Plan Management Navigator
Analytics for Health Plan Administration

Healthcare Analysts

Douglas B. Sherlock, CFA
sherlock@sherlockco.com

Christopher E. de Garay
cgaray@sherlockco.com

Erin Ottolini
erin.ottolini@sherlockco.com

John Park, CFA
jpark@sherlockco.com

Andrew L. Sherlock
asherlock@sherlockco.com

(215) 628-2289

See Page 4 for more in-depth information on this analysis and participation in Sherlock Benchmarks.

Economies of Scale in Health Insurance

Conclusion

If calculated based on *total* administrative costs, economies of scale of administrative expenses are generally not significant or meaningful. For all 33 plans (combined) and for Independent / Provider Sponsored (IPS) plans, there was no significant relationship. But it was significant for the Blue Cross Blue Shield (Blue) plans, though with a 93.3% scale slope.

However, on a function by function basis, some functions are apparently subject to economies of scale. As shown in Figure 1, functions comprising a range of approximately 11.7% to 40.7% of health plan administrative expenses demonstrated economies of scale in 2018, the most recent available year. The scale slope is relatively modest so that a doubling of the plan will lead to those costs subject to economies of scale that are 83.3% to 86.9% of the pre-doubling PMPM costs. The proportion of the expenses subject to economies of scale, the functions subject to scale and their sensitivity to scale, varied by whether the set of plans analyzed was IPS plans, Blue plans or the combination of both.

From a strategic perspective, this means that administrative and technical economies of scale of cannot create an overwhelming competitive advantage. For instance, suppose a health plan operated at $55 PMPM. Using the combined universe model shown in Figure 1, only $10.43 PMPM would be subject to economies of scale and, if the enterprise doubled in size, only $1.57 would be saved though pure scale advantages. While an additional $1.57 per member per month would be welcomed by any CFO, the modest effects of scale implies that smaller firms can be on much the same competitive footing on administrative expenses as their larger peers.

Background

While the largest costs for health plans are health benefits, not every benefit plan sponsor pays health plans to assume health benefit responsibilities. For Blue Cross Blue Shield plans, only 50-60% of members are fully-insured and,

Figure 1. Economies of Scale
Administrative Expenses Subject to Economies of Scale and BCG Slopes
BCBS, IPS, and Combined

	Blue Cross Blue Shield Plans	Independent / Provider - Sponsored Plans	Combined Plans
Percent of Administrative Expenses Subject to Scale	40.7%	11.7%	19.0%
BCG Scale Slope of Functions Subject to Scale	83.3%	86.9%	85.0%

among Independent / Provider sponsored plans, those ratios are commonly 73-78%. By contrast, 100% of all members and their sponsors pay health plans to assume responsibility for administrative activities.

The absence of economies of scale means that most health plans can achieve administrative expense parity through effective execution. But despite this, not all managers agree that achieving efficiency is even possible for their plans. The volume of health plan business combinations testifies to this skepticism.

To evaluate the presence of economies of scale in health insurance, the Sherlock Benchmarks provide a robust data set. The data is composed of a large sample, is from a single year, is uniquely granular and carefully validated.

Economies of scale occur when per unit costs decline as volume of output increases. The "output" of a health plan is health coverage services to its members. The units of output are members per month, so the expenses potentially subject to economies of scale are administrative costs, expressed Per Member Per Month (PMPM). The administrative costs that are the subject of this analysis are claims, customer services, enrollment and so forth. Each plan in the sample reported its costs segmented into more than seventy functions and sub-functions, allowing each of the activities to be analyzed individually.

An analysis of economies of scale is complicated by the extraneous factor of differences in the product mixes between the health plans. Fortunately, each organization participating in the Sherlock Benchmarks reported all functional costs segmented by product, thereby allowing us to eliminate the effects of product mix differences. To some degree, adjustment for products also mutes differences in demographics since senior products are segmented from those sold to each of working age and Medicaid populations. Since ASO products are segmented from insured commerical products, to some degree, product-mix adjustments also adjust for group size as well.

So, put simply, we determine whether economies of scale exist by regressing mix-adjusted PMPM cost in each function against member months. We consider the relationship between membership and costs to be significant if it displays P-Values of less than 10%. Suppose a regression yields a 10% P-Value: it can be interpreted to mean "Assuming that there weren't economies of scale, you'd obtain the observed difference or more in 10% of such studies due to random sampling error." In other words, the lower the P-Value, the more reliable the results. The BCG (Boston Consulting Group) Slope is an intuitive way of expressing the slope of scale: it is the percent of the pre-doubling costs that the activity will exhibit if the plan doubles in size.

Figure 2 summarizes all functions that were sensitive to scale. A down arrow (↓) indicates that the function within the identified universe is subject to economies of scale. An up arrow (↑) indicates that the function is anti-scalable in that universe. A null symbol (Ø) indicates that the function is not subject to either economies of scale or diseconomies of scale in that universe, but is in at least one other universe. N/A means that the function is not shared among universes.

Figure 2. Economies of Scale

Slopes of Significant Administrative Expense Economies of Scale

	Blue Cross Blue Shield Plans	Independent / Provider - Sponsored Plans	Combined Plans
(c) Other Rating and Underwriting	Ø	↑	Ø
4. External Broker Commissions	↑	↑	↑
(a) Media and Advertising	↓	Ø	Ø
(b) Charitable Contributions	Ø	Ø	↑
6. Provider Network Management and Services	Ø	Ø	↓
(b) Provider Contracting	↓	Ø	↓
(1) Provider Configuration	↓	Ø	↓
(a) Precertification	↓	Ø	↓
(c) Disease Management	Ø	↑	Ø
(d) Nurse Information Line	↓	Ø	Ø
(f) Quality Components	Ø	Ø	↓
(g) Medical Informatics	↑	↓	Ø
(b) Printed Materials and Other	Ø	↓	Ø
(c) Grievances and Appeals	↓	N/A	N/A
10. Claim and Encounter Capture and Adjudication	Ø	↓	Ø
11. Information Systems Expenses	↓	Ø	Ø
(b) Applications Maintenance	↓	Ø	↓
(1) Benefit Configuration	↓	Ø	↓
(d) Security Administration and Enforcement	↓	Ø	Ø
12. Finance and Accounting	Ø	Ø	↓
(b) Other Finance and Accounting	Ø	↓	↓
13. Actuarial	↓	Ø	↓
14. Corporate Services Function	↓	Ø	Ø
(a) Human Resources	↓	Ø	Ø
(b) Legal	↓	Ø	↓
(1) Compliance	↓	Ø	↓
(5) All Other Legal	↓	Ø	↓
(c) Facilities	↓	Ø	Ø
(e) Audit	↓	Ø	Ø
(f) Purchasing	Ø	Ø	↑
(h) Printing and Mailroom	↓	Ø	Ø
(i) Risk Management	Ø	Ø	↓
16. Association Dues and License/Filing Fees	↓	Ø	Ø
Subtotal Expenses	↓	Ø	Ø

PULSE In-depth Analysis

This *Navigator* is a summary of a more in-depth analysis available exclusively to subscribers to our *PULSE* newsletter and participants in the Sherlock Benchmarks. The annual subscription to *PULSE* is available for $395. Its greater detail includes:

- Analyses of each function, including P-Values and slope values.
- More detail concerning our methodology, including the mix-adjustment.
- Analyses of universes of Blue Cross Blue Shield plans, Independent / Provider –Sponsored plans and a universe of combined organizations.
- The application of the economies of scale results in the case of a doubling of the size of a plan in that universe.
- Process for the more general application of the results to all sizes of business combinations and internal growth.

Additional information on the newsletter and subscriptions are found at sherlockco.com/pulse/.

Sherlock Benchmarks: Participation and Licensing

Both this *Navigator* and the *PULSE* analysis rely on the results of the 2019 *Sherlock Benchmarks* for universes of Blue Cross Blue Shield Plans and Independent/Provider-Sponsored health plans, our 22nd annual study. Survey materials were distributed in February 2019, collected in April, validated in May and published beginning in June. All data is for the 2018 calendar year and has been carefully validated both by us and by the plans themselves. Collectively, the 33 plans collectively served 47 million Americans. The range of membership was over 350,000 to more than 10 million among Blue Plans and about 65,000 to 2 million among IPS plans.

In 2020, we will conduct our 23rd annual Benchmarking Study for health plans. This study will reflect 2019 calendar year results and will be conducted on the same calendar as last year. We welcome Blue Cross Blue Shield Plans, Independent / Provider – Sponsored plans, Medicaid plans, Medicare plans and other plans.

In addition, for those that cannot participate, licensing is available. Please see sherlockco.com/sherlock-benchmarks/ for additional information on the Sherlock Benchmarks.

Contact

Please do not hesitate to contact us with questions concerning this analysis, *PULSE*, the *Sherlock Benchmarks* on which it is based or your interest in participating in the 2020 Sherlock Benchmarking Study. We can be reached at sherlock@sherlockco.com or (215) 628-2289.