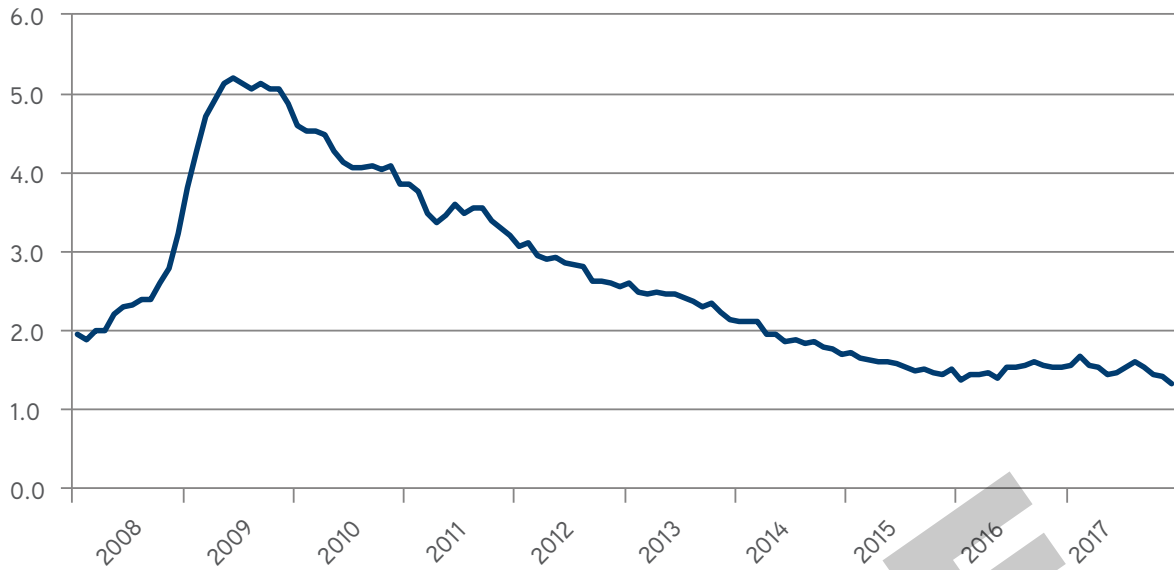


### S/D RATIO: JOB APPLICANTS TO AVAILABLE JOBS



Source: The Conference Board Help Wanted OnLine® (HWOL); United States Bureau of Labor Statistics

Figure 4

While providing an overall indicator of the national aggregate labor market, the S/D ratio may vary considerably by occupation and geographic location. Over time, the S/D ratios across regions and occupations would begin to equilibrate (become similar) if individuals were equally mobile, had information on all employment opportunities and there were no barriers to entry into the various occupations. In practice, none of these conditions hold and thus the S/D ratio maintains differences between occupations and locations even though all may change over time. Table 2 provides the S/D ratio for the 10 top occupations by posted jobs and the associated mean hourly wage rate for three different periods. In June of 2013, the national S/D ratio was

2.45:1, and, as noted earlier, the national S/D ratio at the close of 2017 was approximately 1.33:1. For some of the occupations listed below, such as “Food Preparation and Serving Related,” the S/D ratio declined substantially between the three periods but remained above the national average. For “Computer and Mathematical Science” and “Management,” the S/D ratio increased between the two periods from 2013 to 2016 and decreased in 2017 but remained far below the national average, with the demand for employees exceeding the available pool of potential applicants. As a result of the differences in the changes in the S/D ratios, the wage rate changes between the three periods were considerably different, as well.

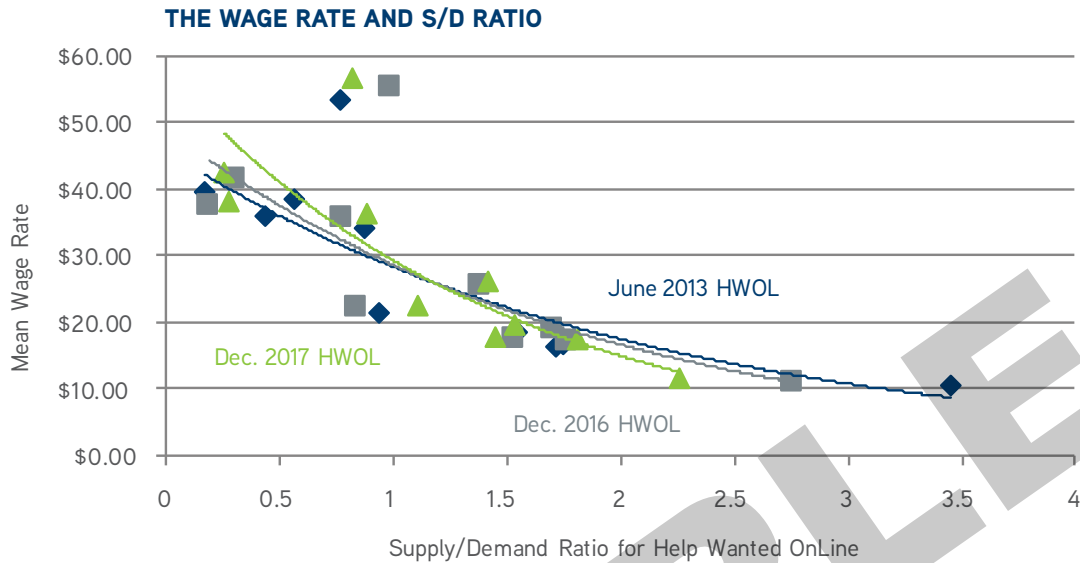
### S/D RATIO AND WAGE RATES FOR HELP WANTED ONLINE, 2013, 2016 AND 2017

Occupation	June 2013 HWOL		Dec. 2016 HWOL		Dec. 2017 HWOL	
	Ratio	Mean Wage	Ratio	Mean Wage	Ratio	Mean Wage
Sales and Related	1.54	\$18.37	1.71	\$18.90	1.53	\$19.50
Computer and Mathematical Science	0.17	\$39.43	0.31	\$41.43	0.26	\$42.25
Office and Administrative Support	1.75	\$16.78	1.53	\$17.47	1.45	\$17.91
Healthcare Practitioners and Technical	0.44	\$35.93	0.19	\$37.40	0.28	\$38.06
Management	0.77	\$53.15	0.99	\$55.30	0.82	\$56.74
Transportation and Material Moving	1.72	\$16.28	1.77	\$16.90	1.81	\$17.34
Business and Financial Operations	0.87	\$34.14	0.78	\$35.48	0.88	\$36.09
Food Preparation and Serving Related	3.45	\$10.38	2.76	\$10.98	2.26	\$11.47
Installation, Maintenance and Repair	0.94	\$21.35	0.84	\$22.11	1.11	\$22.45
Education, Training and Library	0.57	\$38.51	1.39	\$25.48	1.42	\$26.21

Source: The Conference Board Help Wanted OnLine® (HWOL)

Table 2

The relationship between the S/D ratio and the wage rate can be illustrated by graphically comparing the points and finding the mathematical relationship (line). This relationship, represented by the blue (2013), gray (2016) and green (2017) lines in Figure 5, can be seen to have become steeper over the past three years. This implies that at higher wage rates, a small change in the S/D ratio results in a large increase in the wage rate.



Source: The Conference Board Help Wanted OnLine® (HWOL)

Figure 5

The market for veterinary labor can be compared to the national labor market through the use of the information collected on the AVMA's Veterinary Career Center with respect to posted employment opportunities and posted applications for employment.

Prior to the recession in 2008 and 2009 the number of employment opportunities exceeded the number of applicants. However, after the recession when the S/D national ratio hit a high of more than five applicants looking for every employment opportunity, the number of applicants exceeded the number of employment opportunities for veterinarians nationally. While the national S/D ratio fell by half in 2012 (roughly 2.5 applicants for every job), in the veterinary profession the number of applicants per employment opportunity peaked, and starting salaries for new veterinarians bottomed along with the percentage of graduates who were able to obtain full-time employment opportunities prior to graduation.

While the national S/D ratio hit a low point in 2016 (less than 1.5:1), the number of applicants for the available veterinary employment opportunities fell below 1 for the first time since before the last recession and new graduate starting salaries hit

an all-time high real income level along with a record number of new graduates finding full-time employment prior to graduation. In 2017 there was a drop in the number of job applicants applying through the VCC website; this is because VCC jobs were no longer being posted on another search engine (which would direct the applicant to the VCC website), but the overall story remains that there are more employment opportunities than job applicants (Figure 6).

The relationship between the national S/D ratio and the VCC applicant-to-jobs ratio suggests a lag time between the national labor market and the veterinary labor market. This agrees with economic theory. As the economy reaches a peak, inventories begin to accumulate and companies lay off workers. The national S/D would show fewer Help Wanted OnLine employment opportunities and the rising unemployment would produce more applicants. Over time, unemployment benefits and savings would dry up and pet-owning households would reduce their demand for veterinary services. As this demand declined, the number of employment opportunities would decline but the number of potential new employees would not. This process appears, from these data, to take three-four years to occur, and this information should help veterinary practices prepare for the next recession.