

RECEIVED
Corporate & Financial Regulation



SEP 17 2013

September 17, 2013

Pennsylvania
Insurance Department

James R. Potts

Direct Phone 215-665-2748

Direct Fax 215-701-2102

jpotts@cozen.com

Steven L. Yerger, PIR
Company Licensing Specialist
Pennsylvania Insurance Department
1345 Strawberry Square
Harrisburg, PA 17120

Re: Change of Control of Domestic Insurers OneBeacon Insurance Company and Potomac Insurance Company-- Supplemental Information

Dear Mr. Yerger:

On February 7, 2013, we filed with the Pennsylvania Insurance Department a Form A Statement Regarding the Acquisition of Control of a Domestic Insurer in connection with the proposed acquisition of control by Armour Group Holdings Limited, through its subsidiary, Trebuchet US Holdings, Inc. (the "Applicant") of OneBeacon Insurance Company and Potomac Insurance Company, subsidiaries of OneBeacon Insurance Group LLC ("OneBeacon Group").

We understand that the Department advised OneBeacon Group that an independent third party actuarial analysis of the loss reserves of OneBeacon Insurance Company and Potomac Insurance Company, including their subsidiaries OneBeacon America Insurance Company and The Employers' Fire Insurance Company (the "OneBeacon Companies"), must be undertaken and furnished to the Department for the Department's examination and regulatory analysis in connection with the proposed transaction and that a summary report of that analysis be prepared that may be made publicly available. We further understand that, in November of 2012, Towers Watson, with the approval of the Department, was retained by OneBeacon Group to perform that analysis and that the analysis has now been completed.

We have been provided and are enclosing Towers Watson's Analysis of Unpaid Loss and LAE as of September 30, 2012, December 31, 2012 and March 31, 2013 - Summary Report for use and publication as a supplement to the Form A filed by the Applicant. We understand that a full report of Towers Watson's analysis will be provided by OneBeacon Group to the Department on a confidential, non-public basis as part of the Department's examination of the OneBeacon Companies.

Sincerely,

COZEN O'CONNOR

By: James R. Potts



OneBeacon Insurance Group, LLC

**Analysis of Unpaid Loss
and LAE as of
September 30, 2012,
December 31, 2012, and
March 31, 2013 –
Summary Report**

September 9, 2013

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

Dear Brian:

Attached is our report on the unpaid loss and loss adjustment expense amounts of OneBeacon Insurance Group, LLC (OneBeacon) as of September 30, 2012, December 31, 2012 and March 31, 2013.

This final report replaces and supersedes the draft reports sent August 30th and September 3rd.

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

The authors of this report, Sandra C. Santomenno and Christopher Bozman, 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



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

Table of Contents

Purpose and Scope	1
Distribution.....	4
Background.....	5
Company Overview	5
Changes in Operations and Business Environment	5
Reinsurance	5
Terminology.....	6
Loss Adjustment Expense.....	7
Findings – Non-NICO Lines	8
Unpaid Loss and LAE as of September 30, 2012 and March 31, 2013.....	8
Statutory Unpaid Loss & LAE as of September 30, 2012 and March 31, 2013.....	10
Findings – NICO Lines	11
Unpaid Loss and LAE as of December 31, 2012 and March 31, 2013.....	11
Analysis – Non-NICO Lines	13
Development Patterns.....	13
Initial Expected Loss Ratios	14
Selected Ultimate Losses.....	14
Projected Payout and Discounting	14
Non-Modeled Lines	14
Gen Re cover cessions	15
Unallocated Loss Adjustment Expense.....	15
Roll-Forward.....	15
Uncollectible Reinsurance.....	16
Statutory Workers Compensation discount.....	16
Range of Reasonable Estimates.....	18
Analysis – Asbestos Direct	20
Summary	20
Exposure-Based Analysis	20
Estimation of Net Liabilities	21
Cash Flow	22
Analysis – Pollution Direct	23
Summary	23
Key Considerations and Uncertainties.....	24
Estimation of Net Liabilities	24
Cash Flow	24

Analysis of Other NICO Reserves..... 25

- Assumed Asbestos and Pollution..... 25
- Direct and Assumed Other Mass Tort..... 26
- Assumed Re - Workers Compensation..... 26
- Assumed Re - ECRA..... 26
- Assumed Re – ECRA Western Macarthur Claim..... 26
- Cash Flow 26
- Range of Reasonable Estimates – Total NICO lines 26

Reliances and Limitations 27

- Inherent Uncertainty 27
- Asbestos and Pollution Liabilities 27
- Ranges of Estimates 28
- Data Reliance 28
- Extraordinary Future Emergence 28
- Discounting..... 29
- Underlying Assets 29
- Legal Advice..... 29

Data and Information – Non-NICO Lines..... 30

Data and Information – NICO Lines 32

Description of Loss and LAE Projection Methods..... 34

- Reported Development Method 34
- Paid Development Method 34
- Expected Loss Method..... 34
- Reported Bornhuetter-Ferguson Method 35
- Paid Bornhuetter-Ferguson Method 35
- Backwards Recursive Technique..... 35
- Incremental Paid Method 36
- Frequency/Severity Method 36

Purpose and Scope

Towers Watson was retained by the OneBeacon Insurance Company (OneBeacon or the Company) to prepare an actuarial analysis of OneBeacon's loss and loss adjustment expense (LAE) experience for the purpose of developing estimates of unpaid loss and LAE as of September 30, 2012 and December 31, 2012, with a rollforward to March 31, 2013. This review encompasses all of OneBeacon's run-off business (as defined internally by OneBeacon) including Asbestos and Environmental (A&E) as well as miscellaneous and more traditional lines of business. This analysis is segmented between lines subject to an adverse development cover with National Indemnity Company (the "NICO lines") and all other lines of business (the "non-NICO lines"). The NICO lines consist mainly of asbestos, pollution, and other mass tort claims.

This report was prepared for the internal use of OneBeacon management and its Board of Directors to present our findings with respect to this analysis. It is our understanding that OneBeacon management and its Board of Directors will consider our findings for the purposes of providing OneBeacon's regulators a context for the reserves and surplus on the transferred balance sheet from OneBeacon to Armour Reinsurance Limited ("Armour"), a run-off specialist. OneBeacon and Armour have reached an agreement which, if approved, would transfer OneBeacon's obligations for the run-off business to Armour. 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 Department of Insurance ("PA DOI")) has informed OneBeacon, that, in connection with its review of this transaction, it requires that an independent actuarial firm conduct an actuarial analysis to provide context for the reserves and surplus of the transferred entities. The PA DOI has indicated that they will consider the findings of this actuarial analysis in reviewing the proposed sale of the run-off business. We understand further that this Summary Report will be placed in the public record to document the high level findings from our analysis. This Summary Report, and the related full report described below, will be submitted to the PA DOI as part of the parties' request for approval of the sale.

Neither this Summary Report nor the full report described below is intended or necessarily suitable for any other purposes.

This Summary Report does not contain full documentation of our actuarial assumptions and judgments. These assumptions and judgments are fully documented in our report entitled "Analysis of Unpaid Loss and ALAE as of as of September 30, 2012, December 31, 2012 and March 31, 2013 for OneBeacon Insurance Group, LLC." Our projections are subject to a number of reliances and limitations, as described in subsequent sections of this report. The full report contains workpapers, trade secrets, and other confidential information of both OneBeacon and Towers Watson, and as such, is confidential and is not available to the public.

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

In this report, we provide estimates of OneBeacon's unpaid loss and LAE as of September 30, 2012 for the Non-NICO lines and December 31, 2012 for the NICO Lines. For both segments, a roll-forward analysis was performed as of March 31, 2013. Our estimates are provided on several bases representing various intended measures. These include an actuarial central estimate, as well as estimates above and below this actuarial central estimate. These estimates were arrived at through evaluation of the results of various actuarial methods and models applied to OneBeacon's experience. As such, these estimates do not reflect extreme events believed to have a remote possibility of occurring. The range of estimates is intended to encompass a range of reasonable estimates of the actuarial central estimate. We have not equated this range with a specific confidence interval. We consider the actuarial central estimate, and the range of estimates presented here suitable for use in financial reporting contexts. A range of reasonable estimates was compiled separately for the NICO lines and non-NICO lines. These ranges reflect our estimate of the diversification impact between lines within each segment. Quantifying the diversification impact on a total NICO and non-NICO combined range requires assumptions regarding the distribution of unpaid liabilities for both the NICO and the non-NICO lines. While it is possible to make reasonable assumptions with respect to these distributions, there is significant uncertainty as to the shape of the distributions, particularly for the NICO lines. Therefore, OneBeacon has requested that we not provide a range of reasonable estimates in aggregate for the entire run-off portfolio. We note that such a range would be narrower (i.e. have a higher low reasonable estimate and a lower high reasonable estimate) than a range computed by summing the respective low and high estimates.

For the purposes of our report, the "accounting date" September 30, 2012 (Non-NICO lines) and December 31, 2012 (NICO lines) is the date used to separate paid and unpaid claim amounts in the Company's financial statement. Transactions through the "valuation date" of September 30, 2012 are included in the data used in our analysis. For our rollforward analysis, the corresponding accounting and valuation dates are March 31, 2013. No account has been taken in the projections of developments subsequent to the "review date" of March 31, 2013.

Our analysis was performed both net of ceded reinsurance, and net of anticipated future salvage and subrogation. Our estimates include a projection of unrecoverable reinsurance. We have assumed that all of the Company's future salvage/subrogation or other recoveries will be valid and collectible.

On a net basis, we have not reviewed \$81.1 million of carried reserves related to the "Non-Modeled" lines of the run-off business as of September 30, 2012. The non-reviewed business relates principally to involuntary pools as well as miscellaneous non-modeled lines for which limited historical data is available. For the non-reviewed segments, we have set our indicated actuarial central estimates equal to OneBeacon's carried reserves.

We have estimated unpaid amounts on both a discounted and undiscounted basis as regards future investment income. We have separately reviewed the statutory discount amounts carried by OneBeacon in respect of its workers compensation reserves.

The discount rates were calculated based on an assumed investment portfolio mix of AAA rated securities, investment grade corporate bonds, and equities that is matched to the liability payout. For our low reasonable estimate and our actuarial central estimates we have used spot rates and spreads as of March 31, 2013 as well as equity return assumptions provided by White Mountains Advisors, LLC. The long-term real compound return on US equities of 5.7% was estimated by White Mountains Advisors, LLC based on institutional investment research publications as of February 2013.

For our high reasonable estimates, we have utilized higher discount rates based on the assumption that our high estimates implicitly assume an increase in future inflation, which we would expect to be associated with a higher interest rate environment.

The Company participates in a small number of voluntary and involuntary pools. We have independently reviewed the reserves included within the voluntary pools. For the involuntary pools, Company practice is to record the loss and loss adjustment reserves reported to it by the pools with accrual for any reporting lag. Total undiscounted involuntary pool reserves as of September 30, 2012 are \$70.3 million, in comparison to our total net actuarial central estimate of \$861.2 million (gross of outward adverse development covers and loss portfolio transfers).

We have not reviewed any additional or return premiums or commissions due to or from OneBeacon arising from loss sensitive insurance or reinsurance contracts. Such amounts are considered immaterial. However, we note that for one policyholder account, we estimate that OneBeacon will be due an additional retrospective premium of \$3.5 million due to our forecast of future asbestos losses. We further understand that OneBeacon has not recorded this potential receivable as an asset on its balance sheet. We have not reviewed the collectability of this potential additional premium, and none of our estimates contained herein reflect this amount.

Throughout this report, the use of the term "loss" without modification includes loss and allocated loss adjustment expense (ALAE), but does not include unallocated loss adjustment expense (ULAE).

Distribution

We have prepared this Summary Report solely for the intended purpose as described in the preceding section. We understand that this Summary Report may be included as part of the public record related to the PA DOI's review of the request for approval of the transfer of the run-off liabilities. No further distribution of this Summary Report or reference, either oral or written, to Towers Watson, our analysis or findings related to this Summary Report may be made without our prior written consent.

As noted above, the full report contains workpapers, trade secrets, and confidential information of both OneBeacon and Towers Watson and may only be used by the PA DOI for the purposes described above. Because of the nature of the material contained in the full report, it is not 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. As of September 30, 2012, there is \$198.3 million of limit remaining on the NICO cover in excess of OneBeacon's carried reserves. 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."

Changes in Operations and Business Environment

Based on discussions with OneBeacon management, we are aware of recent changes in its claim operation that have an impact on the methods and assumptions utilized in this analysis. For the non-NICO lines, OneBeacon reorganized its claims department to formally establish a run-off claim operation in 2011. Coincident with this change was an increased emphasis on the settlement of claims; OneBeacon believes there may have been improvements in case reserve adequacy in certain segments as well.

Separately, OneBeacon made changes in case reserve estimates for lifetime workers compensation cases beginning in late 2009 and continuing through early 2011. For these claims, OneBeacon is now case reserving based on the assumption of no impairments to mortality due to the nature of the claimants' injuries. Previously, case reserves were established using impaired mortality assumptions where deemed appropriate by OneBeacon's claim examiners. As a result, unadjusted reported development methods or other methods based on case reserves could be distorted for the workers compensation line of business. We have taken this into account when conducting our analysis of OneBeacon's workers compensation segments.

These recent changes in operations introduce additional uncertainty in the liability estimates, as we discuss in a subsequent section of this report.

Reinsurance

During 2001 OneBeacon purchased a reinsurance contract from National Indemnity Company (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.

In addition, OneBeacon entered into an adverse development cover with General Reinsurance Corp. (referred to herein as the "Gen Re cover") 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

Loss Reserves: A liability item on the insurance company balance sheet to provide for unpaid claims. It consists of two components – case reserves and IBNR reserves.

Paid Loss: The amount of money that has been paid by an insurance company on behalf of insureds to cover the insureds' claims.

Case Reserves: The estimate of unpaid loss (or loss and ALAE) amounts established by the claim department for unpaid claims that have been reported to OneBeacon. Case reserves are established on an individual claim basis.

Reported Loss: The total of paid loss and case reserves for known claims.

IBNR: Loss and/or ALAE for claims Incurred But Not Reported. In this report, we have used the term in its broader, more general sense, to represent development on outstanding case reserves (also referred to as supplemental or IBNER – Incurred But Not Enough Reported) and unreported claims (also referred to as "pure" IBNR or IBNYR – Incurred But Not Yet Reported).

Incurred Loss: The total of Reported Loss and IBNR.

Allocated Loss Adjustment Expense (ALAE): ALAE refers to defense, litigation and medical cost containment expenses, whether internal or external (e.g., attorney fees for defense, cost of engaging experts, etc.).

Earned Premium: The pro rata portion of written premium that represents the earned portion of the insurance contract as of a given point in time.

Frequency: Claims per unit of exposure.

Pure Premium: Loss (or loss and ALAE) per unit of exposure.

Loss Adjustment Expense (LAE): The term LAE includes both allocated and unallocated loss adjustment expense. See definition of unallocated loss adjustment expense below.

Loss Development Factors: Factors used to project losses and/or ALAE to their ultimate value. These factors adjust actual losses to include IBNR and case reserve adequacy, or total unpaid amounts, to produce an estimate of total or ultimate loss (and/or ALAE).

Severity: Average loss per claim.

Trend Factors: Factors used to adjust the past loss experience to the cost levels of the period being considered. Trend factors include the effects of inflation and may also include adjustment for anticipated changes in laws, technology and other factors which may be expected to affect loss frequency or severity.

Unallocated Loss Adjustment Expense (ULAE): Those loss adjustment expenses not included within ALAE (e.g., fees of adjusters, attorney fees incurred in the determination of coverage, etc.).

Written Premium: The total premium that is charged for policies with effective dates during the accounting period.

Loss Adjustment Expense

Throughout this report, loss adjustment expenses are classified according to whether the particular expense item is recorded to a specific claim file or not. That is, loss adjustment expense items are categorized as "allocated loss adjustment expense" (ALAE) or "unallocated loss adjustment expense" (ULAE) rather than the annual statement terminology "defense and cost containment" and "adjusting and other."

Findings – Non-NICO Lines

Based on our analysis of OneBeacon's experience at September 30, 2012 and March 31, 2013, and subject to the considerations set forth in the *Reliances and Limitations* section, we have reached the following conclusions regarding the Non-NICO lines.

Unpaid Loss and LAE as of September 30, 2012 and March 31, 2013

The tables below display the estimated unpaid loss and LAE.

- For the Non-NICO lines, before cessions to the Gen Re Adverse Development Cover, estimated total nominal unpaid net loss and LAE as of September 30, 2012, is \$861.2 million. The range of reasonable estimates is \$785.5 million for the low and \$995.8 million for the high.
- For the Non-NICO lines, net of the Gen Re Adverse Development Cover, estimated discounted unpaid loss and LAE as of September 30, 2012, is \$364.8 million. The range of reasonable estimates is \$326.9 million for the low and \$385.1 million for the high.
- For the Non-NICO lines, before cessions to the Gen Re Adverse Development Cover, estimated total nominal unpaid net loss and LAE as of March 31, 2013, is \$765.0 million. The range of reasonable estimates is \$696.2 million for the low and \$887.9 million for the high.
- For the Non-NICO lines, net of the Gen Re Adverse Development Cover, estimated discounted unpaid loss and LAE as of March 31, 2013, is \$276.1 million. The range of reasonable estimates is \$237.6 million for the low and \$289.4 million for the high.

**TABLE 1 – Non-NICO Lines
Unpaid Loss and LAE as of September 30, 2012 (\$000)**

Line	Low	Central	High
Commercial Multi Peril	\$114,152	\$125,221	\$140,067
Auto	61,914	73,834	101,071
All Other ex CD	46,508	59,524	73,341
Workers Compensation	382,760	424,463	514,566
Construction Defect	11,230	13,079	15,643
Non Modeled Lines	88,338	96,957	105,791
Unrecoverable Reinsurance	11,088	12,419	13,910
ULAE	50,798	55,671	63,708
SubTotal	766,787	861,167	1,028,097
Diversification Adjustment	18,747	-	(32,323)
Cessions to Gen Re	(417,297)	(388,013)	(397,350)
Discount	(41,383)	(108,331)	(213,279)
Net Unpaid Loss and LAE	\$326,854	\$364,824	\$385,146

**TABLE 2 – Non-NICO Lines
Unpaid Loss and LAE as of March 31, 2013 (\$000)**

Line	Low	Central	High
Commercial Multi Peril	\$79,541	\$88,065	\$98,992
Auto	53,603	64,821	86,823
All Other ex CD	38,072	47,821	59,168
Workers Compensation	360,169	399,457	484,319
Construction Defect	9,243	10,764	12,875
Non Modeled Lines	84,374	92,523	101,135
Unrecoverable Reinsurance	10,447	11,738	13,188
ULAE	45,371	49,839	57,876
SubTotal	680,820	765,027	914,375
Diversification Adjustment	15,392	-	(26,478)
Cessions to Gen Re	(417,297)	(382,452)	(395,558)
Discount	(41,301)	(106,433)	(202,929)
Net Unpaid Loss and LAE	\$237,615	\$276,142	\$289,410

As of March 31, 2013, we estimate the range of net discounted unpaid loss and LAE for OneBeacon for the non-NICO lines to be from \$237.6 million to \$289.4 million. This range reflects what we consider to be a range of reasonable favorable and adverse scenarios, but not a range of all possible outcomes.

Further, the proper application of any range is dependent on the context. We believe that the range presented here is reasonable for use in the preparation of OneBeacon's financial statements. Consequently, this range is narrower than a range that would illustrate the underlying uncertainty.

Note that neither a general agreement nor standard of practice exists among actuaries regarding the estimation of unpaid loss ranges. In this analysis, we employed techniques based on the range of estimates implied by application of alternative methods and assumptions that we consider reasonable.

Statutory Unpaid Loss & LAE as of September 30, 2012 and March 31, 2013

For the non-NICO lines, our projected net statutory unpaid loss and LAE as of September 30, 2012 is \$404.0 million, with a range of \$299.1 million to \$529.3 million. These statutory unpaid amounts reflect workers compensation tabular discounting, but otherwise are presented on an undiscounted basis. As of March 31, 2013, our projected net statutory unpaid loss and LAE is \$318.7 million, with a range of \$215.1 million to \$428.5 million.

**TABLE 3 – Non-NICO Lines
Statutory Unpaid Loss and LAE as of September 30, 2012 (\$000)**

	Low	Central	High
Total Prior to Diversification	\$766,787	\$861,167	\$1,028,097
Diversification Adjustment	18,747	-	(32,323)
Cessions to Gen Re	(417,297)	(388,013)	(397,350)
Statutory WC Discount	(69,132)	(69,132)	(69,132)
Net Unpaid Loss and LAE	\$299,105	\$404,022	\$529,292

**TABLE 4 – Non-NICO Lines
Statutory Unpaid Loss and LAE as of March 31, 2013 (\$000)**

	Low	Central	High
Total Prior to Diversification	\$680,820	\$765,027	\$914,375
Diversification Adjustment	15,392	-	(26,478)
Cessions to Gen Re	(417,297)	(382,452)	(395,558)
Statutory WC Discount	(63,849)	(63,849)	(63,849)
Net Unpaid Loss and LAE	\$215,067	\$318,726	\$428,491

Findings – NICO Lines

Based on our analysis of OneBeacon's experience at December 31, 2012 and March 31, 2013, and subject to the considerations set forth in the *Reliances and Limitations* section, we have reached the following conclusions.

Unpaid Loss and LAE as of December 31, 2012 and March 31, 2013

The tables below display the estimated unpaid loss and LAE.

- For the lines subject to the NICO cover, estimated total nominal unpaid loss and LAE (net of all reinsurance except for the NICO cover) as of December 31, 2012, is \$1,004.5 million. The range of reasonable estimates is \$884.7 million for the low and \$1,214.4 million for the high.
- For the lines subject to the NICO cover, estimated total nominal unpaid loss and LAE (net of all reinsurance except the NICO cover) as of March 31, 2013, is \$986.0 million. The range of reasonable estimates is \$866.2 million for the low and \$1,195.9 million for the high.
- As of December 31, 2012, estimated net liabilities net of the net NICO cover are \$21.7 million on a nominal basis, and \$3.4 million on a discounted basis. The corresponding range of reasonable estimates is \$0 to \$240.0 million on a nominal basis, and \$0 to \$58.2 million on a discounted basis. It should be noted that we calculated the impact of the NICO cover for our low, central, and high estimates by applying the limit directly to the respective estimates. An alternative approach would be to treat our low, central, and high estimates as representative of potential means of an unpaid loss distribution, and then calculate the expected value of losses in excess of the limit over a distribution based on a stochastic approach. This approach would require a reasonable estimate of variance and shape of the unpaid loss distribution, which is highly uncertain, as discussed previously. This alternate approach would likely yield different estimates, which would be higher for the low reasonable estimate.
- As of March 31, 2013, estimated net liabilities net of the NICO cover are the same as at December 31, 2012, while the discounted estimates range from \$0 to \$59.1 million, with a central estimate of \$3.5 million.

TABLE 5
Unpaid Loss and LAE as of December 31, 2012 (\$000) – NICO Lines

Line	Low	Central	High
Direct			
Asbestos	\$535,121	\$621,818	\$736,760
Pollution	79,025	99,025	129,025
Other	28,050	42,075	56,100
Assumed			
Asbestos	\$72,013	\$102,999	\$144,199
Pollution	21,124	25,359	35,503
Other	91,852	113,237	150,662
SubTotal	827,185	1,004,513	1,252,248
Diversification Adjustment	57,490	-	(37,822)
Cessions to NICO	(884,675)	(983,610)	(983,610)
Losses Above NICO Limit	-	20,903	230,817
ULAE	-	836	9,233
Discount	0	(18,378)	(181,840)
Net Discounted Unpaid Loss and LAE	\$0	\$3,362	\$58,209

TABLE 6
Unpaid Loss and LAE as of March 31, 2013 (\$000) – NICO Lines

Line	Low	Central	High
Asbestos	\$595,215	\$712,898	\$869,040
Pollution	95,692	119,927	160,071
All Other	117,799	153,209	204,659
SubTotal	808,706	986,035	1,233,770
Diversification Adjustment	57,490	-	(37,822)
Cessions to NICO	(866,196)	(965,131)	(965,131)
Losses Above NICO Limit	-	20,903	230,817
ULAE	0	836	9,233
Discount	0	(18,206)	(180,980)
Net Discounted Unpaid Loss and LAE	\$0	\$3,533	\$59,070

Analysis – Non-NICO Lines

For each line of business reviewed, our analysis consisted of the steps outlined below. Additional details regarding the analysis of individual lines of business are provided at the end of this section.

The analysis by line was performed on a net basis, with the initial implicit assumption being that all reinsurance is collectible. Ceded estimates were derived using the initial net estimates as inputs. A provision for uncollectible reinsurance was generated based on the ceded estimates, as described in a subsequent section. Case reserves are discounted for tabular discount (indemnity on lifetime pension cases). The total workers compensation tabular discount embedded in the triangles as of September 2012 is \$57.4 million. Our selected IBNR incorporates a provision for the unwinding of the discount; therefore, the resulting unpaid losses are presented on an undiscounted basis.

Development Patterns

Our projection of future claim reporting and payment is based on OneBeacon's historical experience. Using historical loss development experience provided by OneBeacon, we select report-to-report (RTR) development factors. In cases for which OneBeacon's historical data is not sufficiently credible, stable, or mature, we have supplemented OneBeacon's experience with benchmark reporting and payment patterns. With few exceptions, we have relied on OneBeacon's historical data and have placed very little reliance on benchmark patterns.

Benchmark patterns are constructed internally by Towers Watson, drawing upon available relevant sources of loss development data. Benchmarks are revised periodically as new information and trends emerge. While each company's own development can be expected to vary from the benchmark based on individual circumstances, we believe the benchmark is an appropriate supplement to the analysis of company data, as it represents our current judgment as to the typical emergence of loss that can be expected for that class of business.

In lines of business with lengthy development characteristics, loss development will often continue beyond the greatest maturity level reflected in the underlying data. When necessary, we have estimated development tail factors by reviewing comparable benchmarks developed internally by Towers Watson along with the known development progression reflected in OneBeacon's experience. For workers compensation, our range of tail factors for the 1997 and prior segments were projected based on an examination of OneBeacon's historical development experience as well as varying assumptions regarding future medical inflation and the decay in payments due to mortality and other factors. For the 1998 and subsequent years, we have selected our workers compensation tail factors based on an examination of the development leading up to the tail, benchmark development patterns, and the 1997 and prior selected tail factors.

For the 1997 and prior segments, the data provided by OneBeacon only included amounts paid and case reserves for periods subsequent to September 30, 1987. Therefore, for accident years 1987 and prior, we "estimated" the earlier paid data based on our loss development pattern selections before applying loss development factors. In addition, we tended to give more weight to the incremental method results for these periods since this method is not impacted by the missing historical paid data.

The selected development patterns are used for both the development (LDF) and Bornhuetter-Ferguson (BF) projection methods.

Initial Expected Loss Ratios

The selected initial expected loss ratios (IELR) are based primarily on a review of trended and on-level loss ratio results (based on both the paid and reported LDF indications) for more mature accident years. Historical loss ratio results were indexed to 2012 using factors provided by OneBeacon. These factors combined the effects of loss trend, exposure trend, and rate change. We reviewed these factors for reasonableness.

Selected Ultimate Losses

In general, our selected ultimate losses are based on the results of five projection methods: the reported and paid development methods, the reported and paid Bornhuetter-Ferguson methods, and the IBNR to case method. Our selections are based on judgment reflecting the range of estimates produced by the methods and the strengths and weaknesses of each method. In general, development methods were given predominant weight given the maturity of the accident years. For workers compensation, we also utilized an incremental paid method, and the backwards recursive method. For auto liability unlimited personal injury protection (PIP) claims, we conducted a claim by claim analysis, based on the forecast of average annual medical payments, medical inflation, and mortality. These methods are described in the final section of this report.

For construction defect, our selected ultimate losses are based on the results of a frequency/severity method for claims not yet reported (IBNYR claims) and two projection methods (the reported and paid development methods) for supplemental development. Our selections are based on judgment reflecting the range of estimates produced by the methods and the strengths and weaknesses of each method. These methods are described in this section and in the final section of this report.

The Summary exhibits present the detailed results of our analysis.

Projected Payout and Discounting

For each segment, we have utilized the selected payout patterns from our analysis to project the future annual payout stream. For non-modeled lines, we have used the payout patterns for similar lines of business.

Our discount rates for the low, central and high were based on a review of information provided by White Mountain Advisors LLC regarding a potential asset mix that could be structured to meet the projected liability cash flow.

Non-Modeled Lines

As of September 30, 2012, OneBeacon holds \$92.0 million of loss and ALAE reserves for non-modeled lines. The breakdown of this amount is as follows:

- Non-reviewed Involuntary Pools - \$70.3 million – relates principally to workers compensation. We have not independently reviewed these reserves. We note that these reserves are reviewed by a qualified actuary.
- Other non-reviewed - \$10.8 million.
- Reviewed - \$10.9 million.

Gen Re Cessions

OneBeacon provided us with a file showing the Gen Re cessions to date along with the economic loss. Using our projected payout patterns for the subject business (accident years 2000 and prior), we can then project future subject payments and apply the contract terms (nominal limit and economic loss limit).

Unallocated Loss Adjustment Expense

Actual ULAE costs for OneBeacon through the end of June 2013 were provided, split between direct claim department costs and indirect costs (i.e., allocations from other areas). We also reviewed information prepared by Armour projecting costs through 2017. Our projected payout pattern for gross loss and ALAE was very similar to Armour's payout pattern through 2017. Claim department costs under both the central and high scenarios subsequent to the year ending September 30, 2016, were projected as 2% of the remaining unpaid loss and ALAE for workers compensation and PIP claims (which represent 92% of the remaining central unpaid after September 30, 2016) and 5% of the unpaid loss and ALAE for other lines. Our resulting central estimate of unpaid ULAE is \$55.7 million, with a high estimate of \$63.7 million. Our low unpaid ULAE of \$50.8 million equals our central unpaid ULAE times the ratio of our low unpaid loss and ALAE (before the Gen Re cessions) to our central unpaid loss and ALAE (before the Gen Re cessions).

It should be noted that our projections do not include certain projected costs that Armour has informed us should be treated as operating expenses as opposed to ULAE based on their understanding of the statutory accounting guidelines. These costs 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 projected future operating expenses total \$20.5 million through 2020, and are not otherwise accrued for on the balance sheet.

Roll-Forward

As of March 31, 2013, we subjected our liabilities to a roll-forward test. For the central estimates, we changed our ultimates in reaction to the actual versus expected emergence for lines other than workers compensation and auto liability 1997 & prior. The low and high estimated unpaid amounts as of March 2013 were estimated assuming the same high unpaid to central unpaid and low unpaid to central unpaid ratios by segment as in the September 2012 analysis.

Uncollectible Reinsurance

We have reviewed OneBeacon's provision for uncollectible reinsurance for the non-NICO lines in the following segments:

- Business fronted for a company which is now insolvent.
- Amounts ceded to insolvent reinsurers. We understand that the analysis data provided by OneBeacon reflects cessions to all reinsurers, irrespective of their financial position.
- Reinsurance counterparty risk related to all other reinsurers.

Once ceded IBNR and unpaid is available at the reinsurer level, we apply our proprietary reinsurance counterparty model.

Factors affecting counterparty risk are: 1) financial strength of individual reinsurers (i.e., OneBeacon's counterparties), which is driven by factors external to OneBeacon; and 2) volatility in the ceded loss distribution, which is specific to OneBeacon.

Estimated uncollectible ceded unpaid loss and ALAE to reinsurers as of September 30, 2012, is \$13.0 million.

We estimate a high range of uncollectible ceded unpaid loss and LAE to be \$14.4 million. This high estimate reflects what we consider to be a high range of reasonable adverse counterparty scenarios, but not a high estimate of all possible outcomes.

The table below displays the estimated uncollectible ceded unpaid loss and ALAE.

**TABLE 7 – Non-NICO lines
Uncollectible Ceded Unpaid Loss and ALAE as of September 30, 2012
(\$000)**

	Central Estimate	High Estimate
a. Reinsurance Counterparty Risk	\$1,280	\$1,440
b. Insolvent Reinsurers	11,139	12,470
c. Total Uncollectible Loss and ALAE	\$12,419	\$13,910

Statutory Workers Compensation discount

OneBeacon carries tabular (indemnity only) statutory workers compensation discount on lifetime pension cases, which totals \$57.3 million for modeled lines as of September 30, 2012 (\$52.6 million as of March 31, 2013). As mentioned previously, the case reserves in the loss development triangles are net of this discount, and our assumption is that our projection techniques unwind this discount such

that the ultimate and unpaid losses are presented on an undiscounted basis. To estimate statutory reserves, this discount is then reflected as an adjustment to the total undiscounted unpaid amounts. In addition to this case discount, OneBeacon carries IBNR discount to reflect discount associated with yet to be identified pension lifetime cases. In addition, there is a pool discount amount of \$8.7 million, as reported by the involuntary pools. Finally, a certain amount of this discount is ceded to the Gen Re as discussed below.

We have discussed the key assumptions underlying OneBeacon's "pension calculator" which we understand is a tool designed by the actuarial department and used by the claim department to project case reserves and case indemnity discount on lifetime pension claims. The key assumptions in deriving the case discount amount are the annual scheduled indemnity payments, the mortality curve, and the discount rates, which vary by state and are statutorily determined. We have discussed these assumptions with OneBeacon but have not performed a detailed review or audit of the process. We believe OneBeacon's methodology is reasonable, but note that this case discount could be slightly overstated in that it does not reflect impaired mortality or the potential for settlements. However, our assumption is that this impact is minor, and therefore we have accepted OneBeacon's carried case discount as reasonable.

We separately estimated the additional discount ("IBNR discount") related to unidentified pension cases. We have assumed that as of 141 months, all of the pension cases have been identified, and therefore for accident years 2001 and prior there will be no IBNR discount. We have discussed this assumption with OneBeacon, and they agree that it is generally reasonable; although there may be occasional unidentified pension cases that are more mature than 141 months because of a misinterpretation by the claim department as to which claims qualify for discounting. We have not reflected any IBNR discount for these possible "mature" unidentified pension cases. We note that this may understate the discount slightly.

For accident years at less than 141 months maturity, we have examined a triangle of total workers compensation case reserves to project the case outstanding amounts at 141 months. We have then estimated the discount at 141 months on these claims based on the observed discount rates for accident years 2001 and prior. We then add back an estimate of the discount that would unwind between September 30, 2012 and the date in which each accident year reaches 141 months maturity. This projection requires certain simplifying assumptions, including assumptions with respect to the indemnity case reserve to total case reserve ratio on pension cases as well as the average discount rate. After adding in this yet to be unwound discount, we subtract out the case discount already identified in each of the accident years to obtain the unemerged, or IBNR discount. The resulting IBNR discount is \$2.3 million as of September 30, 2012, which we have reflected in our low, central, and high estimates.

We are accepting the non-modeled statutory discount associated with involuntary pools of \$8.7 million as of September 30, 2012 (\$8.4 million as of March 31, 2013).

A portion of the statutory discount is ceded to the Gen Re. We understand that OneBeacon determines this by first estimating how much of the adverse development from the inception of the Gen Re treaty is due to workers compensation, and then estimating the discount related to the ceded workers compensation reserves. This ceded discount amount is \$9 million as of September 30, 2012, and \$8 million as of March 31, 2013. We have accepted these amounts as reasonable.

Range of Reasonable Estimates

We developed our range of reasonable estimates for Non-NICO lines by first judgmentally selecting a low and high range for each reserving segment. The reserving segments were then combined by major class and low and high estimates for the various major classes were aggregated into an aggregate range. Our diversification analysis was then performed in three steps:

1. We selected a probability distribution of the indicated liabilities for each of the segments in consideration of our low, central, and high estimates for that particular segment. For each range segment, we have judgmentally assumed that the range of liabilities follows a lognormal distribution. We have also assumed that our central estimate represents the mean of this distribution, and that the low and high scenarios correspond to the 30th and 85th percentiles of this distribution respectively. These percentiles were judgmentally selected, but are generally consistent with other range analyses we have performed. Additionally, these values provided a reasonable fit to each segments' selected low and high estimates (as measured by a sum of squared differences approach). Utilizing these assumptions, we parameterized the lognormal distribution for each major class.
2. We judgmentally selected a correlation matrix which includes correlation estimates for each combination of major classes. We have limited our correlation selections to 0.00, 0.125, 0.25, 0.50, 0.75, and 1.00. Because we are constructing a range of reasonable estimates (i.e. range of estimates of the mean) as opposed to a range of possible outcomes, we have judgmentally selected correlation factors reflecting our view of the correlation of estimation errors between major classes. Our selections were based on our knowledge of the business and potential contributors to estimation error. We have not performed any analysis of OneBeacon's data or industry data in order to derive these correlations.
3. We tested and transformed our selected correlation matrix into a positive semi-definite matrix. A positive semi-definite correlation matrix is necessary to ensure simultaneous relationships between each major class of business are consistent hence guaranteeing positive variance for OneBeacon's overall book of business. The transformed matrix and the resulting indicated range of liabilities were approximately equal to those implied by our selected matrix. For ease of computation and comparison, our range analysis relies upon our original selected correlations (limited to 0.00, 0.125, 0.25, 0.50, 0.75, and 1.00).

The resulting correlations are higher than what would be expected if we were considering a range of all possible outcomes, which would incorporate the impact of process variance. Although we would expect the range of all possible outcomes to be wider (perhaps significantly) than the range of reasonable estimates, we would also expect a more significant diversification effect across the various major classes than the diversification effect resulting from the aggregation of the range of reasonable estimates. In our view, there is often a relatively strong correlation between estimation errors for various segments, because the estimates for many segments utilize similar parameter assumptions (e.g. benchmark tail factors or trend factors). In addition, we note that the market cycle tends to produce correlated estimation errors across many different lines of business, including some which are not intuitively correlated.

We have used the correlation matrix described above as well as the major class ranges above to derive an aggregate distribution. We have utilized the lognormal distribution as an approximation of

the aggregate distribution. This is a simplifying assumption which we do not believe will materially affect the results. In view of the number of reserving segments, the derivation of the aggregate distribution employing more robust approaches would increase the computational complexity significantly. We have chosen the 30th and 85th percentiles of the aggregate distribution as our low and high reasonable estimates.

Finally, as mentioned above, it is important to note that these ranges reflect what we consider to be a range of reasonable favorable and adverse scenarios, but not a range of all possible outcomes.

Analysis – Asbestos Direct

Summary

To project OneBeacon's asbestos-related claim liabilities, we perform a ground-up, exposure-based analysis that includes a detailed review of OneBeacon's potential liability on individual policies using Towers Watson's proprietary asbestos model.

We adopt this approach because traditional actuarial methods such as loss development triangles do not adequately address the long latency period between asbestos exposure and disease manifestation, the potential for involvement of multiple policy periods on an individual claim and the calendar year effect of changes in the litigation environment. An exposure-based analysis addresses these unique characteristics of asbestos claim liabilities.

Traditional actuarial methods also do not directly incorporate epidemiological forecasts of asbestos disease incidence and claim emergence. We recognize these factors in our analysis through the ground-up claim projections in our model.

Alternative non-traditional methods that are used to project an insurer's asbestos liabilities typically entail the application of benchmark unpaid ratios to the insurer's aggregate asbestos loss experience. These aggregate methods do not reflect the insurer's specific contract exposures or its detailed loss experience. An exposure-based analysis addresses these unique characteristics of asbestos claim liabilities.

We believe a ground-up, exposure-based analysis is greatly superior to traditional actuarial techniques and also to aggregate projection methods. We have therefore not used any of the traditional or aggregate projection techniques in our review and rely solely on the exposure-based analysis to develop our estimates.

Exposure-Based Analysis

Our analysis involves the following steps:

- Review OneBeacon's asbestos claim files and assign each insured defendant to one of Towers Watson's asbestos tier categories.
- Individually evaluate OneBeacon's exposure and estimate its liabilities on each open large account and a sample of open small accounts (that is then extrapolated to the entire population of open small accounts), using the Towers Watson asbestos model.
- Develop provisions for pure and miscellaneous IBNR, declaratory judgment (DJ) expenses and nonproducts liabilities.
- Reflect outward reinsurance cessions and estimate liabilities net of reinsurance.

The analysis is performed using claim and policy files evaluated as of December 31, 2012. The resulting indications are then rolled forward to March 31, 2013 based on aggregate loss & ALAE activity between January 1 and March 31, 2013.

To facilitate our analysis, we use a five-tier system for grouping asbestos exposures. The tier assignment generally reflects the expected level of the assured's exposure to asbestos claims. Tiers 1-2 are for major defendants, Tiers 3-4 are for peripheral defendants and Tier 5 is for railroads.

The ground-up costs for each defendant are then allocated across years of coverage to estimate the portion of the costs falling in OneBeacon's years and layers of coverage, thus producing estimated ultimate losses for each OneBeacon policy. These calculations are performed using the Towers Watson asbestos simulation model.

Next we add a miscellaneous IBNR provision for future development in our account estimates that is expected in aggregate but that cannot currently be predicted or estimated at the individual account level.

Finally, we develop a loading for pure IBNR accounts, a provision for future nonproducts liabilities, and a provision for declaratory judgment (DJ) expenses.

Estimation of Net Liabilities

After deriving estimates of the gross unpaid liabilities, we project the liabilities net of external reinsurance by selecting net-to-gross ratios to be applied to the indicated gross liabilities of the various exposure segments (tier groupings). Our selected net-to-gross ratios for Tiers 1-2, 3-4 High, and 3-4 Medium Extended rely on the results of the ceded modeling performed by OneBeacon as of year-end 2010 for approximately 90 large accounts; these 90 large accounts comprise more than 90% of Towers Watson December 31, 2012 gross unpaid estimate for the aforementioned tier groups on a combined basis. We have assumed that the net-to-gross ratios for the remaining accounts (i.e. for which ceded modeling was not performed) in each of these tiers group equaled the weighted average of the ratios for the accounts for which OneBeacon did model ceded losses. We are unable to independently test the assumptions and procedures used by OneBeacon in its ceded model.

For exposure segments other than the large accounts (i.e. Tier 3-4 Low accounts, pure IBNR provision, miscellaneous IBNR, DJ expense, nonproducts add-on), we selected net-to-gross ratios with consideration of the different characteristics of each segment. OneBeacon's ceded model reflects commutations and insolvencies for each modeled account. In addition, OneBeacon adds a miscellaneous uncollectible provision equal to 7.5% of the cessions indicated by the model. We understand that this provision is intended to address the possibility that reinsurance coverage terms may be applied less favorably than the way the terms are assumed to apply in OneBeacon's ceded model. Since we are unable to review the assumptions used by OneBeacon in its ceded model, we have assumed the 7.5% miscellaneous uncollectible provision is reasonable and have incorporated it in our estimates.

When aggregating the ranges of net estimates for all of the various components of asbestos exposure to obtain an overall range of estimates over all, we adjust the Scenario 1 (low) and Scenario 3 (high) ends of the range to reflect the diversification of risk (i.e., less than 100% correlation) between

components. The procedure used to determine the impact of risk diversification is similar to that used to combine the range of estimates for asbestos with the other lines of business and is described in the *Range of Reasonable Estimates* section of this report.

Cash Flow

Cash flow projections for OneBeacon's unpaid net liabilities are derived based on aggregate industry benchmark payment patterns. The actual timing and magnitude of future payments may vary significantly from our projections, since the cash flow for asbestos liabilities can be impacted by a single large payment or unusual settlement activity. Furthermore, our benchmark patterns were developed to be suitable for application to amounts gross of reinsurance. Application of the patterns to amounts net of all reinsurance except for the NICO cover implicitly assumes that the nature of the reinsurance protections (e.g., no cessions until an attachment threshold is met) will not materially distort the timing of the net payments, and that the reinsurance cessions will be billed as the gross payments become due.

Analysis – Pollution Direct

Summary

Pollution liabilities cannot optimally be projected by traditional accident/policy year actuarial methods because of the potential for involvement of multiple policy periods for individual claims, and the fact that the development of these claims appears to be related more to factors such as the number of calendar years elapsed since federal legislation was first enacted, than to accident year age of claim. The situation is further complicated by the constantly changing cumulative outcome of coverage litigation cases. We have used two basic approaches to form our projections of OneBeacon's potential environmental liabilities:

- A combination of Towers Watson's proprietary waste site liability simulation model (to project costs associated with insureds and sites already reported to OneBeacon) and IBNR development factors based on our research and experience regarding activities to date of entities reporting to the insurance industry; and
- An aggregate loss development approach incorporating our estimate of payment and reporting patterns, based on a model of the process of site discovery, litigation, and remediation.

We have also considered the results of a market share approach. We generally view the market share technique as the least reliable of the three methods, as it does not directly consider the insurer's types and sources of exposure, and is subject to distortions caused by large or unusual settlements. We therefore tend to use it as a reasonableness check on the other methodologies.

Our estimates include an allowance for insureds, policies, and sites not yet reported to OneBeacon. We have not included any allowance for the emergence of Resource Conservation and Recovery Act (RCRA) sites as a potentially insured liability. Our estimates include remedial response costs, defense costs, coverage disputes, third party costs, and an allowance for natural resource damages claims. The terms "waste site claims," "pollution claims," and "environmental claims" are used interchangeably throughout this report.

We note that our estimates are based on identified insured accounts with open pollution claims, identified waste sites of those accounts, and identified policies contained in the pollution data provided to us for this review. All estimates are based on our typical assumptions regarding such issues as site costs, the share of liability of individual potentially responsible parties, allocation of such costs to various policy years and layers of coverage, likelihood of success in coverage disputes, potential for settlements, etc., supplemented in some instances with account-specific information provided by OneBeacon. Our review is based on the Superfund law in place on December 31, 2012. We have not estimated the potential impact of any Superfund reform scenarios, nor the U.S. Supreme Court decision in *Burlington Northern and Santa Fe Railway Co. v. United States* and *Shell Oil v. United States*. This decision has weakened joint and several liability, finding that courts can apportion Superfund liability in cases where there is a "reasonable basis" for doing so. It is not yet clear how this ruling will affect the amount or allocation of potential pollution liabilities.

Key Considerations and Uncertainties

For our environmental projections, several factors introduce unusual uncertainty into our estimates. These include:

- Judicial uncertainty, i.e., that past decisions regarding the application of insurance coverage to these costs do not reasonably indicate future decisions.
- Settlement / buyout potential, i.e., that insurers will reach mutually satisfactory agreements with their insureds that will allow both parties to avoid the significant legal costs associated with these claims and minimize current uncertainty.
- Application of coverage terms (if coverage is found), i.e., the coverage trigger, the definition of "occurrence," and the distribution of loss/settlement amounts among the various years and layers of insurance coverage. Our analysis allocates losses to year based on several common coverage triggers. It is possible that other allocation procedures will be applied by the courts.
- Parameter uncertainty, i.e., lack of definitive information regarding such items as the ultimate costs and the shares to be paid by an individual potentially responsible party ("PRP") and the method of allocation of losses to year.

Estimation of Net Liabilities

We have selected a net-to-gross ratio on unpaid loss and ALAE of 50%, which is consistent with OneBeacon's selected net-to-gross ratio in their December 31, 2010 review. Our net-to-gross ratio was selected judgmentally based on OneBeacon's paid pollution net-to-gross ratios over the past twelve years.

Cash Flow

The payment patterns used to derive our estimated cash flows are from the pollution aggregate loss development projection, discussed above.

The actual timing and magnitude of payments may vary significantly from our projections, since the cash flow for pollution liabilities can be impacted by a single large payment or unusual settlement activity.

Analysis of Other NICO Reserves

Assumed Asbestos and Pollution

Since sufficient data was not available for us to evaluate the majority of OneBeacon's assumed asbestos and pollution liabilities by using more robust ground-up exposure-based modelling techniques, we compared various metrics of the assumed OneBeacon reserves to similar metrics for OneBeacon's peer reinsurers based on information disclosed in Note 33 from their 2011 statutory US financial statements.

We employ four different techniques in this approach:

- Aggregate loss development method, where the unpaid losses are estimated as a multiple of the paid losses to date;
- Survival ratio method, where the unpaid losses are estimated as a multiple of the average annual payment;
- Unpaid to case method, where the unpaid losses are estimated as a multiple of the case reserves;
- Loss-based market share method, where the unpaid losses are estimated as a percentage of the projected unpaid losses for the U.S. insurance industry.

We note that the survival and other payment ratios are a function of reserve adequacy as well as the level of claim payments in recent years. We assume that there are no unique factors that may be temporarily accelerating or delaying OneBeacon's payments relative to the industry in recent years. While we understand that OneBeacon's data excludes commuted business, the aggregate reinsurer industry data may include commutation payments. As a result, the industry survival ratios might be depressed relative to the OneBeacon assumed ratios.

It is also possible that OneBeacon's assumed case reserves may be more or less adequate than other companies, thereby resulting in lower or higher IBNR-to-case ratios to support the same total reserve. Case reserving procedures vary markedly among insurers and reinsurers, especially due to concerns about discoverability of the reserves.

We reviewed the various metrics and made judgmental selections and then applied the metrics to OneBeacon data evaluated as of year ends 2006-2012. The selected actuarial central estimate is based on a weighted average of the various benchmark results. The weights for each data group are determined by the credibility of the data used for the various benchmark indications. Because the historical paid losses were only available for the past 10 years, no weight was given to the aggregate development methods which rely on complete inception-to-date paid losses.

All calculations were made using data as of December 31, 2012.

Direct and Assumed Other Mass Tort

An insurer's liabilities related to these types of other health hazard or other mass tort (OMT) exposures cannot be projected by traditional actuarial methods. This is due to a number of characteristics of OMT claims, including: (i) an individual claim can impact multiple policy years; (ii) the timing of the filing of such claims is frequently influenced by external events such as the passage of legislation or the reports of alleged harmful effects of certain products by the news media; and (iii) historical data is often limited, and may be distorted by large claims or settlement activity. For these reasons, traditional historical accident year development is not predictive of future emergence for these types of claims. For many of these classes of claims there is essentially no industry information that can be used to estimate ultimate losses.

While our estimates make allowance for increases in the losses associated with OMT claims, we have not included any specific allowance for the emergence of wholly new areas of mass torts.

We have employed judgmentally selected survival ratios to project ultimate OMT claims. These selections incorporate a large element of judgment, due to the characteristics of mass tort claims discussed above and the limited data available. It should be recognized that future claim emergence for these mass tort claims will likely deviate, perhaps materially, from our estimates.

All OMT calculations were made using data as of December 31, 2012.

Assumed Re – All Other

This segment includes workers compensation and other miscellaneous assumed business.

Cash Flow

The payment patterns used to derive our estimated cash flows are from the asbestos and pollution industry benchmark metrics. The payments patterns assumed for the OMT and WC projections are based on level average payments made for the numbers of years implied by the survival rate selections.

The actual timing and magnitude of payments may vary significantly from our projections, since the cash flow for asbestos, pollution, WC and OMT liabilities can be impacted by a single large payment or unusual settlement activity.

Range of Reasonable Estimates – Total NICO lines

We developed our range of reasonable estimates for NICO lines in total in a matter consistent with our approach for Non-NICO lines described earlier.

Reliances and Limitations

Inherent Uncertainty

Projections of loss and LAE 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. Thus, no assurance can be given that OneBeacon's actual loss and LAE liabilities will not ultimately exceed the estimates contained herein. In our judgment, we have employed techniques and assumptions that are appropriate, and the estimates presented herein are reasonable, given the information currently available.

The inherent uncertainty associated with loss and LAE liability estimates for the non-NICO lines is magnified in this case due to the following circumstances:

- Considerable uncertainty exists with respect to the appropriate tail factor for several of the workers compensation classes;
- Future development on this portfolio will be heavily dependent on future medical inflation, which is very difficult to predict;
- Changes in the claim department organization and in case reserving for certain lines, particularly workers compensation, means that reported development methods and case based methods are less reliable for forecasting purposes than typical;
- The timing of the reinsurance recoveries produces some distortions in the net triangle data;
- We understand that over the past 1 to 2 years, greater emphasis has been placed on settling claims. This may distort the paid development patterns. Although we have attempted to address this in our analysis, this adds further uncertainty to the projections; and
- Complete payment history for the 1997 and prior segments is not available.

Asbestos and Pollution Liabilities

The inherent uncertainty associated with projection of loss and expense liabilities is increased when dealing with toxic torts due to the nature of these losses. The technological, judicial, and political climates involving toxic torts such as asbestos and pollution continue to change, and traditional actuarial methods are not optimal for projecting toxic tort 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.

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.

Our analysis is based on the current environment. Additional efforts to reshape the litigation environment could have a significant effect on our estimates; however, reflecting such potential developments would be speculative at this time.

In our judgment, we have employed techniques and assumptions that are appropriate, and the estimates presented herein are reasonable, given the information currently available.

Our pollution analysis also employs an aggregate payment pattern. The use of this payment pattern is based on the assumption that OneBeacon's reporting and handling of pollution claims is consistent with that of the industry

Ranges of Estimates

The range of estimates presented herein is intended to reflect the reasonably expected variation in loss and LAE based on information currently available. It is possible that actual results will fall outside this range.

Data Reliance

Throughout this analysis, we have relied on historical data and other quantitative and qualitative information supplied by OneBeacon. We have not independently audited or verified this information; 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 of OneBeacon's ultimate losses and LAE. 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.

Extraordinary Future Emergence

We have not 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 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.) except where claims of these types are included but not identified in the reported claims and are implicitly analyzed.

Discounting

Estimates discounted for time value of money can be more uncertain than those on an undiscounted basis. In addition to the usual uncertainty in projecting ultimate levels of loss and LAE, discounted estimates are also influenced by:

- Variations in the timing of actual loss and ALAE payments versus the rate of payment assumed in discounting estimates to present value; and
- Variation in the actual investment yield on the assets underlying the liabilities versus the assumed interest rate used in discounting. In particular, the interest rate assumptions utilized here are not adjusted for investment risk, so the discount rates are substantially higher than the corresponding risk free rates of return.

Underlying Assets

We have not examined the assets underlying OneBeacon's loss reserves and we have formed no opinion as to the validity or value of these assets. We have assumed throughout the analysis that OneBeacon's loss reserves are backed by valid assets with suitably scheduled maturities and/or adequate liquidity to meet cash flow requirements.

Legal Advice

Although our analysis makes use of conclusions drawn from our reading of summaries of relevant legal cases, our work in this regard should not be considered to provide legal advice or to anticipate how a court may rule on an individual matter. We assume that OneBeacon will consult with its own legal staff or independent environmental legal counsel regarding these issues.

Data and Information – Non-NICO Lines

OneBeacon provided the following data and information for use in this analysis:

- For each segment of business, net paid and reported loss and ALAE development data, evaluated as of each quarter-end through September 30, 2012, with an update as of March 31, 2013;
- For each segment of business, reported, open, and closed without payment claim count development data, evaluated as of each quarter-end through September 30, 2012, with an update as of March 31, 2013;
- Net earned premium information for each calendar year by business segment;
- Rate level change history by business segment;
- History of claims handling procedures;
- Description of underwriting philosophy and pricing;
- A summary of OneBeacon's reinsurance agreements;
- Loss and ALAE data for OneBeacon's pool exposures;
- Pricing Expected Loss Ratios for selected Runoff lines;
- Net paid and reported Loss and ALAE related to Construction Defect by report year;
- Paid and reported Loss and ALAE Adjustments to claims data (Pencil Adjustments) for groups of claims that are not recorded in OneBeacon's financial system;
- Ceded Loss and ALAE payments related to a significant workers compensation excess of loss treaty commutation;
- Individual claim listing for Automobile Liability claims with unlimited PIP liability, including claimant age, gender, annual medical run-rate;
- Individual claim listing for certain large Workers' Compensation claims;
- Gross and Ceded Paid and Case Outstanding Loss and ALAE by quarter over the past five years for each line of business and reinsurer;
- Carried IBNR for non-modeled lines and pools;
- For Construction Defect, Net incremental paid loss and ALAE for each calendar quarter, from January 1, 2005 through September 30, 2012;

- For Construction Defect, Net loss and ALAE case reserves evaluated at quarter-end for each calendar quarter, from January 1, 2005 through September 30, 2012;
- For Construction Defect, Reported, closed with payment, and closed without payment claim count development data, evaluated as of each quarter-end through September 30, 2012;
- Additional information regarding OneBeacon's construction defect experience from October 1, 2012 through December 31, 2012 was provided in March of 2013.

Data and Information – NICO Lines

For our analysis of unpaid pollution liabilities, OneBeacon provided the following data and information:

- Listing of open pollution accounts as of December 31, 2012
- For each open pollution account, a listing of potentially-exposed policies, including effective and expiration dates, attachment point, the 100% limit and OneBeacon's percentage participation, and, in some cases, pollution exclusions and treatment of expenses
- For each open pollution account, a listing of open waste sites, including site name and location, type of site, likely allocation method, indemnity paid to-date (if any), and in some cases, dates of claimed coverage and insured or OneBeacon cost estimates
- Inception-to-date pollution payments, gross of reinsurance, as of December 31, 2010, and payments during 2011 and 2012 (net payment information was not readily available)
- Information on recent settlement negotiations

For our analysis of unpaid asbestos liabilities, OneBeacon provided the following major data items and information:

- Listing of all asbestos accounts that were first reported in 2004 and subsequent, as of September 30, 2012 and December 31, 2012
- For each open asbestos account, a listing of potentially-exposed policies, including effective and expiration dates, attachment point, the 100% limit and OneBeacon's percentage participation, and, in some cases, asbestos exclusions and treatment of expenses
- Gross paid loss and ALAE (including a separate breakout of declaratory judgment or "DJ" expense) for all individual asbestos accounts for calendar year 2005-2012, as of December 31, 2012
- Information on recent settlement negotiations
- OneBeacon's year-end 2010 internally modelled files by account. Some of the fields captured in these files include the following:
 - Payments, claim counts, and estimated ultimate losses for defendant
 - Historical and future projected payments for each OneBeacon policy by calendar year
- OneBeacon's "2011 Ground-Up Review of Liabilities that fall within NICO Reinsurance Agreement"

- Estimated ceded ratios by account, based on OneBeacon's year-end 2010 internal modelling
- Detailed defendant-level and other information for the individually reviewed accounts that we requested. Some of the fields captured include the following:
 - Insured defendant name
 - Number of plaintiff claims filed against the defendant by calendar year
 - Number of settled claims by major disease type and by calendar year
 - Number of dismissed claims by calendar year
 - Indemnity paid by major disease type and by calendar year
 - Expense paid by calendar year
 - Distribution of pending claims by state
 - Insured's coverage block dates
 - OneBeacon's cost share percentage, if applicable
 - Description of insured's involvement with asbestos
 - Estimated percentage break-out between products and nonproducts
 - Other comments (e.g., coverage limitations, declaratory judgments, litigation status)
 - Evaluation date

Description of Loss and LAE Projection Methods

The choice of method to estimate ultimate losses should consider, among other things, the line of business, the number of years of experience, and the age of the experience year being developed. In general, these methods can be applied to losses, ALAE, and various measures of claim count.

Reported Development Method

The reported development method is based upon the assumption that the relative change in a given year's reported loss estimates from one evaluation point to the next is similar to the relative change in prior years' reported loss estimates at similar evaluation points. In utilizing this method, actual annual historical reported loss data is evaluated. Successive years can be arranged to form a triangle of data.

RTR development factors are calculated to measure the change in cumulative reported costs from one evaluation point to the next. These historical RTR factors and comparable benchmark factors form the basis for selecting the RTR factors used in projecting the current valuation of losses to an ultimate basis. In addition, a tail factor is selected to account for loss development beyond the observed experience. The tail factor is based on trends shown in the data and consideration of external benchmarks.

This method's implicit assumption is that the relative adequacy of case reserves has been consistent over time, and that there have been no material changes in the rate at which claims have been reported.

Paid Development Method

The paid development method is similar to the reported development method, however, case reserves are excluded from the analysis. While this method has the disadvantage of not recognizing the information provided by current case reserves, it has the advantage of avoiding potential distortions in the data due to changes in case reserving methodology.

This method's implicit assumption is that the rate of payment of claims has been relatively consistent over time.

Expected Loss Method

In the expected loss method, ultimate loss projections are based upon some prior measure of the anticipated losses, usually relative to some measure of exposure, such as premiums, revenues, or payroll. An expected loss ratio (or loss cost/pure premium) is applied to the measure of exposure to determine estimated ultimate losses for each year.

Actual losses are not considered in this calculation. This method has the advantage of stability over time because the ultimate loss estimates do not change unless the exposures or pure premiums change. However, this advantage of stability is offset by a lack of responsiveness since this method does not consider actual loss experience as it emerges.

This method is based on the assumption that the pure premium per unit of exposure is a good indication of ultimate losses. It is entirely dependent on pricing assumptions.

Reported Bornhuetter-Ferguson Method

The reported Bornhuetter-Ferguson (BF) method is essentially a blend of two other methods. The first method is the loss development method whereby actual reported losses are multiplied by an expected loss development factor. For slow reporting coverages, the loss development method can lead to erratic and unreliable projections because a relatively small swing in early reportings can result in a large swing in ultimate projections. The second method is the expected loss method whereby the IBNR estimate equals the difference between a predetermined estimate of expected losses and actual reported losses. This has the advantage of stability, but it does not respond to actual results as they emerge.

The reported BF method combines these two methods by setting ultimate losses equal to actual reported losses plus expected unreported losses. As an experience year matures and expected unreported losses become smaller, the initial expected loss assumption becomes gradually less important.

Two parameters are needed to apply the BF method: the initial expected loss ratio (or pure premium) and the expected reporting pattern. The initial expected loss ratio is selected as described in the *Analysis* section, while the expected reporting pattern is based on the reported loss development method described above.

This method is often used for long-tail lines and in situations where the reported loss experience is relatively immature or lacks sufficient credibility for the application of other methods.

Paid Bornhuetter-Ferguson Method

The paid BF method is analogous to the reported BF method using paid losses and development patterns in place of reported losses and patterns.

Backwards Recursive Technique

The backwards recursive technique derives case reserve development factors through an analysis of the historical development of case reserves by period. The changes measured by the backwards recursive technique include payments associated with the historical case reserves and subsequent reserve amounts for those claims remaining open.

The case reserve development factors are applied to the current case reserves by period to estimate their ultimate settlement value. Payments to date are then added to determine the ultimate losses for each period.

Incremental Paid Method

The incremental paid method forecasts future period incremental payments based on the changes in incremental payments observed historically between development periods.

Frequency/Severity Method

The frequency/severity method calculates ultimate losses by separately projecting ultimate claim frequency (claims per exposure) and ultimate claim severity (cost per claim) for each experience period. Typically, loss development methods are used to project ultimate frequency and severity based on historical data. Ultimate losses are calculated as the product of the two items. This method is intended to avoid distortions that may exist with the other methods for the most recent years as the result of changes in case reserve levels, settlement rates, etc. In addition, it may provide insight into the drivers of the loss experience.

OneBeacon
 Estimate of Unpaid Loss & ALAE Liabilities at 3/31/2013
 Net of Reinsurance / Net of Salvage and Subrogation -- in (000's)
 Range of Reasonable Estimates - Accident Years 2012 and Prior

Roll Forward - Summary ex NICO
 Sheet 1

Line	Case Outstanding Loss & ALAE	Low Unpaid Loss & ALAE	Central Unpaid Loss & ALAE	High Unpaid Loss & ALAE
Commercial Multi Peril - Total	76,232	79,541	88,065	98,992
Auto - Total	18,818	22,869	24,399	25,943
All Other Excluding CD - Total	16,989	28,881	36,524	44,714
Workers Compensation - Total	120,411	176,194	192,644	209,153
Total 1997 and Prior	186,914	223,901	258,531	350,499
Construction Defects	6,616	9,243	10,764	12,875
Total Modeled Lines	425,981	540,628	610,928	742,176
All Other Lines	-	N/A	N/A	N/A
Invol Pools	43,480	61,573	67,315	73,052
Reviewed Lines	9,871	14,328	16,060	18,246
Non-Reviewed Lines	9,622	8,473	9,148	9,837
Total Non-Modeled	62,973	84,374	92,523	101,135
Unrecoverable Reinsurance ULAE	12,442	10,447 45,371	11,738 49,839	13,188 57,876
Grand Total	501,396	680,820	765,027	914,375
Grand Total - Correlation Adjusted	501,396	696,212	765,027	887,897

OneBeacon
 Estimate of Unpaid Loss & ALAE Liabilities at 3/31/2013
 Net of Reinsurance / Net of Salvage and Subrogation -- in (000's)
 Range of Reasonable Estimates - Accident Years 2012 and Prior

Roll Forward - Summary ex NICO
 Sheet 2

Line of Business	Low Reasonable Estimate	Actuarial Central Estimate	High Reasonable Estimate
(1) Commercial Multi Peril - BI	72,057	76,648	85,802
(2) Commercial Multi Peril - Property Damage	13,136	14,294	14,945
(3) Commercial Auto Liability	22,826	24,338	25,870
(4) Commercial Auto Physical Damage	43	61	73
(5) Umbrella	10,251	14,847	17,771
(6) General Liability	7,743	9,611	12,198
(7) Workers Compensation - 1997 & Prior	183,975	206,812	275,166
(8) Workers Compensation - 1998 & Subsequent	244,327	267,131	289,988
(9) Auto Liability - 1997 & Prior	30,734	40,422	60,881
(10) Construction Defects	9,243	10,764	12,875
(11) All Other	30,665	38,522	47,743
(12) Perfect Correlation	\$ 625,002	\$ 703,450	\$ 843,311
(13) Independence	\$ 664,531	\$ 703,450	\$ 775,769
(14) with Correlation Adjustment	\$ 640,394	\$ 703,450	\$ 816,833
	-9.0%		16.1%
Unrecoverable Reinsurance	\$ 10,447	\$ 11,738	\$ 13,188
ULAE	\$ 45,371	\$ 49,839	\$ 57,876
Grand Total - Correlation Adjusted	\$ 696,212	\$ 765,027	\$ 887,897

Notes:

- (12) Perfect Correlation assumption:
 Total high estimate equals the sum of the individual line of business high estimates.
- (13) Independence assumption:
 Calculated by assuming that the unpaid liabilities in total are distributed lognormally with the high reasonable equal to the 85th percentile of the all lines distribution; and that all lines of business are independent.
- (14) With correlation adjustment assumption:
 Calculated by assuming that the unpaid liabilities in total are distributed lognormally with the high reasonable equal to the 85th percentile of the all lines distribution; with the aggregate distribution calculated using a judgmentally selected correlation matrix. This corresponds to our selected high reasonable estimates.

OneBeacon
 Estimate of Unpaid Loss & ALAE Liabilities at 9/30/2012
 Net of Reinsurance / Net of Salvage and Subrogation -- in (000's)
 Range of Reasonable Estimates

Summary
 Sheet 1

Line	Case Outstanding Loss & ALAE	Low Unpaid Loss & ALAE	Central Unpaid Loss & ALAE	High Unpaid Loss & ALAE
Commercial Multi Peril - Total	105,744	114,152	125,221	140,067
Auto - Total	24,423	30,508	32,538	34,592
All Other Excluding CD - Total	24,266	38,046	49,145	60,075
Workers Compensation - Total	132,007	187,352	204,822	222,279
Total 1997 and Prior	196,067	235,276	271,315	372,033
Construction Defects	11,243	11,230	13,079	15,643
Total Modeled Lines	493,750	616,564	696,120	844,688
All Other Lines	(1,075)	N/A	N/A	N/A
Cat Losses	45,614	64,348	70,348	76,344
Reviewed Lines	8,196	14,221	15,819	17,725
Non-Reviewed Lines	10,246	9,768	10,790	11,722
Total Non-Modeled	64,057	88,338	96,957	105,791
Unrecoverable Reinsurance	13,030	11,088	12,419	13,910
ULAE		50,798	55,671	63,708
Grand Total	569,761	766,787	861,167	1,028,097
Grand Total - Correlation Adjusted	569,761	785,534	861,167	995,774

OneBeacon
Estimate of Unpaid Loss & ALAE Liabilities at 9/30/2012
Net of Reinsurance / Net of Salvage and Subrogation -- in (000's)
Range of Reasonable Estimates

Summary
Sheet 2

Line of Business	Low Reasonable Estimate	Actuarial Central Estimate	High Reasonable Estimate
(1) Commercial Multi Peril - BI	99,583	105,928	118,579
(2) Commercial Multi Peril - Property Damage	20,509	22,316	23,332
(3) Commercial Auto Liability	30,455	32,467	34,504
(4) Commercial Auto Physical Damage	52	72	88
(5) Umbrella	17,332	25,101	30,045
(6) General Liability	8,663	10,753	13,647
(7) Workers Compensation - 1997 & Prior	195,408	219,641	292,287
(8) Workers Compensation - 1998 & Subsequent	258,826	282,960	307,077
(9) Auto Liability - 1997 & Prior	31,406	41,295	66,479
(10) Construction Defects	11,230	13,079	15,643
(11) All Other	31,438	39,465	48,799
(12) Perfect Correlation	\$ 704,901	\$ 793,077	\$ 950,479
(13) Independence	\$ 751,083	\$ 793,077	\$ 871,294
(14) with Correlation Adjustment	\$ 723,648	\$ 793,077	\$ 918,156
	-8.8%		15.8%
Unrecoverable Reinsurance	\$ 11,088	\$ 12,419	\$ 13,910
ULAE	\$ 50,798	\$ 55,671	\$ 63,708
Grand Total - Correlation Adjusted	\$ 785,534	\$ 861,167	\$ 995,774

Notes:

- (12) Perfect Correlation assumption:
Total high estimate equals the sum of the individual line of business high estimates.
- (13) Independence assumption:
Calculated by assuming that the unpaid liabilities in total are distributed lognormally with the high reasonable equal to the 85th percentile of the all lines distribution; and that all lines of business are independent.
- (14) With correlation adjustment assumption:
Calculated by assuming that the unpaid liabilities in total are distributed lognormally with the high reasonable equal to the 85th percentile of the all lines distribution; with the aggregate distribution calculated using a judgmentally selected correlation matrix. This corresponds to our selected high reasonable estimates.

OneBeacon - NICO Lines of Business
 Estimate of Unpaid Loss & ALAE Liabilities at 3/31/2013
 Gross of Reinsurance / Net of Salvage and Subrogation -- in (000's)
 Range of Reasonable Estimates

Roll Forward - NICO Summary
 Sheet 1

Line	Low Unpaid Loss & ALAE	Central Unpaid Loss & ALAE	High Unpaid Loss & ALAE
As of December 31, 2012			
Asbestos	766,007	1,011,128	1,290,270
Pollution	183,050	228,062	300,067
Other	133,569	173,245	229,520
Total	1,082,626	1,412,435	1,819,857
Payments - Q1 2013			
Asbestos	15,370	15,370	15,370
Pollution	5,464	5,464	5,464
Other	4,791	4,791	4,791
Total	25,625	25,625	25,625
As of March 31, 2013			
Asbestos	750,637	995,758	1,274,901
Pollution	177,586	222,598	294,603
Other	128,778	168,453	224,728
Total	1,057,001	1,386,810	1,794,232

OneBeacon - NICO Lines of Business
 Estimate of Unpaid Loss & ALAE Liabilities at 3/31/2013
 Net of Reinsurance / Net of Salvage and Subrogation -- in (000's)
 Range of Reasonable Estimates

Roll Forward - NICO Summary
 Sheet 2

Line	Low Unpaid Loss & ALAE	Central Unpaid Loss & ALAE	High Unpaid Loss & ALAE
As of December 31, 2012			
Asbestos	607,134	724,817	880,959
Pollution	100,149	124,384	164,528
Other	119,902	155,312	206,762
Total	827,185	1,004,513	1,252,248
Total - Adjusted for Correlation	884,675	1,004,513	1,214,426
Payments - Q1 2013			
Asbestos	11,919	11,919	11,919
Pollution	4,457	4,457	4,457
Other	2,103	2,103	2,103
Total	18,478	18,478	18,478
As of March 31, 2013			
Asbestos	595,215	712,898	869,040
Pollution	95,692	119,927	160,071
Other	117,799	153,209	204,659
Total	808,706	986,035	1,233,770
Total - Adjusted for Correlation	866,196	986,035	1,195,948
Remaining NICO Limit	965,131	965,131	965,131
Total - Net of Remaining NICO Limit	-	20,903	230,817
ULAE	-	836	9,233
Grand Total Net of NICO Cover	-	21,739	240,049

OneBeacon - NICO Lines of Business
 Estimate of Unpaid Loss & ALAE Liabilities at 12/31/2012
 Gross of Reinsurance / Net of Salvage and Subrogation -- in (000's)
 Range of Reasonable Estimates

NICO Summary
 Sheet 1

Line	Low Unpaid Loss & ALAE	Central Unpaid Loss & ALAE	High Unpaid Loss & ALAE
Direct			
Asbestos	681,007	889,553	1,120,066
Pollution	158,050	198,050	258,050
Other	35,400	53,100	70,800
Direct - Total	874,457	1,140,703	1,448,916
Assumed Re			
Asbestos	85,000	121,575	170,205
Pollution	25,000	30,012	42,017
Other	98,169	120,145	158,720
Assumed - Total	208,169	271,731	370,941
Grand Total	1,082,626	1,412,435	1,819,857

OneBeacon - NICO Lines of Business
Estimate of Unpaid Loss & ALAE Liabilities at 12/31/2012
Net of Reinsurance / Net of Salvage and Subrogation -- in (000's)
Range of Reasonable Estimates

NICO Summary
Sheet 2

Line	<u>Low</u> Unpaid Loss & ALAE	<u>Central</u> Unpaid Loss & ALAE	<u>High</u> Unpaid Loss & ALAE
Direct			
Asbestos	535,121	621,818	736,760
Pollution	79,025	99,025	129,025
Other	28,050	42,075	56,100
Direct - Total	642,196	762,918	921,885
Assumed Re			
Asbestos	72,013	102,999	144,199
Pollution	21,124	25,359	35,503
Other Mass Tort	91,852	113,237	150,662
Assumed - Total	184,989	241,595	330,363
Grand Total	827,185	1,004,513	1,252,248
Total - Correlation Adjusted	884,675	1,004,513	1,214,426