

Overview of Cavanaugh Macdonald Analysis
Working after Retirement Data
(February 4, 2015)

Background

- In order for KPERS benefits to begin, there must be a bona fide retirement – which requires a termination of covered employment. The IRS requires that a break occur, but does not specify a certain period of time in its regulations. For KPERS, the current waiting period is 60 days.
- Upon reemployment, retired KPERS members do not become active KPERS members again. No employee contributions to KPERS are required, and no additional benefit is earned during the reemployment period.
- As shown by the following table, specific rules regarding return to work vary by whether the retiree returns to work for the same employer or a different employer.* The State is considered one employer. Each school district or local government unit is treated as a different employer.

			Contributions		
	Waiting Period	Earnings Limitation	Employee	Employer	New Benefit
<u>Same Employer</u>					
State	60 days	\$20,000	None	No	No
Local	60 days	\$20,000	None	No	No
School non- licensed	60 days	\$20,000	None	No	No
School licensed	60 days	No	None	ARC + 8%	No
<u>Different Employer</u>					
State, Local or School non-licensed	60 days	No	None	ARC + employee rate	No
School licensed	60 days	No	None	ARC + 8%	No

*These rules do not apply to short-term substitute teachers. Special rules apply to retirees first returning to work for a different employer prior to 7/1/2006, retired nurses returning to work for certain state agencies, retirees who took early retirement before returning to work in licensed school positions, and retirees working for third-party contractors.

- The rules are expected to influence both member and employer behavior, which could have cost implications to the system. The purpose of the analysis is to determine what member behavior has been over the last eight years.

Returning to Work Data Analysis

- Data on returning to work is limited to the last eight years (through CY 2013). Due to limits in scope and completeness of data, caution is needed in reaching any conclusions about working after retirement behavior.
- The 24,684 total records used in the analysis represent slightly over 6,600 unique individual retirees who were reported as returning to work in one or more years from 2007 through 2013.

Observations about the Data

- School Group retirees were the largest group returning to work. While 58% of active KPERS members are in the School Group, 77% of the returning to work records were School members.
- Of the retirees returning to work for the State, for local employers and in non-licensed positions for school employers, larger numbers were returning to the same employer, rather than a different employer. Due to the earnings cap, this work is more likely to be on a part-time basis.
- Retirement Age. Returning to work rules that encourage members to retire soon after becoming eligible for full benefits could have a cost impact to KPERS. Based on the data, the School Group had a greater proportion of members returning to work who retired at younger ages.
- Length of Time Before Returning to Work.
 - Data on how quickly retirees returned to work is limited. For Local and School employers, a large percentage (over 50%) of retired members who return to work with the same employer do so within a few months of retiring. Those who change employers may do so quickly, but may also wait several years. Those who return to work in State jobs appear to return after a slightly longer break, especially those who retired from a different employer.
 - A high percentage (58%) of the licensed school employees who returned to work with the same employer did so within 3 months of retirement. Those licensed school employees who return to work for a different employer tend to wait longer.
- Compensation Upon Returning to Work.
 - It is difficult to draw reliable conclusions regarding average compensation of retirees returning to work because of the wide variety of job arrangements that may be involved (part-time/full-time, returning to work for part of a year).
 - The average compensation is lower for retirees returning to positions where there is a salary cap (i.e., returning to work for the same employer, unless returning to work in a licensed school position).
 - Licensed school employees who return to work for the same employer have significantly lower compensation than those who return to work for a different employer. It is impossible to know whether this result is due to a significant proportion of members continuing to work less than fulltime after removal of the salary cap or districts rehiring employees at lower salaries or other, unrelated factors. However, the amount has been increasing steadily since removal of the earnings limit in 2009.
 - The average compensation of licensed school employees returning to work for a different employer has been declining since 2009. By way of contrast, the average compensation of licensed school employees who first returned to work before 2006 has held relatively steady. (Employers of this closed group of retirees do not have to pay working after retirement contributions.)

- The average compensation of retirees who were first reemployed in licensed school positions after legislative changes in 2009 seems to be higher than for those first reemployed before 2009.



Cavanaugh Macdonald

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November 12, 2014

Mr. Alan Conroy
Executive Director
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611 S. Kansas Ave., Suite 100
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Re: Analysis of Data Related to Working after Retirement

Dear Alan:

At your request, Cavanaugh Macdonald Consulting, LLC has updated our previous analysis, dated February 10, 2014 related to working after retirement. Since the prior study, we have been supplied with additional data for calendar year 2013. This letter summarizes the findings of our analysis of the data in a similar format to the prior analysis. Hopefully this information will assist KPERS and the legislature in their evaluation of the current working after retirement provisions.

Background

In order for KPERS benefits to begin there must be a *bona fide* retirement, which requires a termination of covered employment. The IRS requires that a break occur, but does not specify a certain period of time in its regulations. Each retirement system sets the time period for the break in service that is required for a *bona fide* retirement. For KPERS, the current waiting period is 60 days. After this time period, a retired member may return to work in covered employment. Upon reemployment, the retired KPERS member does not become an active KPERS member again. No employee contributions to KPERS are required and no additional benefit is earned during their reemployment period. The specific rules regarding returning to work vary by whether the retiree returns to work for the same employer (an employer he worked for in the last two years of KPERS participation) or a different employer. Note that the State is considered one employer, while each school district or local government unit is considered a different employer.

For many years, KPERS retirees who return to work for the same employer have been subject to an "earnings limitation" (currently \$20,000 per calendar year). This provision restricts the amount of salary a retiree may earn while receiving his KPERS benefit. Upon reaching the earnings limitation, the retired member may either stop working and continue his KPERS benefit or continue to work and have his KPERS benefit suspended for the remainder of the calendar year. Retirees returning to work for a different employer have no earnings limitation.

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Prior to 2006, neither employee nor employer contributions were required when a retired member was rehired. However, effective in 2006, an employer contribution was required for retirees who returned to work for a different employer. The amount contributed is a percent on the payroll of such retired reemployed members equal to the full actuarial required contribution (ARC) rate plus a percent equal to the employee contribution rate. Members who were rehired prior to 2006 were grandfathered so no contributions are required.

In 2009 a special, three-year exemption from the earnings limitation was created for licensed school employees who retired with unreduced retirement benefits. These employees may return to work for the same employer without being subject to the earnings limitation. At the same time, a special employer contribution rate of the ARC rate plus 8% was established for licensed school employees rehired after retirement – whether reemployed by the same or a different employer. These provisions were extended in 2012 for an additional three years and are scheduled to expire on July 1, 2015.

A brief summary of the current working after retirement rules is shown in the table below:

	Waiting Period	Earnings Limitation	Contributions		New Benefit
			Employee	Employer	
Same Employer					
State	60 days	\$20,000	None	No	No
Local	60 days	\$20,000	None	No	No
School non-licensed	60 days	\$20,000	None	No	No
School licensed	60 days	No	None	ARC + 8%	No
Different Employer				ARC +	
State, Local or School non-licensed	60 days	No	None	Employee rate	No
School licensed	60 days	No	None	ARC + 8%	No

Note: Employer contributions are not required for members rehired by a different employer prior to 2006.

The set of provisions that comprise the working after retirement rules were put in place to address certain legal and actuarial issues related to hiring retired KPERS members instead of new, active members. The rules are expected to influence both member and employer behavior, which could have cost implications to the system. The purpose of our analysis is to determine what member behavior has been over the last seven years. Any change that is made to the current rules also has the potential to encourage or discourage the reemployment of retired members, depending on the change that is made. As a result, caution should be used in modifying the current rules as such changes may result in unintended consequences.

Data

In preparing this letter, we relied on the data we received from KPERS. Some of this data was provided to us for our annual valuation work and some was provided solely for this project. We have not audited the data, but we have reviewed it for reasonableness. Because of the historical changes to the working after retirement provisions, the data collected by KPERS has changed over the years. Furthermore, some data elements are significant to the analysis in this study, but are not relevant to the actual operation of KPERS. As a result, the data may be incomplete in some cases because there has not been a compelling reason to collect this information if it was not voluntarily provided to KPERS by the employers. For example, the additional data for working after retirement provided by KPERS includes a field to indicate when members returned to work following retirement, but the field is not populated for about 20% of the records. While



Mr. Alan Conroy
November 12, 2014
Page 3

this date is an important piece of data for purposes of this study, it is not information that KPERS routinely needs for its operation, and, therefore, it is not always collected.

When there are substantial amounts of missing data, it creates a concern that the remaining data may be biased in some fashion. Since we do not know if the unreported data is systemic (for example, if most of the missing data was to from larger school districts) or random, we have noted where concerns about the data exist and the possible implications. In general, we believe that more complete data might enhance our understanding of member behavior, but we do not believe that the additional data would result in significantly different results from those presented herein.

The additional data provided for this study included information for retired KPERS members who were working after retirement during calendar years 2006 through 2013 (prior to 2006, data on such members was not available). In addition to identifying the members, it also provided information regarding the type of employer (state, school, or local) who employed the members returning to work. The codes on the data indicate those who returned prior to 2006 and those who returned after, further divided by whether the employer was the same employer the member was working for prior to retirement or a different employer, and, if a school member, whether or not they were a licensed employee. There were 25,915 records in the raw data and 24,684 records in the refined data set (excluding records that KPERS determined should be excluded). Our analysis was based on the refined data set. A summary of the records by group and year is shown in the following table:

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>Total</u>
Local									
Pre-FY 2006	56	68	58	63	55	55	49	43	447
Different Employer	21	63	86	131	156	167	185	227	1,036
Same Employer	<u>151</u>	<u>213</u>	<u>218</u>	<u>318</u>	<u>374</u>	<u>394</u>	<u>401</u>	<u>421</u>	<u>2,490</u>
Total Local	228	344	362	512	585	616	635	691	3,973
School									
Pre-FY 2006	394	391	361	385	367	312	253	205	2,665
<u>Different Employer</u>									
Licensed				682	661	580	524	509	
Non-licensed				<u>247</u>	<u>319</u>	<u>375</u>	<u>439</u>	<u>498</u>	
Total Diff Employer	249	549	795	929	980	955	963	1,007	6,427
<u>Same Employer</u>									
Licensed				416	538	594	568	587	
Non-licensed				<u>800</u>	<u>881</u>	<u>961</u>	<u>1,003</u>	<u>1,073</u>	
Total Same Employer	<u>617</u>	<u>818</u>	<u>990</u>	<u>1,216</u>	<u>1,419</u>	<u>1,555</u>	<u>1,571</u>	<u>1,660</u>	<u>9,846</u>
Total School	1,260	1,758	2,146	2,530	2,766	2,822	2,787	2,872	18,941
State									
Pre-FY 2006	3	12	11	14	6	5	4	4	59
Different Employer	0	6	6	20	22	37	46	59	196
State Nurses	3	0	12	7	16	15	11	8	72
Same Employer	<u>69</u>	<u>101</u>	<u>108</u>	<u>199</u>	<u>252</u>	<u>264</u>	<u>225</u>	<u>225</u>	<u>1,443</u>
Total State	75	119	137	240	296	321	286	296	1,770
Total KPERS	1,563	2,221	2,645	3,282	3,647	3,759	3,708	3,859	24,684

Notes: The Pre-FY 2006 employees worked for different employers and employer contributions are not required. From 2006 to 2008, school employees were not split between licensed employees and non-licensed, so the numbers shown for those years and in total include both groups.



Mr. Alan Conroy
November 12, 2014
Page 4

Results

Number of Members Working After Retirement

As the prior tables illustrates, over the eight-year period that data was maintained the total number of records for retired members working in KPERS covered employment was 24,684. If a retired member worked in more than one calendar year or worked for more than one employer, there is more than one record in the above total count. Out of the 24,684 total records, there were slightly over 6,600 unique individuals in the group. Please note that the pre-FY 2006 group is a closed group so the numbers shown for that group in any given year are members who had returned to work prior to FY 2006 (and no employer contributions are required).

Of the total count of 24,684, about 77% of the records (18,941) were School members, 16% were Local members, and 7% were State members. In comparison, the KPERS active member counts result in the School having 58% of the active membership, Local 26% and the State 16%. This suggests that not only is School the largest percentage of the active membership, the working after retirement provisions are more heavily used by School members as well.

The classification of school retirees who return to work into licensed and non-licensed categories has only been tracked since 2009. Over that time, the number of licensed school employees working for the same employer has generally increased, both in count and as a percentage of the total licensed school employees rehired, while the number working for different employers has decreased. The available data is very limited so we are hesitant to draw conclusions, but it seems likely that the change in the law in 2009 that permitted licensed school employees to be rehired by the same employer without being subject to the earnings limitation is responsible for the increasing number of retired members returning to work for the same employer. The table below isolates the working after retirement experience for school employees from 2009 through 2013.

SCHOOL – LICENSED EMPLOYEES

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>Total</u>
Licensed employees						
Different employer	682	661	580	524	509	2,956
Same employer	<u>416</u>	<u>538</u>	<u>594</u>	<u>568</u>	<u>587</u>	<u>2,703</u>
	1,098	1,199	1,174	1,092	1,096	5,659

It is interesting to note that, in total, there are more non-licensed school employees working after retirement than there are licensed employees. In addition, significantly more non-licensed school employees return to work for the same employer compared to those electing to return to work for a different employer. However, because non-licensed employees returning to work for the same employer are subject to the earnings limitation, it is likely that many are employed on a part-time basis.



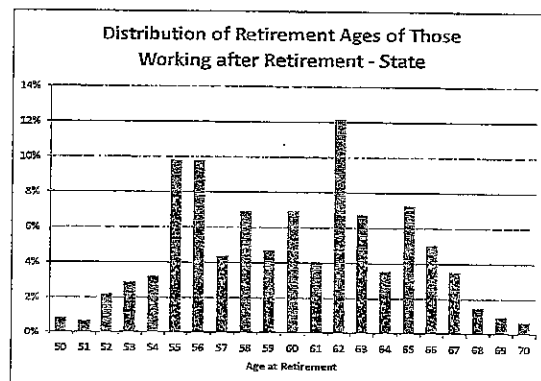
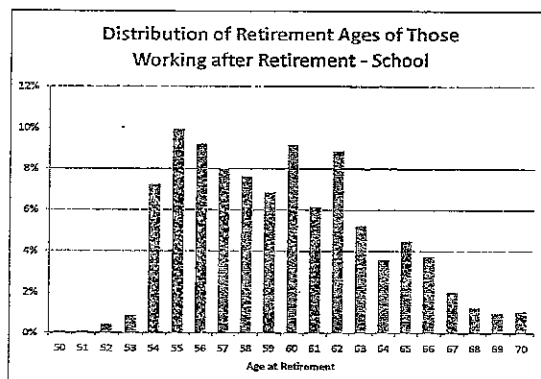
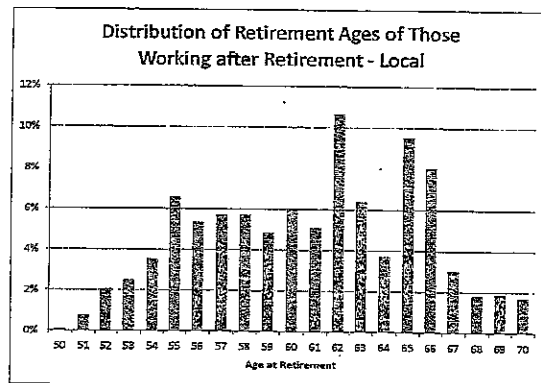
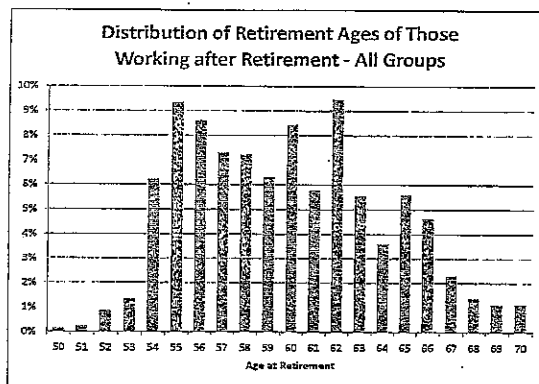
Mr. Alan Conroy
November 12, 2014
Page 5

For the State and Local groups, there is much higher utilization of the return to work provisions by members returning to work for the same employer compared to a different employer. As noted above, those retirees returning to work for the same employer are more likely to be working part-time due to the \$20,000 per year earnings limitation.

Age at Retirement

In general, for members who are eligible to retire with unreduced benefits, an earlier retirement will result in a higher liability and cost for the system. Therefore, if the working after retirement rules are encouraging members who are eligible for Rule of 85 (age plus service equals at least 85) to retire and return to work soon after becoming eligible, rather than continuing in employment, there could be a cost impact to KPERS. For this reason, the age at retirement is a key data element in our analysis.

Using the basic data supplied by KPERS for retired members who returned to work in KPERS-covered positions, we were able to match the records against our valuation data and estimate the age at retirement. The following graphs show a distribution of these retirement ages for the various employer types (State, School, and Local). Because the groups have different retirement rates and a different demographic composition, these graphs do not provide any information on the utilization of the working after retirement provisions, i.e. how many of those retiring are electing to return to work. Rather, they merely provide some insight into the characteristics of the members who have returned to work after retiring.





Mr. Alan Conroy
November 12, 2014
Page 6

It is worth noting that Local members who returned to work were generally older at retirement than the age of the overall group. On the other hand, based on this data the School group has a greater proportion of members who retire at younger ages and return to work.

Consistent with that observation, the draft triennial experience study for the years 2010 through 2012 notes a shift in retirements among School Group members during the study period.¹

During this period, there was a change in the working after retirement provisions for licensed positions in the School group that may have impacted retirement patterns. Prior to July 1, 2009, members who returned to work for the same employer were subject to the \$20,000 earnings limitation (benefits are suspended once the member's earnings reach \$20,000 in a calendar year). However, legislation passed in the 2009 session permitted licensed School members to retire and return to work for the same employer without being subject to the earnings limitation. The results of this study period indicate more retirements for members when they were first eligible for Rule of 85 (select retirement assumption). We believe the change in the working after retirement rules may have played a part in the pattern observed. Since the special provision sunsets in July 1, 2015, we do not recommend making a change in the retirement assumption for School members at this point. If the sunset provision is eliminated, the select assumption for School members may need to be modified in the next experience study.

Break in Service

Of the approximately 6,600 unique members represented in the data, the reemployment date was available for about 5,400, or approximately 80% of the records. In most cases, we were able to match this date against the retirement date in the valuation data to estimate the break in service period between retirement and returning to work. In some limited cases, our calculation of a break in service may actually reflect a change in employer rather than an initial return to work. Because the data needed to calculate the break in employment is not available for those who returned prior to FY 2006 and since it is not entirely complete for those returning to work after 2006, caution should be used in the interpreting these results and drawing any conclusions based on the information. Nonetheless, we believe there are some patterns that are worth noting.

¹ The KPERS Board of Trustees is scheduled to review and consider approval of the "KPERS Triennial Experience Study: Calendar: Years 2010 through 2012" on Thursday, November 20, 2014.



<u>Distribution of Break in Service Between Retirement and Return to Employment</u>						
	Local		School		State	
	<u>Different</u>	<u>Same</u>	<u>Different</u>	<u>Same</u>	<u>Different</u>	<u>Same</u>
Up to 3 months	16.5%	47.6%	31.9%	56.8%	8.8%	18.8%
3-6 months	8.5%	9.6%	4.8%	6.9%	4.4%	12.4%
6-9 months	5.2%	5.9%	3.3%	3.6%	4.4%	8.3%
9-12 months	4.9%	4.6%	2.8%	2.2%	8.8%	4.1%
12-18 months	10.4%	5.7%	11.7%	5.6%	17.6%	9.6%
18-24 months	9.8%	3.2%	4.2%	3.0%	8.8%	6.4%
2-3 years	12.8%	5.7%	9.7%	6.7%	10.3%	11.1%
3-4 years	10.7%	5.0%	7.9%	3.1%	5.9%	8.6%
4-5 years	5.8%	3.2%	6.5%	3.0%	1.5%	5.1%
Over 5 years	15.5%	9.4%	17.2%	9.1%	29.4%	15.6%

For Local and School employers, a large percentage of retired members who return to work with the same employer (over 50%) do so within a few months of retiring, while those who change employers may do so quickly, but may also wait several years. Those who return to work in State jobs appear to return after a slightly longer break, especially those who retired from a different employer.

Further analysis of the School employees can be performed by splitting the data between those who are licensed school employees and those who are not. Because that distinction is not available in the data for calendar years 2006 through 2008, those years are grouped separately from those for whom information on licensing is available. As may be noted in the following table, a high percentage of the licensed school employees who returned to work with the same employer did so within 3 months of retirement. Those licensed school employees who return to work for a different employer tend to wait longer. The distribution of breaks in service for non-licensed school employees who return to work is similar to that of licensed school employees, although there may be somewhat of a longer delay for those who go to a different employer.



Mr. Alan Conroy
November 12, 2014
Page 8

Distribution of Times Between Retirement and Return to Employment

School Employees

	<u>Licensed</u>		<u>Non-licensed</u>		<u>Unknown (2006-2008)</u>	
	Different	Same	Different	Same	Different	Same
Up to 3 months	28.4%	57.8%	17.3%	54.3%	50.5%	60.4%
3-6 months	4.7%	9.8%	8.1%	6.4%	2.4%	3.3%
6-9 months	1.6%	1.9%	5.8%	5.3%	2.1%	2.9%
9-12 months	1.9%	2.3%	3.8%	2.4%	2.2%	2.4%
12-18 months	9.9%	5.1%	13.5%	6.5%	10.9%	4.1%
18-24 months	3.3%	2.0%	6.0%	3.8%	2.5%	2.4%
2-3 years	8.7%	6.6%	10.7%	6.1%	8.5%	8.0%
3-4 years	9.2%	2.7%	7.3%	3.4%	7.0%	4.6%
4-5 years	8.5%	2.0%	8.1%	3.8%	3.7%	3.7%
Over 5 years	23.9%	9.8%	19.4%	8.0%	10.1%	8.2%

Salary After Reemployed

We also analyzed the average compensation reported during reemployment for those retired members who returned to work. Because there may be a wide variety of job arrangements held by members who return to employment, it is difficult to draw many reliable conclusions. The results of this table should be viewed along with the prior table on page 3 of this letter that showed the number of retired members who returned to work, since the average compensation reported for small numbers of employees can be skewed if one employee is especially high or low.

	2006	2007	2008	2009	2010	2011	2012	2013
Local								
Pre-FY 2006	\$17,772	\$19,532	\$20,344	\$22,074	\$23,633	\$23,473	\$25,378	\$24,945
Different Employer	3,260	16,996	21,500	21,322	22,346	22,686	23,836	24,853
Same Employer	11,113	10,568	12,234	12,620	12,370	12,656	13,501	12,574
School								
Pre-FY 2006	40,376	41,290	43,082	44,380	44,066	43,790	43,826	43,632
<u>Different Employer</u>								
Licensed				41,420	40,476	39,290	38,554	38,593
Non-licensed				12,596	13,618	13,464	14,111	14,689
Total	14,708	24,940	29,338	33,720	31,683	29,118	27,385	26,771
<u>Same Employer</u>								
Licensed				18,935	23,471	25,870	27,987	30,131
Non-licensed				11,569	11,608	11,614	11,753	11,979
Total	12,635	13,054	13,820	14,125	16,090	17,048	17,616	18,398



Mr. Alan Conroy
November 12, 2014
Page 9

	2006	2007	2008	2009	2010	2011	2012	2013
State								
Pre-FY 2006	1,359	5,822	6,817	13,941	27,401	28,092	20,956	14,105
Different Employer	-	13,716	17,900	26,905	29,334	29,049	28,674	28,367
Same Employer	4,052	12,510	14,214	15,654	16,762	16,648	19,259	19,038

The analysis showed several results worth noting:

- 1) The average compensation reported for Local and State members who return to work for the same employer is significantly less than the average salary for those who return to work for a different employer. It is likely the members returning to work for the same employer elect to work less than full time to avoid hitting the earnings limitation, which would result in suspension of their KPERS benefit.
- 2) Licensed school employees who return to work for the same employer have much lower compensation than those who return to work for a different employer, although the amount has been increasing steadily since removal of the earnings limit in 2009. It is impossible to know whether this result is due to members continuing to work less than fulltime after removal of the salary cap or districts rehiring employees at lower salaries or other, unrelated factors.
- 3) The difference in average compensation for non-licensed school employees working for the same or different employers is not significant. Again, it is impossible to draw conclusions from the available data as to why this trend is occurring. These positions may include jobs that have a wide range of hours worked as well as different job classifications with varying rates of pay, which may or may not explain the observed results.

We analyzed the average compensation in 2009 through 2013 separately for those retirees hired before and after 2009 in order to evaluate whether the law change in 2009 (permitting retirees to return to work for the same employer without being subject to the earnings limitation) had an impact on the average compensation for licensed school employees. The data in the table below seems to indicate that compensation for those rehired since the law changed is higher than compensation for those hired prior to 2009. It should be noted that the low compensation amounts in the year the retiree returned to work (\$16,850 in 2009, \$16,168 in 2010, \$12,047 in 2011, \$15,717 in 2012, and \$15,333 in 2013) likely represent a partial year of employment. Therefore, those data points should not be considered as fully credible.

<u>Year Returned to Work</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
2006	\$18,819	\$ 21,450	\$ 23,432	\$ 25,214	\$ 26,661
2007	21,742	24,389	25,688	27,497	31,317
2008	23,328	29,460	32,212	36,869	36,093
2009	16,850	29,954	29,969	33,698	36,545
2010		16,168	33,035	32,915	37,704
2011			12,047	29,270	32,647
2012				15,717	35,371
2013					15,333



Mr. Alan Conroy
November 12, 2014
Page 10

Data, Assumptions and Methodology

The data used in this analysis includes a special file prepared by KPERS as well as the data file from the December 31, 2013 actuarial valuation. To the extent that any of that data is inaccurate, our calculations may need to be revised. Earlier in this letter, we noted the limitations of the data.

We have attempted only to provide a summary and observations of the data. We have not, and cannot, provide any estimate of the cost impact of the current or past working after retirement provisions, since it is impossible to know what would have occurred in the absence of those provisions. We also note that behavior by employers and employees in the past may not continue in the future due to such factors as changes in applicable laws (including Social Security and Medicare), budget issues, workplace demographics, and economic conditions.

We, Patrice A. Beckham, FSA and Brent A. Banister, FSA, are consulting actuaries with Cavanaugh Macdonald Consulting, LLC. We are members of the American Academy of Actuaries, Fellows of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries. We are available to answer any questions or provide additional information as needed.

Sincerely,

Handwritten signature of Patrice A. Beckham in cursive.

Patrice A. Beckham, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

Handwritten signature of Brent A. Banister in cursive.

Brent A. Banister, PhD, FSA, EA, FCA, MAAA
Chief Pension Actuary