Short Duration Contracts

Best Practices in Presentation and Disclosure

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Scope of Survey

In May 2015, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2015-09 "Disclosures about Short Duration Contracts."

The FASB was looking to (1) increase the decision usefulness of the information about an insurance company's insurance liabilities, including the nature, amount, timing, and uncertainty of cash flows related to those liabilities and the effect of those cash flows on the statement of comprehensive income, and (2) improve comparability between insurance entities, regardless of the type of insurer issuing the contract.

Public insurance companies adopted the standard in their 2016 financial statements, but non-public insurance companies were provided another year before the adoption of the new disclosure requirements. As private insurance companies move toward adoption and public insurance companies are evaluating their disclosures, we thought it would be wise to look at what other insurance companies have done. We have surveyed numerous public insurance company disclosures and selected 22 insurance companies' disclosures as examples. This survey, rather than indicate what your insurance company should disclose, is a compilation of what others have done. In the spirit of the intent of FASB, we think this survey can help insurers implementing ASU 2015-09 for the first time and those looking to enhance their current disclosures.

All 22 entities included in the survey are registered with the U.S. Securities and Exchange Commission. All the survey entities have securities traded on one of the major stock exchanges: New York Stock Exchange (NYSE) or NASDAQ.

In surveying companies, we look for example insurance companies of varying size and different lines of business. We included examples of both direct carriers and reinsurance companies. In determining the size of a company, we looked at their market capitalization defined as follows:

- Large-Cap Stocks: These companies have a market capitalization over ten billion dollars.
- Mid-Cap Stocks: These companies have a market capitalization over two billion dollars but up to ten billion dollars.
- Small-Cap Stocks: These companies have a market capitalization over 300 million dollars but under two billion dollars.
- Micro-Cap Stocks: These companies have a market capitalization under 300 million dollars.

The following companies have been selected for the survey (see next page):

No	Company	Description	Size	Exchange	Symbol
1	Argo Group International Holdings, Ltd.	Specialty products and reinsurance	Small Cap	NASDAQ	AGII
2	First Acceptance Corporation	Non-standard personal automobile insurance	Small Cap	NYSE	FAC
3	Infinity Property and Casualty Corporation and Subsidiaries	Specialized automobile insurance products	Small Cap	NASDAQ	IPCC
4	Kinsale Capital Group, Inc.	Casualty, property and specialty insurance products	Small Cap	NASDAQ	KNSL
5	Heritage Insurance Holdings, Inc.	Property and casualty insurance holding company	Small Cap	NYSE	HRTG
6	State National Companies, Inc.	Specialty provider of property and casualty insurance products	Small Cap	NASDAQ	SNC
7	United Insurance Holdings Corp.	Homeowners property and casualty products	Small Cap	NASDAQ	UIHC
8	Atlas Financial Holdings, Inc.	Commercial automobile insurance	Micro Cap	NASDAQ	AFH
9	Federated National Holding Company and Subsidiaries	Property and casualty insurance holding company	Micro Cap	NASDAQ	FNHC
10	Hallmark Financial Services, Inc. and Subsidiaries	Commercial and personal lines of property and casualty insurance products	Micro Cap	NASDAQ	HALL
11	Kingstone Companies, Inc.	Property and casualty insurance products to small businesses and individuals	Micro Cap	NASDAQ	KINS
12	Unico American Corporation and Subsidiaries	Property, casualty, and health insurance products	Micro Cap	NASDAQ	UNAM
13	American Financial Group, INC.	Commercial insurance products	Mid Cap	NYSE	AFG
14	Everest Re Group, Ltd.	Global reinsurance and insurance company	Mid Cap	NYSE	RE
15	Mercury General Corporation	Automobile	Mid Cap	NYSE	MCY
16	Old Republic International Corporation	Property and casualty and title insurance	Mid Cap	NYSE	ORI
17	Validus Holdings, Ltd	Short-tail insurance and reinsurance products	Mid Cap	NYSE	VR
18	American International Group, Inc.	Property casualty insurance, life insurance, mortgage insurance and a range of retirement products	Large Cap	NYSE	AIG
19	Hartford Financial Services Group Inc/De	Property and casualty insurance, group benefits and mutual funds	Large Cap	NYSE	HIG
20	Progressive Corporation	One of the largest auto insurance companies in the United States	Large Cap	NYSE	PGR
21	The Travelers Companies, Inc. and Subsidiaries	Auto, home and business insurance products	Large Cap	NYSE	TRV
22	XL Group plc	Ireland: property and casualty insurance, specialty products	Large Cap	NYSE	XL

ASU 2015-09 Highlights

Financial Services – Insurance (Topic 944), Disclosures About Short-Duration Contracts

This guide does not present an in-depth review of the disclosure requirements of ASU 2015-09. Briefly, the requirements of ASU 2015-09 are summarized below.

Effective Dates:

- Public companies:
  - Annual disclosures year ended December 31, 2016
  - Interim disclosures first period in 2017
- Non-public companies:
  - Annual disclosures year ended December 31, 2017
  - Interim disclosures first period in 2018

Key Disclosures:

- Interim disclosure reconciling beginning and ending reserves
- Development triangles up to 10 accident years
- Paid claims and allocated claims adjustment expense (ALAE)
- Incurred claims and ALAE
- Incurred but not reported claims and claims adjustment expense (LAE) by accident year
- Current reported claims frequency by accident year
- Reconciliation of development triangles to carried unpaid claims and LAE in the current period
- Explanations of significant changes in methods and assumptions used to calculate reserves and derive reported claim frequency and IBNR
- Average annual percentage payout of incurred claims by age of accident year

Surveyed Entities

Argo Group International Holdings, Ltd.

5. Reserves for Losses and Loss Adjustment Expenses

The following table provides a reconciliation of reserves for losses and loss adjustment expenses ("LAE"):

(in millions)	For the Years Ended December 31, 2016	2015	2014
Net reserves beginning of the year	$ 2,133.3	$ 2,137.1	$ 2,107.6
Add:			
Losses and LAE incurred during current calendar year, net of reinsurance:			
Current accident year	843.4	798.5	785.1
Prior accident years	(33.3)	(32.4)	(37.7)
Losses and LAE incurred during calendar year, net of reinsurance	810.1	766.1	747.4
Deduct:			
Losses and LAE payments made during current calendar year, net of reinsurance:			
Current accident year	178.9	169.0	185.9
Prior accident years	537.6	564.5	550.8
Losses and LAE payments made during current calendar year, net of reinsurance:	716.5	733.5	736.7
Change in participation interest (1)	(36.3)	(1.2)	37.8
Foreign exchange adjustments	(10.4)	(35.2)	(19.0)
Net reserves - end of year	2,180.2	2,133.3	2,137.1
Add:			
Reinsurance recoverables on unpaid losses and LAE, end of year	1,170.6	990.3	905.3
Gross reserves - end of year	$ 3,350.8	$ 3,123.6	$ 3,042.4

(1) Amount represents (decrease) increase in reserves due to change in our Syndicate 1200 participation.

Reserves for losses and LAE represent the estimated indemnity cost and related adjustment expenses necessary to investigate and settle claims. Such estimates are based upon individual case estimates for reported claims, estimates from ceding companies for reinsurance assumed and actuarial estimates for losses that have been incurred but not yet reported to the insurer. Any change in probable ultimate liabilities is reflected in current operating results.

The impact from the (favorable) unfavorable development of prior accident years' losses and LAE reserves on each reporting segment is presented below:

(in millions)	For the Years Ended December 31, 2016	2015	2014
Excess and Surplus Lines	$ (13.2)	$ (25.5)	$ (38.9)
Commercial Specialty	(22.7)	2.5	(1.7)
International Specialty	(11.0)	(7.7)	(0.4)
Syndicate 1200	(5.0)	(10.3)	(21.1)
Run-off Lines	18.6	8.6	24.4
Total favorable prior-year development	$ (33.3)	$ (32.4)	$ (37.7)

Year ended December 31, 2016:

- *Excess and Surplus Lines:* Favorable development in the general and products liability lines, commercial automobile, and property lines
- *Commercial Specialty:* Favorable development in workers compensation, surety, auto liability, and property, partially offset by unfavorable development in other liabilities
- *International Specialty:* Favorable development in the property reinsurance line, professional liability, and the Brazil unit, partially offset by unfavorable development in the casualty unit
- *Syndicate 1200:* Favorable development in various property classes, general liability, and marine and energy, partially offset by unfavorable development in specialty lines
- *Run-off Lines:* Unfavorable development in risk management, asbestos and environmental liability, and other run-off segments

Year ended December 31, 2015:

- *Excess and Surplus Lines:* Favorable development in the general and products liability lines and commercial automobile, partially offset by unfavorable development in property lines
- *Commercial Specialty:* Unfavorable development in general liability and workers compensation due to an increase in claim severity, partially offset by favorable development in short-tail, directors and officers, auto liability lines, and errors and omissions.
- *International Specialty:* Favorable development in the property reinsurance line, professional liability and the casualty unit, partially offset by unfavorable development in the Brazil unit
- *Syndicate 1200:* Favorable development in various property classes and general liability, partially offset by unfavorable development in accident & health lines
- *Run-off Lines:* Unfavorable development primarily in workers compensation lines and asbestos and environmental liability, partially offset by favorable development in run-off reinsurance claims

Year ended December 31, 2014:

- *Excess and Surplus Lines:* Favorable development in the general and products liability lines, partially offset by unfavorable development in commercial automobile
- *Commercial Specialty:* Favorable development in short-tail, workers compensation, and errors and omissions, partially offset by unfavorable development in general liability and auto liability lines
- *International Specialty:* Favorable development in professional liability and the casualty unit, partially offset by unfavorable development in the property reinsurance line and the Brazil unit
- *Syndicate 1200:* Favorable development in various property classes and professional indemnity, partially offset by unfavorable development in general liability
- *Run-off Lines:* Unfavorable development in workers compensation lines and asbestos liability

In the opinion of management, our reserves represent the best estimate of our ultimate liabilities, based on currently known facts, current law, current technology and assumptions considered reasonable where facts are not known. Due to the significant uncertainties and related management judgments, there can be no assurance that future favorable or unfavorable loss development, which may be material, will not occur.

Short-Duration Contract Disclosures

ASU 2015-09, "Disclosures about Short-Duration Contracts" (Topic 944), requires insurers to make disclosures about their liability for unpaid claims and claim adjustment expenses for short-duration insurance contracts. These disclosures include tables showing incurred and paid claims development information (net of reinsurance and excluding unallocated loss adjustment expenses) which are disaggregated based on the characteristics of the insurance contracts that the insurer writes and other factors specific to the reporting entity. The information should be disclosed by accident year for the number of years claims typically remain outstanding, but need not be more than 10 years, including a reconciliation of the disaggregated information to the consolidated statement of financial position. The basis for our disaggregation of this information is by each of our four ongoing operating segments, further disaggregated within each segment by the significant insurance products we write. See Note 19, "Segment Information," for additional information regarding our four ongoing operating segments.

Significant Insurance Products

We use an underwriting committee structure to monitor and evaluate the financial performance of our insurance products to effectively manage our business. The underwriting committees are organized to allow products or coverages with similar characteristics to be managed and evaluated in distinct groups. Using this approach, the majority of our insurance business is categorized under one of our three underwriting groups, which are Casualty, Professional and Property. Noted below are descriptions of the types of characteristics considered to disaggregate our business into these three groups, as well as other qualitative factors to consider when using the information contained in the following incurred and paid claims development tables.

Casualty

Our Casualty business generally covers exposures where most claims are reported without a significant time lag between the event that gives rise to a claim and the date the claim is reported to us. However, since facts and information are frequently not complete at the time claims are reported to us, and because protracted litigation is sometimes involved, it can be several years before the ultimate value of these claims is determined. In our International Specialty segment, much of the business covers higher layers, potentially increasing the time it takes to fully determine our exposure.

Professional

Much of our Professional business is written on a claims-made basis resulting in coverage only for claims that are reported to us during the year, thus reducing the number of claims that will become known to us after the end of the year. However, facts and information are frequently not complete at the time claims are reported to us, and protracted litigation is sometimes involved. It can be several years before the ultimate value of these claims is determined. In International Specialty, much of the business covers higher layers, potentially increasing the time it takes to fully determine our exposure.

Property

Property losses are generally reported within a short period of time from the date of loss, and in most instances, property claims are settled and paid within a relatively short timeframe. However, Property can be impacted by catastrophe losses which can be more complex than non-catastrophe Property claims due to factors such as difficulty accessing impacted areas and other physical, legal and regulatory impediments potentially extending the period of time it takes to settle and pay claims. The impacts of catastrophe losses can be more significant in our International Specialty and Syndicate 1200 segments.

Descriptions of the primary types of coverages included in each of the insurance product groups for each operating segment are noted below:

Excess and Surplus Lines

- *Casualty:* primary and excess specialty casualty, contract liability, commercial multi-peril, product liability, environmental liability, allied medical, and auto liability

Commercial Specialty

- *Casualty:* workers compensation, general liability, auto liability, and various public entity liability risks
- *Professional:* management liability and errors and omissions liability

International Specialty

- *Casualty:* long-tail casualty and general liability
- *Professional:* product liability, directors and officer's liability, errors and omissions liability, employment practices liability, and professional and engineering liability for commercial markets in Brazil and Continental Europe
- *Property:* catastrophe reinsurance and direct and facultative excess reinsurance

Syndicate 1200

- *Casualty:* general liability, international casualty and motor treaties
- *Professional:* professional indemnity, directors and officer's liability, and medical malpractice
- *Property:* direct and facultative excess reinsurance, North American and international binders, and residential collateral protection for lending institutions

Run-off Lines Segment

We have a Run-off Lines segment for certain products that we no longer underwrite, including asbestos and environmental claims. We have excluded the Run-off Lines segment from the following disaggregated short-duration contract disclosures due to its insignificance to our consolidated financial position and results of operations, both quantitatively and qualitatively. Gross reserves for losses and LAE in Run-off Lines account for less than 9% of our consolidated gross reserves for losses and LAE, and are primarily related to accident years prior to the mid-1990s. As such, claims development tables for the most recent 10 accident years would not provide meaningful information to users of our financial statements, as the majority of the remaining reserves for losses and LAE would be for accident years not separately presented. See Note 6, "Run-off Lines," for further information on this segment, including discussion of prior accidents years' development.

Accident Years Presented

We reevaluated and changed our reportable segments in 2011 to more appropriately align our operating structure with the management of the business. As such, prior to calendar year 2011 we did not track ultimate claims and claim adjustment expenses by accident year at a level of detail consistent with the current segmentation of our business, with the exception of the business in Syndicate 1200. As a result, it is impracticable to obtain the information necessary to provide historical ultimate claims and claim adjustment expense estimates prior to December 31, 2011 in the following incurred and paid claims development tables for all disaggregation categories except those associated with Syndicate 1200.

Syndicate 1200 ultimate claims and claim adjustment expenses are provided beginning with accident year 2010 due to the retroactive whole account quota share contract we entered into on December 31, 2012. As a result of this transaction, reserves for losses and LAE prior to accident year 2010 were legally transferred to another syndicate within the Lloyd's market. Under this quota share contract, we did not retain any direct indemnity or credit risk for the reserves prior to accident year 2010.

Foreign Currency

Portions of the business we write in the Syndicate 1200 and International Specialty segments are denominated in foreign currencies. We have used the December 31, 2016 balance sheet foreign exchange rates to recast the incurred and paid claims information for all periods presented in the following claims development tables in order to eliminate the effects of changes in foreign currency translation rates.

Reserves for Incurred But Not Reported ("IBNR") Claims

Reserves for IBNR claims are based on the estimated ultimate cost of settling claims, including the effects of inflation and other social and economic factors, using past experience adjusted for current trends and any other factors that would modify past experience. We use a variety of statistical and actuarial techniques to analyze current claims costs, including frequency and severity data and prevailing economic, social and legal factors. Each such method has its own set of assumptions and outputs, and each has strengths and weaknesses in different areas. Since no single estimation method is superior to another method in all situations, the methods and assumptions used to project loss reserves will vary by coverage and product. We use what we believe to be the most appropriate set of actuarial methods and assumptions for each product line grouping and coverage. While the loss projection methods may vary by product line and coverage, the general approach for calculating IBNR remains the same: ultimate losses are forecasted first, and that amount is reduced by the amount of cumulative paid claims and case reserves. Reserves established in prior years are adjusted as loss experience develops and new information becomes available. Adjustments to previously estimated reserves are reflected in the results of operations in the year in which they are made.

As described above, various actuarial methods are utilized to determine the reserves for losses and LAE recorded in our Consolidated Balance Sheets. Weightings of methods at a detailed level may change from evaluation to evaluation based on a number of observations, measures, and time elements. There were no significant changes to the methods and assumptions underlying our consolidated reserve estimations and selections as of December 31, 2016.

Incurred & Paid Claims Development Disclosures

The following tables provide information about incurred and cumulative paid losses and allocated loss adjustment expenses ("ALAE"), net of reinsurance. The following tables also include IBNR reserves plus expected development on reported claims and the cumulative number of reported claims as of December 31, 2016.

Excess and Surplus Lines

Casualty Products

(in millions, except number of claims reported)

Accident Year	Incurred Losses & ALAE, Net of Reinsurance For the Years Ended December 31,					
	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2011	$ 202.9	$ 206.0	$ 205.8	$ 200.0	$ 193.5	$ 192.8
2012		189.6	196.0	189.7	183.6	184.4
2013			217.9	222.6	224.3	227.2
2014				213.0	215.1	213.1
2015					232.3	237.0
2016						246.5
					Total	$ 1,301.0

Accident Year	Cumulative Paid Losses & ALAE, Net of Reinsurance For the Years Ended December 31,					
	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2011	$ 17.6	$ 53.8	$ 91.0	$ 122.9	$ 146.6	$ 162.4
2012		17.2	52.8	89.1	120.8	142.4
2013			17.6	60.2	100.4	135.2
2014				15.0	52.2	95.9
2015					16.5	51.9
2016						17.4
					Total	$ 605.2
					Outstanding liabilities for unpaid losses and ALAE prior to 2011, net of reinsurance	96.8
					Total outstanding liabilities for unpaid losses and ALAE, net of reinsurance	$ 792.6

Accident Year	As of December 31, 2016		
	Incurred Losses & ALAE, Net of Reinsurance	IBNR & Expected Development on Reported Claims	Cumulative Number of Reported Claims (2)
2011	$ 192.8	$ 21.1	8,324
2012	184.4	26.5	7,222
2013	227.2	51.5	7,016
2014	213.1	69.9	5,978
2015	237.0	131.2	5,035
2016	246.5	190.8	3,605

(1) Information presented for calendar years prior to 2016 is required supplementary information and is unaudited.

(2) The cumulative number of reported claims is measured at a coverage level by occurrence. Reported occurrences that do not result in a liability are included as reported claims.

Commercial Specialty
Casualty Products
(in millions, except number of claims reported)

Accident Year	Incurred Losses & ALAE, Net of Reinsurance For the Years Ended December 31,					
	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2011	$ 140.6	$ 155.1	$ 159.0	$ 157.5	$ 158.2	$ 154.0
2012		140.3	146.3	149.7	152.2	151.5
2013			126.6	133.2	135.1	133.2
2014				115.5	118.6	116.9
2015					102.6	106.7
2016						95.9
					Total	$ 758.2

Accident Year	Cumulative Paid Losses & ALAE, Net of Reinsurance For the Years Ended December 31,					
	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015(1)	2016
2011	$ 23.1	$ 57.5	$ 85.9	$ 111.3	$ 126.1	$ 135.1
2012		20.1	51.0	80.7	105.3	120.8
2013			18.9	49.4	73.6	93.6
2014				17.4	38.4	58.7
2015					16.4	35.0
2016						11.1
					Total	$ 454.3
					Outstanding liabilities for unpaid losses and ALAE prior to 2011, net of reinsurance	70.3
					Total outstanding liabilities for unpaid losses and ALAE, net of reinsurance	$ 374.2

Accident Year	As of December 31, 2016		
	Incurred Losses & ALAE, Net of Reinsurance	IBNR & Expected Development on Reported Claims	Cumulative Number of Reported Claims (2)
2011	$ 154.0	$ 9.1	28,462
2012	151.5	15.3	24,078
2013	133.2	16.9	19,117
2014	116.9	29.1	16,577
2015	106.7	40.5	13,758
2016	95.9	55.6	9,720

(1) Information presented for calendar years prior to 2016 is required supplementary information and is unaudited.

(2) The cumulative number of reported claims is measured by individual claimant at a coverage level. Reported occurrences that do not result in a liability are included as reported claims.

Commercial Specialty

Professional Products

(in millions, except number of claims reported)

Accident Year	Incurred Losses & ALAE, Net of Reinsurance For the Years Ended December 31,					
	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2011	$ 35.0	$ 35.0	$ 35.0	$ 32.5	$ 28.2	$ 26.9
2012		27.8	28.3	28.6	25.8	24.0
2013			20.9	21.5	21.1	19.0
2014				22.4	22.4	26.0
2015					29.9	29.5
2016						44.2
					Total	$ 169.6

Accident Year	Cumulative Paid Losses & ALAE, Net of Reinsurance For the Years Ended December 31,					
	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2011	$ 3.2	$ 11.8	$ 17.8	$ 22.0	$ 24.0	$ 25.4
2012		2.3	8.6	16.9	19.9	21.4
2013			1.9	6.3	10.9	14.2
2014				2.3	5.4	15.1
2015					1.8	8.3
2016						2.4
					Total	$ 86.8
					Outstanding liabilities for unpaid losses and ALAE prior to 2011, net of reinsurance	0.8
					Total outstanding liabilities for unpaid losses and ALAE, net of reinsurance	$ 83.6

Accident Year	As of December 31, 2016		
	Incurred Losses & ALAE, Net of Reinsurance	IBNR & Expected Development on Reported Claims	Cumulative Number of Reported Claims (2)
2011	$ 26.9	$ 0.7	815
2012	24.0	1.7	634
2013	19.0	1.6	611
2014	26.0	3.3	978
2015	29.5	11.7	1,647
2016	44.2	38.8	2,392

(1) Information presented for calendar years prior to 2016 is required supplementary information and is unaudited.

(2) The cumulative number of reported claims is measured by individual claimant at a coverage level. Reported occurrences that do not result in a liability are included as reported claims.

International Specialty

Casualty Products

(in millions, except number of claims reported)

Accident Year	Incurred Losses & ALAE, Net of Reinsurance For the Years Ended December 31,					
	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2011	$ 6.6	$ 6.6	$ 6.6	$ 4.4	$ 2.2	$ 1.6
2012		7.4	7.4	7.4	5.7	4.5
2013			9.1	9.5	9.6	9.6
2014				10.7	11.0	10.7
2015					12.6	15.3
2016						15.3
					Total	$ 57.0

Accident Year	Cumulative Paid Losses & ALAE, Net of Reinsurance For the Years Ended December 31,					
	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2011	$ —	$ —	$ —	$ —	$ —	$ —
2012		—	—	—	0.1	0.1
2013			0.4	0.8	0.9	0.9
2014				0.3	0.7	0.8
2015					0.3	0.6
2016						0.5
					Total	$ 2.9
					Outstanding liabilities for unpaid losses and ALAE prior to 2011, net of reinsurance	0.4
					Total outstanding liabilities for unpaid losses and ALAE, net of reinsurance	$ 54.5

Accident Year	As of December 31, 2016		
	Incurred Losses & ALAE, Net of Reinsurance	IBNR & Expected Development on Reported Claims	Cumulative Number of Reported Claims (2)
2011	$ 1.6	$ 1.6	1,416
2012	4.5	4.4	1,395
2013	9.6	8.5	1,416
2014	10.7	6.7	1,989
2015	15.3	6.3	2,487
2016	15.3	14.5	2,531

(1) Information presented for calendar years prior to 2016 is required supplementary information and is unaudited.

(2) The cumulative number of reported claims is measured by individual claimant at a coverage level. Reported occurrences that do not result in a liability are included as reported claims.

International Specialty
Professional Products
(in millions, except number of claims reported)

Accident Year	Incurred Losses & ALAE, Net of Reinsurance For the Years Ended December 31, 2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2011	$ 3.2	$ 3.2	$ 3.2	$ 2.3	$ 1.3	$ 0.8
2012		3.5	3.5	3.4	2.7	2.7
2013			5.8	6.4	6.2	4.9
2014				8.2	8.1	7.6
2015					10.8	10.8
2016						11.0
					Total	$ 37.8

Accident Year	Cumulative Paid Losses & ALAE, Net of Reinsurance For the Years Ended December 31, 2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2011	$ —	$ —	$ —	$ —	$ —	$ —
2012		—	—	—	—	1.5
2013			0.5	0.9	1.4	1.4
2014				0.7	1.3	1.7
2015					1.3	2.1
2016						0.9
					Total	$ 7.6
				Total outstanding liabilities for unpaid losses and ALAE, net of reinsurance		$ 30.2

Accident Year	As of December 31, 2016 Incurred Losses & ALAE, Net of Reinsurance	IBNR & Expected Development on Reported Claims	Cumulative Number of Reported Claims (2)
2011	$ 0.8	$ 0.8	789
2012	2.7	1.2	986
2013	4.9	3.2	1,124
2014	7.6	4.7	1,275
2015	10.8	7.5	1,305
2016	11.0	8.7	1,315

(1) Information presented for calendar years prior to 2016 is required supplementary information and is unaudited.

(2) The cumulative number of reported claims is measured by individual claimant at a coverage level. Reported occurrences that do not result in a liability are included as reported claims.

International Specialty

Property Products

(in millions, except number of claims reported)

Accident Year	Incurred Losses & ALAE, Net of Reinsurance For the Years Ended December 31,					
	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2011	$ 114.9	$ 102.9	$ 105.0	$ 102.9	$ 102.2	$ 102.1
2012		47.3	51.5	50.5	51.7	46.5
2013			33.9	35.7	35.1	33.3
2014				28.0	28.2	26.2
2015					28.2	24.5
2016						45.5
					Total	$ 278.1

Accident Year	Cumulative Paid Losses & ALAE, Net of Reinsurance For the Years Ended December 31,					
	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2011	$ 39.9	$ 65.1	$ 86.2	$ 93.7	$ 96.0	$ 97.2
2012		12.4	31.2	40.7	49.7	44.1
2013			4.9	18.7	28.5	30.8
2014				3.3	13.7	20.3
2015					4.6	11.8
2016						14.8
					Total	$ 219.0
					Outstanding liabilities for unpaid losses and ALAE prior to 2011, net of reinsurance	4.4
					Total outstanding liabilities for unpaid losses and ALAE, net of reinsurance	$ 63.5

Accident Year	As of December 31, 2016		
	Incurred Losses & ALAE, Net of Reinsurance	IBNR & Expected Development on Reported Claims	Cumulative Number of Reported Claims (2)
2011	$ 102.1	$ —	400
2012	46.5	0.9	299
2013	33.3	0.8	351
2014	26.2	2.6	339
2015	24.5	5.5	443
2016	45.5	19.5	742

(1) Information presented for calendar years prior to 2016 is required supplementary information and is unaudited.

(2) The cumulative number of reported claims is measured by individual claimant at a coverage level. Reported occurrences that do not result in a liability are included as reported claims.

Syndicate 1200
Casualty Products
(in millions, except number of claims reported)

Accident Year	Incurred Losses & ALAE, Net of Reinsurance For the Years Ended December 31,						
	2010 (1)	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2010	$ 5.7	$ 4.8	$ 4.5	$ 6.1	$ 5.9	$ 5.8	$ 5.8
2011		8.0	8.6	10.8	10.9	10.2	10.1
2012			8.7	10.8	14.8	14.1	13.8
2013				22.6	26.7	26.2	24.5
2014					37.1	36.2	33.8
2015						33.9	29.2
2016							26.2
						Total	$ 143.4

Accident Year	Cumulative Paid Losses & ALAE, Net of Reinsurance For the Years Ended December 31,						
	2010 (1)	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2010	$ —	$ 0.2	$ 0.6	$ 1.1	$ 2.0	$ 2.8	$ 3.7
2011		0.2	0.8	1.6	3.4	5.4	6.9
2012			0.4	1.1	2.6	5.8	8.2
2013				1.5	3.2	7.0	11.3
2014					1.9	4.6	9.9
2015						0.8	5.2
2016							1.8
						Total	$ 47.0
					Total outstanding liabilities for unpaid losses and ALAE, net of reinsurance		$ 96.4

Accident Year	As of December 31, 2016	
	Incurred Losses & ALAE, Net of Reinsurance	IBNR & Expected Development on Reported Claims
2010	$ 5.8	$ 1.1
2011	10.1	2.1
2012	13.8	3.6
2013	24.5	7.3
2014	33.8	13.8
2015	29.2	17.8
2016	26.2	21.5

(1) Information presented for calendar years prior to 2016 is required supplementary information and is unaudited.

Syndicate 1200
Professional Products
(in millions, except number of claims reported)

Accident Year	Incurred Losses & ALAE, Net of Reinsurance For the Years Ended December 31,						
	2010 (1)	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2010	$ 15.2	$ 12.5	$ 12.4	$ 11.0	$ 9.9	$ 9.2	$ 9.3
2011		18.7	20.5	18.1	15.1	14.3	14.4
2012			13.7	13.6	13.8	13.7	13.8
2013				22.4	22.3	22.4	22.0
2014					34.5	35.5	35.9
2015						37.1	36.7
2016							33.2
						Total	$ 165.3

Accident Year	Cumulative Paid Losses & ALAE, Net of Reinsurance For the Years Ended December 31,						
	2010 (1)	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2010	$ 0.1	$ 0.9	$ 1.9	$ 2.9	$ 3.7	$ 5.0	$ 6.3
2011		1.0	2.4	4.1	6.4	8.1	10.4
2012			0.6	1.8	4.2	5.6	8.0
2013				1.6	3.6	7.0	11.5
2014					1.6	6.3	14.5
2015						2.2	8.1
2016							2.0
						Total	$ 60.8
					Total outstanding liabilities for unpaid losses and ALAE, net of reinsurance		$ 104.5

Accident Year	As of December 31, 2016	
	Incurred Losses & ALAE, Net of Reinsurance	IBNR & Expected Development on Reported Claims
2010	$ 9.3	$ 1.9
2011	14.4	3.1
2012	13.8	3.3
2013	22.0	7.0
2014	35.9	13.1
2015	36.7	20.4
2016	33.2	28.7

(1) Information presented for calendar years prior to 2016 is required supplementary information and is unaudited.

Syndicate 1200
Property Products
(in millions, except number of claims reported)

Accident Year	Incurred Losses & ALAE, Net of Reinsurance For the Years Ended December 31,						
	2010 (1)	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2010	$ 50.4	$ 57.9	$ 54.3	$ 53.8	$ 51.1	$ 50.9	$ 50.3
2011		107.3	112.6	106.8	94.2	92.4	91.7
2012			88.4	88.1	92.5	91.6	90.5
2013				83.2	79.1	78.1	76.5
2014					69.5	64.1	65.4
2015						54.9	64.9
2016							72.1
						Total	$ 511.4

Accident Year	Cumulative Paid Losses & ALAE, Net of Reinsurance For the Years Ended December 31,						
	2010 (1)	2011 (1)	2012 (1)	2013 (1)	2014 (1)	2015 (1)	2016
2010	$ 1.8	$ 19.4	$ 27.8	$ 33.6	$ 35.6	$ 39.8	$ 41.3
2011		23.2	46.8	61.4	73.1	78.9	80.7
2012			29.3	47.5	62.6	73.6	76.0
2013				44.2	56.5	68.9	73.0
2014					29.3	51.3	57.3
2015						22.8	42.6
2016							38.8
						Total	$ 409.7
					Total outstanding liabilities for unpaid losses and ALAE, net of reinsurance		$ 101.7

Accident Year	As of December 31, 2016	
	Incurred Losses & ALAE, Net of Reinsurance	IBNR & Expected Development on Reported Claims
2010	$ 50.3	$ 12.8
2011	91.7	23.6
2012	90.5	23.7
2013	76.5	20.1
2014	65.4	16.1
2015	64.9	17.3
2016	72.1	36.4

(1) Information presented for calendar years prior to 2016 is required supplementary information and is unaudited.

Syndicate 1200 Claim Frequency Information

Cumulative claim frequency information has been excluded from the Syndicate 1200 Casualty, Professional and Property incurred and paid claims development tables above due to the impracticability of obtaining such information at the level required for meaningful disaggregated disclosure.

Syndicate 1200 measures claim frequency based on the number of reported claims by individual claimant at a coverage level for non-bordereaux reporting, which is consistent with market practices for insurance business sourced through open market channels. For claims reported on a bordereaux for business sourced through channels such as Lloyd's authorized coverholders, which constitutes approximately half of the business written in Syndicate 1200, the number of reported claims is measured by bordereaux report at a coverage level. This method of tracking and analyzing bordereaux-reported claims is consistent with common industry practice within the Lloyd's market. The information for both bordereaux and non-bordereaux claims may be pooled dependent on the class of business and analyzed in the aggregate to determine the ultimate cost of settling the claims by line of business and Lloyd's year of account. Due to our methodology of establishing ultimate liabilities for Syndicate 1200 claims, there is not a reasonable way to disaggregate the IBNR reserves and expected development on reported claims between bordereaux and non-bordereaux business for separate disclosure.

The reconciliation of the net incurred and paid development tables to the liability for unpaid losses and LAE in our Consolidated Balance Sheets is as follows:

(in millions)	As of December 31, 2016
Liabilities for unpaid losses and ALAE:	
Excess and Surplus Lines - Casualty products	$ 792.6
Commercial Specialty - Casualty products	374.2
Commercial Specialty - Professional products	83.6
International Specialty - Casualty products	54.5
International Specialty - Professional products	30.2
International Specialty - Property products	63.5
Syndicate 1200 - Casualty products	96.4
Syndicate 1200 - Professional products	104.5
Syndicate 1200 - Property products	101.7
Run-off Lines	203.3
Other lines	227.1
Total liabilities for unpaid losses and ALAE, net of reinsurance	2,131.6
Reinsurance recoverables on unpaid losses and LAE:	
Excess and Surplus Lines - Casualty products	261.0
Commercial Specialty - Casualty products	239.6
Commercial Specialty - Professional products	51.5
International Specialty - Casualty products	115.2
International Specialty - Professional products	39.0
International Specialty - Property products	18.6
Syndicate 1200 - Casualty products	54.3
Syndicate 1200 - Professional products	59.9
Syndicate 1200 - Property products	58.9
Run-off Lines	96.7
Other lines	175.9
Total reinsurance recoverables on unpaid losses and LAE	1,170.6
Unallocated loss adjustment expenses	68.0
Unamortized reserve discount	(19.4)
Gross liability for unpaid losses and LAE	$ 3,350.8

Other lines in the table above is comprised of products within our four operating segments which are not individually significant for separate disaggregated disclosure.

Claims Duration

The following table provides supplementary unaudited information about the annual percentage payout of incurred losses and ALAE, net of reinsurance, as of December 31, 2016:

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (1)						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Excess and Surplus Lines - Casualty products	8.4%	18.7%	19.4%	16.3%	11.7%	8.1%	N/A
Commercial Specialty - Casualty products	14.6%	20.7%	18.4%	15.7%	9.7%	6.6%	N/A
Commercial Specialty - Professional products	9.6%	23.9%	29.8%	14.6%	6.4%	5.1%	N/A
International Specialty - Casualty products	11.5%	12.8%	17.5%	14.7%	10.5%	8.4%	N/A
International Specialty - Professional products	6.5%	17.2%	23.6%	15.4%	11.8%	10.2%	N/A
International Specialty - Property products	16.8%	41.2%	23.5%	9.9%	4.1%	2.0%	N/A
Syndicate 1200 - Casualty products	3.7%	7.6%	13.2%	20.4%	21.8%	11.0%	7.1%
Syndicate 1200 - Professional products	4.3%	9.3%	15.0%	15.7%	14.7%	16.6%	7.3%
Syndicate 1200 - Property products	38.4%	24.7%	15.1%	10.9%	5.0%	2.5%	1.3%

(1) The average annual percentage payout is calculated from a paid losses and ALAE development pattern based on an actuarial analysis of the paid losses and ALAE movements by accident year for each disaggregation category. The paid losses and ALAE development pattern provides the expected percentage of ultimate losses and ALAE to be paid in each year. The pattern considers all accident years included in the claims development tables.

Information About Amounts Reported at Present Value

We discount certain workers compensation liabilities for unpaid losses and LAE within our Commercial Specialty and Run-off Lines segments. The discounted Commercial Specialty liabilities relate to all non-ALAE workers compensation liabilities within one of our insurance subsidiaries. In Run-off Lines, we discount certain pension-type liabilities for unpaid losses and LAE. The following tables provide information about these discounted liabilities for unpaid losses and LAE:

	Carrying Amount of Reserves for Losses & LAE As of December 31,			Aggregate Amount of Discount As of December 31,		
(in millions, except discount percentages)	2016	2015	2014	2016	2015	2014
Commercial Specialty - Casualty products	$ 121.1	$ 121.6	$ 114.4	$ 10.3	$ 10.3	$ 9.5
Run-off Lines	184.5	193.7	204.1	9.1	11.2	14.2
Total	$ 305.6	$ 315.3	$ 318.5	$ 19.4	$ 21.5	$ 23.7

	Interest Accretion (1) For the Years Ended December 31,			Discount Rate As of December 31,		
	2016	2015	2014	2016	2015	2014
Commercial Specialty - Casualty products	$ 1.9	$ 1.1	$ 2.1	2.25%	2.25%	2.25%
Run-off Lines	2.1	3.1	2.1	3.50%	3.50%	3.50%
Total	$ 4.0	$ 4.2	$ 4.2			

(1) Interest accretion is recorded in the line item "Losses and loss adjustment expenses" in our Consolidated Statements of Income.

First Acceptance Corporation

9. Losses and Loss Adjustment Expenses Incurred and Paid

Information regarding the reserve for unpaid losses and loss adjustment expenses ("LAE") is as follows (in thousands).

	Year Ended December 31,		
	2016	2015	2014
Liability for unpaid losses and LAE at beginning of year, gross	$ 122,071	$ 96,613	$ 84,286
Reinsurance balances receivable	(464)	(362)	(305)
Liability for unpaid losses and LAE at beginning of year, net	121,607	96,251	83,981
Add: Provision for losses and LAE:			
Current year	278,366	218,186	166,179
Prior year	30,636	845	(4,877)
Net losses and LAE incurred	309,002	219,031	161,302
Less: Losses and LAE paid:			
Current year	163,792	129,216	98,437
Prior year	106,507	64,459	50,595
Net losses and LAE paid	270,299	193,675	149,032
Liability for unpaid losses and LAE at end of year, net	160,310	121,607	96,251
Reinsurance balances receivable	769	464	362
Liability for unpaid losses and LAE at end of year, gross	$ 161,079	$ 122,071	$ 96,613

The unfavorable change in the estimate of unpaid losses and loss adjustment expenses of $30.6 million for the year ended December 31, 2016 was the result of increased losses primarily from the 2015 accident year across all major coverages. The most significant causes of the development were a greater than usual emergence of reported claims and higher bodily injury severity.

The unfavorable change in the estimate of unpaid losses and loss adjustment expenses of $0.8 million for the year ended December 31, 2015 was largely the result of an increase in bodily injury loss adjustment expenses (primarily outside legal costs) driven by the overall increase in claim frequency.

The favorable change in the estimate of unpaid losses and loss adjustment expenses of $4.8 million for the year ended December 31, 2014 was primarily related to bodily injury claims occurring in accident years 2010 through 2013.

The information about incured and paid claims development for the 2007 to 2015 years, and the average annual percentage payout of incurred claims by age as of December 31, 2016, is presented as required supplementary information.

Incurred losses and loss adjustment expenses, net of reinsurance, by accident year are as follows (in thousands).

	For the years ended December 31,									
Accident year	2007 (Unaudited)	2008 (Unaudited)	2009 (Unaudited)	2010 (Unaudited)	2011 (Unaudited)	2012 (Unaudited)	2013 (Unaudited)	2014 (Unaudited)	2015 (Unaudited)	2016
2007	$ 233,004	$ 230,360	$ 228,601	$ 228,716	$ 231,729	$ 231,931	$ 231,058	$ 230,931	$ 230,877	$ 230,862
2008		187,583	174,921	174,312	175,044	175,849	176,468	176,947	177,190	177,226
2009			146,584	140,539	140,501	141,936	142,819	142,772	142,546	142,705
2010				135,458	133,283	134,470	134,446	134,191	134,144	133,983
2011					126,384	126,886	126,272	126,373	125,810	125,670
2012						144,231	140,111	140,249	140,673	141,375
2013							145,878	140,775	142,053	144,076
2014								166,179	165,991	171,827
2015									218,186	240,419
2016										278,366
									Total	$1,786,509

Cumulative paid losses and loss adjustment expenses, net of reinsurance, by accident year are as follows (in thousands).

Accident year	For the years ended December 31, 2007 (Unaudited)	2008 (Unaudited)	2009 (Unaudited)	2010 (Unaudited)	2011 (Unaudited)	2012 (Unaudited)	2013 (Unaudited)	2014 (Unaudited)	2015 (Unaudited)	2016
2007	$ 157,162	$ 210,678	$ 222,406	$ 225,978	$ 228,304	$ 231,493	$ 230,891	$ 230,892	$ 230,873	$ 230,860
2008		122,207	160,366	169,373	172,768	174,688	175,700	176,331	176,907	177,154
2009			92,372	127,355	135,701	139,436	141,399	142,294	142,441	142,654
2010				87,319	120,301	128,843	131,878	132,989	133,648	133,896
2011					82,945	113,199	120,790	123,888	125,012	125,383
2012						89,159	123,869	133,397	137,968	139,781
2013							88,726	124,021	134,931	141,444
2014								98,437	144,943	162,702
2015									129,216	208,533
2016										163,792
									Total	$1,626,199
									Total outstanding reserves for unpaid losses and LAE, net of reinsurance	$ 160,310

As of December 31, 2016, frequency of claims by accident based on number of claimants is as follows.

Accident year	Incurred losses and LAE, net of reinsurance	Total of incurred but not reported liabilities plus expected development on reported claims	Cumulative number of reported claims
2007	$ 230,862	$ 3	117,206
2008	177,226	33	100,188
2009	142,705	26	78,607
2010	133,983	62	71,008
2011	125,670	211	65,831
2012	141,375	597	73,164
2013	144,076	1,784	73,714
2014	171,827	6,003	84,791
2015	240,419	21,968	108,755
2016	278,366	69,261	112,441

The average historical annual percentage payout of incurred losses by age, net of reinsurance is as follows. The amounts reflected below represent the average length of time between the occurrence of a loss and its payment. These percentages are averages of the years present and therefore may not equal 100%.

	(Unaudited) Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Non-standard auto	62.7%	25.2%	6.6%	2.7%	1.1%	0.7%	0.1%	0.2%	0.1%	0.0%

Infinity Property and Casualty Corporation and Subsidiaries

Note 10 ***Insurance Reserves***

The following table provides an analysis of changes in the liability for losses and LAE, net of reinsurance ($ in thousands):

	2016	2015	2014
Balance at Beginning of Period			
Unpaid losses on known claims	$ 237,660	$ 235,037	$ 221,447
IBNR losses	290,097	277,482	262,660
LAE	142,207	155,658	162,469
Total unpaid losses and LAE	669,965	668,177	646,577
Reinsurance recoverables	(14,694)	(14,370)	(14,431)
Unpaid losses and LAE, net of reinsurance recoverables	655,271	653,808	632,146
Current Activity			
Loss and LAE incurred:			
Current accident year	1,120,756	1,064,927	1,019,033
Prior accident years	(24,001)	(28,926)	(17,405)
Total loss and LAE incurred	1,096,755	1,036,001	1,001,628
Loss and LAE payments:			
Current accident year	(687,554)	(656,317)	(602,732)
Prior accident years	(396,147)	(378,221)	(377,235)
Total loss and LAE payments	(1,083,701)	(1,034,538)	(979,967)
Balance at End of Period			
Unpaid losses and LAE, net of reinsurance recoverables	668,325	655,271	653,808
Add back reinsurance recoverables	17,130	14,694	14,370
Total unpaid losses and LAE	685,455	669,965	668,177
Unpaid losses on known claims	238,412	237,660	235,037
IBNR losses	306,641	290,097	277,482
LAE	140,402	142,207	155,658
Total unpaid losses and LAE	$ 685,455	$ 669,965	$ 668,177

The $24.0 million favorable reserve development during the twelve months ended December 31, 2016, was primarily due to decreases in severity estimates in Florida bodily injury and personal injury protection coverages related to accident years 2015 and prior, partially offset by increases in severity estimates in California material damage and bodily injury coverages as well as bodily injury coverages in our commercial vehicle product, all related to accident year 2015.

The $28.9 million favorable reserve development during the twelve months ended December 31, 2015, was primarily due to decreases in severity estimates in Florida bodily injury coverages and California bodily injury loss adjustment expense estimates, all related to accident years 2013 and 2014.

The $17.4 million favorable reserve development during the twelve months ended December 31, 2014, was primarily due to decreases in California property damage severity estimates and in both severity and frequency estimates in Florida bodily injury coverages, all related to accident year 2013.

The following tables provide incurred losses and allocated loss adjustment expenses (ALAE) as well as cumulative paid claims and ALAE, net of reinsurance, for the prior ten accident years for our two largest lines of business. In addition, as of the most recent reporting period, the total of incurred but not reported (IBNR) reserves plus expected development on reported claims and the cumulative number of reported claims are presented ($ in thousands, except severity). The information about incurred and paid claims development for the years ended December 31, 2007 to December 31, 2015 is presented as supplementary information.

Personal Auto

Accident Year	Incurred losses and ALAE, net of reinsurance recoverable For the years ended December 31, (unaudited)										IBNR & expected development on reported claims	Cumulative number of reported claims (1)	Severity (2)
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	2016	2016
2007	$ 600,087	$ 612,555	$ 596,818	$ 585,525	$ 582,153	$ 578,186	$ 578,429	$ 577,799	$ 577,577	$ 577,777	$ 0	283,087	$ 2,041
2008		545,873	533,293	517,125	513,175	511,141	511,490	509,922	509,250	509,058	4	247,202	2,059
2009			497,393	473,328	472,772	471,867	471,714	472,523	473,000	473,359	10	230,828	2,051
2010				541,302	554,167	557,592	559,253	557,625	558,936	557,477	16	270,702	2,059
2011					608,636	633,011	638,400	637,569	638,507	635,905	578	307,904	2,063
2012						739,820	750,522	751,262	751,601	748,166	5,644	360,236	2,061
2013							805,039	805,460	789,428	782,369	11,736	364,784	2,113
2014								807,278	796,084	784,928	21,812	354,013	2,156
2015									839,059	841,144	41,629	365,037	2,190
2016										874,326	206,058	343,254	1,947
										Total	$ 6,784,508		

Cumulative paid losses and ALAE, net of reinsurance recoverable For the years ended December 31, (unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 359,059	$ 522,711	$ 556,520	$ 568,792	$ 574,082	$ 575,600	$ 576,656	$ 577,147	$ 577,383	$ 577,640
2008		320,317	453,092	485,866	499,876	505,063	507,822	508,674	508,831	508,960
2009			285,154	408,535	447,178	460,463	465,453	470,032	471,789	473,074
2010				325,911	485,920	527,538	543,884	550,025	554,410	556,781
2011					374,367	554,245	602,523	621,919	629,992	633,861
2012						450,434	655,303	711,636	731,205	739,354
2013							480,464	692,039	744,188	762,770
2014								485,384	694,607	744,687
2015									530,264	748,850
2016										554,216
									Total	$ 6,300,193
									Outstanding liabilities for unpaid losses and ALAE prior to 2007, net of reinsurance recoverable	1,230
									Total outstanding liabilities for unpaid losses and ALAE, net of reinsurance recoverable	$ 485,545

(1) The cumulative number of reported claims is measured by individual claimant at a coverage level.

(2) Calculated severity amounts by accident year are based on inception-to-date incurred less IBNR and expected development dollars and reported claims. Note that older accident years are more developed than recent accident years.

Commercial Vehicle

Accident Year	Incurred losses and ALAE, net of reinsurance recoverable For the years ended December 31, (unaudited)										IBNR & expected development on reported claims	Cumulative number of reported claims (1)	Severity (2)
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	2016	2016
2007	$ 25,689	$ 23,743	$ 23,028	$ 21,935	$ 21,099	$ 20,781	$ 20,674	$ 20,639	$ 20,631	$ 20,631	$ 0	6,356	$ 3,246
2008		24,457	21,187	18,960	18,893	18,320	18,045	17,973	17,996	17,996	0	6,595	2,729
2009			35,627	31,903	31,226	28,943	27,598	27,533	27,402	27,385	0	9,059	3,023
2010				41,321	39,149	35,881	34,539	33,397	33,845	33,460	44	11,202	2,983
2011					40,294	39,094	36,202	35,052	35,130	34,507	60	11,497	2,996
2012						51,085	46,950	46,284	46,405	45,832	706	13,118	3,440
2013							62,157	51,438	52,083	51,407	1,123	14,426	3,486
2014								65,724	63,304	64,682	2,128	16,735	3,738
2015									81,849	84,314	3,271	20,043	4,043
2016										95,536	29,491	20,309	3,252
									Total	$ 475,750			

Accident Year	Cumulative paid losses and ALAE, net of reinsurance recoverable For the years ended December 31, (unaudited)									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 9,570	$ 15,618	$ 17,730	$ 19,076	$ 20,424	$ 20,555	$ 20,617	$ 20,630	$ 20,630	$ 20,630
2008		9,095	14,489	16,224	17,331	17,887	17,947	17,948	17,994	17,994
2009			13,463	21,735	25,929	26,734	27,229	27,340	27,350	27,355
2010				16,110	25,904	30,120	32,192	32,690	33,286	33,349
2011					17,398	28,427	32,127	33,495	34,223	34,375
2012						22,273	35,322	41,500	43,623	44,578
2013							23,834	40,038	45,200	47,270
2014								28,628	47,162	55,131
2015									37,918	63,932
2016										42,467
									Total	$ 387,082
									Outstanding liabilities for unpaid losses and ALAE prior to 2007, net of reinsurance recoverable	33
									Total outstanding liabilities for unpaid losses and ALAE, net of reinsurance recoverable	$ 88,700

(1) The cumulative number of reported claims is measured by individual claimant at a coverage level.

(2) Calculated severity amounts by accident year are based on inception-to-date incurred less IBNR and expected development dollars and reported claims. Note that older accident years are more developed than recent accident years.

The reconciliation of the net incurred and paid development tables to the liability for unpaid losses and LAE in the consolidated balance sheets is as follows ($ in thousands):

	As of December 31, 2016
Liabilities for unpaid losses and LAE:	
Personal Auto	$ 485,545
Commercial Vehicle	88,700
Other Lines	7,217
Total liabilities for unpaid losses and LAE, net of reinsurance	581,463
Reinsurance recoverables:	
Personal Auto	7,393
Commercial Vehicle	7,941
Other Lines	1,795
Total reinsurance recoverables	17,130
Unallocated loss adjustment expenses	86,862
Gross liability for unpaid losses and LAE	$ 685,455

Other Lines includes our roadside assistance coverage, which has been excluded from the Personal Auto triangles as the high frequency and low severity of these claims can distort analysis, as well as Classic Collector.

Incurred but not reported (IBNR) reserves are established for the quarter and year-end based on a quarterly reserve analysis by our actuarial staff. Various standard actuarial tests are applied to subsets of the business at a state, product and coverage basis. Included in the analyses are the following:

- Paid and incurred extrapolation methods utilizing paid and incurred loss development to predict ultimate losses;
- Paid and incurred frequency and severity methods utilizing paid and incurred claims count development and paid and incurred claims cost development to predict ultimate average frequency (claims count per policy or auto insured) or ultimate average severity (cost per claim); and
- Paid and incurred Bornhuetter-Ferguson methods adding expected development to actual paid or incurred experience to project ultimate losses.

For each subset of the business evaluated, each test generates a point estimate based on development factors applied to known paid and incurred losses and claim counts. Selections of development factors are based on historical loss development patterns with adjustment based on professional actuarial judgment where anticipated development patterns vary from those seen historically. Deviations from historical loss development patterns may occur due to changes in items such as claims settlement and payment practices, business mix, coverage limits and deductibles, inflation trends in auto repair and medical costs and legal and regulatory trends affecting claims settlements. This estimation of IBNR requires selection of hundreds of such factors. A single point estimate for the subset being evaluated is then selected from the results of various tests, based on a combination of simple averages of the point estimates of the various tests and selections based on professional actuarial judgment. During recent years, paid methods have been less reliable because of changes in settlement practices, so we have more heavily relied on incurred methods.

As described above, various actuarial methods are utilized to determine reserves that are booked to financials. Weightings of tests and methods at a detailed level may change from evaluation to evaluation based on a number of observations, measures and time elements. On an overall basis, changes to methods and/or assumptions underlying reserve estimations and selections as of December 31, 2016, were not considered material.

The following table provides supplementary information about the average annual percentage payout of incurred losses and ALAE, net of reinsurance:

Average annual payout of losses and LAE, net of reinsurance

(unaudited)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Personal Auto	61.3%	26.9%	6.9%	2.7%	1.1%	0.7%	0.3%	0.1%	0.0%	0.0%
Commercial Vehicle	47.3%	30.3%	12.0%	5.6%	3.4%	1.0%	0.1%	0.2%	0.0%	0.0%

Kinsale Capital Group, Inc.

7. Reserves for unpaid losses and loss adjustment expenses

The reserves for unpaid losses and loss adjustment expenses represent the Company's estimated ultimate cost of all unreported and reported but unpaid insured claims and the cost to adjust these losses that have occurred as of or before the balance sheet date. Reserves are estimated using individual case-basis valuations of reported claims and statistical analyses. Case reserves are established for individual claims that have been reported to the Company, typically by the Company's insureds or their brokers. Based on the information provided, case reserves are established by estimating the ultimate losses from the claim, including defense costs associated with the ultimate settlement of the claim. Incurred-but-not-reported ("IBNR") reserves are reserves that are determined using actuarial methods to estimate losses that have occurred but have not yet been reported to the Company. The incurred Bornhuetter-Ferguson actuarial method ("BF method") is used to arrive at the Company's loss reserve estimates for each line of business. This method estimates the reserves based on the initial expected loss ratio and expected reporting patterns for losses. Because the Company has a limited number of years of loss experience compared to the period over which losses are expected to be reported, the Company uses industry and peer-group data as a basis for selecting its expected reporting patterns.

As part of the reserving process, the Company reviews historical data and considers the affect of various factors on claims development patterns including polices written on a "claims made" versus "occurrence" basis. Policies written on a claims made basis provide coverage to the insured only for losses incurred during the coverage period, and only if the claim was reported during a specified reporting period. Policies written on an occurrence basis provide coverage to the insured for liabilities arising from events occurring during the term of the policy, regardless of when a claim is actually made. Accordingly, claims related to policies written on an occurrence basis may arise many years after a policy has lapsed. Property losses, while written on an occurrence basis, are generally reported within a short time from the date of loss, and in most instances, property claims are settled and paid within a relatively short period of time.

The following table presents a reconciliation of consolidated beginning and ending reserves for unpaid losses and loss adjustment expenses:

	December 31,		
	2016	2015	2014
	(in thousands)		
Net reserves for unpaid losses and loss adjustment expenses, beginning of year	$ 124,126	$ 91,970	$ 56,589
Commutation of MLQS:			
2016 MLQS	9,109	—	—
2014 MLQS	24,296	—	—
2012 MLQS	—	8,587	7,026
	33,405	8,587	7,026
Adjusted net reserves for losses and loss adjustment expenses	157,531	100,557	63,615
Incurred losses and loss adjustment expenses:			
Current year	83,675	51,434	42,620
Prior year	(12,714)	(9,196)	(1,512)
Total net losses and loss adjustment expenses incurred	70,961	42,238	41,108
Payments:			
Current year	5,494	2,226	1,907
Prior year	28,396	16,443	10,846
Total payments	33,890	18,669	12,753
Net reserves for unpaid losses and loss adjustment expenses, end of year	194,602	124,126	91,970
Reinsurance recoverable on unpaid losses	70,199	95,503	70,240
Gross reserves for unpaid losses and loss adjustment expenses, end of year	$ 264,801	$ 219,629	$ 162,210

During the year ended December 31, 2016, our net incurred losses for accident years 2015 and prior developed favorably by $12.7 million. This favorable development included $6.1 million for the 2015 accident year, $5.8 million of favorable development for 2014 accident year and $0.8 million for accident years 2013 and prior. The favorable development was primarily due to reported losses emerging at a lower level than expected, across most lines of business.

During the year ended December 31, 2015, our net incurred losses for accident years 2014 and prior developed favorably by $9.2 million. This favorable development included $6.5 million for the 2014 accident year and $2.7 million of favorable development for accident years 2013 and prior. The favorable development was primarily due to reported losses emerging at a lower level than expected, particularly on the medical malpractice and professional liability lines of business.

During the year ended December 31, 2014, our net incurred losses for accident years 2013 and prior developed favorably by $1.5 million. This included favorable development of $3.1 million for the 2013 accident year primarily related to the medical malpractice and professional liability lines of business. The favorable development was offset in part by unfavorable development of $1.6 million for accident years 2012 and prior related to the casualty lines of business.

Incurred and Paid Claims Development

The following is information about incurred and paid claims development as of December 31, 2016, net of reinsurance, as well as cumulative claim frequency and the total of IBNR liabilities plus expected development on reported claims included within the net incurred claims amounts. The development and claims duration tables below exclude the commuted MLQS contracts, which would distort development patterns related to those transactions. See Note 8 for further details regarding the commutation of the MLQS. Cumulative number of reported claims is reported on a per claim basis.

The information about incurred and paid claims development for the years ended December 31, 2015 to December 31, 2010, is presented as unaudited supplementary information.

Property

	Incurred Claims and Claim Adjustment Expenses, Net of Reinsurance							
	For the Years Ended December 31,					As of December 31, 2016		
Accident Year	2012 Unaudited	2013 Unaudited	2014 Unaudited	2015 Unaudited	2016	Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims	
	($ in thousands)							
2012	$ 5,615	$ 5,072	$ 5,024	$ 4,999	$ 4,127	$ —	15	
2013		417	205	103	88	7	7	
2014			1,561	1,344	1,240	22	28	
2015				788	533	47	63	
2016					4,177	520	269	
				Total	$ 10,165			

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance				
	For the Years Ended December 31,				
Accident Year	2012 Unaudited	2013 Unaudited	2014 Unaudited	2015 Unaudited	2016
	($ in thousands)				
2012	1,458	2,938	2,937	2,939	3,653
2013		99	81	81	81
2014			169	1,217	1,217
2015				351	429
2016					1,867
				Total	7,247
				All outstanding liabilities before 2012, net of reinsurance	14
				Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 2,932

Historical Claims Duration

The following is supplementary information about average historical claims duration as of December 31, 2016:

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance

Years	1	2	3	4	5
Property	54.4%	28.6%	—%	—%	17.3%

Casualty - Claims Made

	Incurred Claims and Claim Adjustment Expenses, Net of Reinsurance								
	For the Years Ended December 31,							As of December 31, 2016	
Accident Year	2010 Unaudited	2011 Unaudited	2012 Unaudited	2013 Unaudited	2014 Unaudited	2015 Unaudited	2016	Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
	($ in thousands)								
2010	$ 778	$ 805	$ 679	$ 737	$ 946	$ 916	$ 894	$ 36	14
2011		4,246	3,844	3,646	3,609	3,560	3,374	322	76
2012			7,913	5,749	4,205	3,102	2,845	917	138
2013				15,238	11,639	9,113	7,917	2,643	225
2014					18,846	14,289	11,748	5,271	268
2015						9,897	8,831	5,038	249
2016							19,170	15,667	289
						Total	$ 54,779		

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						
	For the Years Ended December 31,						
Accident Year	2010 Unaudited	2011 Unaudited	2012 Unaudited	2013 Unaudited	2014 Unaudited	2015 Unaudited	2016
	($ in thousands)						
2010	$ —	$ 79	$ 368	$ 393	$ 862	$ 859	$ 859
2011		139	1,037	1,392	2,116	3,044	3,042
2012			153	475	877	1,024	1,090
2013				499	1,915	4,436	5,070
2014					435	1,865	5,039
2015						109	2,397
2016							1,158
						Total	18,655
						Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 36,124

Casualty - Occurrence

Accident Year	Incurred Claims and Claim Adjustment Expenses, Net of Reinsurance For the Years Ended December 31, 2010 Unaudited	2011 Unaudited	2012 Unaudited	2013 Unaudited	2014 Unaudited	2015 Unaudited	2016	As of December 31, 2016 Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
	($ in thousands)								
2010	$ 843	$ 771	$ 531	$ 460	$ 458	$ 404	$ 406	$ 106	45
2011		5,839	5,940	5,757	7,340	7,613	8,142	883	206
2012			16,977	17,436	18,803	20,401	20,579	3,264	531
2013				30,616	28,771	28,037	29,039	9,420	749
2014					47,805	40,668	38,049	21,797	964
2015						32,514	28,196	21,102	913
2016							61,440	54,965	561
						Total	$ 185,851		

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance For the Years Ended December 31, 2010 Unaudited	2011 Unaudited	2012 Unaudited	2013 Unaudited	2014 Unaudited	2015 Unaudited	2016
	($ in thousands)						
2010	$ 4	$ 37	$ 59	$ 113	$ 263	$ 261	$ 273
2011		207	1,596	2,519	3,788	4,575	6,363
2012			757	4,441	7,850	11,238	14,382
2013				1,099	4,469	7,957	14,890
2014					698	3,081	8,489
2015						475	1,632
2016							1,099
						Total	47,128
					Liabilities for claims and claim adjustment expenses, net of reinsurance		$ 138,723

Historical Claims Duration

The following is supplementary information about average historical claims duration as of December 31, 2016:

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance 1	2	3	4	5	6	7
Casualty - claims made	3.8%	17.1%	23.2%	9.4%	27.4%	(0.3)%	0.1%
Casualty - occurrence	2.3%	10.8%	11.9%	17.3%	20.6%	10.7 %	3.0%

Reconciliation of Incurred and Paid Claims Development to the Liability for Unpaid Claims and Claim Adjustment Expenses

The reconciliation of the net incurred and paid claims development tables to the liability for claims and claim adjustment expenses in the consolidated statement of financial position is as follows:

(in thousands)	December 31, 2016
Net outstanding liabilities	
Property	$ 2,932
Casualty - claims made	36,124
Casualty - occurrence	138,723
Liabilities for unpaid claims and claim adjustment expenses, net of reinsurance	177,779
Reinsurance recoverable on unpaid claims	
Property	4,971
Casualty - claims made	12,648
Casualty - occurrence	52,580
Total reinsurance recoverable on unpaid claims	70,199
Unallocated claims adjustment expenses	16,823
Gross liability for unpaid claims and claim adjustment expense	$ 264,801

Heritage Insurance Holdings, Inc.

Note 10. Reserve For Unpaid Losses

The Company determines the reserve for unpaid losses on an individual-case basis for all incidents reported. The liability also includes amounts for which are commonly referred to as incurred but not reported, or "IBNR", claims as of the balance sheet date.

The table below summarizes the activity related to the Company's reserve for unpaid losses:

	For the Year Ended December 31,		
	2016	*2015*	*2014*
Balance, beginning of period	$ 83,722	$ 51,469	$ 19,344
Less: reinsurance recoverable on paid losses	—	—	—
Net balance, beginning of period	83,722	51,469	19,344
Incurred related to:			
Current year	220,071	146,484	89,783
Prior years	18,791	(5,293)	(223)
Total incurred	238,862	141,191	89,560
Paid related to:			
Current year	120,626	81,673	45,618
Prior years	62,407	27,265	11,817
Total paid	183,033	108,938	57,435
Net balance, end of period	139,551	83,722	51,469
Plus: reinsurance recoverable on unpaid losses	586	—	—
Balance, end of period	$ 140,137	$ 83,722	$ 51,469

The Company writes insurance in the states of Florida, North Carolina, South Carolina, Hawaii and Georgia, which could be exposed to hurricanes or other natural catastrophes. Although the occurrence of a major catastrophe could have a significant effect on our monthly or quarterly results, such an event is unlikely to be so material as to disrupt our overall normal operations. However, the Company is unable to predict the frequency or severity of any such events that may occur in the near term or thereafter. The Company believes that the reserve for unpaid losses reasonably represents the amount necessary to pay all claims and related expenses which may arise from incidents that have occurred as of the balance sheet date.

The Company's losses incurred for the years ended December 31, 2016 and 2015 reflecting a prior year deficiency of $18.8 million and a redundancy of $5.3 million, respectively, associated with management's best estimate of the actuarial loss and LAE reserves with consideration given to Company specific historical loss experience. Most of the unfavorable development was from personal lines. Also, most of the unfavorable emergence came from the second, third and fourth quarters of 2015, primarily related to claims involving litigation and claims that were represented by attorneys, public adjusters or others (sometimes referred to as Assignment of Benefits). Also, a majority of the unfavorable development in 2016 has been isolated to the tri-county region of Florida (the counties of Miami-Dade, Broward and Palm Beach).

The Company writes insurance in the states of Florida, North Carolina, South Carolina and Hawaii, which could be exposed to hurricanes or other natural catastrophes. The occurrence of a major catastrophe could have a significant effect on the Company's yearly results and cause a temporary disruption of the normal operations of the Company. However, the Company is unable to predict the frequency or severity of any such events that may occur in the near term or thereafter.

The following is information about incurred and paid claims development as of December 31, 2016, net of reinsurance, as well as cumulative claim frequency and the total of incurred-but-not-reported liabilities plus expected development on reported claims included within the net incurred claims amounts.

Incurred Loss and Allocated Loss Adjustment Expenses, Net of Reinsurance
(in thousands, except number of claims)

	Unaudited						
Accident year	2012	2013	2014	2015	2016	Net IBNR Reserves	Reported Claims
2012	$ 1,396	$ 851	$ 811	$ 784	$ 797	$ 6	125
2013		37,005	35,819	37,212	37,090	531	3,607
2014			91,839	86,508	86,634	2,155	7,770
2015				141,125	159,899	13,637	11,068
2016					207,183	65,884	14,603
				Total	$ 491,603	$ 82,213	

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance

	Unaudited				
Accident year	2012	2013	2014	2015	2016
2012	$ 12	$ 615	$ 695	$ 756	$ 766
2013		18,625	29,023	32,414	35,322
2014			47,408	70,932	79,341
2015				76,310	130,267
2016					107,771
				Total	$ 353,467

Reconciliation of Reserve Balances to Liability for Unpaid Loss and Loss Adjustment Expenses

Unpaid Loss and Allocated Loss Adjustment Expense, Net of Reinsurance	$ 138,136
Ceded Unpaid Loss and Allocated Loss Adjustment Expense	586
Unpaid Unallocated Loss Adjustment Expense	1,415
Unpaid losses and loss adjustment expenses	$ 140,137

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance as of December 31, 2016

	Year - 1	Year - 2	Year - 3	Year - 4	Year - 5	Thereafter
Percentage	53%	29%	9%	4%	1%	4%

State National Companies, Inc.

11. Losses and Loss Adjustment Expenses

Losses and loss adjustment expenses consist of the following for the years ended December 31:

($ in thousands)	2016	2015	2014
Direct losses and loss adjustment expenses	$ 927,937	$ 696,249	$ 714,708
Assumed losses and loss adjustment expenses	5,815	1,225	2,469
Ceded losses and loss adjustment expenses	(874,996)	(641,721)	(676,356)
Total net losses and loss adjustment expenses	$ 58,756	$ 55,753	$ 40,821

Activity in the liability for unpaid losses and loss adjustment expenses at December 31, is summarized as follows:

($ in thousands)	2016	2015	2014
Balance at January 1,	$ 1,364,774	$ 1,209,905	$ 1,016,641
Reinsurance recoverables	(1,352,022)	(1,199,780)	(1,006,892)
Net balance at January 1,	12,752	10,125	9,749
Incurred related to:			
Current year	58,200	53,965	41,314
Prior year	556	1,788	(493)
Total incurred	58,756	55,753	40,821
Paid related to:			
Current year	48,918	45,239	34,251
Prior year	9,810	7,887	6,194
Total paid	58,728	53,126	40,445
Net balance at December 31,	12,780	12,752	10,125
Reinsurance recoverables	1,690,926	1,352,022	1,199,780
Balance at December 31,	$ 1,703,706	$ 1,364,774	$ 1,209,905

The estimate for ultimate losses incurred on a net basis related to prior years increased by $0.6 million in 2016, increased by $1.8 million in 2015 and decreased by $0.5 million in 2014. The unfavorable development in 2016 is primarily related to reserve strengthening in our Program Services segment ($1.1 million), partially offset by favorable development of $0.5 million in our Lender Services segment. The unfavorable development in 2015 is primarily related to reserve strengthening on run-off programs in our Program Services segment ($2.0 million). The favorable development in 2014 is primarily due to $0.7 million of favorable development in our Lender Services segment. All of these changes were the result of the re-estimation of unpaid losses and LAE due to ongoing analyses of recent loss development trends as new data becomes available. We had no significant changes in reserving assumptions or methodologies.

The Company adopted the provisions of ASU 2015-09 "Disclosures about Short-Duration Contracts" effective December 31, 2016. The liability for "Unpaid losses and loss adjustment expenses" has been disaggregated along the Program and Lender Services segments. The incurred and paid losses by accident year information presented below for calendar years prior to 2016 for both the Program and Lender Services segments is required supplementary information and is unaudited. The following incurred and paid losses by accident year tables are for the Program Services segment:

($ in thousands) Accident year	Incurred losses and allocated loss adjustment expenses, net of reinsurance For the years ended December 31, 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	2,468	2,475	1,904	2,019	1,943	1,911	2,441	2,574	2,438	2,187
2008		2,054	2,125	1,810	1,733	1,708	1,686	1,675	1,679	1,676
2009			1,918	1,899	1,639	2,151	2,294	2,426	2,701	2,758
2010				1,441	1,641	2,342	2,740	2,696	3,729	3,960
2011					886	1,813	2,103	2,169	2,892	3,353
2012						949	701	692	793	1,362
2013							56	34	22	19
2014								4	2	2
2015									5	5
2016										3
									Total	$ 15,325

($ in thousands) Accident year	Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance For the years ended December 31, 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	880	1,567	1,760	1,874	1,891	1,895	2,433	2,436	2,436	2,186
2008		807	1,284	1,487	1,554	1,613	1,643	1,651	1,654	1,667
2009			573	1,003	1,104	1,458	1,690	1,935	2,132	2,238
2010				366	741	1,099	1,463	1,954	2,239	3,086
2011					53	381	639	997	1,374	1,913
2012						58	135	234	390	734
2013							2	2	2	2
2014								1	1	1
2015									3	3
2016										2
									Total	$ 11,832

The Lender Services segment writes business that is short-tailed due to the nature of the coverages. Therefore, two years of incurred and paid losses by accident year are presented in the tables below:

($ in thousands) Accident year	Incurred losses and allocated loss adjustment expenses, net of reinsurance For the years ended December 31, 2015	2016
2015	$ 53,960	$ 54,079
2016		58,197
	Total	$ 112,276

($ in thousands) Accident year	Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance For the years ended December 31, 2015	2016
2015	$ 45,236	$ 54,073
2016		48,916
	Total	$ 102,989

Incurred but not reported ("IBNR") reserve estimates are generally calculated by first projecting the ultimate cost of all claims that have occurred and then subtracting reported losses and loss expenses. Reported losses include cumulative paid losses and loss expenses plus case reserve estimates. The IBNR reserve includes a provision for claims that have occurred but have not yet been reported, some of which are not yet known to the insurer, as well as a provision for future development on reported claims. The following table presents IBNR liabilities and claims frequency, which is measured by claim event, for each accident year presented for the Program Services segment.

($ in thousands) Accident Year	Total of incurred but not reported liabilities plus expected development on reported claims	Cumulative number of reported claims
2007	$ 1	297,060
2008	8	87,176
2009	519	74,604
2010	874	62,041
2011	1,441	49,878
2012	629	52,233
2013	17	59,350
2014	2	63,576
2015	2	60,347
2016	—	49,215
	$ 3,493	

The following table presents IBNR liabilities and claims frequency, which is measured by claim event, for each accident year presented for the Lender Services segment:

($ in thousands) Accident Year	Total of incurred but not reported liabilities plus expected development on reported claims	Cumulative number of reported claims
2015	$ 5	26,361
2016	9,282	23,757
	$ 9,287	

The average annual percentage payout of incurred claims by age, net of reinsurance, is calculated using a weighted average of paid losses & loss adjustment expenses to incurred losses & loss adjustment expenses, both net of reinsurance for each age. Program claims have a longer tail, therefore the percentage payout is calculated over ten years. Lender claims have a short tail, therefore the percentage payout is calculated over two years. The following tables that present the average annual percentage payout of incurred claims by age, net of reinsurance for the Program and Lender Services segments are required supplementary information and are therefore unaudited:

	Program									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Program	28%	48%	60%	67%	72%	73%	86%	90%	100%	100%

	Lender	
	Year 1	Year 2
Lender	84%	100%

The following table reconciles the Program and Lender loss development tables to the liability for unpaid losses and loss adjustment expenses:

($ in thousands)	2016
Net outstanding liabilities for unpaid losses and LAE	
Program	$ 3,493
Lender	9,287
Liabilities for unpaid losses and LAE, net of reinsurance	12,780
Reinsurance Recoverable on unpaid losses	
Program	1,688,774
Lender	2,152
Total reinsurance recoverable on unpaid losses	1,690,926
Unallocated loss adjustment expenses	—
Total gross liability for unpaid losses and LAE	$ 1,703,706

On September 30, 2016, the Company acquired 100% of the outstanding common shares of United National Specialty Insurance Company, which was subsequently renamed to City National Insurance Company or ("CNIC"). CNIC was acquired as a shell company with a 100% quota share reinsurance agreement. Total gross liability for "Unpaid losses and loss adjustment expenses" includes $12.5 million of gross liability acquired as a part of the acquisition.

United Insurance Holdings Corp.

10) LIABILITY FOR UNPAID LOSSES AND LOSS ADJUSTMENT EXPENSE

We generally use the term loss(es) to collectively refer to both loss and loss adjusting expenses. We establish reserves for both reported and unreported unpaid losses that have occurred at or before the balance sheet date for amounts we estimate we will be required to pay in the future. Our policy is to establish these loss reserves after considering all information known to us at each reporting period. At any given point in time, our loss reserve represents our best estimate of the ultimate settlement and administration cost of our insured claims incurred and unpaid. Since the process of estimating loss reserves requires significant judgment due to a number of variables, such as fluctuations in inflation, judicial decisions, legislative changes and changes in claims handling procedures, our ultimate liability will likely differ from these estimates. We revise our reserve for unpaid losses as additional information becomes available, and reflect adjustments, if any, in our earnings in the periods in which we determine the adjustments are necessary.

General Discussion of the Loss Reserving Process

Reserves for unpaid losses fall into two categories: case reserves and reserves for claims incurred but not reported.

- Case reserves - When a claim is exported, we establish an automatic minimum case reserve for that claim type that represents our initial estimate of the losses that will ultimately be paid on the reported claim. Our initial estimate for each claim is based upon averages of loss payments for our prior closed claims made for that claim type. Then, our claims personnel perform an evaluation of the type of claim involved, the circumstances surrounding each claim and the policy provisions relating to the loss and adjust the reserve as necessary. As claims mature, we increase or decrease the reserve estimates as deemed necessary by our claims department based upon additional information we receive regarding the loss, the results of on-site reviews and any other information we gather while reviewing the claims.

- Reserves for losses incurred but not reported (IBNR reserves) - Our IBNR reserves include true IBNR reserves plus "bulk" reserves. Bulk reserves represent additional amounts that cannot be allocated to particular claims, but which are necessary to estimate ultimate losses on reported and unreported claims. We estimate our IBNR reserves by projecting the ultimate losses using the methods discussed below and then deducting actual loss payments and case reserves from the projected ultimate losses. We review and adjust our IBNR reserves on a quarterly basis based on information available to us at the balance sheet date.

When we establish our reserves, we analyze various factors such as our historical loss experience and that of the insurance industry, claims frequency and severity, our business mix, our claims processing procedures, legislative enactments, judicial decisions and legal developments in imposition of damages, and general economic conditions, including inflation. A change in any of these factors from the assumptions implicit in our estimates will cause our ultimate loss experience to be better or worse than indicated by our reserves, and the difference could be material. Due to the interaction of the aforementioned factors, there is no precise method for evaluating the impact of any one specific factor in isolation, and an element of judgment is ultimately required. Due to the uncertain nature of any projection of the future, the ultimate amount we will pay for losses will be different from the reserves we record. However, in our judgment, we employ techniques and assumptions that are appropriate, and the resulting reserve estimates are reasonable, given the information available at the balance sheet date.

We determine our ultimate losses by using multiple actuarial methods to determine an actuarial estimate within a relevant range of indications that we calculate using generally accepted actuarial techniques. Our selection of the actuarial estimate is influenced by the analysis of our historical loss and claim experience. For each accident year, we estimate the ultimate incurred losses for both reported and unreported claims. In establishing this estimate, we review the results of various actuarial methods discussed below.

Estimation of the Reserves for Unpaid Losses and Allocated Loss Adjustment Expenses

We calculate our estimate of ultimate losses by using the following actuarial methods. We separately calculate the methods using paid loss data and incurred loss data. In the versions of these methods based on incurred loss data, the incurred losses are defined as paid losses plus case reserves. For this discussion of our loss reserving process, the word "segment" refers to a subgrouping of our claims data, such as by geographic area and/or by particular line of business; it does not refer to operating segments.

- **Incurred Development Method** - The incurred development method is based upon the assumption that the relative change in a given year's incurred loss estimates from one evaluation point to the next is similar to the relative change in prior years' reported loss estimates at similar evaluation points. In utilizing this method, actual annual historical incurred loss data is evaluated. Successive years can be arranged to form a triangle of data. Loss development factors (LDFs) are calculated to measure the change in cumulative incurred costs from one evaluation point to the next. These historical LDFs and comparable industry benchmark factors form the basis for selecting the LDFs used in projecting the current valuation of losses to an ultimate basis. This method's implicit assumption is that the relative adequacy of case reserves has been consistent over time, and that there have been no material changes in the rate at which claims have been reported. The paid development method is similar to the incurred development method. While the paid development methods have the disadvantage of not recognizing the information by current case reserves, it has the advantage of avoiding potential distortions in the data due to changes in case reserving methodology. The paid development method's implicit assumption is that the rate of payment of claims has been relatively consistent over time.

- **Expected Loss Method** - In the expected loss method, ultimate loss projections are based upon some prior measure of the anticipated losses, usually relative to some measure of exposure (e.g., earned house years). An expected loss cost is applied to the measure of exposure to determine estimated ultimate losses for each year. Actual losses are not considered in this calculation. This method has the advantage of stability over time, because the ultimate loss estimates do not change unless the exposures or loss costs change. However, this advantage of stability is offset by a lack of responsiveness, since this method does not consider actual loss experience as it emerges. This method is based on the assumption that the loss cost per unit of exposure is a good indication of ultimate losses. It can be entirely dependent on pricing assumptions (e.g., historical experience adjusted for loss trend).

- **Bornhuetter-Ferguson Method** - The incurred Bornhuetter-Ferguson (B-F) method is essentially a blend of two other methods. The first method is the loss development method whereby actual incurred losses are multiplied by an expected LDF. For slow reporting coverages, the loss development method can lead to erratic and unreliable projections because a relatively small swing in early reporting can result in a large swing in ultimate projections. The second method is the expected loss method whereby the IBNR estimate equals the difference between a predetermined estimate of expected losses and actual incurred losses. The incurred B-F method combines these two methods by

  setting ultimate losses equal to actual incurred losses plus expected unreported losses. As an experience year matures and expected unreported losses become smaller, the initial expected loss assumption becomes gradually less important. Two parameters are needed to apply the B-F method: the initial expected loss cost and the expected reporting pattern (LDFs). This method is often used for long-tail lines and in situations where the incurred loss experience is relatively immature or lacks sufficient credibility for the application of other methods. The paid B-F method is analogous to the incurred B-F method using paid losses and development patterns in place of incurred losses and patterns.

- **Paid-to-Paid Development Method** - In addition to the aforementioned methods, we also rely upon the paid-to-paid development method to project ultimate unallocated loss adjustment expense (ULAE). Ratios of paid ULAE to paid loss and allocated loss adjustment expense (ALAE) are compiled by calendar year and a paid-to-paid ratio selection is made. The selected ratio is applied to the estimated IBNR amounts and one half of this ratio is applied to case reserves. This method is derived from rule of thumb that half of ULAE is incurred when a claim is opened and the other half is incurred over the remaining life of the claim.

Reliance and Selection of Methods

The various methods we use have strengths and weaknesses that depend upon the circumstances of the segment and the age of the claims experience we analyze. The nature of our book of business allows us to place substantial, but not exclusive, reliance on the loss development methods, the selected LDFs, represent the most critical aspect of our loss reserving process. We use the same set of LDFs in the methods during our loss reserving process that we also use to calculate the premium necessary to pay expected ultimate losses.

Reasonably-Likely Changes in Variables

As previously noted, we evaluate several factors when exercising our judgment in the selection of the loss development factors that ultimately drive the determination of our loss reserves. The process of establishing our reserves is complex and necessarily imprecise, as it involves using judgment that is affected by many variables. We believe a reasonably-likely change in almost any of these aforementioned factors could have an impact on our reported results, financial condition and liquidity. However, we do not believe any reasonably-likely changes in the frequency or severity of claims would have a material impact on us.

On an annual basis, our consulting actuary issues a statement of actuarial opinion that documents the actuary's evaluation of the adequacy of our unpaid loss obligations under the terms of our policies. We review the analysis underlying the actuary's opinion and compare the projected ultimate losses per the actuary's analysis to our own projection of ultimate losses to ensure that our reserve for unpaid losses recorded at each annual balance sheet date is based upon our analysis of all internal and external factors related to known and unknown claims against us and to ensure our reserve is within guidelines promulgated by the National Association of Insurance Commissioners (NAIC).

We maintain an in-house claims staff that monitors and directs all aspects of our claims process. We assign the fieldwork to our wholly-owned claims subsidiary, or to third-party claims adjusting companies, none of whom have the authority to settle or pay any claims on our behalf. The third-party claims adjusting companies conduct inspection of the damaged property and prepare initial estimates. We review the inspection reports and initial estimates to determine the amounts to be paid to the policyholder in accordance with the terms and conditions of the policy in effect at the time that the policyholder incurs the loss. We maintain strategic relationships with multiple claims adjusting companies that we can engage should we need additional non-catastrophe claims servicing capacity. We believe the combination of our internal resources and relationships with external claims servicing companies provide an adequate level of claims servicing in the event catastrophes affect our policyholders.

The following is information about incurred claims development and paid claims development as of December 31, 2016, net of reinsurance, as well as cumulative claim frequency and the total of IBNR liability plus expected development on reported claims included within the net incurred claims amounts. The incurred claims development and paid claims development data reflect the acquisitions of FSIC and IIC in February 2015 and April 2016, respectively, on a retrospective basis (includes FSIC and IIC data for years prior to our acquisition of the insurance affiliates). The information about incurred claims development and paid claims development for the years ended December 31, 2007, to 2015 is presented as supplementary information.

Homeowners' Insurance

$ In thousands (except number of reported claims)

	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance For the Years Ended December 31, Unaudited										As of December 31, 2016	
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2007	$ 28,232	$ 25,780	$ 24,828	$ 24,852	$ 24,641	$ 24,563	$ 24,665	$ 24,725	$ 24,596	$ 24,601	$ —	2,332,000
2008	—	30,073	28,126	27,174	27,161	27,358	27,597	27,564	27,468	27,453	—	3,170,000
2009	—	—	46,952	46,089	45,515	45,583	45,316	45,116	44,959	44,996	—	4,044,000
2010	—	—	—	51,144	51,292	51,862	52,239	51,685	51,841	51,674	3	4,839,000
2011	—	—	—	—	53,878	56,840	57,670	58,047	59,517	60,215	62	5,913,000
2012	—	—	—	—	—	65,112	69,438	68,923	68,388	69,000	167	10,649,000
2013	—	—	—	—	—	—	98,461	94,755	93,041	92,702	677	7,809,000
2014	—	—	—	—	—	—	—	130,090	130,488	131,402	2,025	10,857,000
2015	—	—	—	—	—	—	—	—	181,609	195,902	6,784	17,918,000
2016	—	—	—	—	—	—	—	—	—	249,276	34,483	28,430,000
									Total	$ 947,221		

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance For the Years Ended December 31, Unaudited									
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 16,713	$ 22,017	$ 23,131	$ 24,155	$ 24,277	$ 24,382	$ 24,439	$ 24,483	$ 24,596	$ 24,601
2008	—	17,915	23,806	25,264	26,360	27,044	27,358	27,390	27,445	27,451
2009	—	—	31,525	41,134	43,149	44,114	44,413	44,737	44,898	44,966
2010	—	—	—	32,993	43,932	46,711	49,256	50,215	50,704	51,163
2011	—	—	—	—	36,419	48,558	52,412	55,532	58,069	59,461
2012	—	—	—	—	—	42,699	60,640	64,675	66,739	68,337
2013	—	—	—	—	—	—	63,732	85,346	89,068	90,627
2014	—	—	—	—	—	—	—	88,375	119,612	125,951
2015	—	—	—	—	—	—	—	—	123,888	174,993
2016	—	—	—	—	—	—	—	—	—	170,527
									Total	$ 838,077
									All outstanding liabilities before 2007, net of reinsurance	176
									Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 109,320

The following is supplementary information about average historical claims duration as of December 31, 2016.

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance

Unaudited										
Years	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
	65.4%	22.4%	4.7%	3.6%	2.0%	1.1%	0.4%	0.2%	0.2%	—%

Remaining Product Lines

$ In thousands (except number of reported claims)

	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance For the Years Ended December 31,										As of December 31, 2016	
	Unaudited											
Accident Year	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**Total of IBNR Liabilities Plus Expected Development on Reported Claims**	**Cumulative Number of Reported Claims**
2007	$ 11,491	$ 9,605	$ 8,313	$ 7,825	$ 7,553	$ 7,554	$ 7,504	$ 7,464	$ 7,464	$ 7,507	$ —	1,191,000
2008	—	13,504	12,871	12,324	11,833	11,877	12,661	12,761	12,885	12,884	—	1,170,000
2009	—	—	10,610	10,135	10,093	10,026	9,902	9,844	9,837	10,009	—	1,097,000
2010	—	—	—	9,911	11,042	10,733	11,126	11,020	11,105	11,072	—	1,160,000
2011	—	—	—	—	11,126	11,022	10,896	10,630	10,575	10,740	—	1,217,000
2012	—	—	—	—	—	10,760	9,651	9,350	9,412	9,147	11	1,061,000
2013	—	—	—	—	—	—	6,657	5,817	5,401	5,736	5	553,000
2014	—	—	—	—	—	—	—	9,073	7,927	8,016	76	682,000
2015	—	—	—	—	—	—	—	—	19,669	19,723	581	1,384,000
2016	—	—	—	—	—	—	—	—	—	17,053	1,952	46,000
									Total	$ 111,887		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance For the Years Ended December 31,

Unaudited										
Accident Year	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
2007	$ 3,974	$ 5,885	$ 6,627	$ 7,001	$ 7,127	$ 7,303	$ 7,442	$ 7,449	$ 7,452	$ 7,507
2008	—	6,169	9,309	10,647	11,104	11,404	12,360	12,403	12,557	12,884
2009	—	—	4,807	7,507	8,470	9,062	9,471	9,570	9,688	10,009
2010	—	—	—	4,346	8,128	9,036	10,182	10,242	10,327	11,073
2011	—	—	—	—	4,587	8,013	9,444	9,837	10,128	10,740
2012	—	—	—	—	—	5,112	7,631	8,242	8,626	9,124
2013	—	—	—	—	—	—	2,925	4,496	4,811	5,566
2014	—	—	—	—	—	—	—	4,008	6,237	7,868
2015	—	—	—	—	—	—	—	—	11,104	18,129
2016	—	—	—	—	—	—	—	—	—	12,432
									Total	$ 105,332
									All outstanding liabilities before 2007, net of reinsurance	42
									Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 6,597

The following is supplementary information about average historical claims duration as of December 31, 2016.

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance

Unaudited										
Years	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
	48.3%	25.7%	7.2%	6.5%	2.8%	3.5%	2.5%	1.5%	1.3%	0.7%

The reconciliation of the net incurred and paid claims development tables to the liability for claims and claim adjustment expenses in the consolidated statement of financial position is as follows.

	December 31, 2016
Net outstanding liabilities	
Homeowners' Only	$ 109,320
All other lines of business	6,597
Liabilities for unpaid claims and claim adjustment expenses, net of reinsurance	$ 115,917
Reinsurance recoverable on unpaid claims	
Homeowners' Only	$ 14,223
All other lines of business	4,501
Total reinsurance recoverable on unpaid claims	$ 18,724
Unallocated claims adjustment expenses	6,214
Total gross liability for unpaid claims and claims adjustment expense	$ 140,855

The table below shows the analysis of our reserve for unpaid losses for each of our last three fiscal years on a GAAP basis:

	2016	2015	2014
Balance at January 1	$ 76,792	$ 54,436	$ 47,451
Acquisition of IIC reserves	22,576	—	—
Acquisition of FSIC reserves	—	2,390	—
Less: reinsurance recoverable on unpaid losses	2,114	1,252	1,957
Net balance at January 1	$ 97,254	$ 55,574	$ 45,494
Incurred related to:			
Current year	281,365	185,476	122,114
Prior years	16,988	(2,368)	(4,037)
Total incurred	$ 298,353	$ 183,108	$ 118,077
Paid related to:			
Current year	210,970	127,306	83,967
Prior years	62,506	36,698	26,420
Total paid	$ 273,476	$ 164,004	$ 110,387
Net balance at December 31	$ 122,131	$ 74,678	$ 53,184
Plus: reinsurance recoverable on unpaid losses	18,724	2,114	1,252
Balance at December 31	$ 140,855	$ 76,792	$ 54,436
Composition of reserve for unpaid losses and LAE:			
Case reserves	$ 83,447	$ 45,502	$ 29,726
IBNR reserves	57,408	31,290	24,710
Balance at December 31	$ 140,855	$ 76,792	$ 54,436

Based upon our internal analysis and our review of the statement of actuarial opinion provided by our actuarial consultants, we believe that the reserve for unpaid losses reasonably represents the amount necessary to pay all claims and related expenses which may arise from incidents that have occurred as of the balance sheet date.

As reflected by our losses incurred related to prior years, the favorable development experienced in 2015 was primarily the result of losses related to the 2014 and 2013 accident years coming in better than expected. The favorable development experienced in 2014 was primarily the result of losses related to the 2013 and 2012 accident years coming in better than expected. During 2016, we had a reserve deficiency. Since we place substantial reliance on loss-development-based actuarial models when determining our estimate of ultimate losses, the deficiencies resulted from additional development on prior accident years which caused our ultimate losses to increase.

Atlas Financial Holdings, Inc.

11. CLAIMS LIABILITIES

Unpaid claims and claims adjustment expenses

The changes in the provision for unpaid claims and claims adjustment expenses, net of amounts recoverable from reinsurers, for the years ended December 31, 2016, 2015, and 2014 were as follows ($ in '000s):

As of the year ended December 31,	2016	2015	2014
Unpaid claims and claims adjustment expenses, beginning of period	$ 127,011	$ 102,430	$ 101,385
Less: reinsurance recoverable	29,399	18,421	18,144
Net unpaid claims and claims adjustment expenses, beginning of period	97,612	84,009	83,241
Net reserves acquired	—	19,396	—
Change in retroactive reinsurance ceded	107	2,037	2,415
Incurred related to:			
Current year	102,133	89,828	61,680
Prior years	32,613	166	(602)
	134,746	89,994	61,078
Paid related to:			
Current year	39,652	32,402	19,427
Prior years	89,179	65,422	43,298
	128,831	97,824	62,725
Net unpaid claims and claims adjustment expenses, end of period	103,634	97,612	84,009
Add: reinsurance recoverable	35,370	29,399	18,421
Unpaid claims and claims adjustment expenses, end of period	$ 139,004	$ 127,011	$ 102,430

The process of establishing the estimated provision for unpaid claims and claims adjustment expenses is complex and imprecise, as it relies on the judgment and opinions of a large number of individuals, on historical precedent and trends, on prevailing legal, economic, social and regulatory trends and on expectations as to future developments. The process of determining the provision necessarily involves risks that the actual results may deviate, perhaps substantially, from the best estimates made.

Atlas experienced $32.6 million in unfavorable prior accident year development for the year ended December 31, 2016 as reflected as incurred related to prior years in the table above. The unfavorable development is primarily from our core commercial automobile liability line. Excluding pre-acquisition Global Liberty reserve development, the development of our core lines on prior accident years was $23.2 million for the year ended December 31, 2016. Michigan commercial automobile claims accounted for approximately 62.5% of this development. Pre-acquisition Global Liberty claims reserve development was $7.9 million for the year ended December 31, 2016. The remaining unfavorable prior year development of $1.5 million for the year ended December 31, 2016 is attributable to assigned risk pools and run-off of non-core business.

Atlas experienced $166,000 in unfavorable prior year development for the year ended December 31, 2015 as reflected as incurred related to prior years in the table above. Prior accident year development on non-core lines and assigned risk pools was $870,000 for the year ended December 31, 2015. This increase was offset by favorable prior accident year development of $475,000 and $230,000 on our core lines and pre-acquisition Global Liberty claims reserves, respectively. This favorable development on our core lines was attributable to our traditional taxi and excess taxi products.

Atlas experienced favorable prior year development during the year ended December 31, 2014 of $352,000 on its core lines and $250,000 on its non-core lines as reflected as incurred related to prior years in the table above. The favorable development on our core lines was primarily related to pre-acquisition Gateway claims reserves.

Short-duration insurance contracts

For purposes of this discussion, Atlas will disaggregate data based on the type of coverage into commercial automobile liability, including personal injury protection, and all other lines. Commercial automobile liability is the main line of business that Atlas operates. All other lines includes commercial automobile physical damage, taxi workers' compensation, other liability and Atlas' short duration lines that are currently in run-off. Amounts related to the Gateway and Global Liberty acquisitions have been included retrospectively for all years presented in the tables below.

Claims payments and changes in reserves may be made on accidents that occurred in prior years, not solely on business that is currently insured. Calendar year claims consist of payments and reserve changes that have been recorded in the financial statements during the applicable reporting period, without regard to the period in which the accident occurred. Calendar year results do not change after the end of the applicable reporting period, even as new claim information develops. Accident year claims consist of payments and reserve changes that are assigned to the period in which the accident occurred. Accident year results will change over time as the estimates of claims change due to payments and reserve changes for all accidents that occurred during that period.

The following is information about incurred and paid claims and claims adjustment expenses development for the year ended December 31, 2016, net of reinsurance, as well as cumulative claim frequency and the total of incurred but not reported liabilities plus expected development on reported claims included within the net incurred claims amounts. The information about incurred and paid claims development for the years ended December 31, 2007 to 2015, is presented as unaudited supplementary information.

Commercial Automobile Liability

Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance ($ in '000s, except cumulative number of reported claims)

	For the Years Ended December 31,										As of the year ended December 31, 2016	
Accident Year	2007 unaudited	2008 unaudited	2009 unaudited	2010 unaudited	2011 unaudited	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016	Incurred but Not Reported Liabilities, Net of Reinsurance	Cumulative Number of Reported Claims
2007	$ 30,198	$ 29,158	$ 29,811	$ 31,068	$ 33,028	$ 33,249	$ 34,160	$ 34,146	$ 34,448	$ 34,644	$ 19	19,853
2008		29,391	29,434	29,225	29,543	27,922	28,015	27,474	28,005	28,496	68	15,763
2009			37,394	40,309	43,889	43,604	42,909	42,326	42,987	43,728	121	13,230
2010				35,877	34,677	35,711	37,026	37,205	38,002	38,841	251	8,562
2011					31,044	38,822	34,887	34,720	35,136	36,080	241	7,819
2012						35,948	37,839	38,972	40,429	44,627	810	9,353
2013							48,449	48,636	53,656	64,687	617	11,658
2014								61,145	53,005	69,555	3,787	14,438
2015									69,060	67,184	9,078	18,407
2016										80,824	38,517	16,457
Total									Total	$ 508,666		

Cumulative Paid Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance ($ in '000s)

	For the Years Ended December 31,									
Accident Year	2007 unaudited	2008 unaudited	2009[1] unaudited	2010 unaudited	2011 unaudited	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016
2007	$ 5,392	$ 12,698	$ 3,030	$ 13,901	$ 22,937	$ 29,255	$ 31,398	$ 33,134	$ 33,787	$ 34,524
2008		6,201	(6,438)	7,256	16,010	20,234	23,282	25,060	27,039	28,136
2009			(3,218)	10,711	24,468	31,784	36,385	39,664	42,030	43,287
2010				10,097	20,483	26,654	31,300	34,831	37,051	38,187
2011					8,725	18,980	24,978	29,660	33,217	35,324
2012						8,385	18,230	26,995	35,563	41,587
2013							10,358	27,198	43,117	59,973
2014								15,404	38,257	60,486
2015									18,597	49,556
2016										21,850
Total										$ 412,910
									All outstanding liabilities before 2007, net of reinsurance	149
									Liabilities for claims and allocated claims adjustment expenses, net of reinsurance	$ 95,905

[1] - year 2009 - negative amounts resulted from the commutation of reinsurance agreements

Other short-duration lines

Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance ($ in '000s, except cumulative number of reported claims)

	For the Years Ended December 31,										As of the year ended December 31, 2016	
Accident Year	2007 unaudited	2008 unaudited	2009 unaudited	2010 unaudited	2011 unaudited	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016	Incurred but Not Reported Liabilities, Net of Reinsurance	Cumulative Number of Reported Claims
2007	$ 23,699	$ 25,236	$ 26,956	$ 26,184	$ 25,705	$ 25,467	$ 25,601	$ 25,488	$ 25,475	$ 25,513	$ 5	33,296
2008		34,673	38,502	36,796	36,489	36,580	36,576	36,222	36,254	36,260	8	47,049
2009			35,688	34,764	34,626	35,453	36,343	36,202	36,736	37,061	93	27,846
2010				26,884	27,729	24,714	24,922	24,392	24,456	24,477	24	14,330
2011					20,315	22,176	22,310	21,782	22,122	22,941	599	10,001
2012						13,054	12,723	13,634	13,854	13,934	129	3,614
2013							5,897	4,754	4,556	4,687	18	2,148
2014								6,645	6,849	6,978	116	2,937
2015									8,320	8,616	277	3,942
2016										9,357	277	4,397
Total									Total	$ 189,824		

Cumulative Paid Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance ($ in '000s)

	For the Years Ended December 31,									
Accident Year	2007 unaudited	2008 unaudited	2009 unaudited	2010 unaudited	2011 unaudited	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016
2007	$ 12,845	$ 20,777	$ 20,384	$ 23,725	$ 24,392	$ 24,769	$ 25,016	$ 25,385	$ 25,410	$ 25,492
2008		21,304	23,263	30,657	33,915	35,442	36,112	36,149	36,222	36,224
2009			11,296	25,422	30,343	33,186	34,375	35,785	36,164	36,499
2010				14,182	20,420	22,596	23,812	24,225	24,368	24,414
2011					11,517	17,419	19,696	20,939	21,600	22,235
2012						6,446	9,789	11,554	12,782	13,343
2013							4,195	4,602	4,603	4,612
2014								6,154	6,677	6,728
2015									7,886	8,154
2016										9,413
Total										$ 187,114
									All outstanding liabilities before 2007, net of reinsurance	830
									Liabilities for claims and allocated claims adjustment expenses, net of reinsurance	$ 3,540

Incurred claims and allocated claim adjustment expenses, net of reinsurance, show how the initial estimate of incurred claims develop for each of the past 10 accident years. Incurred but not reported liabilities, net of reinsurance, by accident year are estimates that are based on the difference between the reported claims and the estimate of the ultimate paid claims and claims adjustment expenses for known and unknown claims. These estimates involve actuarial and statistical projections at a given point in time of what we expect the cost of the ultimate settlement and administration of known and unknown claims. The process reflects the uncertainties and significant judgmental factors inherent in estimating future results of both known and unknown claims, and as such, the process is inherently complex and imprecise. We utilize a third party actuarial firm to assist us in the estimation process.

The cumulative number of reported claims for commercial automobile liability was calculated using actual number of claims at the feature/coverage level. For the other lines, claim counts were calculated using actual claim counts at the feature/coverage level for all claims excluding those from assigned risk pools and surety. The actual claim counts for assigned risk pools and surety may not be available for all years presented and are therefore not included in the reported claims amounts.

The reconciliation of the net incurred and paid claims and claims adjustment expenses development tables to the liability for claims and claims adjustment expenses in the consolidated statement of financial position as of December 31, 2016 is as follows ($ in '000s):

As of December 31,	**2016**
Net outstanding liabilities:	
Commercial automobile liability	$ 95,905
Other short-duration lines	3,540
Unpaid claims and allocated claims adjustment expenses, net of reinsurance	99,445
Reinsurance recoverable on unpaid claims and claims adjustment expenses:	
Commercial automobile liability	31,511
Other short-duration lines	3,859
Total reinsurance recoverable on unpaid claims and claims adjustment expenses	35,370
Unallocated claims adjustment expenses	5,550
Retroactive reinsurance ceded	(1,361)
Total	4,189
Unpaid claims and claims adjustment expenses, gross of reinsurance	$ 139,004

The following is supplementary information about the average annual percentage payout of incurred claims by age, net of amounts recoverable from reinsurers, for the year ended December 31, 2016 (amounts are unaudited).

Years	1	2	3	4	5	6	7	8	9	10
Commercial automobile liability	19.2%	21.2%	20.0%	21.3%	14.0%	9.6%	5.2%	4.9%	2.9%	2.1%
Other short-duration lines	66.4%	18.8%	8.0%	7.0%	3.1%	2.1%	0.6%	0.9%	0.1%	0.3%

Federated National Holding Company and Subsidiaries

6. LOSS AND LOSS ADJUSTMENT EXPENSE RESERVES

The liability for loss and LAE reserves is determined on an individual-case basis for all claims reported. The liability also includes amounts for unallocated expenses, anticipated future claim development and incurred but not yet reported ("IBNR").

Activity in the liability for loss and LAE reserves is summarized as follows:

	Year Ended December 31,		
	2016	2015	2014
	(in thousands)		
Gross reserves, beginning of period	$ 97,340	$ 78,330	$ 61,016
Less: reinsurance recoverable [1]	(7,496)	(10,394)	(2,313)
Net reserves, beginning of period	89,844	67,936	58,703
Incurred loss, net of reinsurance, related to:			
Current year	174,795	113,819	79,932
Prior years	12,546	(9,466)	1,104
Total incurred loss and LAE, net of reinsurance	187,341	104,353	81,036
Paid loss, net of reinsurance, related to:			
Current year	113,196	49,531	40,680
Prior years	56,958	32,914	31,123
Total paid loss and LAE, net of reinsurance	160,154	82,445	71,803
Net reserves, end of period	117,031	89,844	67,936
Plus: reinsurance recoverable [1]	41,079	7,496	10,394
Gross reserves, end of period	$ 158,110	$ 97,340	$ 78,330

(1) Reinsurance recoverable in this table includes only ceded loss and LAE reserves.

The establishment of loss reserves is an inherently uncertain process and changes in loss reserve estimates are expected as such estimates are subject to the outcome of future events. The factors influencing changes in claim costs are often difficult to isolate or quantify and developments in paid and incurred losses from historical trends are frequently subject to multiple interpretations. Changes in estimates, or differences between estimates and amounts ultimately paid, are reflected in the operating results of the period during which such adjustments are made.

During the year ended December 31, 2016, the Company experienced unfavorable loss and LAE reserve development on prior year accident years primarily in its all other peril homeowners' coverage in Florida. The deficiency primarily relates to reserve development on prior year accident years and was related to the all other peril homeowners' coverage in the state of Florida. The deficiency primarily relates to higher severity above the expected development factor anticipated at December 31, 2015 which was driven by the impact from assignment of benefits and other related adjusting expenses.

During the year ended December 31, 2015, the Company experienced a redundancy on prior year accident years primarily a result of continued favorable loss experience (mostly caused by decreased severity in reported claims) in the Company's all other peril homeowners' coverage caused in part by the absence of severe weather in Florida. Specifically, we have experienced better severity than expected on the 2014 and 2013 accident years.

The following tables provide incurred losses and allocated loss adjustment expenses ("ALAE") as well as cumulative paid claims and ALAE, net of reinsurance, for the prior ten accident years for our largest lines of business, homeowners". In addition, as of the most recent reporting period, the total of IBNR reserves plus expected development on reported claims and the cumulative number of reported claims are presented (in thousands, except severity). The information about incurred and paid claims development for the years ended December 31, 2007 to December 31, 2015 is presented as supplementary information.

	Incurred losses and ALAE, net of reinsurance For the years ended December 31, (unaudited)										IBNR & expected development on reported claims	Cumulative number of reported claims [1]	Severity [2]
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	2016	2016
2007	19,410	18,293	17,319	17,544	17,494	17,761	17,912	17,715	17,553	17,559	6	1,883	9,325
2008		18,305	15,784	15,811	15,977	15,659	16,021	15,661	15,604	15,609	4	1,705	9,155
2009			26,228	25,618	25,955	26,482	27,015	27,041	27,119	27,163	101	2,323	11,693
2010				24,825	25,056	26,151	27,895	28,968	29,407	29,945	34	2,348	12,753
2011					20,492	21,344	23,007	23,932	24,582	25,957	40	2,344	11,074
2012						23,032	23,301	24,186	24,468	25,889	326	2,579	10,038
2013							43,807	42,021	35,834	35,859	216	3,209	11,175
2014								64,312	63,300	61,770	2,222	5,679	10,877
2015									99,286	92,159	8,097	11,196	8,231
2016										168,875	48,663	20,923	8,071
										Total	$500,785		

	Cumulative paid losses and ALAE, net of reinsurance For the years ended December 31, (unaudited)									
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	11,358	15,352	16,160	16,783	17,027	17,291	17,429	17,443	17,509	17,519
2008		9,477	13,832	14,689	15,190	15,308	15,445	15,595	15,583	15,587
2009			15,047	23,095	24,657	26,007	26,462	26,831	26,927	26,982
2010				14,052	21,350	24,730	26,886	27,984	29,092	29,739
2011					11,119	19,250	21,323	22,723	24,047	25,580
2012						13,693	20,728	23,120	23,923	25,186
2013							19,986	31,606	33,867	35,123
2014								37,033	53,831	57,891
2015									52,190	76,169
2016										101,532
									Total	$414,308
	All outstanding liabilities for unpaid claims and LAE prior to 2007, net of reinsurance									1,478
	Total outstanding liabilities for unpaid claims and LAE, net of reinsurance									$ 87,955

(1) The cumulative number of reported claims is measured by individual claimant at a coverage level.
(2) Calculated severity amounts by accident year are based on inception-to-date incurred less IBNR and expected development dollars on reported claims. Note the older accident years are more developed than recent accident years.

The reconciliation of the net incurred and paid development tables to the liability for unpaid losses and LAE in the consolidated balance sheets is as follows:

	As of December 31, 2016 (in thousands)
Liabilities for unpaid losses and LAE:	
Homeowners	$ 87,955
Other lines	28,915
Total liabilities for unpaid losses and LAE, net of reinsurance	116,870
Reinsurance recoverables:	
Homeowners	19,964
Other lines	21,115
Total reinsurance recoverables	41,079
Unallocated loss adjustment expenses	161
Gross liability for unpaid losses and LAE	$ 158,110

Other lines include our CGL and personal automobile lines of business. Management performed a quantitative and qualitative assessment and determined that neither line of business met the guidelines for disaggregation, above.

Management establishes a liability on an aggregate basis to provide for the estimated IBNR. The estimates of the liability for loss and LAE reserves are subject to the effect of trends in claims severity and frequency and are continually reviewed. As part of this process, we review historical data and consider various factors, including known and anticipated legal developments, inflation and economic conditions. As experience develops and other data become available, these estimates are revised, as required, resulting in increases or decreases to the existing liability for loss and LAE reserves. Adjustments are reflected in results of operations in the period in which they are made and the liabilities may deviate substantially from prior estimates.

Various actuarial methods are utilized to determine the reserves that are booked to our financial statements. Weightings of tests and methods at a detailed level may change from evaluation to evaluation based on a number of observations, measures and time elements. On an overall basis, changes to methods and/or assumptions underlying reserve estimations and selections as of December 31, 2016, were not considered material.

IBNR reserves are established for the quarter and year-end based on a quarterly reserve analysis by our actuarial staff. Various standard actuarial tests are applied to subsets of the business at a line of business and coverage basis. Included in the analyses are the following:

- *Reported Loss Development Method*: a reported loss development pattern is calculated based on historical loss development data, and this pattern is then used to project the latest evaluation of cumulative reported losses for each accident year or underwriting year, as appropriate, to ultimate levels;
- *Paid Development Method*: a paid loss development pattern is calculated based on historical paid loss development data, and this pattern is then used to project the latest evaluation of cumulative paid losses for each accident year or underwriting year, as appropriate, to ultimate levels;
- *Expected Loss Ratio Method*: expected loss ratios are applied to premiums earned, based on historical company experience, or historical insurance industry results when company experience is deemed not to be sufficient; and
- *Bornhuetter-Ferguson Method*: the results from the Expected Loss Ratio Method are essentially blended with either the Reported Loss Development Method or the Paid Development Method.

Supplementary Information on Historical Loss and LAE Duration (Unaudited)

The following table provides supplementary information about the average annual percentage payout of incurred losses and ALAE, net of reinsurance, as of December 31, 2016:

Average annual payout of losses and LAE, net of reinsurance

(unaudited)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Homeowners	53.4%	28.3%	7.4%	4.2%	2.2%	2.6%	1.0%	0.1%	0.4%	0.0%

Hallmark Financial Services, Inc. and Subsidiaries

6. Reserves for Losses and Loss Adjustment Expenses:

Activity in the consolidated reserves for unpaid losses and LAE is summarized as follows (in thousands):

	2016	2015	2014
Balance at January 1	$ 450,878	$ 415,135	$ 382,640
Less reinsurance recoverable	102,791	91,943	70,172
Net balance at January 1	348,087	323,192	312,468
Incurred related to:			
Current year	246,080	237,102	215,258
Prior years	7,608	(6,953)	(5,203)
Total incurred	253,688	230,149	210,055
Paid related to:			
Current year	93,067	83,132	76,231
Prior years	150,378	122,122	123,100
Total paid	243,445	205,254	199,331
Net balance at December 31	358,330	348,087	323,192
Plus reinsurance recoverable	123,237	102,791	91,943
Balance at December 31	$ 481,567	$ 450,878	$ 415,135

The $7.6 million unfavorable net development, $7.0 million favorable net development and $5.2 million favorable net development in prior accident years recognized in 2016, 2015 and 2014, respectively, represent normal changes in our loss reserve estimates. In 2016, the aggregate loss reserve estimates for prior years were increased to reflect unfavorable loss development when the available information indicated a reasonable likelihood that the ultimate losses would be more than the previous estimates. In 2015 and 2014, the aggregate loss reserve estimates for prior years were decreased to reflect favorable loss development when the available information indicated a reasonable likelihood that the ultimate losses would be less than the previous estimates. Generally, changes in reserves are caused by variations between actual experience and previous expectations and by reduced emphasis on the Bornhuetter-Ferguson method due to the aging of the accident years.

The $7.6 million increase in prior period reserves for unpaid losses and LAE recognized in 2016 was attributable to $5.3 million favorable net development on claims incurred in the 2015 accident year, $3.9 million unfavorable net development on claims incurred in the 2014 accident year and $9.0 million unfavorable net development on claims incurred in the 2013 and prior accident years. Our MGA Commercial Products operating unit, Specialty Personal Lines operating unit and Specialty Commercial operating unit accounted for $11.3 million, $5.0 million, and $1.2 million, respectively, of the increase in prior period reserves recognized during 2016. The increase in reserves for our MGA Commercial operating unit was primarily related to our commercial auto liability line of business. The increase in reserves for our Specialty Personal Lines operating unit was primarily attributable to the 2015, 2014 and 2013 and prior accident years. The increase in reserves for our Specialty Commercial operating unit was primarily related to $0.9 million unfavorable development in our medical professional liability products and $0.7 million related to our commercial auto liability specialty program, partially offset by $0.3 million favorable development in our general aviation line of business and $0.1 million favorable development in our commercial excess liability line of business. These unfavorable developments were partially offset by favorable development of $6.6 million in our Standard Commercial P&C operating unit and $3.3 in our Workers Compensation operating unit. The decrease in reserves for our Standard Commercial P&C operating unit was primarily related to our general liability lines of business. The decrease in prior period reserves for our Workers Compensation operating unit was attributable to the 2015, 2014, 2013 and prior accident years.

Short-Duration Contract Disclosures

ASU 2015-09, "Disclosures about Short-Duration Contracts" (Topic 944), requires insurers to make disclosures about their liability for unpaid claims and claim adjustment expenses for short-duration insurance contracts. These disclosures include tables showing incurred and paid claims development information (net of reinsurance and excluding unallocated loss adjustment expenses) which are disaggregated based on the characteristics of the insurance contracts that the insurer writes and other factors specific to the reporting entity. The information should be disclosed by accident year for the number of years claims typically remain outstanding, but need not be more than 10 years, including a reconciliation of the disaggregated information to the consolidated statement of financial position. The basis for our disaggregation of this information is by each of our three reportable segments. See Note 10, "Segment Information," for additional information regarding our three reportable segments.

Reserves for Incurred But Not Reported ("IBNR") Claims

Reserves for IBNR claims are based on the estimated ultimate cost of settling claims, including the effects of inflation and other social and economic factors, using past experience adjusted for current trends and any other factors that would modify past experience. We use a variety of statistical and actuarial techniques to analyze current claims costs, including frequency and severity data and prevailing economic, social and legal factors. Each such method has its own set of assumptions and outputs, and each has strengths and weaknesses in different areas. Since no single estimation method is superior to another method in all situations, the methods and assumptions used to project loss reserves will vary by coverage and product. We use what we believe to be the most appropriate set of actuarial methods and assumptions for each product line grouping and coverage. While the loss projection methods may vary by product line and coverage, the general approach for calculating IBNR remains the same: ultimate losses are forecasted first, and that amount is reduced by the amount of cumulative paid claims and case reserves. Reserves established in prior years are adjusted as loss experience develops and new information becomes available. Adjustments to previously estimated reserves are reflected in the results of operations in the year in which they are made.

As described above, various actuarial methods are utilized to determine the reserves for losses and LAE recorded in our Consolidated Balance Sheets. Weightings of methods at a detailed level may change from evaluation to evaluation based on a number of observations, measures, and time elements. There were no significant changes to the methods and assumptions underlying our consolidated reserve estimations and selections as of December 31, 2016.

Methodology for Determining Cumulative Number of Reported Claims

A claim file is created when the Company is notified of an actual demand for payment, notified of an event that may lead to a demand for payment or when it is determined that a demand for payment could possibly lead to a future demand for payment on another coverage on the same policy or on another policy. The cumulative number of reported claims is predominately measured at a coverage level by occurrence, with the exception of our Specialty Commercial operating unit which is predominately measured at the claim level. Reported occurrences that do not result in a liability are included in reported claims. The Company does not generate claim counts for ceded business.

Incurred & Paid Claims Development Disclosures

The following tables provide information about incurred and cumulative paid losses and allocated loss adjustment expenses ("ALAE"), net of reinsurance for our three reportable segments, our Specialty Commercial Segment, our Standard Commercial Segment and our Personal Segment. The incurred and paid losses by accident year information presented for all segments in the below tables for calendar years prior to 2016 is required supplementary information and is unaudited. The following tables also include IBNR reserves plus expected development on reported claims and the cumulative number of reported claims as of December 31, 2016 ($ in thousands):

Specialty Commercial Segment

	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance										As of December 31,	
Accident Year	For the Years Ended December 31, Unaudited										IBNR	Cumulative Number of Reported Claims
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	2016
2007	$51,458	$52,141	$51,813	$52,673	$50,158	$ 49,654	$ 49,096	$ 49,056	$ 49,290	$ 49,544	$ 68	6,095
2008		55,617	56,150	58,143	57,923	56,579	55,157	55,425	55,457	55,864	(102)	7,367
2009			60,950	62,679	61,196	59,471	59,831	59,635	59,988	61,361	87	5,456
2010				74,187	78,089	75,695	77,593	78,003	77,972	77,631	1,227	4,999
2011					88,679	87,558	91,059	90,713	89,737	87,793	1,641	5,782
2012						106,371	111,253	111,841	115,709	116,320	2,020	7,337
2013							140,546	135,114	137,230	143,983	2,127	9,188
2014								144,996	133,464	138,842	6,547	10,049
2015									147,304	146,610	23,447	10,707
2016										151,494	52,283	10,424
									Total	$1,029,442		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance

Accident Year	For the Years Ended December 31, Unaudited									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 18,851	$ 33,504	$ 41,344	$ 44,861	$ 47,453	$ 48,612	$ 48,612	$ 48,783	$ 48,860	$ 49,025
2008		24,134	37,803	44,903	51,280	53,723	53,577	54,080	54,909	55,372
2009			21,259	34,411	45,757	53,135	56,791	57,641	59,149	60,785
2010				24,818	45,234	58,139	68,625	73,398	74,513	75,787
2011					27,454	53,509	71,697	80,004	83,787	84,936
2012						37,655	60,923	82,066	97,680	109,060
2013							40,475	76,366	101,725	126,025
2014								42,097	73,631	99,521
2015									39,515	74,906
2016										41,397
									Total	$776,814
									All outstanding liabilities before 2007, net of reinsurance	(26)
									Liabilities for claims and claim adjustment expenses, net of reinsurance	$252,602

Standard Commercial Segment

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance — **As of December 31,**

Accident Year	For the Years Ended December 31, Unaudited										IBNR	Cumulative Number of Reported Claims
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	2016
2007	$48,423	$45,280	$42,632	$42,898	$41,814	$39,476	$37,894	$36,798	$37,321	$ 36,419	$ 576	3,156
2008		49,452	47,557	46,762	45,556	42,758	41,597	40,387	40,001	39,195	1,826	3,246
2009			44,719	45,674	46,772	46,778	45,970	44,159	43,851	43,107	2,102	2,632
2010				45,263	45,235	44,847	43,164	43,459	42,426	42,175	2,252	2,903
2011					60,236	56,489	55,156	49,268	47,266	47,423	3,387	4,364
2012						51,998	52,554	48,222	45,990	44,272	5,144	3,212
2013							55,482	57,528	56,703	53,174	6,379	3,910
2014								55,488	55,808	53,568	8,979	3,531
2015									49,571	49,857	11,946	3,129
2016										46,880	16,885	2,554
									Total	$456,070		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance

Accident Year	For the Years Ended December 31, Unaudited									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 13,883	$ 20,362	$ 25,484	$ 28,908	$ 31,311	$ 32,288	$ 32,949	$ 33,561	$ 33,982	$ 34,483
2008		17,182	25,624	29,058	32,523	34,056	34,762	35,360	36,276	36,859
2009			15,242	28,313	32,075	35,818	38,316	40,389	40,575	40,629
2010				21,302	28,342	30,957	33,428	37,166	39,115	39,706
2011					24,899	35,119	38,909	40,301	41,140	42,441
2012						23,445	32,203	34,789	37,191	38,526
2013							23,123	36,411	41,809	44,475
2014								24,255	37,122	41,514
2015									19,085	34,245
2016										21,508
									Total	$374,386
									All outstanding liabilities before 2007, net of reinsurance	538
									Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 82,222

Personal Segment

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance										As of December 31,	
Accident Year	For the Years Ended December 31, Unaudited									IBNR	Cumulative Number of Reported Claims
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	2016
2007	$28,774	$31,603	$31,252	$31,485	$31,651	$31,931	$32,272	$32,517	$32,528	$ 32,528	$ -	15,814
2008		36,247	36,976	38,329	39,412	39,793	40,170	40,239	40,324	40,369	-	17,353
2009			40,436	42,092	46,244	47,977	48,930	49,694	49,772	49,891	-	21,052
2010				63,862	78,294	80,765	84,724	83,903	84,252	84,591	6	30,179
2011					75,746	77,652	87,810	86,757	86,804	86,948	(28)	31,612
2012						58,604	73,795	70,552	71,513	72,042	50	23,937
2013							55,706	59,132	60,100	60,211	234	23,461
2014								5,452	5,340	6,243	406	19,275
2015									23,104	25,682	1,813	23,234
2016										32,260	6,638	21,134
									Total	$490,765		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance										
Accident Year	For the Years Ended December 31, Unaudited									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 18,106	$ 27,757	$ 30,043	$ 30,975	$ 31,355	$ 31,523	$ 32,056	$ 31,213	$ 32,531	$ 32,530
2008		20,005	32,555	36,782	38,925	39,511	40,210	40,309	40,323	40,347
2009			23,306	37,621	44,689	47,967	49,287	49,539	49,704	49,853
2010				38,643	67,755	75,199	82,624	83,511	84,111	84,556
2011					46,416	67,939	83,497	85,533	86,217	86,593
2012						37,860	64,278	68,849	70,807	71,995
2013							45,901	54,514	58,047	59,775
2014								2,515	4,418	5,631
2015									11,570	22,281
2016										21,669
									Total	$475,230
									All outstanding liabilities before 2007, net of reinsurance	9
									Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 15,544

The reconciliation of the net incurred and paid development tables to the liability for unpaid losses and LAE in our Consolidated Balance Sheets is as follows (in thousands):

	2016
Net outstanding liabilities for losses and LAE	
Specialty Commercial Segment	$ 252,602
Standard Commercial Segment	82,222
Personal Segment	15,544
Liabilities for unpaid losses and allocated loss adjustment expenses, net of reinsurance	350,368
Reinsurance recoverable on unpaid losses and LAE	
Specialty Commercial Segment	102,597
Standard Commercial Segment	8,540
Personal Segment	12,100
Total reinsurance recoverable on unpaid losses and LAE	123,237
Unallocated loss adjustment expenses	
Specialty Commercial Segment	3,831
Standard Commercial Segment	3,031
Personal Segment	1,100
Total unallocated loss adjustment expenses	7,962
Total reserves for unpaid losses and loss adjustment expenses	$ 481,567

Claims Duration

The following table provides supplementary unaudited information about the annual percentage payout of incurred losses and ALAE, net of reinsurance, as of December 31, 2016:

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (1)									
	Unaudited									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Specialty Commercial Segment	32.4%	24.8%	17.4%	12.0%	6.0%	1.2%	1.2%	1.5%	0.5%	-0.3%
Standard Commercial Segment	44.6%	23.0%	8.7%	6.6%	5.0%	3.3%	1.3%	1.4%	1.3%	-1.4%
Personal Segment	51.5%	29.2%	10.9%	4.3%	1.4%	0.8%	0.7%	-0.7%	1.9%	0.0%

(1) The average annual percentage payout is calculated from a paid losses and ALAE development pattern based on an actuarial analysis of the paid losses and ALAE movements by accident year for each disaggregation category. The paid losses and ALAE development pattern provides the expected percentage of ultimate losses and ALAE to be paid in each year. The pattern considers all accident years included in the claims development tables.

Kingstone Companies, Inc.

Note 10 - Property and Casualty Insurance Activity

Premiums written, ceded and earned are as follows:

	Direct	Assumed	Ceded	Net
Year ended December 31, 2016				
Premiums written	$103,191,995	$ 28,522	$(37,294,330)	$65,926,187
Change in unearned premiums	(6,110,225)	6,091	1,585,853	(4,518,281)
Premiums earned	$97,081,770	$ 34,613	$(35,708,477)	$61,407,906
Year ended December 31, 2015				
Premiums written	$91,003,968	$ 40,971	$(30,660,161)	$60,384,778
Change in unearned premiums	(8,436,456)	4,255	(3,340,495)	(11,772,696)
Premiums earned	$82,567,512	$ 45,226	$(34,000,656)	$48,612,082

Premium receipts in advance of the policy effective date are recorded as advance premiums. The balance of advance premiums as of December 31, 2016 and 2015 was $1,421,560 and $1,199,376, respectively.

The components of the liability for loss and LAE expenses and related reinsurance receivables as of December 31, 2016 and 2015 are as follows:

	Gross Liability	Reinsurance Receivables
December 31, 2016		
Case-basis reserves	$25,000,733	$10,804,341
Loss adjustment expenses	7,752,617	1,893,094
IBNR reserves	8,983,369	3,079,445
Recoverable on unpaid losses		15,776,880
Recoverable on paid losses	-	2,319,140
Total loss and loss adjustment expenses	$41,736,719	18,096,020
Unearned premiums		14,101,745
Total reinsurance receivables		$32,197,765
December 31, 2015		
Case-basis reserves	$24,730,463	$11,264,279
Loss adjustment expenses	5,429,221	1,720,522
IBNR reserves	9,716,816	3,721,563
Recoverable on unpaid losses		16,706,364
Recoverable on paid losses	-	2,047,979
Total loss and loss adjustment expenses	$39,876,500	18,754,343
Unearned premiums		12,515,892
Total reinsurance receivables		$31,270,235

The following table provides a reconciliation of the beginning and ending balances for unpaid losses and LAE:

	Years ended December 31,	
	2016	2015
Balance at beginning of period	$39,876,500	$39,912,683
Less reinsurance recoverables	(16,706,364)	(18,249,526)
Net balance, beginning of period	23,170,136	21,663,157
Incurred related to:		
Current year	27,853,010	23,642,998
Prior years	(63,349)	(462,998)
Total incurred	27,789,661	23,180,000
Paid related to:		
Current year	16,496,648	13,172,870
Prior years	8,503,310	8,500,151
Total paid	24,999,958	21,673,021
Net balance at end of period	25,959,839	23,170,136
Add reinsurance recoverables	15,776,880	16,706,364
Balance at end of period	$41,736,719	$39,876,500

Incurred losses and LAE are net of reinsurance recoveries under reinsurance contracts of $11,796,714 and $14,428,197 for the years ended December 31, 2016 and 2015, respectively.

Prior year incurred loss and LAE development results from changes in ultimate loss and LAE estimates by line of business and accident year. Prior year loss and LAE development incurred during the years ended December 31, 2016 and 2015 was favorable $(63,349) and favorable $(462,998), respectively. The Company's management continually monitors claims activity to assess the appropriateness of carried case and incurred but not reported ("IBNR") reserves, giving consideration to Company and industry trends.

Loss and LAE reserves

The reserving process for loss and LAE reserves provides for the Company's best estimate at a particular point in time of the ultimate unpaid cost of all losses and LAE incurred, including settlement and administration of losses, and is based on facts and circumstances then known including losses that have occurred but that have not yet been reported. The process relies on standard actuarial reserving methodologies, judgments relative to estimates of ultimate claims severity and frequency, the length of time before losses will develop to their ultimate level ('tail' factors), and the likelihood of changes in the law or other external factors that are beyond the Company's control. Several actuarial reserving methodologies are used to estimate required loss reserves. The process produces carried reserves set by management based upon the actuaries' best estimate and is the cumulative combination of the best estimates made by line of business, accident year, and loss and LAE. The amount of loss and LAE reserves for individual reported claims (the "case reserve") is determined by the claims department and changes over time as new information is gathered. Such information includes a review of coverage applicability, comparative liability on the part of the insured, injury severity, property damage, replacement cost estimates, and any other information considered pertinent to estimating the exposure presented by the claim. The amounts of loss and LAE reserves for unreported claims and development on known claims (IBNR reserves) are determined using historical information aggregated by line of insurance as adjusted to current conditions. Since this process produces loss reserves set by management based upon the actuaries' best estimate, there is no explicit or implicit provision for uncertainty in the carried loss reserves.

Due to the inherent uncertainty associated with the reserving process, the ultimate liability may differ, perhaps substantially, from the original estimate. Such estimates are regularly reviewed and updated and any resulting adjustments are included in the current year's results. Reserves are closely monitored and are recomputed periodically using the most recent information on reported claims and a variety of statistical techniques. On at least a quarterly basis, the Company reviews by line of business existing reserves, new claims, changes to existing case reserves and paid losses with respect to the current and prior years. Several methods are used, varying by line of business and accident year, in order to select the estimated year-end loss reserves. These methods include the following:

Paid Loss Development – historical patterns of paid loss development are used to project future paid loss emergence in order to estimate required reserves.

Incurred Loss Development – historical patterns of incurred loss development, reflecting both paid losses and changes in case reserves, are used to project future incurred loss emergence in order to estimate required reserves.

Paid Bornhuetter-Ferguson ("BF") – an estimated loss ratio for a particular accident year is determined, and is weighted against the portion of the accident year claims that have been paid, based on historical paid loss development patterns. The estimate of required reserves assumes that the remaining unpaid portion of a particular accident year will pay out at a rate consistent with the estimated loss ratio for that year. This method can be useful for situations where an unusually high or low amount of paid losses exists at the early stages of the claims development process.

Incurred Bornhuetter-Ferguson ("BF") - an estimated loss ratio for a particular accident year is determined, and is weighted against the portion of the accident year claims that have been reported, based on historical incurred loss development patterns. The estimate of required reserves assumes that the remaining unreported portion of a particular accident year will pay out at a rate consistent with the estimated loss ratio for that year. This method can be useful for situations where an unusually high or low amount of reported losses exists at the early stages of the claims development process.

Incremental Claim-Based Methods – historical patterns of incremental incurred losses and paid LAE during various stages of development are reviewed and assumptions are made regarding average loss and LAE development applied to remaining claims inventory. Such methods more properly reflect changes in the speed of claims closure and the relative adequacy of case reserve levels at various stages of development. These methods also provide a more accurate estimate of IBNR for lines of business with relatively few remaining open claims but for which significant recent settlement activity has occurred.

Management's best estimate of required reserves is generally based on an average of the methods above, with appropriate weighting of the various methods based on the line of business and accident year being projected. In some cases, additional methods or historical data from industry sources are employed to supplement the projections derived from the methods listed above.

Two key assumptions that materially affect the estimate of loss reserves are the loss ratio estimate for the current accident year used in the BF methods described above, and the loss development factor selections used in the loss development methods described above. The loss ratio estimates used in the BF methods are selected after reviewing historical accident year loss ratios adjusted for rate changes, trend, and mix of business.

The Company is not aware of any claims trends that have emerged or that would cause future adverse development that have not already been considered in existing case reserves and in its current loss development factors.

In New York State, lawsuits for negligence are subject to certain limitations and must be commenced within three years from the date of the accident or are otherwise barred. Accordingly, the Company's exposure to unreported claims ('pure' IBNR) for accident dates of December 31, 2013 and prior is limited although there remains the possibility of adverse development on reported claims ('case development' IBNR).

The following is information about incurred and paid claims development as of December 31, 2016, net of reinsurance, as well as the cumulative reported claims by accident year and total IBNR reserves as of December 31, 2016 included in the net incurred loss and allocated expense amounts. The historical information regarding incurred and paid claims development for the years ended December 31, 2007 to December 31, 2015 is presented as supplementary unaudited information.

All Lines of Business
(in thousands, except reported claims data)

	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance										As of December 31, 2016	
	For the Years Ended December 31,											Cumulative Number of Reported Claims by Accident
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR	Year
	(Unaudited 2007 - 2015)											
2007	$3,572	$3,414	$3,655	$3,710	$3,744	$3,770	$3,877	$3,913	$3,916	$ 3,941	$ 6	1,067
2008		4,505	4,329	4,223	4,189	4,068	4,055	4,056	4,040	4,038	3	1,133
2009			4,403	4,254	4,287	4,384	4,511	4,609	4,616	4,667	8	1,136
2010				5,598	5,707	6,429	6,623	6,912	6,853	6,838	20	1,616
2011					7,603	7,678	8,618	9,440	9,198	9,066	69	1,913
2012						9,539	9,344	10,278	10,382	10,582	168	4,701(1)
2013							10,728	9,745	9,424	9,621	507	1,551
2014								14,193	14,260	14,218	1,009	2,117
2015									22,340	21,994	2,452	2,508
2016										26,062	5,593	2,688
									Total	$ 111,027		

(1) Reported claims for accident year 2012 includes 3,406 claims from Superstorm Sandy.

All Lines of Business
(in thousands)

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance For the Years Ended December 31, (Unaudited 2007 - 2015)									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$1,790	$2,233	$2,924	$3,428	$3,603	$3,649	$3,670	$3,797	$3,873	$3,892
2008		2,406	3,346	3,730	3,969	4,003	4,029	4,028	4,031	4,031
2009			2,298	3,068	3,607	3,920	4,134	4,362	4,424	4,468
2010				2,566	3,947	4,972	5,602	6,323	6,576	6,720
2011					3,740	5,117	6,228	7,170	8,139	8,540
2012						3,950	5,770	7,127	8,196	9,187
2013							3,405	5,303	6,633	7,591
2014								5,710	9,429	10,738
2015									12,295	16,181
2016										15,364
									Total	$86,712

Net liability for unpaid claim and allocated claim adjustment expenses for the accident years presented	$24,315
All outstanding liabilities before 2007, net of reinsurance	602
Liabilities for claims and claim adjustment expenses, net of reinsurance	$24,917

Reported claim counts are measured on an occurrence or per event basis. A single claim occurrence could result in more than one loss type or claimant; however the Company counts claims at the occurrence level as a single claim regardless of the number of claimants or claim features involved.

The reconciliation of the net incurred and paid claims development tables to the liability for loss and LAE reserves in the consolidated balance sheet is as follows:

(in thousands)	As of December 31, 2016
Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 24,917
Total reinsurance recoverable on unpaid claims	15,777
Unallocated claims adjustment expenses	1,043
Total gross liability for loss and LAE reserves	$ 41,737

The following is supplementary unaudited information about average historical claims duration as of December 31, 2016:

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance									
	1	2	3	4	5	6	7	8	9	10
All Lines of Business	46.1%	18.6%	12.7%	9.3%	6.7%	3.0%	1.0%	1.4%	1.0%	0.5%

The percentages in the above table do not add up to 100% because the percentages represent averages across all accident years at each development stage.

Unico American Corporation and Subsidiaries

NOTE 8 – UNPAID LOSSES AND LOSS ADJUSTMENT EXPENSES

Crusader's loss and loss adjustment expense case and incurred but not reported ("IBNR") reserves are as follows:

	Year ended December 31	
	2016	2015
Direct reserves:		
Case reserves	$ 16,384,081	$ 17,991,121
IBNR reserves	30,671,706	31,102,450
Total direct reserves	$ 47,055,787	$ 49,093,571
Reserves net of reinsurance:		
Case reserves	$ 12,458,646	$ 14,696,913
IBNR reserves	25,076,171	24,759,697
Total net reserves	$ 37,534,817	$ 39,456,610

Reserves for losses and loss adjustment expenses before reinsurance for each of Crusader's lines of business are as follows:

	Year ended December 31			
Line of Business	2016		2015	
Commercial multi-peril	$ 46,100,751	98.0%	$ 48,167,640	98.1%
Other liability	912,014	1.9%	889,867	1.8%
Other	43,022	0.1%	36,064	0.1%
Total	$ 47,055,787	100.0%	$ 49,093,571	100.0%

The Company's consolidated financial statements include estimated reserves for unpaid losses and related loss adjustment expenses of the insurance company operation. Crusader sets loss and loss adjustment expense reserves at each balance sheet date based upon management's best estimate of the ultimate payments that it anticipates will be made to settle all losses incurred and all related loss adjustment expenses incurred as of that date for both reported and unreported claims.

The following table provides an analysis of the roll forward of Crusader's loss and loss adjustment expense reserves, including a reconciliation of the ending balance sheet liability for the periods indicated:

	Year ended December 31		
	2016	2015	2014
Reserve for unpaid losses and loss adjustment expenses at beginning of year – net of reinsurance	$ 39,456,610	$ 39,233,783	$ 39,448,546
Incurred losses and loss adjustment expenses:			
Provision for insured events of current year	22,850,408	21,607,628	17,925,882
Decrease in provision for incurred events of prior years	(23,530)	(2,444,312)	(3,308,764)
Total incurred losses and loss adjustment expenses	22,826,878	19,163,316	14,617,118
Payments:			
Losses and loss adjustment expenses attributable to insured events of the current year	7,984,562	6,812,275	4,286,861
Losses and loss adjustment expenses attributable to insured events of prior years	16,764,109	12,128,214	10,545,020
Total payments	24,748,671	18,940,489	14,831,881
Reserve for unpaid losses and loss adjustment expenses at end of year – net of reinsurance	37,534,817	39,456,610	39,233,783
Reinsurance recoverable on unpaid losses and loss adjustment expenses at end of year	9,520,970	9,636,961	5,162,775
Reserve for unpaid losses and loss adjustment expenses at end of year per balance sheet, gross of reinsurance	$ 47,055,787	$ 49,093,571	$ 44,396,558

At each review period, actual claims costs that emerge are compared with the claims costs that were expected to emerge during that development period. Sometimes the previous claims costs estimates prove to have been too high; sometimes they prove to have been too low. In the case of Crusader, the estimates proved to be too high in each of the years reflected in the table. The favorable development in the 2014 through 2016 calendar years underscores the inherent uncertainty in insurance claims costs, especially for a very small insurer. Management reviews claims costs that appear to be different from the historical claims costs to determine whether those differences are a normal part of the process or an indication that a change in reserve assumptions is appropriate. Management concluded that the differences noted above are differences between actual and expected claims costs that emerge from time to time, particularly in an insurer the size of Crusader.

The following table presents loss development information by accident year, including cumulative incurred and paid losses and allocated loss adjustment expenses ("ALAE"), net of reinsurance, as well as cumulative claim frequency and the total of incurred but not reported liabilities plus expected development on reported claims as of December 31, 2016:

Accident Year	Cumulative Incurred	Cumulative Paid	Total of Incurred But Not Reported Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2007	$ 24,023,109	$ 24,023,106	$ —	1,013
2008	17,617,589	17,593,260	—	921
2009	18,554,526	17,550,304	842,316	1,013
2010	17,641,161	16,778,214	682,675	974
2011	18,224,634	17,422,583	642,817	1,020
2012	18,050,131	16,734,967	794,910	961
2013	21,742,580	19,067,334	1,430,773	839
2014	14,930,960	9,173,947	3,433,848	732
2015	20,840,034	11,151,955	6,440,742	686
2016	21,646,663	7,435,120	10,808,090	696
Total	$ 193,271,387	$ 156,930,790	$ 25,076,171	

The following table reconciles the above cumulative incurred and paid data to Crusader's loss and loss adjustment expense reserves as of December 31, 2016:

	December 31 2016
Cumulative incurred losses and ALAE	$ 193,271,387
Less: cumulative paid losses and ALAE	(156,930,790)
Reserve for unpaid losses and ALAE (accident years 2007 to 2016)	36,340,597
Reserves for unpaid losses and ALAE (accident years prior to 2007)	109,898
Reserves for unpaid unallocated loss adjustment expenses	1,084,322
Reserve for unpaid losses and loss adjustment expenses, net of reinsurance	37,534,817
Reinsurance recoverable on unpaid losses and loss adjustment expenses	9,520,970
Reserve for unpaid losses and loss adjustment expenses, gross of reinsurance	$ 47,055,787

Crusader's liability for unpaid loss and loss adjustment expense reserves consists of case reserves and reserves for IBNR claims. Case reserves are established by claims personnel based on a review of the facts known at the time the claim is reported and are subsequently revised as more information about a claim becomes known. IBNR is estimated using various actuarial methods and techniques and includes (1) reserves for losses and loss adjustment expenses on claims that have occurred but for which claims have not yet been reported to Crusader, and (2) a provision for expected future development on case reserves for information not currently known.

At the end of each fiscal quarter, Crusader's reserves for each accident year (i.e., for all claims occurring within each year) are re-evaluated independently by the Company's president, the Company's chief financial officer, and an independent consulting actuary. Generally accepted actuarial methods, including the widely used Bornhuetter-Ferguson and loss development methods, are employed to estimate ultimate claims costs. An actuarial central estimate of the ultimate claims costs and IBNR reserves is ultimately determined by management and tested for reasonableness by the independent consulting actuary.

The Company determines the number of reported claims based on the number of loss events. A claim is considered a single loss event, per policy, and it may include multiple claimants and multiple coverages on a single policy. The cumulative number of reported claims is a sum of open claims, closed claims, and claims closed without payment.

NOTE 21 – SUPPLEMENTARY INFORMATION ON LOSS AND ALAE DEVELOPMENT (UNAUDITED)

The following table presents cumulative incurred losses and ALAE, net of reinsurance, for years ended December 31:

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
2007	$24,747,856	$26,117,669	$27,061,323	$27,029,577	$26,203,117	$25,511,988	$24,770,214	$24,107,044	$23,979,026
2008		22,580,220	22,106,937	21,290,931	20,004,073	19,347,265	18,668,518	17,889,384	17,456,810
2009			21,751,337	21,412,289	21,571,780	21,012,811	20,398,961	19,667,376	19,050,348
2010				21,418,368	20,437,443	19,883,812	19,326,007	18,639,537	18,075,737
2011					18,120,563	17,900,250	17,605,460	17,014,895	17,879,595
2012						18,511,598	19,532,022	18,895,666	18,344,175
2013							19,570,946	20,118,343	20,323,841
2014								16,884,731	15,394,995
2015									20,452,199

The following table presents cumulative paid losses and ALAE, net of reinsurance, for years ended December 31:

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
2007	$ 6,980,915	$12,283,217	$18,309,573	$21,637,121	$23,333,861	$23,548,201	$23,762,758	$23,906,841	$23,907,436
2008		6,962,996	9,869,827	13,950,969	15,902,618	16,856,762	17,001,061	17,041,185	17,178,322
2009			4,919,359	9,592,059	13,160,200	16,180,346	17,121,818	17,336,454	17,380,065
2010				7,535,122	10,695,223	12,955,467	14,756,510	15,330,864	16,283,050
2011					4,719,943	8,608,287	11,212,490	14,251,525	16,115,802
2012						6,719,982	11,673,621	13,411,125	15,369,629
2013							7,594,731	10,656,777	14,319,057
2014								3,826,263	6,082,893
2015									6,263,796

The following table presents average annual percentage payout of incurred claims by age, net of reinsurance, as of December 31, 2016:

Years	1	2	3	4	5	6	7	8	9	10
	25.3%	20.7%	24.4%	15.6%	7.8%	2.5%	1.1%	0.8%	0.2%	0.6%

American Financial Group, Inc.

O. Insurance

Cash and securities owned by U.S.-based insurance subsidiaries, having a carrying value of approximately $1.00 billion at December 31, 2016, were on deposit as required by regulatory authorities. In addition, $215 million was on deposit in support of AFG's underwriting activities at Lloyd's. At December 31, 2016, AFG and its subsidiaries had $332 million in undrawn letters of credit (none of which was collateralized) supporting the underwriting capacity of its U.K.-based Lloyd's insurer, Neon.

Property and Casualty Insurance Reserves Estimating the liability for unpaid losses and loss adjustment expenses ("LAE") is inherently judgmental and is influenced by factors that are subject to significant variation. Determining the liability is a complex process incorporating input from many areas of the Company including actuarial, underwriting, pricing, claims and operations management.

The process used to determine the total reserve for liabilities involves estimating the ultimate incurred losses and LAE, adjusted for amounts already paid on the claims. The IBNR reserve is derived by first estimating the ultimate unpaid reserve liability and subtracting case reserves for loss and LAE.

In determining management's best estimate of the ultimate liability, management (with the assistance of Company actuaries) considers items such as the effect of inflation on medical, hospitalization, material, repair and replacement costs, the nature and maturity of lines of insurance, general economic trends and the legal environment. In addition, historical trends adjusted for changes in underwriting standards, policy provisions, product mix and other factors are analyzed using actuarial reserve development techniques. Weighing all of the factors, the management team determines a single or "point" estimate that it records as its best estimate of the ultimate liability. Ranges of loss reserves are not developed by Company actuaries. This reserve analysis and review is completed each quarter and for almost every business within AFG's property and casualty sub-segments.

Each review includes in-depth analysis of several hundred subdivisions of the business, employing multiple actuarial techniques. For each subdivision, actuaries use informed, professional judgment to adjust these techniques as necessary to respond to specific conditions in the data or within the business.

Some of the standard actuarial methods employed for the quarterly reserve analysis may include (but may not be limited to):

- Case Incurred Development Method
- Paid Development Method
- Bornhuetter-Ferguson Method
- Incremental Paid LAE to Paid Loss Methods

Management believes that each method has particular strengths and weaknesses and that no single estimation method is most accurate in all situations. When applied to a particular group of claims, the relative strengths and weaknesses of each method can change over time based on the facts and circumstances. Ultimately, the estimation methods chosen are those which management believes produce the most reliable indication for the particular liabilities under review.

The period of time from the occurrence of a loss through the settlement of the liability is referred to as the "tail". Generally, the same actuarial methods are considered for both short-tail and long-tail lines of business because most of them work properly for both. The methods are designed to incorporate the effects of the differing length of time to settle particular claims. For short-tail lines, management tends to give more weight to the Case Incurred and Paid Development methods, although the various methods tend to produce similar results. For long-tail lines, more judgment is involved, and more weight may be given to the Bornhuetter-Ferguson method. Liability claims for long-tail lines are more susceptible to litigation and can be significantly affected by changing contract interpretation and the legal environment. Therefore, the estimation of loss reserves for these classes is more complex and subject to a higher degree of variability.

The level of detail in which data is analyzed varies among the different lines of business. Data is generally analyzed by major product or by coverage within product, using countrywide data; however, in some situations, data may be reviewed by state or region. Appropriate segmentation of the data is determined based on data credibility, homogeneity of development patterns, mix of business, and other actuarial considerations.

Supplementary statistical information is also reviewed to determine which methods are most appropriate to use or if adjustments are needed to particular methods. Such information includes:

- Open and closed claim counts
- Average case reserves and average incurred on open claims
- Closure rates and statistics related to closed and open claim percentages
- Average closed claim severity
- Ultimate claim severity
- Reported loss ratios
- Projected ultimate loss ratios
- Loss payment patterns

Within each business, results of individual methods are reviewed, supplementary statistical information is analyzed, and data from underwriting, operating and claim management are considered in deriving management's best estimate of the ultimate liability. This estimate may be the result of one method, a weighted average of several methods, or a judgmental selection as the management team determines is appropriate.

The liability for losses and LAE for a very limited number of claims with long-term scheduled payments under certain workers' compensation policies has been discounted at 4.5% at both December 31, 2016 and 2015, which represents an approximation of long-term investment yields. Because of the limited amount of claims involved, the net impact of discounting did not materially impact AFG's total liability for unpaid losses and loss adjustment expenses (net reductions from discounting of $16 million and $18 million at December 31, 2016 and 2015, respectively).

The following table provides an analysis of changes in the liability for losses and loss adjustment expenses over the past three years (in millions):

	2016	2015	2014
Balance at beginning of period	$ 8,127	$ 7,872	$ 6,410
Less reinsurance recoverables, net of allowance	2,201	2,227	2,122
Net liability at beginning of period	5,926	5,645	4,288
Provision for losses and LAE occurring in the current year	2,730	2,662	2,488
Net increase (decrease) in the provision for claims of prior years:			
Special A&E charges	36	67	24
Neon exited lines charge	57	—	—
Other	(61)	(34)	(18)
Total losses and LAE incurred	2,762	2,695	2,494
Payments for losses and LAE of:			
Current year	(841)	(828)	(789)
Prior years	(1,512)	(1,575)	(1,340)
Total payments	(2,353)	(2,403)	(2,129)
Reserves of businesses acquired (disposed) (*)	(40)	—	1,028
Foreign currency translation and other	(34)	(11)	(36)
Net liability at end of period	6,261	5,926	5,645
Add back reinsurance recoverables, net of allowance	2,302	2,201	2,227
Gross unpaid losses and LAE included in the balance sheet	$ 8,563	$ 8,127	$ 7,872

(*) Reflects the November 2016 reinsurance to close transaction at Neon (discussed below) and the acquisition of Summit in April 2014 (discussed in *Note B — "Acquisitions and Sale of Businesses"*).

The net increase in the provision for claims of prior years in 2016 reflects (i) reserve strengthening at National Interstate (within the Property and transportation sub-segment), (ii) adverse reserve development at Neon and higher than anticipated severity in New York contractor claims (within the Specialty casualty sub-segment), (iii) the $57 million special charge to increase loss reserves related to Neon's exit of its UK and international medical malpractice and general liability lines of business, and (iv) the $36 million special charge to increase asbestos and environmental reserves. This adverse development was partially offset by (i) lower than expected losses in crop operations and lower than expected claim severity in the property and inland marine and trucking businesses (all within the Property and transportation sub-segment), (ii) lower than anticipated claim frequency and severity in workers' compensation business, lower than expected claim severity in directors and officers liability insurance and lower than expected claim frequency and severity in excess liability business (all within the Specialty casualty sub-segment), and (iii) lower than anticipated claim severity in the fidelity and crime business and lower than expected claim frequency and severity in the surety business (within the Specialty financial sub-segment).

The net increase in the provision for claims of prior years in 2015 reflects (i) higher than expected claim severity at National Interstate and higher than anticipated claim frequency in the ocean marine business (all within the Property and transportation sub-segment), (ii) adverse reserve development at Neon (within the Specialty casualty sub-segment), and (iii) the $67 million special charge to increase asbestos and environmental reserves. This adverse development was partially offset by (i) lower than expected claim severity in the property and inland marine business, agricultural operations and a run-off book of homebuilders business (all within the Property and transportation sub-segment), (ii) lower than anticipated claim severity in workers' compensation business, lower than anticipated claim severity and frequency in excess liability insurance and lower than expected claim severity in directors and officers liability insurance (all within the Specialty casualty sub-segment), and (iii) lower than anticipated claim frequency and severity in the surety business and products for financial institutions and lower than expected claim severity in the fidelity business and run-off collateral value insurance (all within the Specialty financial sub-segment).

Net adverse reserve development in 2014 reflects higher than expected severity in commercial auto liability losses written in the transportation businesses (within the Property and transportation sub-segment), higher than expected claims severity in contractor claims and in a run-off book of casualty business and adverse reserve development at Neon (all within the Specialty casualty sub-segment), and the $24 million special charge to increase asbestos and environmental reserves. This adverse reserve development was offset by (i) lower than expected claim severity in directors and officers liability insurance, lower than expected claim severity and frequency in excess liability insurance and lower than anticipated claim severity in specialty workers' compensation business (all within the Specialty casualty sub-segment), and (ii) lower than expected claim severity in the surety and fidelity businesses and lower than expected claim frequency and severity in the foreign credit business and products for financial institutions (all within the Specialty financial sub-segment).

In November 2016, the Neon Lloyd's syndicate completed a reinsurance to close transaction for its 2007 year of account with StarStone Underwriting Limited, a subsidiary of Enstar Group Limited. The transaction included a quota share of the Italian public hospital business written in Neon's 2008 year of account and represents Neon's complete exit from the Italian public hospital medical malpractice business. In the Lloyd's market, a reinsurance to close transaction transfers the responsibility for discharging all of the liabilities that attach to the transferred year of account plus the right to any income due to the closing year of account in return for a premium.

In May 2015, the FASB issued ASU 2015-09, *Financial Services-Insurance: Disclosures about Short-Duration Contracts*. The ASU requires insurance entities to disclose incurred and paid claims development information by accident year, net of reinsurance. All of AFG's material short-duration insurance contracts are written in its property and casualty insurance segment. The development tables and the associated disclosures are aggregated in the following Specialty sub-segments: Property and transportation, Specialty casualty, Specialty financial and Other specialty. See *Note C — "Segments of Operations"* to the financial statements for a discussion of these sub-segments.

A reconciliation of incurred and paid claims development information to the aggregate carrying amount of the liability for unpaid losses and LAE, with separate disclosure of reinsurance recoverables on unpaid claims is shown below (in millions):

	2016	2015
Unpaid losses and allocated LAE, net of reinsurance:		
Specialty		
Property and transportation	$ 1,020	$ 971
Specialty casualty	3,356	3,170
Specialty financial	228	219
Other specialty	240	240
Total Specialty (excluding foreign reserves)	4,844	4,600
Other reserves		
Reserves for foreign operations	710	648
A&E reserves	337	327
Unallocated LAE	310	296
Other	60	55
Total other reserves	1,417	1,326
Total reserves, net of reinsurance	6,261	5,926
Add back reinsurance recoverables, net of allowance	2,302	2,201
Gross unpaid losses and LAE included in the balance sheet	$ 8,563	$ 8,127

The following claims development tables and associated disclosures related to short-duration insurance contracts are prepared by sub-segment within the property and casualty insurance business for the most recent 10 accident years. AFG determines its claim counts at the claimant or policy feature level depending on the particular facts and circumstances of the underlying claim. While the methodology is generally consistent within each sub-segment, there are minor differences between and within the sub-segments. The methods used to summarize claim counts have not changed significantly over the time periods reported in the tables below.

Property and transportation

(Dollars in Millions)

Incurred Claims and Allocated LAE, Net of Reinsurance

Accident Year	For the Years Ended (2007–2015 is Supplementary Information and Unaudited)										As of December 31, 2016	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total IBNR Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2007	$ 657	$ 595	$ 577	$ 572	$ 572	$ 569	$ 569	$ 568	$ 568	$ 568	$ 1	126,900
2008		923	871	852	853	856	854	855	856	854	3	157,173
2009			526	506	523	516	511	511	508	508	4	140,530
2010				702	662	668	676	679	679	683	10	140,614
2011					830	816	831	845	856	868	16	140,408
2012						890	884	897	909	922	27	146,584
2013							911	898	902	908	40	142,139
2014								868	852	841	67	137,214
2015									840	802	106	134,407
2016										760	250	109,187
									Total	$ 7,714		

Cumulative Paid Claims and Allocated LAE, Net of Reinsurance

Accident Year	For the Years Ended (2007–2015 is Supplementary Information and Unaudited)										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% (a)
2007	$ 284	$ 450	$ 492	$ 523	$ 539	$ 553	$ 559	$ 562	$ 563	$ 564	99.3%
2008		352	706	761	799	824	835	846	846	847	99.2%
2009			229	348	413	456	479	493	497	499	98.2%
2010				328	505	556	618	649	660	665	97.4%
2011					373	679	742	787	821	840	96.8%
2012						582	725	793	841	868	94.1%
2013							449	721	784	831	91.5%
2014								337	646	711	84.5%
2015									367	594	74.1%
2016										296	38.9%
									Total	$ 6,715	
									Unpaid losses and LAE — years 2007 through 2016	999	
									Unpaid losses and LAE — 11th year and prior (excluding unallocated LAE)	21	
									Unpaid losses and LAE, net of reinsurance (excluding unallocated LAE)	$ 1,020	

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance
(Supplementary Information and Unaudited)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Annual	46.5%	29.5%	7.9%	6.1%	3.6%	2.1%	1.0%	0.3%	0.1%	0.2%
Cumulative	46.5%	76.0%	83.9%	90.0%	93.6%	95.7%	96.7%	97.0%	97.1%	97.3%

(a) Represents the cumulative percentage paid of incurred claims and allocated LAE (net of reinsurance, as estimated at December 31, 2016).

Specialty casualty

(Dollars in Millions)

Incurred Claims and Allocated LAE, Net of Reinsurance

Accident Year	For the Years Ended (2007–2015 is Supplementary Information and Unaudited)										As of December 31, 2016	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total IBNR Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2007	$ 1,036	$ 957	$ 892	$ 852	$ 828	$ 821	$ 818	$ 794	$ 802	$ 803	$ 40	62,676
2008		905	891	874	860	871	856	855	849	855	48	59,886
2009			864	867	845	826	816	811	812	807	58	53,097
2010				847	863	864	842	856	846	845	74	52,771
2011					831	831	819	828	814	808	89	50,635
2012						874	865	859	859	855	124	49,732
2013							938	921	915	910	159	49,239
2014								1,011	984	984	263	51,808
2015									1,057	1,023	380	52,001
2016										1,105	636	47,436
									Total	$ 8,995		

Cumulative Paid Claims and Allocated LAE, Net of Reinsurance

Accident Year	For the Years Ended (2007–2015 is Supplementary Information and Unaudited)										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% (a)
2007	$ 166	$ 357	$ 477	$ 563	$ 623	$ 664	$ 692	$ 708	$ 724	$ 733	91.3%
2008		162	355	490	588	653	702	727	751	768	89.8%
2009			160	366	494	575	636	673	698	713	88.4%
2010				179	393	539	623	676	712	734	86.9%
2011					165	369	506	595	643	674	83.4%
2012						163	368	495	596	658	77.0%
2013							171	377	530	638	70.1%
2014								182	398	556	56.5%
2015									170	398	38.9%
2016										181	16.4%
									Total	$ 6,053	
									Unpaid losses and LAE — years 2007 through 2016	2,942	
									Unpaid losses and LAE — 11th year and prior (excluding unallocated LAE)	414	
									Unpaid losses and LAE, net of reinsurance (excluding unallocated LAE)	$ 3,356	

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance
(Supplementary Information and Unaudited)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Annual	19.0%	23.7%	16.1%	11.0%	7.0%	4.7%	3.0%	2.2%	2.0%	1.1%
Cumulative	19.0%	42.7%	58.8%	69.8%	76.8%	81.5%	84.5%	86.7%	88.7%	89.8%

(a) Represents the cumulative percentage paid of incurred claims and allocated LAE (net of reinsurance, as estimated at December 31, 2016).

Specialty financial

(Dollars in Millions)

Incurred Claims and Allocated LAE, Net of Reinsurance

Accident Year	For the Years Ended (2007–2015 is Supplementary Information and Unaudited)										As of December 31, 2016	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total IBNR Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2007	$ 170	$ 165	$ 159	$ 149	$ 145	$ 144	$ 142	$ 141	$ 140	$ 136	$ 1	21,643
2008		190	207	212	209	203	199	198	197	198	1	27,287
2009			193	193	187	184	188	186	187	186	1	27,438
2010				139	146	133	133	135	133	130	3	21,921
2011					140	158	157	155	148	146	14	16,364
2012						164	163	151	139	137	15	21,029
2013							141	145	137	131	15	28,220
2014								146	157	156	22	28,814
2015									156	159	36	35,880
2016										179	75	29,464
									Total	$ 1,558		

Cumulative Paid Claims and Allocated LAE, Net of Reinsurance

Accident Year	For the Years Ended (2007–2015 is Supplementary Information and Unaudited)										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% (a)
2007	$ 82	$ 114	$ 126	$ 133	$ 134	$ 135	$ 135	$ 135	$ 136	$ 135	99.3%
2008		103	153	185	189	189	191	193	194	194	98.0%
2009			112	145	157	166	171	182	185	186	100.0%
2010				61	93	104	122	133	131	128	98.5%
2011					59	113	116	124	131	132	90.4%
2012						71	104	109	117	121	88.3%
2013							70	100	107	114	87.0%
2014								62	108	125	80.1%
2015									72	109	68.6%
2016										87	48.6%
									Total	$ 1,331	
									Unpaid losses and LAE — years 2007 through 2016	227	
									Unpaid losses and LAE — 11th year and prior (excluding unallocated LAE)	1	
									Unpaid losses and LAE, net of reinsurance (excluding unallocated LAE)	$ 228	

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance
(Supplementary Information and Unaudited)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Annual	49.9%	25.3%	7.7%	6.1%	3.3%	1.4%	0.1%	0.3%	0.4%	(0.7%)
Cumulative	49.9%	75.2%	82.9%	89.0%	92.3%	93.7%	93.8%	94.1%	94.5%	93.8%

(a) Represents the cumulative percentage paid of incurred claims and allocated LAE (net of reinsurance, as estimated at December 31, 2016).

Other specialty

(Dollars in Millions)

Accident Year	Incurred Claims and Allocated LAE, Net of Reinsurance For the Years Ended (2007–2015 is Supplementary Information and Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	As of December 31, 2016 Total IBNR Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims (a)
2007	$ 45	$ 42	$ 42	$ 42	$ 40	$ 39	$ 36	$ 36	$ 33	$ 30	$ 10	—
2008		49	49	49	49	48	46	45	45	44	4	—
2009			41	41	41	40	37	37	36	38	11	—
2010				36	39	40	39	40	40	40	4	—
2011					39	43	42	43	43	44	5	—
2012						42	40	39	40	41	10	—
2013							46	47	46	47	6	—
2014								58	57	59	21	—
2015									59	60	27	—
2016										61	44	—
									Total	$ 464		

Accident Year	Cumulative Paid Claims and Allocated LAE, Net of Reinsurance For the Years Ended (2007–2015 is Supplementary Information and Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% (b)
2007	$ 6	$ 10	$ 12	$ 15	$ 17	$ 18	$ 19	$ 20	$ 21	$ 21	70.0%
2008		10	16	23	31	35	37	37	37	38	86.4%
2009			8	12	15	19	22	22	24	26	68.4%
2010				8	14	21	24	27	33	35	87.5%
2011					12	20	25	28	34	36	81.8%
2012						8	17	21	25	28	68.3%
2013							7	16	22	34	72.3%
2014								13	21	30	50.8%
2015									10	26	43.3%
2016										9	14.8%
									Total	$ 283	
									Unpaid losses and LAE — years 2007 through 2016	181	
									Unpaid losses and LAE — 11th year and prior (excluding unallocated LAE)	59	
									Unpaid losses and LAE, net of reinsurance (excluding unallocated LAE)	$ 240	

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (Supplementary Information and Unaudited)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Annual	19.9%	16.9%	12.1%	12.6%	8.7%	5.5%	3.4%	2.9%	2.8%	—%
Cumulative	19.9%	36.8%	48.9%	61.5%	70.2%	75.7%	79.1%	82.0%	84.8%	84.8%

(a) The amounts shown in Other specialty represent business assumed by AFG's internal reinsurance program from the operations that make up AFG's other Specialty property and casualty insurance sub-segments. Accordingly, the liability for incurred claims and allocated LAE represents additional reserves held on claims counted in the tables provided for the other sub-segments (above).

(b) Represents the cumulative percentage paid of incurred claims and allocated LAE (net of reinsurance, as estimated at December 31, 2016).

Total Specialty Group

(Dollars in Millions)

Accident Year	Incurred Claims and Allocated LAE, Net of Reinsurance For the Years Ended (2007–2015 is Supplementary Information and Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	As of December 31, 2016 Total IBNR Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2007	$ 1,908	$ 1,759	$ 1,670	$ 1,615	$ 1,585	$ 1,573	$ 1,565	$ 1,539	$ 1,543	$ 1,537	$ 52	211,219
2008		2,067	2,018	1,987	1,971	1,978	1,955	1,953	1,947	1,951	56	244,346
2009			1,624	1,607	1,596	1,566	1,552	1,545	1,543	1,539	74	221,065
2010				1,724	1,710	1,705	1,690	1,710	1,698	1,698	91	215,306
2011					1,840	1,848	1,849	1,871	1,861	1,866	124	207,407
2012						1,970	1,952	1,946	1,947	1,955	176	217,345
2013							2,036	2,011	2,000	1,996	220	219,598
2014								2,083	2,050	2,040	373	217,836
2015									2,112	2,044	549	222,288
2016										2,105	1,005	186,087
									Total	$ 18,731		

Accident Year	Cumulative Paid Claims and Allocated LAE, Net of Reinsurance For the Years Ended (2007–2015 is Supplementary Information and Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% (a)
2007	$ 538	$ 931	$ 1,107	$ 1,234	$ 1,313	$ 1,370	$ 1,405	$ 1,425	$ 1,444	$ 1,453	94.5%
2008		627	1,230	1,459	1,607	1,701	1,765	1,803	1,828	1,847	94.7%
2009			509	871	1,079	1,216	1,308	1,370	1,404	1,424	92.5%
2010				576	1,005	1,220	1,387	1,485	1,536	1,562	92.0%
2011					609	1,181	1,389	1,534	1,629	1,682	90.1%
2012						824	1,214	1,418	1,579	1,675	85.7%
2013							697	1,214	1,443	1,617	81.0%
2014								594	1,173	1,422	69.7%
2015									619	1,127	55.1%
2016										573	27.2%
									Total	$ 14,382	
									Unpaid losses and LAE — years 2007 through 2016	4,349	
									Unpaid losses and LAE — 11th year and prior (excluding unallocated LAE)	495	
									Unpaid losses and LAE, net of reinsurance (excluding unallocated LAE)	$ 4,844	

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (Supplementary Information and Unaudited)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Annual	33.0%	26.1%	11.8%	8.5%	5.3%	3.4%	2.0%	1.3%	1.1%	0.6%
Cumulative	33.0%	59.1%	70.9%	79.4%	84.7%	88.1%	90.1%	91.4%	92.5%	93.1%

(a) Represents the cumulative percentage paid of incurred claims and allocated LAE (net of reinsurance, as estimated at December 31, 2016).

Closed Block of Long-Term Care Insurance Following the completion of the sale of substantially all of its run-off long-term care insurance business in December 2015, AFG's remaining long-term care insurance reserves were $37 million at December 31, 2016 and $34 million at December 31, 2015, net of reinsurance recoverables and excluding the impact of unrealized gains on securities. AFG's remaining outstanding long-term care policies have level premiums and are guaranteed renewable. Premium rates can potentially be increased in reaction to adverse experience; however, any rate increases would require regulatory approval.

FHLB Funding Agreements Great American Life Insurance Company ("GALIC"), a wholly-owned annuity subsidiary, is a member of the Federal Home Loan Bank of Cincinnati ("FHLB"). The FHLB makes advances and provides other banking services to member institutions. Members are required to purchase stock in the FHLB in addition to maintaining collateral deposits that back any funds advanced. GALIC's $44 million investment in FHLB capital stock at December 31, 2016, is included in other investments at cost. Membership in the FHLB provides the annuity operations with an additional source of liquidity. These advances further the FHLB's mission of improving access to housing by increasing liquidity in the residential mortgage-backed securities market. In 2016, the FHLB advanced GALIC $150 million, increasing the total amount advanced to $935 million (included in annuity benefits accumulated) at December 31, 2016. In the fourth quarter of 2016, GALIC extended the terms on advances totaling $200 million by four years. Interest rates under the various funding agreements on these advances range from 0.03% to 0.53% over LIBOR (average rate of 1.18% at December 31, 2016). While these advances must be repaid between 2018 and 2021 ($285 million in 2018, $500 million in 2020 and $150 million in 2021), GALIC has the option to prepay all or a portion of the advances. The advances on these agreements are collateralized by mortgage-backed securities, which have a total fair value of $1.08 billion (included in available for sale fixed maturity securities) at December 31, 2016 and which have similar expected lives as the advances. Interest credited on the funding agreements, which is included in annuity benefits, was $8 million in 2016, $3 million in 2015 and $1 million in 2014.

Statutory Information AFG's U.S.-based insurance subsidiaries are required to file financial statements with state insurance regulatory authorities prepared on an accounting basis prescribed or permitted by such authorities (statutory basis). Net earnings and capital and surplus on a statutory basis for the insurance subsidiaries were as follows (in millions):

	Net Earnings			Capital and Surplus	
	2016	2015	2014	2016	2015
Property and casualty companies	$ 461	$ 408	$ 318	$ 2,939	$ 2,488
Life insurance companies	167	399	349	1,976	1,721

The National Association of Insurance Commissioners' ("NAIC") model law for risk based capital ("RBC") applies to both life and property and casualty insurance companies. RBC formulas determine the amount of capital that an insurance company needs so that it has an acceptable expectation of not becoming financially impaired. Companies below specific trigger points or ratios are subject to regulatory action. At December 31, 2016 and 2015, the capital ratios of all AFG insurance companies substantially exceeded the RBC requirements. AFG's insurance companies did not use any prescribed or permitted statutory accounting practices that differed from the NAIC statutory accounting practices at December 31, 2016 or 2015.

Payments of dividends by AFG's insurance companies are subject to various state laws that limit the amount of dividends that can be paid. Under applicable restrictions, the maximum amount of dividends available to AFG in 2017 from its insurance subsidiaries without seeking regulatory approval is $693 million. Additional amounts of dividends require regulatory approval.

AFG paid common stock dividends to shareholders totaling $187 million, $178 million and $169 million in 2016, 2015 and 2014, respectively. Currently, there are no regulatory restrictions on AFG's retained earnings or net income that materially impact its ability to pay dividends. Based on shareholders' equity at December 31, 2016, AFG could pay dividends in excess of $1 billion without violating its most restrictive debt covenant. However, the payment of future dividends will be at the discretion of AFG's Board of Directors and will be dependent on many factors including AFG's financial condition and results of operations, the capital requirements of its insurance subsidiaries, and rating agency commitments.

Reinsurance In the normal course of business, AFG's insurance subsidiaries cede reinsurance to other companies to diversify risk and limit maximum loss arising from large claims. To the extent that any reinsuring companies are unable to meet obligations under agreements covering reinsurance ceded, AFG's insurance subsidiaries would remain liable. The following table shows (in millions) (i) amounts deducted from property and casualty written and earned premiums in connection with reinsurance ceded, (ii) written and earned premiums included in income for reinsurance assumed and (iii) reinsurance recoveries, which represent ceded losses and loss adjustment expenses.

	2016	2015	2014
Direct premiums written	$ 5,858	$ 5,713	$ 5,387
Reinsurance assumed	123	119	90
Reinsurance ceded	(1,595)	(1,505)	(1,457)
Net written premiums	$ 4,386	$ 4,327	$ 4,020
Direct premiums earned	$ 5,745	$ 5,613	$ 5,195
Reinsurance assumed	118	105	75
Reinsurance ceded	(1,535)	(1,494)	(1,392)
Net earned premiums	$ 4,328	$ 4,224	$ 3,878
Reinsurance recoveries	$ 810	$ 936	$ 895

In March 2014, AFG's property and casualty insurance operations entered into a reinsurance agreement to obtain additional catastrophe protection through a catastrophe bond structure with Riverfront Re Ltd. ("Riverfront"). The reinsurance agreement provided supplemental reinsurance coverage for catastrophe losses occurring between April 1, 2014 and January 6, 2017. In connection with the reinsurance agreement, Riverfront issued notes to unrelated investors for the full amount of coverage provided under the reinsurance agreement. At the time of the agreement, AFG concluded that Riverfront is a variable interest entity, but that it did not have a variable interest in the entity because the variability in Riverfront's results was expected to be absorbed entirely by the investors in Riverfront. Accordingly, Riverfront is not consolidated in AFG's financial statements and the reinsurance agreement is accounted for as ceded reinsurance. AFG's cost for this coverage was approximately $5 million per year.

AFG has reinsured approximately $10.22 billion of its $13.49 billion in face amount of life insurance at December 31, 2016 compared to $11.19 billion of its $14.67 billion in face amount of life insurance at December 31, 2015. Life written premiums ceded were $31 million, $40 million and $41 million for 2016, 2015 and 2014, respectively. Reinsurance recoveries on ceded life policies were $41 million, $50 million and $59 million for 2016, 2015 and 2014, respectively.

Fixed Annuities For certain products, the liability for "annuity benefits accumulated" includes reserves for excess benefits expected to be paid on future deaths and annuitizations ("EDAR"), guaranteed withdrawal benefits and accrued persistency and premium bonuses. The liabilities included in AFG's Balance Sheet for these benefits, excluding the impact of unrealized gains on securities, were as follows at December 31 (in millions):

	2016	2015
Expected death and annuitization	$ 223	$ 214
Guaranteed withdrawal benefits	278	203
Accrued persistency and premium bonuses	6	11

Variable Annuities At December 31, 2016, the aggregate guaranteed minimum death benefit value (assuming every variable annuity policyholder died on that date) on AFG's variable annuity policies exceeded the fair value of the underlying variable annuities by $20 million, compared to $27 million at December 31, 2015. Death benefits paid in excess of the variable annuity account balances were less than $1 million in each of the last three years.

Everest Re Group, Ltd.

3. RESERVE FOR LOSSES, LAE AND FUTURE POLICY BENEFIT RESERVE

Reserves for losses and LAE.
Activity in the reserve for losses and LAE is summarized for the periods indicated:

(Dollars in thousands)	At December 31, 2016	2015	2014
Gross reserves at January 1	$ 9,951,798	$ 9,720,813	$ 9,673,240
Less reinsurance recoverables	(881,503)	(655,095)	(478,151)
Net reserves at January 1	9,070,295	9,065,718	9,195,089
Incurred related to:			
Current year	3,434,964	3,129,744	2,915,612
Prior years	(295,335)	(65,029)	(39,676)
Total incurred losses and LAE	3,139,629	3,064,715	2,875,936
Paid related to:			
Current year	745,642	690,030	755,880
Prior years	2,042,972	2,180,076	2,088,772
Total paid losses and LAE	2,788,614	2,870,106	2,844,652
Foreign exchange/translation adjustment	(99,859)	(190,032)	(160,655)
Net reserves at December 31	9,321,451	9,070,295	9,065,718
Plus reinsurance recoverables	990,862	881,503	655,095
Gross reserves at December 31	$ 10,312,313	$ 9,951,798	$ 9,720,813

Incurred prior years' reserves decreased by $295,335 thousand, $65,029 thousand and $39,676 thousand for the years ended December 31, 2016, 2015 and 2014, respectively. The decrease for 2016 was attributable to favorable development in the reinsurance segments of $468,749 thousand related primarily to property and short-tail business in the U.S., property business in Canada, Latin America, Middle East and Africa, as well as favorable development on prior year catastrophe losses, partially offset by $53,909 thousand of adverse development on A&E reserves. Part of the favorable development in the reinsurance segments related to the 2015 loss from the explosion at the Chinese port of Tianjin. In 2015, this loss was originally estimated to be $60,000 thousand. At December 31, 2016, this loss was projected to be $16,720 thousand resulting in $43,280 thousand of favorable development in 2016. The net favorable development in the reinsurance segments was partially offset by $173,414 thousand of unfavorable development in the insurance segment primarily related to run-off construction liability and umbrella program business.

The decrease for 2015 was attributable to favorable development in the reinsurance segments of $217,169 thousand related to treaty casualty and treaty property reserves, partially offset by $152,140 thousand of unfavorable development in the insurance segment primarily related to umbrella program and construction liability business.

The decrease for 2014 was attributable to favorable development in the reinsurance segments of $202,418 thousand related to treaty casualty, treaty property and catastrophe reserves, partially offset by $137,769 thousand development on A&E reserves and $24,973 thousand of unfavorable development in the insurance segment primarily related to construction liability and umbrella program business.

The following is information about incurred and paid claims development as of December 31, 2016, net of reinsurance, as well as cumulative claim frequency and the total of incurred but not reported liabilities (IBNR) plus expected development on reported claims included within the net incurred claims amounts. Each of the Company's financial reporting segments has been disaggregated into casualty and property business. The casualty and property segregation results in groups that have homogeneous loss development characteristics and are large enough to represent credible trends. Generally, casualty claims take longer to be reported and settled, resulting in longer payout patterns and increased volatility. Property claims on the other hand, tend to be reported and settled quicker and therefore tend to exhibit less volatility. The property business is more exposed to catastrophe losses, which can result in year over year fluctuations in incurred claims depending on the frequency and severity of catastrophes claims in any one accident year.

The information about incurred and paid claims development for the years ended December 31, 2012 to December 31, 2015 is presented as supplementary information.

These tables present five years of incurred and paid claims development as it is impracticable to retrospectively create the tables for ten years. For the reinsurance groups, for the years prior to 2012, the total of IBNR plus expected development on reported claims was not prepared on an accident year basis. The Company calculated these IBNR amounts in the aggregate for each business unit in total as of prior year end points in time. While business written in the United States would have been allocated to accident year for regulatory reporting purposes, business written outside of the United States would not have been similarly allocated. Attempting to allocate the non-U.S. business IBNR reserves to accident year currently for older year end valuations would require making assumptions and estimates which may not be in line with assumptions that would have been made at the time. A similar situation applies to insurance where the accumulation of the business lines reported in the regulatory filings are not consistent with the breakout of the tables presented below. As a result of not being able to present the information prior to 2012, prospectively an additional year will be added to the tables each reporting year until a ten year table is presented.

The Cumulative Number of Reported Claims is shown only for Insurance Casualty as it is impracticable to provide the information for the remaining groups. The reinsurance groups each include pro rata contracts for which ceding companies provide only summary information via a bordereau. This summary information does not include the number of reported claims underlying the paid and reported losses. Therefore, it is not possible to provide this information. The Insurance Property group includes Accident & Health insurance business. This business is written via a master contract and individual claim counts are not provided. This business represents a significant enough portion of the business in the Insurance Property group so that including the number of reported claims for the remaining business would distort any analytics performed on the group.

The Cumulative Number of Reported Claims shown for the Insurance Casualty is determined by claim and line of business. For example, a claim event with three claimants in the same line of business is a single claim. However, a claim event with a single claimant that spans two lines of business contributes two claims.

The following tables present the ultimate loss and ALAE and the paid loss and ALAE, net of reinsurance for casualty and property, as well as the average annual percentage payout of incurred claims by age, net of reinsurance for each of our disclosed lines of business.

U.S. Reinsurance – Casualty Business

	Incurred Claims and Allocated Claim Adjustment Expenses, Net of reinsurance Years Ended December 31,					At December 31, 2016	
Accident Year (Dollars in thousands)	2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016	Total of IBNR Liabilites Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2012	$ 400,944	$ 395,674	$ 328,910	$ 324,870	$ 320,908	69,381	N/A
2013		310,899	388,247	385,498	388,157	147,320	N/A
2014			367,454	383,597	392,300	215,144	N/A
2015				326,321	354,224	248,529	N/A
2016					330,352	272,614	N/A
					$ 1,785,940		

(Some amounts may not reconcile due to rounding.)

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Years Ended December 31,				
Accident Year (Dollars in thousands)	2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016
2012	$ 9,930	$ 38,398	$ 82,900	$ 143,370	$ 187,125
2013		14,814	48,891	108,736	170,781
2014			18,791	54,220	110,199
2015				19,882	53,592
2016					18,920
					$ 540,617
All outstanding liabilities prior to 2012, net of reinsurance					1,103,846
Liabilities for claims and claim adjustment expenses, net of reinsurance					$ 2,349,169

(Some amounts may not reconcile due to rounding.)

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (unaudited)				
Years	1	2	3	4	5
Casualty	4.6%	9.0%	14.6%	17.3%	13.6%

U.S. Reinsurance – Property Business

Accident Year (Dollars in thousands)	Incurred Claims and Allocated Claim Adjustment Expenses, Net of reinsurance, Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016	At December 31, 2016: Total of IBNR Liabilites Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2012	$ 937,168	$ 723,126	$ 621,543	$ 608,568	$ 608,182	15,899	N/A
2013		621,644	547,741	494,573	455,623	8,005	N/A
2014			641,489	550,471	473,579	46,920	N/A
2015				679,170	543,978	113,327	N/A
2016					966,314	488,562	N/A
					$ 3,047,676		

(Some amounts may not reconcile due to rounding.)

Accident Year (Dollars in thousands)	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance, Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016
2012	$ 242,129	$ 401,879	$ 492,597	$ 528,903	$ 546,305
2013		234,163	322,603	381,281	405,331
2014			218,595	321,473	369,615
2015				226,198	327,261
2016					286,082
					$ 1,934,594
All outstanding liabilities prior to 2012, net of reinsurance					70,472
Liabilities for claims and claim adjustment expenses, net of reinsurance					$ 1,183,554

(Some amounts may not reconcile due to rounding.)

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (unaudited): 1	2	3	4	5
Property	39.6%	21.7%	12.8%	5.7%	2.9%

International – Casualty Business

Accident Year (Dollars in thousands)	Incurred Claims and Allocated Claim Adjustment Expenses, Net of reinsurance, Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016	At December 31, 2016: Total of IBNR Liabilites Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2012	$ 222,381	$ 145,165	$ 134,433	$ 134,806	$ 118,381	19,893	N/A
2013		182,388	167,152	164,664	146,192	38,720	N/A
2014			194,110	187,335	170,072	66,586	N/A
2015				192,610	179,393	99,975	N/A
2016					183,120	135,120	N/A
					$ 797,159		

(Some amounts may not reconcile due to rounding.)

Accident Year (Dollars in thousands)	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance, Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016
2012	$ 18,968	$ 30,309	$ 46,356	$ 56,937	$ 66,755
2013		17,945	41,511	55,190	68,508
2014			25,854	45,309	63,412
2015				24,408	49,198
2016					26,582
					$ 274,456
All outstanding liabilities prior to 2012, net of reinsurance					132,472
Liabilities for claims and claim adjustment expenses, net of reinsurance					$ 655,175

(Some amounts may not reconcile due to rounding.)

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (unaudited): 1	2	3	4	5
Casualty	14.3%	12.9%	11.0%	9.0%	8.3%

International – Property Business

Accident Year (Dollars in thousands)	Incurred Claims and Allocated Claim Adjustment Expenses, Net of reinsurance Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016	At December 31, 2016: Total of IBNR Liabilites Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2012	$ 562,356	$ 516,568	$ 464,379	$ 468,016	$ 468,340	3,276	N/A
2013		493,798	446,011	409,911	402,109	5,153	N/A
2014			590,986	536,437	491,539	73,701	N/A
2015				563,857	439,133	68,845	N/A
2016					510,072	151,258	N/A
					$ 2,311,193		

(Some amounts may not reconcile due to rounding.)

Accident Year (Dollars in thousands)	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016
2012	$ 200,839	$ 327,627	$ 396,237	$ 420,097	$ 433,538
2013		135,240	272,527	326,747	357,358
2014			163,098	285,019	352,586
2015				145,406	267,899
2016					150,819
					$ 1,562,200
All outstanding liabilities prior to 2012, net of reinsurance					135,170
Liabilities for claims and claim adjustment expenses, net of reinsurance					$ 884,163

(Some amounts may not reconcile due to rounding.)

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (unaudited) 1	2	3	4	5
Property	34.4%	28.2%	14.0%	6.3%	2.9%

Bermuda – Casualty Business

Accident Year (Dollars in thousands)	Incurred Claims and Allocated Claim Adjustment Expenses, Net of reinsurance Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016	At December 31, 2016: Total of IBNR Liabilites Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2012	$ 277,335	$ 257,552	$ 238,136	$ 228,861	$ 236,554	69,097	N/A
2013		223,085	254,485	250,151	259,719	120,413	N/A
2014			205,404	239,078	257,310	163,951	N/A
2015				263,919	293,967	196,691	N/A
2016					282,729	208,938	N/A
					$ 1,330,278		

(Some amounts may not reconcile due to rounding.)

Accident Year (Dollars in thousands)	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016
2012	$ 12,975	$ 29,971	$ 52,026	$ 76,682	$ 103,489
2013		17,185	34,498	53,035	78,476
2014			13,846	25,272	43,582
2015				13,664	58,647
2016					45,134
					$ 329,328
All outstanding liabilities prior to 2012, net of reinsurance					507,747
Liabilities for claims and claim adjustment expenses, net of reinsurance					$ 1,508,697

(Some amounts may not reconcile due to rounding.)

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (unaudited) 1	2	3	4	5
Casualty	7.7%	8.7%	7.8%	10.1%	11.3%

Bermuda – Property Business

Accident Year (Dollars in thousands)	Incurred Claims and Allocated Claim Adjustment Expenses, Net of reinsurance Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016	At December 31, 2016: Total of IBNR Liabilites Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2012	$ 233,738	$ 177,683	$ 162,787	$ 158,711	$ 159,285	624	N/A
2013		203,306	147,275	129,687	120,904	1,207	N/A
2014			178,615	157,187	131,588	13,592	N/A
2015				187,738	157,662	45,387	N/A
2016					198,310	123,224	N/A
					$ 767,749		

(Some amounts may not reconcile due to rounding.)

Accident Year (Dollars in thousands)	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016
2012	$ 45,233	$ 84,680	$ 115,938	$ 141,516	$ 148,159
2013		31,315	67,966	106,936	114,050
2014			28,540	81,535	101,239
2015				32,687	72,186
2016					26,324
					$ 461,959
All outstanding liabilities prior to 2012, net of reinsurance					44,730
Liabilities for claims and claim adjustment expenses, net of reinsurance					$ 350,520

(Some amounts may not reconcile due to rounding.)

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (unaudited) 1	2	3	4	5
Property	21.4%	29.6%	21.8%	11.7%	4.2%

Insurance – Casualty Business

Accident Year (Dollars in thousands)	Incurred Claims and Allocated Claim Adjustment Expenses, Net of reinsurance Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016	At December 31, 2016: Total of IBNR Liabilites Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2012	$ 349,301	$ 351,107	$ 346,685	$ 347,989	$ 353,145	50,190	15,638
2013		393,201	393,103	392,539	392,829	101,156	21,168
2014			430,554	456,532	454,071	151,768	24,829
2015				518,706	527,109	282,784	25,939
2016					552,006	406,759	23,463
					$ 2,279,161		

(Some amounts may not reconcile due to rounding.)

Accident Year (Dollars in thousands)	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016
2012	$ 33,162	$ 101,258	$ 157,834	$ 213,365	$ 246,294
2013		33,303	117,016	176,280	224,558
2014			41,182	124,865	201,545
2015				44,298	134,658
2016					54,710
					$ 861,765
All outstanding liabilities prior to 2012, net of reinsurance					644,177
Liabilities for claims and claim adjustment expenses, net of reinsurance					$ 2,061,572

(Some amounts may not reconcile due to rounding.)

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (unaudited) 1	2	3	4	5
Casualty	9.1%	18.9%	16.0%	13.9%	9.3%

Insurance – Property Business

Accident Year (Dollars in thousands)	Incurred Claims and Allocated Claim Adjustment Expenses, Net of reinsurance Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016	At December 31, 2016 Total of IBNR Liabilites Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
2012	$ 106,229	$ 88,908	$ 81,682	$ 82,382	$ 81,957	52	N/A
2013		111,926	97,870	91,054	91,956	5	N/A
2014			131,505	123,487	119,781	1,044	N/A
2015				172,535	152,580	3,999	N/A
2016					300,127	82,989	N/A
					$ 746,400		

(Some amounts may not reconcile due to rounding.)

Accident Year (Dollars in thousands)	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Years Ended December 31, 2012 (unaudited)	2013 (unaudited)	2014 (unaudited)	2015 (unaudited)	2016
2012	$ 56,498	$ 81,712	$ 80,405	$ 81,686	$ 81,830
2013		68,656	92,945	91,653	91,923
2014			81,766	115,913	118,085
2015				102,005	141,010
2016					162,060
					$ 594,908
All outstanding liabilities prior to 2012, net of reinsurance					171
Liabilities for claims and claim adjustment expenses, net of reinsurance					$ 151,663

(Some amounts may not reconcile due to rounding.)

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (unaudited) 1	2	3	4	5
Property	63.1%	27.5%	-0.1%	0.9%	0.2%

Reconciliation of the Disclosure of Incurred and Paid Claims Development to the Liability for Unpaid Claims and Claim Adjustment Expenses

The reconciliation of the net incurred and paid claims development tables to the liability for claims and claim adjustment expenses in the consolidated statement of financial position is as follows.

(Dollars in thousands)	December 31, 2016
Net outstanding liabilities	
U.S. Reinsurance Casualty	$ 2,349,169
U.S. Reinsurance Property	1,183,554
International Casualty	655,175
International Property	884,163
Bermuda Casualty	1,508,697
Bermuda Property	350,520
Insurance Casualty	2,061,572
Insurance Property	151,663
Liabilities for unpaid claims and claim adjustment expenses, net of reinsurance	9,144,514
Reinsurance recoverable on unpaid claims	
U.S. Reinsurance Casualty	98,282
U.S. Reinsurance Property	84,224
International Casualty	83,912
International Property	79,044
Bermuda Casualty	10,135
Bermuda Property	101,210
Insurance Casualty	498,493
Insurance Property	35,562
Total reinsurance recoverable on unpaid claims	990,862
Insurance lines other than short-duration	-
Unallocated claims adjustment expenses	132,210
Other	44,727
	176,937
Total gross liability for unpaid claims and claim adjustment expense	$ 10,312,313

(Some amounts may not reconcile due to rounding.)

Reserving Methodology

The Company maintains reserves equal to our estimated ultimate liability for losses and loss adjustment expense (LAE) for reported and unreported claims for our insurance and reinsurance businesses. Because reserves are based on estimates of ultimate losses and LAE by underwriting or accident year, the Company uses a variety of statistical and actuarial techniques to monitor reserve adequacy over time, evaluate new information as it becomes known, and adjust reserves whenever an adjustment appears warranted. The Company considers many factors when setting reserves including: (1) exposure base and projected ultimate premium; (2) expected loss ratios by product and class of business, which are developed collaboratively by underwriters and actuaries; (3) actuarial methodologies which analyze loss reporting and payment experience, reports from ceding companies and historical trends, such as reserving patterns, loss payments, and product mix; (4) current legal interpretations of coverage and liability; and (5) economic conditions. Insurance and reinsurance loss and LAE reserves represent the Company's best estimate of its ultimate liability. Actual loss and LAE ultimately paid may deviate, perhaps substantially, from such reserves. Net income (gain or loss) will be impacted in a period in which the change in estimated ultimate loss and LAE is recorded.

The detailed data required to evaluate ultimate losses for the Company's insurance business is accumulated from its underwriting and claim systems. Reserving for reinsurance requires evaluation of loss information received from ceding companies. Ceding companies report losses in many forms depending on the type of contract and the agreed or contractual reporting requirements. Generally, pro rata contracts require the

submission of a monthly/quarterly account, which includes premium and loss activity for the period with corresponding reserves as established by the ceding company. This information is recorded into the Company's records. For certain pro rata contracts, the Company may require a detailed loss report for claims that exceed a certain dollar threshold or relate to a particular type of loss. Excess of loss and facultative contracts generally require individual loss reporting with precautionary notices provided when a loss reaches a significant percentage of the attachment point of the contract or when certain causes of loss or types of injury occur. Experienced claims staff handles individual loss reports and supporting claim information. Based on evaluation of a claim, the Company may establish additional case reserves in addition to the case reserves reported by the ceding company. To ensure ceding companies are submitting required and accurate data, Everest's Underwriting, Claim, Reinsurance Accounting, and Internal Audit Departments perform various reviews of ceding companies, particularly larger ceding companies, including on-site audits.

The Company segments both reinsurance and insurance reserves into exposure groupings for actuarial analysis. The Company assigns business to exposure groupings so that the underlying exposures have reasonably homogeneous loss development characteristics and are large enough to facilitate credible estimation of ultimate losses. The Company periodically reviews its exposure groupings and may change groupings over time as business changes. The Company currently uses approximately 200 exposure groupings to develop reserve estimates. One of the key selection characteristics for the exposure groupings is the historical duration of the claims settlement process. Business in which claims are reported and settled relatively quickly are commonly referred to as short tail lines, principally property lines. On the other hand, casualty claims tend to take longer to be reported and settled and casualty lines are generally referred to as long tail lines. Estimates of ultimate losses for shorter tail lines, with the exception of loss estimates for large catastrophic events, generally exhibit less volatility than those for the longer tail lines.

The Company uses a variety of actuarial methodologies, such as the expected loss ratio method, chain ladder methods, and Bornhuetter-Ferguson methods, supplemented by judgment where appropriate, to estimate ultimate loss and LAE for each exposure group.

Expected Loss Ratio Method: The expected loss ratio method uses earned premium times an expected loss ratio to calculate ultimate losses for a given underwriting or accident year. This method relies entirely on expectation to project ultimate losses with no consideration given to actual losses. As such, it may be appropriate for an immature underwriting or accident year where few, if any, losses have been reported or paid, but less appropriate for a more mature year.

Chain Ladder Method: Chain ladder methods use a standard loss development triangle to project ultimate losses. Age-to-age development factors are selected for each development period and combined to calculate age-to-ultimate development factors which are then applied to paid or reported losses to project ultimate losses. This method relies entirely on actual paid or reported losses to project ultimate losses. No other factors such as changes in pricing or other expectations are taken into account. It is most appropriate for groups with homogeneous, stable experience where past development patterns are expected to continue in the future. It is least appropriate for groups which have changed significantly over time or which are more volatile.

Bornhuetter-Ferguson Method: The Bornhuetter-Ferguson method is a combination of the expected loss ratio method and the chain ladder method. Ultimate losses are projected based partly on actual paid or reported losses and partly on expectation. Incurred but not reported (IBNR) reserves are calculated using earned premium, an a priori loss ratio, and selected age-to-age development factors and added to actual reported (paid) losses to determine ultimate losses. It is more responsive to actual reported or paid development than the expected loss ratio method but less responsive than the chain ladder method. The reliability of the method depends on the accuracy of the selected a priori loss ratio.

Although the Company uses similar actuarial methods for both short tail and long tail lines, the faster reporting of experience for the short tail lines allows the Company to have greater confidence in its estimates of ultimate losses for short tail lines at an earlier stage than for long tail lines. As a result, the Company utilizes, as well, exposure-based methods to estimate its ultimate losses for longer tail lines, especially for immature underwriting or accident years. For both short and long tail lines, the Company supplements these general approaches with analytically based judgments.

Key actuarial assumptions contain no explicit provisions for reserve uncertainty nor does the Company supplement the actuarially determined reserves for uncertainty.

Carried reserves at each reporting date are the Company's best estimate of ultimate unpaid losses and LAE at that date. The Company completes detailed reserve studies for each exposure group annually for both reinsurance and insurance operations. The completed annual reserve studies are "rolled-forward" for each accounting period until the subsequent reserve study is completed. Analyzing the roll-forward process involves comparing actual reported losses to expected losses based on the most recent reserve study. The Company analyzes significant variances between actual and expected losses and post adjustments to its reserves as warranted.

The Company continues to receive claims under expired insurance and reinsurance contracts asserting injuries and/or damages relating to or resulting from environmental pollution and hazardous substances, including asbestos. Environmental claims typically assert liability for (a) the mitigation or remediation of environmental contamination or (b) bodily injury or property damage caused by the release of hazardous substances into the land, air or water. Asbestos claims typically assert liability for bodily injury from exposure to asbestos or for property damage resulting from asbestos or products containing asbestos.

The Company's reserves include an estimate of the Company's ultimate liability for A&E claims. The Company's A&E liabilities emanate from Mt. McKinley's direct insurance business and Everest Re's assumed reinsurance business. All of the contracts of insurance and reinsurance, under which the Company has received claims during the past three years, expired more than 20 years ago. There are significant uncertainties surrounding the Company's reserves for its A&E losses.

A&E exposures represent a separate exposure group for monitoring and evaluating reserve adequacy. The following table summarizes incurred losses with respect to A&E reserves on both a gross and net of reinsurance basis for the periods indicated:

	At December 31,		
(Dollars in thousands)	2016	2015	2014
Gross basis:			
Beginning of period reserves	$ 433,117	$ 476,205	$ 402,461
Incurred losses	73,336	40,000	142,233
Paid losses	(65,342)	(83,088)	(68,489)
End of period reserves	$ 441,111	$ 433,117	$ 476,205
Net basis:			
Beginning of period reserves	$ 319,620	$ 458,211	$ 386,677
Incurred losses	53,909	38,440	137,769
Paid losses	(54,457)	(177,031)	(66,235)
End of period reserves	$ 319,072	$ 319,620	$ 458,211

On July 13, 2015, the Company sold Mt. McKinley, a Delaware domiciled insurance company and wholly-owned subsidiary of the Company to Clearwater Insurance Company, a Delaware domiciled insurance company. Concurrently with the closing, the Company entered into a retrocession treaty with an affiliate of Clearwater Insurance Company. Per the retrocession treaty, the Company retroceded 100% of the liabilities associated with certain Mt. McKinley policies, which related entirely to A&E business and had been reinsured by Bermuda Re. As consideration for entering into the retrocession treaty, Everest Re Bermuda transferred cash of $140,279 thousand, an amount equal to the net loss reserves as of the closing date. The maximum liability retroceded under the retrocession treaty will be $440,279 thousand, equal to the retrocession payment plus $300,000 thousand. The Company will retain liability for any amounts exceeding the maximum liability retroceded under the retrocession treaty.

Reinsurance Receivables.
Reinsurance receivables for both paid and recoverable on unpaid losses totaled $1,018,325 thousand and $894,037 thousand at December 31, 2016 and 2015, respectively. At December 31, 2016, $175,042 thousand, or 17.2%, was receivable from Resolution Group Reinsurance (Barbados) Limited ("Resolution Group"); $129,040 thousand, or 12.7%, was receivable from C.V. Starr (Bermuda) ("C.V. Starr"); $109,392 thousand, or 10.7%, was receivable from Zurich Vericherungs Gesellschaft ("Zurich"); $78,225 thousand, or

7.7%, was receivable from Mt. Logan Re segregated accounts and $51,124 thousand, or 5.0%, was receivable from Federal Crop Insurance Corporation ("FCIC"). The receivables from Resolution Group and C.V. Starr are fully collateralized by individual trust agreements. No other retrocessionaire accounted for more than 5% of our receivables.

Future Policy Benefit Reserve.
Activity in the reserve for future policy benefits is summarized for the periods indicated:

	At December 31,		
(Dollars in thousands)	2016	2015	2014
Balance at beginning of year	$ 58,910	$ 59,820	$ 59,512
Liabilities assumed	175	315	250
Adjustments to reserves	303	2,310	4,724
Benefits paid in the current year	(4,315)	(3,535)	(4,667)
Balance at end of year	$ 55,074	$ 58,910	$ 59,820

(Some amounts may not reconcile due to rounding.)

Mercury General Corporation

11. Loss and Loss Adjustment Expense Reserves

The following table presents the activity in loss and loss adjustment expense reserves:

	Year Ended December 31,		
	2016	2015	2014
	(Amounts in thousands)		
Gross reserves at January 1	$ 1,146,688	$ 1,091,797	$ 1,038,984
Less reinsurance recoverable	(14,253)	(14,192)	(13,635)
Net reserves at January 1	1,132,435	1,077,605	1,025,349
Acquisition of WAIC reserves	—	18,677	—
Incurred losses and loss adjustment expenses related to:			
Current year	2,269,769	2,132,837	1,989,315
Prior years	85,369	12,658	(3,193)
Total incurred losses and loss adjustment expenses	2,355,138	2,145,495	1,986,122
Loss and loss adjustment expense payments related to:			
Current year	1,508,362	1,455,245	1,347,967
Prior years	702,124	654,097	585,899
Total payments	2,210,486	2,109,342	1,933,866
Net reserves at December 31	1,277,087	1,132,435	1,077,605
Reinsurance recoverable	13,161	14,253	14,192
Gross reserves at December 31	$ 1,290,248	$ 1,146,688	$ 1,091,797

The increase in the provision for insured events of prior years in 2016 of approximately $85.4 million primarily resulted from the California and Florida automobile lines of business which experienced higher loss severity on liability coverages including Bodily Injury, Combined Single Limits and Property Damage than was originally estimated.

The increase in the provision for insured events of prior years in 2015 of approximately $12.7 million primarily resulted from the California homeowners and automobile lines of business outside of California, which was partially offset by favorable development in the California automobile line of business.

The decrease in the provision for insured events of prior years in 2014 of approximately $3.2 million primarily resulted from lower than expected loss severity on California personal automobile lines of insurance business partially offset by adverse development in other states.

The Company experienced pre-tax catastrophe losses and loss adjustment expenses from severe weather events of $27 million, $19 million, and $11 million in 2016, 2015, and 2014, respectively. The losses in 2016 were primarily due to severe storms outside of California, and rainstorms in California. The losses in 2015 were primarily due to severe storms outside of California, and rainstorms and wildfires in California. The losses in 2014 were primarily related to winter freeze events on the East Coast and severe rainstorms in California.

The following is information about incurred and paid claims development as of December 31, 2016, net of reinsurance, as well as cumulative claim frequency and the total of incurred-but-not-reported liabilities plus expected development on reported claims included within the net incurred claims amounts for our two major product lines: automobile and homeowners lines of business. The cumulative number of reported claims represents open claims, claims closed with payment, and claims closed without payment. It does not include an estimated amount for unreported claims. The number of claims is measured by claim event (such as a car accident or storm damage) and an individual claim event may result in more than one reported claim. The Company considers a claim that does not result in a liability as a claim closed without payment.

The information about incurred and paid claims development for the years ended December 31, 2007 to 2015 is presented as unaudited supplementary information.

Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance (Automobile Insurance)

Accident Year	For the Years Ended December 31,										As of December 31, 2016	
	2007[1]	2008[1]	2009[1]	2010[1]	2011[1]	2012[1]	2013[1]	2014[1]	2015[1]	2016	Total of Incurred But Not Reported Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
	(Amounts in thousands)										(Amounts in thousands)	
2007	$ 1,591,217	$ 1,610,874	$ 1,614,648	$1,624,875	$1,633,606	$1,633,169	$1,634,127	$1,635,529	$ 1,636,379	$ 1,636,065	$ 52	230
2008		1,505,732	1,440,301	1,442,691	1,455,858	1,461,084	1,463,659	1,465,623	1,466,108	1,466,137	82	199
2009			1,372,833	1,349,025	1,361,116	1,361,652	1,365,551	1,371,779	1,372,694	1,372,259	166	186
2010				1,367,547	1,357,750	1,364,307	1,374,638	1,379,336	1,381,056	1,386,105	390	184
2011					1,343,919	1,367,000	1,380,557	1,388,363	1,393,878	1,398,518	4,069	181
2012						1,424,754	1,408,222	1,409,104	1,414,878	1,426,735	4,531	181
2013							1,448,567	1,431,058	1,447,881	1,458,421	10,873	185
2014								1,467,175	1,454,366	1,473,545	32,532	180
2015									1,551,105	1,588,443	90,010	169
2016										1,672,853	303,353	145
									Total	$ 14,879,081		

[1] The information for the years 2007 to 2015 is presented as unaudited supplemental information.

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance (Automobile Insurance)

Accident Year	For the Years Ended December 31,									
	2007[1]	2008[1]	2009[1]	2010[1]	2011[1]	2012[1]	2013[1]	2014[1]	2015[1]	2016
	(Amounts in thousands)									
2007	$ 1,040,933	$ 1,365,854	$ 1,496,543	$ 1,581,001	$ 1,615,964	$ 1,628,413	$ 1,633,178	$ 1,634,888	$ 1,635,631	$ 1,636,204
2008		992,844	1,226,787	1,345,354	1,418,274	1,450,172	1,459,216	1,463,384	1,464,763	1,465,832
2009			913,340	1,137,807	1,260,424	1,326,439	1,355,210	1,363,526	1,370,564	1,371,956
2010				908,954	1,143,984	1,268,142	1,335,871	1,365,464	1,375,799	1,384,333
2011					926,983	1,152,459	1,277,808	1,347,082	1,378,920	1,391,101
2012						955,647	1,194,648	1,304,511	1,372,828	1,409,911
2013							974,445	1,217,906	1,340,724	1,413,999
2014								967,481	1,231,413	1,358,472
2015									1,040,253	1,336,223
2016										1,094,006
									Total	$ 13,862,037
									All outstanding liabilities before 2007, net of reinsurance	(212)
									Loss and allocated loss adjustment expense reserves, net of reinsurance	$ 1,016,832

[1] The information for the years 2007 to 2015 is presented as unaudited supplemental information.

Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance (Homeowners' Insurance)

Accident Year	For the Years Ended December 31,										As of December 31, 2016	
	2007[1]	2008[1]	2009[1]	2010[1]	2011[1]	2012[1]	2013[1]	2014[1]	2015[1]	2016	Total of Incurred But Not Reported Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
	(Amounts in thousands)										(Amounts in thousands)	
2007	$119,505	$ 116,950	$112,042	$111,378	$109,836	$110,052	$110,092	$110,161	$ 110,142	$ 110,204	$ 42	14
2008		146,486	139,549	138,605	139,142	138,190	138,803	139,149	139,156	139,216	5	16
2009			135,889	135,000	131,680	133,087	133,121	134,718	134,597	134,478	(3)	17
2010				165,727	157,566	160,983	160,472	160,206	160,015	159,608	(17)	21
2011					167,414	170,623	170,052	169,600	169,390	169,621	325	23
2012						196,063	188,010	190,376	191,548	192,057	585	25
2013							191,903	188,915	188,026	186,795	775	23
2014								199,298	202,621	203,218	2,993	25
2015									234,800	234,881	9,431	24
2016										250,440	36,538	23
									Total	$ 1,780,518		

[1] The information for the years 2007 to 2015 is presented as unaudited supplemental information.

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance (Homeowners' Insurance)

Accident Year	For the Years Ended December 31,									
	2007[1]	2008[1]	2009[1]	2010[1]	2011[1]	2012[1]	2013[1]	2014[1]	2015[1]	2016
	(Amounts in thousands)									
2007	$ 71,165	$ 100,774	$ 104,340	$ 108,404	$ 109,305	$ 109,874	$ 109,932	$ 109,949	$ 110,064	$ 110,075
2008		86,954	122,239	129,821	135,500	137,284	138,137	138,680	138,809	138,922
2009			86,034	119,306	126,591	130,928	132,180	134,381	134,378	134,301
2010				95,057	137,628	149,084	155,191	156,853	158,053	158,943
2011					111,909	153,845	162,870	166,375	167,806	168,621
2012						128,618	175,029	182,756	188,121	190,373
2013							133,528	174,295	180,858	183,860
2014								139,615	186,996	194,605
2015									163,196	213,994
2016										173,435
									Total	$ 1,667,129
									All outstanding liabilities before 2007, net of reinsurance	2,661
									Loss and allocated loss adjustment expense reserves, net of reinsurance	$ 116,050

[1] The information for the years 2007 to 2015 is presented as unaudited supplemental information.

The following is unaudited supplementary information about average historical claims duration as of December 31, 2016.

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Automobile insurance	66.0%	17.1%	8.5%	4.9%	2.2%	0.7%	0.4%	0.1%	0.1%	—

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Homeowners insurance	66.1%	24.3%	4.6%	3.0%	1.0%	0.7%	0.2%	—	0.1%	—

The reconciliation of the net incurred and paid claims development tables to the liability for claims and claim adjustment expenses in the consolidated balance sheets is as follows.

Reconciliation of the Disclosure of Incurred and Paid Claims Development to the Loss and Loss Adjustment Expense Reserves

	December 31, 2016 (Amounts in thousands)
Net outstanding liabilities	
Automobile insurance	$ 1,016,832
Homeowners' insurance	116,050
WAIC automobile insurance	12,232
Other short-duration insurance lines	51,320
Loss and loss adjustment expense reserves, net of reinsurance	1,196,434
Reinsurance recoverable on unpaid claims	
Automobile insurance	12,601
Homeowners' insurance	199
Other short-duration insurance lines	360
Total reinsurance recoverable on unpaid claims	13,160
Insurance lines other than short-duration	1,480
Unallocated claims adjustment expenses	79,174
	80,654
Total gross loss and loss adjustment expense reserves	$ 1,290,248

Old Republic International Corporation

(h) Losses, Claims and Settlement Expenses - The establishment of claim reserves by the Company's insurance subsidiaries is a reasonably complex and dynamic process influenced by a large variety of factors. These factors principally include past experience applicable to the anticipated costs of various types of claims, continually evolving and changing legal theories emanating from the judicial system, recurring accounting, statistical, and actuarial studies, the professional experience and expertise of the Company's claim departments' personnel or attorneys and independent claim adjusters, ongoing changes in claim frequency or severity patterns such as those caused by natural disasters, illnesses, accidents, work-related injuries, and changes in general and industry-specific economic conditions. Consequently, the reserves established are a reflection of the opinions of a large number of persons, of the application and interpretation of historical precedent and trends, of expectations as to future developments, and of management's judgment in interpreting all such factors. At any point in time, the Company is exposed to the risk of possibly higher or lower than anticipated claim costs due to all of these factors, and to the evolution, interpretation, and expansion of tort law, as well as the effects of unexpected jury verdicts.

All reserves are therefore based on estimates which are periodically reviewed and evaluated in the light of emerging claim experience and changing circumstances. The resulting changes in estimates are recorded in operations of the periods during which they are made. Return and additional premiums and policyholders' dividends, all of which tend to be affected by development of claims in future years, may offset, in whole or in part, developed claim redundancies or deficiencies for certain coverages such as workers' compensation, portions of which are written under loss sensitive programs that provide for such adjustments. The Company believes that its overall reserving practices have been consistently applied over many years, and that its aggregate net reserves have generally resulted in reasonable approximations of the ultimate net costs of claims incurred. However, no representation is made nor is any guaranty given that ultimate net claim and related costs will not develop in future years to be greater or lower than currently established reserve estimates.

General Insurance reserves are established to provide for the ultimate expected cost of settling unpaid losses and claims reported at each balance sheet date. Such reserves are based on continually evolving assessments of the facts available to the Company during the settlement process which may stretch over long periods of time. Long-term disability or pension type workers' compensation reserves are discounted to present value based on interest rates ranging from 3.5% to 4.0%. The amount of discount reflected in the year end net reserves totaled $231.9, $228.6, and $240.7 as of December 31, 2016, 2015, and 2014, respectively. Interest accretion of $24.2, $36.7 and $26.2 for the years ended December 31, 2016, 2015, and 2014, respectively, was recognized within benefits, claims and settlement expenses in the consolidated statements of income. Losses and claims incurred but not reported ("IBNR"), as well as expenses required to settle losses and claims are established on the basis of a large number of formulas that take into account various criteria, including historical cost experience and anticipated costs of servicing reinsured and other risks. As applicable, estimates of possible recoveries from salvage or subrogation opportunities are considered in the establishment of such reserves. Overall claim and claim expense reserves incorporate amounts covering net estimates of unusual claims such as those emanating from asbestosis and environmental ("A&E") exposures as discussed below. Such reserves can affect claim costs and related loss ratios for such insurance coverages as general liability, commercial automobile (truck), workers' compensation, and property.

Early in 2001, the Federal Department of Labor revised the Federal Black Lung Program regulations. The revisions basically require a reevaluation of previously settled, denied, or new occupational disease claims in the context of newly devised, more lenient standards when such claims are resubmitted. Following a number of challenges and appeals by the insurance and coal mining industries, the revised regulations were, for the most part, upheld in June, 2002 and are to be applied prospectively. Since the final quarter of 2001 black lung claims filed or refiled pursuant to these revised regulations have increased, though the volume of new claim reports has abated in recent years.

In March 2010, federal regulations were revised once again as part of the Patient Protection and Affordability Act that reinstates two provisions that can potentially benefit claimants. In response to this most recent legislation and the above noted 2001 change, black lung claims filed or refiled have risen once increased. The vast majority of claims filed to date against Old Republic pertain to business underwritten through loss sensitive programs that permit the charge of additional or refund of return premiums to wholly or partially offset changes in estimated claim costs, or to business underwritten as a service carrier on behalf of various industry-wide involuntary market (i.e. assigned risk) pools. A much smaller portion pertains to business produced on a traditional risk transfer basis. The Company has established applicable reserves for claims as they have been reported and for claims not as yet reported on the basis of its historical experience as well as assumptions relative to the effect of the revised regulations. The potential impact on reserves, gross and net of reinsurance or retrospective premium adjustments, resulting from such regulations cannot be estimated with reasonable certainty.

Old Republic's reserve estimates also include provisions for indemnity and settlement costs for various asbestosis and environmental impairment ("A&E") claims that have been filed in the normal course of business against a number of its insurance subsidiaries. Many such claims relate to policies incepting prior to 1985, including many issued during a short period between 1981 and 1982 pursuant to an agency agreement canceled in 1982. Over the years, the Company's property and liability insurance subsidiaries have typically issued general liability insurance policies with face amounts ranging between $1.0 and $2.0 and rarely exceeding $10.0. Such policies have, in turn, been subject to reinsurance cessions which have typically reduced the subsidiaries' net retentions to $.5 or less as to each claim. Old Republic's exposure to A&E claims cannot, however, be calculated by conventional insurance reserving methods for a variety of reasons, including: a) the absence of statistically valid data inasmuch as such claims generally involve long reporting delays and very often uncertainty as to the number and identity of insureds against whom such claims have arisen or will arise; and b) the litigation history of such or similar claims for insurance industry members which has produced inconsistent court decisions with regard to such questions as when an alleged loss occurred, which policies provide coverage, how a loss is to be allocated among potentially responsible insureds and/or their insurance carriers, how policy coverage exclusions are to be interpreted, what types of environmental impairment or toxic tort claims are covered, when the insurer's duty to defend is triggered, how policy limits are to be calculated, and whether clean-up costs constitute property damage. Over time, the Executive Branch and/or the Congress of the United States have proposed or considered changes in the legislation and rules affecting the determination of liability for environmental and asbestosis claims. As of December 31, 2016, however, there is no solid

evidence to suggest that possible future changes might mitigate or reduce some or all of these claim exposures. Because of the above issues and uncertainties, estimation of reserves for losses and allocated loss adjustment expenses for A&E claims in particular is much more difficult or impossible to quantify with a high degree of precision. Accordingly, no representation can be made that the Company's reserves for such claims and related costs will not prove to be overstated or understated in the future. At December 31, 2016 and 2015, Old Republic's aggregate indemnity and loss adjustment expense reserves specifically identified with A&E exposures amounted to $121.2 and $130.9 gross, respectively, and $97.1 and $100.6 net of reinsurance, respectively. Old Republic's average five year paid loss survival ratios stood at 4.3 years (gross) and 6.3 years (net of reinsurance) as of December 31,

2016 and 4.7 years (gross) and 6.2 years (net of reinsurance) as of December 31, 2015. Fluctuations in this ratio between years can be caused by the inconsistent pay out patterns associated with these types of claims.

Title insurance and related escrow services loss and loss adjustment expense reserves are established as point estimates to cover the projected settlement costs of known as well as IBNR losses related to premium and escrow service revenues of each reporting period. Reserves for known claims are based on an assessment of the facts available to the Company during the settlement process. The point estimates covering all claim reserves inherently take into account IBNR claims based on past experience and evaluations of such variables as changing trends in the types of policies issued, changes in real estate markets and interest rate environments, and changing levels of loan refinancing, all of which can have a bearing on the emergence, number, and ultimate cost of claims.

RFIG Run-off mortgage guaranty insurance reserves for unpaid claims and claim adjustment expenses are recognized only upon an instance of default, defined as an insured mortgage loan for which two or more consecutive monthly payments have been missed. Loss reserves are based on statistical calculations that take into account the number of reported insured mortgage loan defaults as of each balance sheet date, as well as experience-based estimates of loan defaults that have occurred but have not as yet been reported. Further, the loss reserve estimating process takes into account a large number of variables including trends in claim severity, potential salvage recoveries, expected cure rates for reported loan delinquencies at various stages of default, the level of coverage rescissions and claims denials due to material misrepresentation in key underwriting information or non-compliance with prescribed underwriting guidelines, and management judgments relative to future employment levels, housing market activity, and mortgage loan interest costs, demand, and extensions.

The Company has the legal right to rescind mortgage insurance coverage unilaterally as expressly stated in its policy. Moreover, two federal courts that have considered that policy wording have each affirmed that right (See First Tennessee Bank N.A. v. Republic Mortg. Ins. Co., Case No. 2:10-cv-02513-JPM-cgc (W.D. Tenn., Feb. 25, 2011) and JPMorgan Chase Bank N.A. v. Republic Mortg. Ins. Co., Civil Action No. 10-06141 (SRC) (D. NJ, May 4, 2011), each decision citing supporting state law legal precedent). RMIC's mortgage insurance policy provides that the insured represents that all statements made and information provided to it in an application for coverage for a loan, without regard to who made the statements or provided the information, have been made and presented for and on behalf of the insured; and that such statements and information are neither false nor misleading in any material respect, nor omit any fact necessary to make such statements and information not false or misleading in any material respect. According to the policy, if any of those representations are materially false or misleading with respect to a loan, the Company has the right to cancel or rescind coverage for that loan retroactively to commencement of the coverage. Whenever the Company determines that an application contains a material misrepresentation, it either advises the insured in writing of its findings prior to rescinding coverage or exercises its unilateral right to rescind coverage for that loan, stating the reasons for that action in writing and returning the applicable premium. The rescission of coverage in instances of materially faulty representations or warranties provided in applications for insurance is a necessary and prevailing practice throughout the insurance industry. In the case of mortgage guaranty insurance, rescissions have occurred regularly over the years but have been generally immaterial. Since 2008, however, the Company has experienced a much greater incidence of rescissions due to increased levels of observed fraud and misrepresentations in insurance applications pertaining to business underwritten between 2004 and the first half of 2008. As a result, the Company has incorporated certain assumptions regarding the expected levels of coverage rescissions and claim denials in its reserving methodology since 2008. Such estimates, which are evaluated at each balance sheet date, take into account observed as well as historical trends in rescission and denial rates. The table below shows the estimated effects of coverage rescissions and claim denials on loss reserves and settled and incurred losses.

	2016	2015	2014
Estimated reduction in beginning reserve	$ 47.5	$ 79.3	$ 115.2
Total incurred claims and settlement expenses reduced (increased) by changes in estimated rescissions:			
Current year	8.3	18.8	47.1
Prior year	(24.8)	(17.6)	10.4
Sub-total	(16.5)	1.2	57.6
Estimated rescission reduction in paid claims	(1.4)	(33.0)	(93.5)
Estimated reduction in ending reserve	$ 29.6	$ 47.5	$ 79.3

As above-noted, the estimated reduction in ending loss reserves reflects, in large measure, a variety of judgments relative to the level of expected coverage rescissions and claim denials on loans that are in default as of each balance sheet date. The provision for insured events of the current year resulted from actual and anticipated rescissions and claim denials attributable to newly reported delinquencies in each respective year. The provision for insured events of prior years resulted from actual rescission and claim denial activity, reinstatement of previously rescinded or denied claims, or revisions in assumptions regarding expected rescission or claim denial rates on outstanding prior year delinquencies. The trends since 2010 reflect a continuing reduction in the level of actual and anticipated rescission and claim denial rates on total outstanding delinquencies. Claims not paid by virtue of rescission or denial represent the Company's estimated contractual risk, before consideration of the impacts of any reinsurance and deductibles or aggregate loss limits, on cases that are settled by the issuance of a rescission or denial notification. Variances between the estimated rescission and actual claim denial rate are reflected in the periods during which they occur.

Although the insured has no right under the policy to appeal a Company claim decision, the insured may, at any time, contest in writing the Company's findings or action with respect to a loan or a claim. In such cases, the Company considers any additional information supplied by the insured. This consideration may lead to further investigation, retraction or confirmation of the initial determination. If the Company concludes that it will reinstate coverage, it advises the insured in writing that it will do so immediately upon receipt of the premium previously returned. Reserves are not adjusted for potential reversals of rescissions or adverse rulings for loans under dispute since such reversals of claim rescissions and denials have historically been immaterial to the reserve estimation process.

In addition to the above reserve elements, the Company establishes reserves for loss settlement costs that are not directly related to individual claims. Such reserves are based on prior years' cost experience and trends, and are intended to cover the unallocated costs of claim departments' administration of known and IBNR claims.

The following table shows an analysis of changes in aggregate reserves for the Company's losses, claims and settlement expenses for each of the years shown.

Years Ended December 31:	2016	2015	2014
Gross reserves at beginning of year	$ 9,120.1	$ 9,122.0	$ 9,433.5
Less: reinsurance losses recoverable	2,732.5	3,006.6	2,836.7
Net reserves at beginning of year:			
General Insurance	5,053.1	4,722.0	4,334.1
Title Insurance	580.8	505.4	471.5
RFIG Run-off	736.7	870.2	1,774.2
Other	16.9	17.5	16.8
Sub-total	6,387.6	6,115.3	6,596.8
Incurred claims and claim adjustment expenses:			
Provisions for insured events of the current year:			
General Insurance	2,115.1	2,081.6	2,009.8
Title Insurance	107.7	112.1	105.5
RFIG Run-off (a)	171.3	323.7	323.1
Other	21.7	25.2	44.5
Sub-total	2,416.0	2,542.8	2,483.0
Change in provision for insured events of prior years:			
General Insurance	9.9	43.9	107.9
Title Insurance	(23.4)	(12.8)	(13.6)
RFIG Run-off (a)	(68.7)	(130.1)	(74.8)
Other	(3.8)	(.6)	(1.5)
Sub-total	(86.1)	(99.7)	17.8
Total incurred claims and claim adjustment expenses (a)	2,329.9	2,443.0	2,500.9
Payments:			
Claims and claim adjustment expenses attributable to insured events of the current year:			
General Insurance	723.5	671.5	657.0
Title Insurance	4.4	(39.9)	4.7
RFIG Run-off (b)	14.5	29.1	40.6
Other	14.8	16.9	33.4
Sub-total	757.4	677.6	735.9
Claims and claim adjustment expenses attributable to insured events of prior years:			
General Insurance	1,204.5	1,123.0	1,072.8
Title Insurance	58.6	63.8	53.2
RFIG Run-off (b)	250.8	297.9	1,111.6
Other	6.1	8.3	8.7
Sub-total	1,520.2	1,493.1	2,246.5

Total payments (b)	2,277.6	2,170.7	2,982.4
Amount of reserves for unpaid claims and claim adjustment expenses at the end of each year, net of reinsurance losses recoverable: (c)			
General Insurance	5,249.9	5,053.1	4,722.0
Title Insurance	602.0	580.8	505.4
RFIG Run-off	574.0	736.7	870.2
Other	13.8	16.9	17.5
Sub-total	6,439.8	6,387.6	6,115.3
Reinsurance losses recoverable	2,766.1	2,732.5	3,006.6
Gross reserves at end of year	$ 9,206.0	$ 9,120.1	$ 9,122.0

Excluding the reclassification of CCI from the General Insurance to the RFIG Run-off Business segment, certain elements shown in the preceding table would have been as follows:

	2016	2015	2014
Change in provision for incurred events of prior years:			
General Insurance	$ 2.5	$ 41.2	$ 190.8
RFIG Run-off (a)	(61.3)	(127.4)	(157.8)
Payment of claim and claim adjustment expenses attributable to incurred events of the current and prior years:			
General Insurance	1,939.9	1,830.1	1,825.5
RFIG Run-off (b)	$ 253.6	$ 291.4	$ 1,056.5

(a) In common with all other insurance lines, RFIG Run-off mortgage guaranty settled and incurred claim and claim adjustment expenses include only those costs actually or expected to be paid by the Company. As previously noted, changes in mortgage guaranty aggregate case, IBNR, and loss adjustment expense reserves shown below and entering into the determination of incurred claim costs, take into account, among a large number of variables, claim cost reductions for anticipated coverage rescissions and claims denials.

The RFIG Run-off mortgage guaranty provision for insured events of the current year was reduced by estimated coverage rescissions and claims denials of $8.3, $18.8 and $47.1, respectively, for 2016, 2015 and 2014. The provision for insured events of prior years in 2016, 2015 and 2014 was (increased) reduced by estimated coverage rescissions and claims denials of $(24.8), $(17.6) and $10.4, respectively. Prior year development was also affected in varying degrees by differences between actual claim settlements relative to expected experience, by reinstatement of previously rescinded or denied claims, and by subsequent revisions of assumptions in regards to claim frequency, severity or levels of associated claim settlement costs which result from consideration of underlying trends and expectations.

The following table reflects the changes in net reserves between succeeding balance sheet dates.

	2016	2015	2014
Net reserve increase(decrease):			
General Insurance	$ 196.8	$ 331.0	$ 387.9
Title Insurance	21.2	75.3	33.8
RFIG Run-off	(162.7)	(133.4)	(904.0)
Other	(3.0)	(.6)	.7
Total	$ 52.2	$ 272.2	$ (481.5)

(b) Rescissions reduced the Company's paid losses by an estimated $1.4, $33.0, and $93.5 for 2016, 2015, and 2014, respectively. In mid July 2014, in furtherance of a Final Order received from the NCDOI, RMIC and RMICNC processed payments of their accumulated deferred payment obligation balances of approximately $657.0. Refer to Note 1(s).

(c) Year end net IBNR reserves for each segment were as follows:

	2016	2015	2014
General Insurance	$ 2,431.2	$ 2,324.3	$ 2,266.2
Title Insurance	517.5	503.8	432.2
RFIG Run-off	206.3	180.7	138.7
Other	5.4	6.4	5.7
Total	$ 3,160.5	$ 3,015.3	$ 2,843.0

For the three most recent calendar years, the above table indicates that the one-year development of consolidated reserves at the beginning of each year produced favorable developments of 1.3% and 1.6% for 2016 and 2015, respectively, and unfavorable development of (.3)% for 2014, with average favorable annual developments of .8%. The Company believes that the factors most responsible, in varying and continually changing degrees, for reserve redundancies or deficiencies include, as to many general insurance coverages, the effect of reserve discounts applicable to workers' compensation claims, higher than expected severity of litigated claims in particular, governmental or judicially imposed retroactive

conditions in the settlement of claims such as noted above in regard to black lung disease claims, greater than anticipated inflation rates applicable to repairs and the medical portion of claims in particular, and higher than expected claims incurred but not reported due to the slower and highly volatile emergence patterns applicable to certain types of claims such as those stemming from litigated, assumed reinsurance, or the A&E types of claims noted above. In 2016, 2015 and 2014, the Company experienced unfavorable developments of previously established reserves for accidents or events which occurred in 2014 and prior years in particular. These adverse developments were concentrated in workers' compensation and general liability case reserves and resulted from settlements or reserve additions exceeding the previously established indemnity and/or allocated loss adjustment expense provisions. As to

mortgage guaranty and the CCI coverage, changes in reserve adequacy or deficiency result from differences in originally estimated salvage and subrogation recoveries, sales and prices of homes that can impact claim costs upon the disposition of foreclosed properties, changes in regional or local economic conditions and employment levels, greater numbers of coverage rescissions and claims denials due to material misrepresentation in key underwriting information or non-compliance with prescribed underwriting guidelines, the extent of loan refinancing activity that can reduce the period of time over which a policy remains at risk, and lower than expected frequencies of claims incurred but not reported.

In May 2015, the FASB issued guidance requiring additional disclosures about short-duration insurance contracts which the Company has adopted for purposes of its 2016 Annual Report on Form 10-K. The new disclosures, which are included below, are intended to provide additional information about insurance liabilities including the nature, amount, timing, and uncertainty of future cash flows related to those liabilities.

The information about incurred and paid claims development for the years ended December 31, 2007 to 2015 is presented as supplementary information.

The following represents the Company's incurred and paid loss development tables for the major types of insurance coverages as of December 31, 2016.

Workers' Compensation

	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance (Undiscounted)										As of December 31, 2016	
	For the Years Ended December 31,											
Accident	Supplementary Information (Unaudited)										Total of Incurred-but-Not-Reported Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims*
Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		
2007	$ 562.5	$ 542.3	$ 542.6	$ 546.2	$ 544.3	$ 537.6	$ 532.6	$ 535.3	$ 537.5	$ 535.1	$ 23.2	69,162
2008		513.4	515.1	509.5	511.6	507.2	505.4	509.4	508.8	511.3	21.2	63,658
2009			520.7	516.9	534.7	544.4	542.9	559.8	564.6	563.8	32.0	55,919
2010				485.1	480.0	521.5	545.3	569.1	563.1	564.0	35.1	57,714
2011					558.6	567.3	595.3	622.5	643.0	641.7	80.5	53,259
2012						629.3	647.2	670.6	678.1	676.4	118.0	49,826
2013							700.9	705.3	716.9	722.7	149.6	48,709
2014								780.9	792.8	786.4	229.5	53,860
2015									794.3	792.6	319.4	54,535
2016										756.1	449.5	41,331
									Total	$ 6,550.6	(A)	

* Reported claims are accumulated on an individual claimant basis and exclude external reinsurance assumed and participation in residual market pools as claim frequency information is not available.

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance									
	For the Years Ended December 31,									
Accident	Supplementary Information (Unaudited)									
Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 103.5	$ 241.4	$ 337.1	$ 384.0	$ 414.4	$ 437.6	$ 434.0	$ 449.2	$ 458.7	$ 465.5
2008		110.3	246.1	326.2	377.9	412.9	431.7	428.4	440.6	450.5
2009			113.8	263.6	351.4	404.2	440.2	469.4	468.1	478.8
2010				118.9	279.8	370.1	427.9	464.0	466.5	482.8
2011					112.6	266.7	361.4	424.0	469.8	503.4
2012						113.1	265.8	361.8	426.7	469.5
2013							107.6	274.3	381.2	449.8
2014								116.9	293.7	397.1
2015									109.0	274.9
2016										102.5
									Total	$ 4,075.4 (B)

Net incurred claims and allocated claim adjustment expenses (A)	$ 6,550.6
Less: net paid claims and allocated claim adjustment expenses (B)	4,075.4
Sub-total	2,475.1
All outstanding liabilities before 2007, net of reinsurance	640.1
Liabilities for claims and allocated claim adjustment expenses, net of reinsurance	$ 3,115.3

General Liability

Accident Year	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance (Undiscounted) For the Years Ended December 31, Supplementary Information (Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	As of December 31, 2016 Total of Incurred-but-Not-Reported Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims*
2007	$ 109.7	$ 102.6	$ 103.7	$ 104.7	$ 107.3	$ 116.3	$ 113.0	$ 113.3	$ 112.2	$ 117.6	$ 8.8	7,468
2008		87.4	91.8	95.4	93.0	93.1	91.9	102.2	101.9	102.7	12.6	5,063
2009			88.6	87.9	88.2	83.1	89.7	107.6	107.4	105.3	8.9	6,057
2010				68.4	67.8	66.6	64.7	70.4	69.6	68.6	7.8	5,318
2011					72.5	71.5	72.9	80.0	95.8	96.0	11.7	4,667
2012						95.0	91.2	89.2	100.9	107.2	19.8	5,168
2013							95.7	96.7	96.5	107.8	21.9	5,357
2014								107.0	110.4	109.3	41.7	5,671
2015									96.0	96.3	54.5	4,826
2016										92.4	60.6	3,650
										1,003.6	(A)	

* Reported claims are accumulated on an individual claimant basis and exclude external reinsurance assumed and participation in residual market pools as claim frequency information is not available.

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance For the Years Ended December 31, Supplementary Information (Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 14.6	$ 25.6	$ 38.4	$ 56.5	$ 72.0	$ 84.1	$ 93.3	$ 99.9	$ 101.0	$ 101.9
2008		3.9	15.1	28.6	46.0	56.0	66.7	72.2	75.6	79.8
2009			2.4	7.8	25.5	37.0	50.3	67.8	77.1	85.3
2010				3.9	10.8	20.8	31.1	44.3	52.1	55.5
2011					2.5	12.1	26.0	43.6	58.6	68.9
2012						5.5	18.8	36.0	50.8	67.4
2013							4.0	13.6	34.3	58.4
2014								5.8	15.8	31.9
2015									6.3	16.0
2016										7.1
										$ 572.7 (B)

Net incurred claims and allocated claim adjustment expenses (A)	$ 1,003.6
Less: net paid claims and allocated claim adjustment expenses (B)	572.7
Sub-total	430.8
All outstanding liabilities before 2007, net of reinsurance	119.4
Liabilities for claims and allocated claim adjustment expenses, net of reinsurance	$ 550.3

Commercial Automobile

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance (Undiscounted) — As of December 31, 2016

Accident Year	For the Years Ended December 31, Supplementary Information (Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total of Incurred-but-Not-Reported Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims*
2007	$ 601.5	$ 565.0	$ 529.8	$ 513.3	$ 509.1	$ 506.7	$ 495.9	$ 493.0	$ 476.6	$ 474.6	$ 4.2	94,462
2008		572.8	546.4	516.4	502.5	497.8	495.7	480.7	462.8	460.6	3.3	87,247
2009			538.0	491.0	459.2	437.9	434.1	424.9	407.0	402.7	4.9	79,178
2010				578.8	531.6	506.7	500.1	496.6	494.9	479.9	12.1	92,134
2011					584.2	575.5	551.4	543.8	549.9	549.0	17.3	96,702
2012						617.0	605.1	579.6	575.0	573.1	25.8	97,962
2013							654.6	649.8	668.5	669.6	37.7	96,810
2014								678.9	689.2	691.7	33.7	102,857
2015									712.4	710.5	36.9	103,767
2016										755.9	31.8	100,806
										$ 5,768.1	(A)	

* Reported claims are accumulated on an individual claimant basis and exclude external reinsurance assumed and participation in residual market pools as claim frequency information is not available.

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance

Accident Year	For the Years Ended December 31, Supplementary Information (Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 206.6	$ 322.8	$ 399.3	$ 438.1	$ 454.5	$ 463.4	$ 467.4	$ 469.1	$ 469.4	$ 469.6
2008		208.6	306.8	368.5	417.3	436.9	447.3	453.7	455.7	456.0
2009			177.8	269.2	325.1	358.6	377.0	386.8	394.0	396.6
2010				200.0	305.8	372.7	423.8	449.4	460.0	465.7
2011					223.1	352.7	436.2	483.2	511.6	523.0
2012						229.0	351.4	442.9	498.6	525.9
2013							248.3	398.1	511.0	578.1
2014								267.4	430.5	536.9
2015									265.1	438.9
2016										290.2
										$ 4,681.3 (B)

Net incurred claims and allocated claim adjustment expenses (A)	$ 5,768.1
Less: net paid claims and allocated claim adjustment expenses (B)	4,681.3
Sub-total	1,086.8
All outstanding liabilities before 2007, net of reinsurance	3.9
Liabilities for claims and allocated claim adjustment expenses, net of reinsurance	$ 1,090.8

The following represents a reconciliation of the incurred and paid loss development tables to total claim and loss adjustment expense reserves as reported in the consolidated balance sheet.

	December 31, 2016
Net claim and allocated loss adjustment expense reserves:	
Workers' compensation (a)	$ 2,883.3
General liability	550.3
Commercial automobile	1,090.8
Three above coverages combined	4,524.5
Other short-duration insurance lines	539.3
Subtotal	5,063.8
Reinsurance recoverable on claim reserves:	
Workers' compensation	1,703.6
General liability	513.7
Commercial automobile	289.9
Three above coverages combined	2,507.3
Other short-duration insurance lines	230.1
Subtotal	2,737.5
Insurance lines other than short-duration	985.7
Unallocated loss adjustment expense reserves	418.8
	1,404.6
Gross claim and loss adjustment expense reserves	$ 9,206.0

(a) The amount of discount reflected in the year end net reserves totaled $231.9 as of December 31, 2016.

The table below is supplementary information and presents the historical average annual percentage payout of incurred claims by age, net of reinsurance.

	Supplementary Information (Unaudited)									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Workers' compensation	17.4%	24.5%	15.3%	9.6%	6.5%	3.8%	.3%	2.4%	1.9%	1.3%
General liability	5.6%	9.5%	15.0%	16.1%	14.3%	11.9%	6.7%	5.6%	2.5%	.7%
Commercial automobile	40.7%	22.9%	15.1%	9.4%	4.6%	2.2%	1.3%	.5%	.1%	—%

Validus Holdings, Ltd.

14. Reserve for losses and loss expenses

Reserves for losses and loss expenses are based in part upon the estimation of case reserves from broker, insured and ceding company reported data. The Company also uses statistical and actuarial methods to estimate ultimate expected losses and loss expenses, from which IBNR losses can be calculated. The period of time from the occurrence of a loss to the reporting of a loss to the Company and to the settlement of the Company's liability may be several months or years. During this period, additional facts and trends may be revealed. As these factors become apparent, reserves will be adjusted, sometimes requiring an increase or decrease in the overall reserves of the Company, and at other times requiring a reallocation of incurred but not reported reserves to specific case reserves. These estimates are reviewed and adjusted regularly, and such adjustments, if any, are reflected in earnings in the period in which they become known. While management believes that it has made a reasonable estimate of ultimate losses, there can be no assurances that ultimate losses and loss expenses will not exceed this estimate.

The following table summarizes the total reserve for losses and loss expenses as at December 31, 2016 and 2015:

	December 31, 2016	December 31, 2015
Case reserves	$ 1,237,772	$ 1,278,697
IBNR	1,757,423	1,717,870
Total reserve for losses and loss expenses	$ 2,995,195	$ 2,996,567

The following table represents an analysis of paid and unpaid losses and loss expenses incurred and a reconciliation of the beginning and ending unpaid losses and loss expenses for the years ended December 31, 2016, 2015 and 2014:

	Years Ended December 31,		
	2016	2015	2014
Reserve for losses and loss expenses, beginning of year	$ 2,996,567	$ 3,243,147	$ 3,047,933
Loss reserves recoverable	(350,586)	(377,466)	(370,154)
Net reserves for losses and loss expenses, beginning of year	2,645,981	2,865,681	2,677,779
Net reserves acquired	—	—	525,091
Increase (decrease) in net reserves for losses and loss expenses in respect of losses occurring in:			
Current year	1,281,289	1,283,970	1,024,256
Prior years [a]	(216,192)	(306,137)	(259,241)
Total incurred losses and loss expenses [a]	1,065,097	977,833	765,015
Less net losses and loss expenses paid in respect of losses occurring in:			
Current year	(389,234)	(326,167)	(245,084)
Prior years	(725,168)	(841,672)	(818,569)
Total net paid losses	(1,114,402)	(1,167,839)	(1,063,653)
Foreign exchange gain	(31,902)	(29,694)	(38,551)
Net reserve for losses and loss expenses, end of year	2,564,774	2,645,981	2,865,681
Loss reserves recoverable	430,421	350,586	377,466
Reserve for losses and loss expenses, end of year	$ 2,995,195	$ 2,996,567	$ 3,243,147

Incurred losses and loss expenses comprise:

	Years Ended December 31,		
	2016	2015	2014
Gross losses and loss expenses [a]	$ 1,257,054	$ 1,083,695	$ 826,826
Reinsurance balances recoverable	(191,957)	(105,862)	(61,811)
Net incurred losses and loss expenses [a]	$ 1,065,097	$ 977,833	$ 765,015

(a) Upon closing the acquisition of Western World, an adjustment of $15,586 was made to increase net reserves to reflect fair value. This adjustment was fully amortized to income through a reduction in losses and loss expenses of $10,979 and $4,607 during the years ended December 31, 2015 and 2014, respectively.

The net favorable development on prior accident years by segment and line of business for the years ended December 31, 2016, 2015 and 2014 was as follows:

	Year Ended December 31, 2016				
	Property	Marine	Specialty	Liability	Total
Validus Re	$ (57,888)	$ (24,435)	$ (36,210)	$ —	$ (118,533)
Talbot	(38,368)	(11,738)	(35,704)	—	(85,810)
Western World	(2,701)	—	—	(6,411)	(9,112)
AlphaCat	(1,858)	—	(879)	—	(2,737)
Net favorable development	$ (100,815)	$ (36,173)	$ (72,793)	$ (6,411)	$ (216,192)

The Validus Re segment experienced favorable development on prior accident years primarily due to favorable development on attritional losses along with favorable development on the 2015 Chilean Earthquake and 2015 Tianjin port explosion loss events partially offset by adverse development on events in the marine lines primarily related to receipt of a loss advice on an individual marine policy that incepted during the second half of 2015. The Talbot segment experienced favorable development on prior accident years primarily due to favorable development on attritional losses partially offset by adverse development on events in the marine lines primarily related to receipt of a loss advice on an individual marine policy that incepted during the second half of 2015. The Western World segment experienced favorable development on prior accident years principally due to favorable development on attritional losses.

	Year Ended December 31, 2015				
	Property	Marine	Specialty	Liability	Total [a]
Validus Re	$ (70,343)	$ (39,460)	$ (18,813)	$ —	$ (128,616)
Talbot	(52,393)	(63,920)	(30,044)	—	(146,357)
Western World [a]	(6,045)	—	—	(16,922)	(22,967)
AlphaCat	(8,197)	—	—	—	(8,197)
Net favorable development [a]	$ (136,978)	$ (103,380)	$ (48,857)	$ (16,922)	$ (306,137)

The Validus Re segment experienced favorable development on prior accident years primarily due to favorable development on Superstorm Sandy, a 2012 loss event, and attritional losses. The Talbot segment experienced favorable development on prior accident years primarily due to favorable development on attritional losses and certain events, including the Thailand floods, which was a 2011 loss event. The Western World segment experienced favorable development on prior accident years primarily due to the amortization of the fair value adjustment made at the acquisition date as well as favorable development on attritional losses.

	Year Ended December 31, 2014				
	Property	Marine	Specialty	Liability	Total
Validus Re	$ (76,064)	$ (6,830)	$ (4,706)	$ —	$ (87,600)
Talbot	(53,779)	(31,397)	(55,990)	—	(141,166)
Western World [a]	1,023	—	—	(12,263)	(11,240)
AlphaCat	(19,235)	—	—	—	(19,235)
Net favorable development [a]	$ (148,055)	$ (38,227)	$ (60,696)	$ (12,263)	$ (259,241)

(a) Upon closing the acquisition of Western World, an adjustment of $15,586 was made to increase net reserves to reflect fair value. This adjustment was fully amortized to income through a reduction in losses and loss expenses of $10,979 and $4,607 during the years ended December 31, 2015 and 2014, respectively.

The Validus Re segment experienced favorable development on prior accident years primarily due to favorable development on attritional losses and the European Floods, Superstorm Sandy and Gryphon Alpha mooring failure loss events, partially offset by adverse development on the Costa Concordia loss event. The Talbot segment experienced favorable development on prior accident years primarily due to favorable development on attritional losses and loss events, primarily the Tohoku earthquake, which was a 2011 loss event. The Western World segment experienced favorable development on prior accident years primarily due to the amortization of the fair value adjustment made at the acquisition date as well as favorable development on attritional losses. The AlphaCat segment experienced favorable development on prior accident years primarily due to the partial release of a 2013 aggregate excess of loss contract.

Short Duration Contract Disclosures

During the year, the Company adopted ASU 2015-09 and has included the required disclosures below. Refer to Note 4, *"Recent Accounting Pronouncements,"* for further information.

The Company has disaggregated its information presented in the tables below by line of business as appropriate for each of the Validus Re, Talbot and Western World segments. The Company has not prepared loss development tables for the AlphaCat segment as its reserves for losses and loss expenses as at December 31, 2016 of $48,534 are not significant (1.9% of total net reserves) and therefore, presenting this information would not be meaningful. Reserves for the AlphaCat segment have been included as a reconciling item within the reconciliation of loss development information to the Company's reserves for losses and loss expenses.

The Company has presented the below development tables for all accident years shown using exchange rates as at December 31, 2016. All accident years prior to the current year have been restated and presented using the current year exchange rate.

(a) Loss Development Tables

(i) Validus Re

The Validus Re loss development tables have been produced by line of business for accident years 2012 through to 2016. The Company determined that it was impracticable to produce IBNR by accident year by lines of business for years prior to 2012 as the necessary data in original currency was not readily available. In addition, Validus Re provides treaty reinsurance products on a global basis for all of its lines of business and does not receive or maintain claims count information associated with its reserved claims. As such, the Company has determined that it is impracticable to provide this information.

The net reserves for losses and loss expenses related to the acquisitions of IPC Holdings Ltd. ("IPC") acquired on September 4, 2009, and Flagstone Reinsurance Holdings, S.A. ("Flagstone"), acquired on November 30, 2012, have been incorporated in Validus Re's reserves for losses and loss expenses on a prospective basis. IPC and Flagstone were put into run-off as at the acquisition date of each. The prospective treatment for the acquisition of Flagstone was adopted primarily as a result of the data necessary to produce the loss development tables by accident year and by lines of business not being migrated over on acquisition as it was not requested or received and as a result does not exist within Validus Re's data systems.

Validus Re - Property

	Incurred Losses and Loss Expenses, Net of Reinsurance						
	Years Ended December 31,					December 31, 2016	
Accident Year	2012	2013	2014	2015	2016	Total of IBNR Reserves Plus Expected Development on Reported Losses	Cumulative Reported Claims Count
	<---------- *Unaudited* ---------->						
2012	$ 397,635	$ 321,956	$ 309,344	$ 282,517	$ 280,411	$ 19,108	n/a
2013		174,722	156,233	141,203	132,830	7,233	n/a
2014			108,206	102,273	95,392	6,757	n/a
2015				154,923	118,484	41,177	n/a
2016					149,263	86,564	n/a
				Total	$ 776,380		

	Cumulative Paid Losses and Loss Expenses, Net of Reinsurance				
	Years Ended December 31,				
Accident Year	2012	2013	2014	2015	2016
	<---------- *Unaudited* ---------->				
2012	67,004	149,433	202,141	225,518	234,256
2013		17,325	63,974	101,158	114,263
2014			25,346	63,415	78,509
2015				16,029	57,882
2016					26,522
				Total	$ 511,432

Reserves for losses and loss expenses, before 2012, net of reinsurance [a]	$ 154,539
Reserves for losses and loss expenses, net of reinsurance	$ 419,487

(a) Includes reserves for losses and loss expenses, net of reinsurance, of $77,790 and $10,614 related to Flagstone and IPC, respectively.

Validus Re - Marine

	Incurred Losses and Loss Expenses, Net of Reinsurance						
	Years Ended December 31,					December 31, 2016	
Accident Year	2012	2013	2014	2015	2016	Total of IBNR Reserves Plus Expected Development on Reported Losses	Cumulative Reported Claims Count
	<---------- *Unaudited* ---------->						
2012	$ 195,163	$ 226,817	$ 225,131	$ 218,734	$ 216,673	$ 19,725	n/a
2013		76,776	74,022	63,630	61,210	7,347	n/a
2014			63,732	42,991	35,910	7,418	n/a
2015				129,864	119,490	55,557	n/a
2016					68,531	49,619	n/a
					Total	$ 501,814	

	Cumulative Paid Losses and Loss Expenses, Net of Reinsurance				
	Years Ended December 31,				
Accident Year	2012	2013	2014	2015	2016
	<---------- *Unaudited* ---------->				
2012	11,356	94,052	148,628	169,420	178,172
2013		11,784	28,996	39,493	44,512
2014			7,013	11,749	17,383
2015				3,723	16,180
2016					8,801
				Total	$ 265,048

Reserves for losses and loss expenses, before 2012, net of reinsurance [a]	$ 64,750
Reserves for losses and loss expenses, net of reinsurance	$ 301,516

(a) Includes reserves for losses and loss expenses, net of reinsurance, of $15,178 and $1,537 related to Flagstone and IPC, respectively.

(ii) Talbot

The Talbot loss development tables have been produced by line of business for accident years 2012 through to 2016. The Company determined that it was impracticable to produce IBNR by accident year for years prior to 2012 as the Company did not record this data for years prior to 2012 and as such, did not allocate IBNR by line of business for these years. Talbot writes treaty reinsurance business along with business through binders and lineslips and for this business the Company does not receive or maintain claims count information associated with its reserved losses therefore, the Company has determined that it is impracticable to provide claims count information.

Talbot - Property

	Incurred Losses and Loss Expenses, Net of Reinsurance						
	Years Ended December 31,					December 31, 2016	
Accident Year	2012	2013	2014	2015	2016	Total of IBNR Reserves Plus Expected Development on Reported Losses	Cumulative Reported Claims Count
	<---------- *Unaudited* ---------->						
2012	$ 135,923	$ 112,488	$ 100,748	$ 101,387	$ 100,773	$ 2,413	n/a
2013		118,167	96,814	83,426	81,004	605	n/a
2014			147,259	121,260	114,852	5,528	n/a
2015				138,087	109,608	12,696	n/a
2016					177,771	76,755	n/a
					Total	$ 584,008	

Cumulative Paid Losses and Loss Expenses, Net of Reinsurance

Accident Year	Years Ended December 31, 2012	2013	2014	2015	2016
	<---------- *Unaudited* ---------->				
2012	$ 13,051	$ 61,490	$ 83,824	$ 88,150	$ 92,512
2013		12,813	48,231	67,328	73,267
2014			21,249	74,493	95,945
2015				24,537	63,437
2016					37,880
				Total	$ 363,041

Reserves for losses and loss expenses, before 2012, net of reinsurance	$ 12,180
Reserves for losses and loss expenses, net of reinsurance	$ 233,147

Talbot - Marine

Incurred Losses and Loss Expenses, Net of Reinsurance

Accident Year	Years Ended December 31, 2012	2013	2014	2015	2016	December 31, 2016: Total of IBNR Reserves Plus Expected Development on Reported Losses	December 31, 2016: Cumulative Reported Claims Count
	<---------- *Unaudited* ---------->						
2012	$ 208,883	$ 203,855	$ 186,278	$ 182,283	$ 178,839	$ 5,154	n/a
2013		189,091	188,991	168,203	161,839	11,372	n/a
2014			180,401	155,361	154,105	13,671	n/a
2015				187,790	192,818	54,285	n/a
2016					159,153	89,536	n/a
				Total	$ 846,754		

Cumulative Paid Losses and Loss Expenses, Net of Reinsurance

Accident Year	Years Ended December 31, 2012	2013	2014	2015	2016
	<---------- *Unaudited* ---------->				
2012	$ 36,491	$ 105,600	$ 136,335	$ 153,550	$ 157,475
2013		38,416	88,494	112,781	125,037
2014			24,433	74,547	102,788
2015				25,300	73,957
2016					35,105
				Total	$ 494,362

Reserves for losses and loss expenses, before 2012, net of reinsurance	$ 44,753
Reserves for losses and loss expenses, net of reinsurance	$ 397,145

Talbot - Specialty

	Incurred Losses and Loss Expenses, Net of Reinsurance					December 31, 2016	
	Years Ended December 31,						
Accident Year	2012	2013	2014	2015	2016	Total of IBNR Reserves Plus Expected Development on Reported Losses	Cumulative Reported Claims Count
	<---------- *Unaudited* ---------->						
2012	$ 151,306	$ 132,735	$ 122,760	$ 120,621	$ 118,869	$ 5,886	n/a
2013		166,450	145,905	132,797	124,208	8,724	n/a
2014			215,960	214,962	198,653	39,248	n/a
2015				152,907	149,031	39,447	n/a
2016					166,604	105,142	n/a
					Total $ 757,365		

	Cumulative Paid Losses and Loss Expenses, Net of Reinsurance				
	Years Ended December 31,				
Accident Year	2012	2013	2014	2015	2016
	<---------- *Unaudited* ---------->				
2012	$ 25,591	$ 57,906	$ 83,201	$ 87,753	$ 105,888
2013		42,325	77,428	91,940	100,213
2014			41,183	107,882	135,526
2015				35,724	85,397
2016					33,468
				Total	$ 460,492

Reserves for losses and loss expenses, before 2012, net of reinsurance	$ 45,486
Reserves for losses and loss expenses, net of reinsurance	$ 342,359

(iii) Western World

The Western World loss development tables have been produced by line of business for accident years 2007 through to 2016. The Company has accumulated claims count information by accident year for Western World. The Company's methodology for determining reported claims count information is on a per claims basis by accident year and is inclusive of claims that are open, closed with payment and closed without payment.

Western World - Property

	Incurred Losses and Loss Expenses, Net of Reinsurance										December 31, 2016	
	Years Ended December 31,											
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total of IBNR Reserves Plus Expected Development on Reported Losses	Cumulative Reported Claims Count
	<---------- *Unaudited* ---------->											
2007	$ 8,520	$ 8,161	$ 8,218	$ 8,209	$ 8,209	$ 8,206	$ 8,206	$ 8,207	$ 8,207	$ 8,207	$ —	841
2008		12,094	11,615	11,805	11,762	11,729	11,721	11,724	11,724	11,724	—	412
2009			10,300	10,005	10,039	10,034	10,060	10,060	10,060	10,060	—	784
2010				11,846	11,573	11,507	11,414	11,448	11,438	11,332	—	974
2011					12,588	12,223	12,000	12,134	12,012	12,021	—	1,238
2012						15,506	15,491	15,594	15,556	15,522	—	1,680
2013							21,825	23,561	23,659	23,599	—	1,950
2014								35,612	29,282	28,619	103	2,393
2015									27,879	26,002	135	1,788
2016										46,636	9,324	1,587
										Total	$ 193,722	

Accident Year	Cumulative Paid Losses and Loss Expenses, Net of Reinsurance — Years Ended December 31,									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	<---------- *Unaudited* ---------->									
2007	$ 5,418	$ 7,968	$ 8,192	$ 8,206	$ 8,206	$ 8,206	$ 8,206	$ 8,207	$ 8,207	$ 8,207
2008		8,895	11,288	11,672	11,747	11,714	11,721	11,724	11,724	11,724
2009			8,096	9,948	9,942	10,003	10,060	10,060	10,060	10,060
2010				8,563	10,521	10,905	10,854	10,882	10,903	11,287
2011					9,797	12,000	11,976	12,027	12,009	12,021
2012						11,166	14,838	15,435	15,513	15,522
2013							15,568	22,647	23,104	23,561
2014								21,913	27,211	27,606
2015									18,981	25,302
2016										29,666
									Total	$ 174,956

Reserves for losses and loss expenses, before 2007, net of reinsurance	$ —
Reserves for losses and loss expenses, net of reinsurance	$ 18,766

Western World - Liability

Accident Year	Incurred Losses and Loss Expenses, Net of Reinsurance — Years Ended December 31,										December 31, 2016	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total of IBNR Reserves Plus Expected Development on Reported Losses	Cumulative Reported Claims Count
	<---------- *Unaudited* ---------->											
2007	$ 164,717	$ 162,239	$ 160,117	$ 158,478	$ 154,499	$ 152,163	$ 149,994	$ 107,894	$ 107,350	$ 106,342	$ 1,981	$ 4,727
2008		135,009	135,280	135,330	133,088	131,006	129,559	102,424	102,070	101,478	2,075	4,950
2009			116,474	116,780	116,990	116,463	116,327	98,261	96,235	95,266	2,173	3,955
2010				101,223	108,823	111,675	112,072	105,400	106,066	103,973	3,877	4,205
2011					101,091	107,741	107,827	109,412	109,183	108,301	4,627	4,372
2012						108,981	111,283	133,990	132,562	127,486	9,410	4,649
2013							132,077	165,233	164,428	158,329	17,049	5,990
2014								197,022	197,388	203,592	44,988	7,469
2015									154,184	158,591	76,092	5,152
2016										133,303	104,906	3,156
										Total	$ 1,296,661	

Accident Year	Cumulative Paid Losses and Loss Expenses, Net of Reinsurance Years Ended December 31,									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	<---------- *Unaudited* ---------->									
2007	$ 10,723	$ 30,741	$ 58,358	$ 80,218	$ 91,020	$ 96,658	$ 99,978	$ 102,600	$ 103,961	$ 104,038
2008		8,654	28,467	51,165	71,239	82,661	89,433	93,563	95,773	97,475
2009			10,023	30,131	48,255	65,009	77,895	85,644	89,688	90,415
2010				8,215	28,393	51,765	71,430	84,320	92,889	96,309
2011					7,331	27,438	50,197	75,000	88,415	96,780
2012						8,823	31,291	65,437	92,499	108,409
2013							10,159	41,782	77,776	108,613
2014								16,468	52,543	98,848
2015									12,662	39,598
2016										9,873
									Total	$ 850,358

Reserves for losses and loss expenses, before 2007, net of reinsurance	$ 8,944
Reserves for losses and loss expenses, net of reinsurance	$ 455,247

(b) Reconciliation of Loss Development Information to the Reserves for Losses and Loss Expenses

The table below reconciles the loss development information to the Company's reserves for losses and loss expenses as at December 31, 2016:

	December 31, 2016
Reserves for losses and loss expenses, net of reinsurance	
Validus Re - Property	$ 419,487
Validus Re - Marine	301,516
Validus Re - Specialty	291,372
Talbot - Property	233,147
Talbot - Marine	397,145
Talbot - Specialty	342,359
Western World - Property	18,766
Western World - Liability	455,247
Total reserves for losses and loss expenses, net of reinsurance	2,459,039
Loss reserves recoverable	
Validus Re - Property	42,873
Validus Re - Marine	52,970
Validus Re - Specialty	2,162
Talbot - Property	93,774
Talbot - Marine	125,677
Talbot - Specialty	86,587
Western World - Property	187
Western World - Liability	87,300
Elimination - Intercompany	(61,109)
Total loss reserves recoverable	430,421
Unallocated loss adjustment expenses	51,990
Provisions for uncollectible reinsurance	5,153
Reserves for losses and loss expenses - AlphaCat segment	48,534
Other	58
Total reserves for losses and loss expenses	$ 2,995,195

(c) Historical Loss Duration

The below table summarizes the historic average annual percentage payout of incurred losses by age, net of reinsurance, as of December 31, 2016:

	Average Annual Percentage Payout of Incurred Losses by Age, Net of Reinsurance									
	December 31, 2016									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Validus Re - Property	19.0%	34.9%	20.9%	9.1%	3.1%	n/a	n/a	n/a	n/a	n/a
Validus Re - Marine	12.0%	22.5%	19.3%	8.9%	4.0%	n/a	n/a	n/a	n/a	n/a
Validus Re - Specialty	51.4%	34.4%	5.7%	1.7%	0.8%	n/a	n/a	n/a	n/a	n/a
Talbot - Property	18.2%	43.4%	21.5%	5.8%	4.3%	n/a	n/a	n/a	n/a	n/a
Talbot - Marine	19.0%	31.8%	16.8%	8.6%	2.2%	n/a	n/a	n/a	n/a	n/a
Talbot - Specialty	24.1%	30.6%	15.6%	5.2%	15.3%	n/a	n/a	n/a	n/a	n/a
Western World - Property	73.1%	22.4%	2.0%	0.5%	0.1%	0.1%	0.9%	—%	—%	—%
Western World - Liability	8.1%	18.9%	22.9%	20.1%	12.0%	7.2%	3.7%	1.8%	1.5%	0.1%

American International Group, Inc.

13. Insurance Liabilities

LIABILITY FOR UNPAID LOSSES AND LOSS ADJUSTMENT EXPENSES (LOSS RESERVES)

Loss reserves represent the accumulation of estimates of unpaid claims, including estimates for claims incurred but not reported and loss adjustment expenses (IBNR), less applicable discount. We regularly review and update the methods used to determine loss reserve estimates. Any adjustments resulting from this review are reflected currently in pre-tax income. Because these estimates are subject to the outcome of future events, changes in estimates are common given that loss trends vary and time is often required for changes in trends to be recognized and confirmed. Reserve changes that increase previous estimates of ultimate cost are referred to as unfavorable or adverse development or reserve strengthening. Reserve changes that decrease previous estimates of ultimate cost are referred to as favorable development.

Our gross loss reserves before reinsurance and discount are net of contractual deductible recoverable amounts due from policyholders of approximately $12.8 billion and $12.6 billion at December 31, 2016 and 2015, respectively. These recoverable amounts are related to certain policies with high deductibles (in excess of high dollar amounts retained by the insured through self-insured retentions, deductibles, retrospective programs, or captive arrangements, each referred to generically as "deductibles"), primarily for U.S. commercial casualty business. With respect to the deductible portion of the claim, we manage and pay the entire claim on behalf of the insured and are reimbursed by the insured for the deductible portion of the claim. Thus, these recoverable amounts represent a credit exposure to us. At December 31, 2016 and 2015, we held collateral of approximately $9.7 billion and $9.6 billion, respectively, for these deductible recoverable amounts, consisting primarily of letters of credit and funded trust agreements.

The following table presents the roll forward of activity in Loss Reserves:

Years Ended December 31, *(in millions)*	2016	2015	2014
Liability for unpaid loss and loss adjustment expenses, beginning of year	$ 74,942	$ 77,260	$ 81,547
Reinsurance recoverable	(14,339)	(15,648)	(17,231)
Net Liability for unpaid loss and loss adjustment expenses, beginning of year	60,603	61,612	64,316
Foreign exchange effect	(463)	(1,429)	(1,061)
Dispositions[a]	(1,058)	-	-
Changes in net liability for unpaid losses and loss adjustment expenses due to retroactive asbestos reinsurance transaction	-	20	141
Total	59,082	60,203	63,396
Losses and loss adjustment expenses incurred:			
Current year	20,232	20,308	21,279
Prior years, excluding discount	5,788	4,119	703
Prior years, discount charge (benefit)	(422)	(71)	478
Total losses and loss adjustment expenses incurred	25,598	24,356	22,460
Losses and loss adjustment expenses paid*:			
Current year	(5,825)	(5,751)	(6,358)
Prior years	(16,908)	(18,205)	(17,886)
Total losses and loss adjustment expenses paid	(22,733)	(23,956)	(24,244)
Reclassified to liabilities held for sale[b]	(402)	-	-
Liability for unpaid loss and loss adjustment expenses, end of year:			
Net liability for unpaid losses and loss adjustment expenses	61,545	60,603	61,612
Reinsurance recoverable	15,532	14,339	15,648
Total	$ 77,077	$ 74,942	$ 77,260

(a) Includes amounts related to dispositions through the date of disposition. Includes sale of UGC and Ascot.

(b) Represents loss reserves included in our pending sale of certain of our insurance operations to Fairfax. Upon consummation of the sale, we may retain a portion of these reserves through reinsurance arrangements.

During 2016, we recognized adverse prior year loss reserve development of $5.8 billion. This adverse development was primarily a result of the following:

- Higher than expected losses emerging across several casualty product lines, especially in the recent accident years (generally, 2011 to 2015) driven by increased frequency and severity of claims. This recent accident year loss emergence caused us to increase loss development factors applied across many accident years.
- Loss development factors including workers compensation tail factors, also increased due to an observed lengthening of loss reporting patterns relative to prior expectations.
- Increases in loss trend assumptions to reflect the latest observed increases in frequency and severity and the impact of these increased loss trends on expected loss ratios.
- Changes in weights we apply to the various actuarial methods to better align with updated trends.

The Loss Development Tables below include loss development data by our major lines of business for the last 10 accident years. The drivers of prior year development are discussed following each of the Loss Development Tables.

Loss Development

The table below presents the reconciliation of the net incurred and paid claims development in the following tables to Loss Reserves in the Consolidated Balance Sheets for the year ended December 31, 2016:

(in millions)	Net liability for unpaid losses and loss adjustment expenses as presented in the disaggregated tables below	Reinsurance recoverable on unpaid losses and loss adjustment expenses included in the disaggregated tables below	Gross liability for unpaid losses and loss adjustment expenses
Commercial Insurance:			
Liability and Financial Lines			
U.S. Workers' compensation (before discount)	$ 13,069	$ 2,879	$ 15,948
U.S. Excess casualty	8,749	1,115	9,864
U.S. Other casualty	8,746	3,209	11,955
U.S. Financial lines	6,102	1,195	7,297
Europe Casualty and Financial lines	5,587	1,313	6,900
Total Liability and Financial Lines	42,253	9,711	51,964
Property and Special Risks:			
U.S. and Europe	5,913	1,596	7,509
Total Property and Special Risks	5,913	1,596	7,509
Total Commercial Insurance	48,166	11,307	59,473
Consumer - Personal insurance			
U.S., Europe and Japan	3,454	377	3,831
Total Consumer - Personal Insurance	3,454	377	3,831
Legacy Portfolio - Run-Off Property and Casualty Insurance Lines			
U.S. Long Tail Insurance lines (before discount)	5,967	1,679	7,646
Total Legacy Portfolio Run-Off Property and Casualty Insurance Lines	5,967	1,679	7,646
Total	$ 57,587	$ 13,363	$ 70,950
Other Reconciling Items			
Discount on workers compensation lines			(3,570)
Other product lines			6,192
Unallocated loss adjustment expenses			3,505
Total			$ 77,077

Loss Development Information

The following is information about incurred and paid loss developments as of December 31, 2016, net of reinsurance. The cumulative number of reported claims, the total of IBNR liabilities and expected development on reported loss included within the net incurred loss amounts are presented in the following section.

Reserving Methodology

We use a combination of methods to project ultimate losses for both long-tail and short-tail exposures, which include:

- **Paid Development method:** The Paid Development method estimates ultimate losses by reviewing paid loss patterns and selecting paid ultimate loss development factors. These factors are then applied to paid losses by applying them to accident years, with further expected changes in paid loss. Since the method does not rely on case reserves, it is not directly influenced by changes in the adequacy of case reserves.
- **Incurred Development method:** The Incurred Development method is similar to the Paid Development method, but it uses case incurred losses instead of paid losses. Since this method uses more data (case reserves in addition to paid losses) than the Paid Development method, the incurred development patterns may be less variable than paid development patterns.
- **Expected Loss Ratio method:** The Expected Loss Ratio method multiplies premiums by an expected loss ratio to produce ultimate loss estimates for each accident year. This method may be useful if loss development patterns are inconsistent, losses emerge very slowly, or there is relatively little loss history from which to estimate future losses.
- **Bornhuetter-Ferguson method:** The Bornhuetter-Ferguson method using premiums and paid losses is a combination of the Paid Development method and the Expected Loss Ratio method where the weights given to each method is the reciprocal of the loss development factor. This method normally determines expected loss ratios similar to the method used for the Expected Loss Ratio method. The Bornhuetter-Ferguson method using premiums and incurred losses is similar to the Bornhuetter-Ferguson method using premiums and paid losses except that it uses case incurred losses.

- Average Loss method: The Average Loss method multiplies a projected number of ultimate claims by an estimated ultimate severity average loss for each accident year to produce ultimate loss estimates. Since projections of the ultimate number of claims are often less variable than projections of ultimate loss, this method can provide more reliable results for reserve categories where loss development patterns are inconsistent or too variable to be relied on exclusively.

In updating our loss reserve estimates, we consider and evaluate inputs from many sources, including actual claims data, the performance of prior reserve estimates, observed industry trends, our internal peer review processes, including challenges and recommendations from our Enterprise Risk Management group, as well as the views of third party actuarial firms. We use these inputs to improve our evaluation techniques, and to analyze and assess the change in estimated ultimate loss for each accident year by product line. Our analyses produce a range of indications from various methods, from which we select our best estimate.

In determining the actual carried loss reserves, we consider both the internal actuarial best estimate and numerous other internal and external factors, including:

- an assessment of economic conditions, including real GDP growth, inflation, employment rates or unemployment duration, stock market volatility and changes in corporate bond spreads;
- changes in the legal, regulatory, judicial and social environment, including changes in road safety, public health and cleanup standards;
- changes in medical cost trends (inflation, intensity and utilization of medical services) and wage inflation trends;
- underlying policy pricing, terms and conditions including attachment points and policy limits;
- claims handling processes and enhancements;
- third-party claims reviews that are periodically performed for key classes of claims such as toxic tort, environmental and other complex casualty claims;
- third-party actuarial reviews that are periodically performed for key classes of business;
- input from underwriters on pricing, terms, and conditions and market trends; and
- changes in our reinsurance program, pricing and commutations.

The following factors are relevant to the loss development information included in the tables below:

- Table Organization: The tables are organized by accident year and include policies written on an occurrence and claims- made basis. Financial Lines business is primarily written on a claims-made basis, while the majority of the Liability business is written on an occurrence basis. Primarily, all short-tail lines in Property and Special Risks and Personal Insurance are written on an occurrence basis.
- Groupings: We believe our groupings have homogenous risk characteristics with similar development patterns and would generally be subject to similar trends. As an example, we separated U.S. business from non-U.S. business for long-tail classes because the claims for these two product lines can be substantially different, and we only produced a table for Europe, which is the largest region in our non-U.S. portfolio for non-U.S. long-tail business.
- Reinsurance: Our reinsurance program varies by exposure type and may change from year to year. This may affect the comparability of the data presented in our tables.
- Incurred but not reported liabilities (IBNR): We include development from past reported losses in IBNR.
- Data excluded from tables: Information with respect to accident years older than ten years is excluded from the development tables. Unallocated loss adjustment expenses are also excluded.
- Foreign exchange: The loss development for operations outside of the U.S. is presented for all accident years using the current exchange rate at December 31, 2016. Although this approach requires restating all prior accident year information, the changes in exchange rates do not impact incurred and paid loss development trends.
- Claim counts: We consider a reported claim to be one claim for each claimant or feature for each loss occurrence. Claims relating to losses that are 100 percent reinsured are excluded from the reported claims in the tables below. Reported claims for losses from assumed reinsurance contracts are not available and hence not included in the reported claims.
- There are limitations that should be considered on the reported claim count data in the tables below, including:
  - Claim counts are presented only on a reported (not an ultimate) basis;
  - The tables below include lines of business and geographies at a certain aggregated level which may indicate different frequency and severity trends and characteristics, and may not be as meaningful as the claim count information related to the individual products within those lines of business and geographies;
  - Certain lines of business are more likely to be subject to occurrences involving multiple claimants and features, which can distort measures based on the reported claim counts in the table below; and.
  - Reported claim counts are not adjusted for ceded reinsurance, which may distort the measure of frequency or severity.

Supplemental Information: The information about incurred and paid loss development for all periods preceding year ended December 31, 2016 and the related historical claims payout percentage disclosure is unaudited and is presented as supplementary information.

The following tables present undiscounted, incurred and paid losses and allocated loss adjustment expenses by accident year, on a net basis after reinsurance, for 10 years:

U.S. Workers' Compensation

During 2016, we recognized $1.9 billion of adverse prior year development primarily due to increased tail factors and loss development factors. The net earned premium has declined by approximately 72% from accident year 2007 to accident year 2016. The proportion of large deductible business has increased which has slowed the reporting pattern of claims.

Incurred Losses and Allocated Loss Adjustment Expenses, Undiscounted and Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*											December 31, 2016	
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Prior Year Development	Total of IBNR Liabilities Plus Expected Development on Reported Losses	Cumulative Number of Reported Claims
	Unaudited												
2007	$ 4,505	$ 4,441	$ 4,414	$ 4,544	$ 4,528	$ 4,513	$ 4,469	$ 4,379	$ 4,395	$ 4,548	$ 153	$ 392	225,243
2008		4,114	4,184	4,422	4,425	4,471	4,398	4,385	4,398	4,547	149	504	198,597
2009			3,466	3,633	3,608	3,666	3,639	3,616	3,606	3,733	127	547	147,209
2010				2,706	3,049	3,125	3,148	3,211	3,214	3,311	97	550	132,987
2011					2,901	2,953	3,091	3,158	3,113	3,152	39	521	124,486
2012						2,382	2,194	2,286	2,260	2,334	74	571	70,426
2013							1,932	1,880	1,950	2,060	110	645	46,175
2014								1,729	1,764	1,916	152	807	39,000
2015									1,708	1,864	156	1,027	34,241
2016										1,299		965	25,164
Total										$ 28,764	$ 1,057		
Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance from the table below										(19,124)	-		
Liabilities for losses and loss adjustment expenses and prior year development before 2007, net of reinsurance										3,429	850		
Unallocated loss adjustment expense prior year development										-	13		
Liabilities for losses and loss adjustment expenses and prior year loss development, net of reinsurance										$ 13,069	$ 1,920		

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*									
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Unaudited									
2007	$ 926	$ 1,856	$ 2,452	$ 2,844	$ 3,122	$ 3,359	$ 3,577	$ 3,665	$ 3,773	$ 3,855
2008		785	1,678	2,252	2,655	3,044	3,272	3,476	3,609	3,707
2009			630	1,328	1,756	2,120	2,390	2,621	2,780	2,887
2010				550	1,093	1,537	1,855	2,126	2,288	2,426
2011					519	1,129	1,561	1,884	2,129	2,285
2012						415	804	1,089	1,272	1,440
2013							282	619	879	1,067
2014								231	558	786
2015									234	524
2016										147
Total										$ 19,124

Reserving Process and Methodology

U.S. Workers' Compensation is an extremely long-tail line of business, with loss emergence extending for decades. We generally use a combination of loss development methods, frequency/severity and expected loss ratio methods for workers' compensation.

Many of our primary casualty policies contain risk-sharing features, including high deductibles, self-insured retentions or retrospective rating features, in addition to a traditional insurance component. These risk-sharing programs generally are large and complex, comprising multiple products, years and structures, and are subject to amendment over time. We group guaranteed cost and excess of deductible business separately and then further by state and industry subset to the extent that meaningful differences are determined to exist. We also separately analyze certain subsets of the portfolio that have unique characteristics (e.g., U.S. government sub-contractor accounts and construction wrap-up business). For excess of deductible business, we also segment by size of deductible and whether the claim is handled by AIG or an outside third party administrator (TPA).

For guaranteed cost business, expected loss ratio methods generally are given significant weight only in the most recent accident year. Workers' compensation claims are generally characterized by high frequency, low severity, and relatively consistent loss development from one accident year to the next. We historically have been a leading writer of workers' compensation, and thus have sufficient volume of claims experience to use development methods. We generally segregate California (CA) and New York (NY) businesses from the other states to reflect their different development patterns and changing percentage of the mix by state. The claims development tables above are impacted by two other significant initiatives, which offset each other. In recent years, we instituted claims strategy changes and loss mitigation efforts to accelerate settlements, which we believe results in an overall reduction in claim costs. This strategy resulted in an increase in paid losses along the latest diagonals relative to prior years. In addition, we have been reducing premium volume in recent years and shifting a greater proportion of business to insured risk retention structures such as high deductible policies. These mix and volume changes slowed paid and incurred development since excess of deductible claims will typically take longer to emerge and settle.

Expected loss ratio methods for business written in excess of a deductible may be given significant weight in the most recent five accident years. In the current analysis, we have increased our tail factor estimates for states other than NY and CA for guaranteed cost business in recognition of longer medical development patterns that we have been seeing in recent years. In addition, we have reflected increases in legal costs we have seen across the portfolio, particularly in California.

Additionally, over the years we have written a number of very large accounts which include workers' compensation coverage. These accounts are generally individually priced by our actuaries, and to the extent appropriate, the indicated losses based on the pricing analysis may be used to record the initial estimated loss reserves for these accounts.

Prior Year Development

During 2016, we recognized $1.9 billion of adverse prior year development in primary workers' compensation coverages primarily driven by the risk sharing programs where we provide coverage in excess of large deductibles. For this excess of large deductible business, in 2016, we observed actual loss emergence and development at significantly greater levels than expected based on our previous experience in particular from losses in excess of $1 million. Since these policies respond to larger claims, the loss reporting pattern is much longer than observed in guaranteed cost workers' compensation and it takes several years to discern credible changes in the pattern. Furthermore, implementation of claims settlement and loss mitigation strategies over the past several years has made the recent evaluation of data more challenging as historical development patterns may not yet fully reflect these claim and mitigation activities. During 2016, we refined our actuarial methodology by combining data across previously segregated underwriting portfolios to improve our ability to analyze the loss development trends and patterns that had been altered by the mix, claims handling and loss mitigation changes we have made during the last 5 years. We also developed further segmentations by deductible size and other key parameters, such as claims handled by third party administrator's (TPA) staff and not our claims department. As a result, we determined that the loss emergence patterns had changed and lengthened significantly from our prior expectation and therefore, we increased our loss development factors.

In addition, for workers' compensation policies with no deductibles (guaranteed cost), we increased our tail factors for the all other states grouping to reflect the latest unfavorable experience in more mature accident years. This change increased the ultimate losses by approximately $440 million in 2016. We also reflected the increasing cost trends for legal and cost containment services, especially in California, as recent trends in this sector have been unfavorable.

Furthermore, in 2016, the Florida Supreme Court issued two separate rulings that have increased the potential liability for workers' compensation claims in that state by undoing certain aspects of regulations in place since 2003. The Castellanos ruling eliminated statutory caps on claimant attorney fees in certain cases, and the Westphal ruling eliminated the 104-week limitation on temporary total disability benefits. Also in the second quarter, the Florida Court of Appeals issued the Miles decision, declaring unconstitutional certain restrictions on claimant-paid attorney fees. In in the second quarter 2016, we increased our workers' compensation reserves by $100 million to reflect our estimate of the costs of these rulings on prior years' claims.

During 2015, we increased our reserves by $234 million, primarily for accident years 2012 and prior in the U.S. Workers' Compensation line, to reflect estimated increased losses and reduced expectations of future recoveries from our insureds through risk-sharing features. We also recognized $100 million of adverse prior year development in U.S. Workers' Compensation coverages sold to government contractors in U.S. and non-U.S. military installations as a result of adverse loss emergence from several large accounts in the recent accident years. In addition, we reacted to the adverse emergence by increasing our expected loss ratios in recent accident years. For the remainder of the primary workers' compensation portfolio, our 2015 analysis was based on the refined segmentation from 2014, and indicated that prior year loss reserve development was flat after taking into account the initiatives that our claim function had undertaken to manage high risk claims.

During 2014, consistent with prior year studies, we continued to refine our segmentation of primary workers' compensation into guaranteed cost and excess of large deductible businesses by deductible size group. The net result of the analysis was adverse development of $113 million for the primary workers' compensation line of business. The key drivers of the adverse development in this line of business were increases for guaranteed cost business in California and New York, and increases for excess of large deductible business, as well as adverse experience in the construction line. Our revised selections had the greatest adverse effect on the construction line of business ($140 million adverse development) and the national accounts line of business ($125 million adverse development). The most significant favorable effect was in the special workers' compensation line of business ($155 million favorable development).

U.S. Excess Casualty

During 2016, we recognized $1.1 billion of adverse development in Excess Casualty driven by continued higher than expected loss emergence as detailed below. The net earned premium for Excess Casualty has declined by approximately 69% from accident 2007 to accident year 2016. The average limit of the excess casualty business has declined over this period and attachment points for certain subsets has been increasing.

Incurred Losses and Allocated Loss Adjustment Expenses, Undiscounted and Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*										December 31, 2016		
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Prior Year Development	Total of IBNR Liabilities Plus Expected Development on Reported Losses	Cumulative Number of Reported Claims
	Unaudited												
2007	$ 1,854	$ 1,820	$ 1,752	$ 2,246	$ 2,072	$ 2,232	$ 2,208	$ 2,183	$ 2,113	$ 2,194	$ 81	$ 228	6,423
2008		1,979	2,000	2,173	1,951	1,832	1,884	1,721	1,667	1,638	(29)	228	4,561
2009			1,851	1,920	1,812	1,650	1,465	1,328	1,418	1,520	102	224	3,689
2010				1,885	2,094	2,091	1,782	1,649	1,736	1,722	(14)	399	3,459
2011					1,784	1,824	1,595	1,427	1,528	1,611	83	425	3,368
2012						1,604	1,400	1,239	1,486	1,566	80	621	3,252
2013							1,096	998	1,136	1,276	140	672	2,494
2014								873	996	1,185	189	788	1,791
2015									913	1,380	467	972	1,325
2016										810		748	540
Total										$ 14,902	$ 1,099		
Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance from the table below										(7,690)	-		
Liabilities for losses and loss adjustment expenses and prior year development before 2007, net of reinsurance										1,537	26		
Unallocated loss adjustment expense prior year development										-	(67)		
Liabilities for losses and loss adjustment expenses and prior year loss development, net of reinsurance										$ 8,749	$ 1,058		

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*										
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	**2016**
	Unaudited									
2007	$ 8	$ 102	$ 301	$ 732	$ 1,085	$ 1,402	$ 1,613	$ 1,712	$ 1,796	$ 1,857
2008		11	97	439	667	842	954	1,061	1,172	1,226
2009			8	69	249	449	624	788	965	1,175
2010				10	197	475	654	795	946	1,052
2011					5	63	225	387	716	921
2012						3	106	288	495	649
2013							15	105	206	386
2014								3	70	211
2015									9	196
2016										17
Total										$ 7,690

Reserving Process and Methodology

U.S. Excess Casualty policies tend to attach at a high layer above underlying policies, which causes the loss development pattern to be lagged significantly. Many of the claims notified to the excess layers are closed without payment because the claims never reach our layer as a result of high deductibles and other underlying coverages, while the claims that reach our layer and close with payment can be large and highly variable in terms of reported timing and amount. For a portion of this business, the underlying primary policies are issued by other insurance companies, which can limit our access to relevant information to help inform our judgments as the loss events evolve and mature.

We generally use a combination of loss development methods and expected loss ratio methods for excess casualty product lines. We segment our analysis between automobile-related claims and non-automobile claims, due to the shorter-tail nature of the automobile claims. We then further segment the non-automobile claims for certain latent exposures such as construction defects and mass torts where losses have unique emergence patterns. Mass tort claims in particular may develop over an extended period of time and impact multiple accident years when they emerge. The more standard types of claims are then separately analyzed based on attachment point bands, to recognize that the impact of the level of the attachment point can significantly impact the delay in loss reporting and development. In our analyses, losses capped at $10 million were first analyzed using traditional loss development and expected loss ratio methods and then this estimate was used to derive the expected loss estimate for losses above $10 million reflecting the expected relationships between the layers, reflecting the attachment point and limit.

Expected loss ratio methods are generally used for at least the three latest accident years, due to the relatively low credibility of the reported losses. The loss experience is generally reviewed separately by attachment point. The expected loss ratios used for recent accident years are based on the projected ultimate loss ratios for older years adjusted for rate changes and loss trend.

Prior Year Development

During 2016, we recognized $1.1 billion of adverse development driven by continued higher than expected loss emergence due to increased frequency and severity in recent accident years for both automobile and general liability claims. Approximately $250 million of the adverse development is attributable to a cohort of commercial automobile claims identified in 2015 which continued to increase in severity in 2016 beyond what was observed or reasonably expected in 2015. The most significant increases in incurred losses were for accident years 2011 and subsequent. In particular, the frequency and severity of loss events for accident years 2011 and subsequent showed a significant step change from accident years 2010 and prior. We therefore gave limited credibility to accident year 2010 and prior in selecting our expected loss ratios for 2011 and subsequent accident years due to this shift in loss patterns that is now more evident and credible after examining 2016 data. As a result of the continued adverse emergence, we have increased our loss trend assumptions for general liability and automobile and increased our expected loss ratios for the most recent four accident years.

During 2015, U.S. Excess Casualty experienced $1.4 billion of adverse development largely driven by worse than expected loss emergence reported in 2015. This increase was largely driven by adverse emergence in both general liability and umbrella auto liability, reflecting worsening trends in the number and nature of high severity losses. Approximately $411 million of the adverse development is related to automobile liability. Based on the adverse emergence we updated our assumptions about loss severity, loss development patterns and expected loss ratios for the most recent accident years. We have seen an increasing trend in the frequency of high severity claims, especially in the umbrella automobile liability portfolio. We also observed deterioration in certain class action claims that have complex coverage uncertainties and high limits characterized by increases in new claims and/or demands reported in 2015 and progress towards potential settlements, which have further informed our actuarial projections of ultimate losses for these types of claims. These types of claim classes have the longest emergence period within the excess casualty class and can impact multiple accident years, and are therefore inherently more volatile. In addition, we also increased losses associated with bad-faith claims by approximately $120 million reflecting an increase in recent settlements.

During 2014, U.S. Excess Casualty experienced $106 million of favorable development largely driven by savings on a few large claims. In our excess umbrella analysis in 2014, our revised segmentation led to lower 2005 and subsequent accident year estimates for non-mass tort claims where we expect underwriting actions and reductions in policy limits to have a favorable effect on ultimate losses from accident years 2007 to 2013 in particular. This was entirely offset by higher selected ultimate losses for accident years 2004 and prior as a result of updated loss development patterns for mass tort claims which we segmented separately from the non-ultimate loss ratios of prior years, adjusted for rate changes, estimated loss cost trends and all other changes that can be quantified.

U.S. Other Casualty

U.S Other Casualty includes general liability, commercial auto and medical malpractice.

We recognized $1.6 billion of adverse development in Other Casualty as a result of increased frequency and severity in all three product lines. The net earned premium for Other Casualty has declined by approximately 59% from accident year 2007 to accident year 2016.

Incurred Losses and Allocated Loss Adjustment Expenses, Undiscounted and Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*										December 31, 2016		
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Prior Year Development	Total of IBNR Liabilities Plus Expected Development on Reported Losses	Cumulative Number of Reported Claims
	Unaudited												
2007	$ 2,892	$ 2,833	$ 2,815	$ 2,736	$ 2,770	$ 2,805	$ 2,787	$ 2,774	$ 2,846	$ 2,874	$ 28	$ 166	102,070
2008		2,886	2,693	2,757	2,821	2,901	2,903	3,007	3,074	3,113	39	274	116,937
2009			2,343	2,445	2,513	2,509	2,624	2,745	2,807	2,791	(16)	151	89,845
2010				2,037	2,016	2,160	2,109	2,258	2,301	2,420	119	329	95,749
2011					1,970	2,222	2,321	2,458	2,601	2,639	38	381	74,916
2012						1,866	2,049	2,172	2,183	2,325	142	381	41,586
2013							1,580	1,702	1,882	2,116	234	570	36,174
2014								1,695	1,677	1,920	243	749	33,677
2015									1,274	1,607	333	909	29,372
2016										1,280		1,044	19,774
Total										$ 23,085	$ 1,160		
Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance from the table below										(15,844)	-		
Liabilities for losses and loss adjustment expenses and prior year development before 2007, net of reinsurance										1,505	287		
Unallocated loss adjustment expense prior year development											116		
Liabilities for losses and loss adjustment expenses and prior year loss development, net of reinsurance										$ 8,746	$ 1,563		

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*									
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Unaudited									
2007	$ 386	$ 773	$ 1,206	$ 1,621	$ 1,974	$ 2,244	$ 2,377	$ 2,422	$ 2,525	$ 2,577
2008		277	711	1,171	1,691	2,039	2,316	2,506	2,651	2,755
2009			378	770	1,180	1,577	1,929	2,168	2,314	2,534
2010				279	578	902	1,275	1,557	1,741	1,889
2011					235	726	1,109	1,488	1,822	2,048
2012						382	712	1,002	1,349	1,644
2013							169	553	918	1,206
2014								204	566	816
2015									93	303
2016										72
Total										$ 15,844

Reserving Process and Methodology

U.S. Other Casualty includes general liability, automobile liability, environmental, and medical malpractice lines of business. These lines of business are all long-tail in nature and while somewhat diverse in terms of exposures, these lines are often subject to similar trends. These lines are often significantly impacted by the underwriting cycle and external judicial trends. Many of our policies contain risk-sharing features, including high deductibles, self-insured retentions or retrospective rating features, in addition to a traditional insurance component. These risk-sharing programs generally are large and complex, comprising multiple products, years and structures, and are subject to amendment over time.

We generally use a combination of loss development methods, frequency/severity and expected loss ratio methods for primary general liability or products liability product lines. We also supplement the standard actuarial techniques by using evaluations of the ultimate losses on unusual claims or claim accumulations by external specialists on those subsets of claims. The segmentation of the data reflects state differences, industry groups, deductible/non-deductible programs and type of claim.

We segment our analysis by line of business and key coverage structures (claims-made vs. occurrence, large deductible policies, retrospective-rated policies, captives, etc.). Additionally, certain subsets, such as construction defect for general liability, trucking policies for auto liability and hospital policies for medical malpractice and underground storage tanks for environmental are generally reviewed separately from business in other subsets. We continually refine our loss reserving techniques for the domestic primary casualty product lines and adopt further segmentations based on our analysis of the differing emerging loss patterns for certain subsets of insureds. Due to the long-tail nature of general liability business, and the many subsets that are reviewed individually, there is less credibility given to the reported losses and increased reliance on expected loss ratio methods for recent accident years.

For certain product lines with sufficient loss volume, loss development methods may be given significant weight for all but the most recent one or two accident years. For smaller or more volatile subsets of business and excess of a large deductible business, loss development methods may be given limited weight for the five or more recent accident years. Expected loss ratio methods are used for the more recent accident years for these subsets. The loss experience for primary general liability business is generally reviewed at a level that is believed to provide the most appropriate data for reserve analysis. For other subsets, such as environmental, we utilize a combination of claim analysts' loss projections and actuarial methods estimate ultimate losses.

Expected loss ratio methods are generally given significant weight only in the most recent accident year, except for excess of large deductible business, in which expected loss ratio methods may receive weight for several of the most recent accident years. In recent years, the impact of the increase in the frequency of severe claims was projected in the accident years where it was most prevalent. The resulting increase in ultimate loss projections and loss ratios for those years impacted subsequent years through loss development factors and prior expected loss ratio assumptions.

Prior Year Development

Primary general liability. In 2016, we increased our ultimate loss estimates for prior accident years by $754 million. We increased our assumptions about loss development and expected loss ratios based on the adverse actual versus expected loss emergence driven by increases in severity, especially in the risk-sharing excess of deductible programs. In addition, our segmentation separately evaluated key structural drivers recently identified in the data. As a result, we noted the adverse development that was driven by construction defect claims which continue to increase in severity and which exhibit continued higher development at later ages than previously observed. We also identified and separately analyzed in 2016 certain mass tort claims and increased reserves for such claims due to their much longer claim emergence and loss development patterns than previously observed.

For primary general liability in 2015, we increased our ultimate loss estimates for prior accident years by $172 million largely related to coverage sold to the construction sectors as we reacted to adverse loss emergence throughout the year, by changing our assumptions about loss development and expected loss ratios. For construction, the adverse development was driven by construction defect claims. The construction class was re-underwritten to reduce New York and U.S. residential exposures.

Primary commercial auto liability. In 2016, we continued to observe increases in both the frequency and severity of claims occurring in accident years since the recent U.S. economic downturn. These claims have significantly outpaced both our accident year loss ratio assumptions made in 2015 and the pricing rate increases implemented during the same period. As a result, we recognized $352 million of adverse development during 2016 as we increased the expected loss ratios for recent accident years to reflect continued market deterioration in the trends observed in 2016 and the higher reported losses in very recent accident years.

For primary commercial auto liability in 2015, we observed increases in both the frequency and severity of claims occurring since the recovery from the recent U.S. economic downturn, which have significantly outpaced the pricing rate increases implemented during the same period. As a result, we recognized $105 million of adverse development during 2015 as we increased the expected loss ratios for recent accident years to reflect the deteriorating trends.

For commercial auto liability in 2014, we reacted to an increase in frequency of large claims in the accident years 2010 to 2013, where the economic recovery has contributed to increased frequency and severity, especially for those claims in excess of a client deductible of $500,000, which generally take several years to emerge and settle. This led to adverse prior year loss reserve development of $156 million.

In 2015, we also reassessed the reasonableness of our primary general liability and commercial auto liability for future claim handling expenses related to existing loss reserves and updated our estimates to reflect the costs from recent investments in claims systems, processes and people with the objective of improving our ability to better manage total loss costs. We increased our reserve estimates by $214 million based on refined analyses, $100 million of which was attributable to U.S. general liability. The balance was distributed among other product lines.

Medical Malpractice. During 2016, we recognized $428 million of adverse development in U.S. Other Casualty Medical Malpractice comprising primary and excess hospitals and nursing homes coverages. This was in reaction to a continued increase in the frequency of unusually large claims in these classes that drove the adverse actual versus expected loss emergence observed in 2016. Based on the observed adverse emergence and its sustained levels over the last several years, we increased our expected incurred losses and loss ratios for accident years 2011 and subsequent to reflect the distinct step change in the loss ratios from accident years 2010 and prior.

During 2015, we recognized $202 million of adverse development in U.S. Other Casualty hospitals coverages driven by deteriorating loss experience in accident years 2008 and subsequent characterized by large claims in various segments including hospitals, nursing homes, and pharmaceutical and medical products liability. Based on the review of these large claims, we increased our expected loss ratios for recent accident years and classified physicians and surgeons and pharmaceutical and medical products classes into runoff.

During 2014, we recognized $57 million of adverse development in U.S. Other Casualty hospitals coverages largely driven by three large and relatively unusual claims of $25 million each in relatively recent accident years. While there have not been any significant structural changes to the portfolio, there can be material volatility in loss experience in this class of business where individual claims can be of high severity.

U.S. Financial Lines

We recognized $306 million of adverse development during 2016 in U.S. Financial Lines primarily due to higher than expected settlements on large claims from the financial crisis. The net earned premium for U.S. Financial Lines has decreased by approximately 12 percent from accident year 2011 to accident year 2016. The mix of business has been changing over this period as we write more cyber and Mergers and Acquisitions business, which generally report claims faster.

Incurred Losses and Allocated Loss Adjustment Expenses, Undiscounted and Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*											December 31, 2016	
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Prior Year Development	Total of IBNR Liabilities Plus Expected Development on Reported Losses	Cumulative Number of Reported Claims
	Unaudited												
2007	$ 1,900	$ 2,091	$ 2,079	$ 2,015	$ 2,022	$ 2,008	$ 1,964	$ 1,932	$ 1,972	$ 1,968	$ (4)	$ 74	19,088
2008		1,911	2,084	2,049	1,861	1,970	1,906	1,964	2,089	2,112	23	32	21,709
2009			1,719	1,806	1,855	1,909	2,102	2,203	2,196	2,289	93	34	22,595
2010				1,576	1,526	1,420	1,381	1,373	1,470	1,485	15	46	20,126
2011					1,812	1,729	1,897	1,887	1,921	1,951	30	66	20,008
2012						1,579	1,747	1,782	1,889	1,942	53	199	20,029
2013							1,741	1,669	1,622	1,567	(55)	417	18,912
2014								1,742	1,712	1,775	63	612	17,091
2015									1,670	1,689	19	1,045	15,386
2016										1,599		1,392	14,001
Total										$ 18,377	$ 237		
Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance from the table below										(12,686)	-		
Liabilities for losses and loss adjustment expenses and prior year development before 2007, net of reinsurance										411	32		
Unallocated loss adjustment expense prior year development										-	37		
Liabilities for losses and loss adjustment expenses and prior year loss development, net of reinsurance										$ 6,102	$ 306		

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*									
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Unaudited									
2007	$ 61	$ 413	$ 816	$ 1,184	$ 1,364	$ 1,531	$ 1,684	$ 1,748	$ 1,800	$ 1,811
2008		32	420	888	1,183	1,385	1,590	1,712	1,898	2,001
2009			129	499	887	1,273	1,614	1,839	1,968	2,075
2010				31	285	566	800	1,017	1,180	1,281
2011					165	494	886	1,210	1,529	1,749
2012						76	406	815	1,253	1,497
2013							43	333	687	949
2014								66	371	854
2015									66	393
2016										76
Total										$ 12,686

Reserving Process and Methodology

U.S. Financial Lines business includes Directors and Officers (D&O), Errors and Omissions (E&O), Employment Practices Liability Insurance (EPLI) and various professional liability subsets of business, as well as the fidelity book of business. This includes cyber coverage, which has been a growing and evolving portion of this portfolio. These product lines are predominantly claims-made in nature, losses are characterized by low frequency and high severity, and results are often significantly impacted by external economic conditions.

Our analysis is segmented by major coverages, such as D&O, E&O, etc. and then further segmented by major industry groups (e.g. corporate accounts, national accounts, financial institutions, private/not-for-profit etc.) We also separately review primary business from excess business for certain product lines.

We generally use a combination of loss development methods and expected loss ratio methods for D&O, E&O, EPLI, and professional liability. These product lines generally are offered on a claims-made basis, and losses are characterized by low frequency and high severity. In general, expected loss ratio methods are given more weight in the more recent accident years, whereas loss development methods are given more weight in more mature accident years. The loss development factors for the different segments differ significantly in some cases, based on specific coverage characteristics and other factors such as industry group, attachment points, and limits offered. Individual claims projections for accident years 2015 and prior are also used in the analysis. For the more mature accident years, we have generally given more weight to the incurred and legal expense loss development methods than in prior years' reviews.

Frequency/severity methods are generally not used in isolation for these product lines as the overall losses are driven by large losses more than by claim frequency. Severity trends have varied significantly from accident year to accident year and care is required in analyzing these trends by claim type. We also give weight to claim department ground-up projections of ultimate loss on a claim by claim basis as these may be more predictive of ultimate loss values, especially for older accident years.

We generally use loss development methods for fidelity exposures for all but the latest accident year. We also use claim department projections of the ultimate value of each reported claim to supplement and inform the standard actuarial approaches and some weight is given to this method in the more recent accident years. For surety exposures, we generally use the same method as for short-tail classes whereby frequency/severity methods, loss development methods, and IBNR factor methods are used alone or in combination to set reserves.

Expected loss ratio methods are also given weight for the more recent accident years. IBNR factor methods are used, when the nature of losses is low frequency/high severity. The IBNR factors, when applied to earned premium, generate the ultimate expected losses (or other exposure measure) yet to be reported. The factors are determined based on prior accident quarters' loss costs adjusted to reflect current cost levels and the historical emergence of those loss costs. The factors are continually reevaluated to reflect emerging claim experience, rate changes or other factors that could affect the adequacy of the IBNR factor being employed.

Prior Year Development

During 2016, we recognized $306 million of adverse development as we reacted to the adverse actual versus expected in 2016 driven by higher than expected settlements on several large claims from the financial crisis for accident years 2006 to 2010, as well as adverse emergence of errors and omissions losses relative to historical expectations. In addition to the adverse emergence, we also updated our loss development factor assumptions, expected loss ratio assumptions and the weights given to the various methods in recent accident years.

During 2015, we recognized $502 million of adverse development driven largely by the adverse loss emergence that we saw in 2015, especially in D&O and professional liability. In particular, we have observed greater than expected loss costs for several claims from accident years 2006 through 2010, driven by unfavorable settlements and deterioration in known claims. We also updated our loss development factor assumptions as well as expected loss ratio assumptions.

During 2014, we recognized $160 million of adverse development driven by the D&O and Related Management Liability product lines as well as the fidelity book, somewhat offset by the Professional Liability product lines in the recent accident years due to the changing economic cycle.

Europe Casualty and Financial Lines

During 2016, we recognized $355 million of adverse development in Europe Casualty and Financial Lines driven by continued higher than expected loss emergence. The net earned premium for Europe Casualty and Financial Lines has increased by approximately 8 percent from accident year 2011 to accident year 2016.

Incurred Losses and Allocated Loss Adjustment Expenses, Undiscounted and Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*											December 31, 2016	
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Prior Year Development	Total of IBNR Liabilities Plus Expected Development on Reported Losses	Cumulative Number of Reported Claims
	Unaudited												
2007	$ 1,047	$ 1,073	$ 1,084	$ 1,057	$ 1,094	$ 1,088	$ 1,167	$ 1,171	$ 1,178	$ 1,184	$ 6	$ 14	191,746
2008		1,311	1,396	1,424	1,401	1,424	1,430	1,458	1,420	1,426	6	53	238,417
2009			1,539	1,627	1,659	1,661	1,689	1,699	1,704	1,759	55	78	232,281
2010				1,300	1,258	1,255	1,277	1,218	1,252	1,250	(2)	103	265,264
2011					1,239	1,175	1,239	1,284	1,364	1,377	13	157	256,431
2012						1,074	1,041	1,005	1,081	1,146	65	172	209,632
2013							1,080	1,124	1,109	1,124	15	182	176,010
2014								1,143	1,123	1,166	43	376	164,208
2015									1,204	1,363	159	736	175,571
2016										1,407		1,029	178,185
Total										$ 13,202	$ 360		
Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance from the table below										(8,005)	-		
Liabilities for losses and loss adjustment expenses and prior year development before 2007, net of reinsurance										390	(7)		
Unallocated loss adjustment expense prior year development										-	2		
Liabilities for losses and loss adjustment expenses and prior year loss development, net of reinsurance										$ 5,587	$ 355		

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*									
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Unaudited									
2007	$ 88	$ 297	$ 454	$ 632	$ 765	$ 846	$ 961	$ 996	$ 1,025	$ 1,067
2008		116	429	655	870	1,014	1,128	1,199	1,242	1,304
2009			125	379	645	881	1,033	1,156	1,309	1,421
2010				133	378	570	725	850	936	995
2011					127	339	507	733	868	985
2012						110	303	438	615	734
2013							95	340	493	664
2014								79	273	447
2015									74	261
2016										127
Total										$ 8,005

Reserving Process and Methodology

Europe is our largest non-U.S. region for Liability and Financial Lines. Europe Casualty and Financial Lines is composed of third party coverages including general liability, auto liability, D&O, professional liability and various other lines of business throughout both the UK and Continental Europe. These lines of business are all long-tail in nature and while somewhat diverse in terms of exposures, these lines are often subject to similar trends. These lines are impacted by the underwriting cycle and external judicial trends. The largest share of business is in the UK, but significant business is also written in other European countries such as Germany, France, and Italy.

We primarily segment our analysis by country and line of business. Additionally, we separately review various product lines, including excess versus primary casualty, commercial versus financial institutions management liability, and other specific programs and subsets of business. We maintain a database of detailed historical premium and loss transactions in original currency for business written outside of the U.S. which allows our actuaries to determine loss reserves without foreign exchange distorting development.

We generally use a combination of loss development methods and expected loss ratio methods. For countries and lines of business with sufficient loss volume, loss development methods may be given significant weight for all but the most recent accident years. For smaller countries and more volatile product lines, loss development methods are typically given limited weight for recent accident years. Further, we may rely on larger data subsets in determining the loss development factors and *a priori* loss ratio assumptions.

In general, the loss development for long-tail lines in Europe has been more stable than the development in U.S. long-tail lines, although some underlying drivers have affected the results in a similar manner (e.g. the impact of the financial crisis in accident years 2008 and 2009).

Prior Year Development

During 2016, we recognized $355 million of adverse development for Europe Casualty and Financial Lines. Within Europe Financial Lines, we recognized $232 million of adverse development primarily from the D&O line in UK and Continental Europe as result of the adverse actual versus expected loss emergence in 2016 due to increased frequency and severity resulting from increasing litigation. In Europe Casualty we recognized $123 million of adverse development primarily from the unexpected emergence of several large excess casualty claims as well as the impact of declining interest rates that are applied to structured claims in the UK. The actual versus expected loss emergence for Europe Casualty and Financial Lines was more than expected.

During 2015, we recognized $139 million of adverse prior year development, primarily due to primary casualty and professional liability in Continental Europe and the UK. During 2015, we implemented an enhanced claims operating model in Europe which has provided our actuaries with more detailed case reserve data and analysis, enabling AIG's actuaries to react sooner to case development than in prior years.

During 2014, we had $24 million of adverse development driven by financial lines D&O and professional lines in the UK and Continental Europe where severity emerged worse than expected.

U.S. and Europe Property and Special Risks

During 2016, we recognized $402 million of adverse prior year development in the U.S. and Europe Property and Special Risks mainly due to the U.S. program product line which is a collection of programs offering package policies to small and middle market insureds.

Incurred Losses and Allocated Loss Adjustment Expenses, Undiscounted and Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*										December 31, 2016		
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Prior Year Development	Total of IBNR Liabilities Plus Expected Development on Reported Losses	Cumulative Number of Reported Claims
	Unaudited												
2007	$ 2,259	$ 2,061	$ 2,153	$ 2,119	$ 2,087	$ 2,073	$ 2,073	$ 2,069	$ 2,072	$ 2,070	$ (2)	$ 34	88,737
2008		4,114	4,360	4,318	4,276	4,225	4,169	4,140	4,132	4,124	(8)	31	95,060
2009			2,608	2,320	2,318	2,327	2,282	2,285	2,265	2,272	7	32	79,096
2010				3,014	2,747	2,687	2,710	2,716	2,684	2,692	8	25	78,713
2011					3,757	3,586	3,514	3,511	3,491	3,532	41	47	79,542
2012						4,154	4,285	4,232	4,216	4,329	113	76	71,951
2013							2,837	2,877	2,715	2,781	66	138	69,782
2014								3,307	3,154	3,244	90	235	81,948
2015									3,568	3,607	39	500	82,836
2016										3,633		921	61,956
Total										$ 32,284	$ 354		
Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance from the table below										(26,468)	-		
Liabilities for losses and loss adjustment expenses and prior year development before 2007, net of reinsurance										97	6		
Unallocated loss adjustment expense prior year development										-	42		
Liabilities for losses and loss adjustment expenses and prior year loss development, net of reinsurance										$ 5,913	$ 402		

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*									
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Unaudited									
2007	$ 520	$ 1,294	$ 1,629	$ 1,784	$ 1,880	$ 1,930	$ 1,962	$ 1,982	$ 2,006	$ 2,007
2008		1,455	3,029	3,600	3,825	3,970	4,013	4,030	4,046	4,064
2009			661	1,438	1,780	1,985	2,097	2,156	2,184	2,206
2010				828	1,849	2,207	2,396	2,496	2,570	2,612
2011					1,049	2,400	2,924	3,134	3,284	3,370
2012						878	2,794	3,458	3,789	3,995
2013							771	1,775	2,128	2,328
2014								951	2,076	2,547
2015									1,094	2,255
2016										1,084
Total										$ 26,468

Reserving Process and Methodology

U.S. and Europe Property products include commercial, industrial and energy-related property insurance products and services that cover exposures to manmade and natural disasters, including business interruption. U.S. and Europe Special Risk products include aerospace, environmental, political risk, trade credit, surety and marine insurance, and various small and medium sized enterprises insurance lines.

We primarily segment our analysis by line of business (and by country for Europe business). Additionally, we separately review various subsets, including hull, cargo, and liability for marine business, aviation and satellite for aerospace business, and various other specific programs and product lines.

Frequency/severity methods, loss development methods, and IBNR factor methods are used alone or in combination to set reserves for short-tail classes such as U.S. and Europe Property.

IBNR factor methods are used when the nature of losses are low frequency/high severity. The IBNR factors, when applied to earned premium, generate the ultimate expected losses (or other exposure measure) yet to be reported. The factors are determined based on prior accident quarters' loss costs adjusted to reflect current cost levels and the historical emergence of those loss costs. The factors are continually reevaluated to reflect emerging claim experience, rate changes or other factors that could affect the adequacy of the IBNR factor being employed.

We generally use a combination of loss development methods and expected loss ratio methods for aviation exposures. Aviation claims are not very long-tail in nature; however, they are driven by claim severity. Thus a combination of both development and expected loss ratio methods is used for all but the latest accident year to determine the loss reserves. Frequency/severity methods are not employed due to the high severity nature of the claims and different mix of claims from year to year.

We generally use loss development methods for fidelity exposures for all but the latest accident year. We also use claim department projections of the ultimate value of each reported claim to supplement and inform the standard actuarial approaches and some weight is given to this method in the more recent accident years. The claims staff also provides specific estimates to assist in the setting of reserves for natural catastrophe losses.

Expected loss ratio methods are used to determine the loss reserves for the latest accident year. We also use ground-up claim projections provided by our claims staff to assist in developing the appropriate reserve.

Prior Year Development

During 2016, the adverse development of $402 million was driven by our U.S. program business where we recognized $350 million of adverse prior year development due to higher than expected claim emergence in certain automobile, habitational and professional liability programs that resulted in us increasing expected loss ratios and loss development factors for several program subsets. This was partially offset by favorable prior year development in Europe Special Risk. Property had favorable emergence of $62 million mainly driven by the Europe property segment.

During 2015, we recognized $128 million of favorable development from a number of large individual property claims.

U.S., Europe and Japan Personal Insurance

We recognized $114 million of favorable prior year development in U.S., Europe and Japan Personal Insurance mainly due to international accident and health business.

Incurred Losses and Allocated Loss Adjustment Expenses, Undiscounted and Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*											December 31, 2016	
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Prior Year Development	Total of IBNR Liabilities Plus Expected Development on Reported Losses	Cumulative Number of Reported Claims
	Unaudited												
2007	$ 4,662	$ 4,805	$ 4,725	$ 4,710	$ 4,729	$ 4,739	$ 4,742	$ 4,742	$ 4,745	$ 4,744	$ (1)	$ 4	1,737,033
2008		4,535	4,592	4,592	4,611	4,618	4,621	4,625	4,631	4,630	(1)	9	1,851,828
2009			4,698	4,634	4,590	4,624	4,616	4,614	4,612	4,611	(1)	7	1,959,522
2010				4,819	4,826	4,846	4,836	4,838	4,832	4,832	-	13	2,215,816
2011					5,226	5,315	5,275	5,272	5,258	5,250	(8)	25	2,159,211
2012						5,135	5,028	4,998	4,956	4,943	(13)	15	2,096,881
2013							4,714	4,640	4,602	4,576	(26)	52	2,023,707
2014								4,376	4,392	4,376	(16)	126	2,008,729
2015									4,433	4,385	(48)	276	1,949,211
2016										4,426		902	1,702,448
Total										$ 46,773	$ (114)		
Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance from the table below										(43,345)	-		
Liabilities for losses and loss adjustment expenses and prior year development before 2007, net of reinsurance										26	(3)		
Unallocated loss adjustment expense prior year development										-	3		
Liabilities for losses and loss adjustment expenses and prior year loss development, net of reinsurance										$ 3,454	$ (114)		

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*									
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Unaudited									
2007	$ 2,867	$ 4,162	$ 4,395	$ 4,547	$ 4,628	$ 4,670	$ 4,699	$ 4,717	$ 4,727	$ 4,731
2008		2,781	3,958	4,275	4,432	4,511	4,557	4,584	4,596	4,608
2009			2,780	4,016	4,268	4,428	4,504	4,545	4,570	4,587
2010				2,920	4,184	4,496	4,643	4,721	4,764	4,788
2011					3,270	4,631	4,927	5,064	5,146	5,182
2012						2,868	4,333	4,624	4,774	4,858
2013							2,671	3,963	4,261	4,408
2014								2,495	3,708	4,024
2015									2,497	3,712
2016										2,447
Total										$ 43,345

Reserving Process and Methodology

U.S., Europe and Japan Personal Insurance lines consist of accident and health and other personal lines. Accident and health products include voluntary and sponsor-paid personal accident and supplemental health products for individuals, employees, associations and other organizations as well as a broad range of travel insurance products and services for leisure and business travelers. Other personal lines include automobile and homeowners' insurance, extended warranty, and consumer specialty products, such as identity theft and credit card protection. Other personal insurance also provides insurance for high net worth individuals offered through AIG Private Client Group, including auto, homeowners, umbrella, yacht, fine art and collections insurance. Other personal lines are generally short-tail in nature.

We primarily segment our analysis by line of business (and by country for Europe and Japan business) and may separately review various sub-segments, such as specific accident and health products and property damage versus liability for other personal lines products.

Frequency/severity methods, loss development methods, and IBNR factor methods are used alone or in combination to set reserves for short-tail product lines such as personal property.

Frequency/severity and loss development methods are utilized for domestic personal auto product lines.

For these classes of business, reliance is placed on frequency/severity methods as claim counts emerge quickly for personal auto. Frequency/severity methods allow for more immediate analysis of resulting loss trends and comparisons to industry and other diagnostic metrics.

In general, development for U.S., Europe and Japan Personal Insurance classes has been very stable, with only modest changes in the initial selected loss ratios for this business.

Prior Year Development

During 2016, 2015 and 2014, we recognized $114 million, $47 million, and $89 million of favorable development, respectively, mainly driven by the international accident and health business.

During 2016, 2015 and 2014, we experienced favorable loss reserve development of $3 million, $10 million and $16 million, respectively, from natural catastrophes.

U.S. Run-Off Long Tail Insurance lines

During 2016, the U.S. Run-Off Long Tail Insurance Lines experienced adverse prior year development of $390 million driven by Legacy pre-1986 pollution losses and the Run-Off public entity casualty business.

Incurred Losses and Allocated Loss Adjustment Expenses, Undiscounted and Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*											December 31, 2016	
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Prior Year Development	Total of IBNR Liabilities Plus Expected Development on Reported Losses	Cumulative Number of Reported Claims
	Unaudited												
2007	$ 959	$ 743	$ 807	$ 801	$ 833	$ 843	$ 851	$ 859	$ 860	$ 876	$ 16	$ 55	56,148
2008		936	1,025	872	855	895	911	964	961	967	6	75	40,046
2009			543	523	532	566	621	588	584	564	(20)	91	16,213
2010				633	521	527	548	576	572	601	29	81	8,475
2011					528	538	571	635	669	678	9	88	7,776
2012						623	674	736	781	745	(36)	105	4,033
2013							477	530	585	566	(19)	152	2,483
2014								374	472	451	(21)	192	2,246
2015									434	520	86	204	2,154
2016										292		197	1,483
Total										$ 6,260	$ 50		
Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance from the table below										(4,171)	-		
Liabilities for losses and loss adjustment expenses and prior year development before 2007, net of reinsurance										3,878	345		
Unallocated loss adjustment expense prior year development										-	(5)		
Liabilities for losses and loss adjustment expenses and prior year loss development, net of reinsurance										$ 5,967	$ 390		

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance

	Years Ended December 31, *(dollars in millions)*									
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Unaudited									
2007	$ 145	$ 230	$ 321	$ 431	$ 578	$ 641	$ 710	$ 751	$ 770	$ 784
2008		130	360	485	559	643	711	773	817	830
2009			38	125	220	273	354	394	414	431
2010				55	142	235	313	395	425	445
2011					19	135	253	379	442	525
2012						85	191	282	409	476
2013							86	152	258	316
2014								20	93	183
2015									34	129
2016										52
Total										$ 4,171

Reserving Process and Methodology

U.S. Run-Off Long Tail Insurance lines includes run-off lines for asbestos and environmental (1986 and prior), excess workers' compensation, and other casualty coverages consisting of environmental liability, medical malpractice, and general liability. Asbestos coverage has been excluded from AIG polices commencing in 1985. Most of AIG's asbestos claims exposures are ceded to National Indemnity Company (NICO) under a retroactive reinsurance arrangement entered into in 2011. Many of other asbestos-related exposures are very long-tailed in nature and with exposures dating back 30 years or more. In some cases, the exposures in the more recent years have declined since the portfolio is in run-off.

U.S. Long Tail Insurance lines - Asbestos and Environmental (1986 and prior)

We consider a number of factors and recent experience in addition to the results of both external and internal analyses, to estimate asbestos and environmental loss reserves. We primarily base our determination of these loss reserves on a combination of ground-up and top-down analyses of historical claims and available insurance coverages. Nonetheless, we believe that significant uncertainty remains as to our ultimate liability for asbestos and environmental claims, which is due to several factors, including:

- the long latency period between asbestos exposure and disease manifestation, leading to the potential for involvement of multiple policy periods for individual claims;
- claims filed under the non-aggregate premises or operations section of general liability policies;
- the number of insureds seeking bankruptcy protection and the effect of prepackaged bankruptcies;
- diverging legal interpretations; and
- the difficulty in estimating the allocation of remediation cost among various parties with respect to environmental claims.

Loss reserves for asbestos and environmental claims cannot be estimated using conventional reserving techniques such as those that rely on historical accident year loss development factors. The methods used to determine asbestos and environmental loss estimates and to establish the resulting reserves are continually reviewed and updated by management.

At December 31, 2016 and 2015, our net loss reserves included $670 million and $722 million, respectively, for asbestos and environmental-related claims (net of reinsurance, including retroactive reinsurance). We cede the bulk of AIG Property Casualty's net domestic asbestos liabilities under a 2011 retroactive reinsurance agreement with NICO with an aggregate limit of $3.5 billion. Reinsurance recoverables related to this agreement was $1.7 billion and $1.8 billion, respectively, at December 31, 2016 and 2015, respectively. Under retroactive reinsurance accounting, contractual gains are deferred and amortized into income over the settlement period of the underlying reinsured claims. During 2016, 2015 and 2014, we recognized approximately $(53.4) million, $213 million and $(10.7) million, respectively, of additional recoveries under the NICO agreement for which the income statement benefit was deferred. The deferred gain associated with this retroactive reinsurance is $377 million and $430 million at December 31, 2016 and 2015, respectively, and is reported in Other Liabilities. The expense related to this increase in the deferred gain liability is reported in other income/expense rather than losses incurred.

Prior Year Development

During 2016, the Legacy U.S. Runoff Property and Casualty segment recognized $390 million of adverse prior year development.

Asbestos and Environmental (1986 and prior). In 2016, we increased gross undiscounted asbestos incurred losses by $106 million and decreased net undiscounted asbestos incurred losses by $20 million. The gross undiscounted change reflects an increase in estimates related to our accounts retroceded to NICO. The favorable development of the net incurred losses was largely a result of higher estimated external reinsurance recoveries on our retained asbestos exposures. For environmental, we increased incurred losses by $211 million primarily due to adverse development on several large clean-up sites and related accounts as well as a result of top down actuarial analyses performed during the year.

During 2015, the reported claim activity on the assumed claims increased. We responded to this by modifying certain of our loss-reserve-related assumptions to better reflect our loss development. Additionally, we considered recent industry-wide trends regarding expanding coverage theories for liability. In 2015, both the retained accounts and retroceded accounts ground-up reviews for asbestos were updated. As a result, we increased gross undiscounted asbestos incurred losses by $13 million and increased net undiscounted asbestos incurred losses by $164 million. The net undiscounted change reflects an increase primarily due to third party assumed reinsurance exposures. With the gross incurred loss increase less than the net incurred loss increase, the resulting ceded incurred losses were reduced. For environmental, we increased gross environmental incurred losses by $214 million and net environmental incurred losses by $117 million as a result of top down actuarial analyses performed during the year, as well as development on a large sediment site.

U.S. Excess Workers' Compensation. The U.S. Long Tail Insurance Lines excess workers' compensation has an extremely long tail and is one of the most challenging lines of business from a reserving perspective, particularly when the excess coverage is provided above a self-insured retention layer. The class is highly sensitive to small changes in assumptions (for example — in the rate of medical inflation or the longevity of injured workers) which can have a significant effect on the ultimate reserve cost estimate.

During 2016 and 2015, we did not experience significant development in the loss development trends. The proactive management of settlement negotiations and other claims mitigation strategies minimized the volatility observed during 2015. The nominal reduction in reserves as a result of commutations and individual claims settlement strategies amounted to $222 million in 2015 compared to $242 million in 2014.

During 2014, we updated our analyses of run-off excess workers' compensation lines using a range of scenarios and methodologies and determined that our carried reserves were adequate after recognizing $20 million of favorable prior year development resulting from claim settlements and commutations on our assumed reinsurance business, as well as reflecting changes in estimates in our loss mitigation strategies. We commuted several large assumed reinsurance agreements in 2014 and reduced the reserves faster than was previously expected as a result of proactive management by the run-off unit.

Other Casualty Run-Off. We increased the reserves for these coverages by $190 million and $636 million during 2016 and 2015, respectively, to reflect updated assumptions about future loss development. The 2016 increase was driven by runoff public entity business where we reacted to the adverse emergence over the last year by increasing our loss development factors to reflect its own experience especially in the loss tail instead of relying on the overall excess casualty loss development factors.

Prior Year Development before 2007

The previous development tables include only accident years 2007 to 2016. The following table summarizes development, (favorable) or unfavorable, of incurred losses and loss adjustment expenses for accident year 2006 and prior by operating segment and major class of business:

Years Ended December 31, *(in millions)*	2016	2015	2014
2006 and prior accident year development by major class of business and driver of development:			
U.S. Workers Compensation	$ 850	$ 122	$ 158
U.S. Excess Casualty	26	476	437
U.S. Other Casualty	287	366	242
U.S. Financial Lines	32	135	(24)
Property and Special Risks	6	16	(4)
Legacy Portfolio	345	621	258
All Other	(2)	62	3
Total	$ 1,544	$ 1,798	$ 1,070

Claims Payout Patterns

The following table presents the historical average annual percentage claims payout on an accident year basis at the same level of disaggregation as presented in the claims development table.

Average Annual Percentage Payout of Incurred Losses by Age, Net of Reinsurance (Unaudited)										
Year	1	2	3	4	5	6	7	8	9	10
U.S. Workers' compensation	15.5 %	17.8 %	12.6 %	9.2 %	7.5 %	5.2 %	4.4 %	2.6 %	2.3 %	1.8 %
U.S. Excess casualty	0.7	6.8	12.4	13.5	12.8	10.7	8.5	8.4	3.5	2.8
U.S. Other casualty	10.3	15.2	14.4	14.8	12.2	8.6	5.5	4.7	3.5	1.8
U.S. Financial lines	4.0	17.6	21.2	17.3	12.9	10.1	6.5	5.6	3.8	0.5
Europe Casualty and Financial lines	8.2	17.6	14.0	14.7	10.0	7.4	7.0	4.1	3.4	3.5
U.S. and Europe Property and Special Risks	28.7	37.0	14.5	7.1	4.3	2.3	1.2	0.8	0.8	-
U.S. Europe and Japan Personal insurance	58.9	27.2	6.1	3.1	1.7	0.9	0.6	0.3	0.2	0.1
U.S. Run-off Long Tail Insurance lines	10.4	15.7	15.5	12.7	11.9	7.7	5.2	4.1	1.8	1.6

DISCOUNTING OF LOSS RESERVES

At December 31, 2016, the loss reserves reflect a net loss reserve discount of $3.6 billion, including tabular and non-tabular calculations based upon the following assumptions:

Certain asbestos claims are discounted when allowed by the regulator and when payments are fixed and determinable, based on the investment yields of the companies and the payout pattern for the claims. At December 31, 2016, the discount for asbestos reserves was fully amortized.

The tabular workers' compensation discount is calculated based on a 3.5 percent interest rate and the mortality rate used in the 2007 U.S. Life Table.

The non-tabular workers' compensation discount is calculated separately for companies domiciled in New York and Pennsylvania, and follows the statutory regulations (prescribed or permitted) for each state. For New York companies, the discount is based on a 5 percent interest rate and the companies' own payout patterns. In 2012, for Pennsylvania companies, the statute has specified discount factors for accident years 2001 and prior, which are based on a 6 percent interest rate and an industry payout pattern. For accident years 2002 and subsequent, the discount is based on the payout patterns and investment yields of the companies.

In 2013, our Pennsylvania regulator approved use of a consistent discount rate (U.S. Treasury rate plus a liquidity premium) to all of our workers' compensation reserves in our Pennsylvania-domiciled companies, as well as our use of updated payout patterns specific to our primary and excess workers compensation portfolios.

In the fourth quarter of 2016, our Pennsylvania and Delaware regulators approved an updated discount rate that we applied to our workers' compensation loss reserves for the legal entities domiciled in those states.

The discount consists of $932 million of tabular discount for workers' compensation and $2.6 billion of non-tabular discount for workers' compensation. During the years ended December 31, 2016, 2015 and 2014 the benefit/(charge) from changes in discount of $422 million, $71 million and $(478) million, respectively, were recorded as part of the policyholder benefits and losses incurred in the Consolidated Statement of Income.

The following table presents the components of the loss reserve discount discussed above:

December 31,	2016			2015		
(in millions)	U.S. Liability and Financial Lines	Legacy Portfolio - Property and Casualty run-off Insurance Lines	Total	U.S. Liability and Financial Lines	Legacy Portfolio - Property and Casualty run-off Insurance Lines	Total
U.S. workers' compensation	$ 2,583	$ 987	$ 3,570	$ 2,177	$ 964	$ 3,141
Asbestos	-	-	-	-	7	7
Total reserve discount	$ 2,583	$ 987	$ 3,570	$ 2,177	$ 971	$ 3,148

The following table presents the net loss reserve discount benefit (charge):

Years Ended December 31,	2016			2015			2014		
(in millions)	U.S. Liability and Financial Lines	Legacy Portfolio - Property and Casualty run-off Insurance Lines	Total	U.S. Liability and Financial Lines	Legacy Portfolio - Property and Casualty run-off Insurance Lines	Total	U.S. Liability and Financial Lines	Legacy Portfolio - Property and Casualty run-off Insurance Lines	Total
Current accident year	$ 177	$ -	$ 177	$ 182	$ -	$ 182	$ 189	$ -	$ 189
Accretion and other adjustments to prior year discount	287	64	351	(262)	(74)	(336)	(35)	(235)	(270)
Effect of interest rate changes	(58)	(48)	(106)	148	77	225	(225)	(172)	(397)
Net reserve discount benefit (charge)	406	16	422	68	3	71	(71)	(407)	(478)
Amount transferred to run-off insurance lines	-	-	-	(39)	39	-	-	-	-
Net change in total reserve discount	$ 406	$ 16	$ 422	$ 29	$ 42	$ 71	$ (71)	$ (407)	$ (478)
Comprised of:									
U.S. Workers' compensation	$ 406	$ 23	$ 429	$ 29	$ 46	$ 75	$ (71)	$ (385)	$ (456)
Asbestos	$ -	$ (7)	$ (7)	$ -	$ (4)	$ (4)	$ -	$ (22)	$ (22)

During 2016, effective interest rates declined due to a decrease in the forward yield curve component of the discount rates reflecting a decline in U.S. Treasury rates along the changes in payout pattern assumptions. This resulted in a decrease in the loss reserve discount by $106 million.

During 2015, the effective interest rate increased due to the increase in Treasury rates and credit spreads that resulted in an increase in the loss reserve discount by $225 million.

During 2014, the effective interest rate decreased due to the decrease in Treasury rates along with changes in payout pattern assumptions that resulted in a decrease in the loss reserve discount by $397 million.

On January 1, 2014, we merged two internal pooling arrangements of our U.S. Property Casualty companies into one pool, and changed the participation percentages of the pool members resulting in a reallocation of loss reserves from New York-domiciled companies to those domiciled in Pennsylvania and Delaware. As a result of these changes in the participation percentages and domiciliary states of the participants of the combined pool, we recognized a discount benefit of $110 million in the first quarter of 2014.

FUTURE POLICY BENEFITS

Future policy benefits primarily include reserves for traditional life and annuity payout contracts, which represent an estimate of the present value of future benefits less the present value of future net premiums. Included in Future policy benefits are liabilities for annuities issued in structured settlement arrangements whereby a claimant has agreed to settle a general insurance claim in exchange for fixed payments over a fixed determinable period of time with a life contingency feature.

Future policy benefits also include certain guaranteed benefits of variable annuity products that are not considered embedded derivatives, primarily guaranteed minimum death benefits. See Note 14 for additional information on guaranteed minimum death benefits.

The liability for long-duration future policy benefits has been established including assumptions for interest rates which vary by year of issuance and product, and range from approximately 0.1 percent to 14 percent. Mortality and surrender rate assumptions are generally based on actual experience when the liability is established.

POLICYHOLDER CONTRACT DEPOSITS

The liability for Policyholder contract deposits is primarily recorded at accumulated value (deposits received and net transfers from separate accounts, plus accrued interest credited at rates ranging from 0.2 percent to 9.0 percent at December 31, 2016, less withdrawals and assessed fees). Deposits collected on investment-oriented products are not reflected as revenues, because they are recorded directly to Policyholder contract deposits upon receipt. Amounts assessed against the contract holders for mortality, administrative, and other services are included in revenues.

In addition to liabilities for universal life, fixed annuities, fixed options within variable annuities, annuities without life contingencies, funding agreements and GICs, policyholder contract deposits also include our liability for (a) certain guaranteed benefits and indexed features accounted for as embedded derivatives at fair value, (b) annuities issued in a structured settlement arrangement with no life contingency and (c) certain contracts we have elected to account for at fair value. See Note 14 herein for additional information on guaranteed benefits accounted for as embedded derivatives.

For universal life policies with secondary guarantees, we recognize certain liabilities in addition to policyholder account balances. For universal life policies with secondary guarantees, as well as other universal life policies for which profits followed by losses are expected at contract inception, a liability is recognized based on a benefit ratio of (a) the present value of total expected payments, in excess of the account value, over the life of the contract, divided by (b) the present value of total expected assessments over the life of the contract. For universal life policies without secondary guarantees, for which profits followed by losses are first expected after contract inception, we establish a liability, in addition to policyholder account balances, so that expected future losses are recognized in proportion to the emergence of profits in the earlier (profitable) years. Universal life account balances as well as these additional liabilities related to universal life products are reported within Policyholder contract deposits in the Consolidated Balance Sheet.

Under a funding agreement-backed notes issuance program, an unaffiliated, non-consolidated statutory trust issues medium-term notes to investors, which are secured by GICs issued to the trust by one of our Life Insurance Companies through our Institutional Markets business.

The following table presents Policyholder contract deposits by product line:

At December 31, *(in millions)*	2016	2015
Policyholder contract deposits:		
Fixed Annuities	$ 51,278	$ 52,103
Group Retirement	39,578	37,854
Life Insurance	11,855	11,691
Variable and Index Annuities	16,934	13,927
Institutional Markets	7,286	6,533
Legacy Portfolio	5,285	5,480
Total Policyholder contract deposits	$ 132,216	$ 127,588

OTHER POLICYHOLDER FUNDS

Other policyholder funds include unearned revenue reserves (URR). URR consist of front-end loads on investment-oriented contracts, representing those policy loads that are non-level and typically higher in initial policy years than in later policy years. URR for investment-oriented contracts are generally deferred and amortized, with interest, in relation to the incidence of estimated gross profits (EGPs) to be realized over the estimated lives of the contracts and are subject to the same adjustments due to changes in the assumptions underlying EGPs as DAC. Amortization of URR is recorded in Policy fees.

Other policyholder funds also include provisions for future dividends to participating policyholders, accrued in accordance with all applicable regulatory or contractual provisions. Participating life business represented approximately 1.9 percent of gross insurance in force at December 31, 2016 and 3.1 percent of gross domestic premiums and other considerations in 2016. The amount of annual dividends to be paid is approved locally by the boards of directors of the Life Insurance Companies. Provisions for future dividend payments are computed by jurisdiction, reflecting local regulations. The portions of current and prior net income and of current unrealized appreciation of investments that can inure to our benefit are restricted in some cases by the insurance contracts and by the local insurance regulations of the jurisdictions in which the policies are in force.

Certain products are subject to experience adjustments. These include group life and group medical products, credit life contracts, accident and health insurance contracts/riders attached to life policies and, to a limited extent, reinsurance agreements with other direct insurers. Ultimate premiums from these contracts are estimated and recognized as revenue with the unearned portions of the premiums recorded as liabilities in Other policyholder funds. Experience adjustments vary according to the type of contract and the territory in which the policy is in force and are subject to local regulatory guidance.

Hartford Financial Services Group Inc/De

11. Reserve for Unpaid Losses and Loss Adjustment Expenses

Property and Casualty Insurance Products

Roll-forward of Liabilities for Unpaid Losses and Loss Adjustment Expenses

	For the years ended December 31,		
	2016	2015	2014
Beginning liabilities for unpaid losses and loss adjustment expenses, gross	**$ 21,825**	**$ 21,806**	**$ 21,704**
Reinsurance and other recoverables	2,882	3,041	3,028
Beginning liabilities for unpaid losses and loss adjustment expenses, net	**18,943**	**18,765**	**18,676**
Add: Maxum acquisition [1]	122	—	—
Provision for unpaid losses and loss adjustment expenses			
Current accident year	6,990	6,647	6,572
Prior accident year development	457	250	228
Total provision for unpaid losses and loss adjustment expenses	**7,447**	**6,897**	**6,800**
Less: payments			
Current accident year	2,749	2,653	2,639
Prior accident years	4,219	4,066	4,072
Total payments	**6,968**	**6,719**	**6,711**
Less: net reserves transferred to liabilities held for sale	487	—	—
Ending liabilities for unpaid losses and loss adjustment expenses, net	**19,057**	**18,943**	**18,765**
Reinsurance and other recoverables [2]	2,776	2,882	3,041
Ending liabilities for unpaid losses and loss adjustment expenses, gross	**$ 21,833**	**$ 21,825**	**$ 21,806**

[1]Represents Maxum reserves, net as of the acquisition date.
[2]Includes reinsurance recoverables of $2,373 , $2,515 and $2,730 as of December 31, 2016 , 2015 and 2014 , respectively.

Property and Casualty Insurance Products Reserves, Net of Reinsurance that are Discounted

	For the years ended December 31,		
	2016	2015	2014
Liability for unpaid losses and loss adjustment expenses, at undiscounted amounts	$ 1,504	$ 1,607	$ 1,577
Less: amount of discount	483	523	556
Carrying value of liability for unpaid losses and loss adjustment expenses	$ 1,021	$ 1,084	$ 1,021
Discount accretion included in losses and loss adjustment expenses	$ 29	$ 38	$ 31
Weighted average discount rate	3.11%	3.24%	3.50%
Range of discount rates	1.77% - 14.15%	1.77% - 14.15%	1.77% - 14.15%

The current accident year benefit from discounting property and casualty insurance product reserves was $27 in 2016 , $35 in 2015 and $34 in 2014 . The reduction in the discount benefit in 2016 as compared to 2015 reflects lower claim volume and a shorter than expected payment pattern in 2016. The reduction in the discount benefit in 2015 as compared to 2014 reflects lower claim volume and a shorter than expected payment pattern in 2015. Reserves are discounted at rates in effect at the time claims were incurred, ranging from 1.77% for accident year 2016 to 14.15% for accident year 1981.

The reserves recorded for the Company's property and casualty insurance products at December 31, 2016 represent the Company's best estimate of its ultimate liability for losses and loss adjustment expenses related to losses covered by policies

written by the Company. However, because of the significant uncertainties surrounding reserves it is possible that management's estimate of the ultimate liabilities for these claims may change and that the required adjustment to recorded reserves could exceed the currently recorded reserves by an amount that could be material to the Company's results of operations or cash flows.

Losses and loss adjustment expenses are also impacted by trends including frequency and severity as well as changes in the legislative and regulatory environment. In the case of the reserves for asbestos exposures, factors contributing to the high degree of uncertainty in the ultimate settlement of the liabilities gross of reinsurance include inadequate loss development patterns, plaintiffs' expanding theories of liability, the risks

inherent in major litigation, and inconsistent emerging legal doctrines. In the case of the reserves for environmental exposures, factors contributing to the high degree of uncertainty in gross reserves include expanding theories of liabilities and damages, the risks inherent in major litigation, inconsistent decisions concerning the existence and scope of coverage for environmental claims, and uncertainty as to the monetary amount being sought by the claimant from the insured.

(Favorable) Unfavorable Prior Accident Year Development

	For the years ended December 31,		
	2016	2015	2014
Workers' compensation	$ (119)	$ (37)	$ (7)
Workers' compensation discount accretion	28	29	30
General liability	65	8	(25)
Package business	65	28	3
Commercial property	1	(6)	2
Professional liability	(37)	(36)	(17)
Bond	(8)	(2)	8
Auto liability	217	54	25
Homeowners	(10)	9	(7)
Net asbestos reserves	197	146	212
Net environmental reserves	71	55	30
Catastrophes	(7)	(18)	(45)
Uncollectible reinsurance	(30)	—	—
Other reserve re-estimates, net	24	20	19
Total prior accident year development	**$ 457**	**$ 250**	**$ 228**

2016 re-estimates of prior accident year reserves

- **Workers' compensation reserves** c onsider favorable emergence on reported losses for recent accident years as well as a partially offsetting adverse impact related to two recent Florida Supreme Court rulings that have increased the Company's exposure to workers' compensation claims in that state. The favorable emergence has been driven by lower frequency and, to a lesser extent, lower medical severity and management has placed additional weight on this favorable experience as it becomes more credible.
- **General liability reserves** in creased for accident years 2012 - 2015 primarily due to higher severity losses incurred on a class of business that insures service and maintenance contractors and increased reserves in general liability for accident years 2008 and 2010 primarily due to indemnity losses and legal costs associated with a litigated claim.
- **Small commercial package business reserves** increased due to higher than expected severity on liability claims, principally for accident years 2013 - 2015. Severity for these accident years has developed unfavorably and management has placed more weight on emerged experience.
- **Professional liability reserves** d ecreased for claims made years 2008 - 2013, primarily for large accounts, including on non-securities class action cases. Claim costs have emerged favorably as these years have matured and management has placed more weight on the emerged experience.
- **Auto liability reserves** increas ed due to increases in both commercial lines auto and personal lines auto. Commercial auto liability reserves incre ased, predominately for the 2015 accident year, primarily due to increased frequency of large claims. Personal auto liability reserves increas ed, primarily related to increased bodily injury frequency and severity for the 2015 accident year, including for uninsured and under-insured motorist claims, and increased bodily injury severity for the 2014 accident year. Increases in auto liability loss costs were across both the direct and agency distribution channels.
- **Asbestos and environmental reserves** were increased during the period as a result of the second quarter 2016 comprehensive annual review. For further discussion, refer to MD&A, Critical Accounting Estimates, Asbestos and Environmental Reserves.

- **Uncollectible reinsurance reserves** decr eased as a result of giving greater weight to favorable collectability experience in recent calendar periods in estimating future collections.

2015 re-estimates of prior accident year reserves

- **Workers' compensation reserves** decreased due to an improvement in claim closure rates resulting in a decrease in outstanding claims for permanently disabled claimants. In addition, accident years 2013 and 2014 continue to exhibit favorable frequency and medical severity trends; management has been placing additional weight on this favorable experience as it becomes more credible.
- **Small Commercial package business reserves** increased due to higher than expected severity on liability claims, impacting recent accident years.
- **Commercial auto liability reserves** increased due to increased severity of large claims predominantly for accident years 2010 to 2013.
- **Professional liability reserves** decreased for claims made years 2009 through 2012 primarily for large accounts. Claim costs have emerged favorably as these years have matured and management has placed more weight on the emerged experience.
- **Asbestos and environmental reserves** were increased during the period as a result of the 2015 comprehensive annual review.
- **Catastrophe reserves** decreased primarily for accident year 2014 as fourth quarter 2014 catastrophes have developed favorably.
- **Other reserve re-estimates, net** , decreased due to decreased contract surety reserves across several accident years and decreased commercial surety reserves for accident years 2012 through 2014 as a result of lower emerged losses. These reserve decreases were offset by an increase in commercial surety reserves related to accident years 2007 and prior, as the number of new claims reported has outpaced expectations.

2014 re-estimates of prior accident years reserves

- **Workers' compensation reserves** decreased for recent accident years due to improved frequency and lower estimated claim handling costs.
- **General liability reserves** decreased due to lower frequency in late emerging claims.
- **Commercial auto liability reserves** increased due to an increased frequency of severe claims spread across several accident years.
- **Professional liability reserves** decreased for accident years 2013, 2012 and 2010 due to lower frequency of reported claims.
- **Bond reserves** emerged favorably for accident years 2008 to 2013, offset by adverse emergence on reserves for accident years 2007 and prior.
- **Homeowners reserves** emerged favorably for accident year 2013, primarily related to favorable development on fire and water related claims.
- **Asbestos and environmental reserves** were increased during the period as a result of the 2014 comprehensive annual review.
- **Catastrophe reserves** decreased primarily for accident year 2013, as fourth quarter 2013 catastrophes have developed favorably.

Reconciliation of Loss Development to Liability for Unpaid Losses and Loss Adjustment Expenses As of December 31, 2016

Reserve Line	Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance: Cumulative Incurred for Accident Years Displayed in Triangles	Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance: Cumulative Paid for Accident Years Displayed in Triangles	Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance: Unpaid for Accident Years not Displayed in Triangles [1]	Unpaid Unallocated Loss Adjustment Expenses, Net of Reinsurance	Discount	Subtotal: Unpaid Losses and Loss Adjustment Expenses, Net of Reinsurance	Reinsurance and Other Recoverables	Liability for Unpaid Losses and Loss Adjustment Expenses
Workers' compensation	$ 17,948	$ (10,775)	$ 2,152	$ 330	$ (466)	$ 9,189	$ 1,431	$ 10,620
General liability	3,546	(1,981)	464	84	—	2,113	225	2,338
Package business	6,469	(5,214)	53	91	—	1,399	17	1,416
Commercial property	3,041	(2,870)	16	8	—	195	15	210
Commercial auto liability	3,438	(2,594)	15	21	—	880	38	918
Commercial auto physical damage	227	(219)	1	—	—	9	—	9
Professional liability	1,761	(1,225)	36	17	—	589	288	877
Bond	657	(444)	(1)	13	—	225	12	237
Personal auto liability	12,304	(10,703)	13	61	—	1,675	24	1,699
Personal auto physical damage	1,908	(1,876)	1	3	—	36	—	36
Homeowners	7,323	(7,024)	7	35	—	341	1	342
Other ongoing business			208	1	(17)	192	299	491
Asbestos and environmental [2]			1,655	—	—	1,655	390	2,045
Other operations [2]			468	91	—	559	36	595
Total P&C	$ 58,622	$ (44,925)	$ 5,088	$ 755	$ (483)	$ 19,057	$ 2,776	$ 21,833

[1]Amounts represent reserves for claims that were incurred more than ten years ago for long-tail lines and more than three years ago for short-tail lines.
[2]Asbestos and environmental and other operations include asbestos, environmental and other latent exposures not foreseen when coverages were written, including, but not limited to, potential liability for pharmaceutical products, silica, talcum powder, head injuries, lead paint, construction defects, molestation and other long-tail liabilities. These reserve lines do not have significant paid or incurred loss development for the most recent ten accident years and therefore do not have loss development displayed in triangles.

The reserve lines in the above table and the loss triangles that follow represent the significant lines of business for which the Company regularly reviews the appropriateness of reserve levels. These reserve lines differ from the reserve lines reported on a statutory basis, as prescribed by the National Association of Insurance Commissioners ("NAIC").

The following loss triangles present historical loss development for incurred and paid claims by accident year. Triangles are limited

to the number of years for which claims incurred typically remain outstanding, not exceeding ten years. Short-tail lines, which represent claims generally expected to be paid within a few years, have three years of claim development displayed. IBNR reserves shown in loss triangles include reserve for incurred but not reported claims as well as reserves for expected development on reported claims.

Workers' Compensation

Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

Accident Year	For the years ended December 31, (Unaudited): 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR Reserves	Claims Reported
2007	$ 1,597	$ 1,538	$ 1,492	$ 1,434	$ 1,404	$ 1,394	$ 1,375	$ 1,374	$ 1,372	$ 1,374	$ 114	148,662
2008		1,456	1,444	1,456	1,470	1,473	1,477	1,477	1,492	1,493	129	141,632
2009			1,462	1,455	1,478	1,493	1,504	1,504	1,519	1,529	182	135,757
2010				1,560	1,775	1,814	1,858	1,857	1,882	1,881	267	156,400
2011					2,013	2,099	2,204	2,206	2,221	2,224	402	177,279
2012						2,185	2,207	2,207	2,181	2,168	512	170,535
2013							2,020	1,981	1,920	1,883	596	147,997
2014								1,869	1,838	1,789	761	123,794
2015									1,873	1,835	1,012	110,894
2016										1,772	1,256	98,070
Total										$ 17,948		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

Accident Year	For the years ended December 31, (Unaudited): 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 239	$ 547	$ 727	$ 845	$ 935	$ 1,000	$ 1,053	$ 1,094	$ 1,122	$ 1,141
2008		264	581	781	917	1,015	1,089	1,146	1,190	1,216
2009			265	587	792	937	1,042	1,115	1,170	1,208
2010				316	709	970	1,154	1,287	1,374	1,439
2011					371	841	1,156	1,368	1,518	1,622
2012						359	809	1,106	1,313	1,436
2013							304	675	917	1,071
2014								275	598	811
2015									261	576
2016										255
Total										$ 10,775

General Liability

Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

For the years ended December 31,
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR Reserves	Claims Reported
2007	$ 601	$ 570	$ 524	$ 491	$ 489	$ 461	$ 428	$ 416	$ 415	$ 416	$ 46	23,384
2008		501	457	468	454	451	416	398	401	398	50	21,181
2009			382	398	394	382	359	348	347	346	46	20,268
2010				355	362	352	355	343	345	376	43	18,482
2011					353	343	323	316	315	320	55	16,344
2012						321	315	310	295	304	93	11,230
2013							318	321	332	352	145	9,211
2014								317	318	336	180	9,366
2015									316	346	260	9,246
2016										352	323	8,463
Total										$ 3,546		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

For the years ended December 31,
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 46	$ 94	$ 161	$ 230	$ 289	$ 315	$ 335	$ 347	$ 355	$ 362
2008		31	69	141	216	270	300	318	330	337
2009			22	63	124	181	227	256	277	287
2010				14	51	115	181	224	259	314
2011					11	47	93	154	198	234
2012						8	39	75	124	167
2013							7	35	95	152
2014								11	31	88
2015									7	32
2016										8
Total										$ 1,981

Package Business

Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

For the years ended December 31,
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR Reserves	Claims Reported
2007	$ 575	$ 626	$ 638	$ 621	$ 600	$ 600	$ 592	$ 592	$ 586	$ 586	$ 17	53,645
2008		667	703	709	677	675	674	676	673	675	19	58,028
2009			587	584	584	572	578	577	576	576	25	50,263
2010				657	662	654	652	652	651	653	29	52,259
2011					810	792	790	800	808	814	44	60,793
2012						736	725	728	731	736	55	59,472
2013							579	565	573	585	66	43,077
2014								566	578	601	118	42,230
2015									582	588	185	40,140
2016										655	314	36,845
Total										$ 6,469		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

For the years ended December 31,
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 223	$ 362	$ 432	$ 484	$ 525	$ 542	$ 552	$ 559	$ 562	$ 565
2008		278	451	510	562	595	620	633	643	649
2009			227	351	411	463	503	527	539	547
2010				270	414	487	539	570	601	613
2011					377	555	621	684	727	748
2012						286	486	560	616	652
2013							225	339	414	467
2014								226	345	416
2015									212	332
2016										225
Total										$ 5,214

Commercial Property

Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

For the years ended December 31,
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR Reserves	Claims Reported
2007	$ 306	$ 306	$ 299	$ 295	$ 294	$ 295	$ 295	$ 296	$ 296	$ 296	$ (1)	32,589
2008		478	465	465	464	467	464	464	463	464	—	31,995
2009			267	264	259	258	251	257	257	257	—	28,284
2010				286	283	279	282	284	284	284	—	28,513
2011					357	356	356	362	361	360	—	29,099
2012						329	301	301	305	306	1	25,777
2013							234	218	219	220	—	20,280
2014								268	260	262	—	19,720
2015									264	264	3	18,955
2016										328	48	18,189
Total										$ 3,041		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

For the years ended December 31,
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 185	$ 277	$ 291	$ 293	$ 293	$ 294	$ 295	$ 296	$ 296	$ 297
2008		280	422	449	459	464	464	464	465	466
2009			179	247	252	256	256	257	257	257
2010				198	266	276	281	283	284	284
2011					231	332	350	355	358	359
2012						171	279	294	300	304
2013							157	208	216	218
2014								168	243	258
2015									172	239
2016										188
Total										$ 2,870

Commercial Auto Liability

Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

For the years ended December 31,
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR Reserves	Claims Reported
2007	$ 334	$ 333	$ 351	$ 352	$ 351	$ 350	$ 350	$ 351	$ 353	$ 355	$ 1	50,392
2008		303	311	304	303	304	304	302	307	306	4	43,859
2009			306	292	287	287	297	301	302	302	1	38,651
2010				277	280	296	319	323	328	327	11	38,007
2011					272	310	356	356	366	365	12	39,093
2012						311	376	390	401	394	26	35,719
2013							309	314	329	336	40	31,510
2014								306	314	328	71	28,742
2015									302	353	140	27,205
2016										372	251	24,553
Total										$ 3,438		

Cumulative Paid Losses & Allocated Loss Adjustment Expense, Net of Reinsurance

For the years ended December 31
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 68	$ 153	$ 227	$ 292	$ 322	$ 334	$ 343	$ 347	$ 348	$ 349
2008		61	124	185	238	270	289	295	299	300
2009			56	115	175	237	274	291	298	300
2010				55	125	188	252	289	300	308
2011					62	133	211	273	315	339
2012						65	142	233	306	345
2013							61	128	199	255
2014								58	129	195
2015									61	141
2016										62
Total										$ 2,594

Commercial Auto Physical Damage

Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

Accident Year	For the years ended December 31, (Unaudited) 2014	2015	2016	IBNR Reserves	Claims Reported
2014	$ 72	$ 73	$ 73	$ —	31,724
2015		74	75	—	26,761
2016			79	1	24,826
Total			$ 227		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

Accident Year	For the years ended December 31, (Unaudited) 2014	2015	2016
2014	$ 67	$ 73	$ 73
2015		69	75
2016			71
Total			$ 219

Professional Liability

Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

Claims Made Year	For the years ended December 31, (Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR Reserves	Claims Reported
2007	$ 275	$ 274	$ 237	$ 203	$ 201	$ 212	$ 210	$ 210	$ 210	$ 220	$ 14	4,182
2008		281	253	244	274	280	276	276	282	277	10	4,956
2009			254	251	244	266	257	263	255	257	19	5,113
2010				202	211	212	205	201	200	195	30	4,888
2011					226	228	232	226	219	219	42	4,702
2012						174	172	168	149	146	45	3,716
2013							136	136	123	110	66	2,771
2014								116	123	118	65	2,857
2015									104	113	75	2,898
2016										106	94	2,709
Total										$ 1,761		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

Claims Made Year	For the years ended December 31, (Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 11	$ 53	$ 85	$ 117	$ 142	$ 178	$ 187	$ 190	$ 191	$ 200
2008		13	61	126	166	202	221	230	260	264
2009			17	69	127	177	194	226	225	226
2010				22	62	103	137	148	157	162
2011					11	57	100	128	163	170
2012						11	41	60	89	97
2013							4	19	31	39
2014								4	21	40
2015									4	23
2016										4
Total										$ 1,225

Bond

Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

For the years ended December 31,
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR Reserves	Claims Reported
2007	$ 76	$ 76	$ 104	$ 105	$ 101	$ 109	$ 106	$ 129	$ 132	$ 135	$ (3)	5,387
2008		75	67	62	52	47	47	44	47	48	7	3,443
2009			71	71	69	58	57	51	49	49	4	3,301
2010				71	75	80	79	73	69	70	—	2,659
2011					72	76	76	75	70	70	11	2,118
2012						69	69	60	53	48	19	1,712
2013							63	58	54	48	29	1,437
2014								69	65	65	23	1,347
2015									65	65	39	1,294
2016										59	52	1,082
Total										$ 657		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

For the years ended December 31,
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 8	$ 29	$ 38	$ 42	$ 68	$ 104	$ 111	$ 129	$ 131	$ 132
2008		5	18	23	30	32	34	39	39	39
2009			9	32	45	46	44	43	44	44
2010				13	46	59	58	59	63	66
2011					12	39	51	56	57	59
2012						12	25	26	24	25
2013							3	9	17	18
2014								18	31	40
2015									9	19
2016										2
Total										$ 444

Personal Auto Liability

Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

For the years ended December 31,
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR Reserves	Claims Reported
2007	$ 1,291	$ 1,260	$ 1,242	$ 1,229	$ 1,219	$ 1,216	$ 1,215	$ 1,211	$ 1,211	$ 1,209	$ 2	260,143
2008		1,253	1,249	1,227	1,207	1,197	1,196	1,192	1,191	1,188	2	248,987
2009			1,351	1,305	1,280	1,255	1,256	1,260	1,259	1,257	2	254,543
2010				1,346	1,321	1,293	1,287	1,282	1,275	1,265	4	248,940
2011					1,181	1,170	1,180	1,173	1,166	1,154	9	221,862
2012						1,141	1,149	1,146	1,142	1,133	14	210,715
2013							1,131	1,145	1,144	1,153	23	205,308
2014								1,146	1,153	1,198	72	208,364
2015									1,195	1,340	206	214,436
2016										1,407	571	201,606
Total										$ 12,304		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

For the years ended December 31,
(Unaudited)

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 452	$ 846	$ 1,037	$ 1,129	$ 1,175	$ 1,191	$ 1,200	$ 1,204	$ 1,205	$ 1,206
2008		469	861	1,031	1,121	1,160	1,175	1,181	1,183	1,184
2009			492	888	1,083	1,171	1,223	1,240	1,246	1,250
2010				496	915	1,108	1,202	1,239	1,251	1,256
2011					447	826	1,006	1,088	1,126	1,140
2012						441	818	986	1,067	1,104
2013							442	816	1,002	1,091
2014								430	843	1,032
2015									475	935
2016										505
Total										$ 10,703

Personal Auto Physical Damage

Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

Accident Year	For the years ended December 31, (Unaudited) 2014	2015	2016	IBNR Reserves	Claims Reported
2014	$ 614	$ 612	$ 611	$ —	392,193
2015		629	632	—	395,384
2016			665	(3)	383,870
Total			$ 1,908		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

Accident Year	For the years ended December 31, (Unaudited) 2014	2015	2016
2014	$ 591	$ 613	$ 612
2015		610	630
2016			634
Total			$ 1,876

Homeowners

Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

Accident Year	For the years ended December 31, (Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR Reserves	Claims Reported
2007	$ 578	$ 590	$ 581	$ 581	$ 582	$ 581	$ 580	$ 580	$ 580	$ 580	1	133,741
2008		742	768	777	778	779	779	779	779	780	2	165,101
2009			757	777	776	772	772	772	772	769	2	149,783
2010				838	850	838	840	840	840	836	2	161,559
2011					955	920	919	916	914	911	4	179,353
2012						774	741	741	741	739	4	142,756
2013							673	638	637	634	6	113,399
2014								710	707	702	9	121,619
2015									690	703	20	119,097
2016										669	84	111,072
Total										$ 7,323		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

Accident Year	For the years ended December 31, (Unaudited) 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 402	$ 537	$ 557	$ 569	$ 572	$ 575	$ 576	$ 578	$ 578	$ 579
2008		548	721	750	764	773	775	777	777	778
2009			559	727	749	759	763	765	766	766
2010				599	789	815	825	829	832	833
2011					709	871	891	899	903	905
2012						547	696	719	727	731
2013							467	590	611	622
2014								526	663	684
2015									487	645
2016										481
Total										$ 7,024

Property and casualty reserves, including IBNR reserves

The Company estimates ultimate losses and allocated loss adjustment expenses by accident year. IBNR represents the excess of estimated ultimate loss reserves over case reserves. The process to estimate ultimate losses and loss adjustment expenses is an integral part of the Company's reserve setting. Reserves for allocated and unallocated loss adjustment expenses are generally established separate from the reserves for losses.

Reserves for losses are set by line of business within the reporting segments. Case reserves are established by a claims handler on each individual claim and are adjusted as new information

becomes known during the course of handling the claim. Lines of business for which reported losses emerge over a long period of time are referred to as long-tail lines of business. Lines of business for which reported losses emerge more quickly are referred to as short-tail lines of business. The Company's shortest tail lines of business are homeowners, commercial property and auto physical damage. The longest tail lines of business include workers' compensation, general liability and professional liability. For short-tail lines of business, emergence of paid loss and case reserves is credible and likely indicative of ultimate losses. For long-tail lines of business, emergence of paid losses and case reserves is less credible in the early periods after a given accident year and, accordingly, may not be indicative of ultimate losses.

The Company's reserving actuaries regularly review reserves for both current and prior accident years using the most current claim data. A variety of actuarial methods and judgments are used for most lines of business to arrive at selections of estimated ultimate losses and loss adjustment expenses. While actuarial methods used and judgments change depending on the age of the accident year, in 2016, there were no new methods or types of judgments introduced or changes in how those methods and judgments were applied. The reserve selections incorporate input, as appropriate, from claims personnel, pricing actuaries and operating management about reported loss cost trends and other factors that could affect the reserve estimates.

For both short-tail and long-tail lines of business, an expected loss ratio is used to record initial reserves. This expected loss ratio is determined by starting with the average loss ratio of recent prior accident years and adjusting that ratio for the effect of expected changes to earned pricing, loss frequency and severity, mix of business, ceded reinsurance and other factors. For short-tail lines, IBNR for the current accident year is initially recorded as the product of the expected loss ratio for the period, earned premium for the period and the proportion of losses expected to be reported in future calendar periods for the current accident period. For long-tailed lines, IBNR reserves for the current accident year are initially recorded as the product of the expected loss ratio for the period and the earned premium for the period, less reported losses for the period. For certain short-tailed lines of business, IBNR amounts in the above loss development triangles are negative due to anticipated salvage and subrogation recoveries on paid losses.

As losses for a given accident year emerge or develop in subsequent periods, reserving actuaries use other methods to estimate ultimate unpaid losses in addition to the expected loss ratio method. These primarily include paid and reported loss development methods, frequency / severity techniques and the Bornhuetter-Ferguson method (a combination of the expected loss ratio and paid development or reported development method). Within any one line of business, the methods that are given more weight vary based primarily on the maturity of the accident year, the mix of business and the particular internal and external influences impacting the claims experience or the methods. The output of the reserve reviews are reserve estimates that are referred to as the "actuarial indication".

Paid development and reported development techniques are used for most lines of business though more weight is given to the reported development method for some of the long-tailed lines like general liability. In addition, for long-tailed lines of business, the Company relies on the expected loss ratio method for immature accident years. Frequency/severity techniques are used predominantly for professional liability and are also used for auto liability. For most lines, reserves for allocated loss adjustment expenses ("ALAE", or those expenses related to specific claims) are analyzed using paid development techniques and an analysis of the relationship between ALAE and loss payments. Reserves for unallocated loss adjustment expenses ("ULAE") are determined using the expected cost per claim year and the anticipated claim closure pattern as well as the ratio of paid ULAE to paid losses.

In the final step of the reserve review process, senior reserving actuaries and senior management apply their judgment to determine the appropriate level of reserves considering the actuarial indications and other factors not contemplated in the actuarial indications. Those factors include, but are not limited to, the assessed reliability of key loss trends and assumptions used in the current actuarial indications, pertinent trends observed over the recent past, the level of volatility within a particular line of business, and the improvement or deterioration of actuarial indications.

Cumulative number of reported claims

For property and casualty, claim counts represent the number of claim features on a reported claim where a claim feature is each separate coverage for each claimant affected by the claim event. For example, one car accident that results in two bodily injury claims and one auto damage liability claim would be counted as three claims within the personal auto liability triangle. Similarly, a fire that impacts one commercial building may result in multiple claim features due to the potential for claims related to business interruption, structural damage, and loss of the physical contents of the building. Claim features that result in no paid losses are included in the reported claim counts.

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance

	(Unaudited)									
Reserve Line	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year
Workers' compensation	16.3	20.3	13.3	9.2	6.6	4.7	3.7	2.8	1.9	1.3
General liability	4.5	9.4	16.2	17.3	13.4	8.5	7.5	3.0	1.8	1.5
Package business	39.2	22.4	10.7	8.3	5.6	3.6	1.9	1.3	0.8	0.5
Commercial property	64.0	28.0	4.5	1.4	0.8	0.2	0.2	0.2	—	—
Commercial auto liability	17.8	21.0	20.7	18.3	10.7	5.0	2.4	0.8	0.4	0.3
Commercial auto physical damage	91.2	8.7	(0.3)							
Professional liability	5.4	18.2	17.6	15.2	9.7	8.8	2.4	4.1	0.9	4.1
Bond	14.7	27.7	14.1	3.4	3.8	7.6	5.2	4.7	0.7	1.7
Personal auto liability	37.8	33.1	15.4	7.4	3.5	1.2	0.5	0.3	0.1	—
Personal auto physical damage	96.2	3.4	(0.2)							
Homeowners	72.6	21.1	3.1	1.5	0.6	0.3	0.1	0.1	0.1	—

Group Life, Disability and Accident Products

Roll-forward of Liabilities for Unpaid Losses and Loss Adjustment Expenses

	For the years ended December 31,		
	2016	2015 [1]	2014 [1]
Beginning liabilities for unpaid losses and loss adjustment expenses, gross	$ 5,889	$ 6,013	$ 6,258
Reinsurance recoverables	218	209	210
Beginning liabilities for unpaid losses and loss adjustment expenses, net	**5,671**	**5,804**	**6,048**
Provision for unpaid losses and loss adjustment expenses			
Current incurral year	2,562	2,447	2,446
Prior year's discount accretion	202	214	225
Prior incurral year development [2]	(162)	(146)	(223)
Total provision for unpaid losses and loss adjustment expenses [3]	**2,602**	**2,515**	**2,448**
Less: payments			
Current incurral year	1,327	1,257	1,211
Prior incurral years	1,382	1,391	1,482
Total payments	**2,709**	**2,648**	**2,693**
Ending liabilities for unpaid losses and loss adjustment expenses, net	**5,564**	**5,671**	**5,804**
Reinsurance recoverables	208	218	209
Ending liabilities for unpaid losses and loss adjustment expenses, gross	$ 5,772	$ 5,889	$ 6,013

[1]Certain prior year amounts have been reclassified to conform to the current year presentation for unpaid losses and loss adjustment expenses.
[2]Prior incurral year development represents the change in estimated ultimate incurred losses and loss adjustment expenses for prior incurral years on a discounted basis.
[3]Includes unallocated loss adjustment expenses of $100 , $96 and $98 for the years ended December 31, 2016, 2015 and 2014, respectively, that are recorded in insurance operating costs and other expenses in the Consolidated Statements of Operations.

Group life, Disability and Accident Products Reserves, Net of Reinsurance that are Discounted

	For the years ended December 31,		
	2016	2015	2014
Liability for unpaid losses and loss adjustment expenses, at undiscounted amounts	$ 6,382	$ 6,565	$ 6,841
Less: amount of discount	1,303	1,382	1,502
Carrying value of liability for unpaid losses and loss adjustment expenses	$ 5,079	$ 5,183	$ 5,339
Weighted average discount rate	4.3%	4.4%	4.5%
Range of discount rate	3.0% - 8.0%	3.0% - 8.0%	3.0% - 8.0%

Reserves are discounted at rates in effect at the time claims were incurred, ranging from 3.0% for incurral year 2004 to 8.0% for incurral year 1990, and vary by product. Prior year's discount accretion has been calculated as the average reserve balance for the year times the weighted average discount rate.

lower Social Security Disability approvals driven by lower approval rates and backlogs in the Social Security Administration.

Net favorable prior incurral year development in 2016 was driven by the following:

- **Group Disability**- Prior period estimates decreased by approximately $90 largely driven by group long-term disability claim recoveries higher than prior reserve assumptions, particularly in the older incurral years. This favorability was partially offset by lower Social Security Disability approvals driven by lower approval rates and backlogs in the Social Security Administration.
- **Group Life and Accident (including Group Life Premium Waiver)**- Contributing to an approximately $75 decrease in prior period reserve estimates was favorable claim incidence on group life premium waiver for incurral year 2015.

Net favorable prior incurral year development in 2015 was driven by the following:

- **Group Disability**- Prior period estimates decreased by approximately $90 largely driven by updated assumptions related to the probability and timing of long-term disability claim recoveries, which were updated to reflect recent favorable trends. This favorability was partially offset by

- **Group Life and Accident (including Group Life Premium Waiver)**- Prior period estimates decreased by approximately $50 largely driven by favorable claim incidence and recovery experience on group life premium waiver.

Net favorable prior incurral year development in 2014 was driven by the following:

- **Group Disability**- Prior period estimates decreased by approximately $150 largely due to higher actual claim recoveries in group long-term disability, particularly in incurral years 2013 and 2012. In addition for incurral year 2013, group long-term disability claim incidence levels emerged favorably to reserve assumptions.
- **Group Life and Accident (including Group Life Premium Waiver**- Prior period estimates decreased by approximately $65 driven largely by claim incidence and recovery experience on group life premium waiver. For group life premium waiver claims with disability dates prior to 2011, reserve estimates were updated to reflect more emerging favorable claim trends. Reserves for group life claims for incurral year 2013 were decreased due to lower-than-previously-assumed deaths reported in early 2014.

Reconciliation of Loss Development to Liability for Unpaid Losses and Loss Adjustment Expenses as of December 31, 2016

	Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance					Subtotal		
Reserve Line	Cumulative Incurred for Incurral Years Displayed in Triangles	Cumulative Paid for Incurral Years Displayed in Triangles	Unpaid for Incurral Years not Displayed in Triangles	Unpaid Unallocated Loss Adjustment Expenses, Net of Reinsurance	Discount	Unpaid Losses and Loss Adjustment Expenses, Net of Reinsurance	Reinsurance and Other Recoverables	Liability for Unpaid Losses and Loss Adjustment Expenses
Group long-term disability	$ 11,293	$ (6,570)	$ 1,021	$ 128	$ (1,185)	$ 4,687	$ 206	$ 4,893
Group life and accident, excluding premium waiver	3,076	(2,821)	80	2	(18)	319	—	319
Group short-term disability			52	2	—	54	—	54
Group life premium waiver			558	7	(100)	465	2	467
Group supplemental health			39	—	—	39	—	39
Total Group Benefits	$ 14,369	$ (9,391)	$ 1,750	$ 139	$ (1,303)	$ 5,564	$ 208	$ 5,772

The following loss triangles present historical loss development for incurred and paid claims by the year the insured claim occurred, referred to as the incurral year. Triangles are limited to the number of years for which claims incurred typically remain outstanding, but not exceeding ten years. Short-tail lines, which represent claims generally expected to be paid within a few years, have three years of claim development displayed.

Group Long-Term Disability

Undiscounted Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

	For the years ended December 31, (Unaudited)											
Incurral Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR Reserves	Claims Reported
2007	$ 1,375	$ 1,290	$ 1,177	$ 1,158	$ 1,160	$ 1,154	$ 1,154	$ 1,151	$ 1,146	$ 1,143	$ —	27,251
2008		1,415	1,311	1,250	1,237	1,250	1,249	1,243	1,239	1,241	—	27,811
2009			1,441	1,414	1,363	1,343	1,335	1,344	1,328	1,318	—	29,788
2010				1,542	1,471	1,397	1,367	1,376	1,351	1,344	—	30,432
2011					1,503	1,405	1,317	1,313	1,318	1,310	—	30,406
2012						1,358	1,199	1,143	1,141	1,135	1	27,357
2013							1,121	985	954	940	1	20,376
2014								1,051	969	936	3	19,879
2015									985	923	11	18,916
2016										1,003	371	12,748
Total										$ 11,293		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

	For the years ended December 31, (Unaudited)								
Incurral Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	$ 81	$ 340	$ 495	$ 585	$ 661	$ 726	$ 781	$ 828	$ 869	$ 906
2008		81	357	520	618	701	771	831	883	930
2009			88	391	573	682	769	843	906	960
2010				98	419	608	718	805	878	940
2011					98	410	595	707	790	860
2012						84	362	526	620	689
2013							69	289	435	520
2014								67	284	427
2015									67	275
2016										63
Total										$ 6,570

Group Life and Accident, excluding Premium Waiver

Undiscounted Incurred Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

	For the years ended December 31, (Unaudited)				
Incurral Year	2014	2015	2016	IBNR Reserves	Claims Reported
2014	$ 982	$ 973	$ 975	$ 2	25,589
2015		1,022	1,012	7	24,473
2016			1,089	190	19,445
Total			$ 3,076		

Cumulative Paid Losses & Allocated Loss Adjustment Expenses, Net of Reinsurance

	For the years ended December 31, (Unaudited)		
Incurral Year	2014	2015	2016
2014	$ 777	$ 958	$ 970
2015		809	1,000
2016			851
Total			$ 2,821

Group life, disability and accident reserves, including IBNR

The majority of Group Benefits' reserves are for long-term disability ("LTD") claimants who are known to be disabled and are currently receiving benefits. A Disabled Life Reserve ("DLR") is calculated for each LTD claim. The DLR for each claim is the expected present value of all estimated future benefit payments and includes estimates of claim recovery, investment yield, and offsets from other income, including offsets from Social Security benefits and workers' compensation. Estimated future benefit payments represent the monthly income benefit that is paid until recovery, death or expiration of benefits. Claim recoveries are estimated based on claim characteristics such as age and diagnosis and represent an estimate of benefits that will terminate, generally as a result of the claimant returning to work or being deemed able to return to work. The DLR also includes a liability for payments to claimants who have not yet been approved for LTD either because they have not yet satisfied the waiting (or elimination) period or because the approval or denial decision has not yet been made. In these cases, the present value of future benefits is reduced for the likelihood of claim denial based on Company experience. For claims recently closed due to recovery, a portion of the DLR is retained for the possibility that the claim reopens upon further evidence of disability. In addition, a reserve for estimated unpaid claim expenses is included in the DLR.

For incurral years with IBNR claims, estimates of ultimate losses are made by applying completion factors to the dollar amount of claims reported. IBNR represents estimated ultimate losses less both DLR and cumulative paid amounts for all reported claims. Completion factors are derived using standard actuarial techniques using triangles that display historical claim count emergence by incurral year. These estimates are reviewed for reasonableness and are adjusted for current trends and other factors expected to cause a change in claim emergence. The IBNR includes an estimate of unpaid claim expenses, including a provision for the cost of initial set-up of the claim once reported.

For all products, including LTD, there is a period generally ranging from two to twelve months, depending on the product, where

emerged claim information for an incurral year is not yet credible enough to be a basis for an IBNR projection. In these cases, the ultimate losses and allocated loss adjustment expenses are estimated using earned premium multiplied by an expected loss ratio.

The Company also records reserves for future death benefits under group term life policies that provide for premiums to be waived in the event the insured has a permanent and total disablement and has satisfied an elimination period, which is typically nine months ("premium waiver reserves") . The death benefit reserve for these group life premium waiver claims is estimated for a known disabled claimant equal to the present value of expected future cash outflows (typically a lump sum face amount payable at death plus claim expenses) with separate estimates for claimant recovery (when no death benefit is payable) and for death before recovery or benefit expiry (when death benefit is payable). The IBNR for premium waiver death benefits is estimated with standard actuarial development methods.

In addition, the Company also records reserves for group term life, accidental death & dismemberment, short term disability, and other group products that have short claim payout periods. For these products, reserves are determined using paid or reported actuarial development methods. The resulting claim triangles produce a completion pattern and estimate of ultimate loss. IBNR for these lines of business equals the estimated ultimate losses and loss adjustment expenses less the amount of paid or reported claims depending on whether the paid or reported development method was used. Estimates are reviewed for reasonableness and are adjusted for current trends or other factors that affect the development pattern.

Cumulative number of reported claims

For group life, disability and accident coverages, claim counts include claims that are approved, pending approval and terminated and exclude denied claims. Due to the nature of the claims, one claimant represents one event.

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance

	(Unaudited)									
	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year
Group long-term disability	7.1	23.2	14.3	8.3	6.5	5.5	4.7	4.2	3.7	3.2
Group life and accident, excluding premium waiver	79.3	18.7	1.2							

Progressive Corporation

6. LOSS AND LOSS ADJUSTMENT EXPENSE RESERVES

We write personal and commercial auto insurance, residential property insurance, and other specialty property-casualty insurance and related services throughout the United States. As a property-casualty insurance company, we could be exposed to hurricanes or other catastrophes. To help mitigate this risk, we maintain catastrophic reinsurance coverage on our Property business. Although the occurrence of a major catastrophe could have a significant effect on our monthly or quarterly results, we believe that, based on historical experience, such an event would not be so material as to disrupt the overall normal operations of Progressive. We are unable to predict the frequency or severity of any such events that may occur in the near term or thereafter.

As we are primarily an insurer of motor vehicles and residential property, we have limited exposure to environmental, asbestos, and general liability claims. We have established reserves for such exposures, in amounts that we believe to be adequate based on information currently known. These claims are not expected to have a material effect on our liquidity, financial condition, cash flows, or results of operations.

Loss and Loss Adjustment Expense Reserves

Loss and loss adjustment expense (LAE) reserves represent our best estimate of our ultimate liability for losses and LAE relating to events that occurred prior to the end of any given accounting period but have not yet been paid. For our vehicle businesses, which represent about 95% of our total carried reserves, Progressive's actuarial staff reviews over 400 subsets of business data, which are at a combined state, product, and line coverage level (the "products"), to calculate the needed loss and LAE reserves. We begin our review of a set of data by producing multiple estimates of needed reserves, using both paid and incurred data, to determine if a reserve change is required. In the event of a wide variation among results generated by the different projections, our actuarial group will further analyze the data using additional quantitative analysis. Each review develops a point estimate for a relatively small subset of the business, which allows us to establish meaningful reserve levels for that subset. We believe our comprehensive process of reviewing at a subsegment level provides us more meaningful estimates of our aggregate loss reserves.

The actuarial staff completes separate projections of needed case and incurred but not recorded (IBNR) reserves. Since a large majority of the parties involved in an accident report their claims within a short time period after the occurrence, we do not carry a significant amount of IBNR reserves for older accident years. Based on the methodology we use to estimate case reserves for our vehicle businesses, we do not have expected development on reported claims included in our IBNR reserves. We do, however, include anticipated salvage and subrogation recoveries in our IBNR reserves, which could result in negative carried IBNR reserves, primarily in our physical damage reserves.

Assumptions regarding needed reserve levels made by the actuarial staff take into consideration influences on available historical data that reduce the predictiveness of our projected future loss costs. Internal considerations that are process-related, which generally result from changes in our claims organization's activities, include claim closure rates, the number of claims that are closed without payment, and the level of the claims representatives' estimates of the needed case reserve for each claim.

These changes and their effect on the historical data are studied at the state level versus on a larger, less indicative, countrywide basis. External items considered include the litigation atmosphere, state-by-state changes in medical costs, and the availability of services to resolve claims. These also are better understood at the state level versus at a more macro, countrywide level.

Similar to our vehicle businesses, our actuarial staff analyzes loss and LAE property data on an accident period basis. Many of the methodologies and key parameters reviewed are similar. Unlike our vehicle businesses, primarily due to the the low levels of reserves, data is reviewed at a macro level and a range of reserves are generated to determine a reasonable range. In addition, for our Property business, since claims adjusters primarily establish the case reserves, the actuarial staff includes expected development on case reserves as a component of the overall IBNR reserves.

Activity in the loss and loss adjustment expense reserves is summarized as follows:

(millions)	2016	2015	2014
Balance at January 1	$ 10,039.0	$ 8,857.4	$ 8,479.7
Less reinsurance recoverables on unpaid losses	1,442.7	1,185.9	1,045.9
Net balance at January 1	8,596.3	7,671.5	7,433.8
Net loss and loss adjustment reserves (disposed) acquired[1]	(2.5)	222.4	0
Total beginning reserves	8,593.8	7,893.9	7,433.8
Incurred related to:			
Current year	16,967.1	14,657.1	13,330.3
Prior years	(87.5)	(315.1)	(24.1)
Total incurred	16,879.6	14,342.0	13,306.2
Paid related to:			
Current year	11,149.0	9,577.3	8,831.5
Prior years	4,757.4	4,062.3	4,237.0
Total paid	15,906.4	13,639.6	13,068.5
Net balance at December 31	9,567.0	8,596.3	7,671.5
Plus reinsurance recoverables on unpaid losses	1,801.0	1,442.7	1,185.9
Balance at December 31	$ 11,368.0	$ 10,039.0	$ 8,857.4

[1] During 2016, $2.5 million net reserves were disposed by ARX in the exchange transaction (see *Note 16 – Goodwill and Intangible Assets* for further discussion). During 2015, $222.4 million net reserves were acquired in ARX acquisition.

We experienced favorable reserve development of $87.5 million in 2016, $315.1 million in 2015 and $24.1 million in 2014, respectively, which is reflected as "Incurred related to prior years" in the table above.

2016

- Approximately $56 million of the favorable prior year reserve development was attributable to accident year 2015, and approximately $51 million of favorable development was attributable to accident years 2013 and prior. This favorable development was partially offset by $19 million of unfavorable development attributable to accident year 2014.
- Our Personal Lines and Property businesses incurred $54 million and $52 million, respectively, of favorable loss and LAE reserve development, partially offset by the unfavorable loss and LAE development in Commercial Lines. In our Property business both the severity and frequency of late reported claims was less than anticipated.
- Our personal auto product developed favorably $40 million, almost evenly split between Direct and Agency.
- Our personal auto business incurred favorable case development primarily in bodily injury due to a lower than anticipated severity.
- Our personal auto and Commercial Lines businesses incurred unfavorable IBNR loss reserve development, primarily due to a higher severity and frequency of late reported claims than anticipated for accident year 2015, due in part to storms in late December 2015, resulting in a greater number of claims being reported in January 2016 than anticipated.
- In addition, our Commercial Lines business experienced unfavorable case reserve development for accident year 2014 primarily due to a higher severity than anticipated on our largest limits, while case reserve development for accident years 2015 and 2013 and prior was favorable.

2015

- Approximately $239 million of the favorable prior year reserve development was primarily attributable to accident year 2014.
- Favorable reserve development occurred in all segments; our combined Agency auto business and Direct auto business experienced approximately $217 million of total development, with the remainder split between our Commercial Lines and Property businesses.
- In our personal auto and Commercial Lines businesses, we incurred favorable case loss reserve development primarily in bodily injury and uninsured motorist bodily injury coverages, due to lower than anticipated severity.
- Our Property business development was favorable due to lower than anticipated severity and frequency across all products, primarily in accident years 2014 and 2013.

2014

- Approximately $25 million of the favorable prior year reserve development was primarily attributable to accident year 2010.
- Favorable reserve development in our Commercial Lines business of $49 million was partially offset by unfavorable development in our Agency auto business of $24 million. Our Direct auto business experienced slight favorable development.
- The favorable reserve development in our Commercial Lines business was primarily related to favorable case reserve development on our high limit policies.
- In Agency auto, the unfavorable development was primarily attributable to personal injury protection loss reserves and adjusting and other LAE reserves.

Incurred and Paid Claims Development by Accident Year

The tables below present our incurred and paid claims development by accident year for the last five years, which generally represents the number of years for which claims incurred typically remain outstanding. The tables below include inception-to-date information for companies acquired and wholly exclude companies disposed of, rather than including information from the date of acquisition, or until the date of disposition. We believe that the most meaningful presentation of claims development is through the retrospective approach by presenting all relevant historical information for all periods presented.

We have elected to present our incurred and paid claims development consistent with our GAAP reportable segments (see *Note 10 – Segment Information* for a discussion of our segment reporting), with a further disaggregation of our Personal Lines and Commercial Lines claims development between liability and physical damage, since the loss patterns are significantly different between them. The other business primarily includes reserves for the business written in Australia and for our run-off products, which are not considered material, and, therefore, we are not including separate claims development tables.

The following tables show incurred and paid claims development, net of reinsurance, by accident year. Only the most recent year is audited; all prior years are considered required supplementary information and, therefore, are unaudited. Expected development on our case reserves is excluded from the IBNR reserves on our vehicle businesses, as discussed above. For the Property business, the IBNR reserves include expected case development based on the methodology used in establishing the case reserves for that segment. The cumulative number of incurred claims are based on accident coverages (e.g., bodily injury, collision, comprehensive, personal injury protection, property damage) related to opened claims. Coverage counts related to claims closed without payment are excluded from the cumulative number of incurred claims.

Personal Lines - Agency - Liability

($ in millions)

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						As of December 31, 2016	
	For the years ended December 31,						
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016	Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Incurred Claim Counts
2012	$ 3,372.5	$ 3,375.9	$ 3,385.5	$ 3,395.0	$ 3,352.4	$ 0.1	691,743
2013		3,506.0	3,520.9	3,518.2	3,528.0	53.9	696,614
2014			3,702.1	3,627.7	3,633.2	57.3	701,611
2015				3,774.9	3,773.8	142.1	702,917
2016					4,082.9	555.6	724,842
				Total	$ 18,370.3		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance					
	For the years ended December 31,				
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016
2012	$ 1,673.7	$ 2,690.0	$ 3,070.2	$ 3,238.2	$ 3,308.4
2013		1,684.0	2,794.1	3,173.1	3,362.9
2014			1,809.0	2,868.1	3,284.5
2015				1,793.1	2,976.0
2016					1,941.6
				Total	$ 14,873.4
				All outstanding liabilities before 2012, net of reinsurance	59.0
				Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 3,555.9

[1] Required supplementary information (unaudited)

Personal Lines - Agency - Physical Damage

($ in millions)

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						As of December 31, 2016	
	For the years ended December 31,						
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016	Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Incurred Claim Counts
2012	$ 1,948.7	$ 1,954.5	$ 1,956.6	$ 1,956.0	$ 1,958.0	$ 0	1,302,848
2013		2,014.0	2,001.4	2,000.1	1,999.4	(2.4)	1,347,820
2014			2,107.5	2,090.3	2,089.9	(2.0)	1,374,623
2015				2,136.8	2,137.2	(4.6)	1,336,089
2016					2,423.4	(87.4)	1,387,512
				Total	$ 10,607.9		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance					
	For the years ended December 31,				
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016
2012	$ 1,903.9	$ 1,958.4	$ 1,958.1	$ 1,957.9	$ 1,957.1
2013		1,952.7	2,003.9	2,002.0	2,001.3
2014			2,078.8	2,091.6	2,090.6
2015				2,106.2	2,138.1
2016					2,391.0
				Total	$ 10,578.1
				All outstanding liabilities before 2012, net of reinsurance	0.3
				Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 30.1

[1] Required supplementary information (unaudited)

Personal Lines - Direct - Liability

($ in millions)

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						As of December 31, 2016	
	For the years ended December 31,						
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016	Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Incurred Claim Counts
2012	$ 2,507.4	$ 2,469.1	$ 2,480.0	$ 2,488.2	$ 2,471.6	$ (0.1)	526,665
2013		2,619.4	2,621.8	2,615.8	2,649.8	40.9	550,135
2014			2,946.8	2,887.4	2,898.1	44.0	592,017
2015				3,330.5	3,328.3	122.4	656,712
2016					3,819.0	488.9	722,585
				Total	$ 15,166.8		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance					
	For the years ended December 31,				
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016
2012	$ 1,221.9	$ 1,972.4	$ 2,264.4	$ 2,385.0	$ 2,438.3
2013		1,252.0	2,085.1	2,375.5	2,521.3
2014			1,413.0	2,278.0	2,624.2
2015				1,545.2	2,615.0
2016					1,780.6
				Total	$ 11,979.4
				All outstanding liabilities before 2012, net of reinsurance	31.7
				Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 3,219.1

[1] Required supplementary information (unaudited)

Personal Lines - Direct - Physical Damage

($ in millions)

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						As of December 31, 2016	
	For the years ended December 31,						
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016	Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Incurred Claim Counts
2012	$ 1,562.4	$ 1,556.5	$ 1,557.3	$ 1,557.0	$ 1,558.1	$ 0	1,314,480
2013		1,653.7	1,635.6	1,634.6	1,633.4	(2.3)	1,367,281
2014			1,889.3	1,862.2	1,861.7	(2.2)	1,470,879
2015				2,110.7	2,097.7	(5.7)	1,539,503
2016					2,521.0	(115.0)	1,673,575
				Total	$ 9,671.9		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance					
	For the years ended December 31,				
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016
2012	$ 1,540.1	$ 1,560.2	$ 1,559.1	$ 1,558.4	$ 1,557.9
2013		1,612.9	1,638.2	1,636.2	1,635.3
2014			1,874.6	1,864.1	1,862.7
2015				2,094.7	2,100.1
2016					2,505.0
				Total	$ 9,661.0
				All outstanding liabilities before 2012, net of reinsurance	0.3
				Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 11.2

[1] Required supplementary information (unaudited)

Commercial Lines - Liability

($ in millions)

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						As of December 31, 2016	
	For the years ended December 31,						
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016	Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Incurred Claim Counts
2012	$ 800.1	$ 827.4	$ 810.7	$ 807.8	$ 794.8	$ 0	78,425
2013		864.2	864.6	865.4	865.0	23.3	78,090
2014			822.5	795.4	820.3	22.6	74,675
2015				897.6	911.1	51.0	77,263
2016					1,185.8	168.4	89,830
				Total	$ 4,577.0		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						
	For the years ended December 31,					
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016	
2012	$ 228.6	$ 465.4	$ 621.5	$ 715.8	$ 759.9	
2013		233.3	509.4	659.1	752.5	
2014			234.0	438.7	610.0	
2015				238.4	501.5	
2016					298.6	
				Total	$ 2,922.5	
				All outstanding liabilities before 2012, net of reinsurance	20.8	
				Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 1,675.3	

[1] Required supplementary information (unaudited)

Commercial Lines - Physical Damage

($ in millions)

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						As of December 31, 2016	
	For the years ended December 31,						
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016	Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Incurred Claim Counts
2012	$ 266.6	$ 267.7	$ 268.4	$ 267.6	$ 267.8	$ 0	65,804
2013		256.2	254.2	254.5	253.7	(0.5)	62,654
2014			240.3	239.7	238.6	(0.1)	59,616
2015				274.4	274.1	(0.8)	62,609
2016					379.6	(4.6)	74,810
				Total	$ 1,413.8		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						
	For the years ended December 31,					
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016	
2012	$ 247.6	$ 266.9	$ 267.3	$ 267.8	$ 267.6	
2013		239.4	253.1	253.9	253.7	
2014			224.6	238.3	237.7	
2015				248.5	271.9	
2016					336.7	
				Total	$ 1,367.6	
				All outstanding liabilities before 2012, net of reinsurance	0.4	
				Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 46.6	

[1] Required supplementary information (unaudited)

Property Business

($ in millions)

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						As of December 31, 2016	
	For the years ended December 31,						
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016	Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Incurred Claim Counts
2012	$ 296.4	$ 273.4	$ 260.8	$ 252.9	$ 253.5	$ 1.5	33,236
2013		307.3	283.3	254.3	254.1	3.3	30,578
2014			415.5	389.1	379.7	9.5	40,957
2015				460.0	416.5	31.7	41,788
2016					568.6	98.1	50,159
				Total	$ 1,872.4		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance					
	For the years ended December 31,				
Accident Year	2012[1]	2013[1]	2014[1]	2015[1]	2016
2012	$ 178.0	$ 229.7	$ 242.4	$ 248.4	$ 250.2
2013		185.1	234.2	244.9	249.5
2014			269.2	351.5	365.9
2015				280.3	372.8
2016					415.2
				Total	$ 1,653.6
				All outstanding liabilities before 2012, net of reinsurance	5.9
				Liabilities for claims and claim adjustment expenses, net of reinsurance	$ 224.7

[1] Required supplementary information (unaudited)

Subsequent to the date of acquisition, Progressive and ASI have worked together to refine the methodologies used by ASI in establishing their loss and LAE reserves. Therefore, past experience may not be indicative of future performance.

The following table reconciles the net incurred and paid claims development tables to the liability for claims and claim adjustment expenses:

(millions)	2016
Net outstanding liabilities	
Personal Lines	
Agency, Liability	$ 3,555.9
Agency, Physical Damage	30.1
Direct, Liability	3,219.1
Direct, Physical Damage	11.2
Commercial Lines	
Liability	1,675.3
Physical Damage	46.6
Property	224.7
Other business	37.1
Liabilities for unpaid claims and claim adjustment expenses, net of reinsurance	8,800.0
Reinsurance recoverable on unpaid claims	
Personal Lines	
Agency, Liability	724.5
Agency, Physical Damage	0
Direct, Liability	724.3
Direct, Physical Damage	0
Commercial Lines	
Liability	59.5
Physical Damage	0
Property	132.7
Other business	154.9
Total reinsurance recoverable on unpaid claims	$ 1,795.9
Unallocated claims adjustment expense related to:	
Liabilities for unpaid claims and claim adjustment expenses, net of reinsurance	767.0
Reinsurance recoverable on unpaid claims	5.1
Total gross liability for unpaid claims and claim adjustment expense	$ 11,368.0

The following table shows the average historical claims duration as of December 31, 2016:

(Required Supplementary Information - Unaudited)

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance	Years				
	1	2	3	4	5
Personal Lines					
Agency, Liability	48.5%	30.6%	11.2%	5.2%	2.1%
Agency, Physical Damage	98.3%	1.8%	(0.1)%	—%	—%
Direct, Liability	47.6%	31.0%	11.6%	5.2%	2.2%
Direct, Physical Damage	99.5%	0.6%	(0.1)%	(0.1)%	—%
Commercial Lines					
Liability	26.9%	28.9%	19.2%	11.3%	5.5%
Physical Damage	91.7%	6.8%	0.1%	0.1%	(0.1)%
Property	70.9%	21.1%	4.3%	2.1%	0.7%

The Travelers Companies, Inc. and Subsidiaries

7. INSURANCE CLAIM RESERVES

Claims and claim adjustment expense reserves were as follows:

(at December 31, in millions)	2016	2015
Property-casualty	$ 47,929	$ 48,272
Accident and health	20	23
Total	$ 47,949	$ 48,295

The following table presents a reconciliation of beginning and ending property casualty reserve balances for claims and claim adjustment expenses:

(at and for the year ended December 31, in millions)	2016	2015	2014
Claims and claim adjustment expense reserves at beginning of year	$ 48,272	$ 49,824	$ 50,865
Less reinsurance recoverables on unpaid losses	8,449	8,788	9,280
Net reserves at beginning of year	39,823	41,036	41,585
Estimated claims and claim adjustment expenses for claims arising in the current year	15,675	14,471	14,688
Estimated decrease in claims and claim adjustment expenses for claims arising in prior years	(680)	(817)	(885)
Total increases	14,995	13,654	13,803
Claims and claim adjustment expense payments for claims arising in:			
Current year	6,220	5,725	5,895
Prior years	8,576	8,749	8,171
Total payments	14,796	14,474	14,066
Acquisition(1)	—	2	—
Unrealized foreign exchange gain	(74)	(395)	(286)
Net reserves at end of year	39,948	39,823	41,036
Plus reinsurance recoverables on unpaid losses	7,981	8,449	8,788
Claims and claim adjustment expense reserves at end of year	$ 47,929	$ 48,272	$ 49,824

(1) Amount represents acquired net claims and claim adjustment expense reserves of Travelers Participações em Seguros Brasil S.A. at October 1, 2015.

Gross claims and claim adjustment expense reserves at December 31, 2016 decreased by $343 million from December 31, 2015. This decrease primarily reflected the impacts of (i) payments related to operations in runoff, including the Company's $524 million payment related to the settlement of the PPG Industries, Inc. litigation and (ii) net favorable prior year reserve development, partially offset by the impacts of (iii) higher volumes of insured exposures and (iv) loss cost trends for the current accident year. Gross claims and claim adjustment expense reserves at December 31, 2015 decreased by $1.55 billion from December 31, 2014. This decrease primarily reflected the impacts of (i) payments related to operations in runoff, including a $579 million payment related to the settlement of the Asbestos Direct Action Litigation as described in more detail in note 16, (ii) net favorable prior

year reserve development and (iii) changes in foreign currency exchange rates, partially offset by (iv) the impact of loss cost trends for the current accident year.

Reinsurance recoverables on unpaid losses at December 31, 2016 decreased by $468 million from December 31, 2015, primarily reflecting the impact of cash collections in 2016, including the settlement of a reinsurance dispute which is discussed in more detail in note 16. Reinsurance recoverables on unpaid losses at December 31, 2015 decreased by $339 million from December 31, 2014, primarily reflecting the impact of cash collections in 2015.

Included in the claims and claim adjustment expense reserves are reserves for long-term disability and annuity claim payments, primarily arising from workers' compensation insurance and workers' compensation excess insurance policies, that are discounted to the present value of the estimated future payments. The discount rate used was 5% at both December 31, 2016 and 2015. Total reserves net of the discount were $2.17 billion and $2.13 billion, and the related amount of discount was $1.08 billion and $1.07 billion, at December 31, 2016 and 2015, respectively. Accretion of the discount is reported as part of "claims and claim adjustment expenses" in the Consolidated Statement of Income.

Prior Year Reserve Development

The following disclosures regarding reserve development are on a "net of reinsurance" basis.

2016.

In 2016, estimated claims and claim adjustment expenses incurred included $680 million of net favorable development for claims arising in prior years, including $771 million of net favorable prior year reserve development impacting the Company's results of operations and $50 million of accretion of discount.

Business and International Insurance. Net favorable prior year reserve development in 2016 totaled $484 million, primarily driven by better than expected loss experience in the Company's domestic operations in (i) the workers' compensation product line for accident years 2006 and prior as well as accident years 2009, 2013 and 2015 and (ii) the general liability product line (excluding an increase to asbestos and environmental reserves discussed below), related to both primary and excess coverages for accident years 2007 and prior, accident year 2009 and accident years 2011 through 2015, as well as in the Company's international operations in Europe and Canada. These factors contributing to net favorable prior year reserve development in 2016 were partially offset by $225 million and $82 million increases to asbestos and environmental reserves, respectively, which are discussed in further detail in the "Asbestos and Environmental Reserves" section below.

Bond & Specialty Insurance. Net favorable prior year reserve development in 2016 totaled $326 million, primarily driven by better than expected loss experience in (i) the fidelity and surety product line for accident years 2009 through 2015 and (ii) the general liability product line for accident years 2006 through 2011.

Personal Insurance. Net unfavorable prior year reserve development in 2016 totaled $39 million, primarily driven by worse than expected loss experience in the automobile product line for bodily injury coverages for the 2015 accident year.

2015.

In 2015, estimated claims and claim adjustment expenses incurred included $817 million of net favorable development for claims arising in prior years, including $941 million of net favorable prior year reserve development impacting the Company's results of operations and $51 million of accretion of discount.

Business and International Insurance. Net favorable prior year reserve development in 2015 totaled $405 million, primarily driven by better than expected loss experience in the Company's domestic operations in (i) the general liability product line (excluding increases to asbestos and environmental reserves discussed below), for both primary and excess coverages for accident years 2005 through 2013, (ii) the workers' compensation line of business for accident years 2006 and prior, (iii) the property product line related to catastrophe losses for accident years 2011, 2012 and 2014 and non-catastrophe losses for accident years 2013 and 2014, as well as in the Company's operations in Canada and at Lloyd's. These factors contributing to net favorable prior year reserve development in 2015 were partially offset by $224 million and $72 million increases to asbestos and environmental reserves, respectively, which are discussed in further detail in the "Asbestos and Environmental Reserves" section below.

Bond & Specialty Insurance. Net favorable prior year reserve development in 2015 totaled $258 million, primarily driven by better than expected loss experience in the fidelity and surety product line for accident years 2008 through 2014, which was partially driven by a reduction in outstanding exposures related to the financial crisis that commenced in 2007.

Personal Insurance. Net favorable prior year reserve development in 2015 totaled $278 million, primarily driven by better than expected loss experience in (i) the Homeowners and Other product line for liability coverages for accident years 2011 through 2014, for non-catastrophe weather-related losses and non-weather-related losses for accident year 2014 and (ii) the Automobile product line for liability coverages for accident years 2012 through 2014.

2014.

In 2014, estimated claims and claim adjustment expenses incurred included $885 million of net favorable development for claims arising in prior years, including $941 million of net favorable prior year reserve development impacting the Company's results of operations and $50 million of accretion of discount.

Business and International Insurance. Net favorable prior year reserve development in 2014 totaled $322 million, primarily driven by (i) better than expected loss experience in the Company's domestic operations in the general liability product line (excluding increases to asbestos and environmental reserves discussed below), primarily related to excess coverages for accident years 2008 through 2012, (ii) a $162 million benefit resulting from better than expected loss experience related to, and the commutation of reinsurance treaties associated with, a workers' compensation reinsurance pool for accident years 1996 and prior, and better than expected loss experience in the Company's domestic operations in (iii) the property product line for accident years 2010 through 2013, including catastrophe losses from Storm Sandy for accident year 2012 and (iv) the commercial auto product line for accident years 2011 and 2012. These factors contributing to net favorable prior year reserve development in

2014 were partially offset by (i) $250 million and $87 million increases to asbestos and environmental reserves, respectively, which are discussed in further detail in the "Asbestos and Environmental Reserves" section below, (ii) an increase in unallocated loss adjustment expense reserves of $77 million for interest awarded as part of damages pursuant to a court decision in the third quarter of 2014 related to a legal matter, which is discussed in more detail in the "Settlement of Asbestos Direct Action Litigation" section of note 16 and (iii) higher than expected loss experience for liability coverages in the commercial multi-peril product line for accident years 2010 through 2013.

Bond & Specialty Insurance. Net favorable prior year reserve development in 2014 totaled $450 million, primarily driven by better than expected loss experience in the contract surety product line for accident years 2012 and prior.

Personal Insurance. Net favorable prior year reserve development in 2014 totaled $169 million, primarily driven by better than expected loss experience in the Homeowners and Other product line for (i) non-catastrophe weather-related losses for accident year 2013 and (ii) catastrophe losses for accident years 2011 through 2013.

Claims Development

The following is a summary of claims and claim adjustment expense reserves, including certain components, for the Company's major product lines by reporting segment at December 31, 2016.

At December 31, 2016 (in millions)	Net Undiscounted Claims and Claim Adjustment Expense Reserves	Discount (Net of Reinsurance)	Subtotal: Net Claims and Allocated Claim Adjustment Expense Reserves	Reinsurance Recoverables on Unpaid Losses	Claims and Claim Adjustment Expense Reserves
Business and International Insurance					
General liability	$ 7,034	$ (168)	$ 6,866	$ 712	$ 7,578
Commercial property	866	—	866	194	1,060
Commercial multi-peril	3,414	—	3,414	81	3,495
Commercial automobile	2,270	—	2,270	256	2,526
Workers' compensation (1)	15,439	(832)	14,607	729	15,336
International—Canada	1,482	—	1,482	157	1,639
Bond & Specialty Insurance					
General liability	2,042	—	2,042	82	2,124
Fidelity and surety	450	—	450	17	467
Personal Insurance					
Automobile	2,277	—	2,277	465	2,742
Homeowners (excluding Other)	742	—	742	2	744
Subtotal—claims and allocated claim adjustment expenses for the products presented in the development tables below	36,016	(1,000)	35,016	2,695	37,711
Other insurance contracts (2)	2,955	(3)	2,952	2,058	5,010
Unallocated loss adjustment expense reserves	1,936	—	1,936	40	1,976
Structured settlements(3)	—	—	—	3,168	3,168
Other	44	—	44	20	64
Total property-casualty	40,951	(1,003)	39,948	7,981	47,929
Accident and health	—	—	—	20	20
Total	$ 40,951	$ (1,003)	$ 39,948	$ 8,001	$ 47,949

(1) Net discount amount includes discount of $80 million on reinsurance recoverables for long-term disability and annuity claim payments.

(2) Primarily includes residual market, non-Canadian international and runoff assumed reinsurance business.

(3) Includes structured settlements in cases where the Company did not receive a release from the claimant.

The claim development tables that follow present, by accident year, incurred and cumulative paid claims and allocated claim adjustment

expense on a historical basis. This claim development information is presented on an undiscounted, net of reinsurance basis for ten years, or the number of years for which claims incurred typically remain outstanding if less than ten years. The claim development tables also provide the historical average annual percentage payout of incurred claims by age, net of reinsurance, as supplementary information (identified as unaudited in the tables below). The claim development information reflects the acquisition of The Dominion of Canada General Insurance Company (Dominion) in November 2013 on a retrospective basis (includes Dominion data for years prior to the Company's acquisition of Dominion).

Business and International Insurance

General Liability

(dollars in millions)

	For the Years Ended December 31,											
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		
	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance											
	Unaudited											
Accident Year											IBNR Reserves Dec. 31, 2016	Cumulative Number of Reported Claims
2007	$1,136	$1,162	$1,087	$1,089	$ 968	$ 919	$ 888	$883	$865	$ 824	$ 78	23,840
2008		1,143	1,209	1,222	1,079	1,041	994	946	931	935	88	25,385
2009			1,060	1,071	1,028	960	869	837	809	796	95	25,457
2010				1,028	1,031	1,021	959	927	912	918	108	27,678
2011					1,004	1,074	1,065	998	972	935	146	27,210
2012						989	985	935	913	892	184	24,384
2013							965	975	958	940	256	21,836
2014								976	989	983	438	20,926
2015									998	956	592	18,771
2016										1,075	908	13,810
									Total	$9,254		

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance										
	Unaudited										
Accident Year											
2007	$ 32	$ 134	$ 316	$ 467	$ 549	$ 632	$ 682	$697	$713	$ 726	
2008		35	154	359	497	615	694	734	759	799	
2009			35	167	314	446	543	613	643	667	
2010				35	139	324	487	629	702	756	Liability for Claims
2011					47	187	355	539	660	725	And Allocated Claim
2012						32	150	295	489	589	Adjustment Expenses,
2013							35	175	363	498	Net of Reinsurance
2014								37	163	321	
2015									36	137	2007 - Before
2016										35	2016 2007
									Total	$5,253	$ 4,001 $ 3,033
										Total net liability	$ 7,034

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance									
	Unaudited									
Years	1	2	3	4	5	6	7	8	9	10
	3.9%	13.3%	19.1%	17.6%	12.4%	8.4%	5.0%	2.5%	3.1%	1.6%

Commercial Property

(dollars in millions)

	For the Years Ended December 31,						
	2012	2013	2014	2015	2016		
	Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance						
	Unaudited						
Accident Year						IBNR Reserves Dec. 31, 2016	Cumulative Number of Reported Claims
2012	$ 1,054	$ 988	$ 924	$ 889	$ 895	$ 13	28,183
2013		789	755	737	731	10	22,141
2014			936	860	836	15	21,490
2015				786	750	28	19,859
2016					896	131	19,327
				Total	$ 4,108		

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						
	Unaudited						
Accident Year						Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance	
2012	$ 453	$ 770	$ 845	$ 865	$ 872		
2013		389	610	683	703		
2014			464	710	775		
2015				376	615	2012 - 2016	Before 2012
2016					441		
				Total	$ 3,406	$ 702	$ 164
					Total net liability		$ 866

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance				
	Unaudited				
Years	1	2	3	4	5
	51.7%	31.8%	8.7%	2.5%	0.8%

Commercial Multi-Peril

(dollars in millions)

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance
Unaudited

Accident Year	For the Years Ended December 31, 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	IBNR Reserves Dec. 31, 2016	Cumulative Number of Reported Claims
2007	$1,490	$1,430	$1,364	$1,402	$1,398	$1,375	$1,373	$1,369	$1,376	$ 1,369	$ 51	96,767
2008		1,725	1,674	1,683	1,688	1,674	1,684	1,674	1,688	1,681	47	108,382
2009			1,484	1,506	1,501	1,498	1,511	1,514	1,514	1,509	42	103,198
2010				1,711	1,826	1,832	1,861	1,895	1,892	1,898	51	111,586
2011					2,235	2,244	2,269	2,286	2,296	2,287	66	125,358
2012						1,885	1,883	1,903	1,888	1,888	88	104,419
2013							1,615	1,623	1,620	1,609	122	82,936
2014								1,663	1,627	1,625	193	76,833
2015									1,568	1,625	354	68,278
2016										1,662	658	56,471
									Total	$17,153		

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance
Unaudited

Accident Year											
2007	$ 498	$ 824	$ 982	$1,110	$1,208	$1,256	$1,278	$1,296	$1,307	$ 1,312	
2008		712	1,103	1,264	1,396	1,490	1,551	1,581	1,602	1,617	
2009			603	958	1,121	1,264	1,360	1,408	1,436	1,449	
2010				709	1,180	1,395	1,579	1,698	1,763	1,798	Liability for Claims
2011					1,060	1,573	1,803	1,979	2,088	2,156	And Allocated Claim
2012						795	1,246	1,424	1,590	1,699	Adjustment Expenses,
2013							644	987	1,167	1,304	Net of Reinsurance
2014								628	956	1,154	
2015									595	970	2007 - 2016 / Before 2007
2016										585	
									Total	$14,044	$ 3,109 / $ 305
										Total net liability	$ 3,414

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance
Unaudited

Years	1	2	3	4	5	6	7	8	9	10
	39.5%	22.9%	10.8%	8.8%	6.0%	3.3%	1.8%	1.1%	0.9%	0.4%

Commercial Automobile

(dollars in millions)

Accident Year	For the Years Ended December 31, 2012 (Unaudited)	2013 (Unaudited)	2014 (Unaudited)	2015 (Unaudited)	2016	IBNR Reserves Dec. 31, 2016	Cumulative Number of Reported Claims
	Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance						
2012	$1,294	$1,350	$1,327	$1,325	$1,337	$ 35	214,780
2013		1,235	1,236	1,240	1,245	67	197,041
2014			1,165	1,166	1,168	131	184,067
2015				1,198	1,215	246	179,963
2016					1,290	516	173,790
				Total	$6,255		

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance (Unaudited)				Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance		
						2012 - 2016	Before 2012
2012	$ 467	$ 753	$ 960	$1,134	$1,235		
2013		435	675	884	1,039		
2014			397	618	821		
2015				409	658		
2016					416		
				Total	$4,169	$ 2,086	$ 184
					Total net liability	$	2,270

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (Unaudited)				
	1	2	3	4	5
	34.0%	20.0%	16.6%	12.7%	7.6%

Workers' Compensation

(dollars in millions)

	For the Years Ended December 31,											
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		
	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance											
	Unaudited											
Accident Year											IBNR Reserves Dec. 31, 2016	Cumulative Number of Reported Claims
2007	$1,554	$1,519	$1,484	$1,448	$1,390	$1,373	$1,358	$1,340	$1,328	$ 1,341	$ 217	103,064
2008		1,714	1,745	1,734	1,683	1,639	1,634	1,621	1,617	1,617	237	107,565
2009			1,799	1,778	1,746	1,753	1,753	1,766	1,775	1,750	272	104,229
2010				1,886	2,042	2,035	2,056	2,049	2,052	2,055	354	116,837
2011					2,284	2,303	2,347	2,350	2,379	2,385	430	135,061
2012						2,447	2,456	2,457	2,456	2,445	519	133,417
2013							2,553	2,545	2,540	2,506	651	128,111
2014								2,554	2,553	2,547	839	123,110
2015									2,644	2,585	1,142	120,681
2016										2,768	1,651	108,357
									Total	$21,999		

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance											
	Unaudited											
Accident Year												
2007	$ 216	$ 450	$ 589	$ 683	$ 747	$ 802	$ 845	$ 880	$ 910	$ 936		
2008		274	571	752	875	961	1,036	1,088	1,130	1,162		
2009			288	623	828	961	1,065	1,137	1,193	1,235		
2010				341	750	978	1,133	1,246	1,321	1,385	Liability for Claims	
2011					420	911	1,185	1,365	1,487	1,583	And Allocated Claim	
2012						443	940	1,217	1,394	1,536	Adjustment Expenses,	
2013							458	954	1,237	1,413	Net of Reinsurance	
2014								455	944	1,224		
2015									430	893	2007 -	Before
2016										421	2016	2007
									Total	$11,788	$10,211	$ 5,228
										Total net liability	$ 15,439	

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance									
	Unaudited									
Years	1	2	3	4	5	6	7	8	9	10
	17.0%	19.2%	11.2%	7.4%	5.4%	4.1%	3.2%	2.5%	2.1%	1.9%

International—Canada

(dollars in millions)

	For the Years Ended December 31,											
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		
	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance											
	Unaudited											
Accident Year											IBNR Reserves Dec. 31, 2016	Cumulative Number of Reported Claims
2007	$ 632	$ 626	$ 616	$ 608	$ 607	$ 609	$ 611	$ 608	$ 601	$ 597	$ 4	66,327
2008		681	685	670	665	658	655	651	646	642	5	71,803
2009			724	718	707	714	714	702	696	690	13	71,671
2010				715	722	721	735	724	715	706	20	71,437
2011					723	696	686	682	678	669	30	72,063
2012						664	642	631	611	616	50	67,320
2013							723	717	701	685	56	71,183
2014								665	678	682	83	67,935
2015									597	610	112	58,238
2016										612	102	54,948
									Total	$ 6,509		

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance										
	Unaudited										
Accident Year											
2007	$ 228	$ 355	$ 410	$ 450	$ 488	$ 524	$ 547	$ 561	$ 570	$ 578	
2008		256	406	460	501	543	579	603	616	622	
2009			274	419	479	525	573	608	630	648	
2010				258	403	465	522	573	615	641	Liability for Claims
2011					253	380	432	481	538	571	And Allocated Claim
2012						225	336	389	435	482	Adjustment Expenses,
2013							260	388	439	494	Net of Reinsurance
2014								252	382	445	
2015									228	346	2007 - 2016 / Before 2007
2016										295	
									Total	$ 5,122	$ 1,387 / $ 95
										Total net liability	$ 1,482

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance									
	Unaudited									
Years	1	2	3	4	5	6	7	8	9	10
	38.9%	20.0%	8.5%	7.2%	7.2%	5.5%	3.6%	2.3%	1.2%	1.4%

The incurred and paid amounts have been translated from the local currency to U.S. dollars using the December 31, 2016 spot rate for all years presented in the table above in order to isolate changes in foreign exchange rates from loss development.

General Liability

(dollars in millions)

	For the Years Ended December 31,											
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		
	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance											
	Unaudited											
Accident Year											IBNR Reserves Dec. 31, 2016	Cumulative Number of Reported Claims
2007	$ 584	$ 571	$ 638	$ 582	$ 551	$ 511	$ 479	$ 467	$ 462	$ 454	$ 4	11,018
2008		579	769	743	697	716	712	672	643	631	24	6,463
2009			592	624	665	686	680	660	655	641	24	6,287
2010				571	612	679	679	661	668	653	18	5,655
2011					565	596	639	632	601	545	34	5,191
2012						538	591	614	605	601	137	4,824
2013							510	565	606	630	204	4,371
2014								549	571	563	232	4,182
2015									528	524	272	3,814
2016										512	405	2,676
									Total	$ 5,754		

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance											
	Unaudited											
Accident Year												
2007	$ 35	$ 134	$ 229	$ 303	$ 357	$ 373	$ 393	$ 400	$ 410	$ 415		
2008		47	157	281	387	471	529	562	579	590		
2009			36	167	310	390	460	497	563	592		
2010				33	152	291	396	482	565	597	Liability for Claims	
2011					33	143	249	324	414	447	And Allocated Claim	
2012						38	160	255	342	383	Adjustment Expenses,	
2013							34	154	252	352	Net of Reinsurance	
2014								38	150	239		
2015									38	141	2007 -	Before
2016										30	2016	2007
									Total	$ 3,786	$ 1,968	$ 74
										Total net liability	$	2,042

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance									
	Unaudited									
Years	1	2	3	4	5	6	7	8	9	10
	6.3%	19.7%	18.8%	15.1%	12.1%	7.5%	6.2%	3.0%	1.9%	1.1%

Fidelity and Surety

(dollars in millions)

Accident Year	For the Years Ended December 31, 2012	2013	2014	2015	2016	IBNR Reserves Dec. 31, 2016	Cumulative Number of Reported Claims
	Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance Unaudited						
2012	$ 255	$ 262	$ 249	$ 175	$ 140	$ 9	1,148
2013		240	246	199	146	6	1,006
2014			223	212	165	32	992
2015				217	191	79	768
2016					226	128	595
				Total	$ 868		

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited					Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance	
						2012 - 2016	Before 2012
2012	$ 42	$ 108	$ 124	$ 110	$ 111		
2013		37	113	128	131		
2014			58	96	111		
2015				32	75		
2016					54		
				Total	$ 482	$ 386	$ 64
					Total net liability		$ 450

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance Unaudited				
	1	2	3	4	5
	26.1%	36.2%	10.1%	(3.6)%(1)	0.8%

(1) Includes recovery activity.

Personal Insurance

Automobile

(dollars in millions)

	For the Years Ended December 31,						
	2012	2013	2014	2015	2016		
	Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance						
	Unaudited						
Accident Year						IBNR Reserves Dec. 31, 2016	Cumulative Number of Reported Claims
2012	$2,417	$2,454	$2,448	$2,432	$ 2,428	$ 15	793,669
2013		2,108	2,095	2,049	2,044	36	694,650
2014			2,014	1,994	1,981	75	669,990
2015				2,186	2,244	224	755,762
2016					2,779	646	839,962
				Total	$11,476		

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						
	Unaudited						
Accident Year						Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance	
2012	$1,503	$1,983	$2,189	$2,311	$ 2,376		
2013		1,251	1,628	1,814	1,935		
2014			1,193	1,564	1,763		
2015				1,319	1,768	2012 - 2016	Before 2012
2016					1,610		
				Total	$ 9,452	$ 2,024	$ 253
					Total net liability	$ 2,277	

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance				
	Unaudited				
Years	1	2	3	4	5
	60.0%	19.2%	9.2%	5.5%	2.7%

Homeowners (excluding Other)

(dollars in millions)

	For the Years Ended December 31,						
	2012	2013	2014	2015	2016		
	Incurred Claims and Allocated Claims Adjustment Expenses, Net of Reinsurance Unaudited						
Accident Year						IBNR Reserves Dec. 31, 2016	Cumulative Number of Reported Claims
2012	$2,136	$2,056	$2,029	$2,018	$2,019	$ 1	259,006
2013		1,488	1,397	1,365	1,375	4	149,373
2014			1,515	1,450	1,453	9	151,517
2015				1,438	1,454	28	144,367
2016					1,556	307	129,630
				Total	$7,857		

	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance Unaudited						
Accident Year						Liability for Claims And Allocated Claim Adjustment Expenses, Net of Reinsurance	
2012	$1,508	$1,901	$1,964	$1,993	$2,008		
2013		994	1,269	1,317	1,344		
2014			1,053	1,338	1,402		
2015				994	1,333	2012 - 2016	Before 2012
2016					1,049		
				Total	$7,136	$ 721	$ 21
					Total net liability	$ 742	

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance Unaudited				
Years	1	2	3	4	5
	71.1%	20.6%	3.7%	1.7%	0.7%

Methodology for Estimating Incurred But Not Reported (IBNR) Reserves

Claims and claim adjustment expense reserves represent management's estimate of the ultimate liability for unpaid losses and loss adjustment expenses for claims that have been reported and claims that have been incurred but not yet reported as of the balance sheet date. Claims and claim adjustment expense reserves do not represent an exact calculation of the liability, but instead represent management estimates, primarily utilizing actuarial expertise and projection methods that develop estimates for the ultimate cost of claims and claim adjustment expenses. Because the establishment of claims and claims adjustment expense reserves is an inherently uncertain process involving estimates and judgment, currently estimated claims and claim adjustment expense reserves may change. The Company reflects changes to the reserves in the results of operations in the period the estimates are changed.

Cumulative amounts paid and case reserves held as of the balance sheet date are subtracted from the estimate of the ultimate cost of claims and claim adjustment expenses to derive incurred but not reported (IBNR) reserves. Accordingly, IBNR reserves include the cost of unreported claims, development on known claims and re-opened claims. This approach to estimating IBNR reserves has been in place for many years, with no material changes in methodology in the past year.

Detailed claim data is typically insufficient to produce a reliable indication of the initial estimate for ultimate claims and claim adjustment expenses for an accident year. As a result, the initial estimate for an accident year is generally based on an exposure-based method using either the loss ratio projection or the expected loss method. The loss ratio projection method, which is typically used for guaranteed cost business, develops an initial estimate of ultimate claims and claim adjustment expenses for an accident year by multiplying earned premium for the accident year by a projected loss ratio. The projected loss ratio is determined by analyzing prior period experience, and adjusting for loss cost trends, rate level differences, mix of business changes and other known or observed factors influencing the accident year relative to prior accident years. The expected loss method, which is typically used for loss sensitive business, develops an initial estimate of ultimate claims and claim adjustment expenses for an accident year by analyzing exposures by account.

For prior accident years, the following estimation and analysis methods are principally used by the Company's actuaries to estimate the ultimate cost of claims and claim adjustment expenses. These estimation and analysis methods are typically referred to as conventional actuarial methods.

- The paid loss development method assumes that the future change (positive or negative) in cumulative paid losses for a given cohort of claims will occur in a stable, predictable pattern from year-to-year, consistent with the pattern observed in past cohorts.

- The case incurred development method is the same as the paid loss development method but is based on cumulative case-incurred losses rather than paid losses.

- The Bornhuetter-Ferguson method uses an initial estimate of ultimate losses for a given product line reserve component, typically expressed as a ratio to earned premium. The method assumes that the ratio of additional claim activity to earned premium for that component is relatively stable and predictable over time and that actual claim activity to date is not a credible predictor of further activity for that component. The method is used most often for more recent accident years where claim data is sparse and/or volatile, with a transition to other methods as the underlying claim data becomes more voluminous and therefore more credible.

- The average value analysis combined with the reported claim development method assumes that average claim values are stable and predictable over time for a particular cohort of claims. It is typically limited to analysis at more granular levels, such as coverage or hazard/peril, where a more homogeneous subset of claims produce a more stable and fairly predictable average value. The reported claim development method is the same as the paid loss development method but uses changes in cumulative claim counts to produce estimates of ultimate claim counts rather than ultimate dollars. The resulting estimate of ultimate claim counts by cohort is multiplied by an average value per claim from an average value analysis to obtain estimated ultimate claims and claim adjustment expenses.

While these are the principal methods utilized, the Company's actuaries have available to them the full range of actuarial methods developed by the casualty actuarial profession. The Company's actuaries are also continually monitoring developments within the profession for advances in existing techniques or the creation of new techniques that might improve current and future estimates. Most actuarial methods assume that past patterns demonstrated in the data will repeat themselves in the future. For certain reserve components where this assumption may not hold, such as asbestos and environmental reserves, conventional actuarial methods are not utilized by the Company.

Methodology for Determining Cumulative Number of Reported Claims

A claim file is created when the Company is notified of an actual demand for payment, notified of an event that may lead to a demand for payment or when it is determined that a demand for payment could possibly lead to a future demand for payment on another coverage on the same policy or on another policy. Claim files are generally created for a policy at the claimant by coverage level, depending on the particular facts and circumstances of the underlying event.

For Business and International Insurance and for Personal Insurance, claim file information is summarized such that the Company generally recognizes one count for each policy claim event by internal regulatory line of business, regardless of the number of claimants or coverages involved. The claims counts are then accumulated and reported by product line. While the methodology is generally consistent within each segment for the product lines displayed, there are some minor differences between and within segments. For Bond & Specialty Insurance, the Company recognizes one count per coverage per policy claim event.

For purposes of the claims development tables above, claims reported for direct business are counted even if they eventually close with no loss payment, except in the case of (i) deductible business, where the claim is not counted until the case incurred claim estimate is above the deductible, and (ii) International-Canada reported claim counts where claims closed with no loss payment are not counted. Note that claims with zero claim dollars may still generate some level of claim adjustment expenses. Claim counts for assumed business are included only to the extent such counts are available. The Company generally does not receive claim count information for which the underlying claim activity is handled by others, including pools and associations. The Company does not generate claim counts for ceded business. The methods used to summarize claim counts have not changed significantly over the time periods reported in the tables above.

The Company cautions against using the summarized claim count information provided in this disclosure in attempting to project ultimate loss payouts by product line. The Company generally finds claim count data to be useful only on a more granular basis than the aggregated basis disclosed in the

claim development tables above, as the risks, average values and other dynamics of the claim process can vary materially by the cause of loss and coverage within product line. For example, in Personal Automobile, the introduction of a new roadside assistance coverage feature several years ago resulted in a significant increase in claim counts with a low average claim cost. For this reason the Company varies its approach to, and in many cases the level of aggregation for, counting claims for internal analysis purposes depending on the particular granular analysis performed.

Asbestos and Environmental Reserves

At December 31, 2016 and 2015, the Company's claims and claim adjustment expense reserves included $1.71 billion and $2.17 billion, respectively, for asbestos and environmental-related claims, net of reinsurance.

It is difficult to estimate the reserves for asbestos and environmental-related claims due to the vagaries of court coverage decisions, plaintiffs' expanded theories of liability, the risks inherent in complex litigation and other uncertainties, including, without limitation, those which are set forth below.

Asbestos Reserves. Because each policyholder presents different liability and coverage issues, the Company generally reviews the exposure presented by each policyholder at least annually. Among the factors which the Company may consider in the course of this review are: available insurance coverage, including the role of any umbrella or excess insurance the Company has issued to the policyholder; limits and deductibles; an analysis of the policyholder's potential liability; the jurisdictions involved; past and anticipated future claim activity and loss development on pending claims; past settlement values of similar claims; allocated claim adjustment expense; potential role of other insurance; the role, if any, of non-asbestos claims or potential non-asbestos claims in any resolution process; and applicable coverage defenses or determinations, if any, including the determination as to whether or not an asbestos claim is a products/completed operation claim subject to an aggregate limit and the available coverage, if any, for that claim.

In the third quarter of 2016, the Company completed its annual in-depth asbestos claim review, including a review of active policyholders and litigation cases for potential product and "non-product" liability, and noted the continuation of the following trends:

- continued high level of litigation activity in certain jurisdictions involving individuals alleging serious asbestos-related illness, primarily involving mesothelioma claims;
- while overall payment patterns have been generally stable, there has been an increase in severity for certain policyholders due to the continued high level of litigation activity; and
- continued moderate level of asbestos-related bankruptcy activity.

In the Home Office and Field Office category, which accounts for the vast majority of policyholders with active asbestos-related claims, the number of policyholders tendering asbestos claims for the first time, the number of policyholders with open asbestos claims and both gross and net asbestos-related payments declined slightly when compared to 2015. Payments on behalf of policyholders in this category continue to be influenced by the high level of litigation activity in a limited number of jurisdictions where individuals alleging serious asbestos-related injury, primarily

mesothelioma, continue to target defendants who were not traditionally primary targets of asbestos litigation.

The Company's quarterly asbestos reserve reviews include an analysis of exposure and claim payment patterns by policyholder category, as well as recent settlements, policyholder bankruptcies, judicial rulings and legislative actions. The Company also analyzes developing payment patterns among policyholders in the Home Office and Field Office, and Assumed Reinsurance and Other categories as well as projected reinsurance billings and recoveries. In addition, the Company reviews its historical gross and net loss and expense paid experience, year-by-year, to assess any emerging trends, fluctuations, or characteristics suggested by the aggregate paid activity. Conventional actuarial methods are not utilized to establish asbestos reserves nor have the Company's evaluations resulted in any way of determining a meaningful average asbestos defense or indemnity payment.

The completion of these reviews and analyses in 2016, 2015 and 2014 resulted in $225 million, $224 million and $250 million increases, respectively, in the Company's net asbestos reserves. In each year, the reserve increases were primarily driven by increases in the Company's estimate of projected settlement and defense costs related to a broad number of policyholders in the Home Office category due to a higher than previously anticipated level of litigation activity surrounding mesothelioma claims. This increase in the estimate of projected settlement and defense costs resulted from payment trends that continue to be higher than previously anticipated due to the impact of the current litigation environment discussed above. Over the past decade, the property and casualty insurance industry, including the Company, has experienced net unfavorable prior year reserve development with regard to asbestos reserves, but the Company believes that over that period there has been a reduction in the volatility associated with the Company's overall asbestos exposure as the overall asbestos environment has evolved from one dominated by exposure to significant litigation risks, particularly coverage disputes relating to policyholders in bankruptcy who were asserting that their claims were not subject to the aggregate limits contained in their policies, to an environment primarily driven by a frequency of litigation related to individuals with mesothelioma. The Company's overall view of the current underlying asbestos environment is essentially unchanged from recent periods and there remains a high degree of uncertainty with respect to future exposure to asbestos claims.

Net asbestos paid loss and loss expenses in 2016, 2015 and 2014 were $708 million, $770 million and $242 million, respectively. Net payments in 2016 included the payment of the $518 million settlement amounts related to PPG Industries, Inc. Net payments in 2015 included the payment of the $502 million settlement amounts related to the Settlement of Asbestos Direct Action Litigation as described in more detail in note 16. Approximately 69%, 69% and 8% of total net paid losses in 2016, 2015 and 2014, respectively, related to policyholders with whom the Company had entered into settlement agreements limiting the Company's liability.

Environmental Reserves. In establishing environmental reserves, the Company evaluates the exposure presented by each policyholder and the anticipated cost of resolution, if any. In the course of this analysis, the Company generally considers the probable liability, available coverage and relevant judicial interpretations. In addition, the Company considers the many variables presented, such as: the nature of the alleged activities of the policyholder at each site; the number of sites; the total number of potentially responsible parties at each site; the nature of the alleged environmental harm and the corresponding remedy at each site; the nature of government enforcement activities at each site; the ownership and general use of each site; the overall nature of the insurance relationship between the Company and the policyholder, including the role of any umbrella or excess insurance the Company has issued to the policyholder; the involvement of other insurers; the potential for other available coverage, including the number of years of coverage; the role, if any, of non-environmental claims or potential non-environmental claims in any resolution process; and the applicable law in each jurisdiction. The evaluation of the exposure presented by a policyholder can change as information concerning that policyholder and the many variables presented is developed. Conventional actuarial methods are not used to estimate these reserves.

The Company continues to receive notices from policyholders tendering claims for the first time, frequently under policies issued prior to the mid-1980s. These policyholders continue to present smaller exposures, have fewer sites and are lower tier defendants. Further, in many instances, clean-up costs have been reduced because regulatory agencies are willing to accept risk-based site analyses and more efficient clean-up technologies. Over the past several years, the Company has experienced generally favorable trends in the number of new policyholders tendering environmental claims for the first time and in the number of pending declaratory judgment actions relating to environmental matters. However, the degree to which those favorable trends have continued has been less than anticipated. In addition, reserve development on existing environmental claims has been greater than anticipated, driven by claims and legal developments in a limited number of jurisdictions. As a result of these factors, in 2016, 2015 and 2014, the Company increased its net environmental reserves by $82 million, $72 million and $87 million, respectively.

Asbestos and Environmental Reserves. As a result of the processes and procedures discussed above, management believes that the reserves carried for asbestos and environmental claims are appropriately established based upon known facts, current law and management's judgment. However, the uncertainties surrounding the final resolution of these claims continue, and it is difficult to determine the ultimate exposure for asbestos and environmental claims and related litigation. As a result, these reserves are subject to revision as new information becomes available and as claims develop. The continuing uncertainties include, without limitation, the risks and lack of predictability inherent in complex litigation, any impact from the bankruptcy protection sought by various asbestos producers and other asbestos defendants, a further increase or decrease in the cost to resolve, and/or the number of, asbestos and environmental claims beyond that which is anticipated, the emergence of a greater number of asbestos claims than anticipated as a result of extended life expectancies resulting from medical advances and lifestyle improvements, the role of any umbrella or excess policies the Company has issued, the resolution or adjudication of disputes pertaining to the amount of available coverage for asbestos and environmental claims in a manner inconsistent with the Company's previous assessment of these claims, the number and outcome of direct actions against the Company, future developments pertaining to the Company's ability to recover reinsurance for asbestos and environmental claims and the unavailability of other insurance sources potentially available to policyholders, whether through exhaustion of policy limits or through the insolvency of other participating insurers. In addition, uncertainties arise from the insolvency or bankruptcy of policyholders and other defendants. It is also not possible to predict changes in the legal, regulatory and legislative environment and their impact on the future development of asbestos and environmental claims. This environment could be affected by changes in applicable legislation and future court and regulatory decisions and interpretations, including the outcome of legal challenges to legislative and/or judicial reforms establishing medical criteria for the pursuit of asbestos claims. It is also difficult to predict the ultimate outcome of complex coverage disputes until settlement negotiations near completion and significant legal questions are resolved or, failing settlement, until the dispute is adjudicated. This is particularly the case with policyholders in bankruptcy where negotiations often involve a large number of claimants and other parties and require court approval to be effective. As part of its continuing analysis of asbestos and environmental reserves, the Company continues to study the implications of these and other developments.

Because of the uncertainties set forth above, additional liabilities may arise for amounts in excess of the Company's current reserves. In addition, the Company's estimate of claims and claim adjustment expenses may change. These additional liabilities or increases in estimates, or a range of either, cannot now be reasonably estimated and could result in income statement charges that could be material to the Company's operating results in future periods.

Catastrophe Exposure

The Company has geographic exposure to catastrophe losses, which can be caused by a variety of events, including, among others, hurricanes, tornadoes and other windstorms, earthquakes, hail, wildfires, severe winter weather, floods, tsunamis, volcanic eruptions and other naturally-occurring events, such as solar flares. Catastrophes can also result from terrorist attacks and other intentionally destructive acts including those involving nuclear, biological, chemical, radiological, cyber-attacks, explosions and infrastructure failures. The incidence and severity of catastrophes are inherently unpredictable. The extent of losses from a catastrophe is a function of both the total amount of insured exposure in the area affected by the event and the severity of the event. Most catastrophes are restricted to small geographic areas; however, hurricanes and earthquakes may produce significant damage in larger areas, especially those that are heavily populated. The Company generally seeks to mitigate its exposure to catastrophes through individual risk selection and the purchase of catastrophe reinsurance.

There are also risks which impact the estimation of ultimate costs for catastrophes. For example, the estimation of reserves related to hurricanes can be affected by the inability of the Company and its insureds to access portions of the impacted areas, the complexity of factors contributing to the losses, the legal and regulatory uncertainties and the nature of the information available to establish the reserves. Complex factors include, but are not limited to: determining whether damage was caused by flooding versus wind; evaluating general liability and pollution exposures; estimating additional living expenses; the impact of demand surge; the potential impact of changing climate conditions, including higher frequency and severity of weather-related events; infrastructure disruption; fraud; the effect of mold damage and business income interruption costs; and reinsurance collectibility. The timing of a catastrophe's occurrence, such as at or near the end of a reporting period, can also affect the information available to the Company in estimating reserves for that reporting period. The estimates related to catastrophes are adjusted as actual claims emerge.

XL Group PLC

10. Losses and Loss Expenses

The following table represents a reconciliation of the beginning and ending balances of unpaid losses and loss expenses, including an analysis of the Company's paid and unpaid losses and loss expenses incurred for the years indicated:

(U.S. dollars in thousands)	2016	2015	2014
Unpaid losses and loss expenses at the beginning of the year	$ 25,439,744	$ 19,353,243	$ 20,481,065
Unpaid losses and loss expenses recoverable (1)	5,248,905	3,411,528	3,414,735
Net unpaid losses and loss expenses at the beginning of the year	$ 20,190,839	$ 15,941,715	$ 17,066,330
Acquired reserves	101,315	5,439,876	—
Increase (decrease) in net losses and loss expenses incurred in respect of losses occurring in:			
Current year	6,374,377	5,072,830	3,513,465
Prior year	(301,542)	(306,630)	(255,072)
Total net incurred losses and loss expenses	6,072,835	4,766,200	3,258,393
Exchange rate effects	(571,198)	(582,300)	(561,673)
Less net losses and loss expenses paid in respect of losses occurring in:			
Current year	1,444,251	1,047,277	381,008
Prior year	3,890,269	4,327,375	3,440,327
Total net paid losses	$ 5,334,520	$ 5,374,652	$ 3,821,335
Net unpaid losses and loss expenses at the end of the year	20,459,271	20,190,839	15,941,715
Unpaid losses and loss expenses recoverable (1)	5,480,300	5,248,905	3,411,528
Unpaid losses and loss expenses at the end of the year	$ 25,939,571	$ 25,439,744	$ 19,353,243

(1) Property and Casualty business only. See Note 12, "Reinsurance," for further information.

(a) Liability for Unpaid Losses and Loss Expenses

As the Company earns premiums for the underwriting risks it assumes, an estimate of the expected ultimate losses related to the premium is established. Loss reserves for unpaid loss and loss expenses are established due to the significant periods of time that may elapse between the occurrence, reporting and settlement of a loss. The process of establishing reserves for unpaid P&C claims can be complex and is subject to considerable variability, as it requires the use of judgment to make informed estimates. These estimates are based on numerous factors, and may be revised as additional experience and other data become available and are reviewed, as new or improved methodologies are developed or as current laws change. Loss reserves include:

- Case reserves - reserves for reported losses and loss expenses that have not yet been settled; and
- IBNR reserves – reserves for incurred but not reported losses or for reported losses over and above the amount of case reserves.

Case Reserves

Case reserves for the Company's P&C operations are established by management based on amounts reported from insureds or ceding companies and consultation with legal counsel, and represent the estimated ultimate cost of events or conditions that have been reported to or specifically identified by the Company. The method of establishing case reserves for reported claims differs among the Company's operations.

With respect to the Insurance segment, the Company is notified of insured losses and records a case reserve for the estimated amount of the settlement, if any. The estimate reflects the judgment of claims personnel based on general reserving practices, the experience and knowledge of such personnel regarding the nature of the specific claim and, where appropriate, advice of legal counsel. Reserves are also established to provide for the estimated expense of settling claims, including legal and other fees and the general expenses of administering the claims adjustment process.

With respect to reinsurance operations, case reserves for reported claims are generally established based on reports received from ceding companies. Additional case reserves may be established by the Company to reflect the estimated ultimate cost of a loss. For reinsurers, uncertainty in the reserving process stems, in part, from timing lags inherent in reporting by the claimant to the primary insurer, and subsequently by the primary insurer to the reinsurer. As a predominantly broker market reinsurer for both excess-of-loss and proportional contracts, the Company is potentially subject to an additional timing lag in the receipt of information as the primary insurer reports to the broker who in turn reports to the Company.

Since the Company relies on information regarding paid losses, case reserves and IBNR provided by ceding companies to estimate its liability for unpaid losses and loss adjustment expenses ("LAE"), certain procedures are maintained in order to help determine the completeness and accuracy of such information. Periodically, management assesses the reporting activities of its ceding companies on the basis of qualitative and quantitative criteria. In addition to conferring with ceding companies or brokers on claims matters, our claims personnel conduct periodic audits of specific claims and the overall claims procedures of ceding companies at their offices. The Company relies on its ability to effectively monitor the claims handling and claims reserving practices of ceding companies in order to help establish the proper reinsurance premium for reinsurance agreements and to establish proper loss reserves. Disputes with ceding companies have been rare and generally have been resolved through negotiation.

In addition to information received from ceding companies on reported claims, the Company also utilizes information on the pattern of ceding company loss reporting and loss settlements from previous catastrophic events in order to estimate the ultimate liability related to catastrophic events such as hurricanes. Commercial catastrophe model analyses and zonal aggregate exposures are utilized to assess potential client loss before and after an event. Initial cedant loss reports are generally obtained shortly after a catastrophic event, with subsequent updates received as new information becomes available. The Company actively requests loss updates from cedants periodically while there is still considerable uncertainty for an event, often for the first year following an event. The Company's claim settlement processes also incorporate an update to the total loss reserve at the time a claim payment is made to a ceding company.

While the reliance on loss reports from ceding companies may increase the level of uncertainty associated with the estimation of total loss reserves for property catastrophe reinsurance relative to direct property insurance, there are several factors which serve to reduce the uncertainty in loss reserve estimates for property catastrophe reinsurance. First, for large natural catastrophe events, aggregate limits in property catastrophe reinsurance contracts are in some cases fully exhausted by the loss reserve estimates. Second, as a reinsurer, the Company has access to information from a broad cross section of the insurance industry. The Company utilizes such information in order to perform consistency checks on the data provided by ceding companies and is able to identify trends in loss reporting and settlement activity and incorporate such information in the estimate of IBNR reserves. Finally, the Company also supplements the loss information received from cedants with loss estimates developed by market share techniques and/or from third party catastrophe models applied to exposure data supplied by cedants.

IBNR Reserves

IBNR reserves represent management's best estimate, at a given point in time, of the amount in excess of case reserves that is needed for the future settlement and loss adjustment costs associated with claims incurred. It is possible that the ultimate liability may differ materially from these estimates. Because the ultimate amount of unpaid losses and LAE is uncertain, management believes that quantitative techniques to estimate these amounts are enhanced by professional and managerial judgment. Management reviews the IBNR estimates produced by its actuarial department and determines its best estimate of the liabilities to record in the financial statements. The Company considers this single point estimate to be the mean expected outcome.

IBNR reserves are estimated by the Company's actuaries using several standard actuarial methodologies including the loss ratio method, the loss development or chain ladder method, the Bornhuetter-Ferguson ("BF") method and frequency and severity approaches. IBNR related to a specific event may be based on the estimated exposure to an industry loss and may include the use of catastrophe modeling software. On a quarterly basis, IBNR reserves are reviewed by the Company's actuaries, and are adjusted as new information becomes available. Any such adjustments are accounted for as changes in estimates and are reflected in the results of operations in the period in which they are made.

The Company's actuaries use one set of assumptions in calculating the single point estimate, which includes actual loss data, loss development factors, loss ratios, reported claim frequency and severity. The actuarial reviews and documentation are completed in accordance with professional actuarial standards with reserves established on a basis consistent with GAAP. The selected assumptions reflect the actuary's judgment based on historical data and experience combined with information concerning current underwriting, economic, judicial, regulatory and other influences on ultimate claim settlements.

When estimating IBNR reserves, each insurance and reinsurance business unit segregates business into exposure classes. Within each class, the business is further segregated by either the year in which the contract incepted ("underwriting year"), the year in which the claim occurred ("accident year"), or the year in which the claim is reported ("report year"). Within the Insurance Segment, reviews are on an accident year, underwriting year, or report year basis depending on the nature of the business. The Reinsurance segment is reviewed on an underwriting year basis. In each case, management believes the selected method most accurately represents the economic condition of the business.

Generally, initial actuarial estimates of IBNR reserves not related to a specific event are based on the loss ratio method applied to each class of business. Actual paid losses and case reserves ("reported losses") are subtracted from expected ultimate losses to determine IBNR reserves. Estimates of the initial expected ultimate losses involve management judgment and are based on historical information for that class of business, which includes loss ratios, market conditions, changes in pricing and conditions, underwriting changes, changes in claims emergence, and other factors that may influence expected ultimate losses.

Over time, as greater numbers of claims are reported, actuarial estimates of IBNR are based on the BF method and loss development techniques. The BF method utilizes actual loss data and the expected patterns of loss emergence, combined with an initial expectation of ultimate losses to determine an estimate of ultimate losses. This method may be appropriate when there is limited actual loss data and a relatively less stable pattern of loss emergence. The chain ladder method utilizes actual loss and expected patterns of loss emergence to determine an estimate of ultimate losses that is independent of the initial expectation of ultimate losses. This method may be appropriate when there is a relatively stable pattern of loss emergence and a relatively larger number of reported claims. Multiple estimates of ultimate losses using a variety of actuarial methods are calculated for each class of business for each year of loss experience. The Company's actuaries look at each class and determine the most appropriate point estimate based on the characteristics of the particular class and other relevant factors, such as historical ultimate loss ratios, the presence of individual large losses, and known occurrences that have not yet resulted in reported losses. Once the actuaries make their determination of the most appropriate point estimate for each class, this information is aggregated and presented to management for review and approval.

The pattern of loss emergence is determined using actuarial analysis and judgment and is based on the historical patterns of the recording of paid and reported losses, as well as industry information. Information that may cause historical patterns to differ from future patterns is considered and reflected in expected patterns as appropriate. For property, marine and aviation insurance, losses are generally reported within 2 to 3 years from the beginning of the accident year. For casualty insurance, loss emergence patterns can vary from 3 years to over 20 years depending on the type of business. For other insurance, loss emergence patterns generally fall within these ranges. For reinsurance business, loss reporting lags the corresponding insurance classes often by at least one quarter due to the need for loss information to flow from the ceding companies to us generally via reinsurance intermediaries. Such lags in loss reporting are reflected in the actuary's selections of loss reporting patterns used in establishing our reserves.

Such estimates are not precise because, among other things, they are based on predictions of future developments and estimates of future trends in claim severity, claim frequency and other issues. In the process of estimating IBNR reserves, provisions for economic inflation and changes in the social and legal environment are considered, but involve considerable judgment. When estimating IBNR reserves, more judgment is typically required for lines of business with longer loss emergence patterns.

Due to the low frequency and high severity nature of some of the business the Company underwrites, our reserve estimates are highly dependent on actuarial and management judgment and are therefore uncertain. In property classes, there can be additional uncertainty in loss estimation related to large catastrophe events. With wind events, such as hurricanes, the damage assessment process may take more than a year. The cost of claims is subject to volatility due to supply shortages for construction materials and labor. In the case of earthquakes, the damage assessment process may take several years as buildings are discovered to have structural weaknesses not initially detected. The uncertainty inherent in IBNR reserve estimates is particularly pronounced for casualty coverages, such as excess liability, professional liability and workers' compensation, where information emerges relatively slowly over time.

The three types of property and casualty reserve exposure with the longest tails included in the Company's portfolio are:

- high layer excess casualty insurance;
- casualty reinsurance; and
- discontinued asbestos and run-off environmental insurance and reinsurance liabilities.

Certain aspects of casualty operations complicate the actuarial process for establishing reserves. Certain casualty business written by insurance operations is high layer excess casualty business, meaning that liability attaches after large deductibles, including self-insurance or insurance from other sources. The Company began writing this type of business in 1986 and issued policies in forms that were different from traditional policies used by the industry at that time. Initially, there was a lack of industry data available for this type of business. Consequently, the basis for establishing loss reserves for this type of business was largely based upon judgment and the Company's reported loss experience, which was used as a basis for determining ultimate losses and, therefore, IBNR reserves. Over time, the amount of available historical loss experience data has increased. As a result, there is a larger statistical base to assist in establishing reserves for these excess casualty insurance claims.

High layer excess casualty insurance claims typically involve claims relating to (i) a "shock loss" such as an explosion or transportation accident causing severe damage to persons and/or property over a short period of time, (ii) a "non-shock" loss where a large number of claimants are exposed to injurious conditions over a longer period of time, such as exposure to chemicals or pharmaceuticals or (iii) a professional liability loss such as a medical malpractice claim. In each case, these claims are ultimately settled following extensive negotiations and legal proceedings. This process typically takes 5 to 15 years following the date of loss.

Reinsurance operations by their nature add further complications to the reserving process, particularly for the casualty business written, in that there is an inherent lag in the timing and reporting of a loss event from an insured or ceding company to the reinsurer. This reporting lag creates an even longer period of time between the policy inception and when a claim is finally settled. As a result, more judgment is required to establish reserves for ultimate claims in reinsurance operations.

Casualty reinsurance business involves reserving methods that generally include historical aggregated claim information as reported by ceding companies, combined with the results of claims and underwriting reviews of a sample of the ceding company's claims and underwriting files. Therefore, we do not always receive detailed claim information for this line of business.

Discontinued asbestos and run-off environmental liabilities are attached to certain policies previously written by NAC Re Corp. (now known as XL Reinsurance America Inc.), prior to being acquired by the Company; from business of Winterthur purchased by the Company from AXA Insurance in 2001; from a loss portfolio transfer in 2006; and acquired as a result of the Catlin Acquisition. At December 31, 2016, total gross unpaid losses and loss expenses with respect to these businesses represented less than 1% of unpaid losses and loss expenses of the Company.

Unpaid losses and loss expenses prior to reinsurance recoveries for the indicated years ended December 31 comprise the following:

(U.S. dollars in thousands)	2016	2015
Reserve for reported losses and loss expenses	$ 10,343,481	$ 10,293,448
Reserve for losses incurred but not reported	15,596,090	15,146,296
Unpaid losses and loss expenses	$ 25,939,571	$ 25,439,744

Claims Development

Management has determined that the appropriate level of disaggregation for the incurred and paid claims development information best falls into six categories within its two operating segments. This level of disaggregation is consistent with the Company's historical disclosure levels and provides groupings of the Company's insurance and reinsurance businesses of a credible size and with similar claim development characteristics, particularly payment patterns. It should be noted that when estimating IBNR reserves, the Company's Insurance and Reinsurance segments segregate business into exposure classes and over 250 classes are reviewed in total. Furthermore, large losses and catastrophe events are evaluated separately.

As noted previously, reserve reviews are carried out on an accident year, underwriting year or report year basis depending on the nature of the business. Typically, reserve reviews are carried out gross of reinsurance with ceded reinsurance recoveries evaluated separately to arrive at net reserves. However, in accordance with accounting guidance, the disclosures presented herein are accident year triangles, presented net of reinsurance recoverables. Underwriting year triangles are converted to an accident year basis using assumptions consistent with the underlying premium earning profiles and considering large losses in their respective accident year. Similarly, ceded reinsurance recoverables are allocated to accident year and class of business in order to present net accident year triangles. While we have compiled the triangles on a best efforts basis, the allocation bases required to develop historical net accident year triangles should be viewed as approximations only.

Within the Insurance segment, there are four business groups: Professional; Casualty and other; Energy, Property and Construction ("EPC"); and Specialty. Within the Reinsurance segment, all major products fall within two categories: Property and Other Short-Tail Lines, and Casualty and Other Long-Tail Lines. The Company has also provided aggregate triangles for the total Company and the Insurance and Reinsurance segments to reflect the levels at which the Company manages its business.

The nature of the Company's high excess of loss liability and catastrophe business can result in loss events that are both irregular and significant. Similarly, adjustments to reserves for individual years can be irregular and significant. Such adjustments are part of the normal course of business of the Company. There is no assurance that conditions and trends that have affected the development of liabilities in the past will continue. Furthermore, changes in business mix over time, including discontinuation of certain classes of business and growth in others, can impact development patterns. Accordingly, it may not be appropriate to extrapolate future redundancies or deficiencies based on the Company's historical results.

As discussed in further detail in part (c), except for certain workers' compensation (including long term disability) liabilities and certain bodily injury liability claims, emanating from U.K. exposures, predominantly from the U.K. motor liability portfolio, the Company does not discount its unpaid losses and loss expenses. The development in the tables included herein is presented on a gross of discount basis, reflecting the undiscounted case reserves established using a tabular reserving methodology and the undiscounted IBNR. The amount of discount is then determined for both Case and IBNR reserves and booked accordingly. The amount of discount is included in the reconciliation of the reserves to the Consolidated Balance Sheet.

As a result of the Catlin Acquisition in 2015 as noted in Note 2(e), "Acquisitions and Disposals - Catlin Acquisition, the Company acquired approximately $5.4 billion of unpaid claims liability, net of reinsurance, as well as $101.3 million of unpaid claims liability, net of reinsurance due to the Allied Acquisition in 2016 as noted in Note 2(c), "Acquisitions and Disposals - Allied Acquisition." For purposes of this disclosure, the Company has applied the retrospective method for these acquired reserves, including the combined companies' incurred and paid claim development histories throughout the tables. It should be noted that historical reserves for the acquired businesses were established by the respective companies using methods, assumptions and procedures then in effect which may differ from the Company's current reserving bases. Accordingly, it may not be appropriate to extrapolate future redundancies or deficiencies based on the aggregated historical results shown in the triangles.

The Company has also revalued all historical data using exchange rates at December 31, 2016 in order to mitigate the effect of foreign exchange on the development throughout the triangles. Due to currency mix changes from one year end to the next, revaluation of incurred losses will result in different year-on-year movements within the triangles with each annual presentation. This approach for handling foreign exchange movements within the triangles differs somewhat from the underlying calculation of prior year development in our financial statements due the inclusion of historical loss payments as well as reserves and the level of granularity used in the calculation. The differences have been deemed not to be material.

The number of reported claims is provided for the Insurance segment on a per claim basis and excludes those claims which closed with no payment. It should be noted that certain claims may eventually close with no payment in the future at which time the claims will be excluded on a prospective basis. The number of reported claims can vary over time due to changes in mix of business and policy terms and conditions. For the Reinsurance segment, the number of reported claims is not provided due to the common industry practice of cedants reporting loss information for proportional treaties on a bulk basis without comprehensive claim details. Therefore, it is impractical to provide meaningful claim count detail for our Reinsurance business.

The Average Annual Percentage Payout of Incurred Losses for each age has been derived using a weighted average of all cumulative paid amounts as a percentage of 2016 incurred losses and allocated loss expenses. The average annual percentage payout can change over time due to changes in business mix, policy terms and conditions as well as ceded reinsurance arrangements.

As previously noted, the process of establishing reserves for unpaid P&C claims can be complex and is subject to considerable variability, as it requires the use of judgment to make informed estimates. These estimates are based on numerous factors, and may be revised as additional experience and data become available, as new or improved methodologies are developed or as current laws change. In addition, there is no assurance that conditions and trends that have affected the development of liabilities in the past will continue. This variability may result in either favorable or adverse development in the Incurred Loss and Allocated Loss Expense triangles provided by the Company. The variability experienced to date has been in line with management's expectations given the underlying business written by the Company. We have provided additional commentary for the individual categories below:

For the Insurance Segment in total, while individual accident years have both favorable and adverse incremental development across the triangle, accident years 2007 to 2013 have all developed favorably since the first evaluation. The 2014 and 2015 accident years reflect modest adverse development due primarily to large loss activity in several lines that the Company does not view as a trend. In addition, the Company notes that these accident years are still relatively immature.

For the Insurance EPC category, individual accident years have generally developed favorably as updated loss estimates were received and volatility in the loss estimates decreased. The 2014 accident year experienced adverse development from the 2014 evaluation to the 2015 evaluation due to development on a large fire loss which occurred in late December 2014. The 2014 accident year then developed favorably from the 2015 evaluation to the 2016 evaluation. The 2015 accident year experienced adverse development from the first evaluation in 2015 to the second evaluation in 2016 due to movements on several claims in the international property and construction businesses.

For the Insurance Specialty category, individual accident years have generally developed favorably as updated loss estimates were received and volatility in the loss estimates decreased. This category includes a range of businesses with both short-tail and medium-tail exposures. Typically, development in the second year relates to short-tail lines with development on medium-tail business being reflected at subsequent evaluations.

For the Insurance Professional category, individual accident years have both favorable and adverse development across the triangle. These developments relate to the complexity associated with claims in this class of business. In 2008, the Company strengthened its reserves for the 2007 report/accident year due to the developing subprime-credit crisis. Due to the claims-made nature of the underlying Professional policies, the subprime-credit crisis impacted the 2008 to 2012 report years and reserves were re-allocated from the 2007 report year to these later years as claims developed. The cumulative impact of the credit crisis and developing loss trends were more severe than originally expected for these years. The 2014 and 2015 report years have experienced modest adverse development due to large loss activity in the international financial lines management liability book and the discontinued design subcontractors default portfolio.

For the Insurance Casualty category, individual accident years have both favorable and adverse development across the triangle. These developments relate to the complexity associated with claims in this class of business and the high level of attachment of the Company's excess policies. The 2010 accident year experienced more adverse development than other accident years due to development on the Deepwater Horizon event. The 2013 to 2015 accident years reflect modest adverse development due to large loss activity relating to the excess casualty portfolio and strengthening of the excess and surplus portfolio and the newly acquired Allied business.

For the Reinsurance Segment in total, while individual accident years have both favorable and adverse incremental development across the triangle, all accident years except for the 2010 accident year developed favorably since the first evaluation. The adverse development since the first evaluation for the 2010 accident year was very modest.

For the Reinsurance Property and Other Short Tail category, individual accident years have generally developed favorably as updated loss estimates were received and volatility in the loss estimates decreased. The two outliers were the 2010 and 2012 accident years where there was modest adverse development related to large loss events from the business acquired in the Catlin Acquisition. Specifically, the 2010 adverse development relates to the Buncefield Explosion and the New Zealand Darfield Earthquake and the 2012 development relates to Costa Concordia and Superstorm Sandy. The favorable development on the 2011 year relates in part to reductions on the Japan Earthquake and Tsunami event also within the business acquired in the Catlin Acquisition. As noted earlier, the historical reserves for the acquired businesses were established by the respective companies using methods, assumptions and procedures then in effect which may differ from the Company's current reserving bases.

For the Reinsurance Casualty and Other Long Tail category, the earlier years had modest favorable development and the later years had modest adverse development. The adverse development for the later accident years relates to changes in reserving methodology for certain long tailed lines of business that occurred in calendar years 2012 and 2015. In 2012, the Company changed its methodology to hold an explicit discount on loss reserves for U.K. bodily injury claims expected to settle via Periodical Payment Orders ("PPOs"). As these claims became more prevalent and costly, reserves were strengthened on an undiscounted basis. However, with the implementation of discounting, there was a minimal change in the loss reserves, net of the discount. Similarly, a significant portion of the increase in the Incurred Losses and Allocated Loss Expense, Net of Reinsurance for the 2015 calendar year is due to a change in the methodology used to determine the undiscounted ultimate losses for the reinsurance workers' compensation liabilities acquired in the Catlin Acquisition resulting in a large increase in the undiscounted losses but an insignificant change in the discounted losses.

Total Property and Casualty

(in thousands)

Incurred Losses and Allocated Loss Expenses, Net of Reinsurance

	For the Years Ended December 31,									As of Dec 31, 2016		
Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016	IBNR (1)	Number of Claims
2007	$ 4,632,657	$ 4,806,850	$ 4,718,961	$ 4,684,540	$ 4,689,256	$ 4,569,019	$ 4,541,978	$ 4,519,599	$ 4,432,150	$ 4,390,981	$ 246,827	N/A
2008		5,504,796	5,575,015	5,503,422	5,524,325	5,479,907	5,449,364	5,417,072	5,357,648	5,322,204	307,738	N/A
2009			4,622,547	4,627,569	4,542,408	4,556,902	4,550,362	4,550,542	4,422,167	4,392,904	317,583	N/A
2010				4,983,044	5,111,634	5,002,061	5,026,101	4,974,782	4,957,474	4,981,939	464,306	N/A
2011					6,236,775	6,187,474	6,111,779	5,980,635	6,116,046	6,083,796	558,008	N/A
2012						5,697,958	5,660,616	5,640,576	5,754,387	5,663,926	715,827	N/A
2013							5,558,316	5,554,791	5,523,695	5,426,144	1,082,491	N/A
2014								5,183,056	5,369,393	5,397,264	1,396,883	N/A
2015									5,354,494	5,498,206	1,962,006	N/A
2016										6,005,506	3,425,518	N/A
										$53,162,870	Total	

Cumulative Paid Losses and Allocated Loss Expenses, Net of Reinsurance

	For the Years Ended December 31,									
Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016
2007	$ 521,083	$ 1,289,961	$ 2,055,288	$ 2,587,918	$ 3,126,834	$ 3,397,370	$ 3,612,934	$ 3,744,872	$ 3,822,207	$ 3,894,280
2008		788,760	1,994,235	2,857,474	3,446,415	3,947,203	4,240,640	4,450,875	4,582,409	4,700,567
2009			638,179	1,530,295	2,192,791	2,655,163	3,117,922	3,366,917	3,551,474	3,663,224
2010				840,030	1,855,407	2,645,868	3,144,278	3,521,163	3,851,827	4,084,244
2011					1,246,596	2,872,319	3,664,970	4,242,053	4,737,827	5,021,000
2012						952,158	2,256,973	3,149,842	3,802,042	4,199,766
2013							976,023	2,194,912	3,049,907	3,614,076
2014								957,525	2,250,446	3,090,343
2015									970,277	2,152,569
2016										1,192,137
										$35,612,206
									All outstanding liabilities prior to 2007, net of reinsurance	2,501,779
									Liabilities for unpaid losses and loss expenses, net of reinsurance	$20,052,443

Average Annual Percentage Payout of Incurred Losses by Age, Net of Reinsurance

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
17%	22%	15%	10%	9%	6%	3%	3%	3%	1%

(1) Total IBNR Liabilities Plus Expected Development on Reported Claims

Insurance Segment

(in thousands)

Incurred Losses and Allocated Loss Expenses, Net of Reinsurance

	For the Years Ended December 31,									As of Dec 31, 2016		
Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016	IBNR (1)	Number of Claims
2007	$ 3,258,668	$ 3,490,955	$ 3,426,696	$ 3,431,600	$ 3,442,331	$ 3,329,848	$ 3,317,676	$ 3,318,423	$ 3,274,775	$ 3,246,355	$ 158,351	45,542
2008		3,891,682	3,969,259	3,935,499	3,974,071	3,918,450	3,889,538	3,857,758	3,822,133	3,786,671	186,723	54,952
2009			3,472,222	3,499,124	3,458,320	3,480,715	3,483,027	3,500,575	3,369,614	3,346,817	190,193	54,896
2010				3,702,458	3,809,102	3,699,234	3,735,809	3,688,045	3,661,919	3,697,761	313,815	61,416
2011					4,014,389	3,986,420	4,009,166	3,921,559	4,026,511	4,001,271	379,349	65,437
2012						3,870,871	3,799,876	3,800,046	3,921,415	3,851,259	468,002	70,919
2013							3,942,360	4,003,359	3,978,956	3,924,048	802,611	78,018
2014								3,748,154	3,917,364	3,978,436	1,052,314	87,491
2015									3,849,731	4,039,203	1,418,476	94,229
2016										4,160,269	2,358,172	65,684
										$38,032,090	Total	

Cumulative Paid Losses and Allocated Loss Expenses, Net of Reinsurance

	For the Years Ended December 31,									
Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016
2007	$ 367,171	$ 930,428	$ 1,462,857	$ 1,884,318	$ 2,333,047	$ 2,549,256	$ 2,715,861	$ 2,822,610	$ 2,896,977	$ 2,943,144
2008		461,606	1,339,577	1,973,577	2,427,033	2,843,188	3,069,812	3,234,869	3,337,607	3,415,212
2009			462,090	1,140,796	1,666,673	2,043,196	2,432,021	2,634,783	2,787,167	2,865,558
2010				607,658	1,377,513	1,978,027	2,370,062	2,685,015	2,914,856	3,072,546
2011					649,690	1,617,155	2,216,640	2,653,619	3,062,399	3,290,213
2012						634,043	1,471,761	2,079,400	2,578,639	2,886,674
2013							657,753	1,509,232	2,141,332	2,597,422
2014								669,745	1,597,123	2,263,643
2015									691,253	1,563,019
2016										861,429
										$25,758,860
									All outstanding liabilities prior to 2007, net of reinsurance	1,069,908
									Liabilities for unpaid losses and loss expenses, net of reinsurance	$13,343,138

Average Annual Percentage Payout of Incurred Losses by Age, Net of Reinsurance

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
16%	21%	16%	11%	10%	6%	4%	3%	3%	1%

(1) Total IBNR Liabilities Plus Expected Development on Reported Claims

EPC
(in thousands)

Incurred Losses and Allocated Loss Expenses, Net of Reinsurance

Accident Year	For the Years Ended December 31,									As of Dec 31, 2016		
	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016	IBNR (1)	Number of Claims
2007	$ 439,938	$ 394,730	$ 385,373	$ 365,395	$ 364,454	$ 361,632	$ 358,820	$ 357,009	$ 356,106	$ 355,709	$ (213)	5,380
2008		841,913	834,562	806,976	782,005	777,476	769,906	774,108	768,610	767,031	10,701	9,013
2009			400,045	382,644	364,526	356,069	349,819	345,668	344,108	342,072	6,549	7,596
2010				596,340	611,917	589,119	571,375	565,494	574,091	568,574	(5,681)	8,532
2011					979,353	911,684	890,820	857,510	846,315	842,481	7,165	10,172
2012						689,032	660,128	635,712	636,896	626,132	6,086	11,131
2013							740,573	715,909	690,102	684,578	9,763	12,141
2014								703,860	735,789	723,382	6,921	14,609
2015									791,724	812,247	64,949	16,424
2016										969,709	228,630	15,279
										$ 6,691,915	Total	

Cumulative Paid Losses and Allocated Loss Expenses, Net of Reinsurance

Accident Year	For the Years Ended December 31,									
	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016
2007	$ 69,288	$ 208,210	$ 298,622	$ 316,321	$ 329,883	$ 341,442	$ 347,421	$ 348,059	$ 350,602	$ 351,151
2008		152,946	467,537	604,163	653,749	730,513	748,607	752,294	747,374	750,022
2009			84,638	190,194	254,420	287,809	311,335	313,434	328,222	331,246
2010				166,353	380,649	476,832	526,375	543,985	542,011	547,486
2011					211,176	610,086	744,330	784,418	813,298	815,694
2012						161,117	389,827	531,299	574,467	593,981
2013							165,460	452,805	586,539	636,623
2014								180,735	504,925	645,682
2015									224,497	484,431
2016										324,575
										$ 5,480,891
									All outstanding liabilities prior to 2007, net of reinsurance	24,692
									Liabilities for unpaid losses and loss expenses, net of reinsurance	$ 1,235,716

Average Annual Percentage Payout of Incurred Losses by Age, Net of Reinsurance

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
26%	38%	20%	6%	5%	1%	1%	—%	1%	1%

(1) Total IBNR Liabilities Plus Expected Development on Reported Claims

Specialty
(in thousands)

Incurred Losses and Allocated Loss Expenses, Net of Reinsurance

Accident Year	For the Years Ended December 31,									As of Dec 31, 2016		
	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016	IBNR (1)	Number of Claims
2007	$ 825,002	$ 852,759	$ 847,085	$ 837,517	$ 832,003	$ 813,822	$ 802,825	$ 782,043	$ 803,587	$ 799,817	$ 4,787	18,554
2008		875,540	934,797	884,249	863,902	851,059	839,237	813,581	830,905	826,097	3,738	22,083
2009			987,010	978,410	909,964	882,725	872,379	862,563	807,644	798,315	1,770	20,875
2010				1,004,165	962,021	894,249	875,392	849,972	838,086	837,473	12,588	24,437
2011					975,525	974,012	945,212	901,762	915,622	908,417	34,269	25,070
2012						1,009,999	950,530	917,430	901,214	890,061	19,757	27,855
2013							940,906	979,459	943,553	941,582	45,919	31,103
2014								945,355	964,163	948,242	66,235	36,659
2015									967,064	1,027,349	137,686	39,552
2016										1,065,208	386,279	28,418
										$ 9,042,561	Total	

Cumulative Paid Losses and Allocated Loss Expenses, Net of Reinsurance

Accident Year	For the Years Ended December 31,									
	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016
2007	$ 249,996	$ 468,074	$ 608,006	$ 675,749	$ 711,472	$ 739,870	$ 758,150	$ 774,511	$ 776,816	$ 779,786
2008		244,084	511,167	637,898	699,636	742,474	767,795	786,003	791,620	797,195
2009			311,190	552,213	660,099	712,561	736,233	754,577	764,637	767,565
2010				317,829	548,616	660,232	714,045	757,382	774,635	783,693
2011					294,082	603,843	738,976	794,906	817,521	840,552
2012						310,705	589,660	698,093	767,416	804,007
2013							331,485	596,425	716,825	792,004
2014								338,376	618,150	749,446
2015									335,018	656,573
2016										409,665
										$ 7,380,486
									All outstanding liabilities prior to 2007, net of reinsurance	139,887
									Liabilities for unpaid losses and loss expenses, net of reinsurance	$ 1,801,962

Average Annual Percentage Payout of Incurred Losses by Age, Net of Reinsurance

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
35%	30%	14%	7%	4%	3%	2%	1%	1%	1%

(1) Total IBNR Liabilities Plus Expected Development on Reported Claims

Professional
(in thousands)

Incurred Losses and Allocated Loss Expenses, Net of Reinsurance

For the Years Ended December 31, | As of Dec 31, 2016

Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016	IBNR (1)	Number of Claims
2007	$ 911,695	$ 1,130,926	$ 1,106,630	$ 1,061,995	$ 1,070,028	$ 995,364	$ 993,007	$ 1,000,256	$ 944,024	$ 928,677	$ 68,144	4,371
2008		1,033,982	1,087,436	1,131,685	1,221,906	1,195,931	1,174,486	1,167,289	1,136,720	1,114,924	60,568	5,187
2009			968,336	1,036,140	1,094,824	1,158,091	1,196,078	1,202,994	1,169,232	1,164,825	77,399	5,589
2010				989,432	984,780	957,486	1,035,571	996,024	1,016,013	1,061,340	113,635	5,418
2011					967,386	960,895	1,012,458	1,027,504	1,104,107	1,111,524	162,147	5,253
2012						976,450	976,593	1,011,363	1,124,437	1,117,970	212,997	5,320
2013							965,875	963,634	942,022	922,634	339,380	5,595
2014								747,671	799,952	843,003	371,270	5,969
2015									755,087	800,568	493,667	6,391
2016										730,198	654,395	3,704
										$ 9,795,663	Total	

Cumulative Paid Losses and Allocated Loss Expenses, Net of Reinsurance

For the Years Ended December 31,

Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016
2007	$ 25,207	$ 111,289	$ 240,287	$ 421,654	$ 540,255	$ 612,498	$ 692,492	$ 738,301	$ 776,445	$ 801,141
2008		17,987	185,149	346,923	516,426	697,071	782,381	853,405	911,634	969,698
2009			22,350	161,125	337,568	507,629	745,836	838,990	922,453	948,015
2010				21,803	155,845	324,580	480,475	623,975	735,626	803,916
2011					28,625	144,365	315,130	480,248	683,043	815,129
2012						44,486	195,088	378,059	591,820	713,165
2013							36,582	152,052	304,503	457,890
2014								17,042	138,832	312,548
2015									22,521	139,345
2016										23,462
										$ 5,984,309
									All outstanding liabilities prior to 2007, net of reinsurance	140,029
									Liabilities for unpaid losses and loss expenses, net of reinsurance	$ 3,951,383

Average Annual Percentage Payout of Incurred Losses by Age, Net of Reinsurance

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
3%	13%	16%	16%	15%	9%	6%	4%	4%	1%

(1) Total IBNR Liabilities Plus Expected Development on Reported Claims

Casualty and other
(in thousands)

Incurred Losses and Allocated Loss Expenses, Net of Reinsurance

Accident Year	For the Years Ended December 31,									As of Dec 31, 2016		
	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016	IBNR (1)	Number of Claims
2007	$ 1,082,033	$ 1,112,540	$ 1,087,608	$ 1,166,693	$ 1,175,846	$1,159,030	$ 1,163,024	$ 1,179,115	$ 1,171,058	$ 1,162,152	$ 85,633	17,237
2008		1,140,247	1,112,464	1,112,589	1,106,258	1,093,984	1,105,909	1,102,780	1,085,898	1,078,619	111,716	18,669
2009			1,116,831	1,101,930	1,089,006	1,083,830	1,064,751	1,089,350	1,048,630	1,041,605	104,475	20,836
2010				1,112,521	1,250,384	1,258,380	1,253,471	1,276,555	1,233,729	1,230,374	193,273	23,029
2011					1,092,125	1,139,829	1,160,676	1,134,783	1,160,467	1,138,849	175,768	24,942
2012						1,195,390	1,212,625	1,235,541	1,258,868	1,217,096	229,162	26,613
2013							1,295,006	1,344,357	1,403,279	1,375,254	407,549	29,179
2014								1,351,268	1,417,460	1,463,809	607,888	30,254
2015									1,335,856	1,399,039	722,174	31,862
2016										1,395,154	1,088,868	18,283
										$12,501,951	Total	

Cumulative Paid Losses and Allocated Loss Expenses, Net of Reinsurance

Accident Year	For the Years Ended December 31,									
	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016
2007	$ 22,680	$ 142,855	$ 315,942	$ 470,594	$ 751,437	$ 855,446	$ 917,798	$ 961,739	$ 993,114	$ 1,011,066
2008		46,589	175,724	384,593	557,222	673,130	771,029	843,167	886,979	898,297
2009			43,912	237,264	414,586	535,197	638,617	727,782	771,855	818,732
2010				101,673	292,403	516,383	649,167	759,673	862,584	937,451
2011					115,807	258,861	418,204	594,047	748,537	818,838
2012						117,735	297,186	471,949	644,936	775,521
2013							124,226	307,950	533,465	710,905
2014								133,592	335,216	555,967
2015									109,217	282,670
2016										103,727
										$ 6,913,174
									All outstanding liabilities prior to 2007, net of reinsurance	765,300
									Liabilities for unpaid losses and loss expenses, net of reinsurance	$ 6,354,077

Average Annual Percentage Payout of Incurred Losses by Age, Net of Reinsurance

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
7%	14%	16%	13%	13%	8%	5%	4%	3%	3%

(1) Total IBNR Liabilities Plus Expected Development on Reported Claims

Reinsurance Segment

(in thousands)

Incurred Losses and Allocated Loss Expenses, Net of Reinsurance

	For the Years Ended December 31,									As of Dec 31, 2016		
Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016	IBNR (1)	Number of Claims
2007	$ 1,373,989	$ 1,315,895	$ 1,292,265	$ 1,252,940	$ 1,246,925	$1,239,171	$ 1,224,302	$ 1,201,176	$ 1,157,375	$ 1,144,626	$ 88,476	N/A
2008		1,613,114	1,605,756	1,567,923	1,550,254	1,561,457	1,559,826	1,559,314	1,535,515	1,535,533	121,015	N/A
2009			1,150,325	1,128,445	1,084,088	1,076,187	1,067,335	1,049,967	1,052,553	1,046,087	127,390	N/A
2010				1,280,586	1,302,532	1,302,827	1,290,292	1,286,737	1,295,555	1,284,178	150,491	N/A
2011					2,222,386	2,201,054	2,102,613	2,059,076	2,089,535	2,082,525	178,659	N/A
2012						1,827,087	1,860,740	1,840,530	1,832,972	1,812,667	247,825	N/A
2013							1,615,956	1,551,432	1,544,739	1,502,096	279,880	N/A
2014								1,434,902	1,452,029	1,418,828	344,569	N/A
2015									1,504,763	1,459,003	543,530	N/A
2016										1,845,237	1,067,346	N/A
										$15,130,780	Total	

Cumulative Paid Losses and Allocated Loss Expenses, Net of Reinsurance

	For the Years Ended December 31,									
Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016
2007	$ 153,912	$ 359,533	$ 592,431	$ 703,600	$ 793,787	$ 848,114	$ 897,073	$ 922,262	$ 925,230	$ 951,136
2008		327,154	654,658	883,897	1,019,382	1,104,015	1,170,828	1,216,006	1,244,802	1,285,355
2009			176,089	389,499	526,118	611,967	685,901	732,134	764,307	797,666
2010				232,372	477,894	667,841	774,216	836,148	936,971	1,011,698
2011					596,906	1,255,164	1,448,330	1,588,434	1,675,428	1,730,787
2012						318,115	785,212	1,070,442	1,223,403	1,313,092
2013							318,270	685,680	908,575	1,016,654
2014								287,780	653,323	826,700
2015									279,024	589,550
2016										330,708
										$ 9,853,346
									All outstanding liabilities prior to 2007, net of reinsurance	1,431,871
									Liabilities for unpaid losses and loss expenses, net of reinsurance	$ 6,709,305

Average Annual Percentage Payout of Incurred Losses by Age, Net of Reinsurance

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
20%	24%	15%	8%	5%	4%	1%	2%	3%	1%

(1) Total IBNR Liabilities Plus Expected Development on Reported Claims

Property and Other Short-tail Lines
(in thousands)

Incurred Losses and Allocated Loss Expenses, Net of Reinsurance

For the Years Ended December 31, **As of Dec 31, 2016**

Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016	IBNR (1)	Number of Claims
2007	$ 655,785	$ 612,847	$ 591,325	$ 576,823	$ 556,160	$ 543,586	$ 542,517	$ 531,757	$ 505,908	$ 504,777	$ 9,948	N/A
2008		922,391	913,108	893,143	870,757	855,385	851,340	855,891	849,351	856,596	22,281	N/A
2009			574,748	541,926	507,488	488,419	479,539	474,526	468,240	472,758	4,958	N/A
2010				821,119	842,728	846,563	852,550	857,788	840,206	840,582	26,847	N/A
2011					1,728,879	1,697,826	1,617,499	1,589,207	1,593,064	1,585,694	42,172	N/A
2012						1,268,108	1,294,768	1,285,569	1,255,565	1,243,866	69,188	N/A
2013							1,068,975	1,011,548	975,565	939,295	45,977	N/A
2014								865,668	855,081	814,558	57,491	N/A
2015									878,711	829,691	163,854	N/A
2016										1,140,759	531,843	N/A
										$ 9,228,576	Total	

Cumulative Paid Losses and Allocated Loss Expenses, Net of Reinsurance

For the Years Ended December 31,

Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016
2007	$ 128,299	$ 274,682	$ 427,810	$ 470,765	$ 487,471	$ 491,862	$ 503,233	$ 497,701	$ 478,062	$ 483,023
2008		291,995	541,613	693,174	757,091	784,005	801,027	805,951	803,919	816,877
2009			145,413	307,294	389,835	421,579	441,032	445,905	445,861	453,626
2010				215,463	429,578	577,128	639,012	665,932	734,453	783,155
2011					581,324	1,196,404	1,344,405	1,432,899	1,472,992	1,493,813
2012						293,705	713,154	933,717	1,028,319	1,068,475
2013							291,534	604,497	768,385	819,523
2014								250,708	556,548	658,511
2015									236,009	472,543
2016										265,695
										$ 7,315,241
									All outstanding liabilities prior to 2007, net of reinsurance	287,838
									Liabilities for unpaid losses and loss expenses, net of reinsurance	$ 2,201,173

Average Annual Percentage Payout of Incurred Losses by Age, Net of Reinsurance

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
29%	34%	17%	7%	3%	4%	2%	1%	(1)%	1%

(1) Total IBNR Liabilities Plus Expected Development on Reported Claims

Casualty and Other Long-Tail Lines
(in thousands)

Incurred Losses and Allocated Loss Expenses, Net of Reinsurance

For the Years Ended December 31, **As of Dec 31, 2016**

Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016	IBNR (1)	Number of Claims
2007	$ 718,204	$ 703,048	$ 700,940	$ 676,117	$ 690,765	$ 695,585	$ 681,785	$ 669,419	$ 651,467	$ 639,849	$ 78,528	N/A
2008		690,723	692,648	674,780	679,497	706,072	708,486	703,423	686,164	678,937	98,734	N/A
2009			575,577	586,519	576,600	587,768	587,796	575,441	584,313	573,329	122,432	N/A
2010				459,467	459,804	456,264	437,742	428,949	455,349	443,596	123,644	N/A
2011					493,507	503,228	485,114	469,869	496,471	496,831	136,487	N/A
2012						558,979	565,972	554,961	577,407	568,801	178,637	N/A
2013							546,981	539,884	569,174	562,801	233,903	N/A
2014								569,234	596,948	604,270	287,078	N/A
2015									626,052	629,312	379,676	N/A
2016										704,478	535,503	N/A
										$ 5,902,204	Total	

Cumulative Paid Losses and Allocated Loss Expenses, Net of Reinsurance

For the Years Ended December 31,

Accident Year	Unaudited 2007	Unaudited 2008	Unaudited 2009	Unaudited 2010	Unaudited 2011	Unaudited 2012	Unaudited 2013	Unaudited 2014	Unaudited 2015	2016
2007	$ 25,613	$ 84,851	$ 164,621	$ 232,835	$ 306,316	$ 356,252	$ 393,840	$ 424,561	$ 447,168	$ 468,113
2008		35,159	113,045	190,723	262,291	320,010	369,801	410,055	440,883	468,478
2009			30,676	82,205	136,283	190,388	244,869	286,229	318,446	344,040
2010				16,909	48,316	90,713	135,204	170,216	202,518	228,543
2011					15,582	58,760	103,925	155,535	202,436	236,974
2012						24,410	72,058	136,725	195,084	244,617
2013							26,736	81,183	140,190	197,131
2014								37,072	96,775	168,189
2015									43,015	117,007
2016										65,013
										$ 2,538,105
									All outstanding liabilities prior to 2007, net of reinsurance	1,144,033
									Liabilities for unpaid losses and loss expenses, net of reinsurance	$ 4,508,132

Average Annual Percentage Payout of Incurred Losses by Age, Net of Reinsurance

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
5%	9%	10%	10%	9%	7%	7%	6%	6%	4%

(1) Total IBNR Liabilities Plus Expected Development on Reported Claims

Reconciliation

(U.S. dollars in thousands)	December 31, 2016
Net outstanding liabilities	
Insurance Segment	
EPC	$ 1,235,716
Specialty	1,801,962
Professional	3,951,383
Casualty and other	6,354,077
Reinsurance Segment	
Property and Other Short-Tail lines	2,201,173
Casualty and Other Long-Tail lines	4,508,132
Subtotal, disaggregated triangles	$ 20,052,443
Unallocated loss expenses	482,680
Discount (1)	(413,522)
Provision for uncollectible reinsurance	42,119
Other	295,551
Total net liability for unpaid losses and loss expenses	20,459,271
Reinsurance recoverable on unpaid losses	
Insurance Segment	
EPC	$ 486,595
Specialty	524,545
Professional	1,195,720
Casualty	2,836,800
Reinsurance Segment	
Property and Other Short-Tail lines	242,845
Casualty and Other Long-Tail lines	122,190
Other	71,605
Total recoverable on unpaid losses and loss expenses	$ 5,480,300
Unpaid losses and loss expenses	$ 25,939,571

(1) As noted in Note 10(c), "Losses and Loss Expenses - Loss Reserve Discounting," the Company discounts only certain workers' compensation (including long term disability) liabilities and certain bodily injury liability claims, emanating from U.K. exposures, predominantly from the U.K. motor liability portfolio.

(b) Net losses and loss expenses incurred

Net losses and loss expenses incurred for the years indicated are comprised of:

(U.S. dollars in thousands)	2016	2015	2014
Loss and loss expenses payments	$ 6,828,012	$ 6,505,075	$ 4,499,642
Change in unpaid losses and loss expenses	976,401	(168,263)	(514,406)
Change in unpaid losses and loss expenses recoverable	(238,086)	(440,189)	(48,536)
Paid loss recoveries	(1,493,492)	(1,130,423)	(678,307)
Net losses and loss expenses incurred	$ 6,072,835	$ 4,766,200	$ 3,258,393

The following table presents the net (favorable) adverse prior year loss development of the Company's loss and loss expense reserves for its property and casualty operations by operating segment for each of the years indicated:

(U.S. dollars in thousands)	2016	2015	2014
Insurance segment	$ (91,459)	$ (65,030)	$ (99,758)
Reinsurance segment	(210,083)	(241,600)	(155,314)
Total	$ (301,542)	$ (306,630)	$ (255,072)

The significant developments in prior year loss reserve estimates for each of the years indicated within the Company's Insurance and Reinsurance segments are discussed below.

Insurance Segment

The following table summarizes the net (favorable) adverse prior year development by business group relating to the Insurance segment for the indicated years ended December 31:

(U.S. dollars in thousands)	2016	2015	2014
EPC	$ (38,366)	$ (6,447)	$ (57,465)
Specialty	(5,655)	(93,043)	(82,756)
Professional	$ 10,813	$ 5,740	$ 17,092
Casualty and other	(58,251)	28,720	23,371
Total	$ (91,459)	$ (65,030)	$ (99,758)

Net favorable prior year reserve development of $91.5 million for the year ended December 31, 2016 for the Insurance segment. This amount differs from the implied change in ultimate losses that can be calculated from the above triangles because the triangles exclude accident years prior to 2007 as well as minor business and, as noted earlier, utilize a different approach for handling foreign exchange. The total net prior year development of $91.5 million was driven by the following:

- For EPC lines, net prior year development was $38.4 million favorable. This was driven by reflecting better than expected reported non-catastrophe loss experience, particularly on the more recent years in the energy book, and reductions in our estimates for prior year catastrophe losses.
- For specialty lines, net prior year development was $5.7 million favorable. This was driven by releases of $19.8 million in the marine business due to better than expected reported loss experience on the cargo, hull and liability businesses, and $5.9 million in fine art and species to reflect benign reported loss activity. This was partially offset by strengthening of $26.0 million in Accident and Health driven by deteriorations in recent accident years in the U.S. and Switzerland books.
- For professional lines, net prior year development was $10.8 million adverse. This was driven by significant large loss experience on the international financial lines management liability book, particularly on the 2015 report year and strengthening in more recent years on the discontinued design subcontractors default portfolio. This was partially offset by better than expected loss experience reported on the Bermuda directors and officers and employment practices liability portfolio and reductions in our estimates on the design practice book.
- For casualty and other lines, net prior year development was $58.3 million favorable. This was driven by releases of $72.2 million in international casualty primarily to reflect better than expected loss experience reported on the general and professional liability portfolio, predominantly on the 2011 and prior years, and $21.7 million in discontinued casualty primarily due to our reassessment of the IBNR provision for a large risk U.S. Casualty portfolio discontinued prior to 2008, following favorable claims resolutions in recent years. This was partially offset by strengthening to reflect worse than expected loss experience reported on more recent years in the excess and surplus portfolio and the newly acquired Allied business.

Net favorable prior year reserve development totaled $65.0 million for the Insurance segment for the year ended December 31, 2015. Specialty benefited from releases in marine, the discontinued international political risk portfolio due to a favorable settlement of a loss on the 2009 accident year, and reductions in the discontinued specialty book. Casualty was subject to adverse development with deteriorations in excess and surplus and a large claim in the surety portfolio partially offset by releases in the excess casualty book and international casualty reflecting better than expected loss experience. Strengthening in the core U.S. standard commercial book and select accountants and public entities portfolios led to overall adverse development in Professional.

Net favorable prior year reserve development totaled $99.8 million for the Insurance segment for the year ended December 31, 2014. Specialty benefited from a release in aerospace and the discontinued international political risk portfolio due to better than expected loss experience reported. Better than expected loss experience reported for the non-catastrophe exposures primarily in the 2013 accident year led to a release in property. Casualty experienced strengthening in the U.S. environmental portfolio, Lloyd's middle market book and the U.S. primary casualty lines due to worse than expected loss experience from 2008 through 2013, while a strengthening in the core U.S. standard commercial book drove a strengthening in Professional.

There is no assurance that conditions and trends that have affected the development of liabilities in the past will continue. Accordingly, it may not be appropriate to extrapolate future redundancies or deficiencies based on the Company's historical results.

Reinsurance Segment

The following table summarizes the net (favorable) adverse prior year development by line of business relating to the Reinsurance segment for the indicated years ended December 31:

(U.S. dollars in thousands)	2016	2015	2014
Property and Other Short-Tail Lines	$ (134,440)	$ (173,754)	$ (85,324)
Casualty and Other Long-Tail Lines	(75,643)	(67,846)	(69,990)
Total	$ (210,083)	$ (241,600)	$ (155,314)

Net favorable prior year reserve development for the year ended December 31, 2016 totaled $210.1 million for the Reinsurance segment. This amount differs from the implied change in ultimate losses that can be calculated from the above triangles because the triangles exclude accident years prior to 2007 as well as minor business and, as noted earlier, utilize a different approach for handling foreign exchange. The total net prior year development of $210.1 million was attributable to the following:

- Net favorable prior year development for the short-tail lines totaled $134.4 million. Details of the significant components are as follows:
  - For property catastrophe lines, net prior year development was $76.6 million favorable primarily due to IBNR release on older catastrophes and better than expected experience.
  - For property other lines, net prior year development was $25.6 million favorable mainly due to better than expected development on attritional losses on the Property lines partially offset by adverse developments on the crop book.
  - For specialty lines, net prior year development was $32.2 million favorable arising from better than expected development on attritional losses, predominantly on the marine book.
- Net favorable prior year development for the long-tail lines totaled $75.6 million. Details of the significant components are as follows:
  - For casualty lines, net prior year development was $65.5 million favorable due to better than expected development on attritional losses for the 2013 and prior years of account.
  - For other lines, net prior year development was $10.0 million favorable largely due to better than expected development on attritional losses on the whole account book.

Net favorable prior year reserve development totaled $241.6 million for the year ended December 31, 2015. The short-tail lines benefited from $88.9 million in favorable development from Property other lines, $50.3 million favorable development in property catastrophe lines and $34.6 million in favorable development within specialty lines. The release in long tail lines was due to favorable development of $40.1 million and $27.8 million in casualty and other, respectively.

Net favorable prior year reserve development totaled $155.3 million for the year ended December 31, 2014. The short-tail lines benefited from $63.4 million in favorable development from Property other lines and $34.4 million in favorable marine and aviation development, partially offset by adverse property catastrophe development of $12.4 million. The release in long-tail lines was due to favorable development of $44.3 million and $25.7 million in casualty and other, respectively.

There is no assurance that conditions and trends that have affected the development of liabilities in the past will continue. Accordingly, it may not be appropriate to extrapolate future redundancies or deficiencies based on the Company's historical results.

(c) Loss Reserve Discounting

Except for certain workers' compensation (including long term disability) liabilities and certain bodily injury liability claims, emanating from U.K. exposures, predominantly from the U.K. motor liability portfolio, the Company does not discount its unpaid losses and loss expenses.

The Company utilizes tabular reserving for workers' compensation (including long-term disability) unpaid losses that are considered fixed and determinable, and discounts such losses using an interest rate of 3.75% in 2016 and 2015. The interest rate approximates the implied return on the market-based assets supporting the expected cash flows of our liabilities. The tabular reserving methodology results in applying uniform and consistent criteria for establishing expected future indemnity and medical payments (including an explicit factor for inflation) and the use of mortality tables to determine expected payment periods. Tabular unpaid losses and loss expenses, net of reinsurance, at December 31, 2016 and 2015 on an undiscounted basis were $727.4 million and $747.4 million, respectively. The aggregate discount for the time value of money deducted to derive the liability for unpaid losses and loss expenses were $287.7 million and $302.1 million at December 31, 2016 and 2015, respectively. The related discounted unpaid losses and loss expenses were $439.7 million and $445.3 million at December 31, 2016 and 2015, respectively. The interest accretion related to the unwind of the discounted reserves was $18.6 million and $7.8 million during the years ended December 31, 2016 and 2015, respectively. This interest accretion was recorded in the incurred loss line as adverse prior year development.

The Company records a specific reserve allowance for Periodical Payment Orders ("PPOs") related to bodily injury liability claims. This allowance includes the unpaid losses for claims already settled and notified as PPOs at December 31, 2016, as well as the unpaid losses for claims to be settled in the future. The future care element of the unpaid losses was discounted using an interest rate of 2% at both December 31, 2016 and 2015. Unpaid losses and loss expenses, net of reinsurance, at December 31, 2016 and 2015 on an undiscounted basis were $281.6 million and $298.1 million, respectively. The aggregate discount for the time value of money deducted to derive the liability for the unpaid losses and loss expenses were $125.9 million and $130.2 million at December 31, 2016 and 2015 After discounting the future care element, the unpaid losses and loss expenses were $155.7 million and $167.9 million at December 31, 2016 and 2015, respectively. The decrease in the net undiscounted unpaid losses and loss expenses between December 31, 2016 and 2015 is mainly due to foreign exchange rate movements. The interest accretion related to the unwind of the discounted reserves was $2.8 million and $2.6 million during the calendar years ended December 31, 2016 and 2015, respectively. This interest accretion was recorded in the incurred loss line as adverse prior year development.

(d) Discontinued Asbestos and Run-Off Environmental Related Claims

The Company's reserving process includes a continuing evaluation of the potential impact on unpaid liabilities from exposure to discontinued asbestos and run-off environmental claims, including related loss adjustment expenses. Liabilities are established to cover both known and incurred but not reported claims. The Company's reserving and exposures to environmental liability business currently written within the Casualty underwriting division are not included in this note, which only relates to specific discontinued and/or run-off coverages that were not originally written specifically to cover environmental hazards.

The Company's exposure to discontinued asbestos and run-off environmental claims arises from the following four sources:

(1) Reinsurance contracts written, both on a proportional and excess basis, after 1972. The Company discontinued writing contracts with these exposures in 1985. Business written was across many different policies, each with a relatively small contract limit. The Company's reported asbestos claims relate to both traditional products and premises and operations coverage.

(2) Winterthur – business of Winterthur purchased by the Company from AXA Insurance (formerly Winterthur Swiss Insurance Company) in 2001. Pursuant to the Sale and Purchase Agreement and related agreements, AXA Insurance reimburses the Company for all asbestos losses.

(3) During 2006, the Company acquired $40.2 million in losses through a loss portfolio transfer contract of which $18.3 million in losses related to asbestos and environmental claims. Given the terms of the policy, the combined aggregate limit on the total acquired reserves is $60.0 million, not including coverage for claims handling costs over a defined period.

(4) Catlin Acquisition - aviation insurance contracts written by Catlin in the Lloyd's market where the specific asbestos exclusion language was not implemented until 2003. Exposures only extend back to 1993 as Equitas was established to take on the Lloyd's market exposure for 1992 and prior. Exposure is due to asbestos-containing products in use by the aviation industry leading to claims against aviation manufacturers for asbestosis, mesothelioma and lung cancer.

A reconciliation of the opening and closing unpaid losses and loss expenses related to discontinued asbestos and run-off environmental exposure claims for the years indicated is as follows:

Year ended December 31, *(U.S. dollars in thousands)*	**2016**	**2015**	**2014**
Net unpaid losses and loss expenses at beginning of year	$ 93,704	$ 81,416	$ 80,435
Net incurred losses and loss expenses	9,042	15,663	8,903
Less net paid losses and loss expenses	9,912	9,087	7,922
Net increase (decrease) in unpaid losses and loss expenses	$ (870)	$ 6,576	$ 981
Acquired reserves	—	5,712	—
Net unpaid losses and loss expenses at end of year	92,834	93,704	81,416
Unpaid losses and loss expenses recoverable at end of year	83,430	93,688	100,537
Gross unpaid losses and loss expenses at end of year	$ 176,264	$ 187,392	$ 181,953

Reserves for incurred but not reported losses, net of reinsurance, included in the above table were $60.3 million, $65.1 million and $49.3 million at December 31, 2016, 2015 and 2014, respectively. Unpaid losses recoverable are net of potential uncollectible amounts.

At December 31, 2016, the Company had 2,417 open claim files for potential discontinued asbestos claims exposures and 458 open claim files for potential run-off environmental claims exposures. Approximately 34%, 32% and 46% of the open claim files are due to precautionary claim notices in 2016, 2015 and 2014, respectively. Precautionary claim notices are submitted by the ceding companies in order to preserve their right to receive coverage under the reinsurance contract. Such notices do not contain an incurred loss amount to the Company. The increase in total open claim files during 2015 was largely due to the Catlin Acquisition, as noted above.

The development of the number of open claim files for potential discontinued asbestos and run-off environmental claims, including precautionary claims, is as follows:

	Asbestos Claims	Environmental Claims
Total number of claims outstanding at December 31, 2013	1,097	338
New claims reported in 2014	456	190
Claims resolved in 2014	(154)	(69)
Total number of claims outstanding at December 31, 2014	1,399	459
New claims reported in 2015	272	67
Claims resolved in 2015	(246)	(96)
Reserves acquired in 2015	1,166	—
Total number of claims outstanding at December 31, 2015	2,591	430
New claims reported in 2016	579	69
Claims resolved in 2016	(753)	(41)
Total number of claims outstanding at December 31, 2016	2,417	458

The Company's reserving process includes an ongoing evaluation of the potential impact on unpaid liabilities from exposure to discontinued asbestos and run-off environmental claims, including related loss adjustment expenses. Liabilities are established to cover both known and IBNR claims.

The estimation of loss and loss expense liabilities for discontinued asbestos and run-off environmental exposures is subject to much greater uncertainty than is normally associated with the establishment of liabilities for certain other exposures due to several factors, including: (i) uncertain legal interpretations and application of insurance and reinsurance coverage and liability; (ii) the lack of reliable available historical claims data as an indicator of future claims development; (iii) an uncertain political climate which may impact, among other areas, the nature and amount of costs for remediating waste sites; and (iv) the potential of insurers and reinsurers to reach agreements in order to avoid further significant legal costs. Due to the potential significance of these uncertainties, the Company believes that no meaningful range of loss and loss expense liabilities beyond recorded reserves can be established. As the Company's net unpaid loss and loss expense reserves related to discontinued asbestos and run-off environmental exposures are less than 1% of the total net reserves at December 31, 2016 and 2015, further adverse development is not expected to be material to the Company's overall net loss reserves. The Company believes it has made reasonable provisions for its discontinued asbestos and run-off environmental exposures and is unaware of any specific issues that would significantly affect its estimate of loss and loss expenses.