

# EXHIBIT 128

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# EXHIBIT 145

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

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AMBAC ASSURANCE CORPORATION and  
THE SEGREGATED ACCOUNT OF AMBAC  
ASSURANCE CORPORATION,

Index No. 651612/2010  
Part 3 (Hon. E. Bransten)

Plaintiffs,

**CONFIDENTIAL –  
FILED UNDER SEAL**

- against -

COUNTRYWIDE HOME LOANS, INC.,  
COUNTRYWIDE SECURITIES CORP.,  
COUNTRYWIDE FINANCIAL CORP.  
and BANK OF AMERICA CORP.,

Defendants.

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**AFFIDAVIT OF DR. KARL N. SNOW, PHD**


I, Dr. Karl Snow, being duly sworn, state as follows:

1. I have been engaged as an expert witness by Plaintiffs Ambac Assurance Corporation and the Segregated Account of Ambac Assurance Corporation (“Ambac”) in this litigation. I submit this affidavit in support of Ambac’s motion for partial summary judgment filed against Defendants Countrywide Home Loans, Inc., Countrywide Securities Corp., Countrywide Financial Corp., and Bank of America Corp. (collectively, “Defendants”).

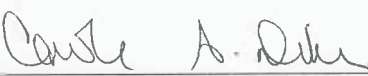
2. I submitted an expert report in this matter on October 1, 2014. A copy of this report, which fully and accurately sets forth my opinions and findings on the issues for which I was retained, and provides the basis for those opinions and findings, is attached as **Exhibit A** to this affidavit.

3. I submitted a corrective addendum to the October 1, 2014 report on October 14, 2014. A copy of the corrective addendum, which updates the damages calculations on account of certain discrete issues in the October 1, 2014 report, is attached as **Exhibit B** to this affidavit.

Dated: New York, New York  
April 28, 2015

By:   
Dr. Karl N. Snow

Sworn to before me this 28<sup>th</sup>  
day of April, 2015

  
Notary Public

CAROLE A. DIKER  
Notary Public, State of New York  
No. 01DI6155856  
Qualified in Richmond County  
Certificate Filed in New York County  
Commission Expires ~~August 19, 20~~  
November 20, 2018

# EXHIBIT A

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

AMBAC ASSURANCE CORPORATION and THE  
SEGREGATED ACCOUNT OF AMBAC  
ASSURANCE CORPORATION,

Plaintiff,

- against -

COUNTRYWIDE HOME LOANS, INC.,  
COUNTRYWIDE SECURITIES CORP.,  
COUNTRYWIDE FINANCIAL CORP., and  
BANK OF AMERICA CORP.,

Defendants.

Index No. 651612/2010

I.A.S. Part 3 (Bransten, J.)

**EXPERT REPORT OF KARL N. SNOW, PHD**

**October 1, 2014**

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## I. Summary of qualifications and experience

- (1) I am a Partner with Bates White Economic Consulting (Bates White), a firm with offices in Washington, DC, and San Diego, CA. I have more than 20 years of experience as a professional economist working in the areas of finance, economics, and statistics, including approximately 10 years of experience in connection with residential mortgage-backed securities (RMBS).
- (2) I received PhD and MA degrees in economics from the University of Chicago and a BA in economics (summa cum laude) from Brigham Young University.
- (3) I taught finance, economics, and statistics at the graduate, MBA, and undergraduate levels at the University of North Carolina–Chapel Hill, from 1990 to 1995, as an Assistant Professor of Finance. I also taught finance and econometrics courses at the undergraduate level at Brigham Young University, where I was an Assistant Professor of Economics from 1995 to 2000. From 1998 to 1999, I was a visiting faculty member of the Finance Department at the Stockholm School of Economics, where I taught undergraduate-, graduate-, and executive-level courses in finance. I have also taught graduate-level finance courses as an adjunct professor at the University of Maryland, Johns Hopkins University, and American University.
- (4) I was employed from 2000 to 2003 as a Director at UBS Investment Bank, where I worked in conjunction with the Fixed Income and Mortgage-Backed Securities groups and taught internal courses on, among other things, mortgage-backed securities and derivative securities. Prior to joining Bates White in 2006, I was a Senior Economist at Welch Consulting and a Principal Economist at Freddie Mac.
- (5) My academic research has focused on the valuation and performance of financial assets, and I have published papers in peer-reviewed journals such as the *Journal of Finance* and the *Financial Analysts Journal*. I have presented workshops on financial, economic, and statistical topics at academic institutions in Europe and the United States.
- (6) As detailed in my curriculum vitae, a copy of which is attached hereto as Appendix A, I have significant experience in matters related to finance, mortgages, economics, and statistics. A list of my declarations, reports, and testimony in the last four years is attached hereto as Appendix B.
- (7) I have been retained by Patterson Belknap Webb & Tyler LLP, counsel to Ambac Assurance Corporation and the Segregated Account of Ambac Assurance Corporation (collectively, “Ambac”). Bates White is being compensated for my time on this matter at a rate of \$650 per hour. In addition to my own time, I directed other Bates White professionals who performed supporting work and analyses in connection with my preparation of this report. My opinions in this matter are in no way dependent on my or Bates White’s compensation.

- (8) I reserve the right to amend, supplement and/or revise my analysis, findings, and opinions, if new evidence becomes available, if the scope of discovery or the causes of action change in any material way, or in response to any attempt by Defendants to rebut my findings.

## II. Background

- (9) Between 2004 and 2006, Ambac issued financial guaranty insurance policies (the “Policies”) covering the payments due on certain classes of the securities issued in 17 residential mortgage-backed securitization transactions (each a “Securitization” and, collectively, the “Securitized”)”.<sup>1</sup> These 17 Securitized were all sponsored by Defendant Countrywide Home Loans, Inc.,<sup>2</sup> and were backed by more than 375,000 loans with a total principal balance of approximately \$25.2 billion.<sup>3</sup>
- (10) Of the 17 Securitized, four were backed by mortgages secured by first-liens on the borrowers’ properties (each a “First-Lien Securitization” and, collectively, the “First-Lien Securitized”). Three Securitized were backed by closed-end second-lien mortgage loans (“CES”) (each a “CES Securitization” and, collectively, the “CES Securitized”). The remaining 10 Securitized were backed by home equity lines of credit or HELOCs (each a “HELOC Securitization” and, collectively, the “HELOC Securitized”). The underlying HELOCs were secured by second-lien mortgages in nine of the HELOC Securitized and by first-lien mortgages in the one of the HELOC Securitized.<sup>4</sup>
- (11) A brief summary of these 17 Securitized is provided below:

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<sup>1</sup> Second Amended Complaint, *Ambac Assurance Corp., et al. v. Countrywide Home Loans, Inc., et al.*, No. 651612/2010 (N.Y. May 28, 2013), ¶ 8.

<sup>2</sup> The other defendants include Countrywide Securities Corp., the underwriter on each of the 17 Securitized, and Countrywide Financial Corp., the parent company of Countrywide Home Loans, Inc., and Countrywide Securities Corp. (collectively, with Countrywide Home Loans, Inc., “Countrywide”), and Bank of America Corp. See Second Amended Complaint, ¶¶ 21–23.

<sup>3</sup> See Final Mortgage Loan Tapes at ABK-CW-D00000006 (2004-K); ABK-CW-D00000007 (2004-L); ABK-CW-D00000008 (2004-M); ABK-CW-D00000009 (2004-N); ABK-CW-D00000010 (2004-O); ABK-CW-D00000011 (2004-T); ABK-CW-D00000012 (2005-16); ABK-CW-D00000013 (2005-17); ABK-CW-D00000014 (2005-F); ABK-CW-D00000015 (2005-L); ABK-CW-D00000016 (2006-11); ABK-CW-D00000017 (2006-13); ABK-CW-D00000018 (2006-B); ABK-CW-D00000019 (2006-C); ABK-CW-D00000020 (2006-S1); ABK-CW-D00000021 (2006-S4); ABK-CW-D00000022 (2006-S6). See also Second Amended Complaint, ¶ 7.

<sup>4</sup> See Second Amended Complaint, ¶ 7.

**Figure 1. Securitization summary**

Type	Securitization	Closing date	# of loans	Original principal balance (in \$ millions)
First-lien	CWABS 2005-16	28-Dec-2005	12,548	2,280.0
	CWABS 2005-17	29-Dec-2005	13,648	2,600.0
	CWABS 2006-11	29-Jun-2006	10,042	1,880.0
	CWABS 2006-13	28-Jul-2006	8,304	1,650.0
CES	CWHEQ 2006-S1	30-Mar-2006	20,031	859.9
	CWHEQ 2006-S4	8-Sep-2006	19,002	1,000.0
	CWHEQ 2006-S6	29-Sep-2006	22,591	1,100.0
HELOC <sup>5</sup>	CWABS 2004-K	29-Sep-2004	32,669	1,700.0
	CWABS 2004-L	29-Sep-2004	20,783	1,000.0
	CWABS 2004-M	29-Sep-2004	20,893	1,000.0
	CWABS 2004-N	29-Sep-2004	20,939	1,000.0
	CWABS 2004-O	30-Sep-2004	28,689	1,256.7
	CWABS 2004-T	23-Dec-2004	42,149	1,970.0
	CWHEQ 2005-F	29-Sept-2005	50,025	2,700.0
	CWHEQ 2005-L	29-Dec-2005	2,979	400.2
	CWHEQ 2006-B	29-Mar-2006	18,212	1,150.0
CWHEQ 2006-C	30-Mar-2006	31,815	1,850.0	

- (12) The Securitizations contained various credit enhancements that were intended to buffer the certificateholders against potential losses, including excess interest collection, cross-collateralization, overcollateralization, and subordination.<sup>6</sup> As an additional credit enhancement, Ambac agreed to insure payments of interest and principal with respect to certain notes (certificates) associated with each of the Securitizations.<sup>7</sup>

<sup>5</sup> All HELOC securitizations are composed of second-lien mortgages except for 2005-L, which is composed of first-lien mortgages.

<sup>6</sup> See CWABS 2005-16 Prospectus Supplement, at S-5 to S-7 (CWAMBAC0000442540, at -546–548).

<sup>7</sup> See Second Amended Complaint, ¶ 127 and note 91. For the HELOC Securitizations, Ambac agreed to insure payments of interest and principal on the Class 1-A and 2-A notes with the exception of the CWHEQ 2005-L Securitization in which Ambac agreed to insure payments to interest and principal on the Class A notes. See CWABS 2004-K Policy, at 3 (CWAMBAC0016398629 at -632); CWABS 2004-L Policy, at 3 (CWAMBAC0016397648, at -651); CWABS 2004-M Policy, at 3 (CWAMBAC0016396541, at -544); CWABS 2004-N Policy, at 3 (CWAMBAC0016399785, at -788); CWABS 2004-O Policy, at 3 (CWAMBAC0016401624, at -627); CWABS 2004-T Policy, at 3 (CWAMBAC0016395100, at -103); CWHEQ 2005-F Policy, at 3 (CWAMBAC0016404248, at -251); CWHEQ 2006-B Policy, at 2 (CWAMBAC0016407026, at -028); CWHEQ 2006-C Policy, at 2 (CWAMBAC0016411075, at -077); and CWHEQ 2005-L Policy, at 2 (CWAMBAC0016408516, at -518). For the CES Securitizations, Ambac agreed to insure payments of interest and principal with respect to the Class A Certificates. See CWHEQ 2006-S1 Policy, at 1 (CWAMBAC0016411923, at -924); CWHEQ 2006-S4 Policy, at 1 (CWAMBAC0016405838, at -839); and CWHEQ 2006-S6 Policy, at 1 (CWAMBAC0016409734, at -735). For the First-Lien Securitizations, Ambac agreed to insure payments of interest and principal on the Class 1-AF Certificates, with the exception of CWABS 2005-16 in which Ambac agreed to insure certain payments to interest and principal with respect to the Class AF Certificates. See CWABS 2005-16 Policy, at 1 (CWAMBAC0016414111, at -112); CWABS 2005-17 Policy, at 1 (CWAMBAC0016415353, at -354); CWABS 2006-11 Policy, at 1 (CWAMBAC0014083184, at -185); CWABS 2006-13 Policy, at 1 (CWAMBAC0016417976, at -977).

- (13) There are various participants that contributed to the creation of these Securitizations. Below, I identify and generally describe the role of certain principal participants.
- **Originator and Sponsor (Countrywide Home Loans, Inc.):** For the Securitizations, Countrywide Home Loans, Inc., acted as both primary originator<sup>8</sup> and sponsor.<sup>9</sup> The originator establishes underwriting guidelines, evaluates the mortgagors' creditworthiness, and originates the mortgage loans. The sponsor is "the person who organizes and initiates an asset-backed securities transaction by selling or transferring assets, either directly or indirectly, including through an affiliate, to the issuing entity."<sup>10</sup>
  - **Trustee (e.g., Bank of New York, Bank of New York Trust Company, JPMorgan Chase Bank):** The mortgage asset pools are sold to a bankruptcy-remote Special Purpose Vehicle (SPV or Trust) that issues the securities. The Trust appoints a Trustee, who holds the documents relating to the securitized mortgage loans. In this case, the Trusts generally appointed Bank of New York, Bank of NY Trust Company, or JPMorgan Chase Bank as the Trustees of the 17 Securitizations.<sup>11</sup>
  - **Securities Administrator (Countrywide Home Loans, Inc., Bank of New York, Bank of New York Trust Company):** The securities administrator oversees the distribution of the cash flows associated with the underlying mortgages to the security holders.<sup>12</sup> Countrywide Home Loans, Inc., was the securities administrator for the 10 HELOC Securitizations.<sup>13</sup> For the remaining Securitizations, the Trustee (Bank of New York, Bank of New York Trust Company) acted in this role.<sup>14</sup>

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<sup>8</sup> See CWABS 2004-L MLPA, at 1 (ABK-CW00002587, at -590). In several Securitizations, loans were also purchased from sellers other than Countrywide Home Loans, Inc. In CWHEQ 2005-L, certain loans were also purchased from seller Park Monaco, Inc., and in the four First-Lien Securitizations, certain loans were purchased from sellers Park Monaco, Inc., and Park Sienna LLC. See CWHEQ 2005-L MLPA, at 1 (ABK-CW00017979, at -982); CWABS 2005-16 PSA, at 1 (ABK-CW00007997, at -8003); CWABS 2005-17 PSA, at 1 (ABK-CW00009840, at -846), CWABS 2006-11 PSA, at 1 (ABK-CW00012144, at -150); CWABS 2006-13 PSA, at 1 (ABK-CW00015953, at -959).

<sup>9</sup> The term "sponsor" is sometimes used interchangeably with "originator" in discussions of RMBS because they are the same entity in some securitizations, such as here where Countrywide Home Loans, Inc., originated and assembled loans for securitization.

<sup>10</sup> As defined by the US Securities and Exchange Commission regulation for asset-backed securities (Regulation AB). See Asset-Backed Securities (Regulation AB), 17 C.F.R. § 229.1101 (2012).

<sup>11</sup> See, e.g., CWABS 2004-K I&I Agreement, at 1 (ABK-CW00001571, at -574); CWABS 2005-16 I&I Agreement, at 1 (ABK-CW00008606, at -609). In addition to these trustees, CWHEQ 2005-F has Wells Fargo Bank, N.A., as Co-Trustee, and CWHEQ 2006-B and CHWEQ 2006-C have Chase Bank US as a Co-Trustee. CWHEQ 2005-F I&I, at 1 (ABK-CW00019453, at -456); CWHEQ 2006-B I&I Agreement, at 1 (ABK-CW00020065, at -068); CWHEQ 2006-C I&I, at 1 (CWAMBAC0016421777, at -780).

<sup>12</sup> See CWABS 2004-K Administration Agreement at 1-2 (ABK-CW00001506, at -508-509) (describing duties of the administrator).

<sup>13</sup> CWABS 2004-K Administration Agreement, at 1 (ABK-CW00001506, at -508); CWABS 2004-L Administration Agreement, at 1 (ABK-CW00002698, at -700); CWABS 2004-M Administration Agreement, at 1 (ABK-CW00003809, at -811); CWABS 2004-N Administration Agreement, at 1 (ABK-CW00004918, at -920); CWABS 2004-O Administration Agreement, at 1 (CWAMBAC0016401555, at -557); CWABS 2004-T Administration Agreement, at 1 (ABK-CW00007053, at -055); CWHEQ 2005-F Administration Agreement, at 1 (ABK-CW00019384, at -386); CWHEQ 2005-L Administration Agreement, at 1 (ABK-CW00018118, at -120); CWHEQ 2006-B Administration Agreement, at 1 (ABK-CW00019997, at -999); CWHEQ 2006-C Administration Agreement, at 1 (CWABMAC0016410994, at -996).

<sup>14</sup> See Footnote 83.

- Underwriter (e.g., Countrywide Securities Corp.): The underwriter purchases the securities issued by the SPV or Trust with the responsibility of selling them to the ultimate investors. In this matter, Countrywide Securities Corp. acted as an underwriter for each of the Securitizations.<sup>15</sup>
  - Investors: The investor(s) in the mortgage-backed securities are made up of a variety of entities, which include pension and mutual funds, insurance companies, and other asset managers. These institutions at the end of the securitization chain are the ultimate holders of the mortgage-backed securities. They are entitled to cash flows generated from the mortgage payments in the underlying asset pools.
  - Financial Guaranty Insurer (Ambac): The insurer enhances the creditworthiness of certain mortgage-backed securities by contracting to provide timely principal and interest payments to the investors in the event of payment shortfalls by the RMBS issuer. This credit enhancement is designed to absorb specified credit losses and hence raise the credit ratings of the securities.
  - Servicer (Countrywide Home Loans Servicing LP): The servicer is responsible for collecting mortgage payments from the mortgagors, managing non-performing loans, supervising foreclosure and property dispositions, and passing the payments to the trustee. Countrywide Home Loans Servicing LP retained the initial servicing rights to the loans and acted as servicer for the Securitizations.<sup>16</sup>
  - Credit Rating Agencies (S&P, Moody's): The credit rating agencies (CRAs) undertake a credit assessment of the various classes of securities to be issued by the Trust and provide a rating or signal of credit quality to the investors and insurer. As of the closing of the Securitizations, Moody's and S&P assigned a shadow rating for each note.<sup>17</sup>
- (14) The rights and obligations of the parties involved in the Securitizations are governed by several documents. For each of the HELOC Securitizations, these include the Mortgage Loan Purchase Agreement (“MLPA”), Sale and Servicing Agreement (“SSA”), and Trust Indenture. For each of the First-Lien and CES Securitizations, the rights and obligations of the parties are governed by several documents including the Pooling and Servicing Agreement (“PSA”). For each Securitization, Ambac

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<sup>15</sup> See, e.g., CWABS 2004-L Prospectus Supplement, at 1 (CWAMBAC0015014225, at -225).

<sup>16</sup> See, e.g., CWABS 2005-16 Prospectus Supplement, at S-36–40 (CWAMBAC00004425240, at -577 to -581).

<sup>17</sup> The shadow ratings assigned for each Securitizations are as follows: CWABS 2004-K: BBB (S&P) and Baa2 (Moody's) (ABK-CW00000095, at -095); CWABS 2004-L: BBB (S&P) and Baa2 (Moody's) (ABK-CW00000136, at -136); CWABS M, N: BBB (S&P) and Baa2 (Moody's) (ABK-CW00245260, at -261); CWABS 2004-O: BBB (S&P) and Baa2 (Moody's) (ABK-CW00238162, at -165); CWABS 2004-T: BBB+ (Moody's) and Baa1 (S&P) (ABK-CW00000237, at -237); CWABS 2005-F: BBB+ (S&P) and Baa2 (Moody's) (ABK-CW00000384, at -384); CWHEQ 2005-L: BBB- (S&P) and A3 (Moody's) (ABK-CW00000607, at -607); CWHEQ 2006-B: BBB (Moody's) and Baa1 (S&P) (ABK-CW00000708, at -708); CWHEQ 2006-C: BBB (S&P) and Baa1 (Moody's) (ABK-CW00000792, at -792); CWABS 2005-16: A- (S&P) and Baa2 (Moody's) (ABK-CW00242432, at -432); CWABS 2005-17: A- (S&P) and Baa2 (Moody's) (ABK-CW00246833, at -837); CWABS 2006-11: BBB+ (S&P) and Baa2 (Moody's) (ABK-CW00246049, at -053); CWABS 2006-13: BBB+ (S&P) and Baa2 (Moody's) (ABK-CW00000461, at -461); CWHEQ 2006-S1: BBB (S&P) and Baa1 (Moody's) (ABK-CW00000523, at -525); CWHEQ 2006-S4: BBB (S&P) and Baa2 (Moody's) (ABK-CW00000876, at -876); CWHEQ 2006-S6: BBB (S&P) and A2 (Moody's) (ABK-CW00000937, at -937).

specifically entered into two related agreements: (1) the Insurance and Indemnity Agreement (“I&I Agreement”) and (2) the Financial Guaranty Insurance Policy (“Policy”).

- (15) The I&I Agreements, in conjunction with the MLPAs and SSAs for the HELOC Securitizations and the PSAs for the First-Lien and CES Securitizations, describe the various representations and warranties made by Countrywide, as well as the remedies available to Ambac in the event of a breach of those representations and warranties. The Policies, issued to the Trustee of the Securitization for the benefit of the holders of the Notes, set forth Ambac’s irrevocable agreement to insure timely payments of certain principal and interest for the Notes to the extent that those amounts were not covered by the other credit enhancements (e.g., excess spread, overcollateralization, etc.).
- (16) The I&I Agreements describe “transaction-level” representations and warranties made by Countrywide to Ambac concerning the accuracy of all of the information that it provided to Ambac, including information about Countrywide’s general mortgage lending practices, its financial information, and the characteristics of the pools of mortgage loans that it securitized. The MLPAs and SSAs for the HELOC Securitizations and the PSAs for the First-Lien and CES Securitizations—all incorporated by reference in the I&I Agreements—contain the “loan-level” representations and warranties concerning the quality and attributes of each of the individual mortgage loans that Countrywide pooled for the Securitizations.<sup>18</sup>
- (17) In the event of “a breach of any of the foregoing representations and warranties, without regard to any limitation concerning the knowledge of the Sponsor, that materially and adversely affects the interests of the Trust, the Indenture Trustee under the Indenture, the Noteholders or the Credit Enhancer in the Mortgage Loan,”<sup>19</sup> the SSAs provide Ambac with the option to put back loans with material defects to Countrywide.<sup>20</sup>
- (18) It is my understanding that after the last of the Securitizations closed, Ambac observed that the Securitizations performed significantly below expectations and that beginning in 2008, Ambac initiated efforts to review more than 8,000 loans across the 17 Securitizations. During this process, Ambac claims that it discovered that a substantial percentage of the loans, within a range of 59% to

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<sup>18</sup> See, e.g., CWHEQ 2005-F I&I Agreement § 2.01(l) (ABK-CW00019453, at-464); CWHEQ 2006-S1 I&I Agreement § 2.01(l) (ABK-CW00023304, at -314); CWABS 2005-16 I&I Agreement § 2.01(l) (ABK-CW00008606, at -616).

<sup>19</sup> See CWHEQ 2005-F SSA, § 2.04(c) (CWAMBAC0016403972, at -987). Similarly, the PSAs for the CES Securitizations provide that “upon discovery” of a “breach of a representation or warranty set forth in Section 2.03(a) through (d) that materially and adversely affects the interests of the Certificateholders or the Certificate Insurer in any Mortgage Loan,” Countrywide must cure the breach, repurchase the non-conforming loan, or substitute another equivalent loan in its place. See CWHEQ 2006-S1 PSA, § 2.03(e) (ABK-CW00022904, at 979–980). The PSAs for the First-Lien Securitizations provide: “upon discovery” of a “breach of a representation or warranty set forth in Section 2.03(a) through (d) that materially and adversely affects the interests of the Certificateholders or the Class AF Insurer in any Mortgage Loan,” Countrywide must cure the breach, repurchase the non-conforming loan, or substitute another equivalent loan in its place. See CWABS 2005-16 PSA, § 2.03(e) (ABK-CW00007997, at -8099).

<sup>20</sup> See CWHEQ 2005-F SSA, § 2.04(d) (CWAMBAC0016403972, at.-987–988). The remaining PSAs in the First-Lien and CES Securitizations provide a similar language on breach of representations and warranties. See, e.g., CWHEQ 2006-S1 PSA, § 2.03(e) (ABK-CW00022904, at 979–980); CWABS 2005-16 PSA, § 2.03(e) (ABK-CW00007997, at -8099).



100% across the Securitizations, were in breach of the loan-level representations and warranties made by Countrywide.<sup>21</sup> Soon thereafter, Ambac began to notify Countrywide of the alleged breaches of representations and warranties and asked that Countrywide cure, substitute, or repurchase the non-compliant loans, in accordance with Countrywide's contractual obligations.<sup>22</sup>

(19) On March 24, 2010, Ambac Assurance Corporation allocated the Policies and claims related to the Securitizations to the Segregated Account. Below is a timeline of events related to the Segregated Account that I have considered and accounted for in my analysis:

- On March 24, 2010, the Circuit Court of Dane County issued the Verified Petition filed by the Commissioner of Insurance (the "Rehabilitator"), which placed the Segregated Account of Ambac Assurance Corporation into statutory rehabilitation pursuant to Wisconsin state law.<sup>23</sup> The Circuit Court of Dane County also issued a preliminary injunction order that, among other things, placed a moratorium on claims payments.<sup>24</sup>
- Subsequently, on January 24, 2011, the Circuit Court of Dane County confirmed the Rehabilitator's proposed Plan of Rehabilitation for the Segregated Account.<sup>25</sup> The plan, among other things, approved the allocation of policies to the Segregated Account, with policyholders receiving a portion of their claims in cash.<sup>26</sup>
- On June 4, 2012, the Circuit Court of Dane County granted the Rehabilitator's motion to effectuate the interim cash payments.<sup>27</sup> On September 20, 2012, Ambac issued a press release stating that interim partial cash distributions had begun to be paid at the 25% level.<sup>28</sup>

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<sup>21</sup> See Second Amended Complaint, ¶ 12.

<sup>22</sup> See letter from Ambac Assurance Corp. to Countrywide Home Loans, Inc., dated December 22, 2008 (ABK-CW00026735, at -735).

<sup>23</sup> Order for Rehabilitation, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. Mar. 24, 2010), at 1, available at <http://ambacpolicyholders.com/storage/courtfilings/Ambac%20-%20Order%20for%20Rehabilitation%203-24-10.pdf>.

<sup>24</sup> Order for Temporary Injunctive Relief, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. Mar. 24, 2010), at 1, available at March 24, 2010 at <http://ambacpolicyholders.com/storage/courtfilings/Ambac%20-%20Order%20for%20Temp%20Injunctive%20Relief%203-24-10.pdf>.

<sup>25</sup> The portion of return received in cash, i.e., Interim Payment Percentage, was 25% initially and may be increased from time to time. Plan of Rehabilitation, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. Jan. 24, 2011), at 2, 4, and 10, available at <http://ambacpolicyholders.com/storage/courtfilings/01262011/Plan%20of%20Rehabilitation%20-%20Final%201-24-11%20w%20Exhibits.pdf>

<sup>26</sup> The portion of return received in cash, i.e., Interim Payment Percentage, was 25% initially and may be increased from time to time. Plan of Rehabilitation, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. Jan. 24, 2011), at 2, 4, and 10, available at <http://ambacpolicyholders.com/storage/courtfilings/01262011/Plan%20of%20Rehabilitation%20-%20Final%201-24-11%20w%20Exhibits.pdf> (as confirmed by Decision and Final Order Confirming the Rehabilitator's Plan of Rehabilitation, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. Jan. 24, 2011), available at <http://ambacpolicyholders.com/storage/courtfilings/01242011/Decision%20and%20Final%20Order%20Confirming%20the%20Rehabilitator%27s%20Plan%2000544318.PDF>); Amended Rehabilitation Plan, at 8 and 16.

<sup>27</sup> Order Granting Rehabilitator's Motion for Approval to Commence Making Interim Cash Payments on Permitted Policy

- On June 11, 2014, the Circuit Court of Dane County approved the Rehabilitator’s motion to amend the rehabilitation plan such that holders of permitted policy claims would receive a combination of cash payments and deferred amounts equal to the remaining balance of such claims.<sup>29</sup>
- The Amended Rehabilitation Plan took effect on June 12, 2014.<sup>30</sup> Among other things, the Amended Rehabilitation Plan provides for the accrual of interest on deferred amounts at the “Accretion Rate.”<sup>31</sup>
- On June 20, 2014, notice was given regarding the interim payment percentage and the deferred payment percentage. Specifically, the Rehabilitator provided notice that it would increase the Interim Payment Percentage to 45% as of August 21, 2014<sup>32</sup> and that it would also make a Deferred Payment in the amount of 26.67% (rounded) (the “Deferred Payment Percentage”) of the Deferred Amount as of the August Reconciliation Date.<sup>33</sup>

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Claims, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 4, 2012), available at <http://ambacpolicyholders.com/storage/courtfilings/06052012/Payments%20order.PDF>.

<sup>28</sup> Ambac Assurance Corp., “Rehabilitator Commences Interim Cash Payments,” news release, Sept. 20, 2012, available at <http://ambacpolicyholders.com/>.

<sup>29</sup> Order Granting the Rehabilitator’s Motion to Amend the Plan of Rehabilitation, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 11, 2014), at 1, available at <http://ambacpolicyholders.com/storage/courtfilings/06112014/OrderGrantingMotiontoAmendPlan6-11-14.pdf>; See Plan of Rehabilitation, as Amended, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 12, 2014) (“Amended Rehabilitation Plan”), at 4, available at <http://ambacpolicyholders.com/storage/rehabilitation/amended/Ambac-Plan-as-Amended-6-12-14.pdf>.

<sup>30</sup> See Notice of Effective Date of Plan of Rehabilitation, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 12, 2014), available at <http://ambacpolicyholders.com/storage/rehabilitation/amended/Notice-of-Effective-Date-of-Plan-of-Rehabilitation.pdf>.

<sup>31</sup> The Amended Rehabilitation Plan, at 2, defines the “Accretion Rate” as follows: “In respect of any Deferred Amount or Junior Deferred Amount, a rate compounded monthly (using 30/360 day count convention) to produce an effective annual rate of 5.1%, except that in Undercollateralized transactions, the portion of any Deferred Loss Amount attributable to the unpaid principal loss or balance of an Insured Obligation shall accrete at an effective annual rate, as determined by the Rehabilitator on a periodic basis, equal to the greater of (i) the monthly Accretion Rate, as calculated above, less the applicable Bond Interest Rate (as adjusted from time to time), and (ii) zero.”

<sup>32</sup> IPP Notice, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 20, 2014), available at <http://ambacpolicyholders.com/storage/courtfilings/06202014/IPP-Notice.pdf>.

<sup>33</sup> Deferred Payment Notice, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 20, 2014), available at <http://ambacpolicyholders.com/storage/courtfilings/06202014/Deferred-Payment-Notice-6-20-14.pdf>.

### III. Scope of charge and summary of opinions

- (20) Counsel for Ambac engaged Bates White to calculate damages associated with Ambac's claims alleged against Countrywide, including claims of Countrywide's fraudulent inducement that caused Ambac to enter into the I&I Agreements and Policies, Countrywide's material breach of each of the I&I Agreements, and Countrywide's breaches of the representations and warranties that it made for Ambac's benefit. Specifically, I was asked by counsel to evaluate damages under two alternative theories: (1) damages that compensate Ambac for its claims payments made under the Policies ("Claims Payment Damages")<sup>34</sup> and (2) damages to Ambac resulting from the alleged failure of Countrywide to repurchase materially defective loans ("Repurchase Damages").<sup>35</sup>
- (21) Claims Payment Damages represent all claims payments that Ambac has made or deferred as of the cut-off date of the data used in the preparation of this report (the "Historical Period"), along with claims payments that Ambac will likely incur after the cut-off date (the "Future Period"), pursuant to the Policies, plus accrued interest and less reimbursements that Ambac has received to date and those it will likely receive in the future.<sup>36</sup> I have calculated Claims Payment Damages in two ways. In the first method, the premiums that Ambac has and will likely receive are deducted, in which case damages represent the claims payments that Ambac has both made and will likely make in the future, pursuant to the Policies, plus accrued interest and less premiums and reimbursements. In the second method, premiums are not deducted, in which case damages represent the claims that Ambac has both made and will likely make in the future, plus accrued interest and less reimbursements. In both cases, the costs that Ambac has incurred in "remediating" the Securitizations (e.g., legal fees, consultant and expert fees, and costs associated with investigating and making repurchase demands, referred to collectively as "Remediation Costs"), are then added to these amounts.
- (22) Repurchase Damages represent the difference between (1) the losses (i.e., unreimbursed paid and deferred claims payments and associated accrued interest, less premiums and reimbursements) that Ambac has actually incurred and is projected to incur in the future and (2) the losses I calculate that Ambac would have incurred and is projected to incur had Countrywide repurchased loans that breached the representations and warranties associated with the Securitizations. Again, Ambac's

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<sup>34</sup> The measure of Claims Payment Damages relates to Ambac's claims regarding both fraudulent inducement and material breach of the I&I Agreements.

<sup>35</sup> By "materially defective," I refer to those loans determined pursuant to this model to be in breach of their warranties and subject to repurchase under the Securitization documents (see Section II, Paragraphs (15)–(17), of this report).

<sup>36</sup> For each Securitization, I incorporate loan-level servicing data and the aggregate values reported by the trustee that cover the period that begins on the Securitization closing date and extends through the August 2014 Trustee Remittance Report reporting period for the Securitization. I refer to this period as the "Historical Period" and refer to the period following the Historical Period data cut-off and through the scheduled maturity date of each Securitization as the "Future Period." In *infra* Section IV.A.2, Figure 3, I report the beginning and end dates the Historical Period for each Securitization.

Remediation Costs are then added to these amounts. I calculated Repurchase Damages under various scenarios that are described below.

- **Contract Date Repurchase Scenario:** Assumes the repurchase by Countrywide of all materially defective loans that exit the Securitization with a realized loss (e.g., default and are charged off),<sup>37</sup> with such repurchases starting from the inception of the Securitization (i.e., the closing date of the Securitization). Materially defective loans that exit the Securitization with a realized loss are assumed to be repurchased the month after they exit the Securitization (e.g., are charged off).
- **Complaint Date Repurchase Scenario:** Assumes the repurchase by Countrywide of all materially defective loans that exit the Securitization with a realized loss, with such repurchases starting on the date of the complaint that first alleged claims concerning each respective Securitization. The repurchases for 12 of the Securitizations are assumed to start on September 28, 2010 (the date of the initial complaint filed in this matter that contained Ambac’s allegations of systemic breaches in those Securitizations).<sup>38</sup> The repurchases for the remaining Securitizations are assumed to start on September 8, 2011, the date of the First Amended Complaint, which contained Ambac’s allegations of systemic breaches in five additional Securitizations.<sup>39</sup> Materially defective loans that exited the Securitization on or before the relevant complaint date are assumed to be repurchased on the relevant complaint date, and materially defective loans that exit the Securitization after the relevant date with a realized loss are assumed to be repurchased the month after they exit the Securitization.
- **Report Date Repurchase Scenario:** Assumes the repurchase by Countrywide of all materially defective loans that exit the Securitization with a realized loss, with such repurchases starting on the last day of the Historical Period. Materially defective loans that exited the Securitization on or before the end of the Historical Period are assumed to be repurchased on the last day of the Historical Period, and materially defective loans that exit the Securitization with a realized loss after this date are assumed to be repurchased the month after they exit the Securitization.

(23) For these three scenarios, I calculate damages under the assumption that Countrywide repurchases those materially defective loans that (a) have been charged off after a default or (b) were modified and prepaid for the modified balance.<sup>40</sup> This approach compensates Ambac for losses on materially

<sup>37</sup> For purposes of this report, I refer to first-lien loans as being “charged off” at the time such first-lien loans are liquidated in accordance with the terms of the applicable Pooling and Servicing Agreements.

<sup>38</sup> Of the 17 Securitizations in this matter, 12 (CWABS 2004-K, CWABS 2004-L, CWABS 2004-M, CWABS 2004-N, CWABS 2004-O, CWABS 2004-T, CWHEQ 2005-F, CWHEQ 2006-B, CWHEQ 2006-C, CWHEQ 2006-S1, CWHEQ 2006-S4, and CWHEQ 2006-S6) are identified in the Complaint dated September 28, 2010.

<sup>39</sup> CWHEQ 2005-L, CWABS 2005-16, CWABS 2005-17, CWABS 2006-11, and CWABS 2006-13.

<sup>40</sup> I understand that Ambac maintains its right to demand Countrywide’s repurchase of materially defective loans in the Securitizations that have not charged-off or otherwise exited a Securitization with a realized loss, and that this Court and the Appellate Division, First Department, have issued rulings on that subject in another matter. See *MBIA Ins. Corp. v. Countrywide Home Loans, Inc.*, 2013 N.Y. Misc. LEXIS 1818, at \*32 n.12 (N.Y. Sup. Ct., N.Y. Cnty, Apr. 29, 2013) (citing *MBIA Ins. Corp. v. Countrywide Home Loans, Inc.*, 105 A.D.3d 412, 413 (1st Dept. 2013)). Although, for purposes of my analysis in this report, I model the repurchase of materially defective loans only after they exit the securitization, I express no opinion on the underlying legal principles relating to this issue.

defective loans realized prior to the given scenario date but does not repurchase (i.e., remove from the pool) materially defective loans that are non-defaulted<sup>41</sup> as of the given scenario date, and such loans are never repurchased unless those loans later realize a loss and exit the Securitization. It is my understanding that such an approach has been employed in certain other lawsuits relating to RMBS involving allegations of breach of contract and frustration of the repurchase protocol.

- (24) By using standard and reliable statistical methods, I have calculated Claims Payment and Repurchase Damages. The summary of my analysis for each Securitization, excluding Remediation Costs, is found in Figure 2. As set out in Paragraphs (21)–(22) above, I understand that in addition to these amounts, Countrywide is also contractually obligated to reimburse Ambac for its Remediation Costs, as well as interest on those Remediation Costs.<sup>42</sup>

**Figure 2: Claims Payment and Repurchase Damages by Securitization (without Remediation Costs)**

(in \$ millions) <sup>43</sup>	Securitization	Claims Payment Damages–Premiums Deducted	Claims Payment Damages–Premiums Not Deducted	Repurchase Damages		
				Contract Date Scenario	Complaint Date Scenario	Report Date Scenario
First-Lien	CWABS 2005-16	139.9	152.4	139.3	140.8	147.5
	CWABS 2005-17	166.9	177.1	172.5	171.6	170.6
	CWABS 2006-11	208.9	217.2	167.3	193.4	204.8
	CWABS 2006-13	126.9	131.5	105.3	118.5	126.6
CES	CWHEQ 2006-S1	131.6	137.1	135.2	135.2	126.2
	CWHEQ 2006-S4	285.0	291.1	280.7	281.9	271.6
	CWHEQ 2006-S6	265.0	271.3	259.3	261.3	250.9
HELOC	CWABS 2004-K	(4.5)	0.3	(0.4)	(0.3)	(0.3)
	CWABS 2004-L	2.0	4.8	4.0	4.0	3.9
	CWABS 2004-M	0.0	2.8	2.0	2.0	2.1
	CWABS 2004-N	(2.8)	0.0	(0.3)	(0.3)	(0.2)
	CWABS 2004-O	(1.4)	2.8	2.0	2.1	2.0
	CWABS 2004-T	(0.9)	5.5	(1.0)	(0.9)	(0.5)
	CWHEQ 2005-F	173.7	185.8	175.1	175.4	167.9
	CWHEQ 2005-L	(1.6)	0.0	(0.1)	(0.1)	(0.1)
	CWHEQ 2006-B	269.8	274.8	255.9	256.0	247.9
CWHEQ 2006-C	291.9	300.4	282.3	282.4	270.9	

<sup>41</sup> The term “non-defaulted” excludes loans that prepay in full. In other words, for the Contract Date, Complaint Date, and Report Date Scenarios, materially defective loans that exit the Securitizations without any unpaid principal balance are not repurchased in my model.

<sup>42</sup> See, e.g., CWHEQ 2006-S1 I&I Agreement, §§ 3.03(c)–(d) (ABK-CW00023304, at -325); CWHEQ 2006-B I&I Agreement, §§ 3.03(c)–(d) (ABK-CW00020065, at -087); CWABS 2005-16 I&I Agreement, §§ 3.03 (c)–(d) (ABK-CW00008606, at -626).

<sup>43</sup> All numbers presented in this report have been rounded to the nearest one hundred thousand. Because of this, some of the totals and differences listed in this report may not appear to sum correctly.

## IV. Damages analysis

- (25) This section describes the methods that I used to calculate, to a reasonable degree of certainty, the monetary impact on Ambac of Countrywide's alleged fraudulent inducement of Ambac into the I&I Agreements and Policies, material breach of the I&I Agreements, and contractual breaches of the associated Securitization's representations and warranties and related repurchase obligations. As explained above, I was asked by counsel to consider two different theories of damages and therefore to calculate Claims Payment Damages and Repurchase Damages.<sup>44</sup>
- (26) In making these calculations, I used statistical analyses based on the work of Dr. Charles Cowan and Mr. James Johnson. Dr. Cowan drew what I understand to be a statistically representative sample of loans from the Securitizations. Based on Mr. Johnson's review of the re-underwriting of the random sample loans and Mr. Johnson's conclusions regarding material defects, Dr. Cowan extrapolated sample-based defect rates to the entire population of loans underlying the Securitization. I understand further that for the four First-Lien Securitizations—which have insured and uninsured certificates and separate collateral groups underlying those certificates (CWABS 2005-16, CWABS 2005-17, CWABS 2006-11, and CWABS 2006-13)—Dr. Cowan drew separate statistically representative samples of loans from the insured and uninsured collateral. I also understand that Dr. Cowan likewise extrapolated separate sample-based defect rates to each respective population of loans based on the re-underwriting review of loans by Mr. Johnson. I have reviewed the results of their work, and it is my opinion that it is reasonable to rely upon these types of analyses, though I do not express any independent opinion as to their conclusions.

### IV.A. Claims Payment Damages

#### IV.A.1. Overview

- (27) In order to determine damages under this theory, it is necessary to calculate the net costs that Ambac has incurred and will likely incur in the future as a result of issuing the Policies. Specifically, for each Securitization, this involves:

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<sup>44</sup> The dollar amounts of damages included in this report are based on information available at this time and as if damages were awarded by the Court at the end of the Historical Period. I reserve the right to update these damages calculations to account for, among other things, additional losses accruing from the end of the Historical Period, if and when the Court awards Ambac damages. I have been instructed by counsel that punitive damages and indemnification may also be available to Ambac for Countrywide's alleged actions. I express no opinion on the amount of punitive damages or indemnification that would be appropriate in such circumstances.

- Calculating Ambac’s historical paid and deferred claims payments, accrued interest, reimbursements, and premiums,<sup>45</sup> and
  - Projecting the cash flows from the underlying mortgages into the future to evaluate the future claims that are reasonably certain to be paid, as well as future premiums and reimbursements likely to be received by Ambac, and discounting those amounts to the present.
- (28) Based on these calculations, I determined Claims Payment Damages for each Securitization. For historical net claims paid by Ambac (paid claims payments less reimbursements), I calculated interest at the statutory rate of 9% simple interest (Interest Rate) provided for by New York state law.<sup>46</sup> For historical claims payments deferred by Ambac, I calculated interest at the Accretion Rate as defined in the Amended Rehabilitation Plan.<sup>47</sup>
- (29) A detailed description of these calculations and their inputs follows.

#### **IV.A.2. Claims Payment Damages**

- (30) My Claims Payment Damages determination relies on two main components: (1) the value of past costs incurred and amounts received by Ambac as a result of issuing the Policies associated with the Securitizations (Past Claims Payment Damages) and (2) the present value (PV) of any expected future costs and receipts (Future Claims Payment Damages).
- (31) Specifically, Past Claims Payment Damages are defined as

$$\begin{aligned} \text{Past Claims Payment Damages} &= \text{Past Paid Claims} + \text{Accrued Interest (Interest Rate)} \\ &\quad \textit{plus} \\ &\quad \text{Past Deferred Claims} + \text{Accrued Interest (Accretion Rate)} \\ &\quad \textit{less} \\ &\quad \text{Past Reimbursements} + \text{Past Premiums} \end{aligned}$$

and are calculated for the period immediately following the contract date for each Securitization through the end of the period covered by the August 2014 Trustee Remittance Report for each

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<sup>45</sup> I used the monthly trustee reports to determine the nominal value of past claims (paid and deferred), premiums, and reimbursements.

<sup>46</sup> New York Civil Practice Law and Rules, § 5004 (2014). I have been instructed by counsel that the 9% interest rate applies to fraud and material breach claims of action. For those deals in which Ambac received reimbursements of principal and contractual interest, I separately apply the applicable Interest Rate to those recoveries, in order to offset the accrual of contractual interest on the underlying claims payment principal. In no instance does Ambac’s realized rate of interest payment on outstanding claims exceed the Interest Rate.

<sup>47</sup> See *supra* Paragraph (19) and Footnote 31.

Securitization.<sup>48</sup> The Past Claims Payment Damages period for each of the Securitizations is listed in Figure 3.

**Figure 3: Past Claims Payment Damage periods<sup>49</sup>**

Type	Securitization	Beginning date	End date
First-Lien	CWABS 2005-16	December 28, 2005	August 25, 2014
	CWABS 2005-17	December 29, 2005	August 25, 2014
	CWABS 2006-11	June 29, 2006	August 25, 2014
	CWABS 2006-13	July 28, 2006	August 25, 2014
CES	CWHEQ 2006-S1	March 30, 2006	August 25, 2014
	CWHEQ 2006-S4	September 8, 2006	August 25, 2014
	CWHEQ 2006-S6	September 29, 2006	August 25, 2014
HELOC	CWABS 2004-K	September 29, 2004	July 25, 2014
	CWABS 2004-L	September 29, 2004	July 25, 2014
	CWABS 2004-M	September 29, 2004	July 25, 2014
	CWABS 2004-N	September 29, 2004	July 25, 2014
	CWABS 2004-O	September 30, 2004	July 25, 2014
	CWABS 2004-T	December 23, 2004	July 25, 2014
	CWHEQ 2005-F	September 29, 2005	July 25, 2014
	CWHEQ 2005-L	December 29, 2005	July 25, 2014
	CWHEQ 2006-B	March 29, 2006	July 25, 2014
	CWHEQ 2006-C	March 30, 2006	July 25, 2014

(32) Future Claims Payment Damages are defined as

*Future Claims Payment Damages* = *PV of Expected Future Claims*

*less*

*PV of Expected Future Reimbursements* +

*PV of Expected Future Premiums*

and are calculated for the Future Period for each Securitization.

(33) Claims Payment Damages are then calculated as the sum of Past Claims Payment Damages and Future Claims Payment Damages.

<sup>48</sup> Again, I reserve the right to update my analysis at a later time as additional information becomes available, including in order to expand the “Past Claims Payment Damages” time period to incorporate additional months of actual historical trustee data—e.g., claims payments and reimbursements—for each Securitization, and to incorporate additional months of accrued interest.

<sup>49</sup> As explained in *supra* Footnote 36, the end dates in Figure 3 correspond to the close of the loan-level servicing data reporting period associated with the August 2014 Trustee Remittance Report for each Securitization.



- (34) I have also calculated an alternative form of Past Claims Payment Damages in which I have not deducted premiums received by Ambac to date (“Past Claims Payment Damages–Premiums Not Deducted”), and an alternative form of Future Claims Payment Damages in which I have not deducted the present value of expected future premiums (“Future Claims Payment Damages–Premiums Not Deducted”). Further below, I sum these amounts in order to calculate total Claims Payment Damages–Premiums Not Deducted.

#### IV.A.2.a. Past Claims Payment Damages

- (35) The nominal values of the inputs for the Past Claims Payment Damages calculation for each Securitization are listed in Figure 4. Past Claims Payment Damages for each Securitization are then calculated both with and without deducting past premiums.

**Figure 4: Past Claims Payment Damages (in \$ millions)**

	Securitization	Claims paid	Accrued Interest (Interest Rate)	Claims accrued	Accrued Interest (Accretion Rate)	Reimb.	Prem.	Past Claims Payment Damages–Prem. Deducted	Past Claims Payment Damages–Prem. Not Deducted
First-Lien	CWABS 2005-16	18.4	1.8	52.5	3.4	1.6	8.2	66.2	74.4
	CWABS 2005-17	22.6	2.6	65.5	4.7	0.6	6.9	87.9	94.8
	CWABS 2006-11	37.9	3.5	103.0	7.9	21.7	5.6	125.0	130.6
	CWABS 2006-13	18.0	2.0	53.3	4.1	9.2	3.2	65.0	68.2
CES	CWHEQ 2006-S1	54.9	6.7	97.4	9.1	26.7	4.7	136.6	141.3
	CWHEQ 2006-S4	157.3	49.1	112.0	10.4	29.4	5.0	294.4	299.3
	CWHEQ 2006-S6	136.1	42.3	116.4	10.6	22.9	5.1	277.4	282.5
HELOC	CWABS 2004-K	1.1	0.2	0.2	0.0	1.2	4.4	(4.1)	0.3
	CWABS 2004-L	4.6	1.5	1.9	0.2	0.1	2.6	5.5	8.1
	CWABS 2004-M	4.0	1.5	0.2	0.1	0.3	2.6	2.8	5.5
	CWABS 2004-N	0.5	0.1	0.0	0.0	0.6	2.6	(2.6)	0.0
	CWABS 2004-O	2.2	0.5	2.4	0.3	0.0	3.7	1.7	5.4
	CWABS 2004-T	0.0	5.5	0.0	0.0	0.0	5.8	(0.2)	5.5
	CWHEQ 2005-F	76.6	26.6	92.6	8.3	0.0	10.2	193.9	204.1
	CWHEQ 2005-L	0.0	0.0	0.0	0.0	0.0	1.2	(1.2)	0.0
	CWHEQ 2006-B	138.1	61.0	83.6	8.1	0.0	4.0	286.8	290.8
	CWHEQ 2006-C	140.4	56.2	119.8	11.6	0.0	6.7	321.2	328.0

#### IV.A.2.b. Future Claims Payment Damages

- (36) In addition to Past Claims Payment Damages, I also calculated claims that Ambac will likely have to pay and premiums and reimbursements that it will likely receive in the future under each of the Policies based on the projected future performance of the loans underlying each Securitization. I projected the future performance of these loans using statistical methods that determine the probabilities of possible outcomes—prepayment, default, or continued payment of principal and/or

interest—based on the past performance of the loans and macroeconomic factors. A description of the statistical model can be found in Appendix D.

- (37) Because the probabilities identify the likelihood of various outcomes, I performed a simulation to project future interest and principal payments (both scheduled and prepaid) as well as losses.<sup>50</sup> For each month starting at the beginning of the Future Period and ending with the scheduled maturity date for each Securitization,<sup>51</sup> each remaining loan in a given pool was projected to continue to make scheduled principal and interest payments, prepay, or default in that month based on the probabilities of those events as estimated in the statistical model. The resulting stream of payments and default losses generated by the simulation were then fed through the corresponding contractually determined list of rules that describe how cash flows received by each Trust are to be distributed (the “Waterfall,” or collectively, “Waterfalls”)<sup>52</sup> to calculate the future claims that Ambac would be obligated to pay as well as the premiums and reimbursements that Ambac would receive associated with each Securitization. This simulation was repeated 10,000 times to generate a distribution of possible outcomes. The median present value of the net claims payments from this simulation process was selected as the “most likely” and is listed in Figure 5.<sup>53</sup>

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<sup>50</sup> For additional details on the simulation, *see* Appendix D.

<sup>51</sup> *See, e.g.*, CWABS 2004-K Prospectus Supplement, at S-35 (CWAMBAC0003362113, at -147); CWABS 2004-L Prospectus Supplement, at S-6 (CWAMBAC0015014225, at 230); CWABS 2004-M Prospectus Supplement, at S-5 (CWAMBAC0015016052, at -056); CWABS 2004-N Prospectus Supplement, at S-5 (CWAMBAC0003357469, at -473); CWABS 2004-O Prospectus Supplement, at S-5 (CWAMBAC0007017635, at -639); CWABS 2004-T Prospectus Supplement, at S-5 (CWAMBAC0003362725, at 729); CWHEQ 2005-L Prospectus Supplement, at S-7 (CWAMBAC0007480771, at -077); CWHEQ 2006-B Prospectus Supplement, at S-6 (CWAMBAC0002191417, at -422); CWHEQ 2006-C Prospectus Supplement, at S-6 (CWAMBAC0007461565, at -570); CWHEQ 2006-S1 Prospectus Supplement, at S-4 (CWAMBAC0013409393, at -400); CWHEQ 2006-S4 Prospectus Supplement, at S-3 (CWAMBAC0007648615, at -621); CWHEQ 2006-S6 Prospectus Supplement, at S-4 (CWAMBAC0007784390, at -397); CWABS 2005-16 Prospectus Supplement, at S-3 (CWAMBAC0000442540, at -544); CWABS 2005-17 Prospectus Supplement, at S-3 (CWAMBAC0000442840, at -844); CWABS 2006-11 Prospectus Supplement, at S-5 (CWAMBAC0017341806, at -814); CWABS 2006-13 Prospectus Supplement, at S-5 (CWAMBAC0014246021, at -021.0008).

<sup>52</sup> The Waterfall distributions are outlined in § 8.03 of the Indenture for each HELOC Securitization and in § 4.04 of the PSA for each First-Lien and CES Securitization. In Appendix G, I detail some aspects of how the Waterfall were implemented to reflect actual distribution in the trustee reports.

<sup>53</sup> The 5th and 95th percentile outcomes are found in Appendix H. These figures give a reasonable range of possible outcomes and, hence, a measure of the precision of the damages calculations. For example, if the 5th percentile outcome was \$2,031.7 million and the 95th percentile outcome was \$2,072.3 million, then 90% of all of the outcomes produced by the simulation fall inside the range of \$2,031.7 million to \$2,072.3 million.

**Figure 5: Future Claims Payment Damages Components (in \$ millions)**

Type	Securitization	Present value				
		Claims Payment Obligation	Reimb.	Premiums	Future Claims Payment Damages–Premiums Deducted	Future Claims Payment Damages–Premiums Not Deducted
First-Lien	CWABS 2005-16	78.2	0.3	4.3	73.7	77.9
	CWABS 2005-17	82.4	0.1	3.3	79.1	82.3
	CWABS 2006-11	86.6	0.0	2.7	83.8	86.6
	CWABS 2006-13	71.3	8.0	1.3	61.9	63.3
CES	CWHEQ 2006-S1	3.0	7.3	0.8	(5.1)	(4.3)
	CWHEQ 2006-S4	4.6	12.8	1.1	(9.4)	(8.3)
	CWHEQ 2006-S6	4.4	15.6	1.2	(12.4)	(11.2)
HELOC	CWABS 2004-K	0.0	0.0	0.4	(0.4)	0.0
	CWABS 2004-L	1.9	5.2	0.2	(3.5)	(3.3)
	CWABS 2004-M	2.1	4.7	0.2	(2.8)	(2.6)
	CWABS 2004-N	0.0	0.0	0.2	(0.2)	0.0
	CWABS 2004-O	1.5	4.1	0.4	(3.0)	(2.6)
	CWABS 2004-T	0.0	0.0	0.7	(0.7)	0.0
	CWHEQ 2005-F	1.2	19.4	1.9	(20.2)	(18.3)
	CWHEQ 2005-L	0.0	0.0	0.4	(0.4)	0.0
	CWHEQ 2006-B	2.3	18.3	1.0	(17.0)	(15.9)
	CWHEQ 2006-C	4.5	32.0	1.8	(29.4)	(27.6)

- (38) I calculated these present-value amounts by using discount rates consistent with the Securitizations' initial shadow ratings.<sup>54</sup> Specifically, I used zero-coupon yield curves for financial companies rated BBB or A, depending upon the Securitization.<sup>55</sup> These rates account for the time value of money and credit risk at different time horizons.<sup>56</sup>

#### IV.A.3. Claims Payment Damages calculations

- (39) Ambac's Claims Payment Damages–Premiums Deducted are calculated as the sum of Past Claims Payment Damages–Premiums Deducted and Future Claims Payment Damages–Premiums Deducted, and are displayed in Figure 6.

<sup>54</sup> See *supra* Footnote 17.

<sup>55</sup> Bloomberg USD Finance BBB and A Zero Coupon Yield via Bloomberg LP, accessed September 22, 2014. See Appendix E.

<sup>56</sup> Yields were reported for maturities of 3M, 6M, 1Y, 2Y, 3Y, 4Y, 5Y, 6Y, 7Y, 8Y, 9Y, 10Y, 15Y, and 20Y. For cash flows with a maturity that falls in between report yields, the yield with the next longer maturity was conservatively used to discount that cash flow. For example, the six-year yield was used to discount all cash flows that had a maturity of greater than five years but less than or equal to six years.

**Figure 6: Claims Payment Damages–Premiums Deducted (in \$ millions and without Remediation Costs)**

Type	Securitization	Past Claims Payment Damages–Premiums Deducted	Future Claims Payment Damages–Premiums Deducted	Claims Payment Damages–Premiums Deducted
First-Lien	CWABS 2005-16	66.2	73.7	139.9
	CWABS 2005-17	87.9	79.1	166.9
	CWABS 2006-11	125.0	83.8	208.9
	CWABS 2006-13	65.0	61.9	126.9
CES	CWHEQ 2006-S1	136.6	(5.1)	131.6
	CWHEQ 2006-S4	294.4	(9.4)	285.0
	CWHEQ 2006-S6	277.4	(12.4)	265.0
HELOC	CWABS 2004-K	(4.1)	(0.4)	(4.5)
	CWABS 2004-L	5.5	(3.5)	2.0
	CWABS 2004-M	2.8	(2.8)	0.0
	CWABS 2004-N	(2.6)	(0.2)	(2.8)
	CWABS 2004-O	1.7	(3.0)	(1.4)
	CWABS 2004-T	(0.2)	(0.7)	(0.9)
	CWHEQ 2005-F	193.9	(20.2)	173.7
	CWHEQ 2005-L	(1.2)	(0.4)	(1.6)
	CWHEQ 2006-B	286.8	(17.0)	269.8
CWHEQ 2006-C	321.2	(29.4)	291.9	

- (40) Ambac’s Claims Payment Damages–Premiums Not Deducted are calculated as the sum of Past Claims Payment Damages–Premiums Not Deducted and Future Claims Payment Damages–Premiums Not Deducted, and are displayed in Figure 7.

**Figure 7: Claims Payment Damages–Premiums Not Deducted (in \$ millions and without Remediation Costs)**

Type	Securitization	Past Claims Payment Damages–Premiums Not Deducted	Future Claims Payment Damages–Premiums Not Deducted	Claims Payment Damages–Premiums Not Deducted
First-Lien	CWABS 2005-16	74.4	77.9	152.4
	CWABS 2005-17	94.8	82.3	177.1
	CWABS 2006-11	130.6	86.6	217.2
	CWABS 2006-13	68.2	63.3	131.5
CES	CWHEQ 2006-S1	141.3	(4.3)	137.1
	CWHEQ 2006-S4	299.3	(8.3)	291.1
	CWHEQ 2006-S6	282.5	(11.2)	271.3
HELOC	CWABS 2004-K	0.3	0.0	0.3
	CWABS 2004-L	8.1	(3.3)	4.8
	CWABS 2004-M	5.5	(2.6)	2.8
	CWABS 2004-N	0.0	0.0	0.0
	CWABS 2004-O	5.4	(2.6)	2.8
	CWABS 2004-T	5.5	0.0	5.5
	CWHEQ 2005-F	204.1	(18.3)	185.8
	CWHEQ 2005-L	0.0	0.0	0.0
	CWHEQ 2006-B	290.8	(15.9)	274.8
CWHEQ 2006-C	328.0	(27.6)	300.4	

- (41) As discussed in the next subsection, I understand that in addition to the Claims Payment Damages figures reflected above, Ambac is also entitled to be reimbursed by Countrywide for amounts that Ambac incurred as a result of its “enforcement, defense or preservation of any rights” with respect to each Securitization (i.e., Remediation Costs).

#### IV.A.4. Accounting for Remediation Costs

- (42) It is my understanding that Section 3.03(c) of each I&I Agreement<sup>57</sup> affords Ambac the right to be reimbursed by Countywide for remediation costs associated with the Securitizations. I understand that Remediation Costs subject to reimbursement by Countrywide include, but are not limited to, legal fees, consultant and expert fees, and costs associated with investigating and making repurchase demands.<sup>58</sup>
- (43) Based on figures provided to me by counsel for Ambac, Ambac’s nominal Remediation Costs through at least August 31, 2014, excluding interest, total approximately \$48.5 million across all

<sup>57</sup> See, e.g., CWHEQ 2006-S1 I&I Agreement, § 3.03 (ABK-CW00023304, at -325); CWHEQ 2006-B I&I Agreement, § 3.03 (ABK-CW00020065, at -087); CWABS 2005-16 I&I Agreement, § 3.03 (ABK-CW00008606, at -626).

<sup>58</sup> I have been instructed by counsel that Ambac alleges it is entitled to recover these Remediation Costs as ordinary damages flowing from Countrywide’s fraudulent inducement and material breach, even in the absence of the contractual remedy set forth in Section 3.03 of each I&I Agreement.

Securitized. <sup>59</sup> It is my understanding that Ambac is also entitled to the reimbursed interest on its Remediation Costs, and I reserve the right to calculate that interest at a later date.

## IV.B. Repurchase Damages

### IV.B.1. Overview

- (44) In addition to Claims Payment Damages, I also set forth an alternative approach to calculating legal damages based on Countrywide's alleged failure to repurchase materially defective loans (Repurchase Damages). Calculating Ambac's damages resulting from Countrywide's alleged failure to comply with its contractual obligations to repurchase loans with material defects is a two-step process:
1. Calculate Ambac's "but-for" net payments, or the claims that Ambac would have been obligated to pay net of premiums and reimbursements, and the interest it would have accrued on those claim payments,<sup>60</sup> both historically and in the future, assuming that materially defective loans had been repurchased by Countrywide.
  2. Calculate the damages incurred by Ambac as a result of Countrywide's alleged failure to repurchase materially defective loans as required by the repurchase protocol as the difference between: (a) Ambac's actual historical and future net payment obligations (including accrued interest at the Late Payment Rate) and (b) Ambac's but-for net payment obligations (as calculated in step 1).
- (45) To calculate the but-for net payment obligations that Ambac would have incurred had Countrywide complied with its contractual repurchase obligations, I first calculated the total amounts that Countrywide would have paid to the Trusts had Countrywide hypothetically repurchased materially defective loans (Repurchase Amounts). I then ran the Repurchase Amounts through the corresponding Waterfalls to determine how the Repurchase Amounts would have affected Ambac's but-for net payment obligations and accrued interest. Because this is a hypothetical scenario, no funds are actually passed through the real-world Securitization Waterfalls; rather, this model approximates how the Waterfalls would have functioned had the Repurchase Amounts been paid to the Trusts at particular points in time.
- (46) Under the Waterfalls, the cash flows from the Repurchase Amounts reduce Ambac's but-for net payment obligations in three ways (assuming a sufficiently large Repurchase Amount):

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<sup>59</sup> ABK-CW-D00001541 (*Ambac Remediation Costs as of 8-31-14 (without interest).XLSX*).

<sup>60</sup> In this instance, I use the Late Payment Rate in order to permit a meaningful comparison between these "but-for" net payments and the actual claims payments paid by Ambac. See *infra* Paragraph (52).

1. Relieving Ambac of any then-current payment obligation under a given Policy,
2. Reimbursing Ambac for any accrued but unreimbursed prior claims payments or reducing the amount of deferred claims accrued, and
3. Paying principal to insured certificateholders, thereby relieving Ambac of future payment obligations.

(47) In order to calculate the Repurchase Amounts for each Securitization, I relied on analysis of the material defect rates in the random samples (the percentage of loans that breach, with material and adverse effect, the “loan-level warranties”) based on the work of Mr. Johnson, and on the extrapolation of that work to the relevant populations by Dr. Cowan. Given that these defect rates are (1) based on samples and (2) do not specifically identify all of the specific loans underlying the Securitizations that should be repurchased (outside of the samples of loans reviewed by Mr. Johnson<sup>61</sup> and the known repurchases<sup>62</sup>), I employed a simulation that allows me to reliably determine Repurchase Damages for each Securitization accounting for these sources of uncertainty.<sup>63</sup> This is accomplished by:

- Drawing a defect rate from the distribution surrounding the extrapolated breach rate based on the analysis by Dr. Cowan, accounting for the loans that are designated as materially defective in each iteration (as described in Footnotes 61 and 62),
- Randomly selecting the remaining loans to be repurchased from the underlying pool of loans, based on the defect rate in the previous step,<sup>64</sup>
- Calculating the Repurchase Amounts for materially defective loans, and
- Passing the Repurchase Amounts through the appropriate Waterfall and calculating the corresponding Repurchase Damages.<sup>65</sup>

(48) This process is then repeated 10,000 times to generate a distribution of possible outcomes, and the median outcome is reported as the “most likely” outcome. Details of the simulation methodology are described in Appendix D.

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<sup>61</sup> Under all of the Repurchase Damages scenarios, sample loans determined to be materially defective by Mr. Johnson are always treated as materially defective and are repurchased in the but-for world on the scenario repurchase date or the actual repurchase date, whichever is earlier.

<sup>62</sup> I understand that Countrywide has agreed to repurchase 546 loans. *See* Appendix J. The 546 repurchases acknowledged by Countrywide are also treated as materially defective and are repurchased in the but-for world.

<sup>63</sup> *See* Appendix D.

<sup>64</sup> For the First-Lien Securitizations, a separate material defect rate is drawn for the insured and uninsured loan groups, respectively, and that rate is used to determine the loans to be repurchased within that loan category.

<sup>65</sup> I reserve the right to recalculate damages in all the Repurchase Damages scenarios in the event Ambac is not awarded damages sufficient to fully reimburse it for all of its claim payments plus accrued interest given that my Waterfall Models, in certain circumstances, permit loan repurchase proceeds to reach holders of classes of residual certificates (or other subordinated certificates owned by Countrywide or its affiliates at the relevant time). I reserve the right to do so based upon my understanding that Ambac’s legal position is that such payments are not permissible if Ambac is not reimbursed through these proceedings for its losses in full with interest in light of Countrywide’s alleged misconduct.

- (49) Note that this calculation relies on various appropriate assumptions, including:
- Countrywide repurchases (as opposed to cures or substitutes for) materially defective loans,<sup>66</sup> and
  - The Optional Redemption provision is not invoked.<sup>67</sup>

#### **IV.B.2. Repurchase Damages scenarios**

- (50) I calculated Repurchase Damages for three scenarios based on different points in time. In calculating the Repurchase Amounts and Repurchase Damages, I have relied on the extrapolated material defect rates based on the work of Mr. Johnson and Dr. Cowan. For the CES and HELOC Securitizations, Dr. Cowan drew what I understand to be a statistically representative samples of loans and, based on the forensic re-underwriting of the loans by Mr. Johnson, extrapolated the sample-based material defect rates to the corresponding population of loans underlying each of the Securitizations (“Pool Defect Rate”). For the First-Lien Securitizations, Dr. Cowan drew what I understand to be a statistically representative sample of loans for both the insured loan groups and uninsured loan groups and, based on the forensic re-underwriting of the loans by Mr. Johnson, extrapolated the sample-based material defect rates to the relevant population of loans (“Insured Loan Group Defect Rate” and “Uninsured Loan Group Defect Rate”). The Pool Defect and Insured/Uninsured Loan Group Defect Rates are displayed in Figure 8. I have reviewed the results of their work, and it is my opinion that it is reasonable to rely upon these types of analyses, though I do not express any independent opinion as to their conclusions.

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<sup>66</sup> I understand that according to the Securitization documents, within 90 days from the date of discovery or notice of a breach, Countrywide also had the option to cure the breach or to substitute a non-defective loan for a defective loan. *See, e.g.*, CWABS 2005-16 PSA, § 2.03(e) (ABK-CW00007997, at -099); CWHEQ 2006-S1 PSA, § 2.03(e) (ABK-CW00022914, at -979); CWABS 2004-K SSA, § 2.04(b) (ABK-CW00001319, at -341) (each Securitization representing the First-Lien, CES, and HELOC Securitization types, respectively). I understand that Countrywide has never invoked the option to cure or substitute a loan rather than to repurchase the loan.

<sup>67</sup> An Optional Redemption provision (or “clean-up” provision) is an option held by one or more parties in a securitization that allows the party to effectively call the outstanding securitized instrument when the underlying collateral principal outstanding has fallen below a certain threshold. The threshold is 10% of the sum of the aggregate Cut-off Date Principal Balance of the Initial Mortgage Loans and the Pre-Funded Amount. Loans must be repurchased at 100% of the Stated Principal Balance. *See, e.g.*, CWABS 2004-K Indenture, at § 10.01 (ABK-CW00001197, at -255); CWABS 2005-16 PSA, at § 9.01 (ABK-CW00007997, at -176); CWHEQ 2006-S1 PSA, at § 9.01 (ABK-CW00022904, at -048).



**Figure 8: Pool Defect Rates**

Type	Securitization	Pool or Loan Group Defect Rate
First-Lien	CWABS 2005-16: Insured Loan Group (Loan Groups 1, 2)	45.52 %
	CWABS 2005-16: Uninsured Loan Group (Loan Groups 3, 4)	69.90 %
	CWABS 2005-17: Insured Loan Group (Loan Group 1)	53.59 %
	CWABS 2005-17: Uninsured Loan Group (Loan Groups 2, 3, 4)	66.39 %
	CWABS 2006-11: Insured Loan Group (Loan Group 1)	48.65 %
	CWABS 2006-11: Uninsured Loan Group (Loan Groups 2, 3)	58.76 %
	CWABS 2006-13: Insured Loan Group (Loan Group 1)	43.24 %
	CWABS 2006-13: Uninsured Loan Group (Loan Groups 2, 3)	62.59 %
CES	CWHEQ 2006-S1	89.54 %
	CWHEQ 2006-S4	88.40 %
	CWHEQ 2006-S6	85.81 %
HELOC	CWABS 2004-K	90.09 %
	CWABS 2004-L	90.86 %
	CWABS 2004-M	89.11 %
	CWABS 2004-N	90.36 %
	CWABS 2004-O	88.19 %
	CWABS 2004-T	90.57 %
	CWHEQ 2005-F	90.97 %
	CWHEQ 2005-L	80.78 %
	CWHEQ 2006-B	94.58 %
	CWHEQ 2006-C	91.67 %

- (51) For these scenarios (Contract Date Repurchase, Complaint Date Repurchase, and Report Date Repurchase), Repurchase Damages are calculated as the difference between (1) the actual net claims (paid and deferred claims less premiums and reimbursements) incurred to date and expected to be paid by Ambac plus accrued interest and (2) the net claims that Ambac would have expected to pay and interest it would have accrued had Countrywide repurchased materially defective loans at the points in time appropriate under each scenario.
- (52) I calculated interest at the contractual interest rate (“Late Payment Rate”) on past net claims paid by Ambac, as per the terms of each associated I&I Agreement.<sup>68</sup> I calculated interest at the Accretion Rate for past claims deferred by Ambac. In calculating the present value of future net payments, I have used the discount rates described in Paragraph (38).

<sup>68</sup> See, e.g., CWHEQ 2006-S1 I&I Agreement, at 3 (ABK-CW00023304, at -309); CWHEQ 2006-B I&I Agreement, at 3 (ABK-CW00020065, at -070); CWABS 2005-16 I&I Agreement, at 3(ABK-CW00008606, at -611).

### IV.B.3. Repurchase Scenarios

#### IV.B.3.a. Contract Date Repurchase Scenario

- (53) In the Contract Date Repurchase Scenario, I calculate the Repurchase Amounts by assuming that Countrywide repurchases only materially defective loans that exit the Securitization with a realized loss. In this scenario, materially defective loans that exit the Securitization with a realized loss after the contract date of the Securitization are assumed to be repurchased the month after they exit the Securitization. The results of my analysis of the Repurchase Damages for this scenario are found in Figure 9.<sup>69</sup>

**Figure 9: Repurchase Damages for the Contract Date Repurchase Scenario (in \$ millions)<sup>70</sup>**

Type	Securitization	Contract date	Contract Date Repurchase Damages
First-Lien	CWABS 2005-16	Dec-2005	139.3
	CWABS 2005-17	Dec-2005	172.5
	CWABS 2006-11	Jun-2006	167.3
	CWABS 2006-13	Jul-2006	105.3
CES	CWHEQ 2006-S1	Mar-2006	135.2
	CWHEQ 2006-S4	Sep-2006	280.7
	CWHEQ 2006-S6	Sep-2006	259.3
HELOC	CWABS 2004-K	Sep-2004	(0.4)
	CWABS 2004-L	Sep-2004	4.0
	CWABS 2004-M	Sep-2004	2.0
	CWABS 2004-N	Sep-2004	(0.3)
	CWABS 2004-O	Sep-2004	2.0
	CWABS 2004-T	Dec-2004	(1.0)
	CWHEQ 2005-F	Sep-2005	175.1
	CWHEQ 2005-L	Dec-2005	(0.1)
	CWHEQ 2006-B	Mar-2006	255.9
	CWHEQ 2006-C	Mar-2006	282.3

#### IV.B.3.b. Complaint Date Repurchase Scenario

- (54) In the Complaint Date Default Repurchase Scenario, I calculate the Repurchase Amounts by assuming that Countrywide repurchases only materially defective loans that exit the Securitization with a realized loss. In this scenario, materially defective loans that exit the Securitization with a realized loss on or before the date of the relevant complaint are assumed to have been repurchased on

<sup>69</sup> The 5th and 95th percentile outcomes for this and the other Repurchase Damages scenarios are found in Appendix H. As in the case of the Claims Payments Damages calculation, these figures give a reasonable range of possible outcomes and, hence, a measure of the precision of the damages calculation.

<sup>70</sup> Please see Appendix I for details of Repurchase Damages by Securitization.

the relevant complaint date.<sup>71</sup> Materially defective loans that exit the Securitization with a realized loss after this date are assumed to be repurchased the month after they exit the Securitization. The results of my analysis of the Repurchase Damages for this scenario are found in Figure 10.

**Figure 10: Repurchase Damages for the Complaint Date Repurchase Scenario (in \$ millions)<sup>72</sup>**

Type	Securitization	Complaint date	Complaint Date Repurchase Damages
First-Lien	CWABS 2005-16	Sep-2011	140.8
	CWABS 2005-17	Sep-2011	171.6
	CWABS 2006-11	Sep-2011	193.4
	CWABS 2006-13	Sep-2011	118.5
CES	CWHEQ 2006-S1	Sep-2010	135.2
	CWHEQ 2006-S4	Sep-2010	281.9
	CWHEQ 2006-S6	Sep-2010	261.3
HELOC	CWABS 2004-K	Sep-2010	(0.3)
	CWABS 2004-L	Sep-2010	4.0
	CWABS 2004-M	Sep-2010	2.0
	CWABS 2004-N	Sep-2010	(0.3)
	CWABS 2004-O	Sep-2010	2.1
	CWABS 2004-T	Sep-2010	(0.9)
	CWHEQ 2005-F	Sep-2010	175.4
	CWHEQ 2005-L	Sep-2011	(0.1)
	CWHEQ 2006-B	Sep-2010	256.0
CWHEQ 2006-C	Sep-2010	282.4	

#### IV.B.3.c. Report Date Repurchase Scenario

- (55) I calculate the Repurchase Amounts for the Report Date Default Repurchase Scenario assuming that Countrywide repurchases only materially defective loans that exit the Securitization with a realized loss. In this scenario, materially defective loans that exit the Securitization with a realized loss on or before the end of the Historical Period for the Securitization (i.e., the cut-off date of the loan-level servicing data used in this report) are assumed to have been repurchased on the last day of the Historical Period. Materially defective loans that exit the Securitization with a realized loss after this date are assumed to be repurchased the month after they exit the Securitization. The results of my analysis of the Repurchase Damages for this scenario are found in Figure 11.

<sup>71</sup> See Footnotes 39–39.

<sup>72</sup> Please see Appendix I for details of Repurchase Damages by Securitization.

**Figure 11. Repurchase Damages for the Report Date Repurchase Scenario (in \$ millions)<sup>73</sup>**

Type	Securitization	Report Date Repurchase Damages
First-Lien	CWABS 2005-16	147.5
	CWABS 2005-17	170.6
	CWABS 2006-11	204.8
	CWABS 2006-13	126.6
CES	CWHEQ 2006-S1	126.2
	CWHEQ 2006-S4	271.6
	CWHEQ 2006-S6	250.9
HELOC	CWABS 2004-K	(0.3)
	CWABS 2004-L	3.9
	CWABS 2004-M	2.1
	CWABS 2004-N	(0.2)
	CWABS 2004-O	2.0
	CWABS 2004-T	(0.5)
	CWHEQ 2005-F	167.9
	CWHEQ 2005-L	(0.1)
	CWHEQ 2006-B	247.9
	CWHEQ 2006-C	270.9

**IV.B.3.d. Mortgage insurance**

- (56) I understand that certain of the Securitizations have pool mortgage insurance policies that were entered at closing and structured to provide first-loss protection on a portion of the collateral underlying the Securitizations, up to a certain fixed amount. I further understand that certain payments under these policies may have been allocated to loans alleged to be in breach of representations and warranties provided by Countrywide and are thereby subject to repurchase.
- (57) To the extent that mortgage insurance payments have been allocated to defaulting loans designated as materially defective and thus repurchased in the repurchase model, such mortgage insurance payments served to reduce in whole or in part the losses on those loans and hence the associated Repurchase Amounts that I calculated for those loans. If these mortgage insurance payments should have been applied only to loans without material defects that defaulted, then the Repurchase Amounts on those materially defective defaulted loans with losses offset by mortgage insurance would be greater than the amounts that I calculated. Moreover, those potentially misapplied mortgage insurance amounts could then be reallocated and applied to offset losses on loans without material defects that exited the Securitizations or are projected to exit in the future.
- (58) I expect that such modifications, if implemented, would result in an increase in my calculation of Repurchase Damages across the Securitizations. I reserve the right to update my calculation of

<sup>73</sup> Please see Appendix I for additional breakdowns of Securitization-specific Repurchase Damages.

Repurchase Damages at a later time in order to measure the impact of any misallocation of mortgage insurance payments.

#### IV.B.3.e. Accretion interest

- (59) For certain repurchase scenarios that I model for a given Securitization, I find that in the but-for scenario Ambac would still have deferred a portion of its historical claim payments pursuant to the Plan of Rehabilitation, and that interest would have accrued on those deferred amounts at the Accretion Rate. These figures are reflected in Appendix I. My models of the Waterfalls do not presently reimburse Ambac for accretion interest to the extent it accrues in both the actual and but-for historical scenarios; however, I reserve the right to update my model in order to permit such reimbursement when sufficient funds are available, including through the Repurchase Amounts I calculate for materially defective loans. I also understand that Ambac may otherwise be entitled to recover the full amount of accrued accretion interest for each Securitization directly from Countrywide. In Figure 12 below, I present the additional damages amounts that would be required for each Repurchase Scenario, by Securitization, in order to compensate Ambac for the full amount of accretion rate interest that has accrued on deferred claim payments as of the end of the Historical Period.

**Figure 12: Additional accretion interest amounts**

(in \$ millions)	Securitization	Scenario		
		Contract Date	Complaint Date	Report Date
First-Lien	CWABS 2005-16	\$ 0.3 M	\$ 0.0 M	\$ 3.4 M
	CWABS 2005-17	\$ 0.1 M	\$ 0.1 M	\$ 4.7 M
	CWABS 2006-11	\$ 4.6 M	\$ 1.9 M	\$ 7.9 M
	CWABS 2006-13	\$ 1.9 M	\$ 1.2 M	\$ 4.1 M
CES	CWHEQ 2006-S1	\$ 0.0 M	\$ 0.0 M	\$ 9.1 M
	CWHEQ 2006-S4	\$ 1.0 M	\$ 0.0 M	\$ 10.4 M
	CWHEQ 2006-S6	\$ 1.8 M	\$ 0.0 M	\$ 10.6 M
HELOC	CWABS 2004-K	\$ 0.0 M	\$ 0.0 M	\$ 0.0 M
	CWABS 2004-L	\$ 0.0 M	\$ 0.0 M	\$ 0.2 M
	CWABS 2004-M	\$ 0.0 M	\$ 0.0 M	\$ 0.1 M
	CWABS 2004-N	\$ 0.0 M	\$ 0.0 M	\$ 0.0 M
	CWABS 2004-O	\$ 0.0 M	\$ 0.0 M	\$ 0.3 M
	CWABS 2004-T	\$ 0.0 M	\$ 0.0 M	\$ 0.0 M
	CWHEQ 2005-F	\$ 0.0 M	\$ 0.0 M	\$ 8.3 M
	CWHEQ 2005-L	\$ 0.0 M	\$ 0.0 M	\$ 0.0 M
	CWHEQ 2006-B	\$ 0.0 M	\$ 0.0 M	\$ 8.1 M
CWHEQ 2006-C	\$ 0.0 M	\$ 0.0 M	\$ 11.6 M	

## V. Summary

- (60) As reflected in Figure 2, above, and replicated below in Figure 13, I have calculated Claims Payment and Repurchase Damages for each Securitization, excluding Remediation Costs, as follows:

**Figure 13: Claims Payment and Repurchase Damages (without Remediation Costs)**

(in \$ millions)	Securitization	Claims Payment Damages–Premiums Deducted	Claims Payment Damages–Premiums Not Deducted	Repurchase Damages		
				Contract Date Scenario	Complaint Date Scenario	Report Date Scenario
First-Lien	CWABS 2005-16	139.9	152.4	139.3	140.8	147.5
	CWABS 2005-17	166.9	177.1	172.5	171.6	170.6
	CWABS 2006-11	208.9	217.2	167.3	193.4	204.8
	CWABS 2006-13	126.9	131.5	105.3	118.5	126.6
CES	CWHEQ 2006-S1	131.6	137.1	135.2	135.2	126.2
	CWHEQ 2006-S4	285.0	291.1	280.7	281.9	271.6
	CWHEQ 2006-S6	265.0	271.3	259.3	261.3	250.9
HELOC	CWABS 2004-K	(4.5)	0.3	(0.4)	(0.3)	(0.3)
	CWABS 2004-L	2.0	4.8	4.0	4.0	3.9
	CWABS 2004-M	0.0	2.8	2.0	2.0	2.1
	CWABS 2004-N	(2.8)	0.0	(0.3)	(0.3)	(0.2)
	CWABS 2004-O	(1.4)	2.8	2.0	2.1	2.0
	CWABS 2004-T	(0.9)	5.5	(1.0)	(0.9)	(0.5)
	CWHEQ 2005-F	173.7	185.8	175.1	175.4	167.9
	CWHEQ 2005-L	(1.6)	0.0	(0.1)	(0.1)	(0.1)
	CWHEQ 2006-B	269.8	274.8	255.9	256.0	247.9
CWHEQ 2006-C	291.9	300.4	282.3	282.4	270.9	

- (61) Ambac’s damages under the theories and scenarios that I considered are summarized as follows:
- For the Securitizations in which Ambac has suffered damages pursuant to my calculation of Claims Payment Damages–Premiums Deducted, total damages equal \$2,050.5 million excluding Remediation Costs<sup>74</sup> and equal \$2,099.0 million when Remediation Costs (excluding interest) are included.
  - For the Securitizations in which Ambac has suffered damages pursuant to my calculation of Claims Payment Damages–Premiums Not Deducted, total damages equal \$2,155.0 million excluding Remediation Costs and equal \$2,203.4 million when Remediation Costs (excluding interest) are included.

<sup>74</sup> See Paragraphs (21)–(22) and Section IV.A.4.

- c. For the Securitizations in which Ambac has suffered damages pursuant to my calculation of Repurchase Damages–Contract Date Scenario, total damages equal \$1,979.1 million excluding Remediation Costs and equal \$2,027.6 when Remediation Costs (excluding interest) are included.
- d. For the Securitizations in which Ambac has suffered damages pursuant to my calculation of Repurchase Damages–Complaint Date Scenario, total damages equal \$2,022.8 million excluding Remediation Costs and equal \$2,071.2 million when Remediation Costs (excluding interest) are included.
- e. For the Securitizations in which Ambac has suffered damages pursuant to my calculation of Repurchase Damages–Report Date Scenario, total damages equal \$1,991.8 million excluding Remediation Costs and equal \$2,040.3 million when Remediation Costs (excluding interest) are included.



[SIGNATURE]

Name

October 1, 2014

[DATE]

Date

## Appendix A. Curriculum vitae

### A.1. Summary of experience

Karl N. Snow has more than 20 years of experience providing economic, financial, and statistical analyses as a consultant, an academic, and a professional in the investment- and mortgage-banking industries. Dr. Snow provides advice and expert analysis on a wide range of issues involving insurance, financial securities, structured products, mortgage lending, and hedge funds. He also has experience analyzing discrimination in labor and mortgage markets, asbestos-related insurance coverage, and bankruptcy matters. He has submitted expert reports and provided testimony in state and federal courts on economic and financial damages, asset valuation, and statistical analysis.

Prior to joining Bates White, Dr. Snow was a Senior Economist at Welch Consulting in Silver Spring, Maryland. He also served as Principal Economist in the Housing Analysis and Research group at Freddie Mac and as Director at UBS Investment Bank (formerly UBS Warburg). In addition to his professional experience, Dr. Snow held professorships in the finance departments of the Kenan-Flagler Business School at the University of North Carolina–Chapel Hill and the Stockholm School of Economics, and in the economics department at Brigham Young University. Dr. Snow has taught courses and presented workshops on finance and economic topics at academic institutions in Europe and the United States.

### A.2. Areas of expertise

- Statistical and econometric analysis
- Estimation of economic and financial damages
- Valuation of financial securities and assets
- Analysis of mortgage-related securities and structured products
- Analysis of labor and mortgage-related discrimination

### A.3. Professional experience

- Bates White, LLC, Washington, DC, July 2006 to present
  - Partner, January 2011 to present
  - Principal, July 2006 to December 2010
- Adjunct Professor of Finance, University of Maryland, Robert H. Smith School of Business, College Park, MD, August 2010 to present



- Senior Economist, Welch Consulting, Silver Spring, MD, 2003–2004, September 2005–2006
- Adjunct Professor of Finance, Johns Hopkins University, Washington, DC, Spring 2005
- Principal Economist, Freddie Mac, Housing Analysis and Research, McLean, VA, 2004–2005
- Adjunct Professor of Finance, American University, Kogod School of Business, Washington, DC, Spring 2004
- Director, UBS Warburg (now UBS Investment Bank), Financial Markets Education, Stamford, CT, 2000–2003
- Assistant Professor of Economics, Brigham Young University, Provo, UT, 1995–2000
- Visiting Assistant Professor of Finance, Stockholm School of Economics, Stockholm, Sweden, 1998–1999
- Assistant Professor of Finance, University of North Carolina-Chapel Hill, Kenan-Flagler Business School, Chapel Hill, NC, 1990–1995

#### A.4. Education

- PhD, Economics (Finance and Econometrics emphases), University of Chicago
- MA, Economics, University of Chicago
- BA, Economics, *summa cum laude*, Brigham Young University

#### A.5. Publications

- “Unresolved Issues in Allocation of Loss to Insurance” (with Charles H. Mullin and Noah Wallace). *Coverage* 21, no. 1, (2011): 13–23.
- “Proper Settlement Credits in All Sums Jurisdictions” (with Charles H. Mullin and Noah Wallace). *Coverage* 20, no. 3 (2010): 26–31.
- “In the Details: Valuing Restricted Stock and Options in Litigation” (with William J. Carrington). *Labor & Employment Law* 36, no. 4 (2008): 7.
- “The Forward Bias: Is It a Money Tree?” (with Kerk Phillips). *Economic Letters* 61 (1998): 373–79.
- “The Effects of Rebalancing on Size and Book-to-Market Ratio Portfolio Returns” (with Patrick Dennis, Steven Perfect, and Kenneth Wiles). *Financial Analysts Journal* 51, no. 3 (1995): 47–56.
- “Diagnosing Asset Pricing Models Using the Distribution of Asset Returns.” *Journal of Finance* 46 (1991): 955–83.

## A.6. Working papers

- “A Look at GSE Performance in Meeting HUD’s Affordable Goals” (with Marsha J. Courchane).
- “The Forward Bias: Is It Risk?” (with Kerk Phillips).

## A.7. Speaking engagements

- “Wall Street Viewpoint: Investing in Companies with Asbestos Liabilities,” HB Litigation Asbestos Bankruptcy Current Trends and Future Outlook Conference, New York, NY, October 2010.
- “Subprime and Structured Finance Litigation: An Economic Overview,” IQPC Subprime and Structured Finance Litigation Conference, New York, NY, November 2008.
- “Key Economic Issues in Proving the Case,” LSI Subprime Lending Crisis Conference, New York, NY, March 2008.
- “Auditing Your Wage and Hour Data,” ACI Wage and Hour Conference, San Francisco, CA, October 2006.
- “A Look at GSE Performance in Meeting HUD’s Affordable Goals,” Annual AREUEA Conference, San Diego, CA, January 2004.
- “The Forward Bias: Is It Risk?” Econometric Society Winter Meetings, Chicago, IL, January 1998.
- “Market Efficiency, Abnormal Returns and the Misspecification of the Risk-Discounting Measure,” Econometric Society Winter Meetings, New Orleans, LA, January 1997.
- “Estimation and Diagnostics of Discount Rate Processes,” American Finance Association Conference, Boston, MA, January 1994; Society for Economic Dynamics and Control Conference, Los Angeles, CA, July 1994.
- “Diagnosing Asset Pricing Models Using the Distribution of Asset Returns,” American Finance Association Conference, Washington, DC, December 1990.
- Economic and finance workshops at Columbia University, New York University, Duke University, University of Southern California, University of California-Davis, Virginia Tech University, University of Lausanne, Norwegian School of Management, and the Stockholm School of Economics.

## Appendix B. Testimony, declarations, and reports in the last four years

Below is a list of cases in which I have prepared an expert report or declaration and/or deposition or trial testimony in the past four years. I have indicated my involvement in each case. I may or may not have copies of the expert reports or the transcripts of any testimony. Except where indicated otherwise, my work in the cases below is subject to protective orders limiting or preventing disclosure.

- *Flintkote Co. v. General Accident Assurance Co. of Canada*, No. C 04-1827 MHP (N.D. Cal. May 7, 2004). Expert report and deposition testimony: 2010.
- *Opal Jones v. Wells Fargo Bank*, No. BC337821 (Cal. Super. Ct. L.A. Cnty. Aug. 5, 2005). Declarations and deposition and trial testimony: 2010–2011.
- *Liotine v. CDW-Government, Inc.*, No. 05-CV-033 (S.D. Ill. Jan. 19, 2005). Expert report: 2011.
- *Moses v. Dodaro*, No. 06-01712 EGS (D.D.C. Oct. 4, 2006). Declarations: 2011.
- *Twin City Fire Ins. Co. v. Arch Insurance Group, Inc.*, No. 602062/09 (N.Y. Sup. Ct. N.Y. Cnty. Jul. 2, 2009). Expert report and deposition testimony: 2011.
- *In re Plant Corp.*, No. 09-31347 TC (Bankr. N.D. Cal. May 20, 2009). Expert reports, deposition testimony, and declaration: 2011.
- *CoreLogic Info. Solutions, Inc. v. Fiserv, Inc.*, No. 2:10-cv-132-RSP (E.D. Tex. Apr. 16, 2010). Expert reports and deposition and trial testimony: 2012.
- *Financial Guaranty Ins. Co. v. Countrywide Home Loans, Inc.*, No. 650736/09 (N.Y. Sup. Ct. N.Y. Cnty. Dec. 11, 2009). Expert report and deposition testimony: 2013.
- *In re Garlock Sealing Tech. LLC*, No. 10-31607 (Bankr. W.D.N.C. Jun. 5, 2010). Expert report and deposition and trial testimony: 2013.
- *In re TFT-LCD (Flat Panel) Antitrust Litigation*, MDL No. 1827 (N.D. Cal. 2010). Expert reports and deposition testimony: 2013.
- *Syncora Guarantee Inc. v. EMC Mortgage Corporation*, No. 09-cv-3106-PAC (S.D.N.Y. Mar. 31, 2009). Expert report: 2013.
- *Assured Guaranty Municipal Corp. v. DB Structured Prod., Inc.*, No. 650705/09 (Sup. Ct., N.Y. Cnty. filed 2011). Expert reports and deposition testimony: 2013–2014.
- *SACO I Trust 2006-5 v. EMC Mortgage LLC*, No. 651820/2012 (N.Y. Sup. Ct. N.Y. Cnty. filed 2012). Declarations: 2013–2014 (publicly available).

- *MASTR Adjustable Rate Mortgages Trust 2006-OA2 v. UBS Real Estate Securities*, No. 12-cv-7322 (S.D.N.Y. Sept. 28, 2012). Expert report, declaration, and deposition testimony: 2014.
- *Home Equity Mortgage Trust Series 2006-1 v. DLJ Mortgage Capital, Inc.*, No. 156016/2012 (N.Y. Sup. Ct. N.Y. Cnty. filed 2012). Declaration: 2014 (publicly available).
- *CIFG Assurance N. Am., Inc. v. Bank of Am., N.A.*, No. 654028/2012 (N.Y. Sup. Ct. N.Y. Cnty. filed 2012). Expert report: 2014 (publicly available).
- *In re Countrywide Fin. Corp. Mortg.-Backed Sec. Litig.*, No. 11-ML-02265-MRP (C.D. Cal. filed 2011). Expert reports: 2014.
- *Capital Ventures Int'l v. UBS Securities LLC*, No. 1:11-cv-11937-DJC (D. Mass. filed 2011). Expert report: 2014.

## Appendix C. List of materials relied upon

Below is a list of materials that I considered in reaching my opinions. Should I identify any additional materials that were omitted from this list, I will supplement accordingly.

### C.1. Legal documents

- Asset-Backed Securities (Regulation AB), 17 C.F.R. § 229.1101 (2012).
- Complaint, *Ambac Assurance Corp., et al. v. Countrywide Home Loans, Inc., et al.*, No. 651612/2010 (N.Y. Sept. 28, 2010).
- Decision and Final Order Confirming the Rehabilitator's Plan of Rehabilitation, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. Jan. 24, 2011). Available at <http://ambacpolicyholders.com/storage/courtfilings/01242011/Decision%20and%20Final%20Order%20Confirming%20the%20Rehabilitator%27s%20Plan%2000544318.PDF>.
- Deferred Payment Notice, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 20, 2014). Available at <http://ambacpolicyholders.com/storage/courtfilings/06202014/Deferred-Payment-Notice-6-20-14.pdf>.
- First Amended Complaint, *Ambac Assurance Corp., et al. v. Countrywide Home Loans, Inc., et al.*, No. 651612/2010 (N.Y. Sept. 8, 2011).
- IPP Notice, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 20, 2014). Available at <http://ambacpolicyholders.com/storage/courtfilings/06202014/IPP-Notice.pdf>.
- *MBIA Ins. Corp. v. Countrywide Home Loans, Inc.*, 2013 N.Y. Misc. LEXIS 1818 (N.Y. Sup. Ct., N.Y. Cnty, Apr. 29, 2013).
- New York Civil Practice Law and Rules, § 5004 (2014).
- Notice of Effective Date of Plan of Rehabilitation, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 12, 2014). Available at <http://ambacpolicyholders.com/storage/rehabilitation/amended/Notice-of-Effective-Date-of-Plan-of-Rehabilitation.pdf>.

- Order Granting Rehabilitator’s Motion for Approval to Commence Making Interim Cash Payments on Permitted Policy Claims, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 4, 2012). Available at <http://ambacpolicyholders.com/storage/courtfilings/06052012/Payments%20order.PDF>.
- Order Granting the Rehabilitator’s Motion to Amend the Plan of Rehabilitation, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 11, 2014). Available at <http://ambacpolicyholders.com/storage/courtfilings/06112014/OrderGrantingMotiontoAmendPlan6-11-14.pdf>.
- Order for Rehabilitation, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. Mar. 24, 2010). Available at <http://ambacpolicyholders.com/storage/courtfilings/Ambac%20-%20Order%20for%20Rehabilitation%203-24-10.pdf>.
- Order for Temporary Injunctive Relief, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. Mar. 24, 2010). Available at March 24, 2010 at <http://ambacpolicyholders.com/storage/courtfilings/Ambac%20-%20Order%20for%20Temp%20Injunctive%20Relief%203-24-10.pdf>
- Plan of Rehabilitation, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. Jan. 24, 2011). Available at <http://ambacpolicyholders.com/storage/courtfilings/01262011/Plan%20of%20Rehabilitation%20-%20Final%201-24-11%20w%20Exhibits.pdf>.
- Plan of Rehabilitation, as Amended, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 12, 2014). Available at <http://ambacpolicyholders.com/storage/rehabilitation/amended/Ambac-Plan-as-Amended-6-12-14.pdf>.
- Second Amended Complaint, *Ambac Assurance Corp., et al. v. Countrywide Home Loans, Inc., et al.*, No. 651612/2010 (N.Y. May 28, 2013).

## C.2. Bates-numbered documents

- ABK-CW00000095–0096 (Ambac Assurance Corporation Specialized Credit Committee Credit Decision Document CWABS 2004-K (September 15, 2004)).
- ABK-CW00000136–0137 (Ambac Assurance Corporation Specialized Credit Committee Credit Decision Document CWABS 2004-L) (September 17, 2004)).
- ABK-CW00000237–0238 (Ambac Assurance Corporation Specialized Credit Committee Credit Decision Document CWABS 2004-T (December 10, 2004)).

- ABK-CW00000384–0385 (Ambac Assurance Corporation Specialized Credit Committee Credit Decision Document CWABS 2005-F (September 9, 2005)).
- ABK-CW00000461 (Ambac Assurance Corporation Specialized Credit Committee Credit Decision Document CWABS 2006-13 (July 2006)).
- ABK-CW00000523–0606 (Assurance Corporation Specialized Credit Committee Credit Decision Document CWHEQ 2006-S1 (March 20, 2006)).
- ABK-CW00000607–0608 (Assurance Corporation Specialized Credit Committee Credit Decision Document CWHEQ 2005-L (December 15, 2005)).
- ABK-CW00000708–0709 (Assurance Corporation Specialized Credit Committee Credit Decision Document CWHEQ 2006-B (March 10, 2006)).
- ABK-CW00000792–0793 (Assurance Corporation Specialized Credit Committee Credit Decision Document CWHEQ 2006-C (March 20, 2006)).
- ABK-CW00000876–0877 (Assurance Corporation Specialized Credit Committee Credit Decision Document CWHEQ 2006-S4 (August 23, 2006)).
- ABK-CW00000937–0938 (Assurance Corporation Specialized Credit Committee Credit Decision Document (September 21, 2006)).
- ABK-CW00001197–1318 (Indenture CWABS 2004-K (September 29, 2004)).
- ABK-CW00001319–1394 (Sale and Servicing Agreement CWABS 2004-K (September 29, 2004)).
- ABK-CW00001395–1426 (Purchase Agreement CWABS 2004-K (September 29, 2004)).
- ABK-CW00001506–1521 (Administration Agreement CWABS 2004-K (September 29, 2004)).
- ABK-CW00001571–1609 (Insurance and Indemnity Agreement CWABS 2004-K (September 29, 2004)).
- ABK-CW00002389–2510 (Indenture CWABS 2004-L (September 29, 2004)).
- ABK-CW00002511–2586 (Sale and Servicing Agreement CWABS 2004-L (September 29, 2004)).
- ABK-CW00002587–2618 (Purchase Agreement CWABS 2004-L (September 29, 2004)).
- ABK-CW00002698–2713 (Administration Agreement CWABS 2004-L (September 29, 2004)).
- ABK-CW00002762–2800 (Insurance and Indemnity Agreement CWABS 2004-L (September 29, 2004)).
- ABK-CW00003501–3622 (Indenture CWABS 2004-M (September 29, 2004)).

- ABK-CW00003623–3698 (Sale and Servicing Agreement CWABS 2004-M (September 29, 2004)).
- ABK-CW00003699–3730 (Purchase Agreement CWABS 2004-M (September 29, 2004)).
- ABK-CW00003809–3824 (Administration Agreement CWABS 2004-M (September 29, 2004)).
- ABK-CW00003872–3911 (Insurance and Indemnity Agreement CWABS 2004-M (September 29, 2004)).
- ABK-CW00004609–4730 (Indenture CWABS 2004-N (September 29, 2004)).
- ABK-CW00004731–4806 (Sale and Servicing Agreement CWABS 2004-N (September 29, 2004)).
- ABK-CW00004807–4838 (Purchase Agreement CWABS 2004-N (September 29, 2004)).
- ABK-CW00004918–4933 (Administration Agreement CWABS 2004-N (September 29, 2004)).
- ABK-CW00004982–5019 (Insurance and Indemnity Agreement CWABS 2004-N (September 29, 2004)).
- ABK-CW00005875–5950 (Sale and Servicing Agreement CWABS 2004-O (September 29, 2004)).
- ABK-CW00006753–6876 (Indenture CWABS 2004-T (December 23, 2004)).
- ABK-CW00006877–6939 (Sale and Servicing Agreement CWABS 2004-T (December 23, 2004)).
- ABK-CW00006940–6972 (Purchase Agreement CWABS 2004-T (December 23, 2004)).
- ABK-CW00007053–7068 (Administration Agreement CWABS 2004-T (December 23, 2004)).
- ABK-CW00007118–7155 (Insurance and Indemnity Agreement CWABS 2004-T (December 23, 2004)).
- ABK-CW00007997–8264 (Pooling and Servicing Agreement CWABS 2005-16 (December 1, 2005)).
- ABK-CW00008606–8642 (Certificate Guaranty Insurance Policy CWABS 2005-16 (December 28, 2005)).
- ABK-CW00008606–8642 (Insurance and Indemnity Agreement CWABS 2005-16 (December 28, 2005)).
- ABK-CW00009840–10108 (Pooling and Servicing Agreement CWABS 2005-17 (December 1, 2005)).
- ABK-CW00010462–0498 (Certificate Guaranty Insurance Policy CWABS 2005-17 (December 29, 2005)).



- ABK-CW00010462–0498 (Insurance and Indemnity Agreement CWABS 2005-17 (December 29, 2005)).
- ABK-CW00012144–2440 (Pooling and Servicing Agreement CWABS 2006-11 (June 1, 2006)).
- ABK-CW00013334–3373 (Certificate Guaranty Insurance Policy CWABS 2006-11 (June 29, 2006)).
- ABK-CW00013334–3373 (Insurance and Indemnity Agreement CWABS 2006-11 (June 29, 2006)).
- ABK-CW00015953–6247 (Pooling and Servicing Agreement CWABS 2006-13 (July 1, 2006)).
- ABK-CW00016571–6608 (Certificate Guaranty Insurance Policy CWABS 2006-13 (July 28, 2006)).
- ABK-CW00016571–6608 (Insurance and Indemnity Agreement CWABS 2006-13 (July 28, 2006)).
- ABK-CW00017778–7906 (Indenture CWHEQ 2005-L (December 29, 2005)).
- ABK-CW00017907–7978 (Sale and Servicing Agreement CWHEQ 2005-L (December 29, 2005)).
- ABK-CW00017979–8014 (Purchase Agreement CWHEQ 2005-L (December 29, 2005)).
- ABK-CW00018118–8139 (Administration Agreement CWHEQ 2005-L (December 29, 2005)).
- ABK-CW00018200–8328 (Certificate Guaranty Insurance Policy CWHEQ 2005-L (December 29, 2005)).
- ABK-CW00018200–8328 (Insurance and Indemnity Agreement CWHEQ 2005-L (December 29, 2005)).
- ABK-CW00019059–9192 (Indenture CWHEQ 2005-F (September 29, 2005)).
- ABK-CW00019384–9400 (Administration Agreement CWHEQ 2005-F (September 29, 2005)).
- ABK-CW00019453–9492 (Certificate Guaranty Insurance Policy CWHEQ 2005-F (September 29, 2005)).
- ABK-CW00019453–9492 (Insurance and Indemnity Agreement CWHEQ 2005-F (September 29, 2005)).
- ABK-CW00019606–9725 (Indenture CWHEQ 2006-B (March 29, 2006)).
- ABK-CW00019726–9807 (Sale and Servicing Agreement CWHEQ 2006-B (March 29, 2006)).
- ABK-CW00019997–20012 (Administration Agreement CWHEQ 2006-B (March 29, 2006)).

- ABK-CW00020065–0106 (Certificate Guaranty Insurance Policy CWHEQ 2006-B (March 29, 2006)).
- ABK-CW00020065–0106 (Insurance and Indemnity Agreement CWHEQ 2006-B (March 29, 2006)).
- ABK-CW00022198–2235 (Purchase Agreement CWHEQ 2006-C (March 30, 2006)).
- ABK-CW00022904–3142 (Pooling and Servicing Agreement CWHEQ 2006-S1 (March 1, 2006)).
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## C.6. Web-based and other corporate sources

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## Appendix D. Damages modeling

- (62) In order to calculate damages for all of the scenarios that I have examined, it is necessary to both forecast the future performance of the loans remaining in the pool as of the end of the Historical Period for each Securitization and to account for the facts that (1) the population material defect rate as extrapolated by Dr. Cowan is based on a sample of loans and (2) the material defect rate does not specifically identify which loans remaining in the pool are materially defective (outside of the sample of loans examined by Mr. Johnson and the known repurchases). To accomplish this, I forecast the probability of a loan being charged off or prepaid in a given month after the end of the Historical Period. I then conduct Monte Carlo simulations that, in each iteration, identify the loans that will charge-off and prepay in the future based on the forecasted probabilities as well as the materially defective loans to repurchase based on the material defect rates calculated by Dr. Cowan. The rest of this appendix describes the forecasting method and Monte Carlo simulation in greater detail.

### D.1. Forecasting

#### D.1.1. Forecasting for loans that are not in default as of the end of the Historical Period

- (63) A loan can terminate early through either default or prepayment. These two types of risk “compete” with each other to be the first observed event. In other words, the occurrence of default prevents a loan from being prepaid, and vice versa. This idea of “competing risk” is widely adopted by academic research, applied by Federal Reserve banks, and implemented by commercial banks to evaluate the performance of mortgage loans.<sup>75</sup>
- (64) In my analysis, I calculate two risk-specific hazard functions: one for default and one for prepayment. The hazard function represents the probability that an event will occur (in this case, a default or a prepayment) conditioned on the fact that the mortgage has “survived” (that no default or prepayment has occurred) up to a certain point in time. I use default (in my analysis, 180+ days delinquent or a status of foreclosure or REO) rather than liquidation because it is a measure of the borrower’s failure to make payments on the loan.

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<sup>75</sup> See Jason P. Fine and Robert J. Gray, “A Proportional Hazards Model for the Subdistribution of a Competing Risk,” *Journal of the American Statistical Association* 94 (1999): 496–509; Yongheng Deng, John M. Quigley, and Robert Van Order, “Mortgage Terminations, Heterogeneity and the Exercise of Mortgage Options,” *Econometrica* 68, no. 2 (2000): 275–307; Anthony Pennington-Cross and Giang Ho, “The Termination of Subprime Hybrid and Fixed-Rate Mortgages,” *Real Estate Economics* 38, no. 3 (2010): 399–426.

- (65) I parameterize the hazard functions of default and prepayment as functions of deal age and macroeconomic variables. The macroeconomic variables include the growth rate of housing prices as well as six-month lagged interest rates.<sup>76</sup> The parameters are estimated by applying standard regression techniques using the servicing data for each loan group in the Historical Period.<sup>77</sup> Using the estimated parameters, I then forecast the future probabilities of default and prepayment in each loan group.
- (66) There is a lag between default and charge-off in the historical data, so, within each loan group, I calculate the historic average number of months ( $n$ ) from the time a loan defaults to the time a loss is recognized. For the loans that remain in the pool (i.e. have not prepaid or been liquidated) but are not in default as of the end of the Historical Period, I assume in my model that once a loan has defaulted, it will be charged off that number of months later. I calculate this average based on the loans that charge off prior to February 2012 because, at that point in time, I observe a change in servicer behavior that allows loans to remain in the pool for a longer period of time. This change coincides with the National Mortgage Settlement in February 2012 between the federal government, 49 state attorneys general, and the nation's five largest mortgage servicers (including Bank of America Corporation),<sup>78</sup> which would have the effect of temporarily slowing the charge off process. Hence, I assume in my analysis that the servicer reverts to their pre-February 2012 behavior in the future.

#### **D.1.2. Forecasting for loans that are in default as of the end of the Historical Period**

- (67) For the loans that are in default as of the end of the Historical Period, I assume that they will all eventually charge off and hence a loss will eventually be recognized. I determine the timing of liquidation as follows.
- (68) As of the end of the Historical Period, if a loan has been in default for less than  $n$  months (determined as described in Paragraph (66)), I assume that it will charge off in the  $n$ th month since it went into default. For example, if a loan had been in default for 12 months and the average time between

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<sup>76</sup> Both the historical data and forecasts of house prices are from Moody's Analytics. The historical data of interest rate are obtained from the Board of Governors of the Federal Reserve System, and the forecasts of interest rate are obtained from the Budget and Economic Outlook by the Congressional Budget Office.

<sup>77</sup> I have experimented with fitting the hazard functions by using linear, quadratic, cubic, quartic, and quintic polynomials of the logarithm of loan age. I chose a quadratic function for the default hazard and a linear function for the prepayment hazard because they produced a good fit of the data and led to future default and prepayment rates that exhibit similar trends with industry standard. I take the natural log of the hazard functions before I estimate the parameters so that the fitted hazard functions are always positive.

<sup>78</sup> United States Department of Justice, "Federal Government and State Attorneys General Reach \$25 Billion Agreement with Five Largest Mortgage Servicers to Address Mortgage Loan Servicing and Foreclosure Abuses," news release, Feb. 9, 2012, *available at* <http://www.justice.gov/opa/pr/federal-government-and-state-attorneys-general-reach-25-billion-agreement-five-largest>.

default and charge-off was 18 months, I assume the loan will charge off six months after the end of the Historical Period.

- (69) If, as of the end of the Historical Period, a loan has been in default for at least  $n$  months but no more than 84 months (seven years) and hence may have been affected by the change in servicer behavior described above, I assume such loans will be charged off sometime in the period from the start of the Future Period to the 84th month since it entered default, assuming an equal probability in each month during that period. If the loan has been in default for more than 84 months as of the end of the Historical Period, I assume that it will be charged off sometime within one year of the start of the Future Period, again assuming an equal probability in each month during that period.

## D.2. Monte Carlo simulations

- (70) Following Mr. Johnson's analysis of the random sample, Dr. Cowan determined the extrapolated percentage of loans in the underlying pools of mortgages, or subsets of those pools, that are materially defective. The forecasting analysis described above determines the probability that a loan will prepay or default in a given month in the future, as well as the probabilities of when a loan will liquidate given default. These calculations do not specifically identify all of the loans that are materially defective (outside of the sample of loans found materially defective by Mr. Johnson and the loans repurchased by Countrywide) or which loans will prepay or default in the future. To account for this, I perform a Monte Carlo simulation to calculate damages in the Repurchase Scenarios.<sup>79</sup>
- (71) Monte Carlo simulation is a widely used technique that employs repeated iterations of a model (the Securitization Waterfall, in this case) to determine the range or distribution of outcomes (damages, in this case) when only the probabilities of underlying factors (e.g., whether a loan is materially defective) or events (e.g., default or prepayment) are known or have been estimated.
- (72) I discuss below how the Monte Carlo simulation was used to calculate damages for the Repurchase Scenarios, as well as Future Claims Payment Damages.

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<sup>79</sup> Monte Carlo simulations have been widely used in solving practical problems in mathematics, statistics, physics, engineering, biology, business, and finance. See, e.g., Nicholas Metropolis and Stan Ulam, "The Monte Carlo Method," *Journal of the American Statistical Association* 44 (1949): 335–41; Nicholas Metropolis, "The Beginning of the Monte Carlo Method," *Los Alamos Science* no. 15 (1987): 125–30, available at <http://jackman.stanford.edu/mcmc/metropolis1.pdf>; Ilya M. Sobol, *A Primer for the Monte Carlo Method* (Boca Raton, FL: CRC Press, 1994); Jun S. Liu, *Monte Carlo Strategies in Scientific Computing* (New York: Springer, 2001); Christian P. Robert and George Casella, *Monte Carlo Statistical Methods* (New York: Springer, 2004); Paul Glasserman, *Monte Carlo Methods in Financial Engineering* (New York: Springer, 2004); Don L. McLeish, *Monte Carlo Simulation and Finance* (Hoboken, NJ: John Wiley & Sons, Inc., 2004); Reuven Y. Rubinstein and Dirk P. Kroese, *Simulation and the Monte Carlo Method*, 2nd ed. (Hoboken, NJ: John Wiley & Sons, Inc., 2007); Ronald W. Shonkwiler and Franklin Mendivil, *Explorations in Monte Carlo Methods* (New York: Springer, 2009).

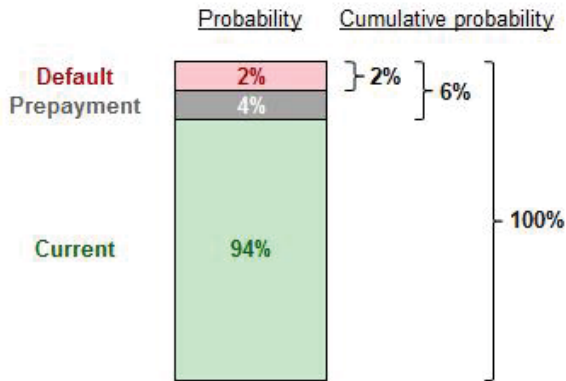
### D.2.1. Future loan performance

- (73) In order to calculate Future Claims Payment Damages and the future component of Repurchase Damages, I forecast the performance of each loan remaining in the pool. For loans not in default as of the end of the Historical Period, I perform the following steps:
1. Draw a set of random numbers from a uniform distribution between zero and one that are then assigned to each loan not in default as of the end of the Historical Period;
  2. Assume that loans with a corresponding random number that are at or below their respective probability of default (as determined by the model) for that month will default that month and later charge off as described in Paragraph (66);
  3. Assume that loans with a corresponding random number that are between their probability of default and the probability of default plus the probability of prepayment for that month will prepay that month;
  4. Assume that loans with a corresponding random number that are above the sum of the associated probability of default and probability of prepayment for that month will make scheduled principal and interest payments that month;<sup>80</sup>
  5. Repeat the above four steps for each month until the termination date of the Securitizations, removing loans that default or prepay in the previous month, to generate a future stream of cash flows associated with each mortgage.
- (74) For illustrative purposes, suppose that the probabilities of default and prepayment for a given loan in a certain month in the future were determined to be 2% and 4%, respectively, as displayed in Figure 14. Once the loan is assigned a random number, its status for the month (default, prepay, or make scheduled principal and interest payments and, hence, remain current) is determined by where its random number falls in the cumulative probability distribution. If, for example, the loan is assigned a random number of 0.035 (3.5%), then it would be assumed to prepay that month because the random number falls between 2% and 6%. Similarly, if the random number associated with the loan were 0.784 (78.4%), then the loan would be assumed to continue to make appropriate payments that month because the random number falls between 6% and 100%.

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<sup>80</sup> For these loans that continue to perform, I calculate scheduled payments by amortizing the loan's balance in accordance with its loan terms and maturity date.

**Figure 14: Illustration of probabilities for forecasting future loan performance**

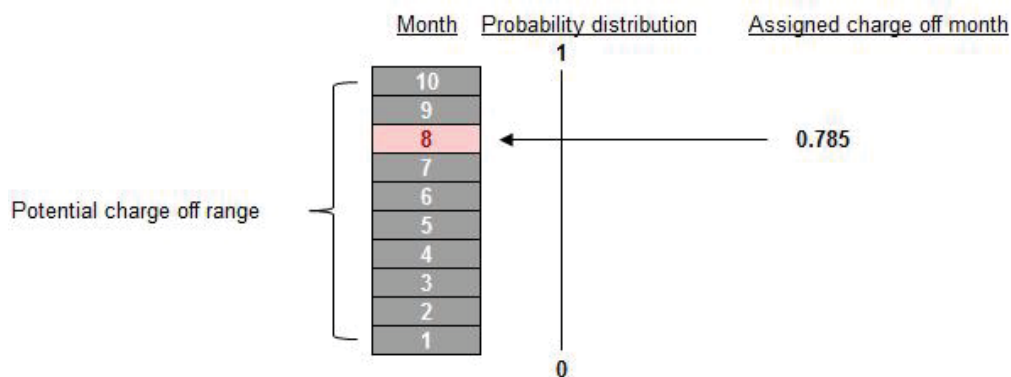


(75) For loans that have been in default longer than the historical average  $n$  as of the end of the Historical Period, I performed the following steps to determine when such loans will charge off:

1. Draw a set of random numbers from a uniform distribution between zero and one that are then assigned to such loans;
2. For each loan, divide the interval between zero and one into  $x$  equal subintervals where  $x$  is the maximum number of months until the loan should be charged off as described in Paragraph (69).
3. Assume that loans with a corresponding random number that falls in the  $i$ th subinterval will charge off  $i$  months into the Future Period (note that for loans that have been in default less than the historical average,  $n$  will be assumed to charge off as described in Paragraph (68)).

(76) For illustrative purposes, suppose that, as described in Paragraph (71), it was determined that a given loan should be charged off sometime within the next 10 months. Accordingly, the interval zero to one would be divided into 10 equal subintervals as displayed in Figure 15. Once the loan is assigned a random number, the month in which it will charge off is determined by the subinterval that its random number falls within. If, for example, the loan is assigned a random number of 0.785, then it would be assumed to charge off in the eighth month after the Historical Period because it falls in the eighth subperiod (i.e., between 0.7 and 0.8).

**Figure 15: Illustration of charging off a loan that is in default as of the end of the Historical Period**



### D.2.2. Calculating Future Claims Payment Damages

- (77) The cash flows generated by the process described in Section D.2.1 are passed through the Waterfall and determine the net payments that Ambac would make to the Trust (claims and accrued interest less premiums and reimbursement). The processes described above are repeated 10,000 times to generate a distribution of possible outcomes.<sup>81</sup> Each outcome is discounted to the present, and the median result is selected as the most likely outcome.

### D.2.3. Calculating damages for the Repurchase Scenarios

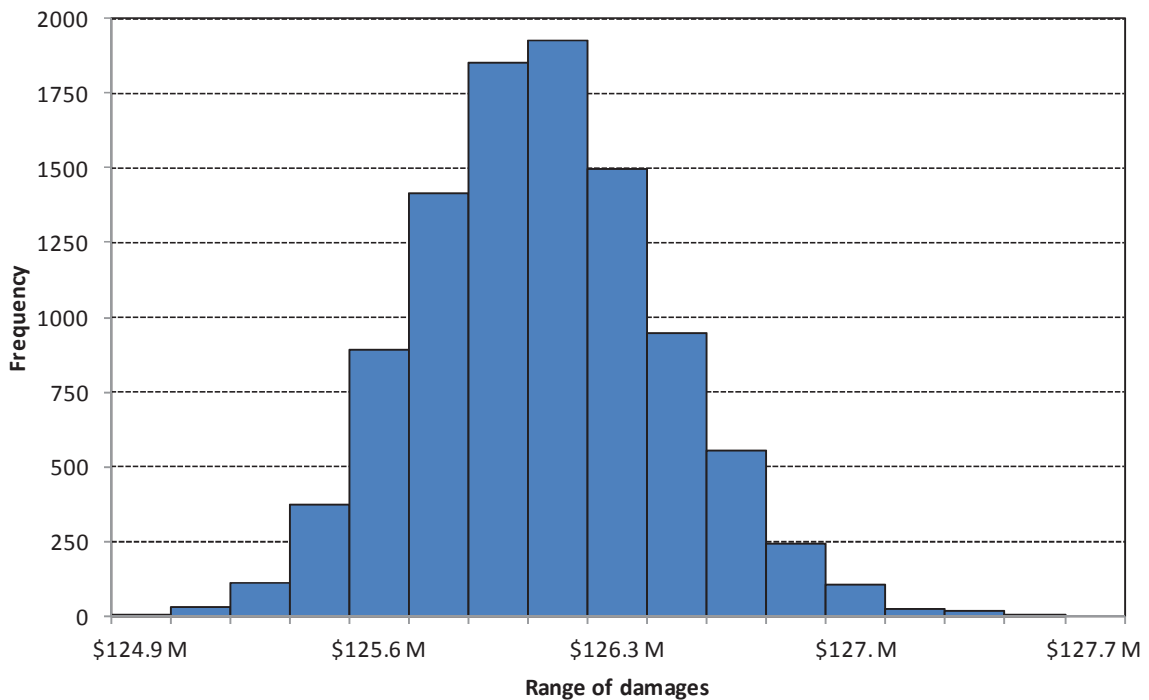
- (78) To calculate damages in the Repurchase Scenarios, I perform the following steps:
1. Determine future loan performance as described in Section D.2.1;
  2. Draw a defect rate from the distribution surrounding the extrapolated breach rate based on the analysis by Dr. Cowan, accounting for the loans that are designated as materially defective in each iteration (the sampled loans identified by Mr. Johnson as materially defective and those loans that Countrywide agreed to repurchase);
  3. Draw a set of random numbers from a uniform distribution between zero and one that are then assigned to each loan underlying the Securitization;
  4. Order the loans based upon each loan's associated random number (from the smallest to the largest), and assume that all loans whose corresponding random number is at or below the adjusted breach rate are materially defective;

<sup>81</sup> 10,000 is a reliable and commonly used number of iterations in Monte Carlo experiments. See Christopher Mooney, *Monte Carlo Simulation* (Thousand Oaks, CA: Sage Publications, Inc., 1997), at 48–49; Terence C. Mills and Raphael N. Markellos, *The Econometric Modelling of Financial Time Series*, 3rd ed. (New York: Cambridge University Press, 2008) at 335; Dean Corbae, Steven N. Durlauf, and Bruce E. Hansen, eds., *Econometric Theory and Practice: Frontiers of Analysis and Applied Research* (Cambridge, UK: Cambridge University Press, 2006), at 174.

5. Assume that each materially defective loan is repurchased on the appropriate Repurchase Scenario date and calculate the Repurchase Amount;<sup>82</sup>
6. Pass the corresponding Repurchase Amounts through the Waterfall and determine the net payments that Ambac would have made to the Trust (claims and accrued interest less premiums and reimbursement) had the materially defective loans been repurchased; and
7. Calculate the difference between the amount calculated above and the actual net amount paid by Ambac to the Trust.

(79) The processes described above are repeated 10,000 times to generate a distribution of possible outcomes. The median result is selected as the most likely outcome. For example, Figure 16 displays the distribution of simulated outcomes for the Report Date Scenario. Appendix H contains the distribution of damages calculations for all of the other damages scenarios.

**Figure 16: Distribution of Repurchase Damages under Report Date Scenario**



<sup>82</sup> I calculate the Repurchase Amount according to the definition of “Purchase Price” in the Indenture or PSA, as applicable, for each Securitization. *See, e.g.*, CWABS 2005-16 PSA, at 56 (ABK-CW00007997, at -058); CWHEQ 2006-S1 PSA, at 34 (ABK-CW00022904, at -943); CWHEQ 2006-B, at 1-28 (CWAMBAC0016406834, at -863).

## Appendix E. BBB and A zero-coupon yields

Figure 17: USD Finance BBB zero-coupon yield by maturity as of September 22, 2014

Maturity	BBB yield	A yield
3M	0.591	0.315
6M	0.692	0.412
1Y	0.893	0.608
2Y	1.355	1.032
3Y	1.795	1.469
4Y	2.241	1.884
5Y	2.652	2.253
6Y	2.989	2.557
7Y	3.335	2.868
8Y	3.615	3.130
9Y	3.860	3.364
10Y	4.092	3.567
15Y	4.898	4.320
20Y	5.011	4.487

Source: Bloomberg



## Appendix F. Servicing data

- (80) I relied upon servicing data for the loans underlying the Securitizations to model the cash flows into each Trust at the loan level. Monthly servicing data that details cash flows from each individual loan are publicly available through BNY Mellon for the First Lien and CES Securitizations. I received servicing data for the HELOC securitizations from counsel.<sup>83</sup>
- (81) Using this servicing data, I was able to replicate the aggregate principal and interest inflows into the Waterfalls as stated in the monthly trustee reports. In cases in which the aggregated values from the servicing data differed from the values reported by the Trustees due to data constraints, I adjusted the servicing data in order to replicate the trustee report values. I discuss any data constraints and adjustments below.

### F.1. Principal collections

- (82) The principal-related cash flows necessary for replicating the Trust distributions in the Historical Period include principal collections, draws, charge-off amounts, and subsequent recoveries. I calculate these values for each trust from the following servicing data fields:
- Scheduled principal collections
  - Unscheduled principal collections, including partial and full prepayments
  - Curtailments collected
  - Mortgage insurance principal
  - Draws
  - Charge-off amounts
  - Liquidation proceeds
  - Subsequent recoveries
  - Repurchase amounts
  - “work940” and “tran940” fields

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<sup>83</sup> Specifically, the servicing data for the CWABS 2005-16, CWABS 2005-17, CWABS 2006-11, CWABS 2006-13, CWHEQ 2006-S1, CWHEQ 2006-S4, and CWHEQ 2006-S6 Securitizations can be downloaded from BNY Mellon Corporate Trust Investor Reporting at <https://gctinvestorreporting.bnymellon.com/>. BNY Mellon is the Securities Administrator for these Securitizations. The servicing data for the CWABS 2004-K, CWABS 2004-L, CWABS 2004-M, CWABS 2004-N, CWABS 2004-O, CWABS 2004-T, CWHEQ 2005-F, CWHEQ 2005-L, CWHEQ 2006-B, and CWHEQ 2006-C Securitizations were provided by counsel.

- (83) To produce the inputs for the Waterfalls, I aggregate the loan-level servicing data for the principal inflows to each loan group in each Trust on a monthly basis and match these to the values reported by the Trustee. In cases in which the aggregated values do not exactly match the trustee report values, I distribute the discrepancy amount pro rata among the active loans to reconcile the difference. For example, if a loan group contains two loans that made principal payments of \$400 and \$100 in a given month according to the servicing data, but the trustee report shows total principal payments of \$505 in that month, then the loans would be adjusted to have principal payments of \$404 and \$101 to resolve the \$5 difference in the aggregate amounts.
- (84) In addition to standardizing cash flows recorded in the trustee reports and servicing data, I made minor adjustments to principal collections, draws, charge-off amounts, repurchases, and liquidation proceeds to be internally consistent within the loan-level data. For example, if the servicing data reports a loan with a beginning balance of \$10,000 and an ending balance of \$11,000 but no corresponding change in principal collection cash flows, I infer that the loan incurred a net draw of \$1,000 for that month. Accordingly, in such cases I adjust the cash flows to equal those implied by the behavior of the loans' beginning and ending balances.

## F.2. Interest collections

- (85) The interest data used to replicate the Trust distributions in the Historical Period include interest collections net of servicing fees as well as the interest rates on each loan. These values are calculated from the following servicing data fields:
- Scheduled net interest
  - Servicing fees
  - Trustee fees (calculated using beginning balances)
  - Mortgage insurance interest
  - Mortgage insurance premiums
  - Other interest adjustments
  - Cumulative unpaid interest at liquidation
  - Stop advance net interest
  - Net loan rate
- (86) In order to calculate the net interest remittances, I aggregate the loan-level servicing data for net interest by loan group on a monthly basis and match the totals to the values reported by the Trustee. When the net interest values in the trustee reports cannot be replicated with the aggregated loan-level

data, I distribute the discrepancy amount to the loans on a pro rata basis weighted by net interest amount.

- (87) I also employ net interest adjustments at the loan level to account for outside cash flows into the trusts. For example, in April 2011 multiple trusts received large settlement amounts that were distributed within the Waterfalls as additional interest funds.<sup>84</sup> These settlement amounts are not reflected within the loan-level servicing data. In order to include these additional funds as interest remittances to the Waterfalls, I adjust the net interest payments on all loans pro rata in order to match the interest remittances reported by the Trustees.

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<sup>84</sup> I was advised that the large interest remittances reported by trustees in April 2011 for CWHEQ 2005-F, CWHEQ 2006-B, and CWHEQ 2006-C include funds from a settlement between AIG and Bank of America.

## Appendix G. Securitization Waterfalls

- (88) When principal and interest payments are collected from the loans in each Securitization, the Trustee passes those payments to the certificateholders (among others) in accordance with the Waterfall.<sup>85</sup> The Trustee reports in the Historical Period record the cash flows actually passed through a given Waterfall to the participants in the Securitization. Accordingly, I sought to match the output of each of my models of the Waterfalls (“Waterfall Models”) to those figures in the Trustee reports such that a given Waterfall Model replicates the associated Trust’s actual historical distributions, by using the Indentures, I&I Agreements, SSAs, PSAs, MLPAs, and the Prospectus Supplements (“Waterfall Documents”) to guide my analysis.
- (89) In some instances, the Trust’s actions do not seem to comport with the rules described in the Waterfall Documents. This appendix describes these instances and the adjustments that I made in order for my Waterfall Models to be consistent with the historical distributions outlined in the Trustee reports. For the Future Periods and/or “but-for” Historical Periods (after a given Repurchase Date), the Waterfall Models follow the processes as described in the Waterfall Documents instead of what the Trustee actually did.<sup>86</sup>

### G.1. Insurer payments and premiums

- (90) Across all of the Securitizations, the claims payments made by Ambac prior to March 24, 2010, the effective date of the Order for Temporary Injunctive Relief,<sup>87</sup> were shown in the Trustee reports to have been paid in the same month that such claims were incurred. However, after the effective start of the Amended Rehabilitation Plan, the portion of claims paid in cash appears to have been paid to certificateholders on a lagged schedule. That is, in general, if a claim was incurred and reported in the Trustee report for one month, then a cash payment would be reported and distributed in a subsequent month’s report.<sup>88</sup> I replicated the actual cash flows in the historical portion of the Waterfall Models (including instances in which the expected payment was delayed by an additional month), and in the but-for Historical Periods, I applied the empirically observed lag. For Future Periods, I assumed that Ambac paid all claims concurrently as it did prior to the Order for Temporary Injunctive Relief.

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<sup>85</sup> See Footnote 52.

<sup>86</sup> In a “but-for” Historical or Future Period, cash flows to the Waterfall are either altered due to repurchases and/or forecasted. Without knowing how the Trustee would handle these cash flows in areas where the Trustee deviated from the Waterfall Documents, I chose to follow the Waterfall Documents instead.

<sup>87</sup> See Paragraph (19) and Footnote 24.

<sup>88</sup> The apparent lag in payments was two months for HELOC Securitizations and one month for all other Securitizations.

### **G.1.1. Insurance premiums**

- (91) For the HELOC and CES Securitizations, the historical premium payments to Ambac were initially based upon the beginning balances of the certificates. Subsequently,<sup>89</sup> the premium payments were calculated based on the ending balances of the certificates, as the Waterfall Documents indicate should happen.<sup>90</sup> Because the premium payments affect the distributions in the Waterfall (and therefore the ending balances of the certificates), this results in a circular calculation. In the Waterfall Models, I used the actual premium paid for the Historical Period. In the but-for and Future Periods, I used the payments collected from the collateral and any repurchase amounts to approximate the ending balances of the certificates and the premiums paid.

### **G.1.2. Insurer coverage of interest shortfalls**

- (92) Interest shortfalls occur when the funds designated in the Waterfall Documents for interest payments are insufficient to make the full interest payments required. The Waterfall Documents for each First-Lien Securitization may provide for coverage of interest shortfalls from the Securitization's Insurance Policy,<sup>91</sup> but the Trustee reports for these Securitizations do not include interest shortfall amounts in calculating claims payments. These amounts are instead treated as Interest Carryforward and are reimbursed from Excess Cashflow in later months. Therefore, in the Historical Period, the Waterfall Models send the actual funds paid by Ambac into the Waterfall for distribution as loss reimbursements and allow Interest Carryforward to increase. In the but-for analysis, the Waterfall Models treat these interest shortfalls as claim amounts.

### **G.1.3. Insurer coverage of principal shortfalls**

- (93) According to the Waterfall Documents for the CWABS 2004-T Securitization, on a given Distribution Date, Ambac is responsible for making principal payments only to the extent necessary to eliminate any undercollateralization after accounting for all other principal distributions on that Distribution Date.<sup>92</sup> However, in April 2014, the amount of claims paid is more than the necessary

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<sup>89</sup> The month in which the calculation method changes varies by deal. For CWABS 2004-K, CWABS 2004-L, CWABS 2004-M, CWABS 2004-N, CWABS 2004-O, and CWABS 2004-T, it is November 2006. For CWHEQ 2005-F, it is April 2007. For CWHEQ 2005-L, it is June 2007. For CWHEQ 2006-B and CWHEQ 2006-C, it is May 2007. For the CES Securitizations, it is May 2008.

<sup>90</sup> See, e.g., CWHEQ 2006-B I&I Agreement, at 4 (ABK-CW00020065, at -071) (The "Premium" is calculated based on the Note Principal Balance "after giving effect to any distributions of principal to be made on such Payment Date"); CWHEQ 2006-S1 PSA, at 8 (ABK-CW00022904, at -917) (The "Certificate Insurance Premium" is calculated based on the certificate balances "after giving effect to any distributions of principal to be made on such Distribution Date").

<sup>91</sup> See, e.g., CWABS 2005-16 PSA, at 30-31 (ABK-CW00007997, at -032 to -033) (providing definition of "Deficiency Amount").

<sup>92</sup> See CWABS 2004-T Indenture, at Ann-1-8, -1-9 (ABK-CW00006753, at -837 to -837) (Defining "Guaranteed Principal Payment Amount," in part, as "if the Available Transferor Subordinated Amount for that Class of Notes has been reduced to zero or below, the amount of the *excess* of the related Note Principal Balance (after giving effect to all

amount and hence creates overcollateralization. The Waterfall Model matches these cash flows in the Historical Period, but any principal claims paid in the but-for or Future Period are limited to the amount needed to eliminate undercollateralization at the time of payment.

- (94) An additional deviation appears to have occurred in September 2013 for the CWHEQ 2005-F Securitization. The Trustee report for that month indicates that an insured claims payment was distributed to the Class 2-A Certificate, but the claim should have been paid to the Class 1-A Certificate. In the Historical Period, the Waterfall Model replicates this distribution, but in the but-for and Future Period, the Waterfall Model distributes the claims payment according to the proper priority.

## G.2. Calculation of certificate interest rates

- (95) In November 2008, the Trustee reports for the CWABS 2004-T, CWHEQ 2005-F, CWHEQ 2006-B, and CWHEQ 2006-C Securitizations indicate that certificate pass-through rates used by the Trustees are lower than the rates calculated per the associated Waterfall Documents.<sup>93</sup> This effectively caps the interest entitlements for the related certificates rather than generating an Interest Shortfall and associated interest claim.<sup>94</sup> In the Historical Periods, the Waterfall Models match these interest rates to calculate the interest entitlements and claims as reported in the Trustee reports. In my but-for calculations, I use the pass-through rates calculated per the documents and calculate the resulting claim payments.

## G.3. Investor losses

- (96) The Waterfall Documents for the HELOC Securitizations include language defining an Investor Loss Reduction Amount as the amount of losses on the collateral for which no principal amounts or insurer claims were paid and no overcollateralization amounts were decreased.<sup>95</sup> However, prior to July 2010, the Trustee reports for all HELOC Securitizations account for only payments of excess interest funds as principal. This results in a greater Investor Loss Reduction Amount than that calculated by using

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allocations and payments for that Class of Notes from all sources other than the Policy on that Payment Date) *over* the related Loan Group Balance (at the end of the related Collection Period”).

<sup>93</sup> This calculation includes a provision capping the certificate interest rates based on the interest rates on the loans; the additional interest that would have accrued absent this provision is not eligible for claims payments. *See* CWHEQ 2006-B Indenture, at 1–3 (CWAMBAC0016406834, at -838). My calculations according to this provision are sufficiently high so as not to be a limiting factor.

<sup>94</sup> *See* CWHEQ 2005-F Indenture, § 8.03(c) (ABK-CW00019059, at -116–117) (providing for the “Application of Subordinated Transferor Collections”). I note that the Trustee report for the CWHEQ 2006-B Securitization does indicate a claim was paid, but the claim amount reported for the Class 1-A Certificate is approximately \$12,000 less than what I would otherwise calculate.

<sup>95</sup> *See, e.g.*, CWABS 2004-T Indenture, at Ann-1-11 (ABK-CW00006753, at -840) (defining “Investor Loss Reduction Amount”); CWHEQ 2006-B Indenture, at 1–17 (CWAMBAC0016406834, at -852) (defining “Investor Loss Reduction Amount”).

the rules described in the Waterfall Documents. Beginning in July 2010, the Trustee reports show Investor Loss Reduction Amounts equal to the amount of undercollateralization (if any) associated with each loan group. The Waterfall Models match this accounting deviation and the July 2010 switchover for the Historical Period, but not for the but-for Historical Period.

## G.4. Certificate Losses

- (97) The Waterfall Documents for the CWABS 2005-16 Securitization state that, upon the exhaustion of the credit support provided by the Class BF Certificate, losses are to be allocated to the Class 1-AF and Class 2-AF Certificates. The amount of loss to allocate to each certificate should be the excess, if any, of the associated certificate principal balance over the aggregate balance of the related loans.<sup>96</sup> However, in May 2012, the Trustee allocated losses to the Class 2-AF Certificates only to the extent needed to reduce the aggregate balances of the Class 1-AF and 2-AF Certificates to the aggregate balance of the loans in Loan Groups 1 and 2; that is, the Trustee allowed the Class 2-AF Certificate balances to be less than the aggregate balance of the related loans. In the Historical Period, the Waterfall Model matches this application of losses, but in the but-for Historical Period, the Waterfall Model allocates to the Class 2-AF Certificate the amount of loss necessary to eliminate any undercollateralization.

## G.5. Additional discrepancies

- (98) I note that there are other minor instances in which the Trustees appear to deviate from the rules set forth in the Waterfall Documents. Because these instances constituted apparent errors and/or deviations from previous practice by the Trustee, I did not reflect them in the Waterfall Models for the but-for and Future Periods, although I did account for them in the Historical Period.

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<sup>96</sup> See CWABS 2005-16 PSA, § 4.04(k) (ABK-CW00007997, at -129).

## Appendix H. Damages percentile distributions

Figure 18: Percentile Distribution of Damages—Claims Payment Damages

(in \$ millions)	Securitization	5th Percentile	50th Percentile	95th Percentile
First-Lien	CWABS 2005-16	137.7	139.9	142.3
	CWABS 2005-17	164.6	166.9	169.4
	CWABS 2006-11	206.5	208.9	211.3
	CWABS 2006-13	124.5	126.9	129.5
CES	CWHEQ 2006-S1	131.0	131.6	132.2
	CWHEQ 2006-S4	284.3	285.0	285.7
	CWHEQ 2006-S6	264.2	265.0	265.9
HELOC	CWABS 2004-K	(4.5)	(4.5)	(4.4)
	CWABS 2004-L	1.2	2.0	3.2
	CWABS 2004-M	(0.6)	0.0	0.8
	CWABS 2004-N	(2.8)	(2.8)	(2.8)
	CWABS 2004-O	(2.2)	(1.4)	(0.5)
	CWABS 2004-T	(1.0)	(0.9)	(0.9)
	CWHEQ 2005-F	172.5	173.7	175.4
	CWHEQ 2005-L	(1.6)	(1.6)	(1.6)
	CWHEQ 2006-B	268.0	269.8	272.4
CWHEQ 2006-C	289.9	291.9	294.3	



**Figure 19: Percentile Distribution of Damages—Contract Date Repurchase Scenario**

(in \$ millions)	Securitization	5th Percentile	50th Percentile	95th Percentile
First-Lien	CWABS 2005-16	131.3	139.3	146.9
	CWABS 2005-17	169.2	172.5	175.5
	CWABS 2006-11	136.2	167.3	182.5
	CWABS 2006-13	98.1	105.3	114.8
CES	CWHEQ 2006-S1	134.6	135.2	135.8
	CWHEQ 2006-S4	278.6	280.7	281.8
	CWHEQ 2006-S6	255.7	259.3	260.9
HELOC	CWABS 2004-K	(0.4)	(0.4)	(0.3)
	CWABS 2004-L	3.2	4.0	5.2
	CWABS 2004-M	1.4	2.0	2.8
	CWABS 2004-N	(0.3)	(0.3)	(0.3)
	CWABS 2004-O	1.2	2.0	2.9
	CWABS 2004-T	(1.1)	(1.0)	(1.0)
	CWHEQ 2005-F	173.9	175.1	176.8
	CWHEQ 2005-L	(0.1)	(0.1)	(0.1)
	CWHEQ 2006-B	254.1	255.9	258.5
CWHEQ 2006-C	280.3	282.3	284.8	

**Figure 20: Percentile Distribution of Damages—Complaint Date Repurchase Scenario**

(in \$ millions)	Securitization	5th Percentile	50th Percentile	95th Percentile
First-Lien	CWABS 2005-16	133.4	140.8	148.0
	CWABS 2005-17	168.3	171.6	174.7
	CWABS 2006-11	175.4	193.4	204.5
	CWABS 2006-13	111.8	118.5	122.0
CES	CWHEQ 2006-S1	134.6	135.2	135.8
	CWHEQ 2006-S4	281.2	281.9	282.6
	CWHEQ 2006-S6	260.3	261.3	262.2
HELOC	CWABS 2004-K	(0.3)	(0.3)	(0.3)
	CWABS 2004-L	3.2	4.0	5.2
	CWABS 2004-M	1.4	2.0	2.8
	CWABS 2004-N	(0.3)	(0.3)	(0.3)
	CWABS 2004-O	1.3	2.1	3.0
	CWABS 2004-T	(0.9)	(0.9)	(0.8)
	CWHEQ 2005-F	174.1	175.4	177.0
	CWHEQ 2005-L	(0.1)	(0.1)	(0.1)
	CWHEQ 2006-B	254.2	256.0	258.5
	CWHEQ 2006-C	280.4	282.4	284.8

**Figure 21: Percentile Distribution of Damages—Report Date Repurchase Scenario**

(in \$ millions)	Securitization	5th Percentile	50th Percentile	95th Percentile
First-Lien	CWABS 2005-16	145.3	147.5	149.9
	CWABS 2005-17	168.2	170.6	173.1
	CWABS 2006-11	189.8	204.8	209.3
	CWABS 2006-13	123.7	126.6	129.2
CES	CWHEQ 2006-S1	125.6	126.2	126.8
	CWHEQ 2006-S4	270.9	271.6	272.3
	CWHEQ 2006-S6	250.1	250.9	251.8
HELOC	CWABS 2004-K	(0.3)	(0.3)	(0.3)
	CWABS 2004-L	3.1	3.9	5.1
	CWABS 2004-M	1.4	2.1	2.9
	CWABS 2004-N	(0.2)	(0.2)	(0.2)
	CWABS 2004-O	1.2	2.0	2.9
	CWABS 2004-T	(0.5)	(0.5)	(0.5)
	CWHEQ 2005-F	166.7	167.9	169.6
	CWHEQ 2005-L	(0.1)	(0.1)	(0.1)
	CWHEQ 2006-B	246.2	247.9	250.5
	CWHEQ 2006-C	268.9	270.9	273.4

## Appendix I. Repurchase Damages by Securitization

Figure 22: Repurchase Damages for Contract Date Default Repurchase Scenario

Securitization		Past Repurchase Damages					Future Repurchase Damages				Total Repurchase Damages
		Claims	Reimbursements	Premiums	Accrued interest	Total	Claims	Reimbursements	Premiums	Total	
CWABS 2005-16	Actual	70.9	1.6	8.2	4.6	65.6	78.8	0.1	4.2	74.4	140.0
	But-for	13.8	1.2	8.1	0.4	4.8	19.9	20.2	3.8	(4.1)	0.7
	Difference	57.1	0.4	0.1	4.2	60.7	58.9	(20.0)	0.4	78.6	139.3
CWABS 2005-17	Actual	88.1	0.6	6.9	6.3	86.9	83.8	0.4	3.3	80.1	167.0
	But-for	7.9	0.6	6.8	0.1	0.6	12.4	15.8	2.7	(6.1)	(5.5)
	Difference	80.2	0.0	0.2	6.2	86.2	71.4	(15.4)	0.6	86.3	172.5
CWABS 2006-11	Actual	140.9	21.7	5.6	10.7	124.3	86.1	0.0	2.7	83.4	207.6
	But-for	73.6	9.5	5.6	5.0	63.5	36.0	56.7	2.5	(23.2)	40.3
	Difference	67.3	12.1	0.0	5.6	60.8	50.1	(56.7)	0.2	106.6	167.3
CWABS 2006-13	Actual	71.3	9.2	3.2	5.7	64.5	71.7	7.7	1.4	62.7	127.2
	But-for	33.7	5.3	3.2	2.3	27.6	38.5	42.8	1.4	(5.7)	21.9
	Difference	37.5	4.0	0.0	3.4	37.0	33.2	(35.2)	0.0	68.4	105.3
CWHEQ 2006-S1	Actual	152.3	26.7	4.7	14.1	135.0	3.0	7.3	0.8	(5.0)	129.9
	But-for	0.3	0.3	4.6	0.0	(4.6)	0.0	0.0	0.6	(0.6)	(5.2)
	Difference	152.0	26.4	0.1	14.1	139.6	3.0	7.3	0.1	(4.4)	135.2
CWHEQ 2006-S4	Actual	269.3	29.4	5.0	50.4	285.3	4.2	12.6	1.1	(9.5)	275.9
	But-for	37.7	29.2	4.9	1.4	4.9	0.0	8.7	1.1	(9.8)	(4.8)
	Difference	231.6	0.2	0.0	49.0	280.4	4.2	3.9	0.1	0.3	280.7
CWHEQ 2006-S6	Actual	252.4	22.9	5.1	43.3	267.8	5.5	15.8	1.2	(11.4)	256.3
	But-for	39.5	21.9	5.0	2.3	14.9	0.0	16.7	1.2	(17.8)	(2.9)
	Difference	212.9	1.0	0.0	41.0	252.9	5.5	(0.9)	0.0	6.4	259.3
CWABS 2004-K	Actual	1.3	1.2	4.4	0.2	(4.2)	0.0	0.0	0.4	(0.4)	(4.5)
	But-for	0.0	0.0	4.1	0.0	(4.1)	0.0	0.0	0.1	(0.1)	(4.2)
	Difference	1.3	1.2	0.3	0.2	(0.1)	0.0	0.0	0.3	(0.3)	(0.4)

CWABS 2004-L	Actual	6.5	0.1	2.6	1.2	5.0	1.7	5.0	0.2	(3.5)	1.5
	But-for	0.0	0.0	2.5	0.0	(2.5)	0.0	0.0	0.0	0.0	(2.5)
	Difference	6.5	0.1	0.1	1.2	7.4	1.7	5.0	0.1	(3.4)	4.0
CWABS 2004-M	Actual	4.2	0.3	2.6	1.1	2.3	1.5	4.2	0.2	(2.8)	(0.5)
	But-for	0.0	0.0	2.5	0.0	(2.5)	0.0	0.0	0.0	0.0	(2.5)
	Difference	4.2	0.3	0.1	1.1	4.8	1.5	4.2	0.1	(2.8)	2.0
CWABS 2004-N	Actual	0.5	0.6	2.6	0.1	(2.6)	0.0	0.0	0.2	(0.2)	(2.8)
	But-for	0.0	0.0	2.4	0.0	(2.4)	0.0	0.0	0.0	0.0	(2.5)
	Difference	0.5	0.6	0.2	0.1	(0.1)	0.0	0.0	0.2	(0.2)	(0.3)
CWABS 2004-O	Actual	4.6	0.0	3.7	0.6	1.5	1.3	4.0	0.4	(3.1)	(1.6)
	But-for	0.0	0.0	3.5	0.0	(3.5)	0.0	0.0	0.1	(0.1)	(3.6)
	Difference	4.6	0.0	0.3	0.6	5.0	1.3	4.0	0.3	(3.0)	2.0
CWABS 2004-T	Actual	0.0	0.0	5.8	0.0	(5.8)	0.0	0.0	0.7	(0.7)	(6.5)
	But-for	0.0	0.0	5.2	0.0	(5.2)	0.0	0.0	0.2	(0.2)	(5.4)
	Difference	0.0	0.0	0.5	0.0	(0.5)	0.0	0.0	0.5	(0.5)	(1.0)
CWHEQ 2005-F	Actual	169.2	0.0	10.2	26.3	185.3	0.4	18.7	1.9	(20.2)	165.1
	But-for	1.2	1.2	9.0	0.0	(9.0)	0.5	0.5	1.0	(1.0)	(10.0)
	Difference	168.0	(1.2)	1.2	26.2	194.3	(0.1)	18.2	0.9	(19.2)	175.1
CWHEQ 2005-L	Actual	0.0	0.0	1.2	0.0	(1.2)	0.0	0.0	0.4	(0.4)	(1.6)
	But-for	0.0	0.0	1.2	0.0	(1.2)	0.0	0.0	0.2	(0.2)	(1.5)
	Difference	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	(0.1)	(0.1)
CWHEQ 2006-B	Actual	221.7	0.0	4.0	50.5	268.3	1.5	17.5	1.0	(17.0)	251.3
	But-for	0.2	0.2	3.8	0.0	(3.8)	0.0	0.0	0.8	(0.8)	(4.6)
	Difference	221.5	(0.2)	0.1	50.5	272.1	1.5	17.5	0.2	(16.2)	255.9
CWHEQ 2006-C	Actual	260.3	0.0	6.7	50.1	303.6	4.7	32.3	1.8	(29.3)	274.3
	But-for	0.3	0.3	6.6	0.0	(6.6)	0.0	0.0	1.5	(1.5)	(8.0)
	Difference	260.0	(0.3)	0.2	50.1	310.2	4.7	32.3	0.3	(27.9)	282.3

Figure 23: Repurchase Damages for Complaint Date Default Repurchase Scenario

Securitization		Past Repurchase Damages					Future Repurchase Damages				Total Repurchase Damages
		Claims	Reimbursements	Premiums	Accrued interest	Total	Claims	Reimbursements	Premiums	Total	
CWABS 2005-16	Actual	70.9	1.6	8.2	4.6	65.6	78.6	0.4	4.3	73.9	139.5
	But-for	4.7	0.5	8.1	0.1	(4.0)	24.9	18.3	3.9	2.7	(1.3)
	Difference	66.2	1.1	0.1	4.5	69.5	53.7	(17.9)	0.4	71.2	140.8
CWABS 2005-17	Actual	88.1	0.6	6.9	6.3	86.9	81.7	0.1	3.2	78.4	165.3
	But-for	7.8	0.6	6.9	0.1	0.5	9.9	14.0	2.7	(6.8)	(6.3)
	Difference	80.3	0.0	0.1	6.2	86.4	71.8	(13.9)	0.6	85.2	171.6
CWABS 2006-11	Actual	140.9	21.7	5.6	10.7	124.3	86.6	0.0	2.8	83.8	208.1
	But-for	46.4	12.9	5.6	2.5	30.4	32.6	45.8	2.5	(15.7)	14.7
	Difference	94.4	8.8	0.0	8.2	93.9	54.0	(45.8)	0.3	99.5	193.4
CWABS 2006-13	Actual	71.3	9.2	3.2	5.7	64.5	70.2	7.8	1.3	61.1	125.7
	But-for	26.3	4.9	3.2	1.6	19.7	25.0	36.3	1.2	(12.6)	7.2
	Difference	45.0	4.3	0.0	4.1	44.8	45.2	(28.6)	0.1	73.7	118.5
CWHEQ 2006-S1	Actual	152.3	26.7	4.7	14.1	135.0	3.0	7.3	0.8	(5.0)	129.9
	But-for	21.9	23.2	4.6	1.2	(4.6)	0.0	0.0	0.6	(0.6)	(5.2)
	Difference	130.3	3.5	0.1	12.9	139.6	3.0	7.3	0.1	(4.4)	135.2
CWHEQ 2006-S4	Actual	269.3	29.4	5.0	50.4	285.3	4.4	12.6	1.1	(9.4)	276.0
	But-for	119.1	126.6	4.9	7.6	(4.9)	0.0	0.0	1.0	(1.1)	(5.9)
	Difference	150.2	(97.2)	0.0	42.8	290.2	4.4	12.6	0.1	(8.3)	281.9
CWHEQ 2006-S6	Actual	252.4	22.9	5.1	43.3	267.8	4.3	15.7	1.2	(12.6)	255.1
	But-for	97.5	103.0	5.0	5.9	(4.6)	0.0	0.4	1.1	(1.5)	(6.1)
	Difference	154.9	(80.1)	0.0	37.4	272.4	4.3	15.4	0.1	(11.1)	261.3
CWABS 2004-K	Actual	1.3	1.2	4.4	0.2	(4.2)	0.0	0.0	0.4	(0.4)	(4.5)
	But-for	0.8	0.9	4.1	0.1	(4.1)	0.0	0.0	0.1	(0.1)	(4.2)
	Difference	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.3	(0.3)	(0.3)
CWABS 2004-L	Actual	6.5	0.1	2.6	1.2	5.0	2.2	5.5	0.2	(3.5)	1.5
	But-for	3.2	3.2	2.5	0.7	(1.8)	0.0	0.6	0.0	(0.7)	(2.5)
	Difference	3.3	(3.0)	0.1	0.6	6.8	2.2	4.8	0.2	(2.8)	4.0
CWABS 2004-M	Actual	4.2	0.3	2.6	1.1	2.3	1.4	4.0	0.2	(2.8)	(0.5)
	But-for	3.3	3.1	2.5	0.7	(1.5)	0.0	1.0	0.0	(1.0)	(2.5)
	Difference	0.9	(2.8)	0.1	0.3	3.9	1.4	3.0	0.1	(1.8)	2.0

CWABS 2004-N	Actual	0.5	0.6	2.6	0.1	(2.6)	0.0	0.0	0.2	(0.2)	(2.8)
	But-for	0.3	0.3	2.5	0.0	(2.5)	0.0	0.0	0.0	0.0	(2.5)
	Difference	0.2	0.3	0.1	0.0	(0.1)	0.0	0.0	0.2	(0.2)	(0.3)
CWABS 2004-O	Actual	4.6	0.0	3.7	0.6	1.5	1.5	4.1	0.4	(3.0)	(1.6)
	But-for	0.6	0.6	3.5	0.0	(3.5)	0.0	0.0	0.1	(0.1)	(3.6)
	Difference	4.0	(0.6)	0.2	0.6	5.0	1.5	4.1	0.3	(3.0)	2.1
CWABS 2004-T	Actual	0.0	0.0	5.8	0.0	(5.8)	0.0	0.0	0.7	(0.7)	(6.5)
	But-for	0.0	0.0	5.4	0.0	(5.4)	0.0	0.0	0.2	(0.2)	(5.6)
	Difference	0.0	0.0	0.3	0.0	(0.3)	0.0	0.0	0.5	(0.5)	(0.9)
CWHEQ 2005-F	Actual	169.2	0.0	10.2	26.3	185.3	0.8	19.1	1.9	(20.2)	165.1
	But-for	44.5	48.6	9.3	4.1	(9.3)	0.0	0.0	1.0	(1.0)	(10.3)
	Difference	124.7	(48.6)	0.9	22.1	194.6	0.7	19.0	0.9	(19.2)	175.4
CWHEQ 2005-L	Actual	0.0	0.0	1.2	0.0	(1.2)	0.0	0.0	0.4	(0.4)	(1.6)
	But-for	0.0	0.0	1.2	0.0	(1.2)	0.0	0.0	0.2	(0.2)	(1.5)
	Difference	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	(0.1)	(0.1)
CWHEQ 2006-B	Actual	221.7	0.0	4.0	50.5	268.3	1.9	17.9	1.0	(17.0)	251.3
	But-for	108.8	121.1	3.9	12.3	(3.9)	0.0	0.0	0.8	(0.8)	(4.7)
	Difference	112.9	(121.1)	0.1	38.3	272.1	1.9	17.9	0.2	(16.2)	256.0
CWHEQ 2006-C	Actual	260.3	0.0	6.7	50.1	303.6	4.0	31.6	1.8	(29.4)	274.3
	But-for	99.1	109.1	6.6	10.0	(6.6)	0.0	0.0	1.5	(1.5)	(8.1)
	Difference	161.2	(109.1)	0.1	40.1	310.3	4.0	31.6	0.3	(27.9)	282.4

Figure 24: Repurchase Damages for Report Date Default Repurchase Scenario

Securitization		Past Repurchase Damages					Future Repurchase Damages				Total Repurchase Damages
		Claims	Reimbursements	Premiums	Accrued interest	Total	Claims	Reimbursements	Premiums	Total	
CWABS 2005-16	Actual	70.9	1.6	8.2	4.6	65.6	78.5	0.5	4.2	73.7	139.3
	But-for	70.9	71.0	8.2	4.6	(3.8)	0.0	1.0	3.4	(4.4)	(8.3)
	Difference	0.0	(69.4)	0.0	0.0	69.4	78.5	(0.5)	0.8	78.1	147.5
CWABS 2005-17	Actual	88.1	0.6	6.9	6.3	86.9	82.4	0.1	3.3	79.0	165.9
	But-for	88.1	88.7	6.9	6.3	(1.2)	0.0	1.0	2.5	(3.5)	(4.7)
	Difference	0.0	(88.0)	0.0	0.0	88.0	82.4	(0.9)	0.7	82.5	170.6
CWABS 2006-11	Actual	140.9	21.7	5.6	10.7	124.3	85.6	0.0	2.7	82.9	207.2
	But-for	140.9	118.1	5.6	10.7	27.8	0.1	23.1	2.4	(25.4)	2.4
	Difference	0.0	(96.5)	0.0	0.0	96.5	85.5	(23.1)	0.3	108.3	204.8
CWABS 2006-13	Actual	71.3	9.2	3.2	5.7	64.5	71.1	7.9	1.3	61.8	126.3
	But-for	71.3	72.4	3.2	5.7	1.3	8.7	9.0	1.2	(1.6)	(0.2)
	Difference	0.0	(63.2)	0.0	0.0	63.2	62.4	(1.1)	0.1	63.4	126.6
CWHEQ 2006-S1	Actual	152.3	26.7	4.7	14.1	135.0	3.1	7.4	0.8	(5.1)	129.9
	But-for	152.3	157.2	4.7	14.1	4.5	0.0	0.1	0.6	(0.8)	3.7
	Difference	0.0	(130.5)	0.0	0.0	130.5	3.1	7.3	0.1	(4.3)	126.2
CWHEQ 2006-S4	Actual	269.3	29.4	5.0	50.4	285.3	4.8	13.0	1.2	(9.4)	275.9
	But-for	269.3	308.6	5.0	50.4	6.1	0.0	0.7	1.1	(1.8)	4.3
	Difference	0.0	(279.2)	0.0	0.0	279.2	4.8	12.3	0.1	(7.6)	271.6
CWHEQ 2006-S6	Actual	252.4	22.9	5.1	43.3	267.8	4.7	15.9	1.2	(12.4)	255.4
	But-for	252.4	282.3	5.1	43.3	8.3	0.0	2.8	1.1	(3.9)	4.5
	Difference	0.0	(259.4)	0.0	0.0	259.4	4.7	13.1	0.1	(8.5)	250.9
CWABS 2004-K	Actual	1.3	1.2	4.4	0.2	(4.2)	0.0	0.0	0.4	(0.4)	(4.5)
	But-for	1.3	1.2	4.4	0.2	(4.2)	0.0	0.0	0.1	(0.1)	(4.2)
	Difference	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	(0.3)	(0.3)
CWABS 2004-L	Actual	6.5	0.1	2.6	1.2	5.0	1.8	5.1	0.2	(3.5)	1.5
	But-for	4.8	5.7	2.6	1.2	(2.4)	0.0	0.0	0.0	0.0	(2.4)
	Difference	1.8	(5.6)	0.0	0.0	7.4	1.8	5.1	0.2	(3.4)	3.9
CWABS 2004-M	Actual	4.2	0.3	2.6	1.1	2.3	1.5	4.1	0.2	(2.8)	(0.5)
	But-for	4.2	5.2	2.6	1.1	(2.6)	0.0	0.0	0.0	0.0	(2.6)
	Difference	0.0	(4.9)	0.0	0.0	4.9	1.5	4.1	0.2	(2.8)	2.1



CWABS 2004-N	Actual	0.5	0.6	2.6	0.1	(2.6)	0.0	0.0	0.2	(0.2)	(2.8)
	But-for	0.5	0.6	2.6	0.1	(2.6)	0.0	0.0	0.0	0.0	(2.6)
	Difference	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	(0.2)	(0.2)
CWABS 2004-O	Actual	4.6	0.0	3.7	0.6	1.5	1.1	3.8	0.4	(3.0)	(1.6)
	But-for	2.9	3.2	3.7	0.6	(3.4)	0.0	0.0	0.1	(0.1)	(3.5)
	Difference	1.7	(3.2)	0.0	0.0	4.9	1.1	3.8	0.3	(3.0)	2.0
CWABS 2004-T	Actual	0.0	0.0	5.8	0.0	(5.8)	0.0	0.0	0.7	(0.7)	(6.5)
	But-for	0.0	0.0	5.7	0.0	(5.7)	0.0	0.0	0.2	(0.2)	(5.9)
	Difference	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	(0.5)	(0.5)
CWHEQ 2005-F	Actual	169.2	0.0	10.2	26.3	185.3	0.9	19.2	1.9	(20.2)	165.1
	But-for	76.6	94.6	10.1	26.3	(1.8)	0.0	0.0	1.0	(1.0)	(2.8)
	Difference	92.6	(94.6)	0.0	0.0	187.1	0.9	19.2	0.9	(19.2)	167.9
CWHEQ 2005-L	Actual	0.0	0.0	1.2	0.0	(1.2)	0.0	0.0	0.4	(0.4)	(1.6)
	But-for	0.0	0.0	1.2	0.0	(1.2)	0.0	0.0	0.2	(0.2)	(1.5)
	Difference	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	(0.1)	(0.1)
CWHEQ 2006-B	Actual	221.7	0.0	4.0	50.5	268.3	1.9	17.9	1.0	(17.0)	251.3
	But-for	138.1	180.5	4.0	50.5	4.2	0.0	0.0	0.8	(0.8)	3.4
	Difference	83.6	(180.5)	0.0	0.0	264.1	1.9	17.9	0.2	(16.2)	247.9
CWHEQ 2006-C	Actual	260.3	0.0	6.7	50.1	303.6	4.0	31.6	1.8	(29.4)	274.3
	But-for	140.4	179.0	6.7	50.1	4.8	0.0	0.0	1.5	(1.5)	3.3
	Difference	119.8	(179.0)	0.0	0.0	298.8	4.0	31.6	0.3	(27.9)	270.9

## Appendix J. Countrywide Repurchases

The following documents detail the communication between Ambac and Countrywide regarding loan repurchases and repurchase requests.

- ABK-CW00026735
- ABK-CW00026739
- ABK-CW00026780
- ABK-CW00026781
- ABK-CW00026812
- ABK-CW00026813
- ABK-CW00026835
- ABK-CW00026836
- ABK-CW00026840
- ABK-CW00026864
- ABK-CW00026866
- ABK-CW00026869
- ABK-CW00026872
- ABK-CW00026875
- ABK-CW00026876
- ABK-CW00026877
- ABK-CW00026878
- ABK-CW00026880
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- CWAMBAC0016543411
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- CWAMBAC0016543415
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- CWAMBAC0016543533
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# EXHIBIT B



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

AMBAC ASSURANCE CORPORATION and THE  
SEGREGATED ACCOUNT OF AMBAC  
ASSURANCE CORPORATION,

Plaintiff,

- against -

COUNTRYWIDE HOME LOANS, INC.,  
COUNTRYWIDE SECURITIES CORP.,  
COUNTRYWIDE FINANCIAL CORP., and  
BANK OF AMERICA CORP.,

Defendants.

Index No. 651612/2010

I.A.S. Part 3 (Bransten, J.)

**CORRECTIVE ADDENDUM TO OCTOBER 1, 2014  
EXPERT REPORT OF KARL N. SNOW, PHD**

**October 14, 2014**

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- (99) On October 1, 2014, I submitted my expert report (“Opening Report”) in the above-captioned matter. I have since updated my damages calculations on account of certain discrete issues subsequently identified in the model code used to generate the damages calculations set forth in my Opening Report. Below, I describe these issues and present updated calculations that demonstrate the impact of these issues on my final damages calculations. Except for the items set forth in this Corrective Addendum, I am not making any changes in my Opening Report.
- (100) First, in Paragraph (38) of my Opening Report, I state that I calculated present-value amounts by using discount rates consistent with each Securitization’s shadow rating, i.e., BBB or A, depending on the Securitization. However, the damages calculations stated in my Opening Report instead utilized discount rates based on the yields of U.S. Treasury Securities. In my opinion, using discount rates based on the yields of U.S. Treasury Securities is a reasonable alternative method for present-value calculations, because such rates are used to determine the amounts that Ambac would have to set aside today to meet the forecasted net obligations in the future.
- (101) In Appendix K, I reproduce Figures 5 and 13 of my Opening Report with the new calculations that result when I discount all future amounts consistent with each Securitization’s shadow rating as described in the text of Paragraph (38). I discounted all future amounts using the results produced by the same Monte Carlo simulation that generated the amounts disclosed in my Opening Report.
- (102) Second, my model did not accurately capture all of Ambac’s deferred amount obligations for the HELOC and CES deals.<sup>97</sup> In particular, these issues include a failure to capture a reduction in Ambac’s deferred amount obligation for Group II of the 2005-F Securitization that was triggered by cash flows of that Securitization in the first month of the Future Period as well as deferred amounts related to coverage of interest shortfall amounts incurred by Ambac in those Securitizations throughout the Historical Period. As a result, the calculations presented in my Opening Report understated Ambac’s damages for the CES and 2006 HELOC Securitizations, and damages were overstated by small amounts for the 2005-F and some of the 2004 HELOC Securitizations.
- (103) In Figure 25 below, I present the difference between the deferred amount reported by the Trustee and those created by my model in my Opening Report, plus the related accretion.<sup>98</sup> This amount represents the maximum adjustment in damages, across all damages scenarios, necessary in order to remedy the issue described in Paragraph (102).

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<sup>97</sup> For 2006-S1 and 2006-S4, part of the understatement in deferred amounts was reflected as an overstatement of claims amounts in the Opening Report (\$0.5 million and \$1.2 million respectively).

<sup>98</sup> For the purposes of generating an upper bound, I have assumed that the entire deferred amount discrepancy occurred in the first month that payments made in accordance with the Plan of Rehabilitation were reported in the trustee remittance data. See Order Granting Rehabilitator’s Motion for Approval to Commence Making Interim Cash Payments on Permitted Policy Claims, *In re Rehab. of Segregated Account of Ambac Assurance Corp.*, No. 10-cv-1576 (Wis. Cir. Ct., Dane Cnty. June 4, 2012), available at <http://ambacpolicyholders.com/storage/courtfilings/06052012/Payments%20order.PDF>; Ambac Assurance Corp., “Rehabilitator Commences Interim Cash Payments,” news release, Sept. 20, 2012, available at <http://ambacpolicyholders.com/>.

**Figure 25: Bound on adjustment to damages (in \$ millions)**

(in \$ millions)	Securitization	Adjustment
CES	CWHEQ 2006-S1	0.8
	CWHEQ 2006-S4	3.2
	CWHEQ 2006-S6	2.0
HELOC	CWABS 2004-K	-0.2
	CWABS 2004-L	-0.2
	CWABS 2004-M	-0.2
	CWABS 2004-N	-
	CWABS 2004-O	-0.8
	CWABS 2004-T	-
	CWHEQ 2005-F	-0.5
	CWHEQ 2005-L	-
	CWHEQ 2006-B	2.0
	CWHEQ 2006-C	0.6

(104) As stated above, I have updated my damages model in order to address each of the above issues. I understand that all updated files are being produced in this matter as additional materials relied upon, and will bear Bates numbers ABK-CW-D00001542-1573.



[SIGNATURE]

October 14, 2014

[DATE]

## Appendix K. Damages calculations with BBB/A discount rate

- (105) Below, I have reproduced Figures 5 and 13 from my Opening Report, except that here I provide the median damages calculations that I compute when future amounts are discounted according to the mechanism described in Paragraph (38) of my Opening Report.
- (106) The calculations set forth below are based on the same results of the Monte Carlo simulation that I used to generate the damages calculations for my Opening Report. Each iteration generated in my original analysis is now discounted using BBB/A discount rates rather than Treasury rates and the median discounted value is selected. The additional corrections detailed in Paragraphs (102) are not reflected in the calculations below but rather should be separately considered.

**Figure 5-A: Future Claims Payment Damages components (in \$ millions), NPV using BBB or A rates**

Type	Securitization	Present Value of Futures Claims Payment Damages Components (BBB/A Discount Rates)				
		Claims Payment Obligation	Reimb.	Premiums	Future Claims Payment Damages–Premiums Deducted	Future Claims Payment Damages–Premiums Not Deducted
First-Lien	CWABS 2005-16	77.7	0.2	4.1	73.4	77.5
	CWABS 2005-17	81.8	0.1	3.1	78.6	81.7
	CWABS 2006-11	85.4	0.0	2.5	82.9	85.4
	CWABS 2006-13	69.6	5.8	1.3	62.6	63.8
CES	CWHEQ 2006-S1	2.9	7.0	0.7	(4.9)	(4.2)
	CWHEQ 2006-S4	4.3	12.2	1.1	(9.0)	(7.9)
	CWHEQ 2006-S6	4.4	15.1	1.2	(11.9)	(10.8)
HELOC	CWABS 2004-K	0.0	0.0	0.4	(0.4)	0.0
	CWABS 2004-L	1.7	4.4	0.2	(2.8)	(2.7)
	CWABS 2004-M	1.6	3.7	0.2	(2.3)	(2.2)
	CWABS 2004-N	0.0	0.0	0.2	(0.2)	0.0
	CWABS 2004-O	1.2	3.4	0.4	(2.6)	(2.2)
	CWABS 2004-T	0.0	0.0	0.7	(0.7)	0.0
	CWHEQ 2005-F	0.0	14.3	1.8	(16.1)	(14.3)
	CWHEQ 2005-L	0.0	0.0	0.3	(0.3)	0.0
	CWHEQ 2006-B	1.4	16.2	1.0	(15.7)	(14.8)
CWHEQ 2006-C	4.5	29.7	1.7	(26.9)	(25.3)	

**Figure 13-A: Claims Payment and Repurchase Damages by Securitization (in \$ millions), NPV using BBB or A rates (without Remediation Costs)**

Type	Securitization	Claims Payment Damages–Premiums Deducted	Claims Payment Damages–Premiums Not Deducted	Repurchase Damages		
				Contract Date Scenario	Complaint Date Scenario	Report Date Scenario
First-Lien	CWABS 2005-16	139.6	151.9	135.9	137.7	147.1
	CWABS 2005-17	166.5	176.5	171.3	170.1	170.0
	CWABS 2006-11	208.0	216.1	155.1	185.1	202.5
	CWABS 2006-13	127.6	132.0	97.3	114.7	127.1
CES	CWHEQ 2006-S1	131.7	137.2	135.3	135.3	126.3
	CWHEQ 2006-S4	285.3	291.4	280.9	282.2	271.9
	CWHEQ 2006-S6	265.5	271.7	259.4	261.7	251.3
HELOC	CWABS 2004-K	(4.4)	0.3	(0.4)	(0.3)	(0.3)
	CWABS 2004-L	2.6	5.4	4.7	4.6	4.6
	CWABS 2004-M	0.5	3.3	2.5	2.5	2.6
	CWABS 2004-N	(2.8)	0.0	(0.3)	(0.3)	(0.2)
	CWABS 2004-O	(1.0)	3.2	2.4	2.5	2.4
	CWABS 2004-T	(0.9)	5.5	(1.0)	(0.8)	(0.5)
	CWHEQ 2005-F	177.8	189.8	179.2	179.4	172.0
	CWHEQ 2005-L	(1.6)	0.0	(0.1)	(0.1)	(0.1)
	CWHEQ 2006-B	271.1	276.0	257.1	257.2	249.2
	CWHEQ 2006-C	294.3	302.7	284.7	284.7	273.3