The Progressive Corporation

REPORT ON LOSS RESERVING PRACTICES

August 2015

PROGRESSIVE

Preface

The artwork[1] on the cover of the *2015 Report on Loss Reserving Practices* displays a picture within a picture concept while showing 3 of Progressive's business groups (Auto, Commercial Lines, and Special Lines). A picture within a picture not only fragments the original picture, but creates new pictures from those smaller pieces. This basic fragmentation, or the creation of segment triangles, is the foundation for how Loss Reserving accurately determines reserves levels.

The primary purpose of this report is to help interested stakeholders better understand our loss reserving process and how it affects our financial results. Reserves in this report refer to loss and loss adjustment expense reserves.

The *2015 Report on Loss Reserving Practices* is very similar to the 2014 report. However, we updated financial information throughout the report, and we updated Sections III and VII to reflect enhancements to our process for setting Adjusting & Other expense reserves.

As the Appendix is a separate document, you can electronically link to it anywhere that you see the blue underlined word: Appendix.

Consistent with Progressive's culture of self-examination, our analysis of loss reserves demands continuous change and continuous improvement. Each section of this report focuses on a different aspect of our reserving process.

- Section I provides an overview of our financial objectives and results, and explains why accurate reserving is important
- Section II defines reserve development and describes how it affects our financial results, and also how historical results compare to our goal of having total reserves that are adequate and develop with minimal variation
- Section III defines the types of reserves, how they are related and how we analyze them
- Section IV describes how and why we estimate our required reserves by segment
- Section V defines many of the terms we use throughout the report
- Sections VI and VII in the Appendix present two case studies of segment reserve reviews – one for loss reserves and one for Loss Adjustment Expense (LAE) reserves, including discussion of the issues we consider and the calculations involved

The *2015 Report on Loss Reserving Practices* was revised by Arpen Patel and Karen Vancleave. Despite the technical nature of our reserve analysis, we strive to make this report as accessible and understandable as possible to a wide audience. We welcome your comments so that we may continue to enhance it. Comments and questions should be directed to Gary Traicoff, Corporate Actuary or Karen Vancleave, Actuarial Director, at The Progressive Corporation, 6300 Wilson Mills Road, Mayfield Village, Ohio 44143 or e-mailed to gary_traicoff@progressive.com or karen_vancleave@progressive.com.

[1] Artwork for the cover of this report was designed by **Daniel Holt.

Safe Harbor Statement Under the Private Securities Litigation Reform Act of 1995: *Statements in this release that are not historical fact are forward-looking statements that are subject to certain risks and uncertainties that could cause actual events and results to differ materially from those discussed herein. These risks and uncertainties include, without limitation, uncertainties related to estimates, assumptions, and projections generally; inflation and changes in economic conditions (including changes in interest rates and financial markets); the possible failure of one or more governmental, corporate, or other entities to make scheduled debt payments or satisfy other obligations; the potential or actual downgrading by one or more rating agencies of our securities or governmental, corporate, or other securities we hold; the financial condition of, and other issues relating to the strength of and liquidity available to, issuers of securities held in our investment portfolios and other companies with which we have ongoing business relationships, including reinsurers and other counterparties to certain financial transactions; the accuracy and adequacy of our pricing, loss reserving, and reinsurance methodologies; the competitiveness of our pricing and the effectiveness of our initiatives to attract and retain more customers; our ability to obtain adequate reinsurance at acceptable rates and to collect under our reinsurance contracts; initiatives by competitors and the effectiveness of our response; our ability to obtain regulatory approval for the introduction of products to new jurisdictions, for requested rate changes and the timing thereof and for any proposed acquisitions; the effectiveness of our brand strategy and advertising campaigns relative to those of competitors; legislative and regulatory developments at the state and federal levels, including, but not limited to, matters relating to vehicle and homeowners insurance, health care reform and tax law changes; the outcome of disputes relating to intellectual property rights; the outcome of litigation or governmental investigations that may be pending or filed against us; weather conditions (including the severity and frequency of storms, hurricanes, floods, snowfalls, hail, and winter conditions); changes in driving patterns, including vehicle usage as influenced by the level of oil and gas prices, among other factors; our ability to accurately recognize and appropriately respond in a timely manner to changes in loss frequency and severity trends; technological advances; acts of war and terrorist activities; our ability to maintain the uninterrupted operation of our facilities, systems (including information technology systems), and business functions, and safeguard personal and sensitive information in our possession; our continued access to and functionality of third-party systems that are critical to our business; court decisions, new theories of insurer liability or interpretations of insurance policy provisions and other trends in litigation; changes in health care and auto and property repair costs; and other matters described from time to time in our releases and publications, and in our periodic reports and other documents filed with the United States Securities and Exchange Commission. In addition, investors should be aware that generally accepted accounting principles prescribe when a company may reserve for particular risks, including litigation exposures. Accordingly, results for a given reporting period could be significantly affected if and when a reserve is established for one or more contingencies. Also, our regular reserve reviews may result in adjustments of varying magnitude as additional information regarding claims activity becomes known. Reported results, therefore, may be volatile in certain accounting periods.*

Table of Contents

Section I – About Progressive

Our Business

The Progressive insurance organization began business in 1937. The Progressive Corporation, an insurance holding company formed in 1965, currently has 53 wholly owned subsidiaries, one mutual insurance company affiliate, and one limited partnership investment affiliate. In addition, Progressive owns a majority interest in ARX Holding Corp., which wholly owns, either directly or in combination with its subsidiaries, 15 subsidiaries.

Our insurance subsidiaries and mutual insurance company affiliate provide personal and commercial automobile and property insurance and other specialty property-casualty insurance and related services. Our property-casualty auto insurance products protect our customers against losses due to collision and physical damage to their motor vehicles, uninsured and underinsured bodily injury, and liability to others for personal injury or property damage arising out of the use of those vehicles. Our property insurance products protect homeowners and renters against losses caused by fire, windstorms, hail, lightning, theft, or vandalism. Our non-insurance subsidiaries and limited partnership investment affiliate generally support our insurance and investment operations.

We operate our personal and commercial auto businesses throughout the United States and sell personal auto insurance on an Internet-only basis in Australia. Our homeowners business is underwritten by select carriers, including our majority owned subsidiary, throughout the U.S.

2014 Business Overview

Progressive generated net income of $1.28 billion, or $2.15 per share, for 2014. From an operations standpoint, the Company generated an underwriting profit of 7.7% which exceeded our targeted goal of 4.0%. The Company generated $18.7 billion of net written premiums across all business units, an increase of 8% from the prior year. Policies in force—our preferred measure of growth—increased 2% on a companywide basis, which represented over 205,000 additional policies. Our 2014 results show a Return on Shareholders' Equity (ROE) of 19.1%[2] and a Comprehensive ROE of 20.1%[3].

Our Financial Objectives

At Progressive, we measure ourselves against two specific goals designed to maximize the value of our Company. Our most important goal is for our insurance subsidiaries to produce an aggregate calendar year underwriting profit of at least 4%. Second, we seek to grow our business as fast as possible so long as doing so is consistent with our profitability objective and our ability to provide high quality service. We communicate these two corporate goals to every Progressive employee and work together to achieve them.

---

[2] Based on net income

[3] Use of Comprehensive ROE is consistent with the Company's policy to manage on a total return basis and reflects changes in unrealized gains and losses on securities held in our portfolio. For Progressive, Comprehensive ROE consists primarily of:

$$\frac{\text{(Net Income) + (Changes in Unrealized Security Gains, Net of Taxes)}}{\text{(Average Shareholders' Equity)}}$$

To review all components of Progressive's Comprehensive ROE, refer to our "Consolidated Statements of Comprehensive Income" and related notes in our *2014 Annual Report to Shareholders*, which is attached as an appendix to the Company's *2015 Proxy Statement*.

Our financial policies evaluate our exposure to risk, which is the chance that actual events turn out to be significantly different than expected and result in a loss of capital. Our Risk Management area, along with our business units, identifies risks that have the potential to significantly impair our strategic objectives. We use risk management tools to quantify the amount of capital needed, in addition to surplus, to absorb consequences of unfavorable events. These events include items such as unfavorable loss development, weather catastrophes, and investment market corrections among other events. We include these estimates in our capital models.

Our risks are classified into the following four categories:

- **Insurance Risks** – risks associated with assuming, or indemnifying for, the losses of, or liabilities incurred by, policyholders
- **Operating Risks** – the risks stemming from external or internal events or circumstances that may directly or indirectly affect our insurance operations
- **Market Risks** – changes in the value of assets held in our investment portfolios, which might result from a variety of factors impacting the investment marketplace generally, or the sectors, industries, or individual securities in which we have invested
- **Credit Risks** – the risks that a counterparty to a transaction will fail to perform according to the terms of a contract or that we will be unable to satisfy our obligations when due or obtain capital when necessary

Loss reserving is an operating insurance risk because significant variations in loss reserve estimates affect our operating profit and our ability to price accurately.

Loss reserving is an activity that is central to the achievement of our goals. It involves estimating the magnitude and timing of future claim payments and loss adjustment expenses for accidents that have already occurred. These estimates take into account not only claims that are in the process of being settled but also claims on accidents that have happened but have not yet been recorded by the Company. At year-end 2014, Progressive's estimated gross loss and LAE reserves amounted to $8.9 billion.

Relationship between Loss Reserving and Pricing Functions

Unlike most industries, insurers do not know their costs until well after a sale has been made. Thus, one of the most important functions for an insurance company is setting rates or pricing. The goal of our pricing function is to properly evaluate future risks the Company will assume but has not yet written. Estimates of future claim payments are essential for accurately measuring Progressive's underwriting profit and for determining whether pricing changes are needed to achieve the Company's underwriting target. Reserve estimates that are too low can lead to the conclusion that pricing is adequate when it is not, and additionally, we may experience unprofitable growth. Reserve estimates that are too high may lead to inflated prices, potentially limiting our ability to attract and retain customers.

Our product-focused business units continue to seek ways to advance the science of rate-making to achieve accurate cost-based pricing at the most detailed level our data will support. This allows us to more accurately match our rates with expected loss costs by risk classification.

The role of the pricing function is to determine rates that are adequate to achieve our profitability goals without being excessive or unfairly discriminatory to consumers. The pricing teams develop their own projections of ultimate losses for the purposes of ratemaking. Though the pricing function is very different from the loss reserving function, the data used is consistent between the functions. Typical information that the Loss Reserving group shares with the Pricing group includes:

- Overall changes in the level of reserves by type of reserve (see Section III)
- History of claim development and selected ultimate losses by accident period
- Changes in selected ultimate loss amounts over time
- Selected severity by historical accident period and resulting trends
- Selected frequency by historical accident period and resulting trends
- Changes in actuarially determined case average reserves by age (see Section III)
- Changes in the level of average adjuster case reserve estimates (see Section III)
- Changes in claim closure rates
- Changes in the closed without payment (CWP) rate

Judgments made by both the loss reserving and pricing areas consider additional information. Growth and process changes may cause claims to settle faster or slower than previous experience. Changes in regulatory requirements made by state insurance departments, in the mix of business, and in the underwriting process may also contribute to unexpected changes in the data.

We use a cost-plus strategy in pricing, beginning with the projected ultimate losses and LAE. The Pricing group estimates the ultimate losses and LAE for each coverage for the state under review. Their projection methods are similar to those used by the Loss Reserving group, as described in Section IV.

Trend selections have a significant impact on how much the rates will change. Changes in the average cost of a claim (severity trend), in the proportion of insured cars that have a claim (frequency trend), and in average premium adjusted for current rate levels (premium trend) are analyzed and selected.

The Loss Reserving group meets regularly with the Product Management group, Pricing group and Claims area to discuss these issues.

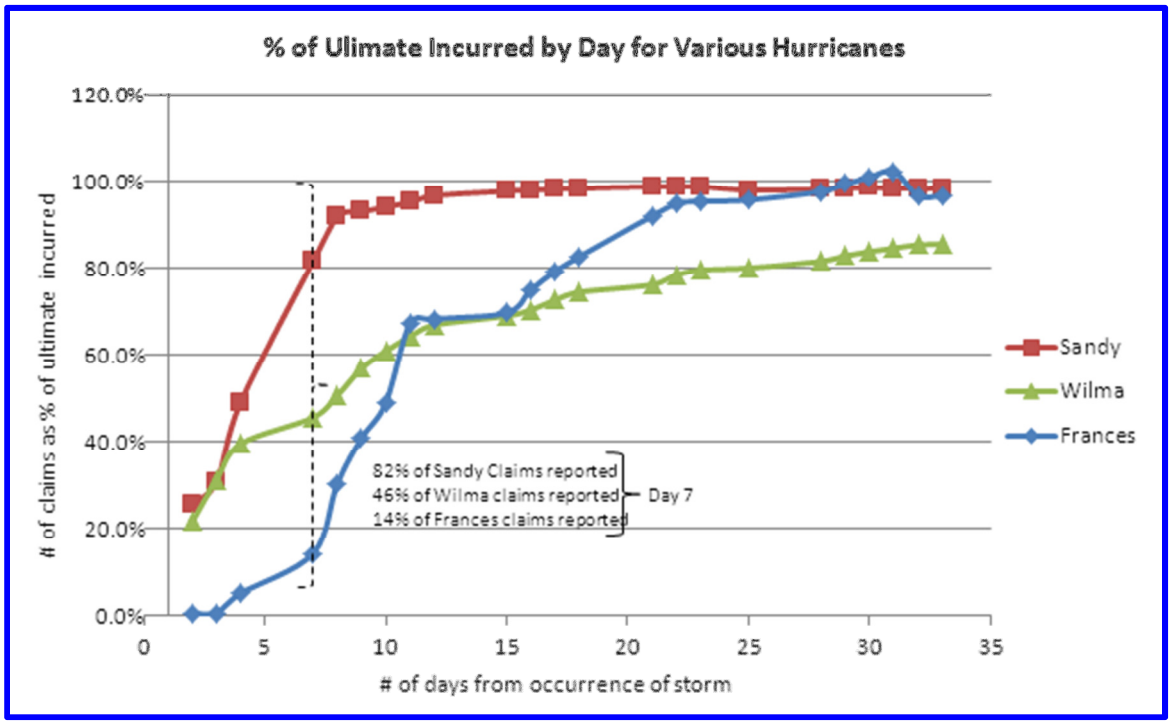
Loss Reserve Uncertainty and Capital Planning

With recommended regulatory changes and other developments (Solvency II & Own Risk Solvency Assessment or ORSA), companies that are currently or anticipate taking advantage of Loss Reserve Disclosures are likely to benefit in many ways. Disclosure regarding an insurer's practice of setting loss reserves, generally an insurer's largest balance sheet liability, helps explain business decisions to investors, rating agencies and other interested parties such as regulators, employees and other stakeholders in the firm. Disclosures such as this 2015 Report on Loss Reserving Policies, which we file with the SEC on Form 8-K, allow management to explain its thoughts and practices in setting reserves, the methods used to model reserves and the varying degree of results that are produced by various reserving methods.

Actuarial estimates of future loss payments resulting from accidents that have already occurred are imprecise by their nature. The amount that will actually be paid is uncertain for many reasons and may deviate, sometimes substantially, from the estimated liability. Because loss reserves are inherently imprecise, insurers are faced with the real risk that they will pay out differently than they have estimated. It is for this reason that Progressive's Risk Management area built a loss reserve estimation risk model which measures the magnitude of that potential difference between what we forecast to happen and actual loss payments made. We use the results of this model in conjunction with other risk models to determine the amount of Economic Capital held for the consolidated entity.

Economic Capital can be defined as the amount of capital that a business needs to ensure that it remains solvent. Economic capital is a measure of risk, not of actual capital available to the

business. As such, it is distinct from familiar accounting and regulatory capital measures. Economic capital is based on a probabilistic assessment of potential future losses and is therefore a more forward-looking measure of capital adequacy than traditional accounting measures. Progressive calculates economic capital internally as the estimated total capital we need to withstand potential losses from all sources of risk at a determined confidence level. The confidence level, which is established by management, can be viewed as the risk of insolvency during a defined time period and is consistent for all risks measured. The measurement process involves assigning to each given risk an amount of capital that would be required to respond to or alleviate the risk. Because loss reserves typically represent an insurer's (including Progressive's) largest balance sheet liability, the inherent uncertainty of loss reserve estimation (i.e. loss reserve uncertainty) represents a significant portion of potential loss in an insured's calculation of economic capital. In addition, volatility in losses results in volatility in estimated loss reserves, which in turn increases the amount of economic capital required for capital planning purposes. Loss reserve uncertainty arises for a variety of reasons. Therefore, no single method of estimating loss reserve uncertainty is appropriate under all circumstances. For example, unanticipated spikes in medical inflation will result in actual loss payments that exceed our estimates (an unanticipated increase in reserve need). Moreover, changes in claims handling procedures may allow us to settle claims more quickly and efficiently than previously thought, with the result of lower actual adjusting expenses than our estimates (an unanticipated decrease in reserve need). Even different types of hurricanes must be reviewed independently as reserve development from one hurricane can be very different from another. See the exhibit below.



We see in the above graph that different hurricanes and tropical storms created very different claim reporting patterns within the first seven to ten days. Wilma, a "typical" hurricane, hit urban areas which caused flooding, but the flood waters retreated fairly quickly allowing policyholders to return home and report damages within a reasonable period of time. Frances, a storm with a large eye that struck during Labor Day weekend, caused significant flooding and resulted in delayed reporting patterns. Superstorm Sandy on the other hand, the second costliest storm in US history (estimated at $75B USD) with a diameter on record of 1,100 miles, allowed policyholders' early re-entry into the affected area. Losses were reported quickly, resulting in prompt claim settlements. As you can see in the graph above, by day 15, nearly all of the

Superstorm Sandy claims were reported allowing for improved reserve accuracy and less dependency on estimates for incurred but not reported (IBNR) claims.

Modeling loss reserve uncertainty works by using historical loss payment data to statistically estimate the relationship between loss payments made in the first development year of each accident year and payments in each subsequent development year. Although these statistical relationships are accurate on average, actual loss payments do vary as discussed above. The risk management model measures the magnitude (standard deviation) of these variations as a percentage of the estimated needed reserve and applies this estimate to expected future loss payments.

We currently estimate loss reserve uncertainty separately from loss adjustment expense reserve uncertainty because economics, process, pricing and other changes can and will affect loss adjustment reserves differently from loss reserves. Unanticipated fluctuations can occur for many reasons some of which include:

- History of claim development and selected ultimate losses by accident period
- Changes in claim closure rates
- Selected severity by accident period and resulting trends
- Selected frequency by accident period and resulting trends
- Unanticipated spike in medical inflation
- Changes in the rate of claims closed without payment (CWP rate)
- Acute change (increase/decrease) in driving behaviors of our policyholders
- Economic factors such as inflation/deflation
- Unanticipated changes in the costs of repairing vehicles

The loss reserve estimation risk model results are combined with other stochastic risk models such as investment portfolio returns, operating risk and other financial risks to determine the total economic capital required at various confidence levels.

Section II – About Reserves and Development

Definition and Stated Goals

Reserves are liabilities established on our Generally Accepted Accounting Principles (GAAP) balance sheet as of a specific accounting date. They are also estimates of the unpaid portion of what we ultimately expect to pay out on claims for insured events that occurred prior to the end of any given accounting period, regardless of whether or not those claims have been recorded by Progressive. These estimates are reported net of the anticipated amounts recoverable from salvage and subrogation. Loss reserves are our best estimate of future payments to claimants, and LAE reserves are the estimated future expense payments related to claims settlement. The types of reserves are explained further in Section III.

We estimate the needed reserves based on facts and circumstances known at the time the loss and LAE costs are evaluated. There is inherent uncertainty in the process of establishing property and casualty loss and LAE reserves caused in part by changes in the Company's mix of business (by state, policy limit or deductible, etc.), changes in claims staffing and processes, inflation on vehicle repair costs and medical costs, changes in state legal and regulatory environments, and unexpected judicial decisions regarding lawsuits, changes in theories of liability, and interpretation of insurance policy provisions, among other reasons.

Progressive's goal is to ensure that total reserves are adequate to cover all loss and LAE costs while sustaining minimal variation from the time reserves are initially established until losses have fully developed.

The Corporate Actuary is accountable for the adequacy and accuracy of the reserves. The Loss Reserving group reports to the Corporate Actuary and is part of the Corporate Finance department. Personal Auto, Commercial Lines, and Special Lines have their own Product Management and Pricing groups. The Loss Reserving group works closely with Product Management, Pricing, and Claims to fully understand the underlying data used in our reviews. The Corporate Actuary uses this information to make reserving decisions independent of these business groups.

In order to make the most accurate estimate, we divide our book of business into smaller groups of data known as segments. A segment is generally defined as a state, product, and coverage grouping with reasonably similar loss characteristics. Reserve estimation and segmentation are further explained in Section IV. Our analysis of reserves is described in greater detail in the Appendix, which presents sample reserve reviews for loss and LAE segments. The Appendix includes a discussion of the issues we consider during the analysis as well as the calculations involved.

Calendar Year versus Accident Year

Financial statements report data on a calendar year basis. However, payments and reserve changes may be made on accidents that occurred in prior years, thus not giving an accurate picture of the business that is currently insured. Therefore, it is important to understand the difference between calendar year and accident year losses.

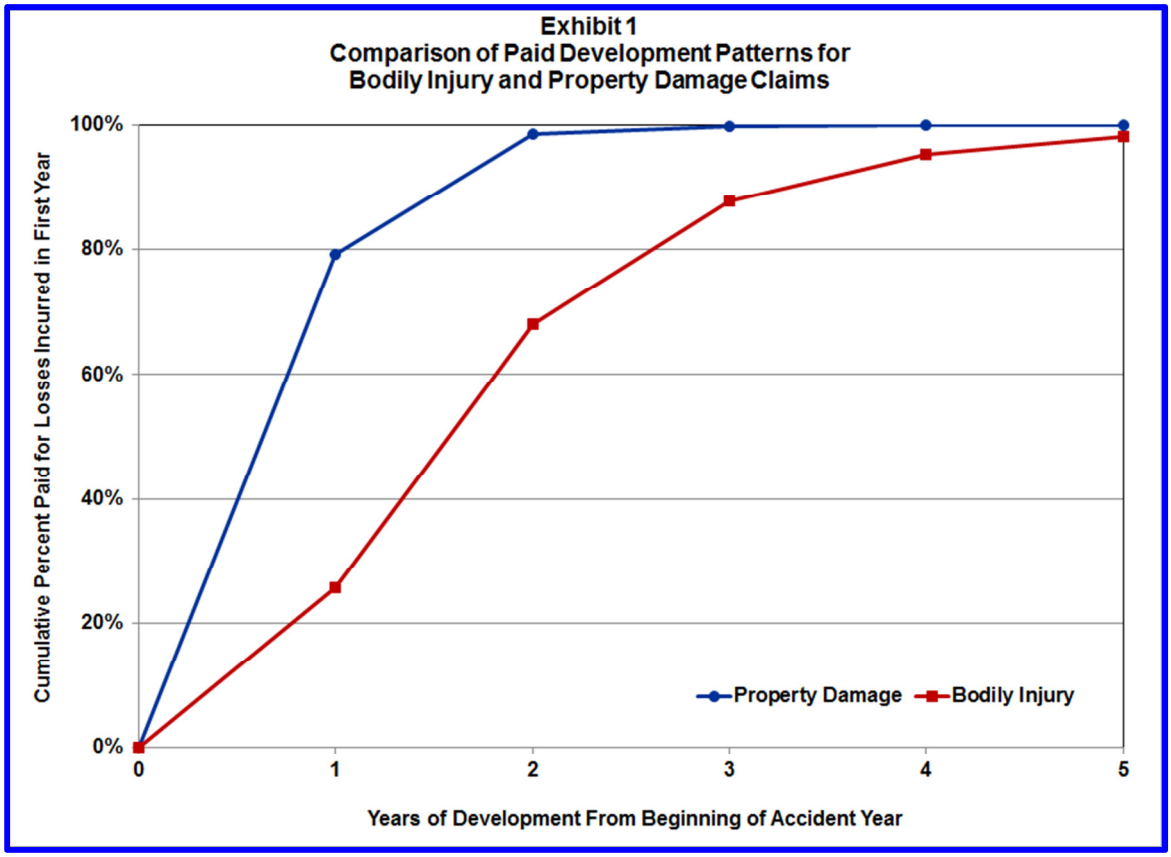
Calendar Period Losses consist of payments and reserve changes that are recorded on the Company's financial records during the period in question, without regard to the period in which the accident occurred. Calendar period results do not change after the end of the period, even as new claim information develops.

Accident Period Losses consist of payments and reserves for losses that occurred in a particular period (i.e., the accident period). Accident period results will change over time as the estimates of losses change due to payments and reserve changes for all accidents that occurred during that period.

Paid Development Patterns

Incurred losses consist of payments and reserve changes, so it is important to understand paid development patterns. The longer a claim is expected to stay open (not settled), the more difficult it is to establish an accurate reserve at the time the accident is reported. Since injury claims tend to take longer to settle than property claims, total reserve estimates for injury claims are more sensitive to the uncertainties mentioned above, such as changes in mix of business, inflation, and legal, regulatory or judicial issues. As more information is obtained about open claims, the reserves are revised accordingly. The ultimate amounts, however, are not known until the claims are settled and paid.

The following chart compares the time it takes to settle a typical segment of Bodily Injury liability claims versus a typical segment of Property Damage liability claims. Each annual development point represents the cumulative percent of paid dollars for accidents that occur in the first year.



Reserve Development

The ultimate paid losses (i.e., our projection of fully-developed paid losses) and ultimate LAE may deviate, perhaps substantially, from point-in-time estimates of reserves contained in our financial statements. The actual claims payments in subsequent calendar years may exceed or may be less than the year-end carried loss reserves causing losses incurred in subsequent calendar years to be higher or lower than anticipated. Changes in the estimated ultimate cost of claims are referred to as development.

There are several ways for reserve development to occur:

- Claims settle for more or less than the established reserves for those claims.
- Adjuster reserve estimates on open (reported) claims change
- Average reserves set by Loss Reserving for open (reported) claims change
- Unrecorded claims emerge (i.e., they are recorded after the accounting date) at a rate greater or less than anticipated. This can be due to either or both of the following:
    - The actual number (frequency) of "late reported" claims differs from the estimate
    - The average amount (severity) of these claims differs from the estimate
- Loss Reserving's estimates of future emergence patterns on unreported claims change
- Salvage and subrogation recoveries are greater or less than anticipated
- Changes in earned premium affect carried IBNR (incurred but not recorded) reserves which are calculated as a percentage of earned premium

Exhibit 2 illustrates Progressive's reserve development over the past ten years. It shows the booked reserves at each year-end, and the re-estimated needed reserves at each subsequent year-end (down the column for each original accounting date). The last diagonal (in red) in Exhibit 2 represents our evaluation, as of December 31, 2014, of the needed reserves as of each respective year-end. The difference between the current evaluation (last diagonal) and the original amount of booked reserves in each column represents cumulative reserve development for that accident year and all prior accident years combined. This measures our performance against the goal, stated above, that total reserves are intended to be adequate and to develop with minimal variation.

Exhibit 2
Analysis of Loss and Loss Adjustment Expense (LAE) Development (in millions)
(unaudited)

For years ending Dec. 31,	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Net Loss & LAE reserves	$4,948.5	$5,313.1	$5,363.6	$5,655.2	$5,932.9	$6,123.6	$6,366.9	$6,460.1	$6,976.3	$7,433.8	$7,671.5
Re-estimated reserves, as of											
One year later	$4,592.6	$5,066.2	$5,443.9	$5,688.4	$5,796.9	$5,803.2	$6,124.9	$6,482.1	$7,021.4	$7,409.7	
Two years later	$4,485.2	$5,130.5	$5,469.8	$5,593.8	$5,702.1	$5,647.7	$6,074.4	$6,519.6	$6,994.7		
Three years later	$4,501.6	$5,093.6	$5,381.9	$5,508.0	$5,573.8	$5,575.0	$6,075.9	$6,495.4			
Four years later	$4,471.0	$5,046.7	$5,336.5	$5,442.1	$5,538.5	$5,564.6	$6,050.6				
Five years later	$4,475.5	$5,054.6	$5,342.8	$5,452.8	$5,580.0	$5,605.6					
Six years later	$4,486.4	$5,060.8	$5,352.8	$5,475.6	$5,609.1						
Seven years later	$4,486.3	$5,070.2	$5,369.7	$5,501.3							
Eight years later	$4,493.3	$5,081.7	$5,391.2								
Nine years later	$4,497.5	$5,100.6									
Ten years later	$4,518.8										
Cumulative Development: favorable/(unfavorable)	**$429.7**	**$212.5**	**($27.6)**	**$153.9**	**$323.8**	**$518.0**	**$316.3**	**($35.3)**	**($18.4)**	**$24.1**	
% of Original Reserves	8.7%	4.0%	-0.5%	2.7%	5.5%	8.5%	5.0%	-0.5%	-0.3%	0.3%	

The reserves set as of December 31, 2013 appeared to be adequate as of year-end 2014, since reserves developed favorably over the course of 2014. In other words, as of year-end 2014, we estimate that claims will cost less than what we projected at year-end 2013. Recall that excessively adequate or deficient reserves can, respectively, limit competitive opportunities or cause unprofitable growth. It is important to recognize both favorable and unfavorable development as quickly as possible, so that these inefficiencies are corrected and our financial results are presented as accurately as possible.

As seen in Exhibit 2, we have developed favorably year-to-date for most year-end evaluations except 2006, 2011, and 2012. We experienced cumulative development of more than 5% for 2004, 2008, 2009, and 2010 In contrast, the cumulative reserve development for 2005, 2007, and 2013 was favorable, but much more modest in magnitude. For these years, reserves have run-off between 0.3% and 4.0% of the originally-held amount. Reserves for 2006, 2011, and 2012 experienced modest unfavorable development. Exhibit 2 quantifies the amount of favorable development in 2014 at the bottom of the 2013 column. Reserves from accident years 2013 and prior developed favorably by $24.1 million, representing 0.3% of the originally held reserves or 0.1% of our 2014 earned premium ($18.4 billion, found on page 10).

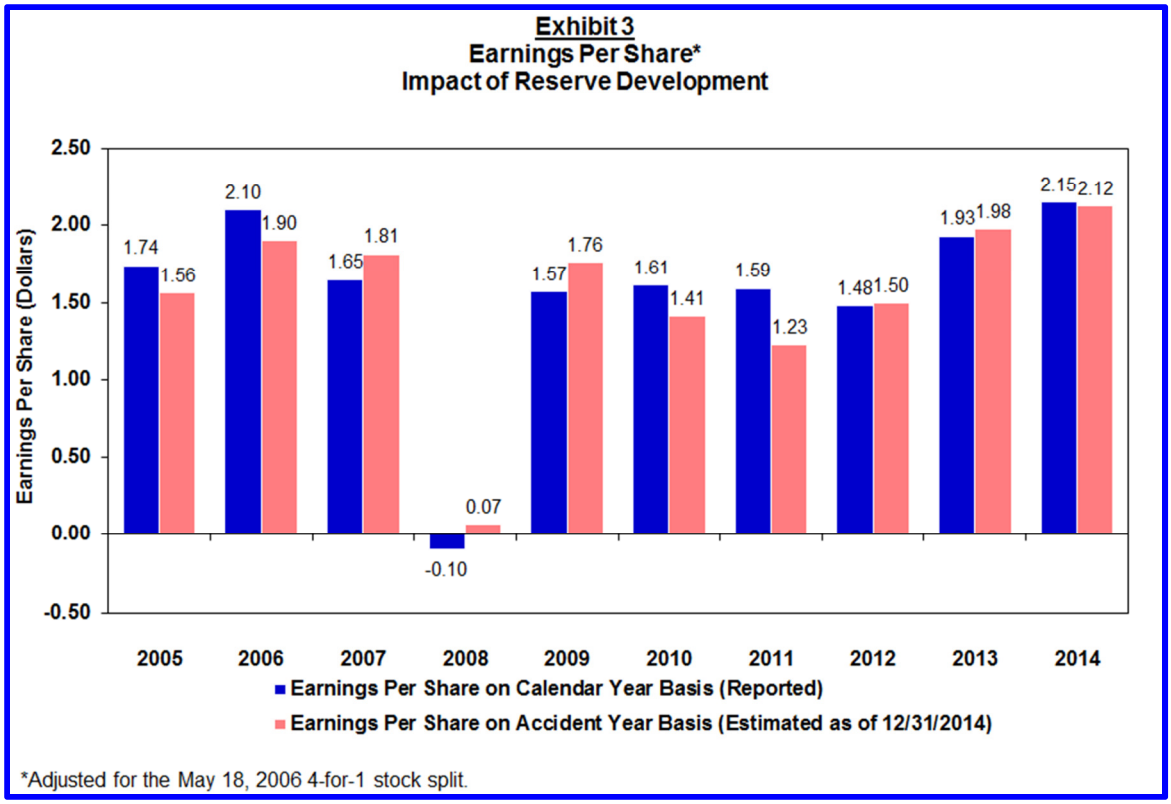
We make many projections in loss reserve analyses that may change as the claims mature. The least mature claims are those that occurred during the most recent accident year, so the Company believes that the estimated severity for the 2014 accident year is the projection with the highest likelihood to change. For further discussion of the 2014 results and how they are affected by loss and LAE reserves, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the Company’s *2014 Annual Report to Shareholders*, which is attached as an appendix to the Company’s *2015 Proxy Statement*.

Reserve development influences our reported earnings. Reported earnings for any period may be understated (relative to accidents that occur in that period) when either or both of the following items occur:

- There is unfavorable development of prior accident years during the current period
- Reserves for accidents that occur in the current period are overestimated (i.e., subsequent evaluation shows a lower estimate of ultimate incurred losses)

On the other hand, reported earnings for any period may be overstated when the opposite of these items occurs.

Exhibit 3 shows how reported Earnings Per Share (EPS) are affected by the reserve development in Exhibit 2. It shows the reported EPS for specified fiscal years and what the EPS would have been if the Company had had no reserve development, i.e., if the specific year’s earnings were based on only that year’s accidents. Each specific year’s adjusted EPS excludes prior accident years’ development during the specific year and includes future development of the current accident year, estimated as of year-end 2014. For example, it can be seen in Exhibits 2 and 3 that in calendar year 2014 reserves developed favorably. Note that the negative EPS in 2008 was driven by losses in the investment portfolio.



External Reporting of Reserve Changes and Reserve Development

Since reserve changes affect calendar period earnings, our monthly earnings release shows actuarial reserve changes by Personal Lines (Agency and Direct), Commercial Lines, and Property. We also report reserve development monthly, in addition to the quarterly and annual reporting requirements. This information for the current month and year-to-date is included in the "Supplemental Information" section of our monthly earnings release. The following excerpt is from our December 2014 earnings release and is unaudited:

December 2014 Year-to-Date ($ in millions)	Companywide Total
Net Premiums Earned	$18,398.5
Actuarial Adjustments	
Reserve Decrease/(Increase)	
Prior accident years	$90.9
Current accident year	(81.3)
Calendar year actuarial adjustment	$9.6
Prior Accident Years Development	
Favorable/(Unfavorable)	
Actuarial adjustment	$90.9
All other development	(66.8)
Total development	$24.1
Calendar year loss/LAE Ratio	72.3
Accident year loss/LAE Ratio	72.4

The table shows that we decreased our loss and LAE reserves during 2014 by $9.6 million as a result of regularly scheduled actuarial reviews. Each month, we generally complete between 55 and 80 reviews, representing slightly more than 25% of our total amount of reserves. Some reviews result in needed changes to the carried reserves. The total change is reported as Actuarial Adjustments in the table. A reserve decrease is shown as a positive value on the earnings report because it increases our earnings for the reporting period.

Actuarial adjustments increased reserves for accident year 2014 by $81.3 million, while reserves for claims in prior accident years were decreased by $90.9 million. However, this actuarial reserve decrease, which applies to claims in prior accident years, represents only one portion of the prior year development.

As stated earlier in this section, favorable or unfavorable development is due to a combination of factors. The favorable actuarial adjustment of $90.9 million includes changes to averages on open claims and the estimated emergence of claims that were unreported as of prior year-end. The all other unfavorable development of $66.8 million includes claims settling for amounts different from the established reserves, changes to adjuster reserve**,** actual emergence of claims that was different than the expected emergence included in IBNR reserves, and salvage and subrogation recoveries greater or less than expected.

The total prior accident years' development listed above ties back to the cumulative development listed in Exhibit 2. Through December 31, 2014, including actuarial adjustments and all other development, the total prior accident years' development was favorable by $24.1 million. In other words, with updated information as of December 31, 2014, we estimated that our reserves as of December 31, 2013, should have been $24.1 million lower than they were.

The $24.1 million favorable prior accident years' development during 2014 is included in our calendar results for 2014. As a result, our 2014 calendar year incurred loss and LAE ratio of 72.3% is lower than our 2014 accident year incurred loss and LAE ratio of 72.4%. The difference of 0.1 points reflects the $24.1 million favorable development through December 31, 2014 divided by the net earned premium of $18.4 billion for the same period.

Reserve changes made as a result of actuarial reviews are intended to keep our current reserve liability accurate for the business reviewed. We change the reserves for the reviewed business based upon current information and our projections of expected future development. This is not the same as the aggregate development of prior year-end reserves.

Internal Reporting of Reserve Changes and Reserve Development

After completing each segment review, Loss Reserving analysts send summaries of the reviews to all affected areas of the Company. Loss Reserving meets with Product Management, Pricing, and Claims to discuss the current change, development, trend, and other issues that were considered in reserve analysis and exchange information that may be considered in future reviews. The participation of these business units allows Loss Reserving to better understand changes in processes and business operations that may be affecting the underlying data.

To help Product Management understand the case reserve changes shown on their income statements, we provide a monthly *Decomposition Report* that summarizes the changes in the following categories (terms are explained in Sections III and VI):

- features that closed
- features that opened (including reopened features)
- changes in reserve averages on new features (due to loss reserving)
- changes in reserve averages on open features (due to loss reserving)

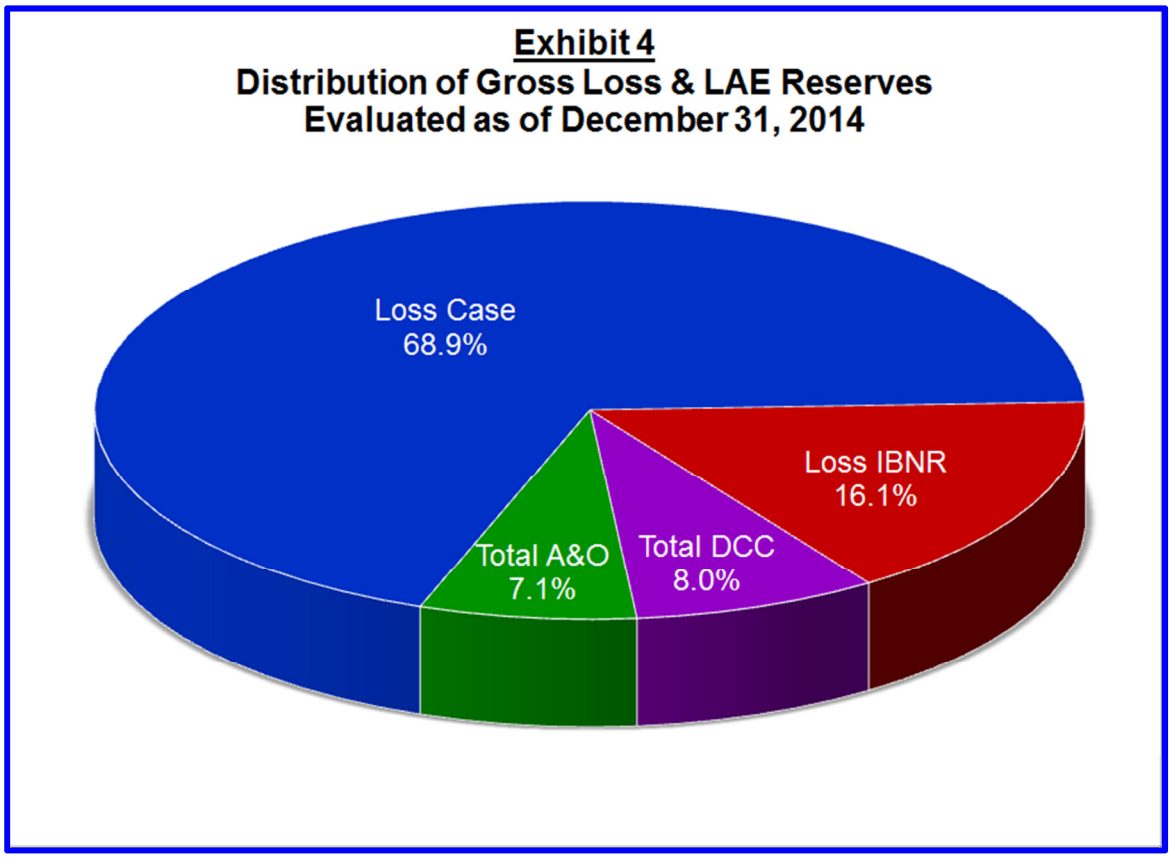
- inflationary impact on open features (inflation factor applied to average reserves)
- aging of open features (features moving to the next age grouping)
- changes from adjuster reserve to average reserve (reserve amount changes from above threshold to below threshold)
- changes from average reserve to adjuster reserve (reserve amount changes from below threshold to above threshold)
- changes in adjuster reserves (reserve amount changes, but stays above threshold)
- changes due to re-segmentation of data

The business units are also provided with updated information regarding the impact of prior accident years' development on their current calendar year results. We track the reserve development on prior accident years, which allow us to retrospectively test our prior assumptions and apply that knowledge in future judgments. It also helps the Product Managers better understand how their calendar year earnings are affected by reserve development.

Section III – Types of Reserves

Reserves are considered a liability on our GAAP balance sheet. At the end of 2014, we reported a $8.9 billion reserve liability ($7.7 billion net of reinsurance recoverables on unpaid claims) on our GAAP balance sheet. We separate reserves into two categories: loss and LAE. While each of these two reserve categories is reported in the aggregate on the GAAP balance sheet, when we analyze the loss reserves, we further break them into two distinct types: case and IBNR. There are two categories of LAE: Defense and Cost Containment (DCC) and Adjusting and all Other (A&O) expenses. In this section, we discuss these reserve types and how we evaluate them to achieve a total reserve balance as accurate as possible.

Exhibit 4 illustrates the types of reserves as a percent of our total reserve liability as of December 31, 2014. In 2014, 84.9% of our reserve liability (Loss case + Loss IBNR) was set aside to pay claimants, while 15.1% of our reserve liability (Total DCC + Total A&O) was established to accommodate costs associated with settling those claims. These costs are described in more detail later in this section.



Loss Reserves

We evaluate our total indicated loss reserve need by sorting and analyzing claims by accident date. This analysis, discussed in detail in Section VII of the Appendix, is completed concurrently with the evaluations of case and IBNR reserves for the same segmentation of business.

Case Reserves
Loss case reserves represented 68.9% of our total carried reserves at December 31, 2014. Case reserves are estimates of amounts required to pay claims that have already been reported and

recorded into Progressive's systems, but have not yet been fully paid. We evaluate our indicated case reserve need, as discussed in Section VII of the Appendix, by sorting and analyzing claims by record date (the date the claim was recorded by the Company).

For each open claim, the Company carries a financial case reserve on its books. The financial case reserve is either an ***average reserve*** determined by the Loss Reserving group or the ***adjuster reserve*** which is our adjuster's estimate of the remaining cost for the claim.

Average Reserves: Our objective is to use an ***average reserve*** for claims which we feel have a more predictable level of severity. We have determined a dollar ***threshold*** (which may vary by product, state, line coverage, and limit) under which a claim's severity is sufficiently predictable to receive an average from Loss Reserving.

These claims are assigned the average reserve regardless of the adjuster reserve. When a claim is first recorded by the Company, there may not be enough known about the claim for an adjuster to determine its cost. The use of average reserves allows claims personnel to concentrate their efforts on adjusting claims rather than accounting for them. Also, average reserves are not as affected by changes in claims processes, and they provide more accurate financial reporting in aggregate.

Loss Reserving determines the average reserves, which vary by segment. In the months that a segment is not reviewed, an inflation factor is applied to the average reserves to keep up with changing costs between reviews. The inflation factor is generally based upon our projected severity trend from the segment's most recent actuarial analysis.

Once an average reserve is assigned to a claim, we monitor the age of a claim. The age of a claim is defined as the length of time from the accident date to the current accounting date. More severe Bodily Injury claims tend to remain open longer than less severe claims and tend to be more expensive due to litigation, medical treatments, etc. In order to recognize this cost differential, the average reserve increases as the claim ages. However, the averages for Physical Damage claims currently are not increased for age since they tend to settle more quickly and the length of time since the accident normally does not impact their severity.

Our analysis has shown that all else being equal, claims reported on time (i.e. immediately after occurrence) ultimately settle at a different cost level compared to those claims which are reported late. In order to recognize this cost differential, we began implementing a record-age segmentation to our analyses in 2014.

Adjuster Reserves: Our claims adjusters often will estimate the ultimate loss on a claim. We call this estimate the ***adjuster reserve.*** In cases where our adjuster sets a reserve equal to or above the threshold, the ***adjuster reserve*** will be used to determine the financial case reserve rather than the average reserve.

Severities may vary significantly on claims above the threshold. The adjuster reserves more accurately estimate the ultimate liability for these claims because the adjusters have typically spent a great deal of time on these larger claims and understand their unique characteristics. While only 14.6% of our total open claim count for Personal Auto Bodily Injury is set at or above the current threshold, these claims represent 34.2% of our total Personal Auto Bodily Injury case reserve liability as of year-end 2014. For Commercial Auto Bodily Injury, only 4.0% of our total open claim count is set at or above the threshold, accounting for about 32.9% of our total Commercial Auto Bodily Injury case reserve liability.

Example: Exhibit 5 and 6 illustrate the life of a hypothetical Personal Auto Bodily Injury claim. When the claim was originally recorded, we assigned the actuarially determined average reserve of $5,829. As the claim aged from the time it was reported in February through the end of October, the average reserve changed due to the application of the inflation factor, results of

actuarial reserve reviews, and aging. Over this same period of time, the adjuster increased the reserve estimate (red line) multiple times as more information was obtained about the claim. When the adjuster's estimate exceeded the sample threshold of $25,000, the financial reserve changed from an average reserve to an adjuster reserve.

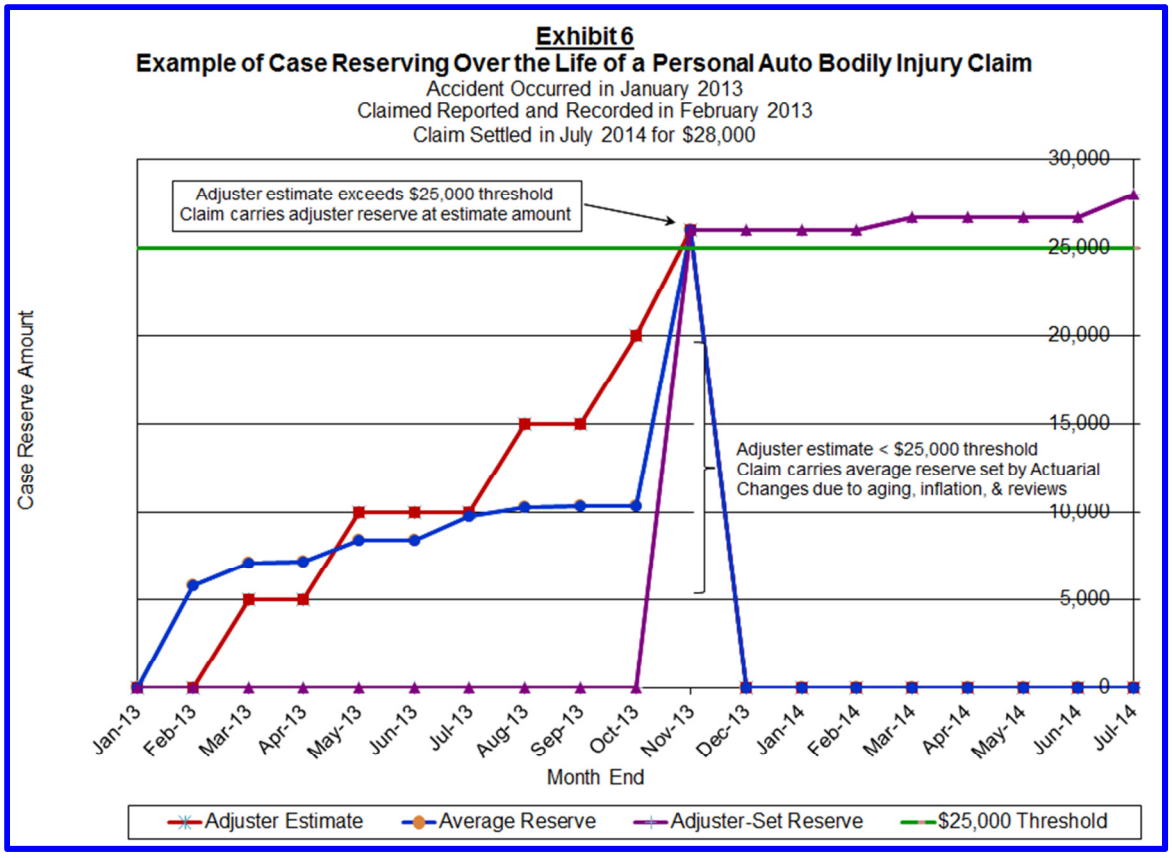
Exhibit 5

Example of Loss Case Reserving Over the Life of a Personal Auto Bodily Injury Claim

Policy Limits = $30,000/$60,000
Threshold = $25,000
State XYZ
Inflation Factor = 6% per year
(Excludes Loss Adjustment Expenses)

Month End Date	Claim Activity	Age in Months*	Adjuster Estimate	Carried Reserve	Amount Paid	Explanation for Reserve Change
Jan-13	Accident occurs	1	-	IBNR	-	Aggregate amount based on factor of EP for segment
Feb-13	Claim is reported	2	-	5,829	-	Average reserve for 1-2 month age group from actuarial review
Mar-13	Adjuster sets estimate	3	5,000	7,121	-	Aging to 3-4 month age group and inflation
Apr-13		4	5,000	7,157	-	Inflation
May-13	Adjuster revises estimate	5	10,000	8,391	-	Actuarial review and aging to 5-6 month age group
Jun-13		6	10,000	8,432	-	Inflation
Jul-13		7	10,000	9,789	-	Aging to 7-12 month age group and inflation
Aug-13	Adjuster revises estimate	8	15,000	10,250	-	Actuarial review revised averages
Sep-13		9	15,000	10,300	-	Inflation
Oct-13	Adjuster revises estimate	10	20,000	10,350	-	Inflation
Nov-13	Adjuster revises estimate	11	26,000	26,000	-	Adjuster estimate pierces threshold, so claim takes adjuster reserve
Dec-13		12	26,000	26,000	-	
Jan-14		13	26,000	26,000	-	
Feb-14		14	26,000	26,000	-	
Mar-14	Adjuster revises estimate	15	26,725	26,725	-	Still above threshold, so we continue to take adjuster reserve
Apr-14		16	26,725	26,725	-	
May-14		17	26,725	26,725	-	
Jun-14		18	26,725	26,725	-	
Jul-14	Claim is paid and closed	19	28,000	0	28,000	Carried reserve goes to zero as claim is closed with payment

Note: Age in Months = $\frac{\text{Number of Days since the Date of Loss}}{\text{30 Days}}$ rounded up to the nearest integer



Incurred But Not Recorded (IBNR) Reserves
We establish a reserve for claims that have occurred, but have not been reported by the claimants or recorded by the Company as of the accounting date. Incurred But Not Recorded (IBNR) Reserves are estimates of the amounts needed to pay these claims. At year-end 2014, the loss IBNR reserves were 16.1% of our total carried reserves.

The IBNR reserve need is evaluated by the same segmentation process used for case reserves. We perform this analysis by sorting historical claims according to the time lag between the accident dates and the dates that these claims were recorded by the Company. The case study in Section VII of the Appendix shows a detailed IBNR reserve analysis.

Late reported claims are evaluated to determine the estimated ultimate losses for each accident quarter within each lag period. For example, Lag month 1 consists of claims for which the accidents occurred during one month but were not recorded until the next calendar month. Similarly, Lag month 2 consists of all claims for which the accidents occurred during one month but were recorded by the Company two months later. Lag month 0 claims were recorded in the same month they occurred.

Exhibit 7 below shows our approximate percent of recorded features for Personal Auto Bodily Injury by record month lag. This exhibit shows 70.6% of our Auto BI features are reported and recorded in our systems by the end of the month in which they occurred. However, 29.4% of the features had not been recorded by the end of the accident month. Therefore, we need to estimate IBNR reserves for these claims.

Exhibit 7

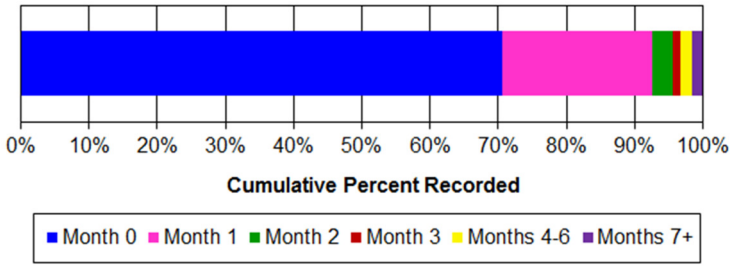
Countrywide Personal Auto Bodily Injury

Recorded Feature Count

Lag Months*	Incremental %	Cumulative %
Month 0	70.6%	70.6%
Month 1	22.1%	92.6%
Month 2	2.9%	95.5%
Month 3	1.2%	96.7%
Months 4-6	1.6%	98.4%
Months 7+	1.6%	100.0%

* Record Month = Accident Month Plus Lag

Percent of Recorded Features by Record Month Lag Auto Bodily Injury Liability



The reserve analysis develops estimated IBNR factors based on the needed reserves by age divided by the earned premium for each age group. The carried IBNR reserves are calculated at the end of each month (by segment) by applying these IBNR factors to trailing periods of earned premium for up to four years. In almost all cases the largest IBNR factors are applied to the premium in the most recent accident quarters because of their greater IBNR reserve need. The IBNR reserves change with our premium volume, allowing these reserves to keep up with growth, inflation, business mix, etc.

Loss Adjustment Expense (LAE) Reserves

In addition to loss payments (which indemnify claimants), the Company incurs expenses in the process of settling claims. Therefore, we need to establish a reserve liability to cover estimated LAE to be paid as loss reserves develop to closure. The two categories of LAE are DCC and A&O, which are defined[4] as follows:

Defense and Cost Containment (DCC) includes all defense, litigation and medical cost containment expenses, including in-house counsel. We evaluate the total indicated DCC expense reserve need by sorting and analyzing these expenses by accident date, similar to how we review the needed loss reserves. In addition to being analyzed in total, the DCC expenses are split into Attorney & Legal and Medical & Other components which are analyzed separately.

Adjusting & all Other Expense (A&O) includes all other claims adjusting expenses, whether internal or external to the Company. A&O consists of fees, salaries and overhead expenses of those employees involved in a claim adjusting function, as well as other related expenses incurred in determination of coverage. We evaluate our total indicated A&O reserve need by first taking A&O Charges to date and allocating them across states, products, coverages, and accident periods. Based on this, we are able to create accident period triangles across the same segmentation. We generally create a triangle of total charged A&O and a triangle of the ratio of charged A&O dollars to Property Damage earned exposures. We then analyze and project these A&O costs to ultimate value, using development techniques that are discussed in more detail within the appendix. We then back out charged A&O to date from our ultimate projection to obtain our overall indicated A&O reserve.

At year-end 2014, the LAE reserves were 15.1% of our total carried reserves. Similar to loss reserves, we carry case reserves for DCC and A&O expenses by applying selected averages to each open feature. For DCC, we carry the adjuster reserve if it exceeds a certain threshold, which occurs less frequently than for loss. Similar to loss IBNR reserves, carried DCC IBNR and A&O IBNR are calculated as a percentage of the trailing earned premium for each respective segment.

Analysis of needed DCC and A&O expense reserves are performed independently. For each state, we review Personal Auto DCC Bodily Injury reserves and all A&O reserves by line coverage at least once per year. For Commercial Auto the reviews are completed on a more aggregated basis. Section VIII of the Appendix contains a case study of our LAE reserve analysis.

Involuntary Market Operating Loss Reserves

Progressive is required by the laws of most states to participate in involuntary market plans. Below we discuss the two major types of involuntary market plans in which we participate.

Private Passenger Assigned Risk Plans*:* State insurance regulations require us to participate in various assigned risk plans. Applicants who cannot obtain insurance in the voluntary market are assigned proportionately by the volume of written exposures or vehicles among the insurers licensed in that state. History indicates an operating loss is to be expected on these assignments. Participation requirements in assigned risk plans differ from state to state. Reserves are established for these expected operating losses based on our current written exposures. Since the plans assign business in policy years two years in the future on our current writings, we carry the reserves until we are actually assigned the risks.

[4] The definitions are consistent with that prescribed by the NAIC under the Statutory Accounting Regulations

The carried reserves for assigned risk plans comprised less than one-tenth of one percent of our total net carried reserves at year-end 2014. However, since this is a unique type of exposure, we evaluate it separately.

The process of determining the assigned risk reserve for a state is as follows:

- Determine Progressive's estimated portion of the assigned risk pool by multiplying our projected market share by the estimated future size of the assigned risk pool in that state
- Reduce this by any credits a state may allow such as voluntarily writing risks that generally populate the plans in a higher portion than in the general market
- Estimate the operating loss that we expect to incur from this business
- Factor in the impact when excess credits are sold to competitors along with charges from Limited Assigned Distribution (LAD) carriers when such agreements are in force

Commercial Auto Insurance Procedure (CAIP): In most states, Progressive is also required to share in the operating results of the involuntary CAIP plan. Due to the more complex nature of commercial business, these plans do not assign policies to specific insurance companies. Instead, a small number of carriers (including Progressive) service the business, but generally do not bear underwriting risk. The servicing carriers transfer the insurance risk, or cede 100% of the business, to the state pools. These pools then retrocede the loss experience of the plan to all companies in proportion to their respective shares of the commercial automobile voluntary market for the respective state.

Other Considerations to Reserves

Salvage and Subrogation
GAAP requires loss reserves to be stated net of anticipated salvage and subrogation recoveries. Statutory Accounting Principles (SAP), which are mandated by state insurance departments or regulators, allow reserves to be reduced by the expected recovery amounts but do not require it. We report our SAP loss reserves net of anticipated salvage and subrogation recoveries.

Salvage: Progressive generally assumes the title to a vehicle when it is declared a total loss. We may then sell the vehicle to a salvage dealer and these proceeds net of expenses are referred to as salvage recovery. Salvage is most relevant in analyzing the needed reserves for Collision claims.

Subrogation: When a Progressive policyholder is involved in an accident in which the other party is at fault or partially at fault, he or she may submit the claim to us. When we pay that claim, we obtain our policyholder's right to recover damages from the at-fault party or the at-fault party's insurance company. Subrogation is most relevant for Collision claims (damage to our insureds' vehicles) and Personal Injury Protection (PIP) claims.

As we collect salvage or subrogation from third parties, it reduces our net paid and incurred loss amount for that claim. We analyze our claims data net of these recoveries, so that our estimated ultimate loss amounts are net of anticipated salvage and subrogation. Since most of our recoveries are realized after claims have been closed, we may carry negative IBNR reserves on the Company's books for anticipated future recoverable salvage and subrogation.

Catastrophes
The United States does not allow insurance companies to set up reserves for catastrophes ahead of time due to accounting and tax principles. An event/storm is declared a catastrophe by an external agency if the industry wide total insured losses will amount to more than $25 million. The type of loss will vary depending on the type of storm. For example, losses from a hurricane will be different than losses from a hail storm or a forest fire.

Progressive predicts its total losses for a catastrophe by looking at data from prior storms. Specifically, we will look at prior storms' development factors, frequency and severity. If a catastrophe occurs too close to the end of the month, there is less time for claims to be reported, and therefore we may put up IBNR reserves to cover the additional amount we think we will need for the total amount of losses. We also know that we will receive some amount of salvage and we factor this into the projection for total losses.

Section IV – Estimating Loss Reserves

During a reserve review we generally estimate the ultimate loss amounts for the past seven accident years using up to six different projections (discussed in more detail below). We may use additional techniques if there are wide variations between the various projections or if underlying process changes make those projections less reliable. To estimate the required reserve balance (i.e., unpaid losses) for the segment, we subtract the payments we have already made on claims that occurred during that same period. We change the reserve level for that segment based upon this review.

In this section, we discuss segmentation and describe the projections we consider in the review. The Appendix contains case studies that show more details involved in the segment reviews, including the calculations and the issues involved. However, the application of judgment is a key component of our reserve analysis and decisions on the needed reserve changes. This is especially true in dynamic environments such as those we have experienced at Progressive, in which changes in mix of business (e.g., by policy limit and geographic area) can be significant.

Segmentation of Reserves for Analysis

Segments are identified to allow us to review reserve needs at the most detailed level our data supports, and provide us with the ability to identify and measure variances and trends in severity and frequency. They also allow us to identify process changes within states/regions, which helps us to understand changes within the underlying data and to reflect them in the reviews. Each segment is generally required to have enough data to deliver reliable (credible) results. Our objective is to achieve adequacy in the reserve levels with minimal variation for each segment. This enhances the accuracy of our financial reporting, supports the income statements of our business units, and allows us to make better business decisions.

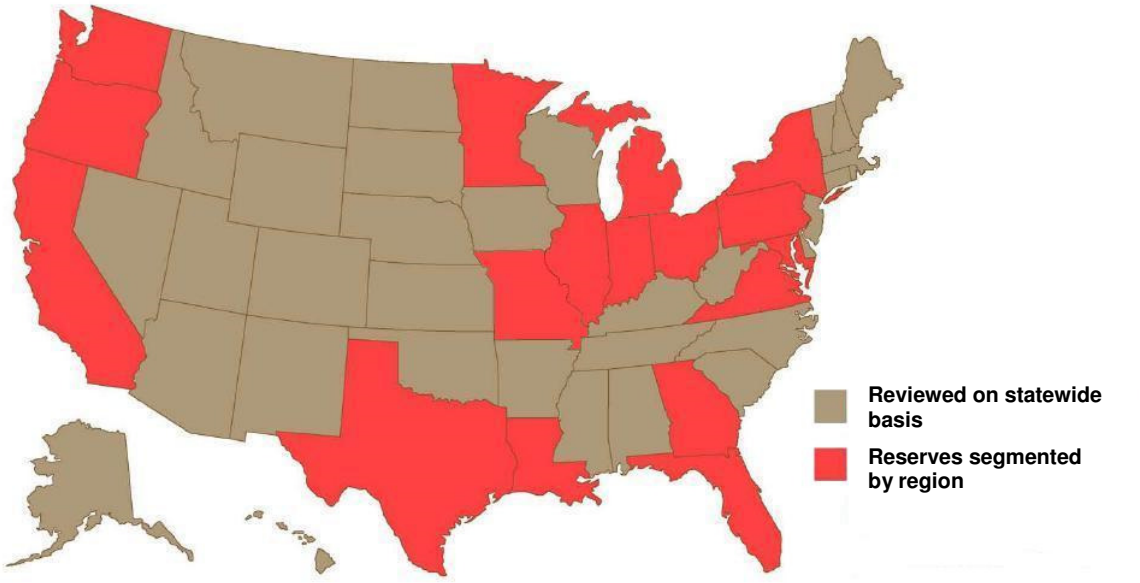
The projection of frequency for the lines of business we write is usually stable even though actual frequency experienced will tend to vary depending on external factors, such as a change in the mix of classes of drivers we insure, weather, or economic pressures like the price of gas. The severity experienced by the Company is more difficult to estimate, and it is affected by changes in underlying costs, such as medical costs, jury verdicts, etc. In addition, severity will vary based on the change in the Company's mix of business by policy limit or deductible.

Internal and external considerations are better understood at the state level than at a more macro countrywide level. Internal considerations that are process-related may result from changes in the claims organization's activities, including claim closure rates, the number of claims that are closed without payment, and the level of estimated needed case reserves by claim. External considerations include the litigation environment, regulatory and legislative actions, state-by-state changes in medical costs, and the availability of services to resolve claims.

Due to our volume, we review each state separately for Personal Auto Bodily Injury loss reserves. Even though a few of these states may be considered too small to have fully credible data, we feel there is value in studying and interpreting each individual state's trends and development. Some states are so large that we can segment the data into regions within the state. Exhibit 8 is a map showing how we currently segment our loss reserve reviews for Personal Auto Bodily Injury.

For some coverages, where the underlying data is not large enough to be credible, we may combine states with similar loss characteristics and review them together. We continually look at ways to further segment our reviews to add value to our process. Examples include enhanced accuracy and information provided to our Product Management and Pricing groups.

Exhibit 8
2014 Personal Auto BI Loss Reserves



With respect to Personal Auto Bodily Injury and Uninsured Motorist coverage, we split loss data into groups based on policy limits and analyze the data. It is valuable to analyze these groups of segments, as they tend to have different severity, frequency and loss development patterns. We also split the data by policy limit for our Commercial Auto Bodily Injury analyses (Specialty truck is analyzed separately from Business Auto). Each identified segment is reviewed annually, semiannually, or quarterly depending on the size, the volatility, and other unique aspects of the individual segment. As the need to further analyze expenses at a finer breakout by limit presents itself, we have structured these more in-depth reviews.

LAE reserves are analyzed at a level of segmentation using many of the same considerations as loss reserves. Since the volume of LAE reserves is much less than that of loss reserves, we combine some of the states for Auto DCC reviews for coverages other than Bodily Injury. This produces more credible results. A&O is reviewed by state for all Auto line coverages. As mentioned earlier, all LAE segments are evaluated at least once per year, generally twice. Commercial Auto is also broken out similar to Auto for LAE, but not to the same level of detail geographically.

Projections of Ultimate Losses

Our standard procedures are to review the results of the different projections in order to determine if a reserve change is required. Three of the six available projections use paid data and the other three projections use incurred data (payments plus case reserves). There are strengths and weaknesses to each of the projections. In the event of a wide variation between results generated by the different projections, we further analyze the data using additional techniques.

The six available standard projections we use to estimate ultimate losses are:

1. ***Amount Paid***, in which we organize the total loss dollars paid by accident period and age of development into a triangular format (refer to Exhibit B of the Appendix) and project them to estimated ultimate amounts. We base our selections of future expected loss development largely on the historical development of prior periods.

2. ***Average Paid***, in which we organize the paid severity (average amount paid per feature) by accident period and age of development into a triangular format and project the severities to estimated ultimate levels. Ultimate loss amounts are then calculated as the ultimate severities multiplied by the estimated ultimate number of features to be paid.

3. ***Bornhuetter-Ferguson Paid***, which uses the paid loss development pattern to determine the percent unpaid. We apply the percent unpaid to the expected ultimate loss amount to arrive at the expected unpaid amount, which is added to actual losses paid-to-date.

4. ***Amount Incurred***, in which we organize the total loss dollars incurred by accident period and age of development into a triangular format and project them to estimated ultimate amounts. We base our future expected loss development largely on the historical development of prior periods.

5. ***Average Incurred***, in which we organize the incurred severity (average amount incurred per feature) by accident period and age of development into a triangular format and project the severities to estimated ultimate levels. Ultimate loss amounts are then calculated as the ultimate severities multiplied by the estimated ultimate number of features to be paid.

6. ***Bornhuetter-Ferguson Incurred***, which uses the incurred loss development pattern to determine the percent not yet recorded. We apply the percent unrecorded to the expected ultimate losses to arrive at the expected unrecorded amount, which is added to actual losses incurred-to-date.

The three paid projections – amount paid, average paid, and Bornhuetter-Ferguson paid – all use paid loss data. The paid projections estimate growth and development of claims in an accident period by looking at the paid development of earlier accident periods. This assumes that past paid loss development is a predictor of future paid loss development. The primary strength of using paid data is that it removes the potential for distortions that may be created by including estimated data (i.e., case reserves). The drawback is that it is more difficult to accurately project ultimate losses in the most recent periods under review. For example, with longer-tailed lines of insurance such as Bodily Injury, the early development periods are more volatile because a large proportion of the payments are made later, as was illustrated in Exhibit 1 of Section II. Accurate paid projections also depend heavily on consistent claims closure or settlement practices. If the closure rate changes, the paid projections could be misleading. In addition, shifts in mix of business (e.g., changes by policy limit) are not as readily identified in the past paid development as in the incurred loss development.

The three incurred projections – amount incurred, average incurred, and Bornhuetter-Ferguson incurred – use paid losses plus case loss reserves in each accident period. They assume that historical incurred loss development will be predictive of our future incurred loss development. The primary strength of using incurred data is that we can make use of reserve estimates for open claims. These estimates are based on the judgment of claims adjusters in addition to our prior actuarial reviews. This is especially critical when estimating ultimate losses for longer-tailed claims such as Bodily Injury. The drawback of using incurred data for projection is that it depends heavily on consistent adjuster reserve estimates, which can vary over time.

We study changes in closure rates and average adjuster reserve levels through our segmentation of data and also through discussions with management. We adjust for these changes in our projections of losses. The case study in Section VII of the Appendix includes more thorough explanations of how changes in the closure rate affect paid loss development, and how changes in average adjuster reserves affect incurred loss development.

For the year, we conducted 771 reviews involving 434 segments of business.

ARX Holding Corporation

Progressive recently acquired a controlling interest in ARX, the parent company of one of our Progressive Home Advantage (PHA) partner American Strategic Insurance (ASI). As of this writing, Progressive owns about 69% of ARX Holding Corporation with 100% ownership targeted within six (6) years.

ARX Holding Corporation's business is primarily made up of Homeowners insurance which is a short tailed coverage. At the end of 2014, homeowners accounted for approximately 80% of the carried reserves. The remaining 20% is made up of Umbrella and Commercial Multi peril. Both the personal lines and commercial lines are heavily reinsured, with the intent of providing ARX with increased capacity to write larger risks while maintaining exposure to losses within its capital resources.

ARX reviews data on a monthly basis segmented by product, annual statement line, and state. Standard actuarial techniques including Average Paid, Average Incurred, Bornhuetter-Ferguson Paid, and Bornhuetter-Ferguson Incurred which are described on pages 23-24 are reviewed. In addition, ARX will also estimate reserves by projecting ultimate loss ratios by accident year and credibility weighting industry loss ratios with ARX.

Section V – Terms and Definitions

Accident Period Losses: Losses for each accident are assigned to the period in which the accident occurred. Accident periods used in our analysis are generally three months (accident quarter), six months (accident semester), or twelve months (accident year). Payments and reserve changes, regardless of when they are made, are assigned to that same period in which the accident occurred. Therefore, accident period results will change over time as the losses develop.

Adjuster Reserves: See Case Reserves.

Adjusting & All Other Expense (A&O): A component of loss adjustment expense. A&O expenses include all claims adjusting expenses (whether internal or external to the Company) that are not included in Defense and Cost Containment (DCC). This category includes fees and salaries of those involved in a claim's adjusting function, and other related expenses incurred in determination of coverage. Adjusting and Other expense reserves are a bulk reserve as they are not attributable to any specific feature or claim. A&O is sometimes called "AOE" outside of Progressive.

Assigned Risk: People unable to obtain auto insurance in the voluntary market apply for coverage in the state automobile plan. In most cases, the insurance coverage is not actually provided by the state but instead is "assigned" to an insurance company. Each insurance company must accept a proportionate share of these risks.

Average Reserves: See Case reserves.

Bodily Injury (BI) Liability Coverage: Covers legal liability arising from causing injury or death to another person. In most states, this is a mandatory coverage. Each state mandates the minimum required limit. BI coverage pays when our insured is liable for an accident in which another party is injured.

Bornhuetter-Ferguson Method: The "BF" method is an actuarial methodology that calculates the projected ultimate losses using a blend of a pure incurred or paid development method and an expected loss ratio (or expected pure premium) method.

Business Auto Market (Light Local) Commercial Auto Vehicles: Commercial vehicles that generally have a gross vehicle weight under 26,000 pounds. These vehicles are used in the insured's business but are not the primary source of revenue for the business.

Calendar Period Losses: Payments and reserve changes which are recorded in the Company's financial system during the period in question, without regard to the period in which the accident occurred or was recorded. Calendar period results do not change after the end of the period, even as new claim information develops.

Case Reserves: Estimates of amounts required to settle claims that have already been recorded but have not yet been closed. Case reserves represent the largest portion of the reserves for automobile insurance products. The case reserves carried on the Company's financial records are called the **financial case reserves**.

- **Adjuster Reserves:** The claims adjuster's best estimate of how much a specific claim will cost (or the average reserve, if the claims adjuster does not make an estimate). If the estimate is above a predetermined threshold, it is used to determine the financial case reserves. All adjuster reserves are included in the actuarial reserve analyses.

- **Average Reserves**: When the adjuster estimate for a feature is below a predetermined threshold, the financial case reserve is the average reserve. These are determined by the Loss Reserving group and vary by segment. Within each segment, they may also vary by age (months since the accident occurred), policy limit, and geographic area.

Catastrophe: A term applied to an incident, storm or series of related incidents resulting in a significant number of claims with a combined cost totaling more than $25 million in property damage for the insurance industry.

Cede: To transfer liability, or a portion of it, in connection with a risk from the original or primary insurer to a reinsurance entity (e.g. a reinsurance company or Joint Underwriting Association).

Claim: A demand for payment by an insured or an alleged third party under the terms and conditions of an insurance contract.

Claimant: Usually refers to one who makes a claim.

Closed Without Payment (CWP): A claim that was reported, did not require a loss payment, and is now closed. Note that there can be loss adjustment expenses for a CWP claim.

Closure Rate: The number of claims from a specific accident period which are closed with payment at a specific evaluation date, divided by the estimated ultimate number of claims to be paid for that accident period.

Collision Coverage: A coverage of the automobile insurance policy that indemnifies the insured when his/her automobile is damaged due to physical contact with another object (except a bird or animal), or due to upset (e.g., overturning).

Combined Ratio: The sum of the loss and loss adjustment expense ratio and the expense ratio. This represents the percentage of each premium dollar an insurer spends on claims and expenses. A combined ratio less than 100% indicates an underwriting profit, while a combined ratio in excess of 100% indicates an underwriting loss.

Comprehensive Coverage: A coverage of the automobile insurance policy that pays for damages to the insured's vehicle due to any cause (except collision), including damage due to fire, windstorm, hail, theft, falling objects, explosion, riot, glass breakage and other causes of loss.

Credibility: A statistical measure of the ability to infer generalizations from a data sample. Credibility increases as sample size increases or variability within the sample decreases.

Decomposition (Decomp) Reports: Monthly internal management reports that decompose the financial case reserve changes into categories that explain the reasons for the changes.

Defense and Cost Containment (DCC) Expense: A component of loss adjustment expense. DCC includes expenses related to defense, litigation and medical cost containment whether internal or external to the Company. DCC expenses include but are not limited to accident investigation, surveillance, litigation management, and fees of attorneys and others if working in defense of a claim.

Development: Change in the estimated or actual losses or reserves over subsequent evaluations. When compared to expectations or prior estimates, it is referred to as either favorable or unfavorable development, based on whether the estimate has decreased or increased.

Development factor: The quotient of the paid or incurred value for an accident or record period evaluated at time t divided by the value for that same accident or record period evaluated at time $(t-1)$.

Diagonal: The cumulative or incremental values or factors for all accident or record periods being evaluated as of a common date. If we are evaluating accident semester paid losses at 6-month intervals, then the last diagonal of the paid loss triangle is made up of the cumulative paid loss amounts for each accident semester as of the most recent evaluation date. The development of that last diagonal would be the paid losses during the last six calendar months for each accident semester. (Also see Triangle).

Earned Car Year: An exposure unit that is the basic rating unit underlying an auto insurance premium. One automobile insured for a period of twelve months is one earned car year.

Earned Premium: That part of the premium proportional to the segment of time a policy has been in force. It is the premium for protection actually provided during the experience period.

Economic Capital: The amount of capital that a business needs to ensure that it remains solvent. It is a measure of risk, not of actual capital available to the business.

Emergence: Generally used in the context of IBNR reserves, it refers to the recording of claims (or dollar amount of the claims) after the date of the accident, usually into at least the next quarterly or annual period. For example, if an accident occurred in October 2012 and it was recorded in February 2013, it was part of the estimate of IBNR at year-end 2012, and it emerged in the first quarter of 2013.

Expense Ratio: The sum of all underwriting and operational expenses divided by premium. These expenses include such items as commission, acquisition expenses, general expenses, and taxes, but not LAE.

Exposure: A measure of the risk of loss and the basic rating unit underlying an insurance premium. The unit of exposure will vary based upon the characteristics of the insurance coverage involved. For automobile insurance, one automobile insured for a period of twelve months is one earned car year or one exposure.

Feature: The smallest divisible part of a claim. This is a loss on one coverage for one person or one property. Often a claim will involve multiple features. It can involve multiple coverages, such as Bodily Injury (BI), property damage (PD), and Collision; and/or it can involve multiple claimants for the same coverage (e.g., two injured parties).

Financial Case Reserves: See Case Reserves.

Frequency: Number of features divided by exposure count. If one exposure is defined as one earned car year, then frequency is a measure of the proportion of insureds that have a claim in a year.

Incurred But Not Recorded (IBNR) reserves: These are estimates at a given evaluation date of amounts that will be needed to settle claims that have already occurred but have not yet been recorded by the Company.

Incurred Losses: The sum of payments and case reserves.

Indication: An actuarial estimate, based upon analysis of the data.

Lag: Generally used in the context of IBNR reserves, it refers to the period of time from the date of the accident to the date the claim is recorded on the Company's books. The data is grouped into quarterly and annual lag periods for analysis of IBNR reserves.

Loss Adjustment Expenses (LAE): Expenses related to claim settlement.
Total Loss Adjustment Expenses (LAE) =
[Defense and Cost Containment (DCC) expenses] + [Adjusting & Other (A&O) expenses]

Loss Adjustment Expenses (LAE) ratio: LAE expenses divided by earned premium.

Loss ratio (Incurred loss ratio): Incurred losses divided by earned premium.

Loss Reserving Segment: See Segment.

Net Loss Reserves: Net indicates that we have deducted the expected reinsurance recoverable from the sum of case and IBNR reserves. It may also refer to reserves that have been reduced for expected salvage and subrogation recoveries.

No-Fault Insurance: A type of insurance contract under which an insured is indemnified for losses by their own insurer, regardless of fault in the accident generating the loss, and limited in the right to seek recovery through the civil-justice system for losses caused by other parties.

Paid Losses: Payments for claims.

Parameters: Variables that determine the characteristics or behavior of a statistical model and can be estimated by calculations from sample data. For example, the parameters of frequency and severity are estimated in the loss reserve analysis model.

Personal Injury Protection (PIP) Coverage: Coverage in which an insurer pays, within specified limits, the medical and funeral expenses, work loss benefits and essential services of the insured, others in his vehicles and pedestrians struck by him. The basic coverage is implemented under no-fault automobile statutes, which vary by state.

Physical Damage: Damage to the insured vehicle, which includes the comprehensive and collision coverages.

Property Damage (PD) Coverage: A coverage that pays the legal liability of the policyholder for damage to, or destruction of, property of others in an auto accident, including damage to other vehicles and structures such as buildings, telephone poles and fences.

Pure Premium: Loss dollars divided by exposure count. Pure premium is also equal to frequency times severity. The pure premium is equivalent to the loss component of the full policy premium.

Record Period Losses: Losses are assigned to the period in which the accident is recorded on the Company's financial records. Record periods used in our analysis are generally three months (record quarter), six months (record semester), or twelve months (record year). Payments and reserve changes, regardless of when they are made, are assigned to that same period in which the accident was recorded. As a result, record period results will change over time as the losses develop, i.e., as the estimates of losses change due to payments and reserve changes for all accidents that were recorded during that period.

Reopened Claim: A claim that was closed (with or without payment) but opened again at a later date due to the discovery of additional information. We reserve for future reopened claims as IBNR.

Reserves: Estimates of the unpaid portion of what the Company ultimately expects to pay out for losses and loss adjustment expenses on claims that occurred by the accounting date, whether or not those claims have been reported to the Company.

Salvage: The residual value of property in which an insurance company secures an ownership interest as a result of paying a claim for a total loss, when the damage exceeded the value of the vehicle before the loss occurred. Anticipated salvage on closed claims is included as negative IBNR reserves.

Segment (Loss Reserving Segment): Generally, a state/product/coverage combination with reasonably similar loss characteristics that is grouped together when assessing reserve adequacy.

Severity: Loss dollars divided by number of features. This indicates the dollar amount of the average feature.

Specialty Commercial Auto Vehicles: Commercial vehicles that generally have a gross vehicle weight of at least 26,000 pounds. These include tow trucks and local cartage (e.g. delivery vans, box trucks, dump trucks and flatbeds). These vehicles are used in the insured's business and are the primary source of revenue for their business.

Subrogation: An insurance company, upon payment of a loss to the insured, is entitled to the insured's legal rights against third parties. These rights are only those related to the loss, and the company is only entitled to the extent of the loss payment. Reserves for the future recoveries we expect to recover through subrogation may be included as negative IBNR reserves.

Threshold: The point above which the adjuster's estimate of a claim is carried in our financial case reserves, versus an average reserve being assigned by the system.

Trend (Exponential Fit): Exponential fitted trends tell us the estimated average annual change in severity, frequency, pure premium, or average earned premium by fitting an exponential curve to the selected values. These can use any number of data points. We generally use two-year or four-year fitted trends.

Triangle: The triangle is a tool used by actuaries to show how data has changed over time and to project ultimate values. Usually, the evaluation periods are columns organized from left to right, and the data periods are rows organized from top to bottom. The oldest data periods have been evaluated the most times, while the more recent data periods have been evaluated the least amount of times. Thus, the historical data forms a triangular shape.

Ultimate: The final selected amount, count, or ratio that we estimate by analyzing the data. For example, the selected ultimate loss amount for an accident period represents our estimate of the total cost of all claims for that accident period after they have all been paid and closed.

Uninsured/Underinsured Motorist (UM or UMBI) Coverage: Uninsured Motorist coverage pays our policy holder in the event of an accident caused by a driver who does not have liability insurance, or does not have enough liability insurance to pay damages. Coverage requirements vary by state.

Utilization (DCC Utilization): Percentage of features for which we incur expenses for defense and cost containment.

Written Premium: The total amount charged to an insured for a policy during its full policy period.

6300 WILSON MILLS ROAD / MAYFIELD VILLAGE / OHIO / 44143
440.461.5000 / progressive.com

01P00102.8 (06/13)