EXHIBIT E

Expert Report Rebutting Dr. Crawshaw's Expert Report

By: Michael Joseph Cascio

April 21, 2014

I. Introduction and Scope of Review

In addition to preparing an expert report on behalf of Respondents, I have been asked to prepare this report for the purpose of evaluating and responding to certain arguments posited by the Consumer Financial Protection Bureau based on the analysis of its expert witness, Dr. Mark Crawshaw. In particular, my report responds to the following arguments:

1) What approach is appropriate to determine the sufficiency of risk transfer for Atrium and Atrium Re's (collectively, "Atrium") reinsurance contracts?

2) What was Atrium's liability under its reinsurance agreements?

3) How are capital, amendments and dividends to be treated?

4) How should Atrium's profit margins be assessed?

5) Were the attachment points under the agreements acceptable?

II. Compensation

My compensation for this assignment is $500 per hour, plus expenses.

III. Expert Qualifications

As provided in my Expert Report, dated March 3, 2014 ("Expert Report"), I have been a Member of the American Academy of Actuaries (MAAA) since 1986, and a Fellow of the Casualty Actuarial Society (FCAS) since 1988. A copy of my complete Curriculum Vitae is appended to my Expert Report, as Attachment A.

IV. Analysis

1. Atrium's reinsurance contracts provided for sufficient risk transfer under the appropriate book year analysis.

As an initial matter, several entities, including Atrium's auditors and Milliman, Inc. ("Milliman"), have concluded at various times that the transactions at issue in this proceeding constituted sufficient Risk Transfer in order for all four contracts (UGI, Genworth, Radian and

CMG) to be accounted for as reinsurance under both Statutory and US GAAP guidelines.[1] Specifically, I have now reviewed the Statutory financial statements of Atrium and the following auditing firms signed off on these statements, thereby concluding that the reinsurance agreements contained adequate risk transfer:

Year Ending - 12 / 31 / t	Auditors
1999	D&T Auditors
2000	D&T Auditors
2001	D&T Auditors
2002	D&T Auditors
2003	D&T Auditors
2004	Beard Miller - Harrisburg, PA
2005	Beard Miller - Harrisburg, PA
2006	Beard Miller - Harrisburg, PA
2007	Beard Miller - Harrisburg, PA
2008	Beard Miller - Harrisburg, PA
2009	Parente Beard - Harrisburg, PA

Had risk transfer not been adequate, the four contracts would have to be accounted for as deposits and alternative accounting would have been required, which was not done in connection with Atrium's yearend financial statements.

It is not uncommon to encounter some differences of opinion among reinsurance industry professionals regarding the adequacy of risk transfer under a particular reinsurance agreement as such an assessment is not a "cookie cutter" exercise. In my experience in the reinsurance industry, it is not unusual for differences of opinion to exist among a panel of industry professionals. I have been involved in multiple instances where an accountant from one firm may opine that adequate risk transfer exists on a particular contract, and another accountant from another firm finds differently. I have also witnessed differences of opinion among accountants in the same firm and office.

However, while differences of opinion do exist regarding risk transfer, I strongly disagree with Dr. Crawshaw's multi-year approach in assessing whether adequate risk transfer existed under the Atrium agreements with UGI, Genworth, Radian and CMG. Further, I do not believe

[1] For the avoidance of doubt, the ultimate authority for forming such an opinion lies with the accounting profession; however, the accountants also generally utilize the input of others, such as actuaries (*e.g.*, Milliman for Atrium) and the company's management.

Dr. Crawshaw's analysis is supported by the practice in the industry, as well as any applicable financial accounting standards or literature.

In his report, Dr. Crawshaw asserts that all of the Atrium reinsurance agreements should be analyzed using a multi-year approach. However, in my professional opinion such a multi-year approach is not appropriate to determine whether risk transfer existed for each of the contracts at issue in this proceeding. Instead, the proper methodology is to analyze each of the contracts on a single year, or book year, basis. The reason for this is simple.

Generally speaking, risk is a measure of uncertainty. For risk transfer analysis, the uncertainty is focused on the economic loss on a net present value basis of all cash flows assessed on a prospective basis. There is no rational basis for lumping years together, especially in light of the ability of either party's ability to terminate the contract on a quarterly basis by simply providing 90 days prior written notice. In addition, using a multi-year analysis is not consistent with industry practice, either now or during the currency of these Agreements. I do agree that such an aggregate analysis will significantly lower the uncertainty or volatility (and thus risk transfer) of the projected possible outcomes.

I also agree that as the number of years being considered increases, the actual results observed will trend towards the expected result, assuming the expected result is accurately estimated. However, (1) a lower volatility and (2) a closer approximation to the expected result or profit tells us nothing about the assumption of risk by Atrium, as these phenomena would result for any reinsurance agreement. It is simply an observation one would expect, which conforms to simple statistical theory as the sample size increases (or in our case, number of book years), *i.e.*, (1) the variance or standard deviation of the data being considered, a sample from the population will result in a variance that is lower and (2) the expected profit will approximate the observed profit. Stated differently, assuming that the (re)insurer has priced its (re)insurance to earn a profit over the long term, it would be very difficult to ever show risk transfer as the number of years being considered increases.

Exceptions to the one year analysis of risk transfer do exist. However, with the exception of the following two examples, a single book year analysis is the proper methodology to use when assessing the adequacy of risk transfer.[2] The two exceptions, which are not at issue with Atrium's contracts, are:

i. A reinsurance contract explicitly states that it is a multi-year agreement, where two to three years is the normal duration of the contract. With such multi-year

[2] There may exist other examples of reinsurance agreements that require a multi-year analysis for risk transfer, especially those of the manuscript variety, but such examples are not common or relevant to the Atrium agreements.

agreements, it is common that the contract would run the full term of the contract, *i.e.*, two to three years. With such arrangements, risk transfer should be based on a multi-year analysis, or a two- or three-year basis.

ii. In the event a single year contract contains provisions that make it punitive for the insurer not to renew, then risk transfer analysis would need to take such provisions into account, which could mean conducting a multi-year analysis.

Since neither of these two provisions is applicable to the Atrium agreements, I do not believe Dr. Crawshaw's use of a multi-year analysis is appropriate.

Furthermore, I disagree with Dr. Crawshaw's assertion that the "intent" of the parties to have a "long-term" relationship can override the plain language of the termination provisions in the reinsurance agreements, such that a multi-year analysis would become appropriate. In my experience in negotiating a reinsurance contract with a prospective insurer, it is fairly standard practice for both sides to embrace each other with the notion that this relationship is intended to be continuing in nature. It would be quite extraordinary for either side to take the position that the agreements for reinsurance will be a "one shot deal." Thus, some of the language quoted by Dr. Crawshaw referring to the intention of this arrangement to be "long-term" in nature is simply business as usual. It does nothing to justify a risk transfer analysis that requires lumping multiple book years together.

2. *Atrium was exposed under its reinsurance agreements.*

As an initial matter, I feel it necessary to discuss the issue of the qualification of an actuary to read and interpret a reinsurance agreement. I disagree with any assertion that only an attorney is qualified to interpret a reinsurance contract. As I have been the Chief Underwriting Officer for multiple reinsurance companies, as well as the primary architect and author of multiple (manuscript) reinsurance contracts, I feel very qualified to read and interpret a reinsurance agreement. I believe that gaining an understanding of the requirements of a particular reinsurance agreement is a necessary precondition to perform an analysis of risk transfer.[3]

[3] In addition, since the accounting profession has the ultimate authority to determine whether a reinsurance agreement has adequate risk transfer to assess if it qualifies for reinsurance

I am of the opinion that there exists no contractual provision in either the Genworth or UGI reinsurance agreements that restricts the liability of the reinsurer to the funds in the Trust.[4] As such, I see no reason not to expect that the full capital and surplus (*i.e.*, assets less liabilities) of Atrium is available for the liabilities assumed by Atrium under the reinsurance contracts. I have put together Exhibit A, which is an extract of Atrium's annual statutory financial statements. To correctly assess the capital at risk for Atrium under the reinsurance assumed from the MIs, this capital needs to be included in any analysis.

3. *I disagree with Dr. Crawshaw's analysis regarding capital, amendments and dividends.*

In his report, Dr. Crawshaw implies that a number of the "features" of the Atrium agreements were such that there was no "significant transfer of risk from the MIs to Atrium." Dr. Crawshaw's Report, at 4. I take issue with such insinuations as the provisions questioned by Dr. Crawshaw are either standard within the industry or are subject to regulatory oversight.

a. Capital

For example, Dr. Crawshaw insinuates that the capital of Atrium was inadequate for the risks assumed by Atrium. I believe that Atrium was required to provide capital levels that conformed to pertinent state laws and guidelines. I have confidence that the Department of Insurance ("DoI"), especially the NY DoI, is more than capable of assessing risk and setting adequate levels of capital. In addition, I did not see any evidence in the materials I reviewed that Atrium failed to meet its statutory capital requirements.

It is significant to note that most jurisdictions, *e.g.,* N.C. Gen. Stat. § 58-10-125 and NY Insurance Law § 6502, require the MI to maintain a minimum risk-to-capital ratio of 25 to 1. By comparison, the reinsurers (such as Atrium), are required to maintain a minimum risk-to-capital ratio of 10 to 1. Thus, if an MI assumes $25 million in PMI risk, the minimum capital

---

accounting treatment, I am of the opinion that the Professional Accounting community had better be able to read and interpret a reinsurance contract in order to opine correctly on the matter, and perform the duties imposed on them by FASB.

[4] With respect to the Radian agreement, I believe that it would be difficult for Atrium to argue that its liability is limited to the funds in the trust account. I believe that the CMG agreement does limit Atrium's liability to the funds in its trust account. However, both of those agreements were commuted and all premiums, capital contributions, and earnings were returned to the respective MI with Atrium incurring a net economic loss with respect to both of those agreements of 16-17% of premium, or far in excess of the 10/10 rule.

requirement is $1 million, whereas if Atrium assumes the same $25 million in risk, Atrium would be required to maintain $2.5 million in capital or 150% more than the MI.

b. Amendments

Under Atrium's contracts, the parties are bound to their original agreement unless each party approves an amendment. *See* § 16.2 of the UGI Protective Order § 15.11 of the Radian contract, and § 15.11 of the CMG contract, which state that the Agreement may only be amended by a signed written agreement. Thus, Atrium could not just unilaterally adopt amendments that benefitted its position.

c. Dividends

Dr. Crawshaw appears to take exception to the timing and quantum of the various dividends received by Atrium over the course of the contracts. Once again, Atrium's ability to take dividends was highly regulated – paying a dividend to the parent required the approval of the regulator, whereas a dividend paid to Atrium needed to meet minimum financial criteria. Such dividends would simply increase the statutory capital and surplus of Atrium, which was still available to pay claims (excluding CMG). In my experience, the DoI is very focused on the protection of policyholders. Failure of a reinsurer to fulfill its contractual obligations, which therefore potentially impacts the integrity of the underlying insurance policy, is an extremely serious matter.

To pay dividends under the UGI contract, the Trust Account needed to be adequately and fully funded. This is specified in § 13.2 which states in part: "Whenever the capital fund portion of the Trust Account is less than that required by this Section, Reinsurer is prohibited from paying any dividends." Thus, Atrium had to be in compliance with its contractual obligations as a condition precedent to the payment of dividends.

Also, in the UGI contract, per § 14.1.a, the Reinsurer is required to submit to the jurisdiction of any court of competent jurisdiction in any state in the event the Reinsurer fails to perform its obligations under the terms of this Agreement. This provision, which also indirectly addresses the payment of dividends, provides further protection to UGI from Atrium paying excessive dividends over and above what was required under the state law.[5]

---

[5] *See also* Genworth contract § 5.01:

Statutory Capital and Reserves. The Company and the Reinsurer each shall establish and maintain (a) all such capital required by the laws of their respective domiciliary states and (b) all such reserves as may be required under relevant state insurance laws and regulations with respect

4. *I disagree with Dr. Crawshaw's conclusion regarding Atrium's profit margins.*

Dr. Crawshaw notes in his report that an expected profit margin of 40% of the ceded premium indicates that "the risk being transferred to Atrium was unusually low." Dr. Crawshaw's Report, at 29. My view is that higher expected profit margins in the industry are normally indicative of catastrophic, excess-of-loss ("XOL") agreements, which Atrium's agreements are. The expected for Atrium profit (as measured as a percentage of premium) is also indicative of the longevity of capital needed to be kept in place, as the exposure period for a single book year is approximately ten years. Other factors which would raise the level of uncertainty for an underwriter and, therefore, support higher expected profit margins are: (1) uncertainties of future premium streams as mortgages become distressed and premium is no longer paid; and (2) the cumulative effect of a single event on multiple prior book years. As a prior underwriter for a reinsurance company that assumed MI exposures, my view of the risks assumed, as well as those of my shareholders, are very different from those espoused by Dr. Crawshaw.

Dr. Crawshaw seems to suggest on page 37 of his Report that Atrium has the ability to foresee poor underwriting results and opt out of the Agreement before the losses are realized. Again, I could not disagree more, and this is for a few reasons. There are two fundamental time lags present in PMI (re)insurance. One lag is the payment of losses from the time a particular loan begins to become distressed. Unlike "short-tailed" losses in the Property & Casualty ("P&C") market, it takes time from when a loan first becomes distressed until the actual loss from such a loan is known. This can take years. The actual loss experience of the MIs actually bears this out too.

The second time lag is the time interval from when the risk of a particular book year is first assumed and the "event" of an economic downturn occurs. As an example, the general housing market was arguably still pretty good in 2005 and 2006, yet when we look at the underwriting results for Genworth in these two book years, the ground up Loss Rates are 14.88% and 22.99% (as projected by Milliman). This is hardly emblematic of a good housing market. Obviously, the market downturn was roughly in 2008, or approximately 2-3 years later. It would have been extremely difficult, if not impossible to project the timing (as well as the severity) of the downturn when the Agreement was being renewed on or about January 1, 2005.

---

to unearned premiums, contingency reserves, claims, Loss or loss adjustment expenses relating to each risk (the "Reserves").

The reality of the emergence of losses with these time lags makes it virtually impossible for a reinsurer to "time the market." Again, the evidence of entering into two agreements (Radian and CMG) so close to the downturn is anecdotal proof of such.

I do not dispute the ability or motivation of a reinsurer to terminate an agreement or exit from the business when the economic downturn is a virtual certainty. Again, I believe this is normal business behavior. I also do not believe that this means there was no risk transfer since there is a virtual certainty of loss. Certainty of loss is not equivalent to assumption of risk.

Exhibit B, hereto is a comparison of the Genworth retained results as compared to the Atrium ceded results based on information extracted from the Milliman December 31, 2011 report. A few observations are worth noting:

Protective Order

I could not extract similar information on a book year basis for UGI, as the details for the older years were not contained in the Milliman reports I reviewed, so the following comments discuss the UGI contract on an aggregate basis, not for risk transfer, but for overall profitability. The Atrium Loss Ratio for the UGI agreement over all years per the March 31, 2013 Milliman report is approximately 51.5%. The retained loss ratio by UGI over this period is approximately 54.4%-56.6%. I say approximate as I could not calculate the exact loss ratio, because I was unable to ascertain the retained losses for the initial UGI book year, but this amount would be minimal and would not impact the aggregate loss ratio materially. A few observations:

- Although, the loss ratio of Atrium per the UGI agreement is lower than the retained loss ratio (after reinsurance) of UGI over all years, they are remarkably close, 51.5% vs. 55.5% (taking the midpoint of 54.4% & 56.6% above). This does not suggest that the premium ceded to Atrium is out of line with the risks assumed, especially when it is compared to the underwriting results of UGI. Both the reinsurer and the insurer recognized a profit.

- Since the "ground up premium" is generated from rates filed and approved at the state level by the DoI and deviations from such is prohibited, the only real issue to argue about is the split of premium between the two entities. The overall loss ratios suggest that the split of premium is not unreasonable.

- Using the logic of Dr. Crawshaw, risk transfer for the Atrium Agreements is a multi-year exercise. Taking the UGI Agreement into consideration, it has been pointed out that over the lifetime of the Agreement, Atrium did quite well, posting an ultimate aggregate loss ratio of 51.5% = $168.393 / $326.974 million (*see* Milliman, 3/31/2013, Executive Summary, page 5, column F). In order for Atrium to have assumed minimal risk to satisfy the 10/10 Rule, a minimum 110% aggregate loss ratio is required to suffer a 10% loss. Since the losses are what they are for the layers assumed by Atrium, it is the premiums that are arguably too high, *i.e.*, lower premiums ceded to Atrium would result in a higher assumed loss ratio, thus premiums could be no higher than $153 million, a $174 million reduction in premium ceded ($326.974 - $153 million). This premium of $174 million, if not ceded to Atrium, would be retained by UGI, resulting in an all year loss ratio for UGI of approximately 41-42%. This is further evidence of the short comings of a multi-year risk transfer test, as comparing a loss ratio of 110% for Atrium to a low 40s loss ratio for UGI is a completely inequitable split of premiums.

Second, Dr. Crawshaw's position that Atrium could "avoid" losses does not mesh with the reality of two contracts suffering net economic losses, *i.e.*, CMG & Radian. In connection with those two agreements, Atrium suffered nearly $1 million in losses.

To conclude, I would like to draw a comparison between the loss ratios of an XOL catastrophe reinsurer in the P&C industry to the loss ratios we have seen here. It is virtually impossible to find comparables, as each reinsurer's portfolio is different from another in many ways. In fact, I could only think of one reinsurer worldwide (I am sure there are others, just unbeknownst to me) that solely writes XOL contracts and that is Renaissance Reinsurance ("Ren Re") in Bermuda. I know their book well as I was the liaison between Ren Re and OPL while I was OPL's Chief Underwriting Officer in Bermuda. Below is an extract from Ren Re's 12/31/2010 Report to Shareholders, at page 97 of 268:

YEAR	Loss Ratio
2002	21.5%
2003	28.1%
2004	40.1%
2005	31.6%
2006	36.9%
2007	55.5%
2008	77.1%
2009	50.9%
2010	84.1%
Average	47.3%
Median	40.1%

As we can observe, the loss ratios do bounce around quite a bit, but the average and median loss ratios are below 50% as compared to Atrium's average, aggregate ultimate loss ratio of 51.5% for UGI and 53.6% for Genworth. Now, one can argue that there are differences between Atrium and Ren Re, since Ren Re is: (1) a property casualty reinsurer, not a mortgage reinsurer; and (2) Ren Re may incur a large loss on a single contract, whereas a 200% loss ratio is the likely maximum for a single contract for Atrium. However, the Ren Re portfolio is extremely diverse, *i.e.*, it would take multiple catastrophic events worldwide to have a serious impact on Ren Re, whereas the risk to Atrium is quite concentrated and not easily diversified away. Further, each year for Ren Re is generally independent from the prior year, whereas Atrium has a very high correlation between successive book years of poor results, as we have seen. Nevertheless, the comparison illustrates that the loss ratios for XOL reinsurers are usually favorable for most exposure periods.

To summarize, in my professional opinion the Atrium reinsurance agreements with UGI and Genworth are risk bearing, and the premiums received are commensurate with the risks assumed. I have also seen no evidence that Atrium did not act in compliance with all applicable state and federal laws.

5. *I disagree with Dr. Crawshaw's position regarding attachment points.*

Dr. Crawshaw takes the position that the attachment point for all of Atrium's captive arrangements were set at a level above expected claims and that it was extremely unlikely in the early years of any arrangements that Atrium would be liable for any claims. *See* Dr. Crawshaw's

Report, at 52. I disagree with Dr. Crawshaw that: (1) the attachment point was set at a level above expected claims; and (2) it was extremely unlikely in the early years that Atrium would be liable for any claims.

With respect to Dr. Crawshaw's first point, while it may be a matter of opinion as to whether the attachment point is above or below expected claims, as demonstrated in Exhibit C, attached hereto, in virtually every case -- all contracts, all book years -- the MI is in a net economic positive position (or "profit") at the attachment point or entry level. As a result, Atrium, the reinsurer, will suffer a net economic loss ***before*** the MI will experience such an unsatisfactory economic position.

Protective Order

Second, since the premium split is roughly 60%/40% for the MI and Atrium, respectively, with Atrium generally retaining a 10% Loss Rate, it would take a Loss Rate of 25% for the two entities to experience identical loss ratios. Said differently, Atrium suffers a net economic loss ***before*** the MI in virtually all years (this generally holds true for all recent book years, but not always for book years before 2000). Since risk transfer is a two pronged test under FASB 113; one test for frequency of loss (probability of loss) and one test for quantum of loss (severity expressed as a percentage of NPV premium), it can be concluded at least for the frequency standard or probability of loss, that the risk assumed by Atrium is greater than that retained by the MI.

Turning to Dr. Crawshaw's second point, I have difficulty reconciling Dr. Crawshaw's position that "it is extremely unlikely in the early years of any arrangements that Atrium would be liable for any claims" with the economic reality that Atrium incurred a significant net economic loss on two of the four reinsurance agreements assumed. This is exactly what occurred for both the CMG and Radian agreements, as both suffered economic losses of 16-17% of premium (per Dr. Crawshaw) despite being in force for roughly 2 ½ and 5 years, respectively, which constitute "early years."

6. Additional points.

a. Trust account structure

Dr. Crawshaw suggests in his Report commencing on page 15, that there is not the usual pooling of risks as a result of the segregation of the trust accounts by MI.[6] While one could argue that having other "pockets of money" available to pay claims increases the ability of the reinsurer to pay claims, such a structure would benefit the first MI to suffer losses to the detriment of the other MIs. If the MI happens not to be the "first in line" then there might not be sufficient funds available to pay its claims. The ability of one MI to tap the trust funds of another reinsurer would seem to encourage riskier behavior on the part of one of the MIs because it would know that it could utilize trust funds from other MI reinsurance agreements. In my experience, the companies that I worked for frequently separated and earmarked trusts for particular contracts. It was a selling point to the insured to know that its trust funds would not be commingled with the trust funds of other entities.

In addition, I believe that if the trust funds are not segregated by MI, then the MI cannot account for the reinsurance on its financial statements. I also note that there is pooling of risks within in each agreement as the book years are cross-collateralized.

b. Trust amounts

Exhibit A, hereto is a table that is an extract from Atrium's Statutory Financial Statements from December 31, 1999, to December 31, 2009. There has been significant discussion in this case concerning Trust amounts, loss reserves, especially contingency reserves, Capital and Surplus ("C&S") as well as Paid in and Contributed C&S. In my opinion, Atrium appears to have had more than adequate C&S, as well as significant funds in the Trust to satisfy its contractual obligations as estimated by Milliman. I was also dismayed to see exhibits that compared "cumulative premiums" to surplus, to imply highly leveraged contracts, whereas the industry standard when comparing premiums to surplus is to consider annual premiums to year end C&S (at times, the average C&S over the calendar year is used).

The two left hand columns of the Table in Exhibit A are the only amounts that are not expressed in millions of dollars. These are ratios of the other columns. I calculated a Premium to Surplus Ratio, which clearly demonstrates reasonable leverage on the statutory balance sheet. These would be the same calculation as is called for in the Statutory Financial Statements, as well as per the Insurance Regulatory Information System tests. I also compared the Contingency

[6] The segregation of trust accounts is required by the underlying contracts for reinsurance. Each of the contracts contains a provision for the establishment of a trust account "for the benefit of the Ceding Company." UGI § 13.1; *see also* Genworth § 12.01; Radian § 12.01; and CMG § 12.02.

Reserve to the estimated unpaid losses, noting that the UGI contract, § 13.5, calls for this estimate to "be based on the maximum amount the Ceding Company, in its sole judgment, anticipates may be required." Even using a conservative estimate by the MI, the Contingency Reserve is ***multiples*** of what would be required under US GAAP. Thus, the amount in the Trust is an extremely conservative amount relative to the estimated ultimate contractual obligations of Atrium.

c. State regulation

I also note that Dr. Crawshaw does not appear to view state regulation of the insurers and reinsurers to be of any significance. I believe that state insurance regulation is significant to the activities of both the insurer and the reinsurer. As it relates to the insurers, both UGI and Genworth are domiciled in North Carolina. I reviewed the report of examination for United Guaranty Residential Insurance Company as of December 31, 2007.[7] In that report, the North Carolina DoI reviewed the financial condition of the insurance entity and specifically reviewed and noted the Company's lender captive arrangements. UGI Report, at 16-17. Although the report is lengthy and focuses primarily on UGI, I did note that UGI has the following policy in place:

> "Before an agreement is entered into, a risk transfer analysis review is performed pursuant to RESPA requirements and in conjunction with the Company's risk transfer policy effective 10/1/2005." (Note # 5 – Notes to Financial Statements).

Another point worth mentioning in the same Note to Financial Statements, UGI discloses a potential liability in the event the reinsurer does not fund the Trust and actual losses exceed the amount in the Trust. No one disputes this potential exists. To put the risk in perspective, as of 9/30/2008, the total unpaid losses for UGI under Captive Arrangements approximately equaled $500 million, whereas the amount in the Trusts approximately equaled $1.1 billion. (*See* Note # 7).

The last item worth mentioning is the first paragraph on page 20, specifically, "The Company [*i.e.*, UGI] discontinued ceding new business on the respective XOL reinsurance cessions to captive reinsurance companies. Following their termination, all these respective XOL reinsurance contracts will be placed into runoff pursuant to their terms." As I heard the testimony of various witnesses, including Dr. Crawshaw, it did not seem evident that the MIs were also terminating captive arrangements; instead, the testimony left me with the distinct

---

[7] Available at:
http://www.ncdoi.com/FE/Documents/Reports/Property%20and%20Casualty%20Companies/2007/UG%20Residential%20Ins%20Co%202007%20RoE.PDF

impression that only reinsurers such as Atrium were driving the terminations. It does not surprise me, however, to learn otherwise. AIG, the parent company of UGI, is a sophisticated entity with a reputation for not being taken advantage of in the market. When the housing market continued to struggle, it seems sensible that the MIs were also not interested in accepting additional PMI exposure.

Similarly, the North Carolina DoI issued a report of examination dated December 31, 2011, for Genworth Mortgage Insurance Corporation, again noting the existence of the Company's captive reinsurance arrangements and activities associated therewith. *See* Genworth Report, at 16-17.[8] I have reviewed that report, and I note the following:

- In April 2013, Genworth settled with the CFPB for $4.5 million for their captive reinsurance arrangements, while agreeing to accept no such new business for 10 years, as well as to comply with monitoring by the CFPB.
- The Company received a clean actuarial opinion from KPMG effective 12/31/2011.
- As of 12/31/2011, the Company still had 36 lender captive arrangements, most of which were XOL. The ceded premiums per the captives were $122 and $93 million, for 2010 and 2011, respectively. The Trust balances for these same years were $812 and $569 million.
- In 2011, the Company entered into two commutations with EB Reinsurance and HSBC Reinsurance.

7. Errata

I would like to clear up two items for which I am on the record. Per my deposition, I note that I took the position that the Atrium Agreements were not traditional "Surplus Relief" vehicles. Normally, XOL contracts are not considered a mechanism for providing Surplus Relief to the ceding company, as other reinsurance structures are normally employed. That said, the Atrium Agreements did provide surplus relief to the MIs, since Atrium carried Contingency Reserves on their Balance Sheet, as opposed to the MIs. This fact is important, as the amount of the Contingency Reserves is a dollar-for-dollar reduction of the Capital and Surplus ("C&S") of the company carrying such a reserve. In addition to the quantum of the relief above, there is the issue of duration. The PMI exposure requires the reserves to be held for 10 years or more, thus not only is the C&S impacted by a significant dollar amount, it needs to be carried on Atrium's balance sheet, which results in a "hit" or a reduction in the C&S.

---

[8] Available at:
http://www.ncdoi.com/FE/Documents/Reports/Property%20and%20Casualty%20Companies/2011/Genworth%20Mortgage%20Ins%20Corp%202011%20ROE.pdf

In my original report, I discuss the fact that MIs would not incur a Schedule P penalty on their Statutory Financial Statements, since Atrium is securing their liabilities via a Trust that is compliant with NY Regulation 114. However, it is not Schedule P, but rather Schedule F.

Finally, the loss ratios quoted did not allocate IBNR accurately between Genworth, UGI and Atrium. Any reference to specific ultimate loss ratio amounts is therefore retracted and replaced with the numeric loss ratio references contained in this Rebuttal Report.

My opinions and conclusions are based upon the information and discovery obtained as of the date of this report, and I reserve the right to update my opinion upon receipt of any additional information. Further, I am prepared to explain my opinions in testimony at deposition and/or trial.

Michael Joseph Cascio, MAAA & FCAS

21 April 2014
Date

SUPPLEMENTAL DOCUMENTS RELIED UPON

1. Milliman Atrium Report 12/31/2007
2. Atrium Annual Statutory Financial Statements: 1999-2009, inclusive
3. Radian Reinsurance Agreement
4. CMG Reinsurance Agreement
5. Mark Crawshaw's Report
6. NC General Insurance Statute
7. NY Insurance Law: Sections 6501-6507
8. Renaissance Reinsurance 12/31/2010 Report to Shareholders
9. Insurance Regulatory Information System (IRIS) Tests
10. NC DoI 12/31/2007 Financial Examination for UGI
11. NC DoI 12/31/2011 Financial Examination for Genworth
12. NY DoI 12/31/2001 & 12/31/2007 Financial Examination for Atrium
13. CAS Guidance for Risk Transfer Testing

EXHIBIT A

ATRIUM FINANCIAL STATEMENT EXTRACTS
STATUTORY BASIS

In millions

Year Ending 12 / 31 / t	TRUST	Unpaid or Loss Reserves	Contingency Reserves	UEP	Total C&S	Paid In C&S	Collected or EP	Premium to Surplus	Cont Res to Unpaid	Auditors
1999	33.86	3.73	21.22	0.41	9.99	8.60	24.54	2.46	5.68	D&T Auditors
2000	80.64	7.15	38.52	0.44	28.08	25.60	34.59	1.23	5.39	D&T Auditors
2001	128.43	11.80	61.36	0.62	33.00	28.60	40.88	1.24	5.20	D&T Auditors
2002	154.87	16.74	85.44	0.83	51.49	46.10	48.17	0.94	5.10	D&T Auditors
2003	181.84	5.78	103.78	0.69	63.07	46.10	36.68	0.58	17.96	D&T Auditors
2004	220.32	10.42	126.25	0.78	64.31	46.10	44.92	0.70	12.12	Beard Miller - Harrisburg, PA
2005	233.47	15.12	147.20	0.70	86.56	80.82	41.99	0.49	9.74	Beard Miller - Harrisburg, PA
2006	253.35	16.86	164.60	0.62	95.08	80.82	36.18	0.38	9.76	Beard Miller - Harrisburg, PA
2007	220.88	32.28	178.83	0.59	82.34	80.82	32.48	0.39	5.54	Beard Miller - Harrisburg, PA
2008	261.16	83.32	191.58	0.58	59.51	80.82	37.93	0.64	2.30	Beard Miller - Harrisburg, PA
2009	281.01	108.47	131.31	0.46	96.36	80.82	33.00	0.34	1.21	Parente Beard - Harrisburg, PA
2010	264.48	116.15	108.48	0.35	52.72	47.27	27.07	0.51	0.93	Parente Beard - Harrisburg, PA
2011	223.58	83.70	93.86	0.26	59.25	42.77	21.82	0.37	1.12	Parente Beard -Malvern, PA

EXHIBIT B

Genworth

EXHIBIT C

Genworth

Genworth

Exhibit M.6

	Ground Up Loss Rate	Atrium Loss Rate	Genworth Loss Rate		Atrium L/R	Genworth L/R	Att Point Genworth L/R
2002	2.06%	0.00%	2.06%		0.00%	24.4%	47.4%
2003	3.36%	0.00%	3.36%		0.00%	39.8%	47.4%
2004	4.63%	0.63%	4.00%		25.00%	47.4%	47.4%
2005	14.83%	10.00%	4.83%		168.20%	54.2%	44.9%
2006	23.06%	10.00%	13.06%		181.20%	157.8%	48.3%
2007	22.84%	10.00%	12.84%		197.30%	168.9%	52.6%
2008	18.65%	10.00%	8.65%		179.00%	103.2%	47.7%
2008.1	8.39%	3.89%	4.50%		126.80%	48.9%	43.5%
Totals	97.82%	44.52%	53.30%	97.82%	53.60%	57.08%	
Std Dev	8.72%	4.90%	4.31%		86.64%	55.92%	
			50.5%				

Genworth Loss Rate = Ground Up Loss Rate - Atrium Loss Rate.

Genworth L/R (2005-8008) = Atrium L/R X (Genworth Loss Rate/Atrium Loss Rate) X 40/60 [25/75 for 2008.1 year].

For 2002-2004 periord, Genworth Loss Rate X 11.85 (average of 2005-2008.1 of Genworth loss ratio/ Genworth loss rate)