not report their financial information. These insurers were not able to be included in the results of the study. Some of the missing insurer data comes from the insurers who have pulled out of the market and did not have information to report. Additionally, the results focused on only credible insurers. To be credible, insurers must meet a minimum number of life years insured in order to be included in the scope of the study. The credible insurers were based on life years from the previous reporting year.

The researchers concluded over 2012 and 2013, the insurers across the small, large, and individual markets did see positive financial performance. After analyzing the data further, in the individual sector, the insurers who paid a rebate were more profitable than insurers who did not pay a rebate. Specifically, the individual insurers who did not pay a rebate operated at a financial loss for the year. In the small and large sectors the companies followed similar trends. Over the two years, these sectors saw an overall profit margin of about 6 percent. The percentage decreased from the previous year but when comparing the companies that paid a rebate versus the companies that did not, the companies who paid a rebate had higher profits.

In order to emphasize changes insurers made due to the passage of the ACA on the individual market, another study published in *Health* Affairs magazine in 2013 looked specifically at the impact of outcomes due to the MLR. The study was conducted by Michael McCue, Mark Hall, and Xinliang Liu. These three researchers are professors at Virginia Commonwealth University, Wake Forest, and University of Central Florida, respectively. They analyzed data between 2010 and 2011 from the National Association of Insurance Commissioners on the Supplemental Health Care Exhibit. Using the financial data from this organization, the researchers compared the medical loss ratio, administrative ratio, and operating margin of participating insurers.

The study limitations include a short time frame of data and the inability to isolate all the factors in the ACA to focus on the MLR. The researchers were unable to definitively conclude what factors caused financial changes given the chosen variables. The researchers were able to show a definitive parallel between rebates and profits especially in the individual market. The operating margin decreased between the given years allowing the profit margin to increase across all markets that issued a rebate. Due to the MLR, in 2011 the companies reported a total of $1.1 billion dollars in rebates flowing back to the customers. The researchers describe the difficulty of untangling the outcomes of each specific regulation in the ACA. Continued research is necessary to determine the outcomes of the ACA while taking more years of data into account.

Hypothesis*:* Using the data found in previous studies I was able to formulate a hypothesis. I believe after analyzing the data provided by the CMS website, I will see the largest changes in the individual market, specifically, the profits in this insurance sector will decrease at

a higher percentage when compared to the small and large markets. Additionally, the sector that provides the highest rebate will also have the highest administrative costs. The higher administrative costs will then lead to lower profits in the same sector.

Methods and Data

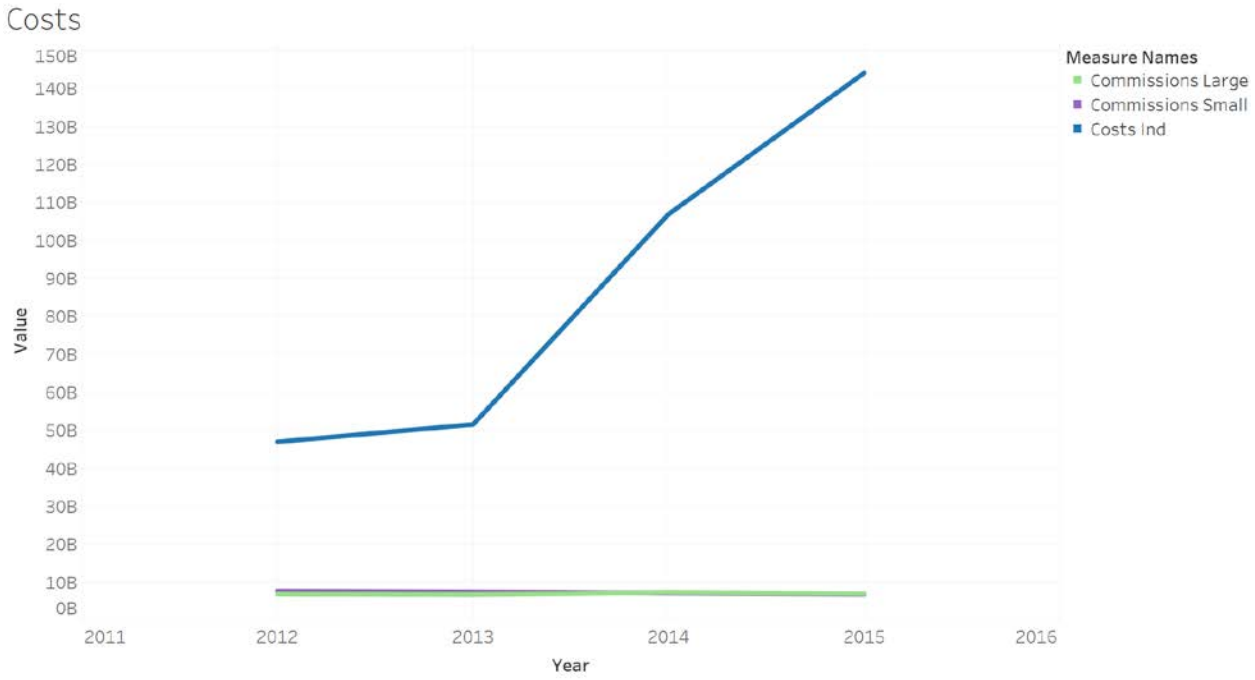
In order to answer my research question, I downloaded a zip file from the Centers for Medicare and Medicaid Services website containing data collected by the Center for Consumer Information and Insurance Oversight. The data was collected from 2011 to 2015. The website also contained separate files with rebate data separated by state and year. The rebate data is available on the website in PDF form. In order to analyze this data, I converted the files to excel. Because not all of the insurance companies submit data for each variable listed within the file from CMS, I had to spend a large portion of time dedicated to data cleaning. Some companies were dropped from the data completely due to the lack of constant information in the file.

Inside of the zip folder the data is split into six parts on separate Excel documents. Each year the data is separated by different variables than the previous year. In order to combine all of the data I had compiled, I performed a stat transfer to open the newly downloaded data into STATA. Once in STATA, I created a do-file in order to begin to clean and combine the data. I began entering commands to delete all cells that did not contain data. The inconsistencies in data sets between each year made it difficult to clean and analyze the data. I was unable to continue to work on this document due to the lack of consistency in the data. Once I reached a point that I could not work with the data further, I turned to a professor who created a version of this data in a manageable form. My conclusions and data analysis come from the data set provided by Dan Sacks. This data set contains the information from the CCIIO in a concise

manner and drops all missing data. In 2011, the insurance companies had the least consistent reporting and the ACA was not fully enacted in this year. Because of this factor, the data that I will be looking at will be contained to the years 2012 to 2015.

When taking a closer look at the data, I focused on the variables contained within the MLR calculation. In turn, I focused on total cost to insurance companies, profit of insurance companies, administrative costs, improvement expenses, and average rebate per family. First, when looking at total cost to insurance companies, the number displayed is the total cost incurred by a company for a given year. The dollar amount shown includes medical and administrative costs for the insurance market. The small, large, and individual sectors are shown in **Figure 1.** When looking at the individual market, there is a sharp increase in costs incurred by these companies from 2013 to 2015. We see a 307% increase in the total costs from 2012 to 2015 in the individual market. In contrast, the small sector sees a 10% decrease in their overall costs from 2012 to 2015. The large sector sees a less than 2% increase in overall costs during the same time frame.

Figure 1

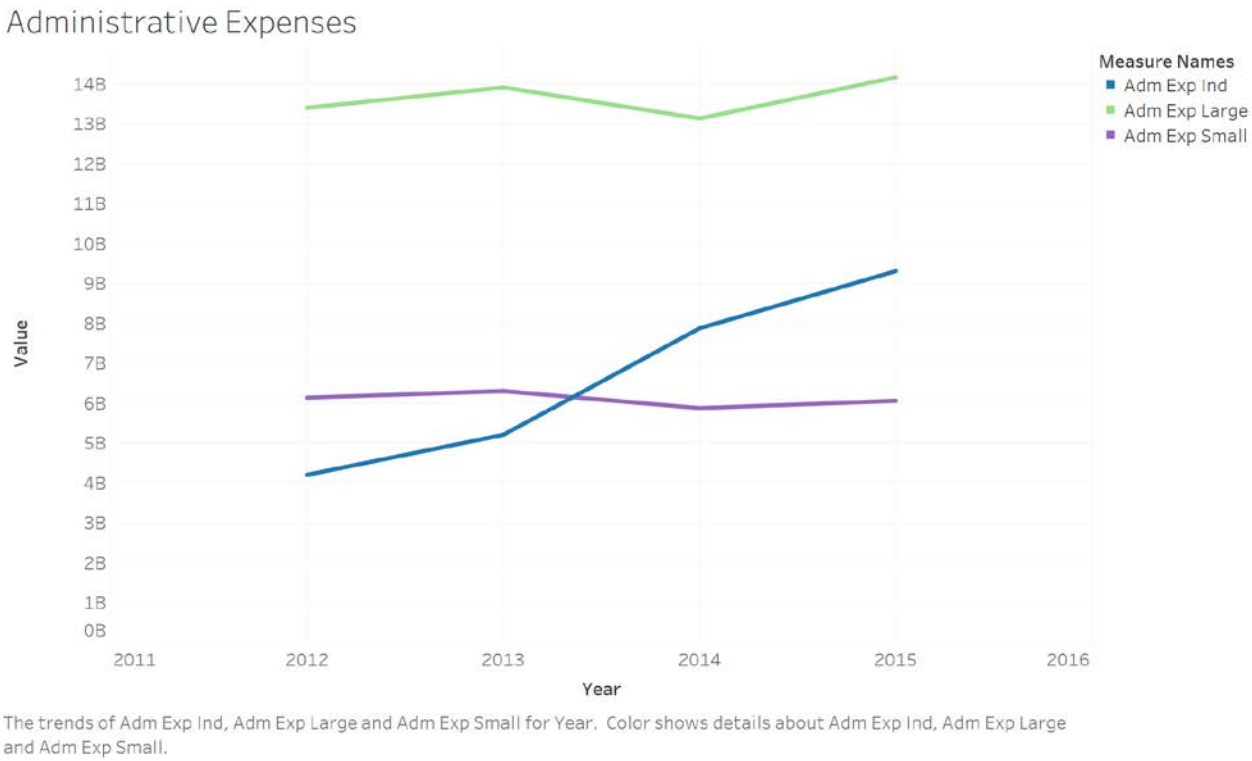


Source: Center for Consumer Information and Insurance Oversight
Notes: This figure illustrates the cost incurred by the insurance companies between the years 2012 and 2015. The figure shows the different trends in the small, large, and individual markets.

One of the goals of the MLR is to decrease unnecessary administrative expenses and to increase efficiency in the companies. The policy intends to add value to the health coverage plans. With 80-85 percent of premiums to be paid out in medical claims, insurance companies are forced to focus on being efficient administratively in order to increase their profits under the regulation. Administrative expenses from 2012 to 2015 are displayed in **Figure 2** and separated by sector. As seen in the previous graph, the small and large sectors follow a similar trend when comparing these sectors to the individual market. Administrative expenses from

2012 to 2015 show a 221.7% increase in the individual market. The increase in administrative expenses in this sector can be related back to the sharp increase of total costs incurred in the individual market. The large sector experienced a 5.7% increase in administrative expenses while, the small sector experienced a 1.3% decrease in their administrative expenses.

Figure 2

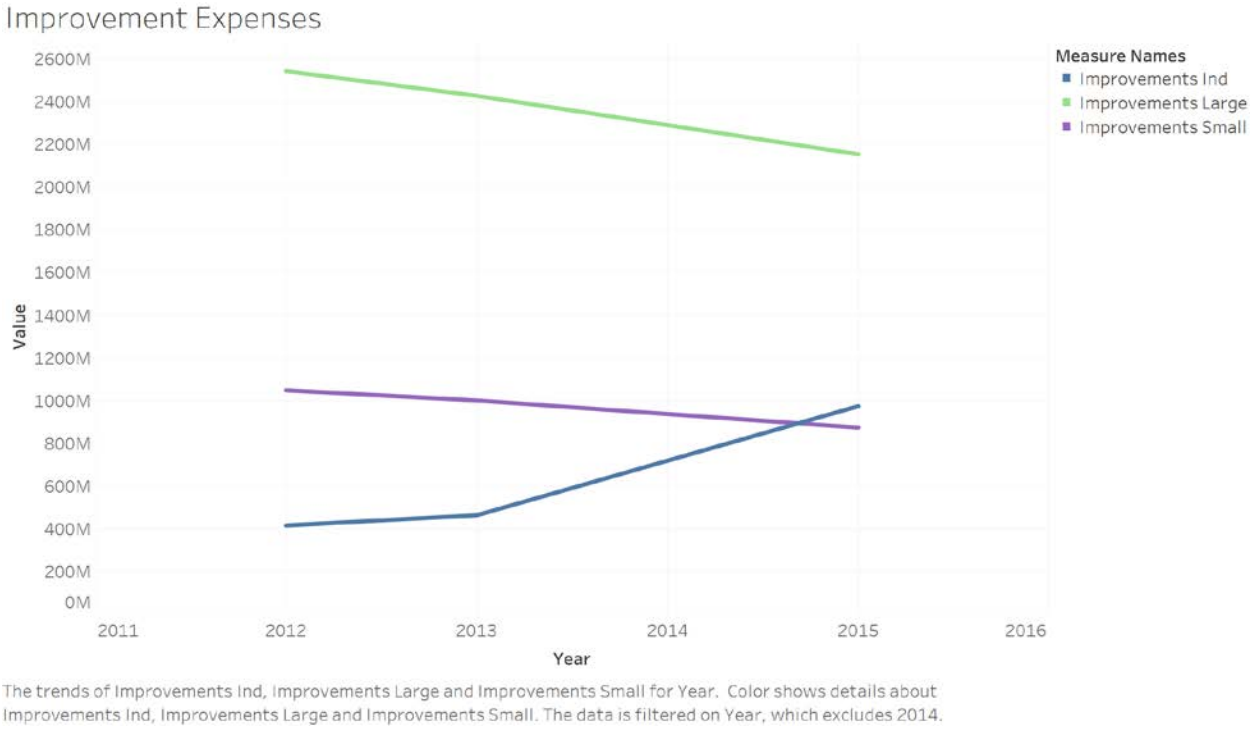


Source: Center for Consumer and Insurance Oversight
Notes: This figure shows the total amount of money spent on improvement expenses by insurance companies in the small, large, and individual markets from 2012-2015.

A component of the numerator in the MLR calculation is improvement expenses. After the passage of the ACA, improvement expenses were added to the calculation to help increase the value of the insurance plans for the consumer. Previously, improvement expenses were not included in the MLR and thus were not encouraged by the calculation to invest money into

quality improvement for the consumers and patients. **Figure 3** illustrates the amount of money allocated to improvement expenses between 2012 and 2015. The individual market increased the amount spent on improvement expenses by about 235%. The increase in improvement expenses in the individual market helps combat the increase in administrative expenses seen in **Figure 2.** The small and large market parallel each other in **Figure 3** and show a steady decline in the amount of money spent on improvement expenses.

Figure 3



Source: Center for Consumer Information and Insurance Oversight
Notes: This figure illustrates the change in improvement expenses from 2012-2015. The small, large, and individual markets are shown in this figure. The data from 2014 is excluded in this graph due to lack of reporting.

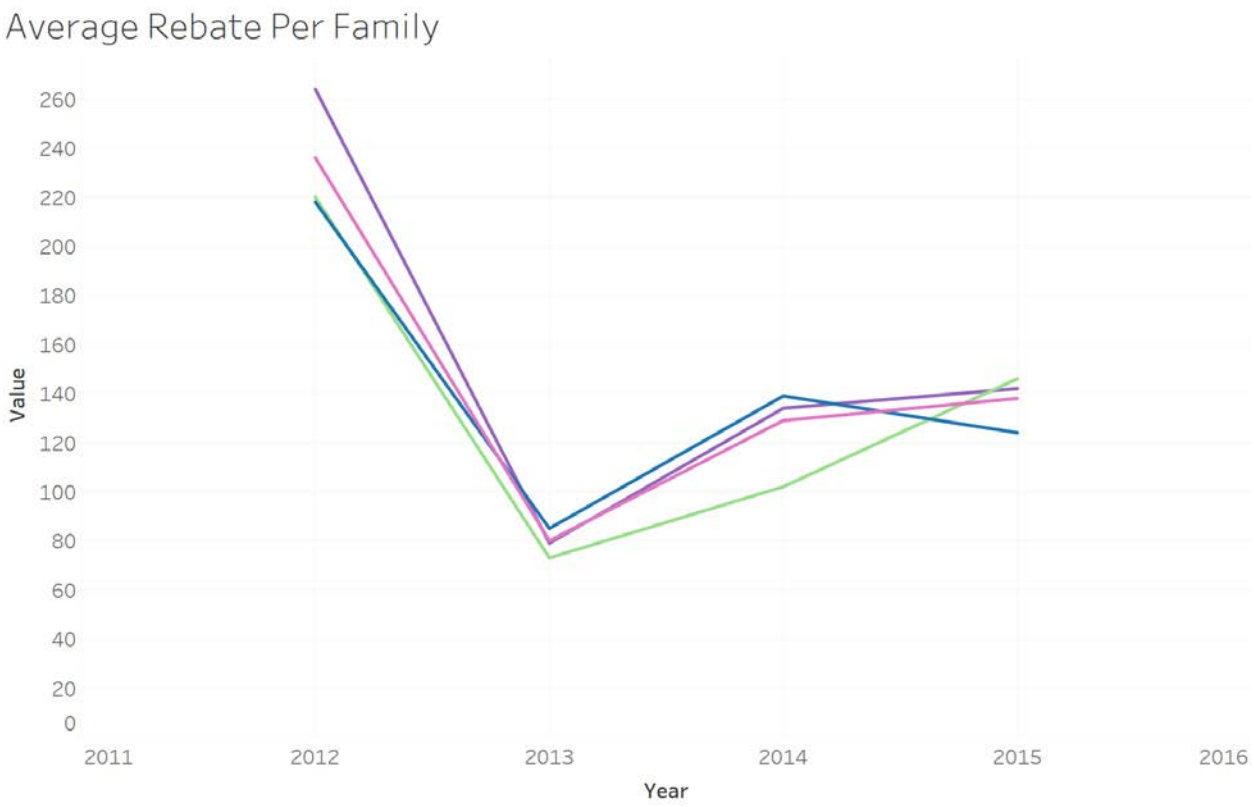
Figure 4 illustrates the aggregate data for insurance company profits from 2012 to 2015. The large sector insurers show a 54.2% decrease in profit between the years shown. The small sector insurers show a mere 14.2% decrease in profits. In contrast, the individual sector insurers have seen more than a 2000% decrease in profits during this time period. It is important to note that beginning in 2012, the individual insurers were operating while experiencing negative profits from the beginning to the end of the data set being analyzed. The small and large markets continue to make a profit between the years shown while the individual markets lose money.

Figure 4

Source: Center for Consumer Information and Insurance Oversight
Notes: This figure shows the total amount of profit made by insurance companies in the small, large, and individual sectors form 2012-2015.

Due to the change in calculation of the MLR, the average rebates owed to families have fluctuated while insurers determine the proper amount to charge in premiums. As shown in **Figure 5**, there is not a constant trend in average rebate data. Initially, researchers anticipated that the rebate clause of the MLR would impact insurers dramatically. In my analysis of rebates issued by insurance companies, there is not a direct correlation between average rebates per family to the insurance company profits. **Figure 5** depicts data from all markets and includes an additional line that displays the total trend for the whole market. In the graph, small, large, and individual insurers follow the same trend when issuing rebates. The large group is slightly more exaggerated in its increases and decreases but still follows the same trend as the small, individual, and total average markets.

Figure 5



Source: Center for Consumer Information and Insurance Oversight
Notes: This figure illustrates the average amount of rebates paid out per family by the small, large, and individual market from 2012-2015. This graph also contains a line of the average rebate paid to customers as compared to the other insurance sectors.

To explore the results in **Figure 5** further, I used a standard t test for comparing means between independent samples. Specifically, I determined if there was a statistically significant difference between the small, large, and individual sectors when considering the change over time in average rebate per family. I compared the average rebate per family between the

individual market and large market (t=0.955). I also compared the individual and small markets (t=0.655). Finally, I compared the small and large markets (t=0.86). Since the t statistic were all below the standard levels (generally about 2), I was able to determine that there is no statistical significance between the variable shown in **Figure 5.**

Results

When comparing health insurance sectors on all variables, the differences between each sectors is evident. The small and large sectors follow the same general trend on all variables while the individual sector sees drastic increases and decreases. Analyzing the individual market on each variable, the financial performance of the individual insurer decreases based on total profit. The total cost in this sector increases by 307% along with the total administrative costs by 221.7%. These two factors help lead to a 3000% decrease in profits in the individual sector.

The small and large markets did not see a drastic change when compared to the individual market. In all variables, with the exception of the administrative expenses and rebates, the data shows parallels between these two sectors. The small market sees a slight decrease in administrative expenses compared to the increases in the large and individual markets. The small and large markets have similar behavior due to the ability to spread risk across a larger range of enrollees. Furthermore, the insurance companies in this sector are also able to bargain for services to help mitigate costs. The plans offered in the small and large sectors did not require as much changing to comply with the new regulations under the ACA. The individual market had a larger margin to make up in order to comply with the 80/20 rule.

The rebate data does not provide direct insight to the financial performance of insurers. The range of data that is analyzed does not show a trend when organized by year. Additionally, when looking at the data by state, there are no consistencies from year to year. For example, in 2012 Washington had the highest average rebate per family at $512. The following year the same state has one of the lower average rebates per family at $122. The t-test performed on the data supports the conclusion that the variables are not statistically significant. When the data is separated by state there are no trends that stands out or could be associated with another variable that I have analyzed.

Discussion

The ACA is an extensive document that triggered many changes in the insurance industry. Insurers must adjust how they increase their profit in order to continue to comply with the MLR. This passage of the ACA had a significant impact on insurance companies but it is not solely due to the enforcement of the MLR. The introduction of the health insurance market places and the increase of enrollees entering the insurance market may have the strongest correlation to the changes in insurer profits.

As seen in previous studies, rebates provide insight to the profits earned by insurance companies analyzing companies who issued a rebate versus the companies who did not. When data is separated in this manner, researchers have seen higher profits in companies that issue rebates to their enrollees compared to companies who did not issue a rebate. When average rebate per family is separated by year, it shows there is not a pattern between profits and rebates on a yearly basis.

Rebates are a key feature of the MLR that adds transparency and value to the insurance plans offered to consumers. In 2011 about $1.1 billion of rebates were issued to enrollees (The Impact of the Medical Loss Regulation 2013). I was not able to see a trend in average rebate per family because I organized the data by year and state rather than by company. If I had organized the data by companies who issued a rebate and those who are not, I would have been able to draw more conclusions from the data set. On a state level, each state did not show a trend in rebates offered. Additionally, I did not have insurance company profit data by state so I was not able to compare states with higher rebates for a given year and the profits for the insurance company for that year.

Prior to the passage of the ACA, the individual sector had 43-48 percent of its plans and enrollees meeting the standards for the MLR (Healthcare Reform Explained 2012). The low percentage illustrates how many plans had to change in order to comply with the new standards. With over 50% of individual market plans changing, this sector anticipated major differences in their financial statements by the end of the first few years under the ACA.

In the small group insurance market the percentage of plans meeting the MLR standards before the ACA were between 70-76 percent. In contrast to the individual market, only about 30% of the plans had to change in order to comply with the new standards. This information is reflected in the data due to the small changes shown in the market. Although the changes in this market are small compared to the individual, the required adjustments did have an effect on the small market. Similar to the small market, the large group insurance market was at a 77-88 percent compliance rate with all of their health plans (Healthcare Reform Explained 2012). The large group was effected less than the small market but were still required to change a

small percentage of their plans. Continuing, the profits for the individual market decreased at a high rate because they were required to make many changes in their plans and organization in a small timeframe. They did not have to ability to accurately predict the amount of premiums dollars they needed to collect in order to balance the total dollars paid in claims due to the new regulations and influx of new enrollees, many of which have pre-existing conditions.

Due to the changes that all markets were required to make, the administrative expenses for all markets increased at some point. Issuing a rebate to enrollees plays a role in increasing the administrative expenses. Additionally, it is difficult to define what expenses are specifically included within administrative expenses compared to other categories.

In the ACA calculation of MLR, the improvement expenses variable can include a wide variety of costs. For example, any effort the insurance company makes to increase the wellness of enrollees is considered an improvement expense and helps increase the MLR calculation. Preventing hospital readmissions, improving patient safety, and reducing medical errors are a few improvements that fall into this category. Looking at the data, the individual market increased their improvement expenses by over 200%. In order for the individual plans to meet the MLR standard, improvement expenses is an area that insurance companies were able to funnel money into in order to meet the percentage threshold. Putting more money into this area is more advantageous for the insurance companies than paying out more money in claims, decreasing premiums, or issuing rebates. The other options do not add value to the insurance company or plan but they do decrease the potential for profit. If more money is added into improvement expenses, in the long run, insurance companies would see less claims due to decreasing readmissions and encouraging preventative care. Also, the company is adding value

to their plans for their enrollees, making health plans more competitive in the marketplace. As a total, the individual market has spent $222 million on measures that improve the quality of healthcare out of the $30 billion they have collected in premiums in the individual market in 2011 (The Impact of the Medical Loss Regulation 2013).

Conclusion

Overall, insurers have seen a difference in their financial performance since the passage of the ACA in 2010. The profits for all sectors of insurers decreased between 2012 and 2015. The profits of the small and large market decreased by 14% and 54% while profits in the individual market decreased by over 2000%. With the data provided by the CCIIO, I am not able to conclude the insurance companies have seen decreases in their profits solely due to the MLR. The ACA has many sections that caused changes within the insurance industry. It is impossible to disentangle the provisions in the ACA to the point that I could isolate the effects of the MLR.

To continue my research, I would like to see what financial data is available from before the passage of the ACA and compare the profits from year to year. Additionally, I would like to analyze the effect of rebates on insurance companies. If insurance companies increase their premiums to be sure they do not pay over the required 80-85 percent of medical claims I would see if the insurance companies increase their profits. With this method, the consumer would still receive the same quality of insurance that is required, but the insurance companies would protect themselves against errors in actuarial data and would not pay over the required amount. Answering this question could be important for individual insurers in order to begin to make a profit rather than continuing to lose money. Eventually, more insurers may be forced to

pull out of the market all together. As the healthcare climate in the United States continues to change with each new administration, more research required to determine what policies need to be kept and created. Continuing to research the MLR is a start to fixing America's health insurance system.

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