

SUPREME COURT OF THE STATE OF NEW YORK  
COUNTY OF NEW YORK

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In the matter of the application of	:	
THE BANK OF NEW YORK MELLON,	:	Index No. 651786/2011
(as Trustee under various Pooling and Servicing	:	
Agreements and Indenture Trustee under various	:	Assigned to: Kapnick, J.
Indentures),	:	
	:	
Petitioner,	:	
	:	
for an order, pursuant to CPLR § 7701, seeking	:	
judicial instructions and approval of a proposed	:	
settlement.	:	
	:	
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**Rebuttal Opinion of  
Phillip R. Burnaman, II  
The GreensLedge Group LLC**

**Rebuttal of  
Expert Report of Charles D. Cowan, Ph.D.**

**CONFIDENTIAL**

## Rebuttal Opinion of Phillip R Burnaman, II

I have been asked to review the report submitted by Charles D. Cowan, Ph.D.<sup>1</sup> My expert report was filed with the court on March 14, 2013 and is included as reference herein.<sup>2</sup> Based on my analysis and review, I conclude that Dr. Cowan's opinion as set out in his report is not creditable for the following reasons:

- i. Material and relevant data is excluded without justification,
- ii. Material facts regarding residential mortgage loans are ignored, and
- iii. The statistical analysis in the report is based on flawed assumptions.

**I therefore submit that Dr. Cowan's conclusions are unsupported in fact and theory.**

I authored this expert report in collaboration with my colleagues at GreensLedge. Neither I nor GreensLedge have any economic interest in this matter or any financial stake in any particular outcome.

### 1. Summary

Dr. Cowan's report is flawed in a number of respects and, as a result, his conclusions have no merit. Specifically, the Cowan Report (i) does not properly apply relevant mortgage industry practices to the issues Mr. Lin addressed, (ii) does not reflect a thorough understanding, and the appropriate application, of facts in the record, and (iii) does not properly apply analytical techniques using appropriate, reasonable and justified assumptions to derive defensible conclusions. Each of these flaws leads to erroneous conclusions, particularly through the application of statistical analysis on a flawed set of assumptions. These compound errors in turn cause Dr. Cowan to incorrectly assert that "Mr. Lin Materially and Unjustifiably Undervalued the Damages Suffered by the Covered Trusts."<sup>3</sup> I discuss each of the significant flaws in Dr. Cowan's report in a separate section of this rebuttal opinion, and the discussion that follows demonstrates that his conclusions criticizing the Settlement Amount are unsupported.

In my opinion, Dr. Cowan's opinion provides no insight into the issues faced by The Bank of New York Mellon ("BNYM") at the time when it considered the Settlement. Dr. Cowan's report appears to suggest that BNYM should have engaged in extended litigation *instead of engaging with BANA/Countrywide* and deciding to enter into the Settlement in a reasonable and expedient manner using available analytical tools.

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<sup>1</sup> Expert Report of Charles D. Cowan, Ph.D., *In the matter of the application of The Bank of New York Mellon, et al.* (Supreme Court of the State of New York, Index No. 651786/2011), March 14, 2013. Hereinafter referred to as the "Cowan Report".

<sup>2</sup> Expert Report of Phillip R. Burnaman, II, *In the matter of the application of The Bank of New York Mellon, et al.* (Supreme Court of the State of New York, Index No. 651786/2011), March 14, 2013. Hereinafter referred to as the "Burnaman Report". All defined terms from the Burnaman Report are incorporated herein.

<sup>3</sup> Cowan Report, 1.

Dr. Cowan’s conclusion regarding the size of the potential claim for damages in this matter is also difficult to reconcile with his statement that “experts offering opinions about the calculation of damages are never involved in the acceptance or non-acceptance of the result,<sup>4</sup>” because Dr. Cowan himself posits many legal conclusions, and ignores several fundamental and practical matters (each addressed below) in reaching his conclusions regarding potential litigation claims he might support.

Finally, Dr. Cowan’s report fails to address many substantial issues that would have materially impacted what he calls the “ultimate settlement range,” including successor liability risk, counterparty risk, and litigation risk, as well as the benefits derived from the servicing improvements.

## **2. Loan File Reviews Are Often Inconclusive, Costly and Time-Consuming, and Are Not Necessary to the Resolution of a Settlement Range**

Dr. Cowan’s report is flawed in criticizing Mr. Lin’s analysis because it lacked data derived from a loan file review of loans in the Covered Trusts and instead relied on other relevant information. This criticism erroneously assumes that loan file review is both absolutely necessary and absolutely conclusive. Both of these assumptions are untrue.

Contrary to Dr. Cowan’s contentions, it was reasonable for Mr. Lin to consider and to accept alternative approaches to valuation of a reasonable settlement amount. Dr. Cowan asserts that “reunderwrit[ing] a statistically valid sample of the actual loan files” is “standard practice in repurchase disputes,<sup>5</sup>” and then reaches the false and unsupported conclusion that such a re-underwriting process would be conclusive. But in reality this is not the case.

The Cowan Report erroneously asserts that the only valid approach to determining a reasonable settlement amount includes a loan file review. Dr. Cowan contends that loan file review is “standard practice in repurchase disputes” and that “loan file review and sampling is a generally accepted...method for calculating breach rates in RMBS.” I do not believe that standard industry practices exist in this area. Rather various claimants and sellers in representation and warranty disputes – in the course of business and/or in litigation — have hotly debated the issues surrounding repurchase, and the best method for resolving disputes. While some disputes are ultimately resolved in court, others (such as this matter or BANA’s recent settlements with the GSEs) are resolved prior to legal proceedings being filed.

Highly publicized mortgage repurchase litigations are relatively recent events and limited in number. Accordingly, it is a gross mischaracterization to assert that this limited universe of disputes has produced a “standard practice” in a way that implies that there is an industry or legal

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<sup>4</sup> Cowan Report, 12.

<sup>5</sup> Cowan Report, 1.

consensus resulting from a matured process or development of a practice over an extensive set of disputes based upon successful and proven techniques. To the contrary, the still-developing practice of loan file review in repurchase disputes<sup>6</sup> and the continuing litigation around many of these disputes reveals a hopelessly time-consuming, expensive and divisive process that leads not to definitive conclusions, but only to an even greater number of individual disputes.

The determination of an actual breach rate, after curable breaches have been addressed, is a highly subjective exercise fraught with the prospect of protracted disputes. This is particularly so given the inherent subjectivity in “re-underwriting” specific loans years after origination without access to the borrower, the actual underwriter, or in some cases the information available to the actual underwriter. This complexity is compounded by the fact that underwriting is often dependent on subjective standards, in no small part because underwriting exceptions and “compensating factors”<sup>7</sup> are a part of the ordinary course of business and are recognized and permitted in underwriting guidelines.<sup>8</sup>

The Cowan Report fails to acknowledge that any of these issues exist when seeking to calculate a definitive breach rate, but others have recognized the flaws in Dr. Cowan’s hypothesis. Prior to the settlement, Royal Bank of Scotland published a research report<sup>9</sup> investigating the “Practical Considerations” of a potential loan file review for 78,168 Countrywide loans. RBS concluded that: “the entire process would take at least two years and could potentially take much longer. We estimate that without litigation, the cost could range from \$24 million to \$88 million, and with litigation could be substantially higher.” If litigated, RBS concludes, the process “can go back and forth interminably.” *Id.*

Dr. Cowan himself advocates that an analysis of approximately 50,000 loans could have been performed. But he fails to acknowledge that the time required for such a review would likely be measured in years, not months. Based on my knowledge of the industry, the time and resources required to complete a loan file review of this magnitude would be considerable. There would also be considerable expense—by Dr. Cowan’s figures (\$200-300 per loan file), approximately \$10 million-\$15 million, and of course that is only for reviewers for the plaintiff, in this type of dispute two and possibly three sets of reviewers would be utilized, easily doubling Dr. Cowan’s estimate. The expense could conceivably be much higher: as much as \$56 million if one were to apply the cost figures estimated by RBS.<sup>10</sup>

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<sup>6</sup> Affidavit of Peter Kempf, *In the matter of the application of The Bank of New York Mellon, et al.* (Supreme Court of the State of New York, Index No. 651786-2011), May 2, 2012, ¶ 16 (“...there is no single established industry standard with respect to the specific details of a reunderwriting process...”).

<sup>7</sup> Prospectus, CWALT 2007-OA6, S-35 and others.

<sup>8</sup> Kempf Aff. ¶ 21-29.

<sup>9</sup> “Non-Agency MBS Loan Repurchases: Practical Considerations” RBS Non-Agency MBS Strategy, September 17, 2010.

<sup>10</sup> My estimate would be \$25 million to \$35 million based on discussions with former colleagues currently in the loan file review business.

As Dr. Cowan undoubtedly knows from his previous engagements as a litigation expert on topics relating to mortgages, loan file review alone is not conclusive. To take one example, the parties in *MBIA v. Countrywide* engaged in a review of 6,000 loans files. The two parties' reviews yielded strikingly disparate results. From this example alone, it is clear that loan file review is not conclusive on its face.

From a sample of 6,000 loans, MBIA's re-underwriting expert Steven Butler found a 96.8% defect rate,<sup>11</sup> while Countrywide's re-underwriting expert Karen Godfrey found 88% of Mr. Butler's loan-level findings were wrong.<sup>12</sup>

Ms. Godfrey finds, among other flaws, that Mr. Butler frequently (i) misapplied the applicable underwriting guidelines or used the wrong guidelines; (ii) applied inconsistent and inappropriate underwriting standards; (iii) used data and information that was unavailable to the original underwriters or is unreliable; and (iv) ignored relevant and available documents and information. *See id.* at 3, Holland Aff., Ex. 147. Ms. Godfrey finds "numerous mistakes, flaws, and biases throughout Mr. Butler's report and loan level findings and opinions." Godfrey Report, at 26, Holland Aff., Ex. 147." And Ms. Godfrey concludes that the vast majority of Mr. Butler's loan-level findings of significant defect are simply wrong. *See id.* at 4, Holland Aff., Ex. 147.

The recent "independent foreclosure review" provides another point of comparison. In an analogous subjective file review process, the Office of the Comptroller of the Currency required the retention of independent consultants to review mortgage loan servicing files in an attempt to determine foreclosure processes and errors. Although the OCC's review did not entail a review of loan origination files, that review nevertheless provides a useful contextual reference, because it involved the use of subjective standards similar to those entailed in origination loan file reviews. After more than \$1.5 billion was spent on the independent consultants conducting the review, both the OCC and the banks involved determined that the process was taking far too long and costing money that was better spent in a settlement. It certainly seems reasonable for BNYM to have come to a similar conclusion without having to spend tens of millions of dollars, over a significant amount of time, in an inconclusive exercise.

In my opinion, Dr. Cowan ignores several issues that make his assertion regarding a "standard process" in repurchase disputes baseless. It was reasonable given the practical realities and uncertainties in this matter for the adversarial parties in this negotiation to consider alternative approaches to estimating claims for breach of representations and warranties in order to save time, money and forestall rounds of further disputes.

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<sup>11</sup> *MBIA Insurance Corp. v. Countrywide* (Supreme Court of the State of New York, Index No. 602825/2008), Expert Report of Steven I. Butler Regarding Countrywide's Underwriting Practices (February 27, 2011).

<sup>12</sup> *MBIA Insurance Corp. v. Countrywide* (Supreme Court of the State of New York, Index No. 602825/2008), Expert Report of Karen S. Godfrey re: Reunderwriting (July 3, 2012), attached as Ex. 147 to the Holland Aff. In Support Of Countrywide's Motion For Summary Judgment (November 28, 2011).

### 3. GSE Data Is Very Relevant and Applicable for Reference

Dr. Cowan acknowledges that “an alternative methodology would be to reunderwrite loans similar to those in the subject pools.” BANA/Countrywide and the Institutional Investors each provided their own reasoned comparison to other loans to arrive at their initial estimate of potential damages or potential claims. Without material justification or any principled basis, the Cowan Report rejects the BANA/Countrywide data as “completely irrelevant,”<sup>13</sup> yet it accepts and relies upon the Institutional Investors’ data without question. From the perspective of a mortgage professional or a layman, this is an unjustifiable exclusion of important data relevant to the matter under consideration.

I have reviewed the methodology employed by BANA/Countrywide to correlate the GSE experience to the loans at issue in this matter,<sup>14</sup> and I have concluded that to dismiss the GSE data as “completely irrelevant” ignores the facts and function of the GSEs in the mortgage market, fails to consider or mention Countrywide’s processes and procedures, and is inconsistent with my experience in the mortgage market.<sup>15</sup>

Dr. Cowan’s sole published source cited in support of dismissing the BANA/Countrywide GSE data is a quote from an article authored by Dr. Faten Sabry,<sup>16</sup> in which Dr. Sabry observed in passing that “[f]or the most part the GSEs have dealt with prime mortgages that conform to a relatively narrow set of specifications and cater to borrowers with good credit and complete documentation.” Dr. Cowan’s use of this quote obscures the actual substantial participation of the GSEs in the Alt-A and Subprime Markets. Dr. Cowan’s criticism misses the mark for at least two reasons:

- In 2006 and 2007, the GSEs in fact purchased over \$500 billion of Alt-A and Subprime loans.<sup>17</sup> While at the time of Dr. Sabry’s writing popular perception may have been that the GSEs limited themselves to prime purchases, the GSE’s had in fact purchased numerous non-conforming loans, Redacted

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<sup>13</sup> Cowan Report, 5.

<sup>14</sup> I believe comparing GSE loans to these PLS loans could lead to the conclusion that GSE loans and their associated representations and warranties would produce more rather than fewer valid repurchase claims.

<sup>15</sup> In my experience mortgage originators generally use the same people and similar or overlapping processes to originate various mortgage loan programs that they offer, including conforming and non-conforming loan product.

<sup>16</sup> Dr. Faten Sabry and Dr. Thomas Schopflocher, “The Subprime Meltdown: A Primer” (June 21, 2007).

<sup>17</sup> In 2006 and 2007, on average, 20% of both FNMA’s and FHLMC’s new single family business was classified as Alt-A and 6% was classified as subprime. Federal Housing Finance Agency *Conservator’s Report on the Enterprises’ Financial Performance*, First Quarter 2011, and 10-K Reports of Fannie Mae and Freddie Mac, 2007

<sup>18</sup> BNYM\_CW-00000165; when presenting the GSE repurchase experience, BANA applied a reweighting by product type to adjust for differences in the proportion of various product types between GSE loans and the loans in the covered trusts. This resulted in BANA/Countrywide presenting a higher repurchase rate than would have been derived from the unadjusted repurchase experience.

- Separately, many of the loans in the covered trusts were originated under “prime” programs. Many such loans were conforming.<sup>19</sup> loan originators may choose to sell conforming loans into GSE programs or put them into private label securitizations (“PLS”), depending on the execution that will get them the best price at the time of sale. Other such loans were “jumbo” loans, which are most frequently conforming mortgage loans in every respect but size.

Contrary to Dr. Cowan’s assertions, there are clearly important and relevant comparisons between the Covered Trust loan experience and the GSE loan experience because the GSE’s had significant ownership in substantially similar loans.<sup>20</sup>

Dr. Cowan seems to imply that the potential differences between a conforming and non-conforming loan would impact the probability of an underwriting defect. It is difficult to see why this should be the case. The accepted standard of mortgage finance analytics would treat these types of loans identically with adjustments only for perceived credit quality. Why should loans that are conforming in every respect save one or two criteria have a materially different experience with respect to the incidence of underwriting defects? The Cowan Report does not speak to this question, which would need to be answered before concluding that the GSE experience was irrelevant to analysis of the breach rate in the Covered Trusts.

The Cowan Report also criticizes Mr. Lin for relying on the GSE data as a reference point because according to the Cowan Report that data was “unverified.” Dr. Cowan unfairly ignores several supporting facts that are in the record in order to put that label on the GSE data set. In my opinion, Mr. Lin reasonably chose to rely on the GSE data that was presented by BANA as a part of the negotiations. I have been able to reconcile much of the BANA/Countrywide GSE data with BANA’s quarterly filings, along with reviews of the Form 8-Ks filed by BANA, FNMA and FHLMC. From my experience as the audit committee chairman of a publicly listed company, I am familiar with the audit and disclosure requirements that accompany the filing of SEC reports. From that experience, I impute a significant measure of veracity to the GSE data that BANA/Countrywide provided, and as mentioned in my earlier report, I considered critically their adaptation of that data to the Covered Trusts.<sup>21</sup> Dr. Cowan did none of this.

The Cowan Report inexplicably has no corresponding concern regarding verification of the data it accepts as reliable from the Institutional Investors’ presentation of data from Digital Risk (“the Digital Risk data”). Dr. Cowan offers no explanation as to why he would reject the GSE data but accept the Digital Risk data, about which no details are available. I have been unable to identify

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<sup>19</sup> GSE conforming loans meet all the Agency requirements regarding origination process, documentation, verification and credit, as set out for example in the Fannie Mae 2007 Selling Guide, (<https://www.fanniemae.com>) including a maximum loan amount.

<sup>20</sup> BANA applied a “Lesser Representation” factor to its GSE repurchase experience in order to correlate that experience to the Covered Trusts. GSE loans have warranties that loans in the Covered Trusts do not, including “borrower misrepresentation,” and breaches in GSE loans do not require a “material and adverse effect” to qualify for repurchase as is the case for the loans in the Covered Trusts.

<sup>21</sup> Burnaman Report, Section 5.

from the record any written material whatsoever relating to the Digital Risk data. No data about the loans reviewed, their vintage, the originators or collateral types, or about the purpose or form of the review is evidenced in the record, in stark contrast to the GSE data supplied by BANA/Countrywide. I have carefully reviewed the record in this matter and I did not see anything in the record that would indicate that the Digital Risk data was “verified” and the Cowan Report provides no citations or references indicating that the author researched the basis for or the veracity of the Digital Risk information. Dr. Cowan’s singular reliance on the less reliable of the two data sets makes his choice of assumptions questionable, at the very least.

Neither the GSE data nor the Digital Risk data was “verified” by an independent third-party in June 2011, but the GSE data was covered by a representation from BANA that it was “not materially false or materially inaccurate.”<sup>22</sup> The Digital Risk data had no such representation or warranty. But the Cowan Report chooses to adopt the Digital Risk data and dismiss the BANA/Countrywide GSE data. Nothing in the record indicates that the information contained in either report was erroneous or fabricated and there is no justification for discounting the data presented by either side.<sup>23</sup>

Based on my experience, the most appropriate and justifiable approach is to accept the data as presented and then to analyze its relevance and level of applicability to the issue at hand, as I did in my initial report. The Cowan Report fails to do this and as a result his conclusions are not valid because he has explicitly chosen to ignore material and relevant data.

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<sup>22</sup> Settlement Agreement, Paragraph 13(b).

<sup>23</sup> Of course, the characterization of the data and the conclusions drawn therefrom by the parties in interest are subject to consideration, criticism and discounting.



#### **4. Cowan Wrongly Dismisses “Success Rate,” Incorrectly Uses “Breach Rate” as a Measure of Damage**

Cowan’s report assumes that the “breach” of a representation or warranty is the only issue that Lin, and by implication BNYM, should have been concerned about because he contends it is the correct measure of claims for damages against a loan originator. Dr. Cowan incorrectly suggests that this measure should be the sole basis on which the claim is resolved, presumably through litigation or settlement. In my experience, the business of mortgage finance does not work this way and the terms breach and success are often casually applied with imprecise definitions as no industry standard definitions exist. But understanding both breach rate and success rate (as those terms have been used in this matter) are important in order to form a judgment that is consistent with assessing a settlement amount and within the bounds of mortgage industry experience, generally.

Breach rate, in the context of this matter, means an *alleged* incident of an underwriting defect — it is, in my experience, what would be termed the “initial” or “alleged” breach rate. Alleged breaches may be cured, or they may, upon review, not be verifiable breaches. “Success Rate,” as Lin used the concept, is a measure of those alleged breaches which are verifiable and cannot be cured. In the context of Lin’s report this means that the loan will actually be repurchased or be subject to a make-whole payment. Mr. Lin expressly did not consider the additional issue of causality or material and adverse effect in estimating the amount of a potential claim – an issue that would presumably be subject to further legal interpretation and potential litigation. But Dr. Cowan’s report, by considering only “breach rate,” does not even reach this important juncture as he simply presumes that all alleged breaches result in either a repurchase obligation or litigation. He ignores the simple facts that many, if not a majority of alleged underwriting breaches can be cured and that other alleged breaches will be determined not to be breaches at all once they are fully investigated.

Both BANA/Countrywide and the Institutional Investors incorporated a combination of breach and success rates into their analysis (BANA/Countrywide by presenting a combined “Defect Rate”—which implicitly is breach rate times success rate – and the Institutional Investors by presenting separate breach and success rates). The Cowan Report, however, suggests that Lin should have ignored success rate as a factor completely: “embedded in the very notion of a success rate are various factors that parties consider when resolving legal disputes.”<sup>24</sup> The Cowan Report further asserts that incorporating success rate into the analysis is inappropriate because “experts” do not calculate legal damages. But this criticism misunderstands the relationship between breach and success rates, which must be taken together to understand a

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<sup>24</sup> Cowan Report, 12.

meaningful defect rate. In the mortgage industry, experts must consider the applicability and enforceability of representation and warranty protections in the ordinary course of their business.

Dr. Cowan asserts that even performing mortgage loans with a technical deficiency in the underwriting file should be repurchased from a securitization trust irrespective of the performance or credit quality of the loans. It is hard for me to see how a Covered Trust might demonstrate that it had been damaged in such a case. To the contrary, a performing mortgage in fact provides credit enhancement to the trust as it provides net spread. In effect, repurchasing the performing loan may in fact be harmful to the trust.

## **5. Dr. Cowan's Funnel and Mortgage Modeling Conventions**

The Cowan Report uses a graphic to contrast the Settlement Amount range with the massive original unpaid balance of the loans in the Covered Trusts that is, in my opinion, disingenuous. In the text surrounding a funnel-shaped graphic, Dr. Cowan says “Mr. Lin’s approach can be viewed as a funnel based on each of the four assumptions which *narrowed the funnel and reduced the repurchase liability* and ultimate settlement range (emphasis added)” and “the simplistic approach he [Lin] took in combing the four assumptions guaranteed a minimum value for the settlement range.” The graphic is itself simplistic and misleading and the surrounding text is untrue. Dr. Cowan selectively misuses statistical analysis in his report to inappropriately narrow the range of potential outcomes without regard to the realities and accepted norms of mortgage modeling and mortgage portfolio performance.

For any analysis, including Dr. Cowan’s, Brian Lin’s or the analysis that I provided in my earlier report on this matter, the assumptions used are a significant factor in determining potential claims or potential damages. Mr. Lin used standard mortgage finance industry methodology to calculate cumulative losses, the first step in that process. Lin’s assumptions, or those of BANA/Countrywide or the Institutional Investors, can be critiqued, but they all used the same methodology. Critiquing Mr. Lin for employing industry standard methodology to calculate cumulative losses in this matter is without merit, unless Dr. Cowan by implication intended to assert that industry standard modeling conventions are themselves not valid or should not be used in this case.

## LIN APPROACH

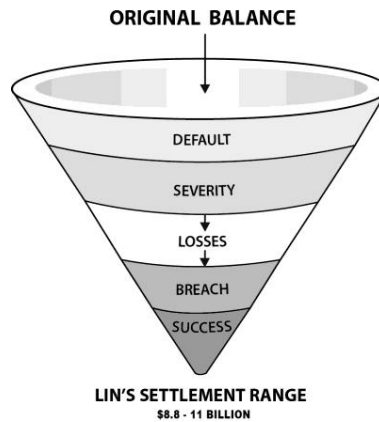


Figure 1: Dr. Cowan's Funnel

The first two levels of Dr. Cowan’s funnel (Figure 1) are “Default” and “Severity.” Determining the default rate and severity on a pool of loans is a necessary step in to calculate cumulative losses.<sup>25</sup> These steps in the calculation are not a unique exercise created by Mr. Lin, nor are they improperly applied in this case.<sup>26</sup>

The last two levels of the Cowan Report’s funnel, breach rate and success rate, are not really screens because they can easily mean different things to different users. Dr. Cowan himself appears to be confused by their usage in this matter, as I discussed in Section 4. If breach rate means loans with an alleged breach, then it is only appropriate that a calculated success rate is a subset of the larger pool that excludes, for example, loans with curable breaches. Dr. Cowan’s view that this is not an acceptable methodology has no basis in the practicalities of the mortgage industry. In any loan pool of substantial size there are likely to be breaches that result from obvious and uncontested underwriting defects, other alleged breaches that may be easily and demonstrably refuted, and still more alleged breaches that are open to debate.

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<sup>25</sup> Frank J. Fabozzi & Steven V. Mann, *The Handbook of Fixed Income Securities*, (8<sup>th</sup> ed. 2011).

<sup>26</sup> In his own graphic, Dr. Cowan neglected to include prepayments. Because loan prepayments significantly reduce the number of loans and the dollar amount of loans outstanding, Dr. Cowan should have included prepaid loans as a first step in the calculation. A prepaid loan cannot cause damage to one of the Covered Trusts or give rise to a repurchase claim.

### Step 1: Calculate the Cumulative Losses

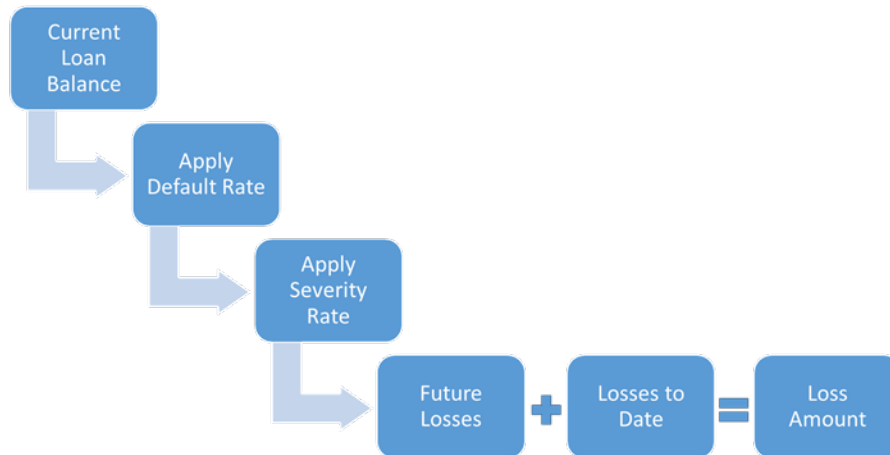


Figure 2: Appropriate Calculation of Losses

### Step 2: Determine the Potential Repurchase Claim Amount

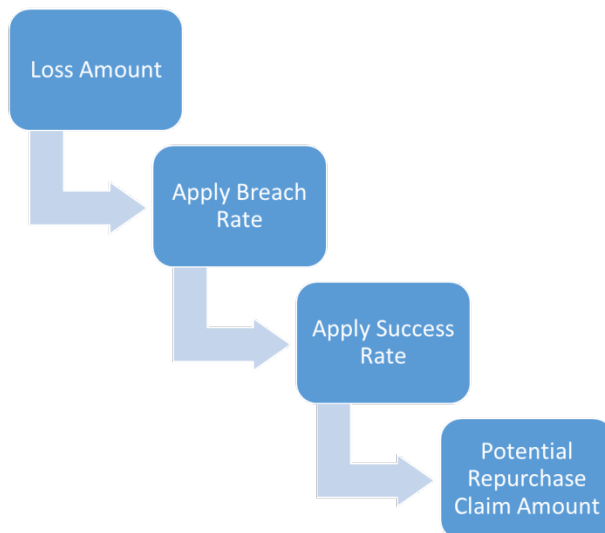


Figure 3: Appropriate Calculation of Potential Repurchase Claim Amount

Calculation of a potential repurchase claim amount is a two-step process, as I detailed in my initial report.<sup>27</sup> The first step requires the application of industry-accepted mortgage modeling techniques to calculate total estimated future losses for the Covered Trusts (Figure 2) which are then added to the losses already realized by the Covered Trusts. This is not Dr. Cowan’s funnel, it is the algorithm used to calculate cumulative losses, and while the assumptions may vary between modelers, the methodology does not. Dr. Cowan did not employ this methodology or produce a cumulative loss estimate, however.

<sup>27</sup> Burnaman Report, Section 4.

The second step — determining the potential repurchase amount — as I describe in my previous report, lacks any industry standard methodology and is therefore a product of both the assumptions of the modeler and the model chosen to analyze the data while employing those assumptions. In this matter, Mr. Lin and the Institutional Investors each elected to use a modeling construct (generally as in Figure 3) that is analogous to the methodology used in mortgage finance for the separate task of estimating losses. This modeling construct is not a funnel designed to “reduce the repurchase liability” as Dr. Cowan describes it; it is an accurate description of the loan re-purchase process which recognizes the subjectivity of the process. Dr. Cowan chose to use a different, and in my opinion inappropriate methodology, and a flawed set of assumptions.

Dr. Cowan’s funnel attempts to juxtapose the original balance of loans in the Covered Trusts with the settlement amount as though that comparison, in and of itself, was illuminating or conclusive in some way. It is not.

In addition to the flaws in Dr. Cowan’s misleading graphic, Dr. Cowan’s assumptions and his critiques of Mr. Lin’s assumptions are unfounded. As an initial matter, Dr. Cowan’s critiques of Mr. Lin’s assumed default rates lack merit. Even assuming that Mr. Lin’s use of a 90% default rate for the 60+ delinquent loans was too low, that assumption had an immaterial effect on Mr. Lin’s conclusions as the Cowan Report seems to acknowledge. Moreover, Dr. Cowan ignores common mortgage industry practice by asserting that it is improper to combine the 30-59 day delinquent loans with current loans (as Mr. Lin did). In my experience, this is common industry practice due to high roll rates between these loan classifications. Borrowers who otherwise are and will remain current may miss a payment (making them temporarily “30 days” delinquent) because of vacation, illness, or mistake.<sup>28</sup> There is also movement between the Current and the 30-59 day classification that does not relate necessarily to borrower behavior, but is due to reporting errors, delays and other factors.

More importantly, Dr. Cowan’s own conclusions concerning re-defaults are inconsistent with my experience and recent OCC reports. Based on his industry experience, Mr. Lin determined that a 35%-40% re-default rate on performing modified loans was reasonable because the performance of previously modified loans “ha[d] improved dramatically since the first round of loan modifications....” Dr. Cowan’s critique of this assumption cites an Amherst Securities report that pre-dates the settlement agreement. The Cowan Report claims that “in actual fact the re-default rate is 51.4% at 12 months after modification.”<sup>29</sup> But Dr. Cowan’s “actual fact” is two years out of date and materially incorrect.

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<sup>28</sup> See Mortgage Bankers Association Letter to FHFA, Nov. 2, 2012, available at <http://mba-pac.informz.net/mba-pac/data/images/mbarepsandwarrantiescommentletter.pdf>

<sup>29</sup> Cowan Report, 10.

Current data from the OCC definitively supports Mr. Lin's assumption that the re-default rate is much lower. The OCC's Fourth Quarter 2012 report<sup>30</sup> shows that for loans held by private investors the 12 month re-default rate on loans modified in 2010 was 28.3% and that the 12 month re-default rate on loans modified in 2011 was 22.1% — less than half of what Dr. Cowan asserts was the “actual fact” and lower than the 35%-40% range Mr. Lin considered reasonable.

Dr. Cowan's criticism regarding re-default rates is inaccurate and his use of unsupported higher rates unjustifiably increases his estimate of the “ultimate settlement range.”

## **6. The Cowan Report Uses Incorrect Assumptions for Analysis**

As reflected in the record in this matter, BANA/Countrywide calculated a “Defect Rate” of approximately 14% based on their GSE experience and adjusted for the product types in the Covered Trusts. I have not found any indication that BANA/Countrywide provided a breach and success rate analogous to the metric proffered by the Institutional Investors in the case record. [REDACTED]

[REDACTED]<sup>31</sup> One might infer that this was a hypothetical breakdown the Institutional Investors used in order to find some equivalency between their analysis and BANA/Countrywide's. But arithmetically, 28% and 50%, or 14% and 100% for that matter, work just as well as 36% and 40%. Because the Cowan Report's presumption that BANA/Countrywide assumed a 36% breach rate is unsupported by the record, the conclusions that rely on that presumption are suspect.

The impact of arbitrarily deriving a 36% breach rate is exacerbated by the analysis Dr. Cowan then performed with it. Dr. Cowan's selective use of statistical analysis serves to narrow the range of losses and provide the aura of statistical accuracy to a process that is subjective.

For no discernible reason, Dr. Cowan runs simulations on a trust-by-trust basis, which assumes uncorrelated characteristics between the trusts and will always result in a narrower range of outcomes. By running a thousand simulations on a trust-by-trust basis, Dr. Cowan effectively defaults to the average values of his assumed range for default, loss severity, breach and success. Further to this, he fails to acknowledge any correlation between the variables (default and severity, breach and default), which ignores market experience and yields an even more narrow range of outcomes where the intuitive and practical answer is actually a wider range of outcomes.

Contrasting Dr. Cowan's results with the results of the four sophisticated mortgage market experts involved in this matter reveals the implausibility of Dr. Cowan's very narrow range of

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<sup>30</sup> Office of the Comptroller of the Currency, OCC Mortgage Metrics Report Fourth Quarter 2012, p.37-38, March 2013.

<sup>31</sup> Lin Dep. 418:18-20 “the 36 percent and the 40 percent is a number that provided to me by the investor group that make up the 14 percent.” October 17, 2012.

predicted outcomes. The loss calculations by BANA/Countrywide, the Institutional Investors, Mr. Lin and myself result in cumulative losses of \$67 billion, \$107 billion, \$76 billion and \$84.7 billion, respectively – thus the four result a \$40 billion-wide range of possible outcomes between \$67 billion and \$107 billion. Dr. Cowan, by using a statistical analysis that will distribute his outcome very closely to the average of the values for each of his independent variables – purports to create a narrow range with significant confidence. I submit that this statistical precision is illusory, and one need only compare Dr. Cowan’s calculations with the industry experts’ collective loss calculations to realize this.

Using the analysis available to me at my firm GreensLedge, I attempted to recreate Dr. Cowan’s statistical methodology and distribution to solve for estimated cumulative losses- the first step in estimating a potential claims amount. My calculation using Dr. Cowan’s methodology produced estimated cumulative losses of \$78.7 billion, easily comparable with the figures set out in the preceding paragraph. Using Dr. Cowan’s “total repurchase liability” of \$56.34 billion, Dr. Cowan’s analysis implies a repurchase rate of 71.6%, assuming my application of his methodology is correct. In my opinion, this repurchase rate is a material outlier in this matter<sup>32</sup> and clearly demonstrates the flawed assumptions and false precision in Dr. Cowan’s analysis.

The Cowan Report criticizes Mr. Lin for calculating a potential claims amount at the “low end” of his range by assuming that all variables are simultaneously are at their lowest range. Dr. Cowan ignores the fact that Mr. Lin also calculated a “high range” which assumed higher values for the variables. Mr. Lin’s report presented his opinion of the range of a reasonable settlement amount, from low to high using the assumptions that he clearly posited and appropriately applied. By contrast, Dr. Cowan opines that a range from low to high is somehow inappropriate in this matter, and that the more appropriate measure of variability is a confidence interval measure. Looking at Dr. Cowan’s purported confidence interval of \$0.8 billion vs. Mr. Lin’s range of \$2.2 billion appears to me as further evidence of the false precision embedded in Dr. Cowan’s analysis.

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<sup>32</sup> Repurchase rates in the record varied from 5.9% to 45%, as I discussed in the Burnaman Report.

## **7. The Cowan Report Misuses Probability Distribution Functions**

The Cowan Report mischaracterizes Mr. Lin's analysis by asserting that his use of a lower boundary condition “flies in the face of common sense” and, probabilistically, is “infinitesimally close to zero.”<sup>33</sup> Dr. Cowan’s report contends that the variables Lin considered all behave independently of one another. My experience and most familiar models used in the mortgage industry lead me to understand that they are not independent. During the housing crisis, high default rates were clearly correlated with high severity rates. There is not enough published data to fully quantify these correlations, but common sense and industry experience indicate that correlations do exist.

Because correlations exist between the variables (default rate, loss severity, breach rate, success rate) that BANA/Countrywide and the Institutional Investors used, it is appropriate to consider them. In the statistical simulations run by Dr. Cowan, his result is the product of a series of outcomes that treat the default rate, severity and breach variables as independent and uncorrelated. This is not supported by common RMBS capital markets experience so consequently the output of his simulation, even if his other assumptions were correct, would have little, if any, utility in this case.

Moreover, instead of using perhaps an appropriate probability distribution function to quantify the correlations between the variables, Dr. Cowan chooses a triangular distribution function without any apparent justification. He cites no research or evidence to suggest that this is an appropriate distribution. His distribution has the effect of necessarily weighting the results toward the center of the average range of the “independent variables” that he has used to set the boundary conditions for the assumptions he has posited himself.

## **8. Dr. Cowan’s So-Called “Adverse Effects on Investors” Are Not Relevant**

Finally, the Cowan Report sets out four so-called “Adverse Effects” of representation and warranty breaches on investors that, while they might be somehow relevant in securities claims by investors, are not relevant to the settled claims relating to the Covered Trusts. Importantly, the Covered Trusts, which owns the claims at issue, are not investors – investors can pursue remedies under causes of action relating to securities laws. The Adverse Effects are irrelevant and do not merit consideration.

The overarching tenor of Dr. Cowan’s “Adverse Effects” and his report generally, disregards the obvious fact that this matter was settled expediently and in a comprehensive fashion and that did not “overwhelm” the system. I am aware of other settlements between BANA and Countrywide and several counterparties including the GSE’s, Syncora and Assured Guaranty - to cite some examples of a functional system of dispute resolution. The parts of the financial system that were broken during the crisis, or more appropriately the financial intermediaries, insurance companies,

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<sup>33</sup> Cowan Report, 17.



and banks that failed or required government intervention in 2008 were those that had excessive leverage, inadequate liquidity, or both.

Nothing in the report submitted by Dr. Cowan would lead me to change or modify the opinions and conclusions set out in my March 14, 2013 report.

Dated: March 28, 2013  
New York, New York

A handwritten signature in black ink, consisting of a large, stylized 'P' followed by 'R', 'B', and 'II' in a cursive script, ending with a flourish.

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**Phillip R. Burnaman, II**

## **Appendix A. Materials Relied Upon**

### **Documents Produced in this matter**

BNYM\_CW-00000165

BNYM\_CW-00000206

BNYM\_CW-00000208

BNYM\_CW-00000209

BNYM\_CW-00000266

BNYM\_CW-00000271

BNYM\_CW-00000278

BNYM\_CW-00000281

BNYM\_CW-00000301

BNYM\_CW-00000370

BNYM\_CW-00000377

BNYM\_CW-00119967

BNYM\_CW-00120005

BNYM\_CW-00120105

BNYM\_CW-00120107

BNYM\_CW-00120115

BNYM\_CW-00120129

BNYM\_CW-00120143

BNYM\_CW-00120201

BNYM\_CW-00120217

BNYM\_CW-00120225

BNYM\_CW-00243975 to BNYM\_CW-00244091

BNYM\_CW-00285555

## **Deposition Transcripts and Exhibits**

Robert E. Bailey Deposition Transcript and Exhibits, December 3, 2012

Robert Bostrom Deposition Transcript and Exhibits, December 18, 2012

Jason Buechele Deposition Transcript and Exhibits, November 27, 2012

Elaine Golin Deposition Transcript and Exhibits, November 12, 2012

Meyer Koplow Deposition Transcript and Exhibits, November 19, 2012

Jason H.P. Kravitt Deposition Transcript and Exhibits, September 19 & 20, 2012

Terry P. Laughlin Deposition Transcript and Exhibits, December 12, 2012

Brian Lin Deposition Transcript and Exhibits, October 16 & 17, 2012

Loretta A. Lundberg Deposition Transcript and Exhibits, October 2 & 3, 2012

Kathy Patrick Deposition Transcript and Exhibits, December 17, 2012

Randy Robertson Deposition Transcript and Exhibits, November 29, 2012

Faten Sabry Deposition Transcript and Exhibits, December 4, 2012

Thomas Scrivener Deposition Transcript and Exhibits, November 14, 2012

Kent Smith Deposition Transcript and Exhibits, December 5, 2012

Scott Waterstredt Deposition Transcript and Exhibits, December 5, 2012

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Amherst Securities Group, Laurie Goodman, et al, *Modification Effectiveness: The Private Label Experience and Their Public Policy Implications*, Journal of Fixed Incomes, Volume 22 (May 30, 2012)

Frank Fabozzi, *The Handbook of Fixed Income Securities* (8<sup>th</sup> ed. 2011)

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John E. McDonald, CFA & Peter G. Handy, Bernstein Research, *BAC: Tough Slog Continues, Trimming Estimates on Higher Expense Run Rate* (January 24, 2011)

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RBS Non-Agency MBS Strategy, "Non-Agency MBS Loan Repurchases: Practical Considerations" September 17, 2010

Dr. Fatan Sabry and Dr. Thomas Schopflocher, "The Subprime Meltdown: A Primer" (June 21, 2007)

## **Data Sources**

Intex

Securities Database, CoreLogic

## Websites

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BNY Mellon, *Corporate Trust Investor Reporting*, available at <https://www.gctinvestorreporting.bnymellon.com> (last visited March 14, 2013)

Fannie Mae Servicing Guide, *Foreclosure Time Frames and Compensatory Fee Allowable Days* (February 13, 2013), [https://www.fanniemae.com/content/guide\\_exhibit/foreclosure-timeframes-compensatory-fees-allowable-delays.pdf](https://www.fanniemae.com/content/guide_exhibit/foreclosure-timeframes-compensatory-fees-allowable-delays.pdf)

Kyle G. Lundstedt, Ph.D. & Andrew Davidson & Co., Inc., *Modeling Mortgage Risk: Definitional Issues*, (2005) [http://www.securitization.net/pdf/content/ADC\\_Delinquency\\_Apr05.pdf](http://www.securitization.net/pdf/content/ADC_Delinquency_Apr05.pdf)

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## Court Documents

*In the matter of the application of The Bank of New York Mellon, et al.*, (Supreme Court of the State of New York, Index No. 651786-2011). Expert Report of Charles D. Cowan, Ph.D., March 14, 2013

*In the matter of the application of The Bank of New York Mellon, et al.*, (Supreme Court of the State of New York, Index No. 651786-2011). Affidavit of Peter S. Kempf, May 2, 2012

*In the matter of the application of The Bank of New York Mellon, et al.*, (Supreme Court of the State of New York, Index No. 651786-2011), The Bank Of New York Mellon's Opposition To The Motion To Compel Discovery Based On The Fiduciary Exception And At-Issue Waiver, Motion Sequence No. 31

*In the matter of the application of The Bank of New York Mellon, et al.* (Supreme Court of the State of New York, Index No. 651786/2011), Steering Committee's Consolidated Reply Memorandum of Law in Support of Orders to Show Cause, Motion Seq. 29-33

*In the matter of the application of The Bank of New York Mellon, et al.*, (Supreme Court of the State of New York, Index No. 651786/2011), Steering Committee's Memorandum of Law in

Support of Order To Show Cause Why the Court Should Not Compel Discovery Of Evidence  
That The Trustee Has Placed At Issue And That Is Subject To The Fiduciary Exception

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*MBIA Insurance Corp. v. Countrywide*, (Supreme Court of the State of New York, Index No. 602825/08), Expert Report of Karen S. Godfrey re: Reunderwriting (July 3, 2012), attached as Ex. 147 to the Holland Aff. In Support Of Countrywide's Motion For Summary Judgment (November 28, 2011) .