



OneBeacon Insurance Group, LLC

Stochastic Modeling of
Run-Off Business
Pro-forma Balance Sheet
as of June 30, 2014

Summary Report

June 10, 2014

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June 10, 2014

Mr. Brian Poole
SVP & Chief Actuary
OneBeacon Insurance Group, LLC
601 Carlson Parkway, Suite 600
Minnetonka, MN 55305

Dear Brian:

Attached is our summary report on the results of the stochastic modeling of the proposed pro-forma balance sheet for the run-off business of OneBeacon Insurance Group, LLC (OneBeacon) as of June 30, 2014. This final report replaces and supersedes our draft reports issued on May 27, 2014 and May 29, 2014.

Attention is called to the section of the report entitled *Distribution*, which sets out the limits on distribution of the report.

Sandra C. Santomenno, Christopher Bozman, and Jason Abril are members of the American Academy of Actuaries and meet its qualification standards to render the actuarial opinion contained herein.

We have enjoyed working with you in the preparation of this report. Please call if you have any questions.

Sincerely,



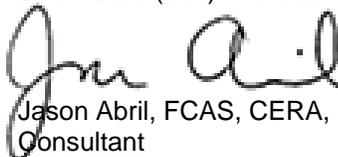
Sandra C. Santomenno, ACAS, MAAA
Senior Consultant
Direct Dial: (908) 879.9254



Stanislav Eratt, FIA, FCAS, CERA
Senior Consultant
Direct Dial: (858) 345.5127



Christopher Bozman, FCAS, MAAA
Director
Direct Dial: (215) 246.7405



Jason Abril, FCAS, CERA, MAAA
Consultant
Direct Dial: (415) 733.4315

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Purpose and Scope

Towers Watson was retained by the OneBeacon Insurance Group, LLC (OneBeacon or the Company) to perform stochastic modeling of the proposed balance sheet for OneBeacon's run-off business as of June 30, 2014.

OneBeacon is seeking to transfer its obligations for its run-off business to Armour Group Holdings Limited (Armour), a run-off specialist. The proposed general structure of this transaction is a sale of the statutory companies or entities that include these liabilities.

We understand that certain state regulators (primarily the Pennsylvania Insurance Department ("PA ID")) will be interested in the adequacy of the assets of the transferred entities in connection with their examination of the runoff companies to be sold. In this context, the purpose of our review is to provide estimates of the probability that the assets on the proposed balance sheet as of June 30, 2014 will be sufficient to fund the obligations of the runoff companies. The PA ID has indicated that it will rely on the findings of this analysis in reviewing the proposed sale of the runoff business. Neither this Summary Report nor the detailed report described below is intended or necessarily suitable for any other purpose.

This Summary Report does not contain full documentation of our actuarial assumptions and judgments. These assumptions and judgments are fully documented in our detailed report "Stochastic Modeling of Runoff Business Pro-Forma Balance Sheet as of June 30, 2014 for OneBeacon Insurance Group, LLC.", to which we refer as "the full report". Our analysis is subject to a number of reliances and limitations, as described in subsequent sections of this report.

Further, this Summary Report should be considered in conjunction with our analysis of the runoff companies' unpaid loss and LAE as of September 30, 2012, December 31, 2012, and March 31, 2013. A summary of the corresponding report (the Summary Reserve report) has been made available to the public by the PA ID.

We are available to answer any questions from the PA ID that may arise regarding this report. We assume that the PA ID will seek such explanation on any matter in question.

The scope of this review is to provide a stochastic analysis of the probability that transferred assets will be sufficient to fund the runoff companies' obligations. We projected results through 2083, by which time it is anticipated that all claims would be closed and paid. We have utilized financial models built in Towers Watson's Igloo, our proprietary financial modeling software.

Distribution

This Summary Report and the full report will be submitted to the PA ID as part of the request for approval of the sale. Both reports are provided for use by the PA ID for the intended purposes as stated in the *Purpose and Scope* section and are not necessarily suitable for any other purposes.

We understand further that this Summary Report may be placed in the public record in relation to the review of the request for approval of the transfer of the run-off liabilities.

The full report contains workpapers, trade secrets, and other confidential information of OneBeacon and Towers Watson. As such, it is confidential and not available to the public or intended to be subject to disclosure requirements under any Freedom of Information Act or similar laws.

Background

Company Overview

OneBeacon is a Bermuda-domiciled holding company that is publicly traded on the New York Stock Exchange under the symbol OB. It was formed on June 1, 2001 when White Mountains Insurance Group, Ltd. (White Mountains) acquired the US operations of Commercial Union and General Accident (CGU). Over time, OneBeacon has exited certain books of business and commenced sales of the renewal rights of several portfolios. OneBeacon is seeking to transfer its run-off business to Armour. These liabilities fall into two categories. The first category includes traditional commercial lines of business including workers compensation, general liability, commercial multi-peril, and automobile liability. The second category is reinsured by National Indemnity Company (NICO), a subsidiary of Berkshire Hathaway, under a loss portfolio transfer (referred to herein as the “NICO cover”) and consists primarily of A&E losses. The NICO claims are managed by Resolute New England (Resolute), a division of NICO. Throughout this report, the lines subject to the NICO cover are referred to as the “NICO lines” and all other lines are referred to as the “non-NICO lines.”

Reinsurance

During 2001 OneBeacon purchased a reinsurance contract from NICO covering \$2.5 billion on paid loss and ALAE subsequent to January 1, 2000 on OneBeacon’s asbestos claims arising from business written in 1992 and prior, all environmental claims arising from business written in 1987 and prior, and certain other latent exposures (NICO cover). Uncollectible reinsurance is covered by the NICO cover. As of September 30, 2013, there is \$198.3 million of limit remaining on the NICO cover in excess of OneBeacon’s carried reserves and \$898.1 million of limit remaining on a paid basis. Using our payout projections through June 30, 2014, we project \$814.5 million of limit remaining on a paid basis as of June 30, 2014.

In addition, OneBeacon entered into an adverse development cover with General Reinsurance Corp. (referred to herein as the “Gen Re ADC”) at the time of the acquisition of the CGU business by White Mountains (the “closing date”). This treaty covers adverse development on the year-end 2000 reserves (net of the NICO cover) up to a nominal limit of \$570 million with a maximum economic loss of \$28 million.

The remaining reinsurance is typically excess of loss protection for the casualty and workers compensation lines. In addition, facultative reinsurance has been purchased in certain instances.

Terminology/Definitions

Failure – Any scenario in which the invested assets fall to zero before the last claim is paid.

Success – Any scenario in which the invested assets never fall below zero before the last claim is paid.

Process risk – The risk that actual outcomes may vary from expected.

Parameter risk – The risk that the selected parameters used to describe a distribution differ from the true, unknown, underlying parameters.

Model risk – The risk that the model selected is not the appropriate model for the underlying process.

Findings and Results

Based on the results derived from running 10,000 simulations from our stochastic model, and subject to the assumptions and reliances and limitations described herein, we have estimated that the proposed transferred balance sheet as of June 30, 2014 (shown on the following page) will be sufficient to cover the future claim and expense obligations of the runoff companies in 90.10% of the simulations during the first 30 years, and in 88.28% of simulations including years thereafter. The first simulated failure occurs in the year beginning June 30, 2024. The success rates for this Final Version are shown in the table below:

Table 1 Estimated Success Rate – Final Version	
	Cumulative Success Rate
Successes in 1 st 10 years	100.00%
Successes in years 10 – 15	99.20
Successes in years 15 – 20	95.91
Successes in years 20 – 25	92.48
Successes in years 25 – 30	90.10
Successes after 30 years	88.28

The opening balance sheet utilized in the Final Version is as follows:

Proposed Pro Forma Opening Balance Sheet for the Runoff Companies
Amounts in \$Millions at 6/30/2014¹

Assets

Securities on Deposit	\$90.4
Unrestricted Invested Assets	<u>189.5</u>
Invested Assets	\$279.8
Recoverable on Paid Losses	\$12.5
Deferred Federal Income Taxes	28.6
Other Assets	<u>26.3</u>
Total Assets	\$347.2

Liabilities

Gross Nominal Loss & LAE Reserve ²	\$1,185.0
Nominal Ceded Loss & LAE Reserve	<u>-968.8</u>
Net Nominal Loss & LAE Reserve ³	216.2
Statutory WC Discount	<u>-59.7</u>
Statutory Discounted Loss & LAE Reserve	156.5
Payable Taxes	0.0
Other Liabilities	<u>29.2</u>
Total Liabilities	\$185.7

Surplus

Parri Passu Surplus Note	\$44.3
Seller Priority Surplus Note	36.6
Unassigned Funds	<u>80.6</u>
Total Surplus	\$161.5

¹ The proposed pro forma opening balance sheet as of June 30, 2014 is derived from the balance sheet as prescribed by the stock purchase agreement between OneBeacon and Armour, rolled forward to June 30, 2014, and strengthened on the closing date, pro forma as of June 30, 2014, by strengthening reserves and issuing surplus notes, as provided for in the stock purchase agreement

² Gross is defined as gross of the Gen Re ADC and the NICO cover, but net of other third party reinsurance

³ Net is defined as net of the Gen Re ADC, the NICO cover and other third party reinsurance

Preliminary Versions

At the request of OneBeacon, we ran three preliminary versions of the model, which are summarized below. The final and preliminary versions of the model differ only with respect to the beginning balance sheet and the asset allocation approach over time. Otherwise, the approach to stochastically modeling the beginning balance sheet is consistent across all the versions. Further description of the asset categories in the table below can be found in the *Asset Modeling* section later in the Report.

Opening Asset Amounts and Asset Allocations by Version Amounts are in \$Millions				
	Opening Invested Asset Value	Opening Equity	Opening Long- term BBB	Opening BBB Liability-Backed
Final Version	\$279.85	\$41.47	\$0.00	\$148.03
Preliminary Version 1	273.20	71.49	0.00	111.35
Preliminary Version 2	273.20	34.82	0.00	148.03
Preliminary Version 3	273.20	0.00	34.82	148.03

Note that for the Final Version and all three preliminary versions, the opening Securities on Deposit are the same. Preliminary versions 1-3 contain \$6.65 million less in opening assets than the Final Version. The \$6.65 million was added to the Final Version for additional balance sheet strengthening purposes.

Preliminary Version 1 with the success rates shown in Table 1.1 differs from the Final Version in the following respects:

- Cash flow matching period of the BBB liability backed bonds of 15 years, as compared to 20 years in the Final Version. This results in an opening investment of BBB liability backed bonds of \$111.35 million, as compared to \$148.03 million in the Final Version.
- Opening amount of equity investments of \$71.49 million (26% of the total investment portfolio), as compared to \$41.47 million (15% of the total investment portfolio) in the Final Version.
- Changes in the annual asset re-balancing logic to target BBB portfolio mix as a percentage of the unconstrained portfolio.

Table 1.1
Estimated Success Rate – Preliminary Version 1

	Cumulative Success Rate
Successes in 1 st 10 years	100.00%
Successes in years 10 – 15	99.13
Successes in years 15 – 20	95.62
Successes in years 20 – 25	92.30
Successes in years 25 – 30	90.18
Successes after 30 years	88.11

Preliminary Version 2, with the success rates shown below in Table 1.2, is the same as the Final Version, except that there is \$6.65 million less in opening assets than in the Final Version.

Table 1.2
Estimated Success Rate – Preliminary Version 2

	Cumulative Success Rate
Successes in 1 st 10 years	100.00%
Successes in years 10 – 15	99.08
Successes in years 15 – 20	95.33
Successes in years 20 – 25	91.34
Successes in years 25 – 30	89.00
Successes after 30 years	86.79

Preliminary Version 3, with the success rates shown below in Table 1.3, is the same as Preliminary Version 2, except that all equity investments from Preliminary Version 2 are allocated to long term BBB bonds.

Table 1.3
Estimated Success Rate – Preliminary Version 3

	Cumulative Success Rate
Successes in 1 st 10 years	99.98%
Successes in years 10 – 15	98.60
Successes in years 15 – 20	92.99
Successes in years 20 – 25	87.50
Successes in years 25 – 30	84.34
Successes after 30 years	80.87

Analysis

We performed stochastic modeling of the probability that the assets on the proposed balance sheet as of June 30, 2014 will be sufficient to fund all of the future obligations of OneBeacon's run-off business. To accomplish this, we utilized financial models built in Towers Watson's Igloo, our proprietary financial modeling platform. Within this platform, we simulated 10,000 potential future financial scenarios for 70 future calendar periods, i.e. through to 2083. Within the Igloo model, future cash flow statements are forecast for each scenario.

Our analysis focused on cash flows as we have not been asked to forecast future income statements and balance sheets. Success scenarios consist of simulations where invested assets are sufficient to pay for the runoff companies' obligations.

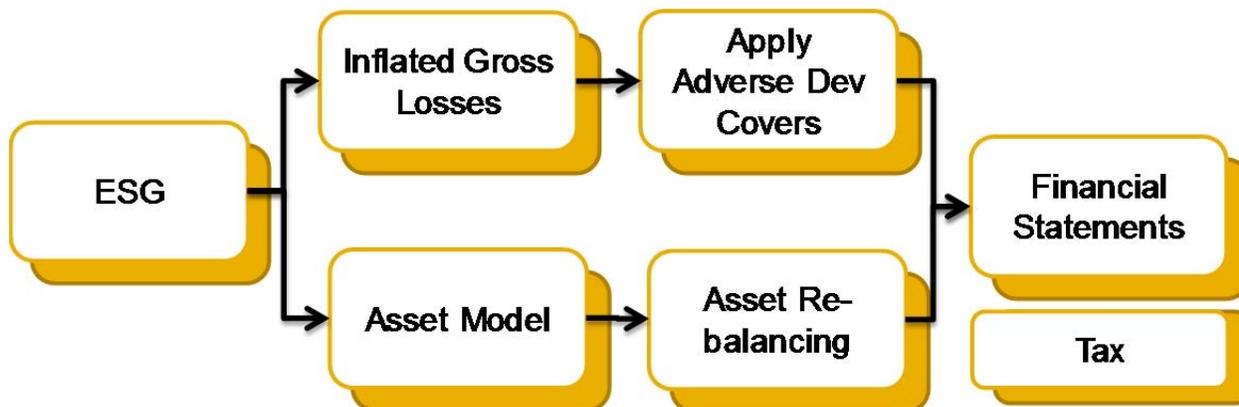
Initial Assumptions

Using data provided by OneBeacon as of September 30, 2013, we performed a roll-forward analysis of the actuarial central estimate of unpaid loss and ALAE from March 31, 2013 (as shown in the Summary Reserve report) to September 30, 2013. To the extent that any of the actual emergence of paid and reported losses varied materially from expectations, we updated our central estimate ultimate projections as of March 31, 2013.

Expected payout patterns were then selected by accident year and segment as of September 30, 2013. These payout patterns are consistent with the patterns selected as of March 31, 2013. These patterns were then used to roll-forward the low, central, and high estimates to June 30, 2014.

Approach to Financial Modeling

The following Chart summarizes the major components of the financial model:



Inputs to Igloo consisted of a proposed pro forma opening balance sheet provided by OneBeacon, which we used as a basis for determining the amount and composition of the opening asset portfolio and future projected administrative expenses. Opening reserves are established based on the starting balance sheet.

Economic Scenario Generator

We based future economic scenarios on Towers Watson’s proprietary economic scenario generator (ESG) output which incorporates future interest rates, credit spreads, equity returns, and wage and price inflation for the U.S. economy, with some adjustments based on additional input from Towers Watson’s investment consulting practice.

These metrics are then used to determine the full distribution of returns at various time horizons for a wide range of assets (at both an aggregate level and individual-security level).

For each simulation within the Igloo model, a specific simulated economic scenario is utilized and applied consistently to both the assets and the liabilities.

Stochastic modeling of cashflows associated with claim payments

To model future paid losses, we examined payment patterns derived from OneBeacon historical experience (adjusted for past inflation) and considered the uncertainty associated with those cashflows in two components:

1. Uncertainty resulting from potential future volatility in claims inflation, as described below in the Future Inflation section;
2. All other sources of uncertainty impacting the timing and amount of the payments, incorporating both process and parameter uncertainty based on the variability exhibited in the runoff companies' data with consideration given to reasonable ranges of reserve estimates.

While correlations between segments due to a shared dependency to inflation will be automatically reflected, we also considered the degree of "residual" correlation, if any. We define residual correlation in this context as the correlations due to factors other than a shared dependency to inflation. For example, payouts associated with CMP BI, general liability, and umbrella claims will be correlated in that umbrella claims arise on policies in which OneBeacon also writes the primary coverage.

Finally, the reinsurance terms for the NICO cover and Gen Re ADC were applied to the stochastically determined future cash flows for each scenario. Unrecoverable reinsurance provisions were also modeled.

Future inflation

Future claims inflation scenarios were constructed for the different types of claims based on combinations of the following components:

- Future wage and price inflation, using Towers Watson's ESG simulations directly
- Medical inflation, generated by randomly selecting one of the three models constructed by Towers Watson that project medical inflation as a function of the overall CPI
- A superimposed component to account for other effects such as litigiousness ("superimposed inflation")

The specifics of each type of claim are also considered (for example, inflation for asbestos claims considers the aging of the claimant population; for pollution, technology improvements are assumed to offset "expected" future price inflation in the "expected" scenario).

Within each scenario, the ESG components that underlie the projection of asset returns and the market value of the assets held are consistent with those applied to determine inflation assumptions for claims.

Unallocated loss adjustment expenses and other operating expenses

Unallocated loss adjustment expenses (ULAE) for non-NICO lines are modeled using uncertainty assumptions based on the variability of gross losses. ULAE for NICO is assumed to be a fixed percentage of the net NICO loss and ALAE payments. These amounts are included with the Loss and ALAE amounts in the model.

The incurred underwriting expense assumption by year was provided to us by OneBeacon. These amounts include one-time IT costs associated with the transfer of the business to Armour, Armour's management fees, and certain other costs such as premises insurance, audit expense, and actuarial services. These amounts have been partially offset by an expected retro premium receivable.

Asset modeling, re-balancing and cash flows for invested assets

For each economic scenario, we modeled asset returns with rules governing asset allocations (equities, corporate bonds, treasuries, etc.) to reflect amounts required to be held on deposit by state regulators and asset allocation targets provided by OneBeacon. Specifically, invested assets were modeled for the following five categories:

1. Securities on deposit Treasuries (SOD Treasuries), representing securities on deposit with states other than California. These amounts primarily back non-California Workers Compensation liabilities while others are for miscellaneous state licenses. Aside from running off the miscellaneous SOD's during 2014-2015, we have assumed the remainder of the amounts on deposit for WC will be released in proportion to the estimated payout of our WC high reasonable reserve estimate (as of June 30, 2014);
2. Securities on deposit corporate bonds with A security (SOD Corporates), representing securities on deposit with California. These amounts primarily back California Workers Compensation liabilities. We have assumed these amounts on deposit will be released in proportion to the estimated payout of our WC high reasonable reserve estimate (as of June 30, 2014);
3. Corporate bonds with BBB security (BBB Liability-backed), which are set to match the net cash flow payments excluding tax and investments by year for the first 20 years at the 80th percentile for each incremental cash flow period, as generated by the stochastic model. Income and principal payments from SOD treasuries and SOD corporates offset the amount of assets required to cash flow match;
4. Corporate bonds with BBB security (Long-term BBB), which are used to duration match liabilities beyond 20 years. This portfolio is reset annually and valued on a market value basis; and
5. Equity securities (equities) as a hedge against inflation.

Categories 1 and 2 above comprise the securities on deposit (SOD) and categories 3, 4 and 5 comprise the unrestricted investment portfolio. Categories 4 and 5 above are re-balanced annually in

order to achieve a target equity allocation of 15% of the entire asset portfolio for the first 30 years. Subsequent to 30 years, all remaining equities are sold and invested into the duration-matched long-term BBB portfolio.

For each of the bond categories, we have used Towers Watson's asset model to produce indices of the income, capital and total returns at each maturity period from 1 to 30 years. The opening balance sheet assumes that the initial bond portfolio is purchased at par value. We do not reflect any transactional costs. The income return is based on the opening average yield to maturity. Market value capital returns for the corporate bonds include changes in valuation as a result of changes in the interest rate yield curve, migration of the bonds from one security level to another as well as default. Amortized cost capital returns for corporate bonds only incorporate changes in valuation as a result of defaults. For SOD Corporates, capital returns assume that bonds are sold if the security level drops below single A and then get repurchased at single A. For BBB level corporate bonds, we have assumed (based on discussions with OneBeacon), that these bonds will be held until maturity or default.

For the equity returns, we developed indices of the total returns and dividend cash flows at each maturity period from 1 to 30 years based on Towers Watson's asset model.

Assets other than equities and long term BBB's were assumed to be held to maturity and valued at amortized cost rather than market value. However, if a cash need forced the selling of a bond, it was sold at market value, and the resulting gain or loss was realized during the period in which it was sold.

For each calendar period, non-cashflow matched assets were re-balanced annually, limiting the amount of equity investments to no greater than 15% of the total portfolio through year 30 and eliminating equity investments from the portfolio after year 30.

Surplus Notes Repayments and Taxes

The assets as of June 30, 2014 shown on the proposed opening balance sheet include proceeds from the issuance of surplus notes to OneBeacon. These surplus notes may be repaid, with interest (using pre-determined interest rates), subject to approval by the PA ID.

In our modeling, we have not incorporated any surplus notes repayments. We understand that in more favorable scenarios, there would be repayment of some or all of the surplus notes' interest and principal. We understand that these repayments can only be made with the consent of the PA ID.

Rules with respect to taxes were built into Igloo based on OneBeacon's financial model assumptions. Tax basis reserves are discounted using the tax discount factors provided by OneBeacon. For simplicity, deferred tax assets and tax carry-forwards are assumed to never expire. In reality, in failure scenarios, the deferred tax assets would be written off at some point, according to the prevailing accounting rules. Since we define failure when the invested assets go to zero, this treatment of not writing off deferred tax assets has no impact on the failure or success rates projected herein. For tax

calculation purposes, investment returns for equities are assumed to be unrealized for the first five years of the model. We believe this to be a reasonable assumption given the liability cash flow matching strategy described further below. We have modeled tax carry-forwards; however, we have not modeled tax recoveries, as we do not expect this item to materially impact our conclusions.

Reliances and Limitations

We have performed our analysis in accordance with relevant actuarial standards of practice and have selected approaches, methods and assumptions that we consider reasonable. However, any projection of the future environment and its effects on variables such as claims costs or asset behavior is inherently uncertain. This section explains the most significant limitations of our analysis as well as important reliances.

Capital Modeling

Although we have developed model projections in conformity with what we believe to be the current and proposed operating environments and the “most probable” future experience within such environments, it should be recognized that actual future results will vary from those projected. Deviations in the parameters used to reflect the environment could alter the projected results substantially. These parameters include management direction, insurance regulations, accounting practices, federal and local taxation, and external economic factors such as inflation rates and available investment yields. Finally, deviations from “most probable” experience are normal and are to be expected. Even without any change in perceived environments, and in the parameters used to reflect them, actual results from year-to-year will vary from those projected because of normal random fluctuations. Any deviations in parameters could cause results to vary, either favorably or unfavorably, from those projected herein. We believe the parameters chosen are reasonable and the methodologies used to derive such parameters are consistent with actuarial practices and with the methodologies employed in similar modeling work.

Inherent Uncertainty

Projections of loss and LAE cash flow liabilities are subject to potentially large errors of estimation, since the ultimate disposition of claims incurred prior to the financial statement date, whether reported or not, is subject to the outcome of events that have not yet occurred. Examples of these events include jury decisions, court interpretations, legislative changes, changes in the medical condition of claimants, public attitudes, and social/economic conditions such as inflation. Any estimate of future costs is subject to the inherent limitation on one’s ability to predict the aggregate course of future events. It should therefore be expected that the actual emergence of losses and LAE will vary, perhaps materially, from any estimate. As noted above, such variance could be favorable or unfavorable.

In this analysis, we have attempted to quantify the uncertainty inherent in the future loss emergence of OneBeacon’s business. For most segments, the resulting range of outcomes has been estimated by applying certain models to OneBeacon’s historical experience. Therefore, we are implicitly assuming that the volatility observed historically is predictive of the potential future volatility.

Asbestos and pollution liabilities

The inherent uncertainty associated with projection of loss and expense liabilities is increased when dealing with toxic tort claims due to the nature of these losses. The technological, judicial, and political climates involving toxic torts such as asbestos and pollution-related claims continue to change, and traditional actuarial methods are not optimal for projecting such liabilities. As a result, the projection of liabilities for asbestos and pollution claims is subject to greater uncertainty than would normally be associated with a review of liability estimates for general liability exposures other than major claims. We have conducted our review based on a variety of assumptions that are subject to change and, as much as possible, have taken this uncertainty into consideration.

External influences such as court decisions and legislative changes tend to have a greater effect on the uncertainty in major claims liabilities than for other types of loss. In particular, the asbestos litigation environment has experienced significant changes over the last several years. These changes include judicial decisions, tort reform measures enacted by various states, defendant bankruptcies and the establishment of the associated trusts. The changes individually and collectively have had and are expected to continue to have a significant effect on the manner in which asbestos claims are asserted and settled. This in turn leads to continued uncertainty in liability estimates as the effects of these changes must be estimated and incorporated into our projections. The estimates underlying our analysis reflect the current environment. Additional efforts to reshape the litigation environment could have a significant effect on our estimates, favorable or unfavorable; however, reflecting such potential developments would be speculative at this time. For higher percentiles, we have not explicitly incorporated any additional losses due to changes in the litigation environment, however, it is unclear as to whether the loss distribution utilized for asbestos and pollution builds in implicit provisions for potential changes in the future litigation environment.

There is significant uncertainty with respect to the estimated distribution of asbestos and pollution outcomes. The statistical techniques used to estimate the distribution of future payments for the non-NICO lines are not applicable to the NICO lines. While we have utilized techniques for the NICO lines, that we believe to be reasonable, considerable professional judgment has been incorporated.

Extraordinary Future Emergence

We have not explicitly anticipated any extraordinary changes to the legal, social, or economic environment that might affect the cost, frequency, or future reporting of claims. In addition, our estimates make no explicit provision for potential future claims arising from loss causes not represented in the historical data (e.g., new types of mass torts or latent injuries, terrorist acts, etc.). However, our mass tort analysis implicitly includes provisions for new emerging mass torts.

Model Risk

We have projected the distribution of future paid loss outcomes using models which, in our professional judgment, are appropriate for measuring uncertainty. We have not attempted to quantify

the potential uncertainty resulting from the possibility that the models used are not appropriate. That said, we believe the modeling is consistent with acceptable actuarial practices and is reasonable.

Reinsurance counterparty risk

We have assumed that recoveries arising from the Gen Re ADC and NICO cover are fully collectible. We assume that the Gen Re ADC recoveries are collected one quarter in arrears. For uncollectible reinsurance, we have utilized the unrecoverable reinsurance projections based on the analysis summarized in the Summary Reserve report.

Data Reliance

Throughout this analysis, we have relied on historical data and other quantitative and qualitative information supplied by OneBeacon, included but not limited to net paid and reported loss and ALAE development data, pro-forma balance sheets with a starting asset allocation as of June 30, 2014, asset allocation rules, regulatory specifications and amount of restricted assets.

We have not independently audited or verified the information provided; however, we have reviewed it for reasonableness and internal consistency. We have assumed that the information is complete and accurate, and that we have been provided with all information relevant to the analysis presented in this report.

The accuracy of our results is dependent upon the accuracy and completeness of the underlying data; therefore, any material discrepancies discovered in this data should be reported to us and this report amended accordingly, if warranted.

Federal Income Tax

Estimates of the provision for Federal Income Tax developed in this report are based on Towers Watson's understanding of current tax law and regulations and discussions with OneBeacon. Our work is not intended to provide tax advice.

Investment Returns

Simulated investment returns are based on Towers Watson's analysis of historical financial market data, overlaid with the views of Towers Watson's investment consulting practice. In addition, the implicit assumption is that Armour will invest in index funds, and therefore that returns will not be heavily impacted by movements in any particular equity. We have also not reflected any transactional costs associated with the buying and selling of securities.

Methods to Determine Reserve Variability

For non-NICO lines other than Auto Liability and the lines described in the last section, a Bootstrapping technique was used to measure reserve variability related to factors other than inflation. This technique is described by England and Verrall in the paper “Analytic and Bootstrap Estimates of Prediction Errors in Claim Reserving”¹, and further extended by England in a subsequent paper², to incorporate process risk in a more robust manner.

For the Auto Liability segments with open claims related to unlimited personal injury protection (“PIP”) coverage provided on policies written in the 1970s and 1980s, a claim specific model was utilized, which estimates volatility in future payments based on volatility in future medical inflation and the variation in mortality.

For asbestos, future claims inflation was estimated by applying ground-up medical inflation to OneBeacon’s portfolio to estimate the expected inflation rate specific to the portfolio and reducing the implied inflation by a fixed-percentage to account for expected annual improvement due to the aging of the claimant population (reflecting our observation that awards tend to be lower for older plaintiffs). Based on this, we parameterized a model to estimate future inflated payments as a function of un-inflated future payments and medical inflation. We then assumed that un-inflated future payments are distributed lognormally. The parameters of the lognormal were derived using the ranges from our Summary Reserve report.

For pollution, the relationship between claims inflation and price inflation was assumed to be zero except in cases where price inflation is unexpectedly high. The assumption is that technology improvements will offset some of the price inflation. We assumed that un-inflated future payments are distributed lognormally. The parameters of the lognormal were derived using the ranges from our Summary Reserve report.

For all other lines, reserve variability used a parametric approach. The distribution is lognormal, with a mean and coefficient of variation set to match the variability implied by the Reserve Summary report. Payment patterns from the Reserve Analysis report were applied to derive future payment streams. The following lines were grouped together:

- Non-NICO
 - All Other General Liability:

¹ England, P.D. & Verrall, R. J. (1999). “Analytic and bootstrap estimates of prediction errors in claims reserving.” *Insurance: Mathematics and Economics*, 25, pp.281-293.

² England, P.D. (2001). “Addendum to ‘Analytic and bootstrap estimates of prediction errors in claims reserving.’” Actuarial Research Paper No. 138, Department of Actuarial Science and Statistics, City University, London, EC1V 0HB.

- Modeled Lines: Commercial Multi Peril - Non Liability - Runoff, Commercial Auto Liability - Mass - Runoff, Commercial Auto Physical Damage - ex Mass - Runoff, Commercial Auto Physical Damage - Mass - Runoff, All Lines - AGRI, Non WC - HSNP, Commercial Lines - Monoline Property - Runoff, General Accident Business Owners Policy - Runoff, All Other - NATL, All Other - 1997 & Prior, All Other - HSNP - 1997 & Prior, Construction Defects,
- Non-Modeled Lines: Other Mass Torts, Extra Contractual, Misc. Personal Lines, Voluntary Pools
- All Other Workers Compensation: Non Modeled Cat Losses, NFU, LRAM, and Involuntary Pools
- Unrecoverable Reinsurance
- ULAE
- NICO
- All Other