

PENNSYLVANIA COMPENSATION RATING BUREAU

**Summary of Material for Modification of Experience
April 1, 2020 Loss Cost Revision**

As Filed

PENNSYLVANIA 2020 LOSS COST FILING

EFFECTIVE DATE -April 1, 2020

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* Incurred Losses exclude IBNR and Bulk Reserves.

Note: Table I reflects the adjustment of reported data to a Post-Act 57 & HB 1846, Pre-Protz & HB 1840 Basis

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EXHIBIT I

INDICATED CHANGE IN LOSS COSTS

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
(1) Policy Year 2015 Ratio of Loss to Expected Loss	0.5458	0.5933	1.1391
(2) Policy Year 2016 Ratio of Loss to Expected Loss	0.5096	0.5676	1.0772
(3) Policy Year 2017 Ratio of Loss to Expected Loss	0.5001	0.5743	1.0744
(4) Average (Midpoint = 1/1/2017)	0.5185	0.5784	1.0969
(5) Policy Year 2015 Ratio Trended to 4/1/2021 +	0.4135	0.4696	0.8831
(6) Policy Year 2016 Ratio Trended to 4/1/2021 +	0.4070	0.4697	0.8767
(7) Policy Year 2017 Ratio Trended to 4/1/2021 +	0.4211	0.4969	0.9180
(8) Average at 4/1/2021	0.4139	0.4787	0.8926
(9a) Protz Adjustment	1.1337	1.0000	
(9b) House Bill 1840 Adjustment	0.8961	1.0000	
(10) Indicated Change in Loss Costs	0.4205	0.4787	0.8992
			-10.08%

CHANGES IN MANUAL LOSS COST LEVEL BY INDUSTRY GROUP

	<u>Mfg.</u>	<u>Cont.</u>	<u>Other</u>	<u>Total</u>
(11) Current Collectible Premium Ratio	1.0411	1.1268	0.9929	
(12) Anticipated Collectible Premium Ratio	1.0427	1.1287	0.9928	
(13) Final Indicated Change in Manual Loss Cost Level (10T) * (12) / (11)	0.9006	0.9007	0.8991	0.8999

+ Refer to pages 20 and 21

EXHIBIT II

**CALCULATION OF EMPLOYER ASSESSMENT FACTOR AND
LOADING FOR LOSS BASED ASSESSMENTS**

(1)	2018 PCRB Member Paid Loss*	2,216,375,969	
(2)	2019/2020 Fiscal Year Membership Assessment Amount		
	a. Administration Fund	51,723,784	
	b. Subsequent Injury Fund	143,627	
	c. Supersedeas Fund	16,012,749	
	d. Uninsured Employers Guaranty Fund	5,603,317	
	e. Total	<u>73,483,477</u>	
(3)	2018 Employer Assessment Premium Base	3,627,074,324	
(4)	2019/2020 Fiscal Year Membership Assessment Rate		
	a. Administration Fund (2a) / (3)	0.0143	
	b. Subsequent Injury Fund (2b) / (3)	0.0000	
	c. Supersedeas Fund (2c) / (3)	0.0044	
	d. Uninsured Employers Guaranty Fund (2d) / (3)	0.0015	
	e. Employer Assessment Factor (4a) + (4b) + (4c) + (4d)	<table border="1"><tr><td style="text-align: right;">0.0202</td></tr></table>	0.0202
0.0202			
(5)	2019/2020 Fiscal Year Budget for the Office of Small Business Advocate	280,000	
(6)	2019/2020 Fiscal Year Membership Assessment Rate for the Office of Small Business Advocate (5) / (1)	0.0001	
(7)	Merit Rating Plan Increment Factor	0.0034	
(8)	Certified Safety Committee Program Increment Factor	0.0102	
(9)	Overall Adjustment for the Office of Small Business Advocate, Merit Rating Plan and Certified Safety Committee Program (6) + (7) + (8)	0.0137	

* Loss payments on deductible policies have been adjusted to a first dollar basis.

EXHIBIT III - 1

POLICY YEAR LOSS RATIO 2017

(1) Standard Earned Premium Reported (Table I)			1,555,308,930
(2) Premium Development Factor to Ultimate Level (Exhibit V-1)			1.0090
(3) Expense Constant Removal Factor			1.0000
(4) PCCPAP On-Level Factor			1.0069
(5) Factor to Remove Loss Based Assessments			0.9862
(6) Standard Earned Premium on Level (1) * (2) * (3) * (4) * (5)			1,558,329,065
(7) Loss Cost Change to 04/1/19 Level			0.7763
(8) Expected Loss at Current Level (6) * (7)			1,209,730,853
Losses - Paid-to-30th Method	Indemnity	Medical	Total
(9) Paid Losses Reported (Table I-D-Reported & I-E-Reported)	222,466,309	394,338,978	616,805,287
(10) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	2.8329	1.8665	
(11) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9975	1.0000	
(12) Ultimate Incurred Losses (9) * (10) * (11)	628,659,442	736,033,702	1,364,693,144
(13) Benefit Level Factor	1.0000	1.0000	
(14) Adjusted Losses (12) * (13)	628,659,442	736,033,702	1,364,693,144
(15) Policy Year Ratio of Losses to Expected Losses (14) / (8)	0.5197	0.6084	1.1281
Losses - Incurred Method			
(16) Incurred Losses Reported (Table I-B-Reported & I-C-Reported)	384,632,083	543,900,463	928,532,546
(17) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.5140	1.2014	
(18) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9981	1.0000	
(19) Ultimate Incurred Losses (16) * (17) * (18)	581,250,869	653,442,016	1,234,692,885
(20) Benefit Level Factor	1.0000	1.0000	
(21) Adjusted Losses (19) * (20)	581,250,869	653,442,016	1,234,692,885
(22) Policy Year Ratio of Losses to Expected Losses (21) / (8)	0.4805	0.5402	1.0207
Losses - Average of Incurred and Paid-to-30th Method			
(23) Adjusted Ultimate Incurred Losses ((14) + (21)) / 2	604,955,156	694,737,859	1,299,693,015
(24) Policy Year Ratio of Losses to Expected Losses (23) / (8)	0.5001	0.5743	1.0744
(25) Normalized Claim Frequency (Exhibit VI-2)	0.5320	0.5320	
(26) Severity Ratio * (24) / (25)	0.9400	1.0794	2.0194

* Severity Ratio represents loss ratio adjusted to a common level of claim frequency.

EXHIBIT III - 2

POLICY YEAR LOSS RATIO 2016

(1) Standard Earned Premium Reported (Table I)			1,503,591,117
(2) Premium Development Factor to Ultimate Level (Exhibit V-1)			0.9998
(3) Expense Constant Removal Factor			1.0000
(4) PCCPAP On-Level Factor			1.0078
(5) Factor to Remove Loss Based Assessments			0.9853
(6) Standard Earned Premium on Level (1) * (2) * (3) * (4) * (5)			1,492,745,328
(7) Loss Cost Change to 04/1/19 Level			0.7413
(8) Expected Loss at Current Level (6) * (7)			1,106,572,112
Losses - Paid-to-30th Method	Indemnity	Medical	Total
(9) Paid Losses Reported (Table I-D-Reported & I-E-Reported)	371,128,021	445,723,495	816,851,516
(10) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.5823	1.4968	
(11) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9987	1.0000	
(12) Ultimate Incurred Losses (9) * (10) * (11)	586,454,744	667,158,927	1,253,613,671
(13) Benefit Level Factor	1.0000	1.0000	
(14) Adjusted Losses (12) * (13)	586,454,744	667,158,927	1,253,613,671
(15) Policy Year Ratio of Losses to Expected Losses (14) / (8)	0.5300	0.6029	1.1329
Losses - Incurred Method			
(16) Incurred Losses Reported (Table I-B-Reported & I-C-Reported)	477,328,607	513,349,672	990,678,279
(17) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.1355	1.1472	
(18) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9987	1.0000	
(19) Ultimate Incurred Losses (16) * (17) * (18)	541,325,488	588,914,744	1,130,240,232
(20) Benefit Level Factor	1.0000	1.0000	
(21) Adjusted Losses (19) * (20)	541,325,488	588,914,744	1,130,240,232
(22) Policy Year Ratio of Losses to Expected Losses (21) / (8)	0.4892	0.5322	1.0214
Losses - Average of Incurred and Paid-to-30th Method			
(23) Adjusted Ultimate Incurred Losses ((14) + (21)) / 2	563,890,116	628,036,836	1,191,926,952
(24) Policy Year Ratio of Losses to Expected Losses (23) / (8)	0.5096	0.5676	1.0772
(25) Normalized Claim Frequency (Exhibit VI-2)	0.5639	0.5639	
(26) Severity Ratio * (24) / (25)	0.9037	1.0065	1.9102

* Severity Ratio represents loss ratio adjusted to a common level of claim frequency.

EXHIBIT III - 3

POLICY YEAR LOSS RATIO 2015

(1) Standard Earned Premium Reported (Table I)				1,501,766,929
(2) Premium Development Factor to Ultimate Level (Exhibit V-1)				0.9997
(3) Expense Constant Removal Factor				1.0000
(4) PCCPAP On-Level Factor				1.0076
(5) Factor to Remove Loss Based Assessments				0.9853
(6) Standard Earned Premium on Level (1) * (2) * (3) * (4) * (5)				1,490,489,325
(7) Loss Cost Change to 04/1/19 Level				0.7224
(8) Expected Loss at Current Level (6) * (7)				1,076,729,488
Losses - Paid-to-30th Method		Indemnity	Medical	Total
(9) Paid Losses Reported (Table I-D-Reported & I-E-Reported)	474,262,598	476,545,689		950,808,287
(10) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.2955	1.4104		
(11) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9995	1.0000		
(12) Ultimate Incurred Losses (9) * (10) * (11)	614,084,434	672,120,040		1,286,204,474
(13) Benefit Level Factor	1.0000	1.0000		
(14) Adjusted Losses (12) * (13)	614,084,434	672,120,040		1,286,204,474
(15) Policy Year Ratio of Losses to Expected Losses (14) / (8)	0.5703	0.6242		1.1945
Losses - Incurred Method				
(16) Incurred Losses Reported (Table I-B-Reported & I-C-Reported)	535,683,006	533,185,215		1,068,868,221
(17) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.0485	1.1358		
(18) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9994	1.0000		
(19) Ultimate Incurred Losses (16) * (17) * (18)	561,338,009	605,591,767		1,166,929,776
(20) Benefit Level Factor	1.0000	1.0000		
(21) Adjusted Losses (19) * (20)	561,338,009	605,591,767		1,166,929,776
(22) Policy Year Ratio of Losses to Expected Losses (21) / (8)	0.5213	0.5624		1.0837
Losses - Average of Incurred and Paid-to-30th Method				
(23) Adjusted Ultimate Incurred Losses ((14) + (21)) / 2	587,711,222	638,855,904		1,226,567,126
(24) Policy Year Ratio of Losses to Expected Losses (23) / (8)	0.5458	0.5933		1.1391
(25) Normalized Claim Frequency (Exhibit VI-2)	0.6029	0.6029		
(26) Severity Ratio * (24) / (25)	0.9052	0.9840		1.8892

* Severity Ratio represents loss ratio adjusted to a common level of claim frequency.

EXHIBIT III - 4

POLICY YEAR LOSS RATIO 2014

(1) Standard Earned Premium Reported (Table I)				1,495,207,187
(2) Premium Development Factor to Ultimate Level (Exhibit V-1)				1.0001
(3) Expense Constant Removal Factor				1.0000
(4) PCCPAP On-Level Factor				1.0066
(5) Factor to Remove Loss Based Assessments				0.9857
(6) Standard Earned Premium on Level (1) * (2) * (3) * (4) * (5)				1,483,701,329
(7) Loss Cost Change to 04/1/19 Level				0.6810
(8) Expected Loss at Current Level (6) * (7)				1,010,400,605
Losses - Paid-to-30th Method				
		Indemnity	Medical	Total
(9) Paid Losses Reported (Table I-D-Reported & I-E-Reported)	524,537,262	531,089,913		1,055,627,175
(10) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.1967	1.3768		
(11) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9998	0.9980		
(12) Ultimate Incurred Losses (9) * (10) * (11)	627,567,911	729,768,875		1,357,336,786
(13) Benefit Level Factor	1.0000	1.0000		
(14) Adjusted Losses (12) * (13)	627,567,911	729,768,875		1,357,336,786
(15) Policy Year Ratio of Losses to Expected Losses (14) / (8)	0.6211	0.7223		1.3434
Losses - Incurred Method				
(16) Incurred Losses Reported (Table I-B-Reported & I-C-Reported)	569,536,181	577,114,618		1,146,650,799
(17) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.0336	1.1361		
(18) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9997	0.9982		
(19) Ultimate Incurred Losses (16) * (17) * (18)	588,500,131	654,475,200		1,242,975,331
(20) Benefit Level Factor	1.0000	1.0000		
(21) Adjusted Losses (19) * (20)	588,500,131	654,475,200		1,242,975,331
(22) Policy Year Ratio of Losses to Expected Losses (21) / (8)	0.5824	0.6477		1.2301
Losses - Average of Incurred and Paid-to-30th Method				
(23) Adjusted Ultimate Incurred Losses ((14) + (21)) / 2	608,034,021	692,122,038		1,300,156,059
(24) Policy Year Ratio of Losses to Expected Losses (23) / (8)	0.6018	0.6850		1.2868
(25) Normalized Claim Frequency (Exhibit VI-2)	0.6531	0.6531		
(26) Severity Ratio * (24) / (25)	0.9215	1.0489		1.9704

* Severity Ratio represents loss ratio adjusted to a common level of claim frequency.

EXHIBIT III - 5

POLICY YEAR LOSS RATIO 2013

(1) Standard Earned Premium Reported (Table I)				1,491,313,092
(2) Premium Development Factor to Ultimate Level (Exhibit V-1)				1.0002
(3) Expense Constant Removal Factor				1.0000
(4) PCCPAP On-Level Factor				1.0067
(5) Factor to Remove Loss Based Assessments				0.9853
(6) Standard Earned Premium on Level (1) * (2) * (3) * (4) * (5)				1,479,531,555
(7) Loss Cost Change to 04/1/19 Level				0.6487
(8) Expected Loss at Current Level (6) * (7)				959,772,120
Losses - Paid-to-30th Method				
		Indemnity	Medical	Total
(9) Paid Losses Reported (Table I-D-Reported & I-E-Reported)	544,017,755	521,384,289		1,065,402,044
(10) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.1554	1.3596		
(11) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9999	0.9934		
(12) Ultimate Incurred Losses (9) * (10) * (11)	628,493,226	704,215,382		1,332,708,608
(13) Benefit Level Factor	1.0000	1.0000		
(14) Adjusted Losses (12) * (13)	628,493,226	704,215,382		1,332,708,608
(15) Policy Year Ratio of Losses to Expected Losses (14) / (8)	0.6548	0.7337		1.3885
Losses - Incurred Method				
(16) Incurred Losses Reported (Table I-B-Reported & I-C-Reported)	572,502,492	571,591,807		1,144,094,299
(17) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.0316	1.1257		
(18) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9999	0.9940		
(19) Ultimate Incurred Losses (16) * (17) * (18)	590,506,250	639,583,663		1,230,089,913
(20) Benefit Level Factor	1.0000	1.0000		
(21) Adjusted Losses (19) * (20)	590,506,250	639,583,663		1,230,089,913
(22) Policy Year Ratio of Losses to Expected Losses (21) / (8)	0.6153	0.6664		1.2817
Losses - Average of Incurred and Paid-to-30th Method				
(23) Adjusted Ultimate Incurred Losses ((14) + (21)) / 2	609,499,738	671,899,523		1,281,399,261
(24) Policy Year Ratio of Losses to Expected Losses (23) / (8)	0.6350	0.7001		1.3351
(25) Normalized Claim Frequency (Exhibit VI-2)	0.7139	0.7139		
(26) Severity Ratio * (24) / (25)	0.8894	0.9806		1.8700

* Severity Ratio represents loss ratio adjusted to a common level of claim frequency.

EXHIBIT III - 6

POLICY YEAR LOSS RATIO 2012

(1) Standard Earned Premium Reported (Table I)				1,531,607,206
(2) Premium Development Factor to Ultimate Level (Exhibit V-1)				1.0001
(3) Expense Constant Removal Factor				1.0000
(4) PCCPAP On-Level Factor				1.0067
(5) Factor to Remove Loss Based Assessments				0.9858
(6) Standard Earned Premium on Level (1) * (2) * (3) * (4) * (5)				1,520,126,432
(7) Loss Cost Change to 04/1/19 Level				0.6192
(8) Expected Loss at Current Level (6) * (7)				941,262,287
Losses - Paid-to-30th Method				
		<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
(9) Paid Losses Reported (Table I-D-Reported & I-E-Reported)	539,400,679	510,638,128		1,050,038,807
(10) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.1274	1.3419		
(11) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9999	0.9919		
(12) Ultimate Incurred Losses (9) * (10) * (11)	608,072,076	679,689,924		1,287,762,000
(13) Benefit Level Factor	1.0000	1.0000		
(14) Adjusted Losses (12) * (13)	608,072,076	679,689,924		1,287,762,000
(15) Policy Year Ratio of Losses to Expected Losses (14) / (8)	0.6460	0.7221		1.3681
Losses - Incurred Method				
(16) Incurred Losses Reported (Table I-B-Reported & I-C-Reported)	573,059,774	558,413,365		1,131,473,139
(17) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.0242	1.1201		
(18) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9999	0.9926		
(19) Ultimate Incurred Losses (16) * (17) * (18)	586,849,514	620,858,362		1,207,707,876
(20) Benefit Level Factor	1.0000	1.0000		
(21) Adjusted Losses (19) * (20)	586,849,514	620,858,362		1,207,707,876
(22) Policy Year Ratio of Losses to Expected Losses (21) / (8)	0.6235	0.6596		1.2831
Losses - Average of Incurred and Paid-to-30th Method				
(23) Adjusted Ultimate Incurred Losses ((14) + (21)) / 2	597,460,795	650,274,143		1,247,734,938
(24) Policy Year Ratio of Losses to Expected Losses (23) / (8)	0.6347	0.6909		1.3256
(25) Normalized Claim Frequency (Exhibit VI-2)	0.7315	0.7315		
(26) Severity Ratio * (24) / (25)	0.8677	0.9445		1.8122

* Severity Ratio represents loss ratio adjusted to a common level of claim frequency.

EXHIBIT III - 7

POLICY YEAR LOSS RATIO 2011

(1) Standard Earned Premium Reported (Table I)				1,644,423,446
(2) Premium Development Factor to Ultimate Level (Exhibit V-1)				0.9997
(3) Expense Constant Removal Factor				1.0000
(4) PCCPAP On-Level Factor				1.0057
(5) Factor to Remove Loss Based Assessments				0.9862
(6) Standard Earned Premium on Level (1) * (2) * (3) * (4) * (5)				1,630,484,973
(7) Loss Cost Change to 04/1/19 Level				0.5964
(8) Expected Loss at Current Level (6) * (7)				972,421,238
Losses - Paid-to-30th Method				
	Indemnity	Medical	Total	
(9) Paid Losses Reported (Table I-D-Reported & I-E-Reported)	604,048,360	564,054,051		1,168,102,411
(10) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.1092	1.3270		
(11) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	1.0000	0.9915		
(12) Ultimate Incurred Losses (9) * (10) * (11)	669,978,434	742,105,832		1,412,084,266
(13) Benefit Level Factor	1.0000	1.0000		
(14) Adjusted Losses (12) * (13)	669,978,434	742,105,832		1,412,084,266
(15) Policy Year Ratio of Losses to Expected Losses (14) / (8)	0.6890	0.7632		1.4522
Losses - Incurred Method				
(16) Incurred Losses Reported (Table I-B-Reported & I-C-Reported)	626,315,782	599,899,864		1,226,215,646
(17) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.0203	1.1146		
(18) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9999	0.9920		
(19) Ultimate Incurred Losses (16) * (17) * (18)	638,977,831	663,277,903		1,302,255,734
(20) Benefit Level Factor	1.0000	1.0000		
(21) Adjusted Losses (19) * (20)	638,977,831	663,277,903		1,302,255,734
(22) Policy Year Ratio of Losses to Expected Losses (21) / (8)	0.6571	0.6821		1.3392
Losses - Average of Incurred and Paid-to-30th Method				
(23) Adjusted Ultimate Incurred Losses ((14) + (21)) / 2	654,478,133	702,691,868		1,357,170,001
(24) Policy Year Ratio of Losses to Expected Losses (23) / (8)	0.6730	0.7226		1.3956
(25) Normalized Claim Frequency (Exhibit VI-2)	0.7827	0.7827		
(26) Severity Ratio * (24) / (25)	0.8599	0.9232		1.7831

* Severity Ratio represents loss ratio adjusted to a common level of claim frequency.

EXHIBIT III - 8

POLICY YEAR LOSS RATIO 2010

(1) Standard Earned Premium Reported (Table I)				1,597,475,660
(2) Premium Development Factor to Ultimate Level (Exhibit V-1)				0.9997
(3) Expense Constant Removal Factor				1.0000
(4) PCCPAP On-Level Factor				1.0055
(5) Factor to Remove Loss Based Assessments				0.9859
(6) Standard Earned Premium on Level (1) * (2) * (3) * (4) * (5)				1,583,138,401
(7) Loss Cost Change to 04/1/19 Level				0.6013
(8) Expected Loss at Current Level (6) * (7)				951,941,121
Losses - Paid-to-30th Method				
	Indemnity	Medical	Total	
(9) Paid Losses Reported (Table I-D-Reported & I-E-Reported)	633,051,722	568,975,757		1,202,027,479
(10) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.0967	1.3116		
(11) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	1.0000	0.9913		
(12) Ultimate Incurred Losses (9) * (10) * (11)	694,248,004	739,809,866		1,434,057,870
(13) Benefit Level Factor	1.0000	1.0000		
(14) Adjusted Losses (12) * (13)	694,248,004	739,809,866		1,434,057,870
(15) Policy Year Ratio of Losses to Expected Losses (14) / (8)	0.7293	0.7772		1.5065
Losses - Incurred Method				
(16) Incurred Losses Reported (Table I-B-Reported & I-C-Reported)	652,792,438	613,024,444		1,265,816,882
(17) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.0164	1.1110		
(18) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	0.9999	0.9920		
(19) Ultimate Incurred Losses (16) * (17) * (18)	663,459,801	675,599,239		1,339,059,040
(20) Benefit Level Factor	1.0000	1.0000		
(21) Adjusted Losses (19) * (20)	663,459,801	675,599,239		1,339,059,040
(22) Policy Year Ratio of Losses to Expected Losses (21) / (8)	0.6970	0.7097		1.4067
Losses - Average of Incurred and Paid-to-30th Method				
(23) Adjusted Ultimate Incurred Losses ((14) + (21)) / 2	678,853,903	707,704,553		1,386,558,456
(24) Policy Year Ratio of Losses to Expected Losses (23) / (8)	0.7131	0.7434		1.4565
(25) Normalized Claim Frequency (Exhibit VI-2)	0.8317	0.8317		
(26) Severity Ratio * (24) / (25)	0.8574	0.8938		1.7512

* Severity Ratio represents loss ratio adjusted to a common level of claim frequency.

EXHIBIT III - 9

POLICY YEAR LOSS RATIO 2009

(1) Standard Earned Premium Reported (Table I)				1,526,121,199
(2) Premium Development Factor to Ultimate Level (Exhibit V-1)				1.0000
(3) Expense Constant Removal Factor				1.0000
(4) PCCPAP On-Level Factor				0.9987
(5) Factor to Remove Loss Based Assessments				0.9859
(6) Standard Earned Premium on Level (1) * (2) * (3) * (4) * (5)				1,502,646,906
(7) Loss Cost Change to 04/1/19 Level				0.5986
(8) Expected Loss at Current Level (6) * (7)				899,484,438
Losses - Paid-to-30th Method		Indemnity	Medical	Total
(9) Paid Losses Reported (Table I-D-Reported & I-E-Reported)	617,924,423	522,967,009		1,140,891,432
(10) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.0889	1.3012		
(11) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	1.0000	1.0048		
(12) Ultimate Incurred Losses (9) * (10) * (11)	672,842,648	683,780,060		1,356,622,708
(13) Benefit Level Factor	1.0000	1.0000		
(14) Adjusted Losses (12) * (13)	672,842,648	683,780,060		1,356,622,708
(15) Policy Year Ratio of Losses to Expected Losses (14) / (8)	0.7480	0.7602		1.5082
Losses - Incurred Method				
(16) Incurred Losses Reported (Table I-B-Reported & I-C-Reported)	632,444,653	550,884,216		1,183,328,869
(17) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.0136	1.1123		
(18) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	1.0000	1.0046		
(19) Ultimate Incurred Losses (16) * (17) * (18)	641,016,981	615,565,497		1,256,582,478
(20) Benefit Level Factor	1.0000	1.0000		
(21) Adjusted Losses (19) * (20)	641,016,981	615,565,497		1,256,582,478
(22) Policy Year Ratio of Losses to Expected Losses (21) / (8)	0.7126	0.6844		1.3970
Losses - Average of Incurred and Paid-to-30th Method				
(23) Adjusted Ultimate Incurred Losses ((14) + (21)) / 2	656,929,815	649,672,779		1,306,602,594
(24) Policy Year Ratio of Losses to Expected Losses (23) / (8)	0.7303	0.7223		1.4526
(25) Normalized Claim Frequency (Exhibit VI-2)	0.8446	0.8446		
(26) Severity Ratio * (24) / (25)	0.8647	0.8552		1.7199

* Severity Ratio represents loss ratio adjusted to a common level of claim frequency.

EXHIBIT III - 10

POLICY YEAR LOSS RATIO 2008

(1) Standard Earned Premium Reported (Table I)				1,720,420,658
(2) Premium Development Factor to Ultimate Level (Exhibit V-1)				1.0000
(3) Expense Constant Removal Factor				1.0000
(4) PCCPAP On-Level Factor				0.9989
(5) Factor to Remove Loss Based Assessments				0.9862
(6) Standard Earned Premium on Level (1) * (2) * (3) * (4) * (5)				1,694,812,506
(7) Loss Cost Change to 04/1/19 Level				0.5651
(8) Expected Loss at Current Level (6) * (7)				957,738,547
Losses - Paid-to-30th Method				
		<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
(9) Paid Losses Reported (Table I-D-Reported & I-E-Reported)	679,864,958	581,125,548		1,260,990,506
(10) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.0801	1.2884		
(11) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	1.0000	1.0340		
(12) Ultimate Incurred Losses (9) * (10) * (11)	734,303,163	774,175,259		1,508,478,422
(13) Benefit Level Factor	1.0000	1.0000		
(14) Adjusted Losses (12) * (13)	734,303,163	774,175,259		1,508,478,422
(15) Policy Year Ratio of Losses to Expected Losses (14) / (8)	0.7667	0.8083		1.5750
Losses - Incurred Method				
(16) Incurred Losses Reported (Table I-B-Reported & I-C-Reported)	696,048,467	606,717,831		1,302,766,298
(17) Loss Development Factor to Ultimate Valuation (Exhibit V-3 & V-5)	1.0119	1.1090		
(18) Adjustment to Post-Act 1846, Pre-Protz Decision & HB 1840 Loss Levels	1.0000	1.0326		
(19) Ultimate Incurred Losses (16) * (17) * (18)	704,297,288	694,759,024		1,399,056,312
(20) Benefit Level Factor	1.0000	1.0000		
(21) Adjusted Losses (19) * (20)	704,297,288	694,759,024		1,399,056,312
(22) Policy Year Ratio of Losses to Expected Losses (21) / (8)	0.7354	0.7254		1.4608
Losses - Average of Incurred and Paid-to-30th Method				
(23) Adjusted Ultimate Incurred Losses ((14) + (21)) / 2	719,300,226	734,467,142		1,453,767,368
(24) Policy Year Ratio of Losses to Expected Losses (23) / (8)	0.7510	0.7669		1.5179
(25) Normalized Claim Frequency (Exhibit VI-2)	0.8718	0.8718		
(26) Severity Ratio * (24) / (25)	0.8614	0.8797		1.7411

* Severity Ratio represents loss ratio adjusted to a common level of claim frequency.

EXHIBIT IV - 1

**POLICY YEARS 2008 - 2013
PREMIUM ON-LEVEL FACTORS**

<u>POLICY YEAR</u>	<u>(1) LOSS COST DATE</u>	<u>(2) LOSS COST CHANGE</u>	<u>(3) CUM. INDEX OF COL (2)</u>	<u>(4) PORTION OF YEAR ON-LEVEL</u>	<u>(5) PRODUCT (3) * (4)</u>	<u>FACTOR TO ADJUST to 04/01/19 LC LEVEL</u>
2008	4/01/07	BASE	1.0000	0.3260	0.3260	
	4/01/08	0.8978	0.8978	0.6740	0.6051	
	4/01/09	0.5861	0.5262	-----	-----	
	to 04/01/19			1.0000	0.9311	0.5651
2009	4/01/08	BASE	1.0000	0.3039	0.3039	
	4/01/09	0.9700	0.9700	0.6961	0.6752	
	4/01/10	0.6042	0.5861	-----	-----	
	to 04/01/19			1.0000	0.9791	0.5986
2010	4/01/09	BASE	1.0000	0.2929	0.2929	
	4/01/10	1.0068	1.0068	0.7071	0.7119	
	4/01/11	0.6001	0.6042	-----	-----	
	to 04/01/19			1.0000	1.0048	0.6013
2011	4/01/10	BASE	1.0000	0.2923	0.2923	
	4/01/11	1.0087	1.0087	0.7077	0.7139	
	4/01/12	0.5949	0.6001	-----	-----	
	to 04/01/19			1.0000	1.0062	0.5964
2012	4/01/11	BASE	1.0000	0.3083	0.3083	
	4/01/12	0.9434	0.9434	0.6917	0.6525	
	4/01/13	0.6306	0.5949	-----	-----	
	to 04/01/19			1.0000	0.9608	0.6192
2013	4/01/12	BASE	1.0000	0.3068	0.3068	
	4/01/13	0.9599	0.9599	0.6932	0.6654	
	4/01/14	0.6570	0.6307	-----	-----	
	to 04/01/19			1.0000	0.9722	0.6487

EXHIBIT IV - 2

**POLICY YEARS 2014 - 2018
PREMIUM ON-LEVEL FACTORS**

<u>POLICY YEAR</u>	<u>(1) LOSS COST DATE</u>	<u>(2) LOSS COST CHANGE</u>	<u>(3) CUM. INDEX OF COL (2)</u>	<u>(4) PORTION OF YEAR ON-LEVEL</u>	<u>(5) PRODUCT (3) * (4)</u>	<u>FACTOR TO ADJUST to 04/01/19 LC LEVEL</u>
2014	4/01/13	BASE	1.0000	0.3122	0.3122	
	4/01/14	0.9485	0.9485	0.6878	0.6524	
	4/01/15	0.6926	0.6569	-----	-----	
	to 04/01/19			1.0000	0.9646	0.6810
2015	4/01/14	BASE	1.0000	0.3143	0.3143	
	4/01/15	0.9401	0.9401	0.6857	0.6446	
	4/01/16	0.7368	0.6927	-----	-----	
	to 04/01/19			1.0000	0.9589	0.7224
2016	4/01/15	BASE	1.0000	0.3078	0.3078	
	4/01/16	0.9910	0.9910	0.6922	0.6860	
	4/01/17	0.7434	0.7367	-----	-----	
	to 04/01/19			1.0000	0.9938	0.7413
2017	4/01/16	BASE	1.0000	0.3196	0.3196	
	4/01/17	0.9379	0.9379	0.6804	0.6381	
	2/01/18	0.7927	0.7435	-----	-----	
	to 04/01/19			1.0000	0.9577	0.7763
2018	4/01/17	BASE	1.0000	0.1627	0.1627	
	2/01/18	1.0606	1.0606	0.1348	0.1430	
	4/01/18	1.0070	1.0680	0.7025	0.7503	
	1/01/19	0.7422	0.7927	-----	-----	
	to 04/01/19			1.0000	1.0560	0.7507

EXHIBIT V - 1

DEVELOPMENT FACTORS

PREMIUM

<u>Reports in Ratio</u>	<u>Policy Year</u>	<u>2017-2018 Ratio</u>	<u>Policy Year</u>	<u>2016-2017 Ratio</u>	<u>Policy Year</u>	<u>2015-2016 Ratio</u>	<u>Policy Year</u>	<u>2014-2015 Ratio</u>	<u>Unweighted Average</u>	<u>Selected Average</u>	<u>Cumulative Average</u>
2nd to 1st	2016	1.0093	2015	1.0090	2014	1.0084	2013	1.0099	1.0092	1.0092	1.0090
3rd to 2nd	2015	0.9992	2014	1.0005	2013	1.0012	2012	0.9994	1.0001	1.0001	0.9998
4th to 3rd	2014	0.9980	2013	1.0005	2012	0.9996	2011	1.0002	0.9996	0.9996	0.9997
5th to 4th	2013	1.0001	2012	0.9995	2011	0.9999	2010	1.0001	0.9999	0.9999	1.0001
6th to 5th	2012	1.0001	2011	1.0002	2010	1.0002	2009	0.9997	1.0001	1.0001	1.0002
7th to 6th	2011	1.0004	2010	1.0003	2009	1.0011	2008	1.0000	1.0004	1.0004	1.0001
8th to 7th	2010	1.0000	2009	0.9999	2008	0.9999	2007	1.0000	1.0000	1.0000	0.9997
9th to 8th	2009	1.0000	2008	0.9988	2007	1.0002	2006	1.0000	0.9997	0.9997	0.9997
10th to 9th	2008	1.0000	2007	1.0000	2006	1.0000	2005	1.0000	1.0000	1.0000	1.0000
11th to 10th	2007	1.0000	2006	1.0000	2005	1.0000	2004	1.0000	1.0000	1.0000	1.0000
12th to 11th	2006	1.0000	2005	1.0000	2004	1.0000	2003	1.0001	1.0000	1.0000	1.0000
13th to 12th	2005	1.0000	2004	1.0000	2003	1.0000	2002	1.0000	1.0000	1.0000	1.0000
14th to 13th	2004	1.0000	2003	1.0000	2002	1.0000	2001	1.0000	1.0000	1.0000	1.0000
15th to 14th	2003	1.0000	2002	1.0000	2001	1.0000	2000	1.0000	1.0000	1.0000	1.0000
16th to 15th	2002	0.9999	2001	1.0000	2000	1.0000	1999	1.0000	1.0000	1.0000	1.0000
17th to 16th	2001	1.0000	2000	1.0000	1999	0.9999	1998	1.0000	1.0000	1.0000	1.0000
18th to 17th	2000	1.0000	1999	1.0000	1998	1.0000	1997	1.0000	1.0000	1.0000	1.0000
19th to 18th	1999	1.0000	1998	1.0000	1997	0.9999	1996	1.0001	1.0000	1.0000	1.0000
20th to 19th	1998	1.0000	1997	1.0000	1996	1.0000	1995	1.0000	1.0000	1.0000	1.0000
21st to 20th	1997	1.0000	1996	1.0000	1995	1.0000	1994	1.0000	1.0000	1.0000	1.0000
22nd to 21st	1996	1.0000	1995	1.0000	1994	1.0002	1993	1.0000	1.0001	1.0000	1.0000
23rd to 22nd	1995	1.0000	1994	1.0000	1993	1.0000	1992	1.0000	1.0000	1.0000	1.0000
24th to 23rd	1994	1.0000	1993	1.0000	1992	1.0000	1991	1.0000	1.0000	1.0000	1.0000
25th to 24th	1993	1.0000	1992	1.0000	1991	1.0000	1990	1.0000	1.0000	1.0000	1.0000
26th to 25th	1992	1.0000	1991	1.0000	1990	1.0000	1989	1.0000	1.0000	1.0000	1.0000
27th to 26th	1991	1.0000	1990	1.0000	1989	1.0000	1988	1.0000	1.0000	1.0000	1.0000
28th to 27th	1990	1.0000	1989	1.0000	1988	1.0000	1987	1.0000	1.0000	1.0000	1.0000
29th to 28th	1989	1.0000	1988	1.0000	1987	1.0000	1986	1.0000	1.0000	1.0000	1.0000
30th to 29th	1988	1.0000	1987	1.0000	1986	1.0000				1.0000	1.0000

<u>Policy Year</u>	<u>Present Valuation</u>	<u>Premium Development Factor</u>
1989	Twenty-Ninth	1.0000
1990	Twenty-Eighth	1.0000
1991	Twenty-Seventh	1.0000
1992	Twenty-Sixth	1.0000
1993	Twenty-Fifth	1.0000
1994	Twenty-Fourth	1.0000
1995	Twenty-Third	1.0000
1996	Twenty-Second	1.0000
1997	Twenty-First	1.0000
1998	Twentieth	1.0000
1999	Nineteenth	1.0000
2000	Eighteenth	1.0000
2001	Seventeenth	1.0000
2002	Sixteenth	1.0000
2003	Fifteenth	1.0000
2004	Fourteenth	1.0000
2005	Thirteenth	1.0000
2006	Twelfth	1.0000
2007	Eleventh	1.0000
2008	Tenth	1.0000
2009	Ninth	1.0000
2010	Eighth	0.9997
2011	Seventh	0.9997
2012	Sixth	1.0001
2013	Fifth	1.0002
2014	Fourth	1.0001
2015	Third	0.9997
2016	Second	0.9998
2017	First	1.0090

EXHIBIT VI - 1

DETERMINATION OF TREND

INDEMNITY

Policy Year	2011	2012	2013	2014	2015	2016	2017
Actual Loss Ratio	0.6730	0.6347	0.6350	0.6018	0.5458	0.5096	0.5001
Normalized Frequency	0.7827	0.7315	0.7139	0.6531	0.6029	0.5639	0.5320
Severity Loss Ratio	0.8599	0.8677	0.8894	0.9215	0.9052	0.9037	0.9400
x	1	2	3	4	5	6	7
y	0.8599	0.8677	0.8894	0.9215	0.9052	0.9037	0.9400

7 Point Exponential Regression: $y = 0.852065 * 1.013161 ^ x$

Selected Annual Severity Trend Factor = 1.32%

Policy Year	Annual Severity Trend Factor (1)	Trend Period # of Years to 4/1/21 (2)	Severity Trend Factor (3) = (1) ^ (2)	Frequency Trend Factor (4) #
2015	1.0132	5.2500	1.0711	0.7073
2016	1.0132	4.2500	1.0571	0.7555
2017	1.0132	3.2500	1.0434	0.8070

Trended Loss Ratio

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3) * (4)	Trended Loss Ratio (7) = (5) * (6)
2015	0.5458	0.7576	0.4135
2016	0.5096	0.7986	0.4070
2017	0.5001	0.8420	0.4211

MEDICAL

Policy Year	2011	2012	2013	2014	2015	2016	2017
Actual Loss Ratio	0.7226	0.6909	0.7001	0.6850	0.5933	0.5676	0.5743
Normalized Frequency	0.7827	0.7315	0.7139	0.6531	0.6029	0.5639	0.5320
Severity Loss Ratio	0.9232	0.9445	0.9806	1.0489	0.9840	1.0065	1.0794
x	1	2	3	4	5	6	7
y	0.9232	0.9445	0.9806	1.0489	0.9840	1.0065	1.0794

7 Point Exponential Regression: $y = 0.912409 * 1.021644 ^ x$

Selected Annual Severity Trend Factor = 2.16%

Policy Year	Annual Severity Trend Factor (1)	Trend Period # of Years to 4/1/21 (2)	Severity Trend Factor (3) = (1) ^ (2)	Frequency Trend Factor (4) #
2015	1.0216	5.2500	1.1190	0.7073
2016	1.0216	4.2500	1.0953	0.7555
2017	1.0216	3.2500	1.0721	0.8070

Trended Loss Ratio

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3) * (4)	Trended Loss Ratio (7) = (5) * (6)
2015	0.5933	0.7915	0.4696
2016	0.5676	0.8275	0.4697
2017	0.5743	0.8652	0.4969

EXHIBIT VI - 2

DETERMINATION OF TREND

CLAIM FREQUENCY

Policy Year Frequency per \$1 million of Expected Losses
{1 = PY 2006, 12 = PY 2017}

Policy Year	Claim Frequency	Normalized Frequency
2006	27.93	1.0000
2007	26.34	0.9431
2008	24.35	0.8718
2009	23.59	0.8446
2010	23.23	0.8317
2011	21.86	0.7827
2012	20.43	0.7315
2013	19.94	0.7139
2014	18.24	0.6531
2015	16.84	0.6029
2016	15.75	0.5639
2017	14.86	0.5320

Policy Year	2011	2012	2013	2014	2015	2016	2017
x	1	2	3	4	5	6	7
y	0.7827	0.7315	0.7139	0.6531	0.6029	0.5639	0.5320

7 Point Exponential Regression: $y = 0.844463 * 0.936156 ^ x$

Selected Annual Frequency Trend Factor =

-6.4%

Policy Year	Annual Frequency Trend Factor (1)	Trend Period # of Years to 4/1/21 (2)	Frequency Trend Factor (3) = (1) ^ (2)
2015	0.9362	5.2500	0.7073
2016	0.9362	4.2500	0.7555
2017	0.9362	3.2500	0.8070

TABLE I

POLICY YEAR DATA ACCUMULATED TO END OF CALENDAR YEAR

ACCUMULATED STANDARD EARNED PREMIUM

Policy Year Valued	As of 12/31/16	As of 12/31/17	Ratio to Prior Year
Prior to 1987	12,384,460,821	12,384,458,835	1.0000
1987	1,676,453,105	1,676,482,828	1.0000
1988	1,867,693,806	1,867,664,083	1.0000
1989	1,996,749,996	1,996,749,996	1.0000
1990	2,254,128,053	2,254,124,435	1.0000
1991	2,350,510,694	2,350,512,996	1.0000
1992	2,186,468,420	2,186,468,501	1.0000
1993	2,340,866,035	2,340,866,035	1.0000
1994	1,773,409,924	1,773,409,924	1.0000
1995	1,630,877,823	1,630,877,834	1.0000
1996	1,539,720,300	1,539,721,392	1.0000
1997	1,268,705,557	1,268,706,946	1.0000
1998	1,208,698,313	1,208,701,647	1.0000
1999	1,228,984,648	1,228,984,909	1.0000
2000	1,287,105,101	1,287,112,574	1.0000
2001	1,409,059,336	1,409,061,732	1.0000
2002	1,497,608,286	1,497,601,744	1.0000
2003	1,561,479,352	1,561,473,061	1.0000
2004	1,668,659,997	1,668,658,730	1.0000
2005	1,832,186,614	1,832,224,358	1.0000
2006	1,804,782,292	1,804,788,954	1.0000
2007	1,866,997,216	1,866,925,803	1.0000
2008	1,719,381,604	1,717,257,784	0.9988
2009	1,523,356,994	1,523,191,496	0.9999
2010	1,594,446,327	1,594,961,495	1.0003
2011	1,641,795,330	1,642,164,184	1.0002
2012	1,531,104,086	1,530,285,548	0.9995
2013	1,488,565,240	1,489,286,074	1.0005
2014	1,478,603,190	1,479,373,030	1.0005
2015	1,474,537,335	1,487,854,824	1.0090
2016	839,988,102	1,490,730,303	1.7747
2017		871,024,192	

Policy Year Valued	As of 12/31/17	As of 12/31/18	Ratio to Prior Year
Prior to 1988	14,411,402,418	14,411,405,899	1.0000
1988	1,892,607,569	1,892,607,569	1.0000
1989	2,028,082,946	2,028,082,946	1.0000
1990	2,290,035,843	2,290,035,843	1.0000
1991	2,398,254,432	2,398,256,274	1.0000
1992	2,244,372,912	2,244,372,912	1.0000
1993	2,410,288,015	2,410,288,015	1.0000
1994	1,821,433,152	1,821,433,152	1.0000
1995	1,680,295,166	1,680,295,166	1.0000
1996	1,596,524,889	1,596,524,889	1.0000
1997	1,313,138,328	1,313,138,328	1.0000
1998	1,259,127,734	1,259,138,981	1.0000
1999	1,271,720,235	1,271,742,203	1.0000
2000	1,331,070,442	1,331,114,780	1.0000
2001	1,425,211,103	1,425,262,404	1.0000
2002	1,498,637,483	1,498,476,769	0.9999
2003	1,566,982,759	1,566,948,228	1.0000
2004	1,668,469,875	1,668,449,097	1.0000
2005	1,832,796,463	1,832,808,547	1.0000
2006	1,806,580,855	1,806,561,901	1.0000
2007	1,870,000,140	1,869,981,519	1.0000
2008	1,720,424,234	1,720,420,658	1.0000
2009	1,526,125,153	1,526,121,199	1.0000
2010	1,597,458,041	1,597,475,660	1.0000
2011	1,643,808,594	1,644,423,446	1.0004
2012	1,531,452,449	1,531,607,206	1.0001
2013	1,491,165,875	1,491,313,092	1.0001
2014	1,498,212,054	1,495,207,187	0.9980
2015	1,502,940,510	1,501,766,929	0.9992
2016	1,489,713,032	1,503,591,117	1.0093
2017	869,953,413	1,555,308,930	1.7878
2018		936,025,285	

NOTE: So as to maximize the use of available data, the companies used in one stage of development were allowed to be independent of those used in the other stage of development; therefore, the figures shown at each valuation may vary.

TABLE I - A - REPORTED

POLICY YEAR DATA ACCUMULATED TO END OF CALENDAR YEAR

INCURRED LOSSES EXCLUDING BULK AND IBNR RESERVES

Policy Year Valued	As of 12/31/16	As of 12/31/17	Ratio to Prior Year
Prior to 1987	8,872,073,743	8,876,043,076	1.0004
1987	1,550,752,466	1,559,017,446	1.0053
1988	1,775,635,745	1,774,024,551	0.9991
1989	2,078,851,752	2,080,058,392	1.0006
1990	2,109,733,578	2,111,185,739	1.0007
1991	1,844,948,379	1,845,546,838	1.0003
1992	1,554,322,883	1,554,568,375	1.0002
1993	1,280,521,903	1,281,830,357	1.0010
1994	1,183,328,416	1,184,219,052	1.0008
1995	1,009,996,897	1,011,079,203	1.0011
1996	895,529,803	898,217,690	1.0030
1997	908,324,108	907,728,018	0.9993
1998	911,753,699	917,704,304	1.0065
1999	1,006,684,093	1,006,253,049	0.9996
2000	1,062,611,966	1,064,435,779	1.0017
2001	1,091,695,210	1,092,481,587	1.0007
2002	1,198,517,371	1,202,361,846	1.0032
2003	1,193,399,057	1,196,905,869	1.0029
2004	1,278,529,070	1,280,986,604	1.0019
2005	1,303,220,456	1,308,450,905	1.0040
2006	1,330,139,989	1,333,783,443	1.0027
2007	1,410,508,464	1,414,341,055	1.0027
2008	1,299,549,494	1,299,087,280	0.9996
2009	1,178,603,410	1,179,576,128	1.0008
2010	1,247,566,013	1,256,717,931	1.0073
2011	1,214,486,887	1,224,143,573	1.0080
2012	1,106,951,171	1,126,225,082	1.0174
2013	1,145,991,253	1,150,135,092	1.0036
2014	1,060,056,814	1,114,661,445	1.0515
2015	871,885,444	1,019,081,741	1.1688
2016	330,294,136	849,596,612	2.5722
2017		360,964,575	

Policy Year Valued	As of 12/31/17	As of 12/31/18	Ratio to Prior Year
Prior to 1988	10,677,289,631	10,694,925,605	1.0017
1988	1,798,723,526	1,799,755,243	1.0006
1989	2,110,470,099	2,114,069,323	1.0017
1990	2,144,336,975	2,148,744,816	1.0021
1991	1,886,396,231	1,887,720,510	1.0007
1992	1,600,123,380	1,604,538,396	1.0028
1993	1,320,674,137	1,317,924,907	0.9979
1994	1,210,264,662	1,213,610,751	1.0028
1995	1,037,020,068	1,038,923,640	1.0018
1996	924,557,514	925,479,768	1.0010
1997	936,914,164	938,875,940	1.0021
1998	963,050,521	968,216,277	1.0054
1999	1,056,308,811	1,059,045,529	1.0026
2000	1,118,872,394	1,122,916,511	1.0036
2001	1,114,971,169	1,116,137,959	1.0010
2002	1,204,472,328	1,215,741,923	1.0094
2003	1,201,808,279	1,205,086,683	1.0027
2004	1,279,608,189	1,285,974,268	1.0050
2005	1,308,478,328	1,313,020,070	1.0035
2006	1,334,804,939	1,341,416,009	1.0050
2007	1,415,291,366	1,419,240,962	1.0028
2008	1,300,317,615	1,302,766,298	1.0019
2009	1,180,850,809	1,183,328,869	1.0021
2010	1,257,972,932	1,265,816,882	1.0062
2011	1,224,524,276	1,226,215,646	1.0014
2012	1,126,768,590	1,131,473,139	1.0042
2013	1,151,802,393	1,144,094,299	0.9933
2014	1,134,886,821	1,146,650,799	1.0104
2015	1,029,235,002	1,068,868,221	1.0385
2016	848,988,532	990,678,279	1.1669
2017	360,739,923	928,532,546	2.5740
2018		407,203,775	

NOTE: So as to maximize the use of available data, the companies used in one stage of development were allowed to be independent of those used in the other stage of development; therefore, the figures shown at each valuation may vary.

TABLE I - B - REPORTED

POLICY YEAR DATA ACCUMULATED TO END OF CALENDAR YEAR

INDEMNITY INCURRED LOSSES EXCLUDING BULK AND IBNR RESERVES

Policy Year Valued	As of 12/31/16	As of 12/31/17	Ratio to Prior Year
Prior to 1987	5,899,981,659	5,901,118,782	1.0002
1987	964,426,671	964,810,535	1.0004
1988	1,087,890,794	1,087,391,410	0.9995
1989	1,264,804,411	1,265,209,898	1.0003
1990	1,285,052,256	1,285,425,862	1.0003
1991	1,105,659,767	1,105,100,634	0.9995
1992	920,801,482	920,769,973	1.0000
1993	796,349,356	796,275,555	0.9999
1994	733,635,630	733,487,428	0.9998
1995	603,305,117	603,865,426	1.0009
1996	497,055,095	496,940,071	0.9998
1997	496,395,332	496,596,269	1.0004
1998	491,372,973	491,348,242	0.9999
1999	554,555,161	554,895,802	1.0006
2000	587,877,992	588,591,255	1.0012
2001	618,042,127	618,124,971	1.0001
2002	662,573,254	663,486,560	1.0014
2003	647,096,939	648,154,254	1.0016
2004	684,358,979	684,984,762	1.0009
2005	688,222,176	688,986,696	1.0011
2006	708,125,501	708,913,315	1.0011
2007	743,814,297	746,254,979	1.0033
2008	694,381,748	695,407,566	1.0015
2009	626,549,230	629,224,730	1.0043
2010	645,460,207	649,867,794	1.0068
2011	620,769,781	625,598,381	1.0078
2012	566,027,624	568,874,281	1.0050
2013	566,117,434	572,054,009	1.0105
2014	504,465,441	548,072,299	1.0864
2015	366,619,854	490,226,637	1.3372
2016	106,614,954	358,903,441	3.3664
2017		112,945,050	

Policy Year Valued	As of 12/31/17	As of 12/31/18	Ratio to Prior Year
Prior to 1988	7,030,597,825	7,030,165,341	0.9999
1988	1,103,132,429	1,102,477,214	0.9994
1989	1,283,967,024	1,284,319,748	1.0003
1990	1,306,809,733	1,308,139,976	1.0010
1991	1,129,027,732	1,129,061,098	1.0000
1992	948,339,155	951,282,245	1.0031
1993	820,368,306	819,697,306	0.9992
1994	750,056,695	749,983,180	0.9999
1995	620,153,886	620,272,728	1.0002
1996	513,128,986	512,934,881	0.9996
1997	513,850,561	514,165,240	1.0006
1998	514,139,402	514,725,714	1.0011
1999	586,723,987	587,050,668	1.0006
2000	622,446,288	622,440,433	1.0000
2001	632,315,747	632,865,089	1.0009
2002	664,639,464	665,392,877	1.0011
2003	650,612,656	650,135,739	0.9993
2004	684,316,967	684,669,881	1.0005
2005	688,979,950	690,327,314	1.0020
2006	709,577,383	711,361,991	1.0025
2007	746,697,560	748,717,755	1.0027
2008	695,926,902	696,048,467	1.0002
2009	629,852,506	632,444,653	1.0041
2010	650,616,054	652,792,438	1.0033
2011	625,692,016	626,315,782	1.0010
2012	569,161,832	573,059,774	1.0068
2013	573,078,596	572,502,492	0.9990
2014	559,062,316	569,536,181	1.0187
2015	495,941,440	535,683,006	1.0801
2016	358,601,890	477,328,607	1.3311
2017	112,908,351	384,632,083	3.4066
2018		117,217,397	

NOTE: So as to maximize the use of available data, the companies used in one stage of development were allowed to be independent of those used in the other stage of development; therefore, the figures shown at each valuation may vary.

TABLE I - C - REPORTED

POLICY YEAR DATA ACCUMULATED TO END OF CALENDAR YEAR

MEDICAL INCURRED LOSSES EXCLUDING BULK AND IBNR RESERVES

Policy Year Valued	As of 12/31/16	As of 12/31/17	Ratio to Prior Year
Prior to 1987	2,972,092,084	2,974,924,294	1.0010
1987	586,325,795	594,206,911	1.0134
1988	687,744,951	686,633,141	0.9984
1989	814,047,341	814,848,494	1.0010
1990	824,681,322	825,759,877	1.0013
1991	739,288,612	740,446,204	1.0016
1992	633,521,401	633,798,402	1.0004
1993	484,172,547	485,554,802	1.0029
1994	449,692,786	450,731,624	1.0023
1995	406,691,780	407,213,777	1.0013
1996	398,474,708	401,277,619	1.0070
1997	411,928,776	411,131,749	0.9981
1998	420,380,726	426,356,062	1.0142
1999	452,128,932	451,357,247	0.9983
2000	474,733,974	475,844,524	1.0023
2001	473,653,083	474,356,616	1.0015
2002	535,944,117	538,875,286	1.0055
2003	546,302,118	548,751,615	1.0045
2004	594,170,091	596,001,842	1.0031
2005	614,998,280	619,464,209	1.0073
2006	622,014,488	624,870,128	1.0046
2007	666,694,167	668,086,076	1.0021
2008	605,167,746	603,679,714	0.9975
2009	552,054,180	550,351,398	0.9969
2010	602,105,806	606,850,137	1.0079
2011	593,717,106	598,545,192	1.0081
2012	540,923,547	557,350,801	1.0304
2013	579,873,819	578,081,083	0.9969
2014	555,591,373	566,589,146	1.0198
2015	505,265,590	528,855,104	1.0467
2016	223,679,182	490,693,171	2.1937
2017		248,019,525	

Policy Year Valued	As of 12/31/17	As of 12/31/18	Ratio to Prior Year
Prior to 1988	3,646,691,806	3,664,760,264	1.0050
1988	695,591,097	697,278,029	1.0024
1989	826,503,075	829,749,575	1.0039
1990	837,527,242	840,604,840	1.0037
1991	757,368,499	758,659,412	1.0017
1992	651,784,225	653,256,151	1.0023
1993	500,305,831	498,227,601	0.9958
1994	460,207,967	463,627,571	1.0074
1995	416,866,182	418,650,912	1.0043
1996	411,428,528	412,544,887	1.0027
1997	423,063,603	424,710,700	1.0039
1998	448,911,119	453,490,563	1.0102
1999	469,584,824	471,994,861	1.0051
2000	496,426,106	500,476,078	1.0082
2001	482,655,422	483,272,870	1.0013
2002	539,832,864	550,349,046	1.0195
2003	551,195,623	554,950,944	1.0068
2004	595,291,222	601,304,387	1.0101
2005	619,498,378	622,692,756	1.0052
2006	625,227,556	630,054,018	1.0077
2007	668,593,806	670,523,207	1.0029
2008	604,390,713	606,717,831	1.0039
2009	550,998,303	550,884,216	0.9998
2010	607,356,878	613,024,444	1.0093
2011	598,832,260	599,899,864	1.0018
2012	557,606,758	558,413,365	1.0014
2013	578,723,797	571,591,807	0.9877
2014	575,824,505	577,114,618	1.0022
2015	533,293,562	533,185,215	0.9998
2016	490,386,642	513,349,672	1.0468
2017	247,831,572	543,900,463	2.1946
2018		289,986,378	

NOTE: So as to maximize the use of available data, the companies used in one stage of development were allowed to be independent of those used in the other stage of development; therefore, the figures shown at each valuation may vary.

TABLE I - D - REPORTED

POLICY YEAR DATA ACCUMULATED TO END OF CALENDAR YEAR

INDEMNITY PAID LOSSES

Policy Year Valued	As of 12/31/16	As of 12/31/17	Ratio to Prior Year
Prior to 1987	5,832,466,749	5,842,659,698	1.0017
1987	952,800,113	954,200,265	1.0015
1988	1,070,773,667	1,072,484,494	1.0016
1989	1,238,214,871	1,241,484,725	1.0026
1990	1,258,552,954	1,261,601,216	1.0024
1991	1,073,978,839	1,077,286,478	1.0031
1992	892,880,437	895,783,844	1.0033
1993	770,436,735	773,624,109	1.0041
1994	706,131,073	709,029,608	1.0041
1995	586,461,098	588,206,141	1.0030
1996	483,928,781	485,321,616	1.0029
1997	488,818,235	489,814,521	1.0020
1998	486,132,265	486,897,790	1.0016
1999	547,606,530	548,487,674	1.0016
2000	579,148,481	580,405,784	1.0022
2001	607,619,124	609,356,737	1.0029
2002	645,050,866	647,206,512	1.0033
2003	627,801,432	630,432,303	1.0042
2004	655,836,107	659,821,315	1.0061
2005	666,473,017	669,832,453	1.0050
2006	681,611,629	686,519,970	1.0072
2007	716,229,997	721,692,906	1.0076
2008	668,950,668	673,514,594	1.0068
2009	604,675,824	612,641,369	1.0132
2010	616,004,690	626,287,006	1.0167
2011	581,184,979	594,341,978	1.0226
2012	506,707,650	524,898,706	1.0359
2013	484,774,815	524,277,341	1.0815
2014	385,164,095	474,173,788	1.2311
2015	216,518,538	386,817,067	1.7865
2016	36,709,005	206,769,403	5.6327
2017		38,308,382	

Policy Year Valued	As of 12/31/17	As of 12/31/18	Ratio to Prior Year
Prior to 1988	6,960,325,744	6,970,136,815	1.0014
1988	1,088,193,680	1,089,807,070	1.0015
1989	1,260,161,832	1,262,954,255	1.0022
1990	1,282,975,702	1,286,412,760	1.0027
1991	1,100,691,821	1,103,774,567	1.0028
1992	923,040,954	926,473,546	1.0037
1993	797,005,463	799,764,340	1.0035
1994	725,259,731	728,273,157	1.0042
1995	604,492,157	606,132,952	1.0027
1996	501,418,711	502,534,448	1.0022
1997	507,040,503	507,843,083	1.0016
1998	509,353,915	510,218,049	1.0017
1999	579,771,693	580,665,321	1.0015
2000	614,395,410	615,331,993	1.0015
2001	623,534,936	624,746,554	1.0019
2002	648,347,997	650,751,446	1.0037
2003	632,888,671	635,373,412	1.0039
2004	659,151,883	662,622,477	1.0053
2005	669,824,507	673,727,349	1.0058
2006	687,170,491	692,488,091	1.0077
2007	722,126,843	727,492,226	1.0074
2008	674,008,162	679,864,958	1.0087
2009	613,254,137	617,924,423	1.0076
2010	627,027,818	633,051,722	1.0096
2011	594,429,783	604,048,360	1.0162
2012	525,134,978	539,400,679	1.0272
2013	525,297,394	544,017,755	1.0356
2014	483,917,045	524,537,262	1.0839
2015	391,215,823	474,262,598	1.2123
2016	206,573,634	371,128,021	1.7966
2017	38,277,529	222,466,309	5.8119
2018		42,189,646	

NOTE: So as to maximize the use of available data, the companies used in one stage of development were allowed to be independent of those used in the other stage of development; therefore, the figures shown at each valuation may vary.

TABLE I - E - REPORTED

POLICY YEAR DATA ACCUMULATED TO END OF CALENDAR YEAR

MEDICAL PAID LOSSES

Policy Year Valued	As of 12/31/16	As of 12/31/17	Ratio to Prior Year
Prior to 1987	2,852,508,996	2,865,364,138	1.0045
1987	558,083,130	561,896,918	1.0068
1988	658,374,121	660,814,268	1.0037
1989	769,992,934	775,334,622	1.0069
1990	793,862,321	797,733,320	1.0049
1991	704,394,383	708,009,464	1.0051
1992	601,521,512	605,737,370	1.0070
1993	457,997,327	461,654,636	1.0080
1994	420,996,132	425,455,796	1.0106
1995	381,141,540	384,815,165	1.0096
1996	369,622,623	372,956,810	1.0090
1997	382,193,738	385,470,165	1.0086
1998	392,978,543	396,018,579	1.0077
1999	423,268,578	426,036,895	1.0065
2000	446,435,730	450,062,990	1.0081
2001	451,920,242	454,441,154	1.0056
2002	503,287,272	508,706,870	1.0108
2003	517,039,772	521,291,037	1.0082
2004	560,578,383	564,969,017	1.0078
2005	573,334,733	579,361,460	1.0105
2006	582,099,477	587,794,163	1.0098
2007	628,590,349	635,934,040	1.0117
2008	569,661,514	575,279,188	1.0099
2009	513,110,128	519,069,795	1.0116
2010	554,026,403	561,840,000	1.0141
2011	551,148,855	559,203,979	1.0146
2012	496,739,402	504,503,337	1.0156
2013	501,007,048	515,950,636	1.0298
2014	482,344,634	512,556,599	1.0626
2015	356,952,744	445,729,284	1.2487
2016	98,992,709	358,158,805	3.6180
2017		104,688,644	

Policy Year Valued	As of 12/31/17	As of 12/31/18	Ratio to Prior Year
Prior to 1988	3,503,703,527	3,520,229,159	1.0047
1988	669,736,322	672,490,387	1.0041
1989	786,864,556	792,278,318	1.0069
1990	809,487,235	813,425,253	1.0049
1991	724,711,846	728,151,711	1.0047
1992	623,411,603	627,024,489	1.0058
1993	475,964,788	479,527,352	1.0075
1994	434,701,113	438,492,704	1.0087
1995	394,454,549	397,529,791	1.0078
1996	382,997,117	386,767,077	1.0098
1997	397,274,854	401,791,819	1.0114
1998	418,420,105	421,568,549	1.0075
1999	443,916,501	447,913,278	1.0090
2000	470,596,775	474,750,723	1.0088
2001	462,669,795	466,058,247	1.0073
2002	509,637,289	516,180,502	1.0128
2003	523,708,440	528,458,815	1.0091
2004	564,274,992	569,600,399	1.0094
2005	579,387,764	587,057,401	1.0132
2006	588,126,090	596,248,365	1.0138
2007	636,437,302	642,378,001	1.0093
2008	575,974,802	581,125,548	1.0089
2009	519,626,837	522,967,009	1.0064
2010	562,329,524	568,975,757	1.0118
2011	559,482,773	564,054,051	1.0082
2012	504,707,218	510,638,128	1.0118
2013	516,585,726	521,384,289	1.0093
2014	521,322,082	531,089,913	1.0187
2015	449,713,010	476,545,689	1.0597
2016	357,931,029	445,723,495	1.2453
2017	104,583,627	394,338,978	3.7706
2018		124,950,858	

NOTE: So as to maximize the use of available data, the companies used in one stage of development were allowed to be independent of those used in the other stage of development; therefore, the figures shown at each valuation may vary.

TABLE I - A - ADJUSTED TO A POST-ACT 57 & HB 1846, PRE-PROTZ & HB 1840 BASIS

POLICY YEAR DATA ACCUMULATED TO END OF CALENDAR YEAR

INCURRED LOSSES EXCLUDING BULK AND IBNR RESERVES

Policy Year Valued	As of 12/31/16	As of 12/31/17	Ratio to Prior Year
Prior			
to 1987	7,296,909,322	7,301,112,794	1.0006
1987	1,292,289,873	1,300,596,304	1.0064
1988	1,491,329,384	1,489,869,216	0.9990
1989	1,766,844,623	1,768,139,132	1.0007
1990	1,808,847,100	1,810,349,930	1.0008
1991	1,600,676,852	1,601,450,635	1.0005
1992	1,366,518,847	1,366,867,324	1.0003
1993	1,143,176,928	1,144,575,389	1.0012
1994	1,073,481,734	1,074,479,128	1.0009
1995	936,427,135	937,538,163	1.0012
1996	854,503,781	857,284,560	1.0033
1997	879,402,058	878,898,147	0.9994
1998	888,264,504	894,300,056	1.0068
1999	987,502,426	987,160,849	0.9997
2000	1,048,725,519	1,050,637,056	1.0018
2001	1,083,576,782	1,084,430,531	1.0008
2002	1,195,818,033	1,199,763,744	1.0033
2003	1,196,604,579	1,200,202,104	1.0030
2004	1,287,945,913	1,290,507,582	1.0020
2005	1,318,249,377	1,323,608,983	1.0041
2006	1,349,687,322	1,353,454,512	1.0028
2007	1,434,456,602	1,438,407,315	1.0028
2008	1,319,171,156	1,318,819,011	0.9997
2009	1,181,012,544	1,182,105,989	1.0009
2010	1,242,496,935	1,251,797,899	1.0075
2011	1,209,539,019	1,219,327,667	1.0081
2012	1,102,690,835	1,122,101,717	1.0176
2013	1,142,324,458	1,146,712,784	1.0038
2014	1,058,804,490	1,113,636,186	1.0518
2015	871,336,686	1,019,081,741	1.1696
2016	329,757,984	849,596,612	2.5764
2017		360,964,575	

Policy Year Valued	As of 12/31/17	As of 12/31/18	Ratio to Prior Year
Prior			
to 1988	8,801,694,831	8,819,304,028	1.0020
1988	1,510,613,975	1,511,708,976	1.0007
1989	1,793,921,287	1,797,451,978	1.0020
1990	1,838,810,083	1,843,029,971	1.0023
1991	1,636,765,228	1,638,055,113	1.0008
1992	1,406,886,158	1,410,916,818	1.0029
1993	1,179,216,780	1,176,523,316	0.9977
1994	1,098,099,563	1,101,427,424	1.0030
1995	961,590,342	963,465,861	1.0020
1996	882,485,240	883,399,982	1.0010
1997	907,201,403	909,154,449	1.0022
1998	938,322,368	943,481,024	1.0055
1999	1,036,415,364	1,039,143,016	1.0026
2000	1,104,444,115	1,108,478,314	1.0037
2001	1,106,774,331	1,107,929,368	1.0010
2002	1,201,869,474	1,213,117,217	1.0094
2003	1,205,119,800	1,208,375,987	1.0027
2004	1,289,117,471	1,295,451,091	1.0049
2005	1,323,637,094	1,328,150,528	1.0034
2006	1,354,487,116	1,361,063,359	1.0049
2007	1,439,376,671	1,443,288,945	1.0027
2008	1,320,073,205	1,322,488,134	1.0018
2009	1,183,383,385	1,185,832,914	1.0021
2010	1,253,048,613	1,260,854,751	1.0062
2011	1,219,705,969	1,221,346,216	1.0013
2012	1,122,643,558	1,127,271,651	1.0041
2013	1,148,375,872	1,140,583,132	0.9932
2014	1,133,844,028	1,145,441,146	1.0102
2015	1,029,235,002	1,068,557,660	1.0382
2016	848,988,532	990,078,415	1.1662
2017	360,739,923	927,817,814	2.5720
2018		407,002,178	

NOTE: So as to maximize the use of available data, the companies used in one stage of development were allowed to be independent of those used in the other stage of development; therefore, the figures shown at each valuation may vary.

TABLE I - B - ADJUSTED TO A POST-ACT 57 & HB 1846, PRE-PROTZ & HB 1840 BASIS

POLICY YEAR DATA ACCUMULATED TO END OF CALENDAR YEAR

INDEMNITY INCURRED LOSSES EXCLUDING BULK AND IBNR RESERVES

Policy Year Valued	As of 12/31/16	As of 12/31/17	Ratio to Prior Year
Prior to 1987	5,204,123,749	5,205,124,304	1.0002
1987	854,651,029	854,988,791	1.0004
1988	965,597,430	965,158,022	0.9995
1989	1,124,687,065	1,125,043,853	1.0003
1990	1,146,579,122	1,146,907,858	1.0003
1991	990,989,456	990,497,475	0.9995
1992	830,210,013	830,182,289	1.0000
1993	724,807,533	724,742,596	0.9999
1994	675,877,389	675,746,986	0.9998
1995	570,995,446	571,505,271	1.0009
1996	489,688,787	489,577,214	0.9998
1997	496,395,332	496,596,269	1.0004
1998	491,372,973	491,348,242	0.9999
1999	554,555,161	554,895,802	1.0006
2000	587,877,992	588,591,255	1.0012
2001	618,042,127	618,124,971	1.0001
2002	662,573,254	663,486,560	1.0014
2003	647,096,939	648,154,254	1.0016
2004	684,358,979	684,984,762	1.0009
2005	688,222,176	688,986,696	1.0011
2006	708,125,501	708,913,315	1.0011
2007	743,814,297	746,254,979	1.0033
2008	694,381,748	695,407,566	1.0015
2009	626,549,230	629,224,730	1.0043
2010	645,460,207	649,867,794	1.0068
2011	620,769,781	625,598,381	1.0078
2012	566,027,624	568,874,281	1.0050
2013	566,117,434	572,054,009	1.0105
2014	504,465,441	548,072,299	1.0864
2015	366,619,854	490,226,637	1.3372
2016	106,614,954	358,903,441	3.3664
2017		112,945,050	

Policy Year Valued	As of 12/31/17	As of 12/31/18	Ratio to Prior Year
Prior to 1988	6,205,456,624	6,204,997,363	0.9999
1988	979,131,031	978,539,100	0.9994
1989	1,141,725,554	1,142,009,745	1.0002
1990	1,165,992,259	1,167,134,549	1.0010
1991	1,011,944,594	1,011,943,566	1.0000
1992	855,048,879	857,607,613	1.0030
1993	746,670,177	746,054,943	0.9992
1994	691,021,046	690,929,303	0.9999
1995	586,936,601	587,027,390	1.0002
1996	505,530,724	505,329,107	0.9996
1997	513,850,561	514,156,510	1.0006
1998	514,139,402	514,718,614	1.0011
1999	586,723,987	587,041,602	1.0005
2000	622,446,288	622,430,515	1.0000
2001	632,315,747	632,853,336	1.0009
2002	664,639,464	665,371,025	1.0011
2003	650,612,656	650,113,522	0.9992
2004	684,316,967	684,637,422	1.0005
2005	688,979,950	690,299,006	1.0019
2006	709,577,383	711,327,164	1.0025
2007	746,697,560	748,680,433	1.0027
2008	695,926,902	696,014,713	1.0001
2009	629,852,506	632,416,122	1.0041
2010	650,616,054	652,754,626	1.0033
2011	625,692,016	626,264,659	1.0009
2012	569,161,832	572,983,318	1.0067
2013	573,078,596	572,417,846	0.9988
2014	559,062,316	569,369,321	1.0184
2015	495,941,440	535,372,445	1.0795
2016	358,601,890	476,728,743	1.3294
2017	112,908,351	383,917,351	3.4003
2018		117,015,800	

NOTE: So as to maximize the use of available data, the companies used in one stage of development were allowed to be independent of those used in the other stage of development; therefore, the figures shown at each valuation may vary.

TABLE I - C - ADJUSTED TO A POST-ACT 57 & HB 1846, PRE-PROTZ & HB 1840 BASIS

POLICY YEAR DATA ACCUMULATED TO END OF CALENDAR YEAR

MEDICAL INCURRED LOSSES EXCLUDING BULK AND IBNR RESERVES

Policy Year Valued	As of 12/31/16	As of 12/31/17	Ratio to Prior Year
Prior to 1987	2,092,785,573	2,095,988,490	1.0015
1987	437,638,844	445,607,513	1.0182
1988	525,731,954	524,711,194	0.9981
1989	642,157,558	643,095,279	1.0015
1990	662,267,978	663,442,072	1.0018
1991	609,687,396	610,953,160	1.0021
1992	536,308,834	536,685,035	1.0007
1993	418,369,395	419,832,793	1.0035
1994	397,604,345	398,732,142	1.0028
1995	365,431,689	366,032,892	1.0016
1996	364,814,994	367,707,346	1.0079
1997	383,006,726	382,301,878	0.9982
1998	396,891,531	402,951,814	1.0153
1999	432,947,265	432,265,047	0.9984
2000	460,847,527	462,045,801	1.0026
2001	465,534,655	466,305,560	1.0017
2002	533,244,779	536,277,184	1.0057
2003	549,507,640	552,047,850	1.0046
2004	603,586,934	605,522,820	1.0032
2005	630,027,201	634,622,287	1.0073
2006	641,561,821	644,541,197	1.0046
2007	690,642,305	692,152,336	1.0022
2008	624,789,408	623,411,445	0.9978
2009	554,463,314	552,881,259	0.9971
2010	597,036,728	601,930,105	1.0082
2011	588,769,238	593,729,286	1.0084
2012	536,663,211	553,227,436	1.0309
2013	576,207,024	574,658,775	0.9973
2014	554,339,049	565,563,887	1.0202
2015	504,716,832	528,855,104	1.0478
2016	223,143,030	490,693,171	2.1990
2017		248,019,525	

Policy Year Valued	As of 12/31/17	As of 12/31/18	Ratio to Prior Year
Prior to 1988	2,596,238,207	2,614,306,665	1.0070
1988	531,482,944	533,169,876	1.0032
1989	652,195,733	655,442,233	1.0050
1990	672,817,824	675,895,422	1.0046
1991	624,820,634	626,111,547	1.0021
1992	551,837,279	553,309,205	1.0027
1993	432,546,603	430,468,373	0.9952
1994	407,078,517	410,498,121	1.0084
1995	374,653,741	376,438,471	1.0048
1996	376,954,516	378,070,875	1.0030
1997	393,350,842	394,997,939	1.0042
1998	424,182,966	428,762,410	1.0108
1999	449,691,377	452,101,414	1.0054
2000	481,997,827	486,047,799	1.0084
2001	474,458,584	475,076,032	1.0013
2002	537,230,010	547,746,192	1.0196
2003	554,507,144	558,262,465	1.0068
2004	604,800,504	610,813,669	1.0099
2005	634,657,144	637,851,522	1.0050
2006	644,909,733	649,736,195	1.0075
2007	692,679,111	694,608,512	1.0028
2008	624,146,303	626,473,421	1.0037
2009	553,530,879	553,416,792	0.9998
2010	602,432,559	608,100,125	1.0094
2011	594,013,953	595,081,557	1.0018
2012	553,481,726	554,288,333	1.0015
2013	575,297,276	568,165,286	0.9876
2014	574,781,712	576,071,825	1.0022
2015	533,293,562	533,185,215	0.9998
2016	490,386,642	513,349,672	1.0468
2017	247,831,572	543,900,463	2.1946
2018		289,986,378	

NOTE: So as to maximize the use of available data, the companies used in one stage of development were allowed to be independent of those used in the other stage of development; therefore, the figures shown at each valuation may vary.

TABLE I - D - ADJUSTED TO A POST-ACT 57 & HB 1846, PRE-PROTZ & HB 1840 BASIS

POLICY YEAR DATA ACCUMULATED TO END OF CALENDAR YEAR

INDEMNITY PAID LOSSES

Policy Year Valued	As of 12/31/16	As of 12/31/17	Ratio to Prior Year
Prior to 1987	5,144,717,380	5,153,686,156	1.0017
1987	844,420,821	845,652,815	1.0015
1988	950,536,070	952,041,427	1.0016
1989	1,101,290,929	1,104,168,073	1.0026
1990	1,123,262,386	1,125,944,552	1.0024
1991	963,113,407	966,023,799	1.0030
1992	805,642,286	808,196,994	1.0032
1993	702,007,018	704,811,588	1.0040
1994	651,676,129	654,226,550	1.0039
1995	555,669,073	557,256,888	1.0029
1996	476,956,262	478,307,312	1.0028
1997	488,818,235	489,814,521	1.0020
1998	486,132,265	486,897,790	1.0016
1999	547,606,530	548,487,674	1.0016
2000	579,148,481	580,405,784	1.0022
2001	607,619,124	609,356,737	1.0029
2002	645,050,866	647,206,512	1.0033
2003	627,801,432	630,432,303	1.0042
2004	655,836,107	659,821,315	1.0061
2005	666,473,017	669,832,453	1.0050
2006	681,611,629	686,519,970	1.0072
2007	716,229,997	721,692,906	1.0076
2008	668,950,668	673,514,594	1.0068
2009	604,675,824	612,641,369	1.0132
2010	616,004,690	626,287,006	1.0167
2011	581,184,979	594,341,978	1.0226
2012	506,707,650	524,898,706	1.0359
2013	484,774,815	524,277,341	1.0815
2014	385,164,095	474,173,788	1.2311
2015	216,518,538	386,817,067	1.7865
2016	36,709,005	206,769,403	5.6327
2017		38,308,382	

Policy Year Valued	As of 12/31/17	As of 12/31/18	Ratio to Prior Year
Prior to 1988	6,143,624,219	6,152,231,083	1.0014
1988	965,986,426	967,401,789	1.0015
1989	1,120,779,365	1,123,229,047	1.0022
1990	1,145,020,695	1,148,035,890	1.0026
1991	987,011,826	989,716,197	1.0027
1992	832,788,991	835,800,268	1.0036
1993	726,113,212	728,533,465	1.0033
1994	669,202,197	671,845,756	1.0040
1995	572,685,993	574,174,474	1.0026
1996	494,171,758	495,250,776	1.0022
1997	507,040,503	507,840,675	1.0016
1998	509,353,915	510,215,457	1.0017
1999	579,771,693	580,662,640	1.0015
2000	614,395,410	615,329,183	1.0015
2001	623,534,936	624,742,919	1.0019
2002	648,347,997	650,744,236	1.0037
2003	632,888,671	635,365,958	1.0039
2004	659,151,883	662,612,065	1.0052
2005	669,824,507	673,715,640	1.0058
2006	687,170,491	692,472,138	1.0077
2007	722,126,843	727,476,130	1.0074
2008	674,008,162	679,847,388	1.0087
2009	613,254,137	617,910,412	1.0076
2010	627,027,818	633,033,650	1.0096
2011	594,429,783	604,019,504	1.0161
2012	525,134,978	539,357,882	1.0271
2013	525,297,394	543,961,594	1.0355
2014	483,917,045	524,415,401	1.0837
2015	391,215,823	474,013,458	1.2116
2016	206,573,634	370,634,358	1.7942
2017	38,277,529	221,910,143	5.7974
2018		42,063,077	

NOTE: So as to maximize the use of available data, the companies used in one stage of development were allowed to be independent of those used in the other stage of development; therefore, the figures shown at each valuation may vary.

TABLE I - E - ADJUSTED TO A POST-ACT 57 & HB 1846, PRE-PROTZ & HB 1840 BASIS

POLICY YEAR DATA ACCUMULATED TO END OF CALENDAR YEAR

MEDICAL PAID LOSSES

Policy Year Valued	As of 12/31/16	As of 12/31/17	Ratio to Prior Year
Prior			
to 1987	1,973,573,192	1,986,428,334	1.0065
1987	409,483,732	413,297,520	1.0093
1988	496,452,174	498,892,321	1.0049
1989	598,239,719	603,581,407	1.0089
1990	631,544,516	635,415,515	1.0061
1991	574,901,339	578,516,420	1.0063
1992	504,408,145	508,624,003	1.0084
1993	392,275,318	395,932,627	1.0093
1994	368,996,650	373,456,314	1.0121
1995	339,960,655	343,634,280	1.0108
1996	336,052,350	339,386,537	1.0099
1997	353,363,867	356,640,294	1.0093
1998	369,574,295	372,614,331	1.0082
1999	404,176,378	406,944,695	1.0068
2000	432,637,007	436,264,267	1.0084
2001	443,869,186	446,390,098	1.0057
2002	500,689,170	506,108,768	1.0108
2003	520,336,007	524,587,272	1.0082
2004	570,099,361	574,489,995	1.0077
2005	588,492,811	594,519,538	1.0102
2006	601,770,546	607,465,232	1.0095
2007	652,656,609	660,000,300	1.0113
2008	589,393,245	595,010,919	1.0095
2009	515,639,989	521,599,656	1.0116
2010	549,106,371	556,919,968	1.0142
2011	546,332,949	554,388,073	1.0147
2012	492,616,037	500,379,972	1.0158
2013	497,584,740	512,528,328	1.0300
2014	481,319,375	511,531,340	1.0628
2015	356,952,744	445,729,284	1.2487
2016	98,992,709	358,158,805	3.6180
2017		104,688,644	

Policy Year Valued	As of 12/31/17	As of 12/31/18	Ratio to Prior Year
Prior			
to 1988	2,453,249,928	2,469,775,560	1.0067
1988	505,628,169	508,382,234	1.0054
1989	612,557,214	617,970,976	1.0088
1990	644,777,817	648,715,835	1.0061
1991	592,163,981	595,603,846	1.0058
1992	523,464,657	527,077,543	1.0069
1993	408,205,560	411,768,124	1.0087
1994	381,571,663	385,363,254	1.0099
1995	352,242,108	355,317,350	1.0087
1996	348,523,105	352,293,065	1.0108
1997	367,562,093	372,079,058	1.0123
1998	393,691,952	396,840,396	1.0080
1999	424,023,054	428,019,831	1.0094
2000	456,168,496	460,322,444	1.0091
2001	454,472,957	457,861,409	1.0075
2002	507,034,435	513,577,648	1.0129
2003	527,019,961	531,770,336	1.0090
2004	573,784,274	579,109,681	1.0093
2005	594,546,530	602,216,167	1.0129
2006	607,808,267	615,930,542	1.0134
2007	660,522,607	666,463,306	1.0090
2008	595,730,392	600,881,138	1.0086
2009	522,159,413	525,499,585	1.0064
2010	557,405,205	564,051,438	1.0119
2011	554,664,466	559,235,744	1.0082
2012	500,582,186	506,513,096	1.0118
2013	513,159,205	517,957,768	1.0094
2014	520,279,289	530,047,120	1.0188
2015	449,713,010	476,545,689	1.0597
2016	357,931,029	445,723,495	1.2453
2017	104,583,627	394,338,978	3.7706
2018		124,950,858	

NOTE: So as to maximize the use of available data, the companies used in one stage of development were allowed to be independent of those used in the other stage of development; therefore, the figures shown at each valuation may vary.

EXHIBIT VII

LOSS COST FORMULAE

The experience used for classification relativities for the April 1, 2020 revision will include all available risks. It is proposed that catastrophes be limited in accordance with the procedure previously employed in other Bureau filings. The experience period will be five (5) years for all classifications regardless of whether a classification might meet the full credibility requirements with less than five years of data. Credibility will be based on reported payrolls for classifications using payroll as the exposure base. For non-payroll classifications, expected losses will be used as the basis for credibility. Thus, two credibility tables will be prepared for use in the April 1, 2020 filing. The values for these respective tables will be established such that the credibilities assigned to a payroll-based classification having the same portion of total statewide expected losses and payrolls attributable to its experience using each table would be equal. All occupational disease losses will be included in the exhibit of classification experience, with the total amount of such losses by type of injury being shown on a separate line on the classification loss cost worksheets.

Most classifications are subject to standard procedures as described below. However, circumstances will sometimes require that some classifications' rating procedure be modified to recognize situations where the normal rating process would not be appropriate. Such classifications, and the manner in which their loss costs have been derived, are separately identified within the filing material.

The calculation of classification loss costs will be made using the following procedure:

- (1) Determine the present pure premiums by category (serious, non-serious, medical only and total) for each classification.
- (2) Adjust the present pure premiums by category (serious, non-serious, medical-only and total) to the April 1, 2020 loss cost level.
- (3) Determine Expected Losses (serious, non-serious, medical-only and total) for each classification by multiplying the exposures from the experience period by the present pure premiums.
- (4) Determine the indicated pure premiums (serious, non-serious, medical-only and total) from the exposures and losses from the experience period.
- (5) Test the indicated total pure premiums by multiplying the exposures of the latest two years for each classification and obtaining the total Actual Losses for all classifications combined.
- (6) Calculate Expected Losses by multiplying the present pure premiums by the exposures from the last two years for each classification and by the overall average loss cost change.
- (7) Obtain correction factors by dividing the Expected Losses derived in (6) by the Actual Losses derived in (5).

LOSS COST FORMULAE (CONTINUED)

- (8) Multiply the indicated (pre-test) pure premiums from (4) times the correction factors derived in (7) to obtain indicated (post-test) pure premiums.
- (9) Determine “formula” pure premiums from (2) and (8) above for each type of loss (serious, non-serious and medical-only), with credibility for each category of loss corresponding to either the amount of reported payroll (for all classifications in which payroll is the exposure base) or to the amount of Expected Losses (for all “non-payroll” classifications). Credibility weights will be taken from exhibits appearing in the Class Book. The complement of credibility is in each case to be assigned to the present loss costs on April 1, 2020 level for each category of loss.
- (10) Select proposed total pure premiums for each classification, using the middle value from the total pure premiums derived in (2), (8) and (9) above. If the proposed pure premium selected on this basis is different from the formula pure premium derived in (9) above, partial pure premiums are to be allocated between categories (serious, non-serious and medical-only) in the same proportion as the partial pure premiums comprising the formula pure premium.
- (11) Test the proposed total pure premiums selected in (10) by multiplying by the exposures of the two latest years for each classification and obtaining the total Expected Losses for all classifications combined.
- (12) Obtain a correction factor by dividing the Expected Losses derived in (6) above by the Expected Losses derived in (11) above.
- (13) Calculate the “composite pure premium multiplier” as the product of the following items:
 - (a) The pure premium correction factor determined in (12) above.
 - (b) The proposed experience rating plan off-balance factor.
- (14) Apply the composite pure premium multiplier obtained in (13) above to the proposed total pure premiums to obtain classification loss costs.
- (15) Test to assure that the maximum departure of the classification loss costs derived in (14) above from current loss costs are in accordance with the following parameters:

Maximum Change in Loss Cost:
Upward: The overall average change plus 25% rounded to the nearest 1%.
Downward: The overall average change minus 25% rounded to the nearest 1%.
- (16) Loss costs are to be rounded to the nearest \$.01.
- (17) Test the limited loss costs derived in (16) above to determine if balance has been achieved within 0.0005 of the indicated change in loss cost level. If such balance has not been achieved, calculate the necessary correction factor to adjust the composite pure premium multipliers derived in (13) above to achieve the necessary balance. Perform steps (14) through (17) iteratively until the desired balance is achieved.

EXHIBIT VIII**COLLECTIBLE PREMIUM RATIOS ***

Manual Year	Premium at Manual Rates	Collected Premium (Excluding Constants)	Collectible Premium Ratio (2)/(3)
(1)	(2)	(3)	(4)
ALL INDUSTRIES			
2014	2,746,743,943	2,668,227,034	1.0294
2015	2,666,469,668	2,602,219,012	1.0247
2016	2,662,504,862	2,594,827,046	1.0261
TOTAL	8,075,718,473	7,865,273,092	1.0268
MANUFACTURING AND UTILITIES			
2014	563,913,515	541,404,846	1.0416
2015	537,151,164	513,490,886	1.0461
2016	529,173,566	508,618,404	1.0404
TOTAL	1,630,238,245	1,563,514,136	1.0427
CONTRACTING AND QUARRYING			
2014	540,321,387	474,241,939	1.1393
2015	514,618,525	458,414,093	1.1226
2016	517,706,281	460,715,203	1.1237
TOTAL	1,572,646,193	1,393,371,235	1.1287
OTHER INDUSTRIES			
2014	1,642,509,041	1,652,580,249	0.9939
2015	1,614,699,979	1,630,314,033	0.9904
2016	1,615,625,015	1,625,493,439	0.9939
TOTAL	4,872,834,035	4,908,387,721	0.9928

* Excludes classifications and coverages not subject to experience rating.

EXHIBIT IX

CALCULATION OF EXPECTED LOSS COST FACTORS (a)

Policy Year Beginning 4/1 (1)	HB 1846 Adjustment Factor (2)	Protz & HB 1840 Adjustment Factor (3)	Loss Ratio Development Factor (4)	Collectible Premium Ratio (5)	Trend Factor (6)	Product (2) * (3) * (4) * (5) * (6) (7)	Expected Loss Cost Factor 1.0 / (7) (8)
<u>Manufacturing and Utilities</u>							
2016	1.0000	1.0044	1.1267	1.0427	0.8239	0.9722	1.0286
2017	1.0000	1.0028	1.2288	1.0427	0.8647	1.1110	0.9001
2018	1.0000	1.0021	1.4879	1.0427	0.9077	1.4112	0.7086
<u>Contracting and Quarrying</u>							
2016	1.0000	1.0044	1.1716	1.1287	0.8239	1.0944	0.9137
2017	1.0000	1.0028	1.2259	1.1287	0.8647	1.1998	0.8335
2018	1.0000	1.0021	1.5135	1.1287	0.9077	1.5539	0.6435
<u>Other Industries</u>							
2016	1.0000	1.0044	1.1248	0.9928	0.8239	0.9241	1.0821
2017	1.0000	1.0028	1.2082	0.9928	0.8647	1.0401	0.9614
2018	1.0000	1.0021	1.4912	0.9928	0.9077	1.3466	0.7426

a Apply to pure Loss Costs (pre-LBA, Merit Rating Plan, PCCPAP and Certified Safety Committee adjustments).

EXHIBIT X

RETROSPECTIVE DEVELOPMENT FACTORS *

Retrospective development factors for first, second and third adjustments are calculated below. They are intended for application to retrospective plans with no loss limitation.

First Adjustment	RDF =	0.3004
Second Adjustment	RDF =	0.1652
Third Adjustment	RDF =	0.1132

For those companies using retrospective development factors with loss limitations, the following formula may be used:

$$\text{RDF(LIM)} = (1.0 - \text{ELF}) \times \text{RDF}$$

RDF(LIM) = Retrospective Development Factors at limited basis
ELF = Excess Loss Factors for given Hazard Group and Loss Limitation
RDF = Retrospective Development Factors without Loss Limitation

For Example:

$$\text{The \$25,000 limit Hazard Group C ELF} = 0.655$$

$$\begin{aligned} \text{Then First Adjustment RDF} &= (1 - 0.655) * 0.3004 \\ &= 0.1036 \end{aligned}$$

* The use of retrospective development factors is optional.