

State: District of Columbia **First Filing Company:** LM General Insurance Company, ...
TOI/Sub-TOI: 19.0 Personal Auto/19.0000 Personal Auto Combinations
Product Name: Rate Revision
Project Name/Number: 16-DC-P-AO-R-GRS-ASR/16-DC-P-AO-R-GRS-ASR

Filing at a Glance

Companies: LM General Insurance Company
LM Insurance Corporation

Product Name: Rate Revision

State: District of Columbia

TOI: 19.0 Personal Auto

Sub-TOI: 19.0000 Personal Auto Combinations

Filing Type: Rate

Date Submitted: 11/17/2016

SERFF Tr Num: LBPM-130800721

SERFF Status: Submitted to State

State Tr Num:

State Status:

Co Tr Num: 16-DC-P-AO-R-GRS-ASR

Effective Date 11/29/2016

Requested (New):

Effective Date 01/03/2017

Requested (Renewal):

Author(s): Godwin Kalb

Reviewer(s):

Disposition Date:

Disposition Status:

Effective Date (New):

Effective Date (Renewal):

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General Information

Project Name: 16-DC-P-AO-R-GRS-ASR	Status of Filing in Domicile:
Project Number: 16-DC-P-AO-R-GRS-ASR	Domicile Status Comments:
Reference Organization:	Reference Number:
Reference Title:	Advisory Org. Circular:
Filing Status Changed: 11/17/2016	
State Status Changed:	Deemer Date:
Created By: Godwin Kalb	Submitted By: Godwin Kalb
Corresponding Filing Tracking Number:	

Filing Description:
Please see the attached cover letter.

Company and Contact

Filing Contact Information

Godwin Kalb, Sr. Compliance Analyst	godwin.kalb@libertymutual.com
1001 4th Avenue	425-943-6052 [Phone]
Seattle, WA 98154-1101	

Filing Company Information

LM General Insurance Company	CoCode: 36447	State of Domicile: Illinois
175 Berkeley Street	Group Code: 111	Company Type: Property and
Boston, MA 02116	Group Name: Liberty Mutual	Casualty
(617) 357-9500 ext. [Phone]	Group	State ID Number:
	FEIN Number: 22-2227328	

LM Insurance Corporation	CoCode: 33600	State of Domicile: Illinois
175 Berkeley Street	Group Code: 111	Company Type:
Boston, MA 02116	Group Name: Liberty Mutual	State ID Number:
(617) 357-9500 ext. [Phone]	Group	
	FEIN Number: 04-3058504	

Filing Fees

Fee Required? No
 Retaliatory? No
 Fee Explanation:

SERFF Tracking #:

LBPM-130800721

State Tracking #:

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Rate Information

Rate data applies to filing.

Filing Method: File & Use

Rate Change Type: Increase

Overall Percentage of Last Rate Revision: 2.900%

Effective Date of Last Rate Revision: 04/16/2015

Filing Method of Last Filing: File & Use

Company Rate Information

Company Name:	Overall % Indicated Change:	Overall % Rate Impact:	Written Premium Change for this Program:	Number of Policy Holders Affected for this Program:	Written Premium for this Program:	Maximum % Change (where req'd):	Minimum % Change (where req'd):
LM General Insurance Company	21.500%	3.000%	\$199,946	3,126	\$6,732,145	6.100%	1.000%
LM Insurance Corporation	21.500%	3.400%	\$19,087	224	\$562,166	5.900%	1.500%

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Rate/Rule Schedule

Item No.	Schedule Item Status	Exhibit Name	Rule # or Page #	Rate Action	Previous State Filing Number	Attachments
1		Base Rates	Page R-C011-1	Replacement		Base Rates - Proof.pdf

District of Columbia
Automobile Rating Manual
Base Rates

Company	BI	PD	PIP	Comp	Coll	UM	UIM	Fixed
LM General	563.899805	502.641994	243.367602	383.038323	1267.776303	179.138709	28.565392	1030.351683
LM-IC	626.555340	558.491105	270.408447	425.598137	1408.640337	199.043010	31.739325	1144.835204

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Supporting Document Schedules

Bypassed - Item:	Consulting Authorization
Bypass Reason:	N/A
Attachment(s):	
Item Status:	
Status Date:	

Satisfied - Item:	Actuarial Certification (P&C)
Comments:	
Attachment(s):	DC PL Gears Actuarial Certification.pdf
Item Status:	
Status Date:	

Satisfied - Item:	District of Columbia and Countrywide Experience for the Last 5 Years (P&C)
Comments:	
Attachment(s):	Rate History.pdf DC Auto Exhibit.pdf
Item Status:	
Status Date:	

Satisfied - Item:	District of Columbia and Countrywide Loss Ratio Analysis (P&C)
Comments:	
Attachment(s):	DC and CW Loss Ratio Analysis.pdf
Item Status:	
Status Date:	

Satisfied - Item:	Cover Letter
Comments:	
Attachment(s):	DC Cover Letter.pdf
Item Status:	
Status Date:	

Satisfied - Item:	Mock-Up
Comments:	
Attachment(s):	Base Rates - mockup.pdf
Item Status:	

SERFF Tracking #:

LBPM-130800721

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Status Date:



Liberty Mutual
Personal Automobile
District of Columbia
Combined
Summary of Rate Indications

Narrative

The most current rate level indication for District of Columbia Automobile is +21.5% with a new business effective date of November 29, and a renewal business effective date of January 3, 2017.

Past and Prospective Experience Within and Outside the State

Calendar year earned premiums and accident year losses (incurred losses for Liability and paid losses for Physical Damage) are utilized in the indication. Three years of experience are used for both Liability and Physical Damage coverages beginning July 1, 2013 and ending June 30, 2016. Losses are evaluated as of June 30, 2016. The credibility weighted indications are +44.2% for Liability (See Exhibit I, Sheet 1) and +2.1% for Physical Damage (See Exhibit I, Sheet 2). The overall indication is +21.5%.

Liability and Physical Damage premiums are brought to current level by means of the parallelogram method. Liability premium is adjusted to reflect a reduction in the average on-leveled earned premium. Physical Damage premium is also adjusted to reflect the effects of Symbol Trend, Model Year and Deductible shift.

Exhibit IV shows the development of losses by accident year. Countrywide loss development factors were utilized for PIP because loss development patterns based on District of Columbia data show too much variability over the historical period. For all other coverages, District of Columbia loss data was used to select loss development factors.

For each coverage, two annual trend factors are selected. The historical trend factor trends losses from the midpoint of each year used in the experience period to the midpoint of the latest experience period. In this case, the midpoint of the latest experience period is January 1, 2016. The loss projection factor trends losses from the midpoint of the latest experience period to one year beyond the proposed effective date (i.e. average accident date of the proposed policy effective period). In this case, losses are trended to January 3, 2018. The loss trend selections are based on both Liberty and Industry calendar year trend data and are shown in Exhibit V.

Fixed expense ratios of 28.8% and 25%, as a percent of Earned Premium, were calculated for Liability and Physical Damage, respectively (See Exhibit VII) and then added to the developed and trended loss ratio to determine the overall indicated loss, fixed expense and loss adjustment expense ratio.

Catastrophic Hazards

A catastrophe load factor of 1.044 is selected based on the long-term catastrophe experience in District of Columbia (See Exhibit VI). Catastrophe losses are removed from the Comprehensive loss experience and the data is then adjusted by including the selected catastrophe load.

Insurer Operating Expenses

Both Liability and Physical Damage incurred losses are adjusted to include all loss adjustment expenses. Based on Liberty Mutual District of Columbia projections we have selected the LAE factors of 1.171 for non-MedPay Liability and 1.252 for Physical Damage.

The projected permissible loss, fixed expense and loss adjustment expense ratio for Liability is +83.5%. The projected permissible loss, fixed expense, and loss adjustment expense ratio for Physical Damage is +81.5% (see Exhibit VII).

Index of Exhibits

Exhibit	Description
I	Liability and Physical Damage Rate Level Indications
II	Premium Exhibit
III	Loss Exhibit
IV	Loss Development Triangles
V	Trend Analysis
VI	Catastrophe Provision Calculation
VII	Permissible Loss Ratio Calculation
VIII	Excess Loss Loading
IX	UM-UIM Indication Calculation
Appendix A	Automobile Profit Provision

**Liberty Mutual Auto Program
Rate History Table
District of Columbia**

	LMGIC	LMIC	SERFF Tracking #
2014	6.60%	3.30%	LBPM-129441425
2015	2.90%	3.40%	LBPM-129887879

Liberty Mutual Insurance
District of Columbia
Combined
Combined Coverages Rate Level Indication
Accident Period: 07/01/2013 to 06/30/2016

1) 1-Year Total Liability Earned Premium at Current Level and at Total Limits	5,148,357
2) 1-Year Total Physical Damage Earned Premium at Current Level	6,032,922
3) Total Earned Premium at Current Level: (1) + (2)	11,181,279
4) Total Liability Rate Indication (See Exhibit I, Sheet 1)	44.2%
5) Total Physical Damage Rate Indication (See Exhibit I, Sheet 2)	2.1%
6) Overall Rate Indication	21.5%

Liberty Mutual Insurance
District of Columbia
Combined
Total Limits Liability Rate Level Indication
Accident Period: 07/01/2013 to 06/30/2016

	3-Year Total
1) Total Limits Earned Premium at Collected Level (See Exhibit II)	
Bodily Injury	7,843,353
Property Damage	5,355,498
UM/UIM	2,031,929
PIP	633,439
Total Liability	15,864,218
2) Earned Premium at Current Level Including Premium Trend (See Exhibit II)	
Bodily Injury	8,338,782
Property Damage	4,981,610
UM/UIM	1,763,759
PIP	618,145
Total Liability	15,702,296
3) Total Limits Incurred Loss as of 06/16 (See Exhibit III)	
Bodily Injury	3,732,682
Property Damage	3,497,521
UM/UIM	1,493,341
PIP	458,898
Total Liability	9,182,442
4) Total Limits Ultimate Loss and LAE (See Exhibit III)	
Bodily Injury	5,847,784
Property Damage	4,201,385
UM/UIM	2,077,918
PIP	553,559
Total Liability	12,680,647
5) Total Limits Ultimate and Trended Loss and LAE (See Exhibit III)	
Bodily Injury	7,296,857
Property Damage	5,348,919
UM/UIM	2,618,267
PIP	513,608
Total Liability	15,777,651
6) Fixed Expenses (See Exhibit VII)	
Bodily Injury	28.8%
Property Damage	28.8%
UM/UIM	28.8%
PIP	28.8%
7) Indicated Loss, LAE and Fixed Expense Ratio [(5)/(2)+(6)]	
Bodily Injury	116.3%
Property Damage	136.2%
UM/UIM	177.3%
PIP	111.9%
8) Permissible Loss, LAE, and Fixed Expense Ratio (See Exhibit VII)	83.5%
9) Indicated Rate Change [(7)/(8) - 1]	
Bodily Injury	39.3%
Property Damage	63.0%
UM/UIM	112.2%
PIP	34.0%
10) Credibility	
Bodily Injury: Full Credibility Based on 3,000 BI Claims	41.8%
Property Damage: Full Credibility Based on 3,000 PD Claims	68.3%
UM/UIM: Full Credibility Based on 3,000 UM Claims	38.7%
PIP: Full Credibility Based on 3,000 PIP Claims	17.0%
11) Complement of Credibility (Average Loss Ratio Trend)	
Bodily Injury	30.9%
Property Damage	33.5%
UM/UIM	47.1%
PIP	10.7%
12) Credibility Weighted Rate Indication {(9)*(10) + (11)*[1-(10)]}	
Bodily Injury	34.4%
Property Damage	53.7%
UM/UIM	72.3%
PIP	14.7%
Total Liability (Weighted Average of Coverages. Weights = (2), Year Ending 06/30/2016)	44.2%

Liberty Mutual Insurance
District of Columbia
Combined
Physical Damage Rate Level Indication
Accident Period: 07/01/2013 to 06/30/2016

	3-Year Total
1) Earned Premium at Collected Level (See Exhibit II)	
Comprehensive	5,143,235
Collision	10,996,209
Total	16,139,444
2) Earned Premium at Current Level Including Premium Trend (See Exhibit II)	
Comprehensive	5,571,534
Collision	12,611,669
Total	18,183,202
3) Paid Loss as of 06/16 (See Exhibit III)	
Comprehensive	1,871,231
Collision	4,569,089
Total	6,440,321
4) Ultimate Loss and LAE (See Exhibit III)	
Comprehensive	2,499,646
Collision	5,543,925
Total	8,043,571
5) Ultimate and Trended Loss and LAE (See Exhibit III)	
Comprehensive	2,733,211
Collision	7,249,346
Total	9,982,557
6) Fixed Expenses (See Exhibit VII)	
Comprehensive	25.0%
Collision	25.0%
7) Indicated Loss, LAE and Fixed Expense Ratio [(5)/(2)+(6)]	
Comprehensive	74.0%
Collision	82.4%
8) Permissible Loss, LAE, and Fixed Expense Ratio (See Exhibit VII)	81.5%
9) Indicated Rate Change [(7)/(8) - 1]	
Comprehensive	-9.2%
Collision	1.2%
10) Credibility	
Comprehensive: Full Credibility Based on 3,000 Comprehensive Claims	50.8%
Collision: Full Credibility Based on 3,000 Collision Claims	71.8%
11) Complement of Credibility (Average Loss Ratio Trend)	
Comprehensive	6.2%
Collision	10.3%
12) Credibility Weighted Rate Indication {(9)*(10) + (11)*[1-(10)]}	
Comprehensive	-1.6%
Collision	3.7%
Total Physical Damage (Weighted Average of Coverages. Weights = (2), Year Ending 06/30/2016)	2.1%

Liberty Mutual Insurance
District of Columbia
Combined
Calculation of Trended Earned Premium at Current Rate Level
Accident Period: 07/01/2013 to 06/30/2016
Data Evaluated as of: 06/30/2016

Bodily Injury

Experience Period	Earned Premium	On-Level Factors	Earned Premium @ Current Level	Premium Trend Factor	Trended Earned Premium @ Current Level	Weights
07/01/13 to 06/30/14	2,421,731	1.381	3,344,537	0.849	2,838,598	0.34
07/01/14 to 06/30/15	2,598,068	1.226	3,186,255	0.875	2,787,897	0.33
07/01/15 to 06/30/16	2,823,553	1.065	3,006,846	0.902	2,712,287	0.33
Total	7,843,353		9,537,638		8,338,782	

Property Damage

Experience Period	Earned Premium	On-Level Factors	Earned Premium @ Current Level	Premium Trend Factor	Trended Earned Premium @ Current Level	Weights
07/01/13 to 06/30/14	1,825,138	1.173	2,141,192	0.789	1,688,509	0.34
07/01/14 to 06/30/15	1,772,852	1.098	1,946,118	0.843	1,641,365	0.33
07/01/15 to 06/30/16	1,757,507	1.042	1,831,117	0.902	1,651,736	0.33
Total	5,355,498		5,918,427		4,981,610	

UM

Experience Period	Earned Premium	On-Level Factors	Earned Premium @ Current Level	Premium Trend Factor	Trended Earned Premium @ Current Level	Weights
07/01/13 to 06/30/14	695,996	1.335	929,101	0.634	588,812	0.33
07/01/14 to 06/30/15	667,696	1.225	817,922	0.716	585,710	0.33
07/01/15 to 06/30/16	668,237	1.090	728,220	0.809	589,237	0.33
Total	2,031,929		2,475,242		1,763,759	

PIP

Experience Period	Earned Premium	On-Level Factors	Earned Premium @ Current Level	Premium Trend Factor	Trended Earned Premium @ Current Level	Weights
07/01/13 to 06/30/14	219,604	1.207	265,144	0.814	215,827	0.35
07/01/14 to 06/30/15	209,780	1.159	243,114	0.852	207,220	0.34
07/01/15 to 06/30/16	204,055	1.071	218,593	0.893	195,098	0.32
Total	633,439		726,850		618,145	

Comprehensive

Experience Period	Earned Premium	On-Level Factors	Earned Premium @ Current Level	Premium Trend Factor	Trended Earned Premium @ Current Level	Weights
07/01/13 to 06/30/14	1,672,322	0.989	1,654,446	1.137	1,880,504	0.34
07/01/14 to 06/30/15	1,716,764	0.991	1,700,941	1.093	1,858,992	0.33
07/01/15 to 06/30/16	1,754,149	0.994	1,743,329	1.051	1,832,037	0.33
Total	5,143,235		5,098,716		5,571,534	

Collision

Experience Period	Earned Premium	On-Level Factors	Earned Premium @ Current Level	Premium Trend Factor	Trended Earned Premium @ Current Level	Weights
07/01/13 to 06/30/14	3,551,812	0.966	3,432,341	1.239	4,254,356	0.34
07/01/14 to 06/30/15	3,627,380	0.971	3,521,002	1.180	4,156,429	0.33
07/01/15 to 06/30/16	3,817,017	0.979	3,736,594	1.124	4,200,884	0.33
Total	10,996,209		10,689,937		12,611,669	

**Liberty Mutual Insurance
District of Columbia
Combined
Losses Developed to Ultimate: Incurred Loss Method
Accident Period: 07/01/2013 to 06/30/2016
Data Evaluated as of: 06/30/2016**

Bodily Injury Basic @ \$100K

Experience Period	Incurred Loss	Loss Development Factor	LAE Load	Excess Loss Load	Developed Loss & LAE	Trend Factor	Trended Developed Loss & LAE	Weights
07/01/13 to 06/30/14	1,472,617	1.078	1.171	1.037	1,928,523	1.316	2,538,461	0.34
07/01/14 to 06/30/15	1,383,863	1.190	1.171	1.037	2,000,259	1.246	2,493,263	0.33
07/01/15 to 06/30/16	876,201	1.803	1.171	1.037	1,919,003	1.180	2,265,132	0.33
Total	3,732,682				5,847,784		7,296,857	

Property Damage

Experience Period	Incurred Loss	Loss Development Factor	LAE Load	Developed Loss & LAE	Trend Factor	Trended Developed Loss & LAE	Weights
07/01/13 to 06/30/14	1,101,165	0.998	1.171	1,287,287	1.356	1,745,506	0.34
07/01/14 to 06/30/15	1,084,072	1.001	1.171	1,269,973	1.278	1,623,025	0.33
07/01/15 to 06/30/16	1,312,284	1.070	1.171	1,644,126	1.205	1,980,388	0.33
Total	3,497,521			4,201,385		5,348,919	

UMBI/UIM @ \$100K

Experience Period	Incurred Loss	Loss Development Factor	LAE Load	Excess Loss Load	Developed Loss & LAE	Trend Factor	Trended Developed Loss & LAE	Weights
07/01/13 to 06/30/14	365,787	1.078	1.171	1.037	479,031	1.316	630,535	0.33
07/01/14 to 06/30/15	236,446	1.190	1.171	1.037	341,763	1.246	425,997	0.33
07/01/15 to 06/30/16	190,253	1.803	1.171	1.037	416,680	1.180	491,837	0.33
Total	792,486				1,237,474		1,548,369	

UMPD

Experience Period	Incurred Loss	Loss Development Factor	LAE Load	Developed Loss & LAE	Trend Factor	Trended Developed Loss & LAE	Weights
07/01/13 to 06/30/14	200,995	0.998	1.171	234,968	1.356	318,606	0.33
07/01/14 to 06/30/15	255,376	1.001	1.171	299,168	1.278	382,337	0.33
07/01/15 to 06/30/16	244,484	1.070	1.171	306,308	1.205	368,955	0.33
Total	700,855			840,444		1,069,899	

PIP

Experience Period	Incurred Loss	Loss Development Factor	LAE Load	Developed Loss & LAE	Trend Factor	Trended Developed Loss & LAE	Weights
07/01/13 to 06/30/14	219,303	0.983	1.171	252,464	0.890	224,636	0.35
07/01/14 to 06/30/15	142,427	1.012	1.171	168,752	0.938	158,221	0.34
07/01/15 to 06/30/16	97,168	1.163	1.171	132,343	0.988	130,752	0.32
Total	458,898			553,559		513,608	

**Liberty Mutual Insurance
District of Columbia
Combined
Losses Developed to Ultimate: Paid Loss Method
Accident Period: 07/01/2013 to 06/30/2016
Data Evaluated as of: 06/30/2016**

Comprehensive xCat

Experience Period	Paid Loss	Loss Development Factor	LAE Load	CAT Load	Developed Loss & LAE	Trend Factor	Trended Developed Loss & LAE	Weights
07/01/13 to 06/30/14	602,200	0.999	1.252	1.044	786,516	1.072	842,800	0.34
07/01/14 to 06/30/15	722,840	0.996	1.252	1.044	941,192	1.093	1,029,126	0.33
07/01/15 to 06/30/16	546,192	1.081	1.252	1.044	771,938	1.116	861,285	0.33
Total	1,871,231				2,499,646		2,733,211	

Collision

Experience Period	Paid Loss	Loss Development Factor	LAE Load	Developed Loss & LAE	Trend Factor	Trended Developed Loss & LAE	Weights
07/01/13 to 06/30/14	1,417,000	0.996	1.252	1,767,485	1.383	2,444,212	0.34
07/01/14 to 06/30/15	1,424,681	0.985	1.252	1,756,575	1.310	2,300,308	0.33
07/01/15 to 06/30/16	1,727,408	0.934	1.252	2,019,865	1.240	2,504,826	0.33
Total	4,569,089			5,543,925		7,249,346	

**Liberty Mutual Insurance
District of Columbia
Bodily Injury/UMBI/UMBI - Basic Limits @ \$100K Incurred Losses**

AY/Age	Maturity								
	12	24	36	48	60	72	84	96	108
Jul2007-Jun2008	669,784	1,077,711	1,384,336	1,467,060	1,471,060	1,471,060	1,471,060	1,471,060	1,471,060
Jul2008-Jun2009	549,460	972,112	1,010,685	1,045,064	1,045,364	1,045,363	1,045,363	1,045,363	1,045,363
Jul2009-Jun2010	497,947	658,697	762,021	765,293	1,038,993	1,038,993	1,038,993		
Jul2010-Jun2011	561,005	1,286,776	1,455,358	1,563,587	1,573,587	1,573,587			
Jul2011-Jun2012	735,882	1,205,988	1,347,441	1,405,397	1,536,188				
Jul2012-Jun2013	986,509	1,209,288	1,339,084	1,385,116					
Jul2013-Jun2014	1,088,188	1,735,591	1,838,405						
Jul2014-Jun2015	1,077,102	1,620,309							
Jul2015-Jun2016	1,066,454								

	Age to Age Factors								
	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - Ult
Jul2007-Jun2008	1.609	1.285	1.060	1.003	1.000	1.000	1.000	1.000	
Jul2008-Jun2009	1.769	1.040	1.034	1.000	1.000	1.000	1.000		
Jul2009-Jun2010	1.323	1.157	1.004	1.358	1.000	1.000			
Jul2010-Jun2011	2.294	1.131	1.074	1.006	1.000				
Jul2011-Jun2012	1.639	1.117	1.043	1.093					
Jul2012-Jun2013	1.226	1.107	1.034						
Jul2013-Jun2014	1.595	1.059							
Jul2014-Jun2015	1.504								
Selected	1.515	1.104	1.043	1.034	1.000	1.000	1.000	1.000	1.000
To Ultimate	1.803	1.190	1.078	1.034	1.000	1.000	1.000	1.000	1.000

**Liberty Mutual Insurance
District of Columbia
Property Damage/UMPD/UIMPD - Incurred Losses**

AY/Age	Maturity								
	12	24	36	48	60	72	84	96	108
Jul2007-Jun2008	744,118	843,749	866,825	867,788	867,787	867,787	867,786	867,786	867,786
Jul2008-Jun2009	633,524	725,577	723,323	722,150	722,363	722,363	722,363	722,363	722,363
Jul2009-Jun2010	798,646	851,318	839,375	836,833	836,833	836,833	836,833		
Jul2010-Jun2011	1,049,979	1,070,169	1,080,926	1,075,771	1,075,771	1,075,770			
Jul2011-Jun2012	1,085,517	1,169,112	1,168,107	1,168,120	1,168,120				
Jul2012-Jun2013	1,096,724	1,158,280	1,160,984	1,159,063					
Jul2013-Jun2014	1,157,557	1,250,943	1,302,160						
Jul2014-Jun2015	1,241,592	1,339,448							
Jul2015-Jun2016	1,556,768								

	Age to Age Factors								
	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - Ult
Jul2007-Jun2008	1.134	1.027	1.001	1.000	1.000	1.000	1.000	1.000	
Jul2008-Jun2009	1.145	0.997	0.998	1.000	1.000	1.000	1.000		
Jul2009-Jun2010	1.066	0.986	0.997	1.000	1.000	1.000			
Jul2010-Jun2011	1.019	1.010	0.995	1.000	1.000				
Jul2011-Jun2012	1.077	0.999	1.000	1.000					
Jul2012-Jun2013	1.056	1.002	0.998						
Jul2013-Jun2014	1.081	1.041							
Jul2014-Jun2015	1.079								
Selected	1.069	1.002	0.998	1.000	1.000	1.000	1.000	1.000	1.000
To Ultimate	1.070	1.001	0.998	1.000	1.000	1.000	1.000	1.000	1.000

Liberty Mutual Insurance
District of Columbia
Comprehensive Excluding Catastrophes - Paid Loss, Including R/R

AY/Age	Maturity								
	12	24	36	48	60	72	84	96	108
Jul2007-Jun2008	569,024	593,889	605,677	606,144	602,294	602,294	602,294	601,776	601,776
Jul2008-Jun2009	500,252	528,303	528,303	527,733	527,733	527,733	527,733	527,733	
Jul2009-Jun2010	497,307	565,133	564,712	564,712	564,712	564,712	564,712		
Jul2010-Jun2011	567,783	599,318	598,568	599,234	599,234	599,234			
Jul2011-Jun2012	616,713	694,497	684,299	684,199	683,966				
Jul2012-Jun2013	509,263	571,370	570,917	569,814					
Jul2013-Jun2014	599,534	607,947	602,200						
Jul2014-Jun2015	696,313	722,840							
Jul2015-Jun2016	546,192								

	Age to Age Factors								
	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - Ult
Jul2007-Jun2008	1.044	1.020	1.001	0.994	1.000	1.000	0.999	1.000	
Jul2008-Jun2009	1.056	1.000	0.999	1.000	1.000	1.000	1.000		
Jul2009-Jun2010	1.136	0.999	1.000	1.000	1.000	1.000			
Jul2010-Jun2011	1.056	0.999	1.001	1.000	1.000				
Jul2011-Jun2012	1.126	0.985	1.000	1.000					
Jul2012-Jun2013	1.122	0.999	0.998						
Jul2013-Jun2014	1.014	0.991							
Jul2014-Jun2015	1.038								
Selected	1.085	0.997	1.000	1.000	1.000	1.000	1.000	1.000	1.000
To Ultimate	1.081	0.996	0.999	0.999	1.000	1.000	1.000	1.000	1.000

**Liberty Mutual Insurance
District of Columbia
Collision - Paid Losses**

AY/Age	Maturity								
	12	24	36	48	60	72	84	96	108
Jul2007-Jun2008	1,188,190	1,189,595	1,190,768	1,182,841	1,182,041	1,181,908	1,181,908	1,179,425	1,179,425
Jul2008-Jun2009	1,184,814	1,176,936	1,173,048	1,167,261	1,167,261	1,167,261	1,167,261	1,167,261	
Jul2009-Jun2010	1,328,809	1,291,152	1,278,285	1,278,252	1,277,852	1,277,485	1,277,085		
Jul2010-Jun2011	1,448,815	1,423,321	1,400,325	1,399,493	1,399,493	1,399,493			
Jul2011-Jun2012	1,205,169	1,153,741	1,134,478	1,132,534	1,130,368				
Jul2012-Jun2013	1,147,225	1,064,388	1,082,104	1,079,512					
Jul2013-Jun2014	1,599,581	1,441,075	1,417,000						
Jul2014-Jun2015	1,520,956	1,424,681							
Jul2015-Jun2016	1,727,408								

	Age to Age Factors								
	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - Ult
Jul2007-Jun2008	1.001	1.001	0.993	0.999	1.000	1.000	0.998	1.000	
Jul2008-Jun2009	0.993	0.997	0.995	1.000	1.000	1.000	1.000		
Jul2009-Jun2010	0.972	0.990	1.000	1.000	1.000	1.000			
Jul2010-Jun2011	0.982	0.984	0.999	1.000	1.000				
Jul2011-Jun2012	0.957	0.983	0.998	0.998					
Jul2012-Jun2013	0.928	1.017	0.998						
Jul2013-Jun2014	0.901	0.983							
Jul2014-Jun2015	0.937								
Selected	0.948	0.988	0.998	1.000	1.000	1.000	0.999	1.000	1.000
To Ultimate	0.934	0.985	0.996	0.998	0.999	0.999	0.999	1.000	1.000

Liberty Mutual Insurance
Countrywide PIP States (Including AR, FL, KS, KY, MA, MD, MI, MN, ND, NY, OR, PA, TX, UT, WA) Private Passenger Auto Loss
Development
PIP - Incurred Losses
All Companies

AY/Age	Maturity								
	12	24	36	48	60	72	84	96	108
Jul2007-Jun2008	166,551,550	192,924,787	200,871,567	201,671,582	200,735,170	200,359,635	199,266,237	198,168,451	197,529,823
Jul2008-Jun2009	187,436,145	222,055,586	225,614,898	223,907,106	222,988,518	221,515,359	219,150,201	218,866,863	
Jul2009-Jun2010	214,776,929	245,880,716	255,055,217	259,706,432	258,621,982	256,119,501	254,460,876		
Jul2010-Jun2011	225,419,443	250,022,536	260,857,983	263,305,408	258,118,176	256,946,029			
Jul2011-Jun2012	223,240,498	257,994,899	264,310,113	262,539,699	262,304,052				
Jul2012-Jun2013	218,234,995	255,829,847	260,813,237	263,204,713					
Jul2013-Jun2014	231,184,123	262,354,311	271,679,850						
Jul2014-Jun2015	225,981,410	262,765,683							
Jul2015-Jun2016	235,905,191								

	Age to Age Factors								
	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108-ult
Jul2007-Jun2008	1.158	1.041	1.004	0.995	0.998	0.995	0.994	0.997	
Jul2008-Jun2009	1.185	1.016	0.992	0.996	0.993	0.989	0.999		
Jul2009-Jun2010	1.145	1.037	1.018	0.996	0.990	0.994			
Jul2010-Jun2011	1.109	1.043	1.009	0.980	0.995				
Jul2011-Jun2012	1.156	1.024	0.993	0.999					
Jul2012-Jun2013	1.172	1.019	1.009						
Jul2013-Jun2014	1.135	1.036							
Jul2014-Jun2015	1.163								
Selected	1.150	1.029	1.004	0.996	0.994	0.992	0.997	1.000	1.000
To Ultimate	1.163	1.012	0.983	0.979	0.984	0.989	0.997	1.000	1.000

**Liberty Mutual Insurance
District of Columbia
Combined
Calculation of Loss Trend Factors
Accident Period: 07/01/2013 to 06/30/2016
Data Evaluated as of: 06/30/2016**

Historical Loss Trend Factors

Selected Annual Historical Pure Premium Trend :	BI	PD	UMBI	UMPD	PIP	COMP	COLL
	5.6%	6.1%	5.6%	6.1%	-5.1%	-2.0%	5.6%

Experience Period	Trend From	Trend To	Trend Period	Loss Trend Factor						
				BI	PD	UMBI	UMPD	PIP	COMP	COLL
07/01/13 to 06/30/14	1/1/2014	1/1/2016	2.00	1.115	1.126	1.115	1.126	0.901	0.960	1.115
07/01/14 to 06/30/15	1/1/2015	1/1/2016	1.00	1.056	1.061	1.056	1.061	0.949	0.980	1.056
07/01/15 to 06/30/16	1/1/2016	1/1/2016	0.00	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Projected Loss Trend Factors

Selected Annual Projected Pure Premium Trend :	BI	PD	UMBI	UMPD	PIP	COMP	COLL
	8.6%	9.7%	8.6%	9.7%	-0.6%	5.6%	11.3%

Experience Period	Trend From	Trend To	Trend Period	Loss Trend Factor						
				BI	PD	UMBI	UMPD	PIP	COMP	COLL
All	1/1/2016	1/3/2018	2.01	1.180	1.205	1.180	1.205	0.988	1.116	1.240

Combined Loss Trend Factors

Experience Period	Loss Trend Factor						
	BI	PD	UMBI	UMPD	PIP	COMP	COLL
07/01/13 to 06/30/14	1.316	1.356	1.316	1.356	0.890	1.072	1.383
07/01/14 to 06/30/15	1.246	1.278	1.246	1.278	0.938	1.093	1.310
07/01/15 to 06/30/16	1.180	1.205	1.180	1.205	0.988	1.116	1.240

**Liberty Mutual Insurance
District of Columbia
Combined
Calculation of Premium Trend Factors
Accident Period: 07/01/2013 to 06/30/2016
Data Evaluated as of: 06/30/2016**

Historical Premium Factors

Selected Annual Historical Premium Trend:	BI	PD	UM	COMP	COLL
	-3.0%	-6.5%	-11.5%	4.0%	5.0%

Experience Period	Trend From	Trend To	Trend Period	Premium Trend Factor				
				BI	PD	UM	COMP	COLL
07/01/13 to 06/30/14	1/1/2014	1/1/2016	2.00	0.941	0.874	0.783	1.082	1.103
07/01/14 to 06/30/15	1/1/2015	1/1/2016	1.00	0.970	0.935	0.885	1.040	1.050
07/01/15 to 06/30/16	1/1/2016	1/1/2016	0.00	1.000	1.000	1.000	1.000	1.000

Projected Premium Trend Factors

Selected Annual Projected Premium Trend:	BI	PD	UM	COMP	COLL
	-5.0%	-5.0%	-10.0%	2.5%	6.0%

Experience Period	Trend From	Trend To	Trend Period	Premium Trend Factor				
				BI	PD	UM	COMP	COLL
All	1/1/2016	1/3/2018	2.01	0.902	0.902	0.809	1.051	1.124

Combined Premium Trend Factors

Experience Period	Premium Trend Factor				
	BI	PD	UM	COMP	COLL
07/01/13 to 06/30/14	0.849	0.789	0.634	1.137	1.239
07/01/14 to 06/30/15	0.875	0.843	0.716	1.093	1.180
07/01/15 to 06/30/16	0.902	0.902	0.809	1.051	1.124

District of Columbia
Calendar Year Trend Data
Industry

4 Qtrs. Ending Year	Ending Qtr.	Bodily Injury			Property Damage			Personal Injury Protection			Comprehensive			Comprehensive Ex-Cat			Collision		
		Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium
2012	1	11,216	1.37%	154	2,170	6.14%	133	4,769	0.26%	13	1,521	5.42%	82	*****	*****	*****	2,256	10.09%	228
2012	2	11,089	1.37%	151	2,174	6.15%	134	5,005	0.26%	13	1,503	5.44%	82	*****	*****	*****	2,278	10.09%	230
2012	3	10,893	1.37%	149	2,253	5.97%	134	5,812	0.25%	15	1,569	5.60%	88	*****	*****	*****	2,272	9.94%	226
2012	4	11,214	1.38%	154	2,348	5.67%	133	5,614	0.27%	15	1,598	5.42%	87	*****	*****	*****	2,274	9.73%	221
2013	1	11,270	1.37%	154	2,331	5.62%	131	5,702	0.27%	15	1,707	5.13%	88	*****	*****	*****	2,310	9.54%	220
2013	2	11,485	1.39%	159	2,340	5.62%	132	6,283	0.24%	15	1,746	5.03%	88	*****	*****	*****	2,375	9.42%	224
2013	3	11,433	1.38%	158	2,389	5.66%	135	5,987	0.25%	15	1,602	4.67%	75	*****	*****	*****	2,399	9.66%	232
2013	4	11,415	1.37%	157	2,413	5.68%	137	6,617	0.24%	16	1,567	4.47%	70	*****	*****	*****	2,419	9.69%	234
2014	1	11,766	1.37%	162	2,443	5.61%	137	6,793	0.23%	16	1,522	4.47%	68	*****	*****	*****	2,404	9.82%	236
2014	2	11,526	1.34%	154	2,466	5.66%	140	6,148	0.24%	15	1,507	4.56%	69	*****	*****	*****	2,391	10.18%	243
2014	3	12,163	1.37%	166	2,489	5.71%	142	5,921	0.22%	13	1,529	4.65%	71	*****	*****	*****	2,367	10.27%	243
2014	4	12,048	1.36%	164	2,505	5.80%	145	5,295	0.22%	12	1,541	4.87%	75	*****	*****	*****	2,351	10.57%	248
2015	1	12,281	1.38%	170	2,542	5.99%	152	4,979	0.21%	10	1,503	4.91%	74	*****	*****	*****	2,398	10.80%	259
2015	2	12,155	1.45%	176	2,570	6.00%	154	4,915	0.20%	10	1,563	5.07%	79	*****	*****	*****	2,462	10.93%	269
2015	3	12,470	1.47%	183	2,629	6.07%	160	5,110	0.20%	10	1,600	5.14%	82	*****	*****	*****	2,497	11.12%	278
2015	4	12,450	1.50%	187	2,670	6.07%	162	5,453	0.19%	10	1,578	5.08%	80	*****	*****	*****	2,607	11.17%	291
2016	1	12,109	1.51%	183	2,712	6.13%	166	5,796	0.19%	11	1,584	5.18%	82	*****	*****	*****	2,597	11.50%	299

Fitted Trend

1-Yr (5 pts)	-0.16	8.77	8.60	6.93	2.32	9.42	17.73	-10.28	5.62	4.71	4.45	9.37	*****	*****	*****	9.06	6.09	15.70
2-Yr (9 pts)	2.74	6.42	9.33	5.42	4.95	10.64	-8.69	-11.55	-19.23	2.72	8.02	10.96	*****	*****	*****	4.93	7.60	12.90
3-Yr (13 pts)	3.35	3.21	6.67	5.03	3.36	8.57	-6.19	-10.87	-16.39	-2.11	2.49	0.33	*****	*****	*****	3.04	7.09	10.34
4-Yr (17 pts)	3.25	2.05	5.36	5.29	0.63	5.95	-0.42	-9.05	-9.43	-0.34	-1.90	-2.23	*****	*****	*****	3.10	4.02	7.24

District of Columbia
Calendar Year Trend Data
PL

4 Qtrs. Ending Year	Ending Qtr.	Bodily Injury			Property Damage			Personal Injury Protection			Comprehensive			Comprehensive Ex-Cat			Collision		
		Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium
2012	1	7,576	2.35%	178	2,101	6.61%	139	5,255	0.92%	48	1,903	5.76%	110	1,866	5.61%	105	2,572	8.67%	223
2012	2	8,876	2.25%	200	2,258	6.22%	140	5,292	0.66%	35	1,797	5.46%	98	1,757	5.33%	94	2,679	8.67%	232
2012	3	10,545	2.10%	221	2,314	6.42%	149	4,528	0.49%	22	2,025	5.34%	108	1,973	5.00%	99	2,658	8.98%	239
2012	4	10,346	2.08%	215	2,440	6.33%	154	2,583	0.42%	11	2,191	4.75%	104	2,192	4.38%	96	2,630	8.51%	224
2013	1	9,905	2.06%	204	2,480	6.39%	158	2,395	0.53%	13	2,278	4.10%	93	2,106	3.72%	78	2,419	8.40%	203
2013	2	8,880	2.18%	193	2,333	6.52%	152	3,052	0.76%	23	2,305	4.19%	97	2,141	3.82%	82	2,542	8.22%	209
2013	3	7,646	2.36%	180	2,280	6.32%	144	3,277	0.83%	27	2,017	3.97%	80	1,893	3.84%	73	2,756	8.10%	223
2013	4	9,192	2.35%	216	2,271	6.16%	140	4,490	1.02%	46	1,818	3.86%	70	1,693	3.79%	64	2,852	8.68%	248
2014	1	10,037	2.19%	220	2,282	5.91%	135	6,223	1.18%	73	1,839	4.35%	80	1,884	4.30%	81	3,096	9.29%	288
2014	2	8,032	2.38%	191	2,262	6.20%	140	5,714	1.30%	74	1,872	4.68%	88	1,902	4.61%	88	2,957	9.30%	275
2014	3	9,077	2.34%	213	2,376	5.98%	142	6,078	1.31%	79	1,949	4.57%	89	1,930	4.53%	87	2,946	8.96%	264
2014	4	8,484	2.38%	202	2,396	6.06%	145	5,293	1.37%	72	2,157	4.79%	103	2,152	4.77%	103	2,616	8.74%	229
2015	1	9,905	2.39%	237	2,266	6.18%	140	3,816	1.36%	52	2,228	4.82%	107	2,218	4.80%	107	2,608	8.91%	232
2015	2	11,111	2.06%	229	2,433	6.13%	149	6,207	1.23%	76	2,317	4.32%	100	2,294	4.30%	99	2,712	9.42%	255
2015	3	10,887	2.30%	250	2,473	6.59%	163	6,678	1.01%	68	2,153	4.58%	99	2,113	4.49%	95	2,349	9.98%	234
2015	4	9,603	2.47%	238	2,595	6.47%	168	6,426	0.95%	61	1,837	4.21%	77	1,796	4.14%	74	2,856	10.39%	297
2016	1	8,217	2.71%	223	2,709	6.63%	180	6,714	0.79%	53	1,690	4.24%	72	1,648	4.17%	69	2,981	10.55%	314
2016	2	8,955	2.67%	239	2,745	6.21%	170	3,684	0.67%	25	1,542	5.14%	79	1,522	5.07%	77	2,970	9.97%	296

Fitted Trend

1-Yr (5 pts)	-24.81	31.48	-1.14	14.23	1.23	15.63	-33.98	-44.53	-63.38	-34.47	11.42	-26.99	-34.81	10.68	-27.85	18.30	7.02	26.61
2-Yr (9 pts)	3.25	6.38	9.84	9.89	3.47	13.69	-3.34	-29.33	-31.69	-9.88	-1.04	-10.81	-11.17	-1.47	-12.47	0.84	8.52	9.43
3-Yr (13 pts)	3.50	4.48	8.14	6.14	1.07	7.27	14.25	-4.00	9.68	-4.77	4.39	-0.58	-3.55	5.70	1.94	0.46	7.82	8.32
4-Yr (17 pts)	-0.23	4.67	4.43	3.31	0.17	3.48	14.77	16.52	33.73	-3.00	-1.05	-4.02	-2.26	0.60	-1.68	1.83	5.13	7.06

Mid-Atlantic
Calendar Year Trend Data
Industry

4 Qtrs. Ending Year	Ending Qtr.	Bodily Injury			Property Damage			Personal Injury Protection			Comprehensive			Comprehensive Ex-Cat			Collision		
		Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium
2012	1	14,644	0.81%	118	2,797	3.67%	103	8,169	1.38%	112	1,290	5.72%	74	*****	*****	*****	2,839	5.89%	167
2012	2	14,646	0.81%	119	2,807	3.71%	104	8,117	1.38%	112	1,305	5.65%	74	*****	*****	*****	2,868	5.91%	170
2012	3	14,742	0.81%	120	2,839	3.72%	106	8,013	1.39%	111	1,322	5.54%	73	*****	*****	*****	2,866	5.91%	169
2012	4	14,945	0.82%	123	2,857	3.67%	105	7,934	1.37%	109	1,665	5.54%	92	*****	*****	*****	2,837	5.85%	166
2013	1	15,015	0.82%	124	2,870	3.62%	104	7,952	1.34%	107	1,658	5.34%	88	*****	*****	*****	2,882	5.87%	169
2013	2	15,212	0.82%	125	2,898	3.61%	105	7,934	1.33%	105	1,607	5.12%	82	*****	*****	*****	2,898	5.88%	170
2013	3	15,389	0.82%	126	2,929	3.62%	106	7,852	1.33%	104	1,539	4.91%	76	*****	*****	*****	2,911	5.92%	172
2013	4	15,518	0.82%	127	2,963	3.61%	107	7,944	1.34%	106	1,174	4.73%	56	*****	*****	*****	2,942	5.95%	175
2014	1	15,639	0.81%	127	2,982	3.61%	108	8,015	1.33%	107	1,187	4.79%	57	*****	*****	*****	2,945	6.10%	180
2014	2	15,711	0.81%	126	3,000	3.62%	109	8,103	1.33%	107	1,217	4.98%	61	*****	*****	*****	2,922	6.18%	181
2014	3	15,895	0.80%	128	3,031	3.62%	110	8,225	1.32%	108	1,244	5.02%	62	*****	*****	*****	2,928	6.21%	182
2014	4	16,102	0.81%	130	3,054	3.65%	111	8,323	1.30%	108	1,253	5.02%	63	*****	*****	*****	2,931	6.26%	184
2015	1	16,228	0.81%	132	3,089	3.66%	113	8,323	1.30%	108	1,263	4.93%	62	*****	*****	*****	2,949	6.26%	185
2015	2	16,405	0.82%	134	3,118	3.66%	114	8,283	1.30%	108	1,268	4.90%	62	*****	*****	*****	2,991	6.27%	188
2015	3	16,490	0.82%	135	3,154	3.68%	116	8,233	1.29%	106	1,277	4.91%	63	*****	*****	*****	3,025	6.31%	191
2015	4	16,458	0.82%	134	3,204	3.69%	118	8,042	1.33%	107	1,301	4.90%	64	*****	*****	*****	3,081	6.31%	195
2016	1	16,485	0.82%	134	3,258	3.71%	121	8,023	1.34%	107	1,330	4.95%	66	*****	*****	*****	3,099	6.25%	194

Fitted Trend

1-Yr (5 pts)	1.39	0.48	1.88	5.48	1.56	7.13	-4.03	3.22	-0.94	5.25	0.24	5.50	*****	*****	*****	5.30	0.15	5.46
2-Yr (9 pts)	2.99	0.86	3.87	4.44	1.35	5.85	-0.14	-0.15	-0.29	4.91	0.07	4.98	*****	*****	*****	3.03	1.31	4.38
3-Yr (13 pts)	3.34	-0.19	3.14	4.03	0.84	4.91	1.19	-0.66	0.52	-5.85	-1.10	-6.88	*****	*****	*****	2.11	2.69	4.85
4-Yr (17 pts)	3.45	-0.04	3.40	3.74	0.04	3.78	0.60	-1.44	-0.85	-3.44	-3.64	-6.96	*****	*****	*****	1.90	2.23	4.17

Mid-Atlantic
Calendar Year Trend Data
PL

4 Qtrs. Ending Year	Ending Qtr.	Bodily Injury			Property Damage			Personal Injury Protection			Comprehensive			Comprehensive Ex-Cat			Collision		
		Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium	Paid Severity	Paid Freq.	Paid Pure Premium
2012	1	14,740	1.16%	171	2,786	4.07%	113	9,356	1.67%	157	1,302	4.97%	65	1,052	4.54%	48	3,177	5.53%	176
2012	2	15,424	1.13%	175	2,798	3.99%	112	8,904	1.65%	147	1,321	5.10%	67	1,042	4.50%	47	3,184	5.54%	176
2012	3	15,458	1.07%	166	2,826	3.99%	113	8,525	1.71%	146	1,262	4.90%	62	1,082	4.31%	47	3,189	5.60%	179
2012	4	14,872	1.00%	148	2,861	3.88%	111	8,713	1.60%	139	2,081	5.03%	105	1,130	4.13%	47	3,224	5.59%	180
2013	1	14,620	0.97%	142	2,925	3.91%	114	8,912	1.59%	142	2,037	4.89%	100	1,184	4.03%	48	3,327	5.78%	192
2013	2	14,225	0.98%	140	2,942	3.94%	116	8,937	1.61%	144	2,032	4.61%	94	1,218	3.98%	48	3,316	5.89%	195
2013	3	14,294	1.01%	144	2,971	3.98%	118	9,159	1.57%	143	2,012	4.49%	90	1,216	3.97%	48	3,309	5.94%	197
2013	4	14,475	1.06%	154	2,995	4.08%	122	8,821	1.67%	148	1,135	4.13%	47	1,194	3.99%	48	3,242	5.86%	190
2014	1	14,870	1.05%	157	2,989	4.02%	120	8,471	1.69%	143	1,222	4.19%	51	1,170	4.05%	47	3,194	6.01%	192
2014	2	14,917	1.04%	156	2,998	4.00%	120	8,691	1.64%	143	1,274	4.40%	56	1,135	4.17%	47	3,179	5.99%	190
2014	3	14,583	1.01%	148	3,029	3.95%	120	8,742	1.61%	141	1,288	4.42%	57	1,134	4.18%	47	3,231	5.96%	193
2014	4	14,576	0.95%	138	3,028	3.97%	120	8,760	1.59%	139	1,328	4.38%	58	1,168	4.13%	48	3,318	6.05%	201
2015	1	14,193	0.92%	130	3,066	4.00%	123	8,697	1.58%	137	1,360	4.29%	58	1,201	4.06%	49	3,402	6.04%	205
2015	2	14,308	0.91%	130	3,117	4.03%	126	8,504	1.60%	136	1,345	4.17%	56	1,239	4.01%	50	3,498	6.04%	211
2015	3	14,446	0.94%	136	3,155	4.07%	128	8,385	1.62%	136	1,334	4.18%	56	1,242	4.01%	50	3,511	6.06%	213
2015	4	14,763	1.00%	148	3,219	4.07%	131	8,628	1.61%	139	1,335	4.16%	56	1,243	4.02%	50	3,532	6.02%	213
2016	1	15,483	1.05%	163	3,303	4.05%	134	9,034	1.61%	145	1,334	4.28%	57	1,231	4.14%	51	3,527	5.82%	205
2016	2	16,300	1.08%	176	3,359	3.96%	133	9,109	1.61%	147	1,245	4.69%	58	1,151	4.52%	52	3,562	5.79%	206

Fitted Trend

1-Yr (5 pts)	14.11	20.23	37.19	8.14	-1.73	6.27	8.85	0.33	9.21	-5.98	11.04	4.41	-6.08	11.45	4.67	1.63	-4.91	-3.36
2-Yr (9 pts)	3.92	2.54	6.56	5.95	0.59	6.57	1.47	-0.15	1.32	0.03	0.25	0.28	3.11	1.51	4.67	6.00	-1.39	4.53
3-Yr (13 pts)	2.44	-0.45	1.99	4.19	0.33	4.53	-0.27	-0.45	-0.72	-8.27	-0.56	-8.78	0.64	1.94	2.60	3.62	-0.08	3.53
4-Yr (17 pts)	0.34	-1.48	-1.14	4.00	0.55	4.57	-0.11	-0.63	-0.73	-6.94	-3.78	-10.45	2.45	-0.24	2.21	2.75	1.50	4.30

Liberty Mutual Insurance
District of Columbia
Combined
Comprehensive Catastrophe Load Calculation
Data Evaluated as of: 06/30/2016

Accident Year Ending	Total Paid Comp Loss	XCat Paid Comp Loss	Total/XCat Ratio
Jul2003-Jun2004	422,134	413,496	1.021
Jul2004-Jun2005	385,626	383,172	1.006
Jul2005-Jun2006	522,865	467,042	1.120
Jul2006-Jun2007	427,551	425,257	1.005
Jul2007-Jun2008	625,016	601,776	1.039
Jul2008-Jun2009	554,727	527,733	1.051
Jul2009-Jun2010	624,570	564,712	1.106
Jul2010-Jun2011	615,373	599,234	1.027
Jul2011-Jun2012	734,831	683,966	1.074
Jul2012-Jun2013	619,865	569,814	1.088
Jul2013-Jun2014	612,201	602,200	1.017
Jul2014-Jun2015	738,562	722,840	1.022
Jul2015-Jun2016	550,408	546,192	1.008

Selected Cat Provision: 1.044

Liberty Mutual Insurance
District of Columbia
Combined
Permissible Loss Ratio Calculation
Projected Expenses (As a Percentage of Earned Premium)
Data Evaluated as of: 06/30/2016

Liability	Total	Variable	Fixed
Commission	0.5%	0.5%	0.0%
Other Acquisition	21.1%	3.8%	17.3%
General	7.7%	0.0%	7.7%
Tax	2.4%	2.4%	0.0%
Profit	8.8%	8.8%	0.0%
Contingency	1.0%	1.0%	0.0%
Total Expense Ratio	41.5%	16.5%	25.0%
Total Trended Expense Ratio	45.3%	16.5%	28.8%
Target Loss & Fixed Exp Ratio			83.5%

Physical Damage	Total	Variable	Fixed
Commission	0.4%	0.4%	0.0%
Other Acquisition	17.2%	2.6%	14.6%
General	7.1%	0.0%	7.1%
Tax	2.3%	2.3%	0.0%
Profit	12.2%	12.2%	0.0%
Contingency	1.0%	1.0%	0.0%
Total Expense Ratio	40.2%	18.5%	21.6%
Total Trended Expense Ratio	43.5%	18.5%	25.0%
Target Loss & Fixed Exp Ratio			81.5%

**Liberty Mutual Insurance
 District of Columbia
 Combined
 Excess Loss Loading Factor Calculation
 Method One: Ratio of Ultimate Developed Losses
 Data Evaluated as of: 06/30/2016**

BI + UMBI / UIM

Accident Year	Ult. Incurred Loss	Ult Loss Capped @ \$100K	Large Loss Factor	Trended Large Loss Factor
Jul2007-Jun2008	1,471,060	1,471,060	1.000	1.000
Jul2008-Jun2009	1,100,363	1,045,363	1.053	1.053
Jul2009-Jun2010	1,038,993	1,038,993	1.000	1.000
Jul2010-Jun2011	1,573,587	1,573,587	1.000	1.000
Jul2011-Jun2012	1,706,188	1,536,188	1.111	1.111
Jul2012-Jun2013	1,444,049	1,432,295	1.008	1.008
Jul2013-Jun2014	2,119,795	1,982,369	1.069	1.069
Jul2014-Jun2015	2,068,817	1,928,410	1.073	1.073
Jul2015-Jun2016	1,964,839	1,923,191	1.022	1.022
5 Year Average				1.057
7 Year Average				1.040
8 Year Average				1.042
10 Year Average				1.037
Selected State Load				1.037

Excess Trend	0.0%
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Liberty Mutual Insurance
District of Columbia
Combined
Total Limits UM / UIM Rate Level Indication
Accident Period: 07/01/2013 to 06/30/2016

	<u>3-Year Total</u>
1) Total Limits Earned Premium at Collected Level	
UMxUIM	1,555,270
UIM	476,659
Total UM/UIM	<u>2,031,929</u>
2) Earned Premium at Current Level Including Premium Trend	
UMxUIM	1,350,074
UIM	413,684
Total UM/UIM	<u>1,763,759</u>
3) Total Limits Incurred Loss as of 06/16	
UMxUIM	1,213,383
UIM	279,958
Total UM/UIM	<u>1,493,341</u>
4) Total Limits Ultimate Loss and LAE	
UMxUIM	1,678,489
UIM	399,429
Total UM/UIM	<u>2,077,918</u>
5) Total Limits Ultimate and Trended Loss and LAE	
UMxUIM	2,111,713
UIM	506,555
Total UM/UIM	<u>2,618,267</u>
6) Fixed Expenses	
UMxUIM	28.8%
UIM	28.8%
Total UM/UIM	<u>28.8%</u>
7) Indicated Loss, LAE and Fixed Expense Ratio [(5)/(2)+(6)]	
UMxUIM	185.3%
UIM	151.3%
Total UM/UIM	<u>177.3%</u>
8) Permissible Loss, LAE, and Fixed Expense Ratio	83.5%
9) Indicated Rate Change [(7) / (8) - 1]	
UMxUIM	121.7%
UIM	81.1%
Total UM/UIM	<u>112.2%</u>
10) Credibility	
UMxUIM: Full Credibility Based on 3,000 UM Claims	37.9%
UIM: Full Credibility Based on 3,000 UIM Claims	8.2%
Total UM/UIM: Full Credibility Based on 3,000 UM/UIM Claims	<u>38.7%</u>
11) Complement of Credibility (Average Loss Ratio Trend)	
UMxUIM	47.1%
UIM	47.1%
Total UM/UIM	<u>47.1%</u>
12) Credibility Weighted Rate Indication {(9)*(10) + (11)*[1-(10)]}	
UMxUIM	75.3%
UIM	49.9%
Total UM/UIM	<u>72.3%</u>

Liberty Mutual Insurance

Private Passenger Automobile

Countrywide Profit Provision

As Liberty Mutual Insurance is organized under a mutual holding company system, our company has limited recourse to stock market capitalization to generate needed surplus funds, unlike a publicly-traded insurance company or an insurance company with a publicly-traded parent. Any increase in surplus must come from (1) underwriting profit, (2) investment income, (3) realized capital gains, or (4) unrealized capital gains. In the following analysis, Liberty Mutual selects provisions for underwriting profit which will ensure that anticipated income from all sources produces net income after taxes that is commensurate with the risk assumed in the business of property/casualty insurance. Furthermore, these provisions ensure that projected changes in policyholder surplus are sufficiently similar (in direction and magnitude) to changes in premium accounts so that confidence in the Companies' financial integrity can be maintained.

Exhibit A shows a history of calendar year rates of return for investment income expressed as a percentage of mean invested assets. The primary source is interest, dividends, and real estate income shown in column (3). Based on the current market yield, it is reasonable to anticipate before tax returns of 2.9% from interest, dividends, and real estate income during the time rates are effective. Historically, realized capital gains have contributed very little to earnings. For the prospective period, we select 0.3% from this source. In total, our anticipated pre-tax return is 3.2%. We believe this a reasonable return given the current interest rate environment. After federal income taxes, the total anticipated rate of return is 2.3% of invested assets.

Exhibit B presents the investment income derived from unearned premium reserves. The model uses historical information, modified for the current tax rate. This income is separated into two categories. First, there are premium finance charges [Line 10] collected by allowing policyholders to pay their premiums in installments over the 12-month policy term. Line 3 is the corresponding portion of the unearned premium reserve representing the premium which is being financed by the company. Second, there is the remaining reserve, after prepaid expense and taxes, [Line 7] which develops income based on the anticipated rate of return.

Exhibit C applies the rate of return to mean loss and loss adjustment expense reserves. These exhibits relate investment income to premium earned. Exhibit D provides pertinent expense data to calculate the Permissible Loss Ratio. Exhibit E deals with the calculation of federal income taxes applicable to unearned premium and loss reserves.

Income from all of the above sources is combined with our selected underwriting profit provisions in the following 2 to 1 premium-to-surplus model:

Let Premium = \$100; Surplus = \$50

Memo Exhibit

	<u>Liability</u>	<u>Physical Damage</u>
1) Investment Income on Unearned Premium Reserves \$100 x (Exhibit B, Table 1, Item 12)	(\$0.31)	(\$0.31)
2) Investment Income on Loss Reserves \$100 x (Exhibit C, Table 1, Item 5)	\$1.73	\$0.03
3) Investment Income on Surplus \$50 x (Exhibit A, Table 1, Column 7)	\$1.15	\$1.15
4) Underwriting Income After Tax \$100 x (1-.35) x Profit Provision (Exhibit D, Item 4b)	\$6.81	\$8.51
5) Total Expected Return [1]+[2]+[3]+[4] Average Total Expected Return (Based on earned 58.8%/41.2% premium distribution)	\$9.38	\$9.38
6) Expected Return on Surplus ([5] x Premium:Surplus Ratio)/\$100		18.8%
7) GAAP Adjusted Return [6]/GAAP Adj. Factor (Exhibit F, Item 6)		15.0%

We have determined that, related to surplus, 15.0% is an appropriate and fair rate of return for property-casualty insurers in comparison with other industries, given the variability in the overall return. The pre-tax profit provisions of 10.5% for liability and 13.1% for physical damage are derived using an iterative method to yield an anticipated return of 9.38% on earned premium after tax, and a 15.0% GAAP adjusted return on surplus. However, we have selected lower target profit provisions of 8.8% for liability and 12.2% for physical damage as a percentage of premium.

Exhibit A: Effective Rate of Return on Investable Assets

Table 1: Historical Investments Returns 1986-2015

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Calendar Year	Mean Invested Assets (a)	Net Investment Income (b)	Net Inv. Inc. % of (2)	Net Realized Capital Gains (c)	Net Realized Cap. Gains % of (2)	Total Return
1986	8,118,335,491	638,231,286	7.9	306,142,812	3.8	
1987	9,808,729,009	733,126,525	7.5	117,222,704	1.2	
1988	11,272,895,755	868,278,838	7.7	34,851,447	0.3	
1989	12,415,308,080	965,013,926	7.8	45,991,686	0.4	
1990	13,727,246,565	1,040,182,466	7.6	43,141,539	0.3	
1991	14,085,608,244	1,084,863,706	7.7	16,195,685	0.1	
1992	14,872,603,927	1,078,372,300	7.3	356,556,819	2.4	
1993	15,380,644,905	1,019,000,685	6.6	192,575,284	1.3	
1994	15,728,080,374	1,000,703,107	6.4	42,091,361	0.3	
1995	16,644,320,729	1,004,243,423	6.4	58,061,803	0.3	
1996	17,754,458,149	1,024,976,627	5.8	80,172,253	0.5	
1997	19,051,878,513	1,049,458,975	5.5	112,763,515	0.6	
1998	20,008,196,638	1,114,613,916	5.6	199,016,656	1.0	
1999	21,692,869,206	1,259,013,722	5.8	559,579,315	2.6	
2000	23,097,086,037	1,249,282,280	5.4	336,548,991	1.5	
2001	22,316,155,306	1,180,115,309	5.3	295,996,921	1.3	
2002	22,117,700,188	1,149,160,133	5.2	236,186,278	1.1	
2003	24,593,328,553	1,213,180,583	4.9	186,183,583	0.8	
2004	28,362,100,873	1,278,067,945	4.5	411,926,118	1.5	
2005	31,616,013,191	1,277,698,305	4.0	273,728,472	0.9	
2006	35,560,878,142	1,370,600,938	3.9	106,166,957	0.3	
2007	40,342,136,927	1,668,935,624	4.1	189,655,540	0.5	
2008	44,670,013,186	2,071,514,943	4.6	(48,560,181)	-0.1	
2009	47,693,589,467	1,792,955,767	3.8	(28,910,232)	-0.1	
2010	49,579,139,343	1,721,410,847	3.5	202,759,385	0.4	
2011	50,838,643,778	1,760,105,473	3.5	163,773,970	0.3	
2012	52,513,908,048	1,648,452,923	3.1	236,234,647	0.4	
2013	54,881,045,930	1,499,741,700	2.7	206,470,410	0.4	
2014	55,293,806,504	1,399,734,442	2.5	68,018,947	0.1	
2015	54,042,540,167	1,331,769,819	2.5	206,127,870	0.4	
Latest 10 Years	485,415,701,492	16,265,222,476	3.4	1,301,737,313	0.3	
Latest 5 Years	267,569,944,427	7,639,804,357	2.9	880,625,844	0.3	
Anticipated Returns (Before Tax)			2.9		0.3	3.2
2015 Federal Tax Rate (Exhibit A, Table 2)			0.2666		0.3500	
Anticipated Returns (After Tax)			2.1		0.2	2.3

(a) Mean of current and prior year Annual Statements: Page 2, Line 12 Less Page SI04, Column (2), Lines 12, 18 and 24.

(b) 2015 Annual Statement: Page 4, Line 9 less Page 12, Part 1, Column (2), Lines 1.3, 2.11, 2.21, and 8.

(c) 2015 Annual Statement: Page 4, Line 10.

Exhibit A: Effective Rate of Return on Investable Assets

Table 2: Effective Federal Tax Rate

	<u>Earned</u> <u>Income</u>		<u>Distribution</u>	Federal Tax <u>Rate</u>	
BONDS (Ex Tax Exempt)	\$1,000,430,178	(a)	0.751	0.3500	
BONDS (Tax Exempt)					
Acquired Before 8/7/86	\$0		0.000	0.0000	
Acquired After 8/7/86	\$344,635,127		0.259	0.0525	
STOCKS					
Acquired Before 8/7/86					
Non-Affiliated	\$0		0.000	0.1050	
Foreign	\$0		0.000	0.3500	
Total	<u>\$0</u>				
Acquired After 8/7/86					
Non-Affiliated	\$41,252,878		0.031	0.1418	
Foreign	\$21,151,949		0.016	0.3500	
Total	<u>\$62,404,827</u>				
All Other Investment Income (b)	(\$75,700,313)	(c)	-0.057	0.3500	
Net Investment Income Gain/(Loss)	\$1,331,769,819	(d)	1.000	0.2666	(e)

(a) 2015 Annual Statement: Page 12, Part 1, Column (2), Lines 1 + 1.2
(Excludes bonds of affiliates)

(b) Reduced by investment expenses and depreciation on real estate

(c) 2015 Annual Statement: Page 12, Part 1, Column (2), lines 3, 4, 6, 7, and 9 less line 16

(d) Exhibit A, Table 1, Column 3

(e) Weighted average rate using "Distribution" column

Exhibit B: Investment Income from Unearned Premium Reserves

Table 1: Investment Income from Unearned Premium Reserves as Factor of Earned Premium

	Auto Liability	Auto Physical Damage
1) Earned Premium	\$100.00	\$100.00
2) Mean Unearned Premium Reserve Ratio of Mean Direct Unearned Premium Reserve to Direct Earned Premium x [1]	\$50.20	\$50.20
3) Mean Premium Subject to Installment Payment Finance Plan Ratio of Mean Premium Financed to Mean Direct Unearned Reserve x [2]	\$37.50	\$37.50
4) Funds Available for Prepaid Expense, Tax, and Investment [2] - [3]	\$12.70	\$12.70
5) Prepaid Expense Sum of Acquisition, Taxes, and One-Half General Expenses x (2)	\$12.90	\$12.95
6) Federal Tax - 1986 Reform Act Ratio of Tax Payable to Mean Net Unearned Premium Reserve x [2]	\$0.25	\$0.25
7) Funds Available for Investment Max([4] - [5] - [6], \$0)	\$0.00	\$0.00
8) Rate of Return, After Tax	2.3%	2.3%
9) Income on Invested Reserve [7] x [8]	\$0.00	\$0.00
10) Income from Installment Payment Premium Finance Plan Ratio of Investment Income to Mean Premium Financed x (3)	(\$0.31)	(\$0.31)
11) Total Investment Income [9] + [10]	(\$0.31)	(\$0.31)
12) Investment Income as a Factor of Earned Premium [11] / [1]	-0.0031	-0.0031

Notes

Lines [2], [3], and [10]: Exhibit B, Table 2, Columns [9], [10] and [6], 'Selected'

Line [5]: Exhibit D - Acquisition, 50% of General, and Taxes

Line [6]: Exhibit E, Section A, Line [5]

Line [8]: Exhibit A, Table 1

Exhibit B: Investment Income from Unearned Premium Reserves

Table 2: Investment Income from Installment Payment Premium Finance Plan (\$000)
(Private Passenger Automobile)

<u>Year</u>	[1] Premium Finance <u>Charges</u>	[2] Premium <u>Charged-Off</u>	[3]=[1]-[2] Net Investment <u>Income</u>
2006	\$40,612	\$19,181	\$21,431
2007	\$40,188	\$24,083	\$16,104
2008	\$39,993	\$27,252	\$12,741
2009	\$35,612	\$32,098	\$3,514
2010	\$32,800	\$29,300	\$3,500
2011	\$30,492	\$33,231	-\$2,739
2012	\$28,101	\$35,013	-\$6,912
2013	\$25,958	\$43,202	-\$17,243
2014	\$23,465	\$58,849	-\$35,384
2015	\$24,442	\$51,590	-\$27,148

<u>Year</u>	[4]=[3]*0.65 After-Tax Investment <u>Income</u>	[5] Mean Premium <u>Financed</u>	[6]=[4]/[5] Ratio of Investment Income to Mean <u>Premium Financed</u>
2006	\$13,930	\$1,410,003	0.010
2007	\$10,468	\$1,483,302	0.007
2008	\$8,282	\$1,558,991	0.005
2009	\$2,284	\$1,625,851	0.001
2010	\$2,275	\$1,725,184	0.001
2011	(\$1,780)	\$1,860,539	-0.001
2012	(\$4,493)	\$2,045,822	-0.002
2013	(\$11,208)	\$2,251,839	-0.005
2014	(\$23,000)	\$2,110,072	-0.011
2015	(\$17,646)	\$1,920,849	-0.009

Selected

-0.008

<u>Year</u>	[7] Direct Earned <u>Premium</u>	[8] Mean Direct Unearned <u>Premium Reserve</u>	[9]=[8]/[7] Unearned Premium to Earned Premium <u>Ratio</u>	[10]=[5]/[8] Premium Financed to Unearned Premium <u>Reserve Ratio</u>
2006	\$3,794,629	\$1,912,456	0.504	0.737
2007	\$3,844,079	\$1,938,657	0.504	0.765
2008	\$3,926,622	\$1,984,942	0.506	0.785
2009	\$4,048,548	\$2,055,686	0.508	0.791
2010	\$4,279,658	\$2,156,978	0.504	0.800
2011	\$2,818,158	\$2,295,071	0.814	0.811
2012	\$4,897,160	\$2,480,741	0.507	0.825
2013	\$5,305,445	\$2,683,716	0.506	0.839
2014	\$5,632,020	\$2,825,639	0.502	0.747
2015	\$5,865,042	\$2,927,420	0.499	0.656

Selected

0.502	0.747
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Exhibit C: Investment Income from Loss Reserves

Table 1: Investment Income from Loss Reserves as a Factor of Premium

	<u>Auto Liability</u>	<u>Auto Physical Damage</u>
1) Ratio of Loss & LAE Reserves to Incurred Loss & LAE	1.224	0.022
2) Ratio of Federal Tax Payable to Incurred Loss & LAE	0.001	0.000
3) Permissible Loss & LAE Ratio	0.616	0.588
4) Net Effective Rate of Return After Tax	0.023	0.023
5) Investment Income as a Factor of Premium {[(1) - (2)] * (3) * (4)}	0.017	0.000

Notes

Line [1]: Exhibit C, Table 2, Column [9]

Line [2]: Exhibit E, Section B, Line [11]

Line [3]: Exhibit D

Line [4]: Exhibit A, Table 1

Exhibit C: Investment Income from Loss Reserves

Table 2: Ratio of Loss and LAE Reserves to Loss and LAE Incurred
Private Passenger Automobile - Liability
(\$000)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
	Year-End Direct	Prior Year Direct	Mean Direct	Year End Direct	Prior Year Direct	Mean Direct	Direct Incurred	Direct Incurred	Ratio of Reserves
<u>Year</u>	<u>Loss Reserve</u>	<u>Loss Reserve</u>	<u>Loss Reserve</u>	<u>LAE Reserve</u>	<u>LAE Reserve</u>	<u>LAE Reserve</u>	<u>Losses</u>	<u>LAE</u>	<u>to Incurred</u>
2006	2,198,306	2,390,298	2,294,302	529,549	494,133	511,841	1,221,529	343,654	1.793
2007	1,896,699	2,198,306	2,047,502	465,880	529,549	497,714	1,333,332	243,342	1.614
2008	2,135,874	1,896,699	2,016,286	406,493	465,880	436,186	1,678,525	264,866	1.262
2009	2,288,787	2,135,874	2,212,330	394,118	406,493	400,306	1,585,986	321,363	1.370
2010	2,410,821	2,288,787	2,349,804	411,820	394,118	402,969	1,647,348	388,187	1.352
2011	2,352,808	2,410,821	2,381,815	463,618	411,820	437,719	1,759,550	457,939	1.271
2012	2,398,879	2,352,808	2,375,844	473,156	463,618	468,387	1,841,116	446,004	1.244
2013	2,659,067	2,398,879	2,528,973	504,169	473,156	488,663	2,258,262	490,385	1.098
2014	3,127,309	2,659,067	2,893,188	539,309	504,169	521,739	2,366,650	443,888	1.215
2015	3,389,240	3,127,309	3,258,275	586,038	539,309	562,673	2,313,179	500,769	1.358

Selected

1.224

Table 2: Ratio of Loss and LAE Reserves to Loss and LAE Incurred
Private Passenger Automobile - Physical Damage
(\$000)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
	Year-End Direct	Prior Year Direct	Mean Direct	Year End Direct	Prior Year Direct	Mean Direct	Direct Incurred	Direct Incurred	Ratio of Reserves
<u>Year</u>	<u>Loss Reserve</u>	<u>Loss Reserve</u>	<u>Loss Reserve</u>	<u>LAE Reserve</u>	<u>LAE Reserve</u>	<u>LAE Reserve</u>	<u>Losses</u>	<u>LAE</u>	<u>to Incurred</u>
2006	(20,146)	(30,501)	(25,324)	42,365	62,598	52,481	800,009	186,124	0.028
2007	(2,397)	(20,146)	(11,272)	52,907	42,365	47,636	846,793	197,986	0.035
2008	3,492	(2,397)	548	42,248	52,907	47,578	868,521	170,361	0.046
2009	(6,350)	3,492	(1,429)	45,553	42,248	43,901	862,207	178,032	0.041
2010	(7,542)	(6,350)	(6,946)	52,544	45,553	49,048	895,533	198,548	0.038
2011	4,521	(7,542)	(1,510)	46,543	52,544	49,543	1,058,607	190,460	0.038
2012	(16,929)	4,521	(6,204)	36,119	46,543	41,331	1,214,352	199,916	0.025
2013	21,920	(16,929)	2,495	37,578	36,119	36,849	1,203,864	205,576	0.028
2014	(18,938)	21,920	1,491	36,506	37,578	37,042	1,259,471	246,239	0.026
2015	(18,832)	(18,938)	(18,885)	36,460	36,506	36,483	1,377,750	242,080	0.011

Selected

0.022

Note: Beginning in 2000, Liberty Mutual no longer holds Physical Damage Case Loss Reserves

Exhibit D: Expense Ratios

	<u>Auto Liability</u>	<u>Auto Physical Damage</u>
1) Acquisition	20.8%	21.1%
2) General	4.4%	4.6%
3) Taxes	2.7%	2.4%
4a) Indicated Profit	10.5%	13.1%
4b) Selected Profit	8.8%	12.2%
5) Indicated Total	38.4%	41.2%
6) Permissible Loss and LAE Ratio	61.6%	58.8%

Notes

Data from 2015 Insurance Expense Exhibit (Direct)

Exhibit E: Federal Income Tax Payable Due to Tax Reform Act of 1986

A. Tax on Unearned Premium Reserves (\$000,000)

	<u>Private Passenger Auto</u>	
1) Net Unearned Premium Reserve 12/31/14	\$3,104	(a)
2) Net Unearned Premium Reserve 12/31/15	\$3,315	(a)
3) Mean Net Unearned Premium Reserve {[1] + [2]} / 2	\$3,210	
4) Federal Tax Payable on Change in Net Unearned Premium Reserve {[2]-[1]} x 20% x 0.35	\$15	
5) Ratio of Tax Payable to Mean Net Unearned Premium Reserve [4] / [3]	0.005	
6) Selected	0.005	

(a) Insurance Expense Exhibit, Part II, Column 19

B. Loss & LAE Reserve Discounting (\$000,000)

	<u>Liability</u>	<u>Physical Damage</u>	
1) Net Reserve at 12/31/14	\$3,446.82	\$53.46	(a)
2) Net Reserve at 12/31/15	\$3,708.49	\$57.34	(a)
3) Discounted Net Reserve at 12/31/14	\$3,360.06	\$52.99	(b)
4) Discounted Net Reserve at 12/31/15	\$3,616.58	\$56.56	(b)
5) Change in Net Reserve [2]-[1]	\$261.67	\$3.88	
6) Change in Discounted Net Reserve [4]-[3]	\$256.52	\$3.57	
7) Additional Taxable Income [5]-[6]	\$5.15	\$0.31	
8) Federal Tax Payable [7] x 0.35	\$1.80	\$0.11	
9) 2015 Incurred Loss & LAE	\$2,954.31	\$1,269.84	(c)
10) Ratio of Federal Tax Payable to Incurred Loss & LAE [8] / [9]	0.001	0.000	
11) Selected	0.001	0.000	

(a) Insurance Expense Exhibit, Part II, Columns 13 + 15 + 17

(b) Discount ratios are provided internally by the Financial Department

(c) Insurance Expense Exhibit, Part II, Columns 7 + 9 + 11

Exhibit F: Expected Total Return - Adjustment to GAAP

Expected Total Return - Adjustment to GAAP

Amounts in Millions

Item	2013	2014	2015	Source
(1) Policyholders Surplus	17,508	19,180	18,687	Annual Statement: Page 3, Column (1), line 37
(2) Non-Admitted Assests	1,429	1,449	1,746	Annual Statement: Page 2, Column (2), line 26
(3) Equity in the UPR [= (h) calculated below]	3,017	3,100	3,256	calculated field
(4) Total Adjustments (2)+(3)	4,446	4,549	5,003	calculated field
(5) GAAP Surplus Adjustment Factor [(4)+(1)]/(1)	1.254	1.237	1.268	calculated field
(6) Selected GAAP Surplus Adjustment Factor		1.250		

Calculation of Equity in UPR

Item	2013	2014	2015	Source
(a) Commissions and Brokerage Expense Incd	2,795	2,781	2,825	IEE: Page 7, Part 3, Column (23), Totals
(b) Taxes, License & Fees	831	771	788	IEE: Page 7, Part 3, Column (25), Totals
(c) Other Acquisition Expenses Incd	2,496	2,502	2,735	IEE: Page 7, Part 3, Column (27), Totals
(d) General Expense Incd	2,809	2,719	2,606	IEE: Page 7, Part 3, Column (29), Totals
(e) Total of (a) + (b) + (c) + 0.5(d)	7,526	7,414	7,651	calculated field
(f) Written Premium	29,445	29,365	29,848	IEE: Page 6, Part 3, Column (1), Totals
(g) Ending UPR	11,802	12,279	12,703	IEE: Page 6, Part 3, Column (19), Totals
(h) Equity in UPR (g)*(e)/(f)	3,017	3,100	3,256	calculated field



AUTO | HOME | LIFE

Liberty Mutual Insurance

Personal Market Product
Management
175 Berkley Street 04G/H
Boston, MA 02116
(617) 357-9500 Phone
(617) 654-3452 Fax

Dear Commissioner Taylor,

In accordance with the File and Use provision, LM General Insurance Company (LMGIC) and LM Insurance Corporation (LMIC) respectfully submit revisions to our Personal Automobile Program. These revisions will be effective for all new business policies effective on or after November 29, 2016, and all renewal business policies effective on or after January 3, 2017.

Summary of Revisions:

We will be revising the following tables:

Base Rates

Rate Effect:

	Total Rate	Total Liability	Total PhysDam	Bodily Injury	Property Damage	MedPay	PIP	Comp + Rental	Collision	UM/UIIM	UMPD / UIMPD	Towing
LM General	3.4%	6.0%	0.0%	5.9%	6.0%	0.0%	6.4%	-0.1%	0.0%	6.4%	0.0%	0.0%
LM-IC	3.0%	6.2%	0.0%	6.2%	6.1%	0.0%	6.3%	0.0%	0.0%	6.4%	0.0%	0.0%
Overall	3.0%	6.2%	0.0%	6.1%	6.1%	0.0%	6.3%	0.0%	0.0%	6.4%	0.0%	0.0%

Filing Materials:

All applicable filing materials are included with this SERFF submission.

Sincerely,

Godwin Kalb
Sr. Compliance Analyst
(425)943-6052
godwin.kalb@libertymutual.com

District of Columbia
Automobile Rating Manual
Base Rates

Company	BI	PD	PIP	Comp	Coll	UM	UIM	Fixed
LM General	529.931214	472.363494	228.707454	383.805935	1269.045348	168.347626	26.844650	999.662058
LM-IC	588.812461	524.848327	254.119394	426.451039	1410.050387	187.052918	29.827389	1110.735620

Company	BI	PD	PIP	Comp	Coll	UM	UIM	Fixed
LM General	563.899805	502.641994	243.367602	383.038323	1267.776303	179.138709	28.565392	1030.351683
LM-IC	626.555340	558.491105	270.408447	425.598137	1408.640337	199.043010	31.739325	1144.835204