



The Hilltop Institute

analysis to advance the health of vulnerable populations

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MEMORANDUM

To: JP Cardenas, Kris Vallecillo, and Jessica Grau
CC: Alice Middleton
From: Laura Spicer, Alexis Smirnow, Chuck Betley, and Brenna Tan
Date: August 17, 2018
Re: SHOP Analysis

Introduction

The Maryland Health Benefit Exchange (MHBE) is seeking innovative ways to promote enrollment in the Small Business Health Options Program (SHOP), and one option is to seek a Section 1332 waiver to obtain federal pass-through funds for the SHOP tax credit so that the credit could be provided to plan sponsors in advance. SHOP enrollment in Maryland has remained low, with 111 active groups and 644 covered lives as of December 31, 2017.¹ Nationally, SHOP enrollment has also been low. As of January 2017, 27,205 groups with 232,698 covered lives were enrolled in SHOP marketplaces.² This is significantly less than the Congressional Budget Office's estimate that four million people would enroll in SHOP coverage by 2017 nationwide.

Advanced payment could potentially resolve some of the liquidity issues that prevent small employers from offering coverage to their employees. To assess this option, the MHBE requested The Hilltop Institute to estimate the following:

- The total number of employers in the state who are eligible to receive the tax credit
- The total number of employees who could benefit from the program
- The potential federal premium tax credit pass-through amount available in Maryland

In reviewing the literature, Hilltop identified a previous study that the Lewin Group conducted for Families USA, which estimated the number of small businesses eligible for the SHOP tax credit in 2011 using their Health Benefits Simulation Model. This simulation model includes a synthetic firm module that is based on Medical Expenditure Panel Survey data, the 1997 Robert

¹ MHBE. (February 20, 2018). *MHBE SHOP – Update*. Presentation to the MHBE Board of Trustees.

² CMS. (May 15, 2017). *The Future of SHOP*. Retrieved from <https://www.cms.gov/CCIIO/Resources/Regulations-and-Guidance/Downloads/The-Future-of-the-SHOP-CMS-Intends-to-Allow-Small-Businesses-in-SHOPs-Using-HealthCaregov-More-Flexibility-when-Enrolling-in-Healthcare-Coverage.pdf>.

Wood Johnson Foundation employer survey, and the 2006 Kaiser Family Foundation employer survey. In 2011, the maximum SHOP tax credit was 35 percent of the premium cost. This model estimated that 53,470 businesses in Maryland would be eligible for the 35 percent tax credit in 2011.³

Background

Prior Small Business Subsidies in Maryland

The Maryland Working Families and Small Business Health Coverage Act of 2007 created the Health Insurance Partnership, which provided subsidies to small businesses for purchasing health insurance. The subsidies were available to businesses with nine or fewer employees with low to moderate wages. This program was phased out with the enactment of SHOP under the Affordable Care Act (ACA). Like SHOP, the number of employers and covered lives under the Partnership remained low, with a range of 221 to 423 participating employers and 1,050 to 1,951 covered lives between 2009 and 2013.⁴

Brief Overview of SHOP

As small businesses are not required to offer health insurance coverage, the SHOP tax credit is intended to provide an incentive to small businesses to offer coverage for their employees. To qualify, the small employer must⁵:

- Have fewer than 25 full-time equivalent employees (FTEs) for the taxable year
- Pay average annual wages of less than \$50,000 per FTE (indexed annually for inflation beginning in 2014)
- Maintain a “qualifying arrangement” whereby the employer contributes, for each employee who enrolls in a qualified health plan offered by the employer through the exchange, a uniform percentage of at least 50 percent of the premium cost of the qualified health plan

Tax Credit Amount

Beginning in 2014, the maximum credit is 50 percent (35 percent for tax-exempt organizations) of the employer’s premium payments. The small business tax credit beginning in 2014 is only available for two consecutive years. If the number of employees is greater than 10 or the average annual wage is greater than \$25,000 (adjusted for inflation), two reduction factors are applied. If the number of FTEs is greater than 10, then the credit is multiplied by the number of FTEs in excess of 10 divided by 15. If the employer’s average annual wages are greater than \$25,000 (adjusted for inflation), the average annual wages above \$25,000 are divided by \$25,000. The

³ Families USA and Small Business Majority. (2012). *Good Business Sense: The Small Business Health Care Tax Credit in the Affordable Care Act*. Retrieved from

https://familiesusa.org/sites/default/files/product_documents/Small-Business-Health-Care-Tax-Credit.pdf

⁴ Maryland Health Care Commission. (January 1, 2016). *Health Insurance Partnership Final Report*.

⁵ ACA §1421; 26 USC § 45R(d)(1).

credit is multiplied by the fraction of average annual wages in excess of \$25,000. The sum of the two calculations is the overall reduction of the tax credit.

Other States

In December 2016, the federal government approved Hawaii's Section 1332 waiver that would allow the state to waive certain ACA provisions related to employer-based coverage because Hawaii already had extensive requirements regarding employer-sponsored health insurance that are stricter than the ACA.⁶ Hawaii requested federal pass-through funding in lieu of the small employer tax credit for their state premium supplementation fund. Hawaii estimated that the value of the small business tax credit since 2010 was \$182 million based on full utilization by all eligible employers and the maximum annual value of the credits for each employer multiplied by two years. For 2017 through 2021, Hawaii estimated that the tax credit savings would be approximately \$9 million per year or \$46 million total. This estimate assumed a 5 to 15 percent uptake for the credit on an annual basis, simplified by using an average of 10 percent. This analysis also assumed an even distribution of participation in the tax credit across the five-year waiver period and that the uptake of the tax credit prior to the waiver was negligible.

Hawaii used state employment data, valuation estimates from the Lewin Group, and the federal tax credit formula to estimate the tax credit savings. Using market size data and the tax credit eligibility estimates, Hawaii determined a distribution of employers based on the number of FTEs and average salaries, which was then paired with the allowable credit per employee and the average employee count. This analysis allowed Hawaii to estimate the total value of tax credit savings and the amount of federal pass-through funds they could receive.

Data Sources and Methodology

Identifying the Number of Potentially Eligible Businesses

To conduct the analysis, Hilltop first identified the number of businesses in the state with 25 or fewer employees. The Maryland Department of Labor, Licensing, and Regulation (DLLR) provided Hilltop with a list of Maryland-based small businesses with 25 or fewer employees, which was developed by the InfoGroup. The data set grouped business into three categories: 1-5 employees, 6-10 employees, and 11-25 employees. The data set also included the firm's industry classification or sub-classification using the North American Industry Classification System (NAICS) coding. The list initially contained 193,202 businesses, which decreased to 186,772 after cleaning.

To understand the underlying data set, Hilltop had a conference call with DLLR staff and learned the following. The state of Maryland has a contract with the InfoGroup to provide employer data to several state agencies, including DLLR, and these agencies use the data for various reports. The InfoGroup has a national employer database that they validate by calling every employer. The InfoGroup provides the state of Maryland with data twice per year. Unfortunately, Hilltop cannot independently validate the data. Anecdotal reports from DLLR staff indicate that

⁶ *Hawaii Section 1332 Waiver Proposal*. Retrieved from <https://governor.hawaii.gov/wp-content/uploads/2014/12/REVISED-Hawaii-1332-Waiver-Proposal -August-10-2016.pdf>

employers occasionally call with corrections to their information, but they have not observed any major issues. DLLR staff did note that the data are only updated twice per year and that small businesses tend to be volatile. To help validate our numbers, DLLR provided us with the following data from their *Quarterly Census of Employment & Wages; Employment; Quarter 4, 2017*: 106,788 private sector firms with 1-25 employees, with 681,639 employees. These counts are similar to Hilltop's median estimates using the data gathered by InfoGroup.

For estimating the average annual wages of these businesses, Hilltop used income data aggregated by Data USA (<https://datausa.io/about/>) from the American Community Survey (ACS) 5-Year Estimates and available for download as text files from the Data USA website.⁷ The estimated annual average salary was identified for each of the 44 public use microdata areas (PUMAs) in Maryland for each of the 20 NAICS categories provided in the DLLR dataset.

To map the average wage for each NAICS category to each of the firms in Maryland, Hilltop created a crosswalk using the Missouri Census Data Center's Geographic Correspondence Engine (<http://mcdc.missouri.edu/websas/geocorr14.html>). This crosswalk mapped each zip code in Maryland to its corresponding PUMA. Please note that several zip codes are assigned to more than one PUMA. If a zip code was assigned to multiple PUMAs, Hilltop averaged the wage across each of the PUMAs located in that zip code.

Data from DLLR were excluded from the analysis if:

- There were missing data points
- The firm's zip code was set to "99999"
- The NAICS classification was recorded as "Unclassified," as wage data are not provided for this category
- The firm's zip code was not assigned to a PUMA

To estimate the potential number of employees who could benefit from the program, Hilltop used the employer size ranges provided by DLLR to create minimum and maximum ranges within categories. The final analysis included 99,096 small businesses with an imputed average wage within the SHOP thresholds.

Average Premium

Hilltop obtained the average 2017 small group premium amount from the Maryland Insurance Administration's (MIA's) presentation to the Health Insurance Coverage Protection Commission on September 27, 2017, which was \$323 per month, or \$3,876 per year.

Inflation Adjustment

The average annual wage threshold for SHOP eligibility is \$50,000, and the threshold for adjusting the premium tax credit amount is \$25,000, both adjusted by the chained consumer price index for all urban consumers (C-CPI-U) for calendar years after 2016. Hilltop obtained the 2016

⁷ These data are aggregated by Deloitte, Datawheel, and Cesar Hidalgo, Professor at the MIT Media Lab.

adjusted amounts from a report by the Government Accountability Office (GAO), which were \$51,800 and \$25,900, respectively.⁸ The Bureau of Labor Statistics calculated the C-CPI-U for 2017 to be 2 percent, resulting in 2017 thresholds of \$52,836 and \$26,418.⁹ Per IRS rules, these are then rounded to the nearest thousand, which is \$53,000 and \$26,000, respectively.

Results

To estimate the maximum potential amount of federal pass-through dollars, Hilltop estimated the premium tax credit amount for each firm in the data set using the following formulas. Since employer size was provided in ranges, we developed estimates for both the upper and lower bounds of those ranges, as well as the median.

- For firms with 1-10 employees and an annual average wage less than \$26,000, the formula is:

$$\$3,876*.5$$

- For firms with 1-10 employees and an annual average wage above \$26,000, the formula is:

$$(\$3,876*.5) - [(\$3,876*.5)*((\text{Average wage}-\$26,000)/\$26,000)]$$

- For firms with 11-25 employees and an annual average wage less than \$26,000, the formula is:

$$(\$3,876*.5) - [(\$3,876*.5)*((\text{number of employees} - 10)/15)]$$

- For firms with 11-25 employees and an annual average wage above \$26,000, the formula is:

$$(\$3,876*.5) - [(\$3,876*.5)*((\text{Average wage}-\$26,000)/\$26,000) + (\$3,876*.5)*((\text{number of employees} - 10)/15)]$$

In cases where the premium reduction factor exceeded 50 percent of the average premium, the premium tax credit was set to zero.

⁸ <https://www.gao.gov/assets/680/675969.pdf>

⁹ https://www.bls.gov/news.release/archives/cpi_01182017.pdf

Table 1 assumes that each business had the minimum number of employees in the firm size range and assumes that all businesses take up the tax credit. This results in an estimate of \$217 million.

Table 1. Lower Bound Estimates of Minimum Potential SHOP Pass-Through

Income Range	Number of Firms	Firm Size	Base Premium	Reduction Factor	Premium Credit	Number of Employees
\$0 - \$26,000	8,403	1	\$16,285,014	\$0	\$16,285,014	8,403
\$26,000 - \$53,000	2,815	1	\$5,455,470	* ¹⁰ exceeds base premium	\$0	2,815
\$26,000 - \$53,000	74,360	1	\$144,109,680	\$82,058,602	\$62,051,078	74,360
\$0 - \$26,000	2,737	11	\$58,347,366	\$3,889,824	\$54,457,542	30,107
\$26,000 -\$53,000	1,253	11	26,711,454	* exceeds base premium	\$0	13,783
\$26,000 -\$53,000	9,528	11	203,117,904	119,189,259.29	\$83,928,645	104,808
Total	99,096		\$454,026,888		\$216,722,278	234,276

Table 2 assumes that each business had the maximum number of employees in the firm size range¹¹ and assumes that all businesses take up the tax credit. This results in an estimate of \$792 million. Please note that this table is provided for illustrative purposes only. As businesses may skew toward the smaller side of the employee range, this is likely a large overstatement.

Table 2.Upper Bound Estimate of Maximum Potential SHOP Pass-Through

Income Range	Number of Firms	Firm Size	Base Premium	Reduction Factor	Premium Credit	Number of Employees
\$0 - \$26,000	8,403	10	\$162,850,140	\$0	\$162,850,140	84,030
\$26,000 - \$53,000	2,815	10	\$54,554,700	*exceeds base premium	\$0	28,150
\$26,000 - \$53,000	74,360	10	\$1,441,096,800	\$820,586,019	\$620,510,781	743,600
\$0 - \$26,000	2,737	24	\$127,303,344	\$118,816,454	\$8,486,890	65,688
\$26,000 -\$53,000	302	24	\$14,046,624	13,647,425	399,199	7,248
\$26,000 -\$53,000	10,479	24	487,399,248	* exceeds base premium	\$0	251,496
Total	99,096		\$2,287,250,856		\$792,247,010	928,716

¹⁰ *Depending on the average wage and number of employees, the reduction factor may exceed the premium, and the tax credit is thus set to zero.

¹¹ We used 24 employees instead of 25 as the maximum, as the formulas constructed for the tax credit become zero for firms with 25 employees.

Table 3 assumes that each business had the median number of employees in the firm size range and assumes that all businesses take up the tax credit. This results in an estimate of \$418 million.

Table 3. Estimate of Potential SHOP Pass-Through Using Median Firm Size

Income Range	Number of Firms	Firm Size	Base Premium	Reduction Factor	Premium Credit	Number of Employees
\$0 - \$26,000	5,140	3	\$29,883,960	\$0	\$29,883,960	15,420
\$26,000 - \$53,000	2,102	3	\$12,221,028	* exceeds base premium	\$0	6,306
\$26,000 - \$53,000	56,505	3	\$328,520,070	188,166,533.88	\$140,353,536	169,515
\$0 - \$26,000	3,263	8	\$50,589,552	\$0	\$50,589,552	26,104
\$26,000- \$53,000	713	8	\$11,054,352	* exceeds base premium	\$0	5,704
\$26,000- \$53,000	17,855	8	\$276,823,920	\$154,691,391	\$122,132,529	142,840
\$0 - \$26,000	2,737	18	\$95,477,508	\$50,921,338	\$44,556,170	49,266
\$26,000 -\$53,000	6,724	18	234,560,016	* exceeds base premium	\$0	121,032
\$26,000 -\$53,000	4,057	18	141,524,388	110,718,935	\$30,805,453	73,026
Total	99,096		\$1,180,654,794		\$418,321,201	609,213

Tables 1 through 3 above assume that every business will offer insurance and take-up the tax credit. Table 4 below adjusts these assumptions for the likelihood that not all businesses will choose to offer insurance. Table 4 assumes that 30 percent of Maryland businesses with 25 or fewer employees will offer insurance and take-up the tax credit, while also assuming that the median number of employees best represents the number per business. To create these estimates, Hilltop took a random sample of 30 percent of businesses and then applied the corresponding tax credit formulas. The resulting total tax credit amount is \$126 million. Please note that the 30 percent take-up rate is proposed as an example based on estimates from the Medical Expenditure Panel Survey, which show that just over 30 percent of businesses with 50 or fewer employees in Maryland offered health insurance in 2016. The take-up rate is lower for businesses with fewer than 10 employees.¹²

¹² Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends. 2016 Medical Expenditure Panel Survey-Insurance Component. Retrieved from https://meps.ahrq.gov/data_stats/summ_tables/insr/state/series_2/2016/tiib2.htm

Table 4. Estimate of Potential SHOP Pass-Through with 30 Percent Take-Up Rate Among Maryland Firms using Median Number of Employees per Firm

Income Range	Number of Firms	Firm Size	Base Premium	Reduction Factor	Premium Credit	Number of Employees
\$0 - \$26,000	1,582	3	\$9,197,748	\$0	\$9,197,748	4,746
\$26,000 - \$53,000	634	3	\$3,686,076	* exceeds base premium	\$0	1,902
\$26,000 - \$53,000	16,695	3	\$97,064,730	\$55,875,299	\$41,189,431	50,085
\$0 - \$26,000	1,042	8	\$16,155,168	\$0	\$16,155,168	8,336
\$26,000- \$53,000	206	8	\$3,193,824	* exceeds base premium	\$0	1,648
\$26,000- \$53,000	5,336	8	\$82,729,344	\$46,335,045	\$36,394,299	42,688
\$0 - \$26,000	841	18	\$29,337,444	\$15,646,637	\$13,690,807	15,138
\$26,000 -\$53,000	1,234	18	\$43,046,856	\$33,559,410	\$9,487,446	22,212
\$26,000 -\$53,000	2,024	18	\$70,605,216	* exceeds base premium	\$0	36,432
Total *	29,594				\$126,114,899	183,187

*The remaining 26,438 firms randomly selected from the pool of employers had average incomes exceeding \$53,000 per year and would not be eligible for this program.

Limitations

Please note that this analysis has a number of limitations, including the following:

- Hilltop does not have data on the validity of the underlying Maryland small business data set.
- The analysis uses estimates of average wages based on survey data.
- The analysis uses data aggregated by Deloitte's Data USA platform. We could not find documentation of their data aggregation process, such as the survey weights used.
- Firm sizes are estimated using ranges.
- The analysis assumes the 50 percent tax credit base, while tax-exempt small businesses are only eligible for a maximum 35 percent tax credit.
- The underlying data set may include part-time employees, whereas the SHOP tax credit is based on FTEs, so the number of eligible employees may be an over count.
- The analysis may overestimate the number of eligible employees in that some may be eligible for Medicaid or may have access to other health insurance through a parent or spouse.