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**KANSAS MUNICIPAL INSURANCE TRUST**

**ACTUARIAL ANALYSIS OF  
FUNDING AND UNPAID CLAIM LIABILITIES  
AS OF DECEMBER 31, 2015**

Prepared for:

**Mr. Don Osenbaugh**  
Pool Administrator

Prepared by:

**Milliman, Inc.**

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AS OF DECEMBER 31, 2015**

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# KANSAS MUNICIPAL INSURANCE TRUST

## ACTUARIAL ANALYSIS OF FUNDING AND UNPAID CLAIM LIABILITIES AS OF DECEMBER 31, 2015

### INTRODUCTION

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Milliman, Inc. (Milliman) has been retained by the Kansas Municipal Insurance Trust (“KMIT” or the “Trust”) to conduct an actuarial analysis to:

- Estimate the unpaid claim liabilities as of December 31, 2015;
- Provide funding estimates for 2016; and
- Provide the above funding estimates on a discounted basis and at various probability levels.

The purpose of our analysis is to assist the Trust in preparing its financial statements. Our analysis is based on data evaluated as of December 31, 2015 and information provided through the date of this report.

The Trust is an interlocal governmental agency formed for the purpose of establishing and administering a group funded workers’ compensation pool pursuant to the provisions of Kansas state law governing labor and industries. The Trust began operations on January 1, 1994 and provides a comprehensive workers’ compensation insurance program for participating members of the League of Kansas Municipalities. In addition to insurance coverage, the program provides risk management services with an emphasis on loss control, claims administration and management information services.

KMIT limits its exposure to loss by purchasing both per occurrence and aggregate excess insurance. A summary of KMIT’s excess insurance program is provided on Exhibit 1.

Our estimates are provided on an undiscounted and discounted basis with respect to the time value of money. Our estimates are net of insurance recoverables and include defense and cost containment expenses (ALAE), but do not include other claims administration expenses.

There have been no material changes in procedures, methodology or significant assumptions used in deriving our estimates since our last analysis performed as of December 31, 2014.

In this report, we are using the terms “loss” or “unpaid claim liability” to represent the sum of the medical loss, indemnity loss and allocated loss adjustment expense (ALAE) components on each claim, unless otherwise noted. Certain items are not considered, specifically administrative costs and the overhead costs of claims handling (commonly referred to as unallocated loss adjustment expenses or ULAE).

Mindy M. Steichen is a Fellow of the Casualty Actuarial Society and Member of the American Academy of Actuaries (AAA) and meets the Qualification Standards of the AAA to render the actuarial opinion contained herein.

## **LIMITED DISTRIBUTION OF RESULTS**

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Milliman's work has been prepared solely for the internal use of KMIT. No portion of Milliman's work may be provided to any other party without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work. Milliman's work may not be filed with the SEC or other securities regulatory bodies. In addition, references to Milliman or its estimates in communication with third parties are not authorized.

Milliman's consent to release its work product to any third party may be conditioned on the third party signing a third party release agreement, subject to the following exceptions:

- (A) KMIT may provide a copy of Milliman's work to its auditor to be used solely for audit purposes. In the event the audit reveals any error or inaccuracy in the data underlying Milliman's work, Milliman requests the auditor or KMIT notify Milliman as soon as possible.
- (B) KMIT may provide a copy of Milliman's work to governmental entities, as required by law.

In the event Milliman consents to release its work product, it must be provided in its entirety. We recommend that any such party have its own actuary or other qualified professional review the work product to ensure that the party understands the assumptions and uncertainties inherent in our estimates. No third party recipient of Milliman's work product should rely upon Milliman's work product.

Any reader of this report agrees that they shall not use Milliman's name, trademarks or service marks, or refer to Milliman directly or indirectly in any third party communication without Milliman's prior written consent for each such use or release, which consent shall be given in Milliman's sole discretion.

## SUMMARY OF RESULTS

Our estimates of KMIT's ultimate loss and ALAE are shown by accident year in the table below, along with estimates from our last analysis. In total, our estimates have decreased by approximately \$300,000 since our last analysis.

<b>KMIT NET ULTIMATE LOSS &amp; ALAE LIMITED TO AGGREGATE RETENTIONS</b>			
<b>Accident Year</b>	<b>Selected @ 12/31/15</b>	<b>Selected @ 12/31/14</b>	<b>Difference</b>
1994	\$742,241	\$742,241	\$0
1995	1,103,496	1,103,496	0
1996	836,631	836,631	0
1997	1,543,031	1,543,031	0
1998	1,328,630	1,328,631	(1)
1999	1,540,262	1,540,262	0
2000	1,588,723	1,592,966	(4,243)
2001	1,180,293	1,180,293	0
2002	1,340,826	1,340,826	0
2003	1,623,367	1,623,367	0
2004	2,498,969	2,494,672	4,297
2005	4,024,900	3,985,889	39,011
2006	2,905,173	2,905,571	(398)
2007	3,116,175	3,065,209	50,966
2008	3,754,393	3,636,700	117,693
2009	2,333,322	2,348,944	(15,622)
2010	4,220,269	4,081,109	139,160
2011	3,045,103	3,097,095	(51,992)
2012	2,263,115	2,062,085	201,030
2013	2,209,964	2,295,616	(85,652)
2014	3,532,764	3,893,823	(361,059)
2015	3,542,932	3,875,424	(332,492)
<b>Total</b>	<b>\$50,274,579</b>	<b>\$50,573,881</b>	<b>\$(299,302)</b>

Unpaid claim liabilities are derived by subtracting loss and ALAE paid to date from the estimated ultimate loss and ALAE.

The following table displays our estimates of KMIT's net unpaid claim liabilities as of December 31, 2015:

<b>KMIT NET UNPAID CLAIM LIABILITIES AS OF DECEMBER 31, 2015</b>			
<b>Accident Year</b>	<b>Case Reserves</b>	<b>IBNR*</b>	<b>Total Unpaid</b>
1994	\$0	\$0	\$0
1995	0	0	0
1996	0	0	0
1997	0	(52,380)	(52,380)
1998	0	0	0
1999	8,559	(9,338)	(779)
2000	16,716	7,915	24,631
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	26,867	61,778	88,645
2005	85,711	78,257	163,968
2006	70,251	76,136	146,387
2007	119,578	87,216	206,794
2008	139,662	141,401	281,063
2009	21,183	157,870	179,053
2010	253,105	259,964	513,069
2011	343,700	191,455	535,155
2012	198,918	217,236	416,154
2013	168,364	383,068	551,432
2014	298,049	688,485	986,534
2015	726,473	1,812,954	2,539,427
<b>Total</b>	<b>\$2,477,136</b>	<b>\$4,102,017</b>	<b>\$6,579,153</b>

\* The 1997 and 1999 year incurred and paid losses exceed the aggregate retention. Ultimately KMIT should recover losses excess of the aggregate retention from Safety National.

The total unpaid claim liability includes a provision for case reserves, expected development of case reserves, incurred but not reported (IBNR) reserves, allocated loss adjustment expense reserves and excess insurance recoveries. We have not estimated a provision for claims administration expenses. The estimates in the above table are net of KMIT's excess insurance protection, and are shown on an undiscounted (full value) basis. We have not included a provision for KMIT's exposure above its aggregate excess insurance.

The estimates presented above can be characterized as actuarial central estimates and represent an expected value over a range of reasonably possible outcomes. They do not reflect all conceivable extreme events where the contribution of such events to an expected value is not reliably estimable. The estimates are not defined by a precise statistical measure (i.e., mean, median, mode, etc.), but are selected from multiple indications produced by a variety of generally accepted actuarial methods.

Our actuarial central estimate of KMIT's ultimate loss for the January 1, 2016 to December 31, 2016 fund year is \$3.71 million on an undiscounted basis and \$3.65 million discounted at a yield rate of 0.69%. The following table displays our estimated funding amounts at various probability levels:

<b>KMIT 2016 FUND YEAR LIMITED TO \$750,000 PER OCCURRENCE AND \$6,923,594 AGGREGATE RETENTION</b>		
<b>Probability Level</b>	<b>Undiscounted</b>	<b>Discounted @ 0.69%</b>
95%	\$6,923,594	\$6,812,816
85%	5,831,004	5,737,707
75%	4,679,659	4,604,784
65%	3,936,856	3,873,866
<b>Actuarial Central Estimate</b>	<b>\$3,714,015</b>	<b>\$3,654,591</b>



## **GENERAL APPROACH**

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We used four projection techniques to develop estimates of the ultimate losses. The unpaid claim liability was then derived by subtracting losses paid as of December 31, 2015 from the estimated ultimate losses.

The following methods were used to project ultimate losses:

- Incurred loss development projection;
- Paid loss development projection;
- Incurred Bornhuetter-Ferguson projection; and
- Paid Bornhuetter-Ferguson projection.

### **Loss Development Methods**

Incurred losses are defined as paid losses plus reported reserves on open claims (case reserves). The incurred loss development method derives an estimate of ultimate losses by multiplying the incurred losses by an incurred loss development factor. The loss development factor reflects expected development from late reported claims (IBNR) and reopened claims, as well as from changes in the aggregate value of case reserves as accident years mature. When necessary, we have supplemented KMIT's historical experience with external data sources in selecting development factors (Exhibit 2). Specifically, we referenced insurance industry experience for workers' compensation business in Kansas and countrywide.

The paid loss development method derives an estimate of ultimate losses by multiplying paid losses by a paid loss development factor. Again, we considered Kansas and countrywide workers' compensation experience in our selection of paid loss development factors (Exhibit 4). The paid loss development factors reflect the expected relationship between ultimate losses and paid losses through December 31, 2015.

Exhibits 3 and 5 display the results of the incurred and paid loss development projections.

### **Bornhuetter-Ferguson Methods**

The Incurred Bornhuetter-Ferguson method derives ultimate losses by adding an estimated IBNR amount to the losses reported to date. The estimated IBNR was based on an initial estimate of the ultimate losses (a priori estimate) and an estimated reporting pattern for incurred losses. The a priori loss estimates for fund years 1994 through 2015 were based on our December 31, 2014 analysis of ultimate losses.

We relied on the development pattern underlying the incurred loss development projection method to select a reporting pattern. Specifically, the estimated percentage unreported is equal to one minus the reciprocal of the cumulative incurred loss development factor. Estimated ultimate losses were then derived by adding the estimated IBNR to the incurred losses as of December 31, 2015.

The Paid B-F method derives ultimate losses by adding an estimated unpaid amount to the paid losses to date. The estimated unpaid loss was calculated by taking one minus the reciprocal of the cumulative paid loss development factor multiplied by the a priori loss estimate.

Exhibits 6 and 7 display the results of the incurred and paid B-F projections.

Based on the projection methods outlined above, we selected the net ultimate loss estimates by accident year, as displayed on Exhibit 8.

***Unpaid Claim Liabilities***

The unpaid claim liability was derived by subtracting the cumulative paid loss and ALAE through December 31, 2015 from the estimated ultimate loss and ALAE. Exhibit 9 displays the calculation of the net unpaid claim liabilities, as well as the net IBNR, which is equal to the total net unpaid claim liabilities less the net case reserves as of December 31, 2015.

The negative IBNR amounts in the 1997 and 1999 fund years are due to the fact that incurred losses exceed the aggregate retention for those years. KMIT expects to fully recover the losses excess of the aggregate retention from its excess insurer. KMIT has made payments and has case reserves in excess of the aggregate retention. IBNR for 1997 and 1999 reflects aggregate recoveries already received of \$300,247 and \$111,920, respectively. Additional recoveries are expected.

## **FUNDING ANALYSIS**

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Exhibit 10 derives our projection of KMIT's ultimate losses for accident year 2016. Our projections were based on KMIT's historical loss experience as well as aggregate Kansas workers' compensation loss experience (adjusted to reflect KMIT's risk profile). Our selected ultimate losses were used to calculate pure premiums (ultimate loss per \$100 payroll) for accident years 2006 through 2015. These pure premiums were adjusted for:

- Changes in the self-insured retention;
- Changes in benefit levels (Exhibit 11); and
- Trends in average claim costs (1.0% per year).

The selected 2016 pure premium (row 8) was multiplied by the projected 2016 payroll to estimate the ultimate loss, prior to aggregate excess insurance (row 10).

We have provided funding estimates on both an undiscounted and a discounted basis. Undiscounted values are the nominal estimates of claims to be paid in the future and do not reflect the time value of money. The discounted value reflects the amount of assets which, when combined with investment earnings on these assets assumed to accumulate at a specified yield rate, are estimated to be sufficient to pay all claims. We used a 0.69% yield assumption, as provided by KMIT. The selected payout pattern is shown on Exhibit 12, and the resulting present value factor is displayed on Exhibit 13.

It is not uncommon for self-insured entities to fund at levels which include a margin for adverse loss experience. One way to accomplish this is to fund at a probability level greater than the actuarial central estimate. For purposes of developing estimates at various probability levels, the actuarial central estimates presented in this report (both undiscounted and discounted) represent expected value estimates. As such, when the ultimate cost of the claims is known, there is approximately an equal probability that the actual value will be higher or lower than the estimated value. To estimate liabilities at various probability levels,

we relied on an insurance industry based distribution of aggregate workers' compensation losses, adjusted to reflect characteristics of KMIT's loss experience. The resulting unpaid claim liabilities at various probability levels are displayed on Exhibit 14.

We know of no specific requirement that a public entity fund at a given probability level. The funding level is a reflection of the entity's risk tolerance, as well as the availability of funds from other sources in the event the self-insurance fund falls short of the paid amounts. There is always a chance that the balance in the fund will not be sufficient to meet the claims that will be charged against it. While we believe a self-insured entity should recognize the potential risk of assuming its own claim liabilities, there is no simple formula that we know of to decide how much self-insured exposure is prudent. Of course, budget and risk considerations may play a role in the decision.

The range of values displayed in the exhibits (in particular the 95<sup>th</sup> percentile) does not represent the highest or lowest possible values of the discounted loss and ALAE claim liabilities. Potential variation around these values exists, both due to uncertainty with respect to the amount, as well as timing of future payments along with the investment yield.

## **QUALIFICATIONS AND LIMITATIONS**

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The actuarial methodology used in this report assumes that case reserves on reported claims are consistently estimated based on current facts known about the claims as of the date of valuation. No independent review of any specific claim files has been performed by Milliman.

In estimating KMIT's unpaid claim liabilities, it is necessary to project future loss and ALAE payments. It is certain that actual future losses and ALAE will not develop exactly as projected and may vary significantly from our projections. Further, our projections make no provision for future emergence of new classes of losses or types of losses (such as cumulative trauma claims), which are not sufficiently represented in KMIT's historical database or which are not yet quantifiable.

In performing this analysis, we have relied on data and other information provided to us by KMIT. We have not audited or verified this data and other information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete. In that event, the results of our analysis may not be suitable for the intended purpose.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

The sensitivity of key variables in this analysis was considered. Key variables include the selected loss development tails, trend factors, and pure premiums. The overall results are potentially sensitive to these key variables, and reasonable alternative selections could change the results in either direction.

KMIT's data was supplemented with insurance industry data where deemed necessary, such as loss development factors where credible data was not available. The use of external data is another source of uncertainty in our estimates.

The emergence of individual large losses (or changes in case reserves on existing open claims) could materially change our results. We cannot predict the timing of large losses, but their possibility increases the uncertainty inherent in our estimates.

Milliman is not expressing an opinion as to the appropriateness of discounting KMIT's unpaid claims liabilities for financial reporting. We have not examined KMIT's current investment portfolio nor its current investment philosophy. In estimating KMIT's discounted loss reserves, we used an annual effective interest rate of 0.69%. The interest rate was provided to us by KMIT and is based on its assessment of its investment returns. KMIT selected the interest rate because KMIT has greater familiarity with the potential investment returns on its assets. The selected interest rate does not conflict significantly with what, in our opinion, would be reasonable for the purpose of this assignment.

Future rates of return are not guaranteed and may exceed or fall below the assumed rate. Also, the actual timing of loss payments is subject to variability. Differences between actual and expected rates of return and timing of payments from those underlying our estimates may have a material effect on the amount of the discount. Further, our projections assume the existence of valid assets underlying the unpaid claim liabilities and that these assets are appropriate to meet the cash flow needs of KMIT. We have not reviewed the held assets.

Finally, KMIT insures part of its exposure to limit its liability for losses. Our estimates are presented on a net basis with respect to excess and aggregate insurance recoverables. We have not made any provisions for uncollectible excess or aggregate insurance.

We did not review the actual excess and aggregate insurance contracts of KMIT but relied on summaries of the terms of the contracts provided by KMIT. Our results, net of excess insurance, assume that all excess insurance is valid and collectible. We are not able to assess the potential for uncollectible excess insurance without performing a substantial amount of additional work beyond the scope of our assignment. We have not anticipated any contingent liabilities that could arise if the excess insurers do not meet their obligations to KMIT as reflected in the data and other information provided to us.



We appreciate the opportunity to again be of service to the Kansas Municipal Insurance Trust. If you have any questions on our report, please do not hesitate to contact us.

Sincerely,

A handwritten signature in cursive script that reads "Mindy M. Steichen".

Mindy M. Steichen, FCAS, MAAA  
Consulting Actuary

MMS/bas

cc: Deanna Furman  
Debbie James

March 25, 2016

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**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation  
Summary of Excess Insurance Program**

<u>Insurance Period</u>	<u>Per Claim Retention</u>	<u>Aggregate Retention</u>	<u>Excess Insurance Policy Limit</u>
1/01/94-12/31/95 *	\$250,000	\$2,376,391	\$5,000,000
1/01/96-12/31/96	250,000	1,796,589	3,000,000
1/01/97-12/31/97	250,000	1,543,031	3,000,000
1/01/98-12/31/98	250,000	1,472,773	3,000,000
1/01/99-12/31/99	250,000	1,540,262	3,000,000
1/01/00-12/31/00	250,000	1,702,335	3,000,000
1/01/01-12/31/01	250,000	2,045,088	3,000,000
1/01/02-12/31/02	300,000 **	2,720,504	3,000,000
1/01/03-12/31/03	300,000 ***	3,218,926	3,000,000
1/01/04-12/31/04	500,000	4,544,300	3,000,000
1/01/05-12/31/05	500,000	5,602,842	3,000,000
1/01/06-12/31/06	750,000	4,978,483	3,000,000
1/01/07-12/31/07	750,000	4,920,798	3,000,000
1/01/08-12/31/08	750,000	5,448,469	3,000,000
1/01/09-12/31/09	750,000	5,503,943	3,000,000
1/01/10-12/31/10	750,000	5,517,871	3,000,000
1/01/11-12/31/11	750,000	5,397,530	3,000,000
1/01/12-12/31/12	750,000	5,619,072	3,000,000
1/01/13-12/31/13	750,000	6,047,177	3,000,000
1/01/14-12/31/14	750,000	6,550,307	3,000,000
1/01/15-12/31/15	750,000	6,994,827	3,000,000
1/01/16-12/31/16	\$750,000	\$6,923,594	\$3,000,000

\* For the 1994 & 1995 years, the aggregate retention of \$2.4M is applicable on a combined basis.

\*\* The Retention for Class Code 7539 is \$350,000 and \$300,000 for all other Class Codes.

\*\*\* The Retention for Class Code 7539 is \$400,000 and \$300,000 for all other Class Codes.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation  
Incurred Medical & Indemnity Loss & ALAE Limited to Per Claim Retentions**

Accident Year	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264
1994	549,504	752,689	775,594	743,060	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241
1995	546,387	1,083,821	1,098,272	1,108,380	1,102,723	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,496	1,103,496	1,103,496	1,103,496
1996	544,209	680,655	739,898	856,552	856,495	836,460	836,493	836,493	836,493	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631
1997	1,315,384	1,548,834	1,787,838	1,749,009	1,747,333	1,775,940	1,807,342	1,807,365	1,808,816	1,808,816	1,808,816	1,801,890	1,826,890	1,826,890	1,826,890	1,833,890	1,896,890	1,896,890	1,896,890	1,895,658		
1998	715,614	999,500	1,091,244	1,084,938	1,120,177	1,183,709	1,218,855	1,310,767	1,328,630	1,328,630	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631
1999	725,540	1,112,731	1,302,534	1,460,666	1,512,637	1,504,443	1,552,010	1,573,510	1,642,112	1,642,112	1,646,612	1,646,612	1,646,612	1,651,612	1,651,612	1,651,612	1,661,521	1,661,520				
2000	696,850	1,036,064	1,205,669	1,239,967	1,296,491	1,317,123	1,355,755	1,411,001	1,418,001	1,418,001	1,523,001	1,574,576	1,577,021	1,580,271	1,580,775	1,580,808						
2001	815,645	1,128,688	1,199,118	1,191,746	1,192,910	1,193,220	1,198,501	1,180,293	1,180,293	1,180,293	1,180,293	1,180,293	1,180,293	1,180,293	1,180,293	1,180,293						
2002	1,054,829	1,477,212	1,365,075	1,343,505	1,343,505	1,340,826	1,340,826	1,340,826	1,340,826	1,340,826	1,340,826	1,340,826	1,340,826	1,340,826	1,340,826	1,340,826						
2003	1,282,114	1,607,815	1,593,726	1,591,103	1,598,258	1,598,258	1,623,547	1,628,451	1,635,451	1,635,451	1,635,451	1,623,367	1,623,367									
2004	1,293,267	2,063,658	2,133,976	2,318,109	2,344,150	2,340,188	2,305,072	2,301,629	2,324,597	2,429,597	2,436,741											
2005	2,233,412	3,244,786	3,358,164	3,440,441	3,599,488	3,603,227	3,761,251	3,841,672	3,893,333	3,896,316	3,946,643											
2006	1,652,427	2,506,421	2,521,407	2,622,453	2,621,186	2,702,302	2,741,620	2,829,620	2,829,037	2,829,037												
2007	1,674,625	2,331,829	2,439,995	2,589,099	2,764,193	2,795,735	2,870,662	2,960,162	3,028,959													
2008	2,436,655	3,008,881	3,206,923	3,312,358	3,392,219	3,475,316	3,480,497	3,612,992														
2009	1,394,062	2,103,767	2,053,555	2,131,483	2,223,547	2,190,325	2,175,452															
2010	2,362,300	3,183,354	3,678,422	3,624,648	3,813,725	3,960,305																
2011	2,198,429	2,404,188	2,475,834	2,812,895	2,853,648																	
2012	1,359,817	1,686,437	1,766,421	2,045,879																		
2013	1,503,391	1,723,903	1,826,896																			
2014	2,563,324	2,844,279																				
2015	1,729,978																					

Accident Year	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	216 - 228	228 - 240	240 - 252	252 - 264	264 - Ult
1994	1.370	1.030	0.958	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.984	1.013	1.009	0.995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.251	1.087	1.158	1.000	0.977	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.177	1.154	0.978	0.999	1.016	1.018	1.000	1.001	1.000	1.000	0.996	1.014	1.000	1.000	1.004	1.034	1.000	0.999				
1998	1.397	1.092	0.994	1.032	1.057	1.030	1.075	1.014	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000					
1999	1.534	1.171	1.121	1.036	0.995	1.032	1.014	1.044	1.000	1.003	1.000	1.000	1.003	1.000	1.006	1.000						
2000	1.487	1.164	1.028	1.046	1.016	1.029	1.041	1.005	1.000	1.074	1.034	1.002	1.002	1.000	1.000							
2001	1.384	1.062	0.994	1.001	1.000	1.004	0.985	1.000	1.000	1.000	1.000	1.000	1.000	1.000								
2002	1.400	0.924	0.984	1.000	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000									
2003	1.254	0.991	0.998	1.004	1.000	1.016	1.003	1.004	1.000	1.000	0.993	1.000										
2004	1.596	1.034	1.086	1.011	0.998	0.985	0.999	1.010	1.045	1.003	1.000											
2005	1.453	1.035	1.025	1.046	1.001	1.044	1.021	1.013	1.001	1.013												
2006	1.517	1.006	1.040	1.000	1.031	1.015	1.032	1.000	1.000													
2007	1.392	1.046	1.061	1.068	1.011	1.027	1.031	1.023														
2008	1.235	1.066	1.033	1.024	1.024	1.001	1.038															
2009	1.509	0.976	1.038	1.043	0.985	0.993																
2010	1.348	1.156	0.985	1.052	1.038																	
2011	1.094	1.030	1.136	1.014																		
2012	1.240	1.047	1.158																			
2013	1.147	1.060																				
2014	1.110																					

NCCI Kansas	1.212	1.044	1.023	1.012	1.010	1.007	1.020	1.008	1.004	1.002	1.006	1.002	1.003	1.004	1.001	1.001	1.006	1.000	0.999	<-- 228 - Ult		
NCCI Countrywide	1.336	1.096	1.049	1.026	1.017	1.011	1.009	1.007	1.006	1.005	1.003	1.005	1.003	1.003	1.002	1.002	1.003	1.002	1.026	<-- 228 - Ult		
Average	1.375	1.057	1.041	1.021	1.009	1.012	1.016	1.008	1.004	1.008	1.002	1.002	1.001	1.000	1.001	1.006	1.000	1.000	1.000	1.000	1.000	1.000
Average x H/L	1.358	1.058	1.039	1.019	1.008	1.012	1.014	1.006	1.000	1.002	1.000	1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Wtd Average	1.332	1.054	1.041	1.026	1.014	1.014	1.019	1.010	1.005	1.009	1.002	1.002	1.001	1.000	1.002	1.008	1.000	1.000	1.000	1.000	1.000	1.000
Select for 94-03*	1.332	1.054	1.057	1.034	1.012	1.014	1.019	1.010	1.005	1.003	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
94-03 Cumulative	1.645	1.235	1.172	1.109	1.073	1.060	1.045	1.026	1.016	1.011	1.008	1.006	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005
Select for 04-15**	1.332	1.054	1.057	1.034	1.012	1.014	1.019	1.010	1.005	1.003	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
04-15 Cumulative	1.670	1.254	1.190	1.126	1.089	1.076	1.061	1.041	1.031	1.026	1.023	1.021	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020

\* Years with SIRs of \$250,000 or \$300,000.

\*\* Years with SIRs of \$500,000 or \$750,000.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation  
Net Ultimate Medical & Indemnity Loss & ALAE Indications  
Incurred Loss Development Projection  
Evaluation as of 12/31/15**

		(1)	(2)	(3)	(4) = [(1)-(2)]x(3)+(2)
Accident Year	Months of Development	Incurred Loss & ALAE @12/31/15	Incurred Large Loss & ALAE Adjustment	Cumulative Incurred LDF*	Indicated Ultimate Loss & ALAE**
1994	264	\$742,241	\$0	1.005	\$745,952
1995	252	1,103,496	0	1.005	1,109,013
1996	240	836,631	0	1.005	840,814
1997	228	1,895,658	0	1.005	1,905,136
1998	216	1,328,630	0	1.005	1,335,273
1999	204	1,661,520	0	1.005	1,669,828
2000	192	1,580,808	0	1.005	1,588,712
2001	180	1,180,293	0	1.005	1,186,194
2002	168	1,340,826	0	1.005	1,347,530
2003	156	1,623,367	0	1.005	1,631,484
2004	144	2,437,191	0	1.021	2,488,372
2005	132	3,946,643	499,925	1.023	4,025,918
2006	120	2,829,037	0	1.026	2,902,592
2007	108	3,028,959	0	1.031	3,122,857
2008	96	3,612,992	0	1.041	3,761,125
2009	84	2,175,452	0	1.061	2,308,155
2010	72	3,960,305	0	1.076	4,261,288
2011	60	2,853,648	0	1.089	3,107,623
2012	48	2,045,879	0	1.126	2,303,660
2013	36	1,826,896	0	1.190	2,174,006
2014	24	2,844,279	750,000	1.254	3,376,226
2015	12	1,729,978	0	1.670	2,889,063
Total		\$46,584,729	\$1,249,925		\$50,080,821

\* Based on KMIT loss history supplemented with NCCI Statistical Bulletin information.

\*\* The large claims in 2005 & 2014 were not developed.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation  
Paid Medical & Indemnity Loss & ALAE Limited to Per Claim Retentions**

Accident Year																						
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264
1994	337,680	572,772	672,657	722,555	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241	742,241
1995	311,299	770,471	1,000,258	1,025,950	1,102,723	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,118	1,103,496	1,103,496	1,103,496	836,631
1996	233,827	557,835	701,367	831,383	856,495	836,460	836,493	836,493	836,493	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631	836,631
1997	698,376	1,236,709	1,600,714	1,689,902	1,749,729	1,761,798	1,774,588	1,787,037	1,785,022	1,790,744	1,795,115	1,799,457	1,812,180	1,817,500	1,822,970	1,830,014	1,835,872	1,843,278	1,895,658			
1998	382,887	762,358	946,649	1,033,877	1,068,430	1,123,046	1,188,439	1,286,699	1,311,945	1,328,630	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,631	1,328,630
1999	497,057	945,543	1,231,294	1,387,701	1,433,141	1,470,482	1,488,630	1,501,435	1,569,579	1,633,846	1,636,617	1,637,470	1,638,895	1,640,575	1,645,221	1,652,182	1,652,961					
2000	405,729	832,626	1,120,010	1,198,918	1,296,491	1,310,649	1,327,913	1,363,971	1,378,649	1,395,111	1,462,558	1,547,462	1,550,510	1,553,759	1,561,239	1,564,092						
2001	460,784	967,977	1,064,877	1,191,746	1,192,444	1,193,220	1,194,038	1,180,293	1,180,293	1,180,293	1,180,293	1,180,293	1,180,293	1,180,293	1,180,293	1,180,293						
2002	659,579	1,130,950	1,324,566	1,340,467	1,340,825	1,340,825	1,340,825	1,340,825	1,340,826	1,340,826	1,340,826	1,340,826	1,340,826	1,340,826	1,340,826	1,340,826						
2003	964,665	1,462,892	1,532,404	1,542,377	1,598,258	1,598,258	1,602,481	1,616,517	1,623,367	1,623,367	1,623,367	1,623,367	1,623,367	1,623,367	1,623,367	2,410,324						
2004	786,944	1,561,934	1,953,110	2,101,031	2,248,698	2,279,692	2,294,399	2,297,324	2,307,329	2,380,745	2,393,750	2,410,324										
2005	1,229,826	2,570,887	2,944,207	3,152,061	3,367,881	3,469,495	3,621,588	3,735,826	3,762,129	3,839,629	3,860,932											
2006	874,076	1,920,917	2,220,653	2,387,480	2,526,291	2,625,597	2,641,385	2,739,343	2,749,626	2,758,786												
2007	787,012	1,984,011	2,279,729	2,351,320	2,526,347	2,619,834	2,663,981	2,768,556	2,909,381													
2008	1,191,790	2,489,314	2,865,128	3,060,081	3,201,123	3,242,919	3,294,839	3,473,330														
2009	730,841	1,582,734	1,831,733	1,946,136	2,099,939	2,143,884	2,154,269															
2010	1,125,821	2,295,412	3,059,724	3,408,765	3,596,993	3,707,200																
2011	923,653	1,662,070	1,908,433	2,383,873	2,509,948																	
2012	794,945	1,405,620	1,633,737	1,846,961																		
2013	678,447	1,493,185	1,658,532																			
2014	1,390,345	2,546,230																				
2015	1,003,505																					

Accident Year																						
	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	216 - 228	228 - 240	240 - 252	252 - 264	264 - Ult
1994	1.696	1.174	1.074	1.027	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	2.475	1.298	1.026	1.075	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	2.386	1.257	1.185	1.030	0.977	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.771	1.294	1.056	1.035	1.007	1.007	1.007	0.999	1.003	1.002	1.002	1.007	1.003	1.003	1.004	1.003	1.004	1.028				
1998	1.991	1.242	1.092	1.033	1.051	1.058	1.083	1.020	1.013	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000					
1999	1.902	1.302	1.127	1.033	1.026	1.012	1.009	1.045	1.041	1.002	1.001	1.001	1.001	1.003	1.004	1.000						
2000	2.052	1.345	1.070	1.081	1.011	1.013	1.027	1.011	1.012	1.048	1.058	1.002	1.002	1.005	1.002							
2001	2.101	1.100	1.119	1.001	1.001	1.001	0.988	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000							
2002	1.715	1.171	1.012	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000									
2003	1.516	1.048	1.007	1.036	1.000	1.003	1.009	1.004	1.000	1.000	1.000	1.000	1.000									
2004	1.985	1.250	1.076	1.070	1.014	1.006	1.001	1.004	1.032	1.005	1.007											
2005	2.090	1.145	1.071	1.068	1.030	1.044	1.032	1.007	1.021	1.006												
2006	2.198	1.156	1.075	1.058	1.039	1.006	1.037	1.004	1.003													
2007	2.521	1.149	1.031	1.074	1.037	1.017	1.039	1.051														
2008	2.089	1.151	1.068	1.046	1.013	1.016	1.054															
2009	2.166	1.157	1.062	1.079	1.021	1.005																
2010	2.039	1.333	1.114	1.055	1.031																	
2011	1.799	1.148	1.149	1.053																		
2012	1.768	1.162	1.131																			
2013	2.201	1.111																				
2014	1.831																					
NCCI Kansas	2.123	1.245	1.107	1.047	1.031	1.020	1.014	1.012	1.010	1.007	1.006	1.005	1.003	1.005	1.004	1.004	1.004	1.003	1.041	<-- 228 - Ult		
NCCI Countrywide	2.140	1.268	1.125	1.070	1.043	1.030	1.021	1.017	1.013	1.011	1.010	1.008	1.007	1.006	1.006	1.005	1.005	1.005	1.076	<-- 228 - Ult		
Average	2.014	1.200	1.087	1.048	1.015	1.012	1.019	1.010	1.010	1.005	1.006	1.001	1.001	1.001	1.001	1.001	1.001	1.007	1.000	1.000	1.000	1.000
Average x H/L	2.013	1.200	1.082	1.048	1.015	1.009	1.017	1.008	1.008	1.002	1.001	1.000	1.000	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Wtd Average	1.988	1.189	1.085	1.052	1.019	1.014	1.024	1.012	1.012	1.006	1.007	1.001	1.001	1.002	1.001	1.001	1.001	1.012	1.000	1.000	1.000	1.000
Select for 94-03*	1.988	1.189	1.119	1.052	1.028	1.014	1.024	1.012	1.012	1.006	1.003	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001
94-03 Cumulative	3.163	1.591	1.338	1.196	1.137	1.106	1.091	1.065	1.052	1.040	1.034	1.031	1.029	1.028	1.027	1.026	1.025	1.024	1.023	1.022	1.021	1.020
Select for 04-15**	1.988	1.189	1.119	1.052	1.028	1.014	1.024	1.012	1.012	1.006	1.003	1.002	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001
04-15 Cumulative	3.207	1.613	1.357	1.213	1.153	1.122	1.107	1.081	1.068	1.055	1.049	1.046	1.044	1.043	1.042	1.041	1.040	1.039	1.038	1.037	1.036	1.035

\* Years with SIRs of \$250,000 or \$300,000.  
\*\* Years with SIRs of \$500,000 or \$750,000.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation  
Net Ultimate Medical & Indemnity Loss & ALAE Indications  
Paid Loss Development Projection  
Evaluation as of 12/31/15**

Accident Year	Months of Development	(1)	(2)	(3)	(4)	(5)
		Paid Loss & ALAE @12/31/15	Paid Large Loss & ALAE Adjustment	Incurred Large Loss & ALAE Adjustment	Cumulative Paid LDF*	= [(1)-(2)]x(4)+(3) Indicated Ultimate Loss & ALAE**
1994	264	\$742,241	\$0	\$0	1.020	\$757,086
1995	252	1,103,496	0	0	1.021	1,126,669
1996	240	836,631	0	0	1.022	855,037
1997	228	1,895,658	0	0	1.023	1,939,258
1998	216	1,328,630	0	0	1.024	1,360,517
1999	204	1,652,961	0	0	1.025	1,694,285
2000	192	1,564,092	0	0	1.026	1,604,758
2001	180	1,180,293	0	0	1.027	1,212,161
2002	168	1,340,826	0	0	1.028	1,378,369
2003	156	1,623,367	0	0	1.029	1,670,445
2004	144	2,410,324	0	0	1.046	2,521,199
2005	132	3,860,932	499,925	499,925	1.049	4,025,621
2006	120	2,758,786	0	0	1.055	2,910,519
2007	108	2,909,381	0	0	1.068	3,107,219
2008	96	3,473,330	0	0	1.081	3,754,670
2009	84	2,154,269	0	0	1.107	2,384,776
2010	72	3,707,200	0	0	1.122	4,159,478
2011	60	2,509,948	0	0	1.153	2,893,970
2012	48	1,846,961	0	0	1.213	2,240,364
2013	36	1,658,532	0	0	1.357	2,250,628
2014	24	2,546,230	750,000	750,000	1.613	3,647,319
2015	12	1,003,505	0	0	3.207	3,218,241
<b>Total</b>		<b>\$44,107,593</b>	<b>\$1,249,925</b>	<b>\$1,249,925</b>		<b>\$50,712,589</b>

\* Based on KMIT loss history supplemented with NCCI Statistical Bulletin information.

\*\* The large claims in 2005 & 2014 were not developed.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation  
Net Ultimate Medical & Indemnity Loss & ALAE Indications  
Incurred Bornhuetter - Ferguson Projection Method  
Evaluation as of 12/31/15**

Accident Year	Months of Development	(1)	(2)	(3)	(4)	(5)	(6)
		A' Priori Ultimate Losses & ALAE*	Large Loss & ALAE Adjustment	Incurred Cumulative LDF	IBNR** =[(1)-(2)]x[1-1/(3)]	Incurred Loss & ALAE @ 12/31/15	Indicated Ultimate Loss & ALAE = (4) + (5)
1994	264	\$742,241	\$0	1.005	\$3,693	\$742,241	\$745,934
1995	252	1,103,496	0	1.005	5,490	1,103,496	1,108,986
1996	240	836,631	0	1.005	4,162	836,631	840,793
1997	228	1,896,890	0	1.005	9,437	1,895,658	1,905,095
1998	216	1,328,631	0	1.005	6,610	1,328,630	1,335,240
1999	204	1,661,521	0	1.005	8,266	1,661,520	1,669,786
2000	192	1,592,966	0	1.005	7,925	1,580,808	1,588,733
2001	180	1,180,293	0	1.005	5,872	1,180,293	1,186,165
2002	168	1,340,826	0	1.005	6,671	1,340,826	1,347,497
2003	156	1,623,367	0	1.005	8,076	1,623,367	1,631,443
2004	144	2,494,672	0	1.021	51,311	2,437,191	2,488,502
2005	132	3,985,889	499,925	1.023	78,375	3,946,643	4,025,018
2006	120	2,905,571	0	1.026	73,630	2,829,037	2,902,667
2007	108	3,065,209	0	1.031	92,164	3,028,959	3,121,123
2008	96	3,636,700	0	1.041	143,232	3,612,992	3,756,224
2009	84	2,348,944	0	1.061	135,048	2,175,452	2,310,500
2010	72	4,081,109	0	1.076	288,257	3,960,305	4,248,562
2011	60	3,097,095	0	1.089	253,114	2,853,648	3,106,762
2012	48	2,062,085	0	1.126	230,748	2,045,879	2,276,627
2013	36	2,295,616	0	1.190	366,527	1,826,896	2,193,423
2014	24	3,893,823	750,000	1.254	636,787	2,844,279	3,481,066
2015	12	3,995,282	0	1.670	1,602,898	1,729,978	3,332,876
<b>Total</b>		<b>\$51,168,857</b>	<b>\$1,249,925</b>		<b>\$4,018,293</b>	<b>\$46,584,729</b>	<b>\$50,603,022</b>

\* The A'Priori Ultimate Losses & ALAE are based on Milliman's 12/31/14 analysis.

\*\* No additional IBNR has been included for the large claims in 2005 & 2014.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation  
Net Ultimate Medical & Indemnity Loss & ALAE Indications  
Paid Bornhuetter - Ferguson Projection Method  
Evaluation as of 12/31/15**

Accident Year	Months of Development	(1)	(2)	(3)	(4)	(5)	(6)
		A' Priori Ultimate Losses & ALAE*	Large Loss & ALAE Adjustment	Paid Cumulative LDF	Unpaid** =[(1)-(2)]x[1-1/(3)]	Paid Loss & ALAE @ 12/31/15	Indicated Ultimate Loss & ALAE = (4) + (5)
1994	264	\$742,241	\$0	1.020	\$14,554	\$742,241	\$756,795
1995	252	1,103,496	0	1.021	22,697	1,103,496	1,126,193
1996	240	836,631	0	1.022	18,010	836,631	854,641
1997	228	1,896,890	0	1.023	42,648	1,895,658	1,938,306
1998	216	1,328,631	0	1.024	31,140	1,328,630	1,359,770
1999	204	1,661,521	0	1.025	40,525	1,652,961	1,693,486
2000	192	1,592,966	0	1.026	40,368	1,564,092	1,604,460
2001	180	1,180,293	0	1.027	31,030	1,180,293	1,211,323
2002	168	1,340,826	0	1.028	36,521	1,340,826	1,377,347
2003	156	1,623,367	0	1.029	45,751	1,623,367	1,669,118
2004	144	2,494,672	0	1.046	109,708	2,410,324	2,520,032
2005	132	3,985,889	499,925	1.049	162,833	3,860,932	4,023,765
2006	120	2,905,571	0	1.055	151,475	2,758,786	2,910,261
2007	108	3,065,209	0	1.068	195,163	2,909,381	3,104,544
2008	96	3,636,700	0	1.081	272,500	3,473,330	3,745,830
2009	84	2,348,944	0	1.107	227,043	2,154,269	2,381,312
2010	72	4,081,109	0	1.122	443,757	3,707,200	4,150,957
2011	60	3,097,095	0	1.153	410,976	2,509,948	2,920,924
2012	48	2,062,085	0	1.213	362,097	1,846,961	2,209,058
2013	36	2,295,616	0	1.357	603,931	1,658,532	2,262,463
2014	24	3,893,823	750,000	1.613	1,194,770	2,546,230	3,741,000
2015	12	3,995,282	0	3.207	2,749,482	1,003,505	3,752,987
<b>Total</b>		<b>\$51,168,857</b>	<b>\$1,249,925</b>		<b>\$7,206,979</b>	<b>\$44,107,593</b>	<b>\$51,314,572</b>

\* The A'Priori Ultimate Losses & ALAE are based on Milliman's 12/31/14 analysis.

\*\* No additional unpaid has been included for the large claims in 2005 & 2014. The incurred amount for these claims has been included.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation  
Selection of Medical & Indemnity Net Ultimate Loss & ALAE  
Evaluation as of 12/31/15**

Accident Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) =Min [(6), (7)]
	Incurred Loss & ALAE @12/31/15	Ultimate Loss and ALAE Based on:				Selected Ultimate Loss & ALAE*	Aggregate Retention**	Selected Ultimate Loss & ALAE Limited to Aggregate
		Incurred Development Method	Paid Development Method	Incurred Born-Ferg Method	Paid Born-Ferg Method			
1994	\$742,241	\$745,952	\$757,086	\$745,934	\$756,795	\$742,241	N/A	\$742,241
1995	1,103,496	1,109,013	1,126,669	1,108,986	1,126,193	1,103,496	N/A	1,103,496
1996	836,631	840,814	855,037	840,793	854,641	836,631	\$1,796,589	836,631
1997	1,895,658	1,905,136	1,939,258	1,905,095	1,938,306	1,895,658	1,543,031	1,543,031
1998	1,328,630	1,335,273	1,360,517	1,335,240	1,359,770	1,328,630	1,472,773	1,328,630
1999	1,661,520	1,669,828	1,694,285	1,669,786	1,693,486	1,661,520	1,540,262	1,540,262
2000	1,580,808	1,588,712	1,604,758	1,588,733	1,604,460	1,588,723	1,702,335	1,588,723
2001	1,180,293	1,186,194	1,212,161	1,186,165	1,211,323	1,180,293	2,045,088	1,180,293
2002	1,340,826	1,347,530	1,378,369	1,347,497	1,377,347	1,340,826	2,720,504	1,340,826
2003	1,623,367	1,631,484	1,670,445	1,631,443	1,669,118	1,623,367	3,218,926	1,623,367
2004	2,437,191	2,488,372	2,521,199	2,488,502	2,520,032	2,498,969	4,544,300	2,498,969
2005	3,946,643	4,025,918	4,025,621	4,025,018	4,023,765	4,024,900	5,602,842	4,024,900
2006	2,829,037	2,902,592	2,910,519	2,902,667	2,910,261	2,905,173	4,978,483	2,905,173
2007	3,028,959	3,122,857	3,107,219	3,121,123	3,104,544	3,116,175	4,920,798	3,116,175
2008	3,612,992	3,761,125	3,754,670	3,756,224	3,745,830	3,754,393	5,448,469	3,754,393
2009	2,175,452	2,308,155	2,384,776	2,310,500	2,381,312	2,333,322	5,503,943	2,333,322
2010	3,960,305	4,261,288	4,159,478	4,248,562	4,150,957	4,220,269	5,517,871	4,220,269
2011	2,853,648	3,107,623	2,893,970	3,106,762	2,920,924	3,045,103	5,397,530	3,045,103
2012	2,045,879	2,303,660	2,240,364	2,276,627	2,209,058	2,263,115	5,619,072	2,263,115
2013	1,826,896	2,174,006	2,250,628	2,193,423	2,262,463	2,209,964	6,047,177	2,209,964
2014	2,844,279	3,376,226	3,647,319	3,481,066	3,741,000	3,532,764	6,550,307	3,532,764
2015	1,729,978	2,889,063	3,218,241	3,332,876	3,752,987	3,542,932	6,994,827	3,542,932
Total	\$46,584,729	\$50,080,821	\$50,712,589	\$50,603,022	\$51,314,572	\$50,748,464		\$50,274,579

\* Gross of Aggregate Excess Coverage; Net of Specific Excess Coverage.

\*\* The Aggregate Retention for 1994 and 1995 is \$2,376,391 on a combined basis.



## KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST

**Workers' Compensation**  
**Calculation of Medical & Indemnity Net Unpaid Loss & ALAE**  
**Evaluation as of 12/31/15**

Accident Year	(1) Net Ultimate Loss & ALAE*	(2) Net Incurred Loss & ALAE*	(3) Net Paid Loss & ALAE*	(4) = (2) - (3) Net Case Reserves	(5) = (1) - (2) Net IBNR**	(6) = (4) + (5) Total Net Unpaid Loss & ALAE
1994	\$742,241	\$742,241	\$742,241	\$0	\$0	\$0
1995	1,103,496	1,103,496	1,103,496	0	0	0
1996	836,631	836,631	836,631	0	0	0
1997	1,543,031	1,595,411	1,595,411	0	(52,380)	(52,380)
1998	1,328,630	1,328,630	1,328,630	0	0	0
1999	1,540,262	1,549,600	1,541,041	8,559	(9,338)	(779)
2000	1,588,723	1,580,808	1,564,092	16,716	7,915	24,631
2001	1,180,293	1,180,293	1,180,293	0	0	0
2002	1,340,826	1,340,826	1,340,826	0	0	0
2003	1,623,367	1,623,367	1,623,367	0	0	0
2004	2,498,969	2,437,191	2,410,324	26,867	61,778	88,645
2005	4,024,900	3,946,643	3,860,932	85,711	78,257	163,968
2006	2,905,173	2,829,037	2,758,786	70,251	76,136	146,387
2007	3,116,175	3,028,959	2,909,381	119,578	87,216	206,794
2008	3,754,393	3,612,992	3,473,330	139,662	141,401	281,063
2009	2,333,322	2,175,452	2,154,269	21,183	157,870	179,053
2010	4,220,269	3,960,305	3,707,200	253,105	259,964	513,069
2011	3,045,103	2,853,648	2,509,948	343,700	191,455	535,155
2012	2,263,115	2,045,879	1,846,961	198,918	217,236	416,154
2013	2,209,964	1,826,896	1,658,532	168,364	383,068	551,432
2014	3,532,764	2,844,279	2,546,230	298,049	688,485	986,534
2015	3,542,932	1,729,978	1,003,505	726,473	1,812,954	2,539,427
<b>Total</b>	<b>\$50,274,579</b>	<b>\$46,172,562</b>	<b>\$43,695,426</b>	<b>\$2,477,136</b>	<b>\$4,102,017</b>	<b>\$6,579,153</b>

\* Net of Aggregate Excess Coverage; Net of Specific Excess Coverage.

\*\* For the 1997 and 1999 years, incurred and paid losses exceed the aggregate retention.

Ultimately KMIT should recover losses excess of the aggregate retention from Safety National.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation  
Projected 2016 Ultimate Loss & ALAE**

	(1)	(2)	(3)	(4)	(5)	(6)	(7) (3)x(4)x(5)x(6)
Accident Year	Ultimate Loss & ALAE Gross of Aggregate	Payroll (\$00's)	Pure Premium	Increased Limits Factor to \$750,000*	Benefit Level Adjustment Factor	Trend Factor**	Trended Pure Premium at \$750,000 Retention
2006	\$2,905,173	\$1,399,227	\$2.08	1.000	1.052	1.10	\$2.41
2007	3,116,175	1,485,167	2.10	1.000	1.043	1.09	2.39
2008	3,754,393	1,588,854	2.36	1.000	1.020	1.08	2.60
2009	2,333,322	1,594,082	1.46	1.000	1.015	1.07	1.59
2010	4,220,269	1,606,836	2.63	1.000	1.024	1.06	2.85
2011	3,045,103	1,534,033	1.99	1.000	1.018	1.05	2.13
2012	2,263,115	1,596,327	1.42	1.000	1.013	1.04	1.50
2013	2,209,964	1,717,948	1.29	1.000	1.007	1.03	1.34
2014	3,532,764	1,987,456	1.78	1.000	0.996	1.02	1.81
2015	3,542,932	1,995,343	1.78	1.000	1.000	1.01	1.80
Total	\$30,923,210	\$16,505,273	\$1.88			Weighted Average	\$2.02
						Avg M3L5	1.70
						Avg L5	1.72
						NCCI Kansas	1.63
(8)	2016 Selected Net Pure Premium						\$1.85
(9)	2016 Projected Payroll (\$00's)						\$2,069,665
(10) = (8) x (9)	Estimated KMIT 2016 Ultimate Losses and ALAE (Prior to Aggregate Excess Insurance)						\$3,828,881
(11)	Aggregate Retention Factor for 2016						0.97
(12) = (10) x (11)	Estimated KMIT 2016 Ultimate Losses and ALAE (Limited to Aggregate Retention)						\$3,714,015
(13)	Discount Factor at 0.69%						0.984
(14) = (12) x (13)	Present Value of Estimated KMIT 2016 Ultimate Losses and ALAE (Limited to Aggregate Retention)						\$3,654,591

\* Based on Kansas NCCI Filing.

\*\* Trended at 1.0% per year.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation  
Calculation of the On-Level Benefit Level Factors  
For the Pure Premium Method**

<u>Date</u>	<u>Incremental Benefit Level Change*</u>	<u>Cumulative Benefit Level Change</u>	<u>Accident Year</u>	<u>Average Benefit Level</u>	<u>Anticipated Benefit Level Factor to 2016</u>
07/01/93	0.889	0.889	2006	1.005	1.052
07/01/93	1.009	0.897	2007	1.013	1.043
11/01/93	0.981	0.880	2008	1.036	1.020
07/01/94	1.004	0.883	2009	1.042	1.015
07/01/95	1.004	0.887	2010	1.033	1.024
05/01/96	1.024	0.908	2011	1.039	1.018
07/01/96	1.007	0.915	2012	1.043	1.013
07/01/97	1.007	0.921	2013	1.050	1.007
09/01/97	0.985	0.907	Estimated 2014	1.061	0.996
07/01/98	1.008	0.915	Estimated 2015	1.057	1.000
07/01/99	1.008	0.922	Estimated 2016	1.057	1.000
10/01/99	1.012	0.933			
07/01/00	1.010	0.942			
07/01/00	1.008	0.950			
07/01/01	1.007	0.956			
12/01/01	1.023	0.978			
07/01/02	1.006	0.984			
07/01/03	1.004	0.988			
12/01/03	0.993	0.981			
07/01/04	1.004	0.985			
07/01/05	1.005	0.990			
12/01/05	1.012	1.002			
07/01/06	1.005	1.007			
07/01/07	1.009	1.016			
12/01/07	1.018	1.034			
07/01/08	1.004	1.039			
07/01/09	1.006	1.045			
01/01/10	0.985	1.029			
07/01/10	1.007	1.036			
01/01/11	1.006	1.042			
05/15/11	0.994	1.036			
01/01/12	1.007	1.043			
01/01/13	1.006	1.050			
01/01/14	1.010	1.060			
07/01/14	1.002	1.062			
01/01/15	0.995	1.057			

\* Source: 2015 NCCI Annual Statistical Bulletin.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation**

**Selection of Payment Pattern Based on Selected Paid LDFs**

(1)	(2)	(3)	(4) = 1 / (2)	(5) = 1 / (3)	(6)
Month of Development	1994-2003 Selected Cumulative Paid LDF*	2004-2015 Selected Cumulative Paid LDF*	1994-2003 Indicated Payment Pattern	2004-2015 Indicated Payment Pattern	Selected Payment Pattern
264	1.020	1.035	98.0%	96.6%	100.0%
252	1.021	1.036	97.9%	96.5%	100.0%
240	1.022	1.037	97.8%	96.4%	100.0%
228	1.023	1.038	97.8%	96.3%	100.0%
216	1.024	1.039	97.7%	96.2%	100.0%
204	1.025	1.040	97.6%	96.2%	100.0%
192	1.026	1.041	97.5%	96.1%	99.5%
180	1.027	1.042	97.4%	96.0%	99.0%
168	1.028	1.043	97.3%	95.9%	98.5%
156	1.029	1.044	97.2%	95.8%	98.0%
144	1.031	1.046	97.0%	95.6%	97.0%
132	1.034	1.049	96.7%	95.3%	96.0%
120	1.040	1.055	96.2%	94.8%	95.0%
108	1.052	1.068	95.1%	93.6%	94.0%
96	1.065	1.081	93.9%	92.5%	93.0%
84	1.091	1.107	91.7%	90.3%	92.0%
72	1.106	1.122	90.4%	89.1%	91.0%
60	1.137	1.153	88.0%	86.7%	90.0%
48	1.196	1.213	83.6%	82.4%	85.0%
36	1.338	1.357	74.7%	73.7%	80.0%
24	1.591	1.613	62.9%	62.0%	65.0%
12	3.163	3.207	31.6%	31.2%	35.0%

\* Loss Development Factors are selected on Exhibit 4.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation  
Calculation of Discount Factor for 2016**

(1) Month of Development	(2) Selected Cumulative Payment Pattern*	(3) Incremental Payment Pattern*	(4) Discounted Incremental Payment Pattern**
12	35.0%	35.0%	34.9%
24	65.0%	30.0%	29.7%
36	80.0%	15.0%	14.7%
48	85.0%	5.0%	4.9%
60	90.0%	5.0%	4.9%
72	91.0%	1.0%	1.0%
84	92.0%	1.0%	1.0%
96	93.0%	1.0%	1.0%
108	94.0%	1.0%	0.9%
120	95.0%	1.0%	0.9%
132	96.0%	1.0%	0.9%
144	97.0%	1.0%	0.9%
156	98.0%	1.0%	0.9%
168	98.5%	0.5%	0.5%
180	99.0%	0.5%	0.5%
192	99.5%	0.5%	0.5%
204	100.0%	0.5%	0.5%
216	100.0%	0.0%	0.0%
228	100.0%	0.0%	0.0%
240	100.0%	0.0%	0.0%
252	100.0%	0.0%	0.0%
264	100.0%	0.0%	0.0%
Total		100.0%	98.4%

\* Columns (2) and (3) represent the projected payment pattern for a fund year at its inception.

\*\* Based on a 0.69% assumed yield as provided by KMIT.

**KANSAS MUNICIPAL WORKERS' COMPENSATION INSURANCE TRUST**

**Workers' Compensation**

**Projected 2016 Ultimate Loss & ALAE at Various Probability Levels**

**Discounted at 0.69%**

Probability Level	Gross of Aggregate Retention		Limited to Aggregate Retention	
	Undiscounted	Discounted at 0.69%	Undiscounted	Discounted at 0.69%
95%	8,883,004	8,740,876	6,923,594	6,812,816
85%	6,011,343	5,915,162	5,831,004	5,737,707
75%	4,824,390	4,747,200	4,679,659	4,604,784
65%	4,058,614	3,993,676	3,936,856	3,873,866
Actuarial Central Estimate	3,828,881	3,767,619	3,714,015	3,654,591