Exhibit 174

to the Declaration of Andrew R. Stanton in Support of
Wells Fargo Bank, N.A.'s Motion for Summary Judgment (Mar. 13, 2020) in
Commerzbank AG v. Wells Fargo Bank, N.A., Case No. 15-cv-10033-KPF-SN (S.D.N.Y.); and
Phoenix Light SF Ltd. v. Wells Fargo Bank, N.A., Case No. 14-cv-10102-KPF-SN (S.D.N.Y.)

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

COMMERZBANK AG,	:	
Plaintiff,	:	
	:	Index No. 15-cv-10033
v.	:	
WELLS FARGO BANK, N.A.,	:	
Defendant.	:	

EXPERT REPORT OF ETHAN COHEN-COLE, PH.D.

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JULY 25, 2019

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I. INTRODUCTION AND SCOPE OF WORK

A. Qualifications

1. I am a Senior Advisor at Vega Economics, a company that provides consulting services on various economic issues. I hold a Ph.D. and M.A. in Economics from the University of Wisconsin at Madison, an M.P.A. in Public Policy from Princeton University, and a B.A. in History from Harvard University.

2. I was previously a professor in the Department of Finance at the University of Maryland, College Park's Robert H. Smith School of Business. In addition, I served as a faculty participant at the Center for Financial Policy and on the steering committee of the Center for Social Value Creation. I taught courses on various topics, including risk management, corporate finance, and the regulation and management of financial institutions.

3. Before teaching, I was a financial economist in the Supervision and Regulation function of the U.S. Federal Reserve System ("Federal Reserve"), where I provided technical and analytical direction to bank supervisors for many of the largest banks in the United States. At the Federal Reserve, I led quantitative reviews of large bank risk modeling efforts and was a designated system quantitative expert on risk management and Basel II.

4. At various stages of my career, I have worked in the banking sector in roles related to mortgage securitization. In the mid-1990s, I worked as a technical risk management consultant. This job included helping clients build risk-based scoring systems for a range of loan types, including mortgages. At the Federal Reserve, I evaluated the mortgage credit risk models for many top-20 financial institutions. Also at the Federal Reserve, I worked closely with mortgage databases to develop internal evaluations of bank risk and to write papers on mortgage risk. As an academic at the University of Maryland, I continued to research and work in the mortgage area. I wrote papers both on consumer credit and commercial paper.

5. I have experience evaluating financial risk within a range of contexts, including market risk, operational risk, and credit risk. My client experience involves advising financial institutions in a variety of contexts including the measurement and management of credit risk, the creation and validation of loan scoring models, and the evaluation of risk management systems for personal and corporate lending.

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6. I have evaluated structured financial products in a range of contexts. Prior to working as an expert, I taught classes in risk management and financial institutions, during which I taught sections on structured products. At the Federal Reserve, I regularly reviewed industry risk management models that included a variety of structured financial products.

7. I have published widely in peer-reviewed economics and finance journals, including *The Review of Economics and Statistics*, *Journal of Macroeconomics*, *American Law and Economics Review*, *Journal of Health Economics*, *Economic Inquiry*, *Economics Letters*, and *Applied Economics*. I have also served as a referee for more than 20 academic journals, including *The Review of Financial Studies*, *The Quarterly Journal of Economics*, *The American Economic Review*, *Journal of Monetary Economics*, *The Review of Economic Studies*, *The Review of Economics and Statistics*, *American Economic Journal—Economic Policy*, *Journal of Financial Intermediation*, *Journal of Money, Credit and Banking*, *Journal of Banking & Finance*, and *Journal of Financial Services Research*.

8. Apart from my regular class lectures, I have delivered more than 75 lectures at universities and professional meetings. I have been a visiting scholar or professor at the University of California, Berkeley, the European Central Bank, the Bank of France, and the Federal Deposit Insurance Corporation's Center for Financial Research. I have received scholarly research grants from the National Science Foundation, the National Institutes of Health, the National Institute of Justice, the Department of Education, the European Central Bank, and the MacArthur Foundation.

9. I have included a recent CV as **Appendix A**: *Curriculum Vitae*. My CV includes all my publications for the last ten years and all my expert witness testimony for the last four years.

10. In preparing my report, I relied upon the documents listed in **Appendix B**: *Materials Relied Upon*, along with any items cited or referenced in the body and footnotes of my report, exhibits, appendices, and any notes or footnotes thereto.

11. For my work on this matter, Vega Economics is being compensated on my behalf at a rate of $875/hour. In performing my analyses, I utilized a team of Vega Economics personnel who worked under my supervision and direction at rates of $275 to $750. Neither my compensation nor that of Vega Economics is contingent upon my findings or the outcome of this matter. I reserve the right to express additional opinions or otherwise supplement my analyses or the

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opinions expressed herein. All of the opinions included herein are stated to a reasonable degree of professional certainty.

B. Case Background and Assignment

12. Commerzbank AG ("Plaintiff") brought this action against Wells Fargo Bank, N.A. ("Wells Fargo") for alleged breaches of contractual and statutory duties in its role as trustee of 15 RMBS trusts ("Relevant Trusts").[1, 2] Plaintiff states that it acquired 24 certificates issued by the Relevant Trusts ("Relevant Certificates") through merger or other transfers[3] between June 2005 and June 2015. *See* **Exhibit 1:** *Plaintiff's Claimed Holdings*. Of these Relevant Certificates, Plaintiff has retained ownership of three certificates,[4] and 21 are no longer held by Plaintiff.[5]

13. With respect to the Relevant Trusts, Plaintiff alleges that Wells Fargo breached its duties as trustee by: (1) failing to provide notice of claimed breaches of representations and warranties ("R&Ws") concerning the loans underlying the Relevant Trusts and then failing to enforce the alleged obligations of the responsible parties to repurchase those loans, as well as other loans that were included on so-called "exception reports" as a result of certain documents not being

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[1] Complaint. *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (Dec. 24, 2015) ("Complaint") at preface, ¶¶ 1, 16-21.

[2] The Relevant Trusts are: ABFC Asset-Backed Certificates, Series 2005-HE2 ("ABFC 2005-HE2"); ABFC Asset-Backed Certificates, Series 2005-OPT1 ("ABFC 2005-OPT1"); ABFC Asset-Backed Certificates, Series 2006-OPT1 ("ABFC 2006-OPT1"); ABFC Asset-Backed Certificates, Series 2006-OPT2 ("ABFC 2006-OPT2"); Asset Backed Securities Corporation Home Equity Loan Trust, Series WMC 2005-HE5 ("ABSHE 2005-HE5"); Citigroup Mortgage Loan Trust, Series 2005-OPT4 ("CMLTI 2005-OPT4"); Greenpoint Mortgage Funding Trust 2005-AR4 ("GPMF 2005-AR4"); Greenpoint Mortgage Funding Trust 2006-AR1 ("GPMF 2006-AR1"); Greenpoint Mortgage Funding Trust 2006-AR2 ("GPMF 2006-AR2"); Greenpoint Mortgage Funding Trust 2006-AR3 ("GPMF 2006-AR3"); Morgan Stanley ABS Capital I Inc. Trust 2005-WMC2 ("MSAC 2005-WMC2"); Morgan Stanley ABS Capital I Inc. Trust 2005-WMC3 ("MSAC 2005-WMC3"); Morgan Stanley ABS Capital I Inc. Trust 2005-WMC5 ("MSAC 2005-WMC5"); Morgan Stanley Capital I Inc. Trust 2006-HE1 ("MSAC 2006-HE1"); and Option One Mortgage Loan Trust 2006-2 ("OOMLT 2006-2"). Snow, Karl N. Amended Expert Report of Karl N. Snow, PhD. *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (Dec. 12, 2018) and supporting materials ("Snow Report") at Fig. 2. Although the Complaint references a total of 19 trusts, the Snow Report does not address four trusts referenced in the Complaint. *See* Complaint at Exhibit A and Snow Report at ¶ 9 n. 1. Those trusts are: Banc of America Funding 2005-C Trust; Banc of America Mortgage 2006-B Trust; HarborView Mortgage Loan Trust 2007-3; and Mastr Asset Backed Securities Trust 2007-NCW.

[3] Snow Report at ¶ 9.

[4] *Id.*

[5] *Id.* at ¶ 20.

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found in the loan files at or around the time the Relevant Trusts were formed; and (2) failing to address alleged breaches by servicers of their contractual obligations to the Relevant Trusts.[6]

14. Plaintiff alleged causes of action for breach of contract, the covenant of good faith and fair dealing, and fiduciary duty; negligence; and violations of the Trust Indenture Act and the Streit Act.[7] I understand that, following the Court's March 30, 2017 Order on Wells Fargo's Motion to Dismiss, the following claims remain: (i) breach of contract; (ii) post-Event of Default breach of fiduciary duty; and (iii) breach of duty of due care and the duty to avoid conflicts of interest.[8] Plaintiff's other claims were dismissed, including claims for negligence, breach of pre-default fiduciary duty, breach of the implied covenant of good faith and fair dealing, and Plaintiff's claims brought under the Trust Indenture Act and the Streit Act.[9]

15. In support of its claims and contentions, Plaintiff has submitted the expert report of Dr. Karl N. Snow.[10] Plaintiff retained Dr. Snow to calculate: (1) damages to Plaintiff allegedly resulting from Wells Fargo's purported failure to enforce responsible parties' obligation to repurchase particular loans in the Relevant Trusts ("Repurchase Damages");[11] and (2) so-called "Tort Damages," which, according to Dr. Snow, represent the "out-of-pocket harm to the Plaintiff" caused by Wells Fargo's alleged failure to perform its duties, "accounting for any discount relative to par in the price paid by the Plaintiff for the [Relevant] Certificates."[12]

16. I have been retained by Wells Fargo, through its counsel Jones Day, to review and respond to the Snow Report, and to the extent required, the reports of other Plaintiff's experts upon which Dr. Snow relies.

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[6] Complaint at ¶¶ 6-7, 9, 104.

[7] *Id.* at ¶¶ 9-14.

[8] Opinion and Order. *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (Mar. 30, 2017) at 25-26, 30, 32-33.

[9] *Id*. at 27-29, 35, 39-40, 47.

[10] Dr. Snow's original report was submitted on December 5, 2018. *See* Snow, Karl N. Expert Report of Karl N. Snow, PhD. *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (Dec. 5, 2018). A week later, he amended his report to correct an issue with the code used to generate certain of the numbers that he identified while preparing the supporting materials, an error in populating certain of the rows in the sensitivity charts, and typographical errors. *See* Letter from Sean P. McGonigle, Wollmuth Maher & Deutsch LLP, to Jeremy R. Kauffman, Jones Day, Re: *Commerzbank AG v. Wells Fargo, N.A., No. 15-cv-10033* (Dec. 12, 2018).

[11] Snow Report at ¶ 14.

[12] *Id.*

II. SUMMARY OF REBUTTAL OPINIONS

17. It is my opinion that numerous premises and assumptions underlying the Snow Report are erroneous or unsupported and that the damages calculations contained therein are unreliable and do not reflect damages to Plaintiff arising out of Wells Fargo's alleged failures to fulfill its duties as trustee. The Snow Report suffers from the many infirmities described below.

18. ***Opinion One***. Dr. Snow's damages models fail to reflect damages attributable to Wells Fargo's alleged breaches of duties as trustee. Dr. Snow has put forward two damages models—one for Repurchase Damages and another for Tort Damages. The basis of each is a depiction of a "but-for" world. But a damages model built from a but-for world must accurately reflect relevant facts and circumstances and requires an understanding of the claims made against the trustee and the trustee's duties. Dr. Snow's analysis reflects no such understanding. Dr. Snow has created but-for scenarios that ignore relevant facts and circumstances and make counterfactual assumptions untethered to the realities of the Relevant Trusts' rights against third parties who may have had obligations to repurchase loans. Consequently, Dr. Snow effectively treats Wells Fargo as a guarantor of warrantor conduct and ignores (or counterfactually assumes away) the elements of Plaintiff's claims which allege that Wells Fargo failed to pursue specific action. That is, for each asserted breach, Dr. Snow did not model what would have happened if Wells Fargo had pursued remedies with regard to allegedly breaching loans, as Plaintiff claims Wells Fargo was required to do.

- Instead of considering and analyzing, for example, what would have happened had Wells Fargo pursued repurchases, Dr. Snow simply takes as given the assumptions provided to him by counsel about, among other things, how those enforcement actions would have played out. He ignores the costs involved with the repurchase process, how long the process would have taken and uncertainties as to timing, the uncertainties as to outcomes, whether litigation would have been necessary, whether the trustee would have been directed or indemnified to pursue litigation, the outcome of such litigation or settlement, and the likely recovery from a settlement or court judgment. Dr. Snow's failure to account for these contingencies results in calculations that do not accurately reflect damages attributable to the trustee, Wells Fargo.

19. ***Opinion Two***. Dr. Snow's Repurchase Damages calculations are unsupported and flawed. Dr. Snow calculates Repurchase Damages by creating a but-for scenario, in which he simulates the repurchase of certain loans that generate cashflows that back the Relevant Certificates.

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Dr. Snow relies on counsel and other experts for assumptions that are necessary for his repurchase simulations, including among other things: which loans to repurchase; whether to assume full success on such repurchases; and when the simulated repurchases occur. For nearly all of these assumptions, Dr. Snow simply utilizes the uniform inputs provided to him by counsel without loan-by-loan or trust-by-trust analysis. These include:

- *an unwarranted assumption of a 100 percent repurchase rate*. Because it simulates repurchase of *all loans* identified as defective by other Plaintiff's experts, Dr. Snow's analysis is contrary to his own experience regarding repurchases and inconsistent with observed historical repurchase rates.

- *an unreliable sensitivity analysis for repurchase rates of less than 100 percent*. Dr. Snow's method of calculating damages under various "sensitivities" is unsupported and simulates the purchase of partial loans, which is impossible in the real world. Dr. Snow admits that there is no factual basis underlying his sensitivity percentages, and his across-the-board scaling of cashflows ignores the loan-by-loan analysis that I understand is required in this case.

- *arbitrary and unreasonable enforcement and repurchase dates with no factual basis*. Dr. Snow again relies solely on counsel's direction regarding these dates, which reflect, respectively, when Wells Fargo was allegedly on notice of defects or breaches and when loans are repurchased in Dr. Snow's but-for scenario. Because Dr. Snow fails to provide support for these choices, the damages calculations upon which they are based are, in my opinion, unreliable. Changing these assumptions changes Dr. Snow's damages analysis.

- *an unsupported "rolling repurchase" assumption*. For loans that were active as of a given trust's enforcement date, Dr. Snow declines to simulate repurchase on that date, and instead delays the but-for world repurchase until such loans become delinquent or otherwise distressed, thereby avoiding adverse economic consequences to Plaintiff that would arise from earlier repurchases. Dr. Snow's "rolling repurchase" assumption has no basis in fact or the governing agreements, and makes repurchases contingent on loan performance, not the alleged R&W breaches or document defects.

- *lists of allegedly defective loans provided by counsel without quantitative or empirical support for claimed breaches.* These lists purport to reflect the assessments of Ms.

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Ingrid Beckles and Mr. Richard Bitner, who claim to identify document defects or R&W breaches that they contend materially and adversely affected the value of the loans or the interests of the certificateholders. Dr. Snow performed no quantitative or empirical analysis to verify Ms. Beckles' and Mr. Bitner's opinions about the loans at issue. Ms. Beckles' and Mr. Bitner's findings are contradicted by the analysis of Wells Fargo's experts, as well as my own empirical analysis. When I recalculate Repurchase Damages utilizing the results of my empirical analysis and the findings of other Wells Fargo experts, damages are significantly reduced even when using Dr. Snow's methodology.

- *unsupported assumptions regarding the repurchase of liquidated loans*. Dr. Snow assumes that previously liquidated loans can be repurchased and calculates their Purchase Prices, purportedly in conformity with the applicable governing agreements. But Dr. Snow fails to establish that liquidated loans are, in fact, eligible for repurchase in the Relevant Trusts, and the Purchase Prices calculated by Dr. Snow are unsupported.

20. ***Opinion Three***. A large discrepancy between Dr. Snow's projected, "future damages" forecasts and the actual data renders his "future damages" calculation unreliable. To calculate Repurchase Damages, Dr. Snow compares cashflows under the but-for scenario and cashflows in the baseline "real world" scenario. For both scenarios, Dr. Snow's calculation of cashflows includes projected, future cashflows. Specifically, Dr. Snow forecasts future cashflows for the Relevant Trusts from June 2018 until trust maturity. But because Dr. Snow's forecasting begins in June 2018, I can use subsequent, actual trust performance data from June 2018 to the present, as reported in the Relevant Trusts' remittance reports, to determine whether and to what extent Dr. Snow's forecasts are consistent with the data. However, almost immediately from June 2018, Dr. Snow's forecasts of future loan performance diverge from the actual data, and this divergence grows over time, rendering his entire future damages calculations ($95.45 million in the Held-to-Maturity scenario and $22.04 million in the Sold scenario)[13] unreliable.

21. ***Opinion Four***. Dr. Snow's Held-to-Maturity and Sold scenarios are unsupported and flawed. Dr. Snow calculates damages under two scenarios: the "Held-to-Maturity" scenario, in which he assumes that Plaintiff holds all of its sold certificates until maturity, and the "Sold" scenario,

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[13] *Id.* at Figs. 5 and 6. For Dr. Snow's Tort "future damages," *see id.* at Figs. 8 and 9.

in which he assumes that Plaintiff sold its certificates on the same dates as it did in the real world. For the 21 sold certificates, the Held-to-Maturity scenario is counterfactual, in that it assumes that Plaintiff did not sell certificates, when in the real world, Plaintiff did so. Dr. Snow provides no basis for his assumption that Plaintiff would have elected to hold these 21 certificates to maturity instead of selling them. Yet Dr. Snow's Held-to-Maturity counterfactual assumption more than doubles the amount of damages claimed. Indeed, for 16 of the Relevant Certificates, Dr. Snow's Repurchase Damages in the Held-to-Maturity scenario are not equal to zero, even if *no* repurchases are assumed to have occurred in Dr. Snow's but-for scenario. These "residual damages" are a direct result of Dr. Snow's assumption of continued holding of the certificates and not related to action by Wells Fargo. Also, Dr. Snow's Sold scenario relies on a flawed pricing regression that is missing important data and does not accurately predict prices, rendering it unreliable.

22. ***Opinion Five***. Dr. Snow's calculation of damages fails to consider the costs associated with enforcing the Relevant Trusts' claimed repurchase rights against responsible parties. These include the costs of loan investigation and review, as well as the costs of managing counterparty communications and rebuttals. Dr. Snow also has not considered that enforcing repurchase obligations often involves litigation, and he ignores the costs and uncertainty involved in such litigation.

23. ***Opinion Six***. Dr. Snow ignores the disparate interests of certificateholders of various tranches of the Relevant Trusts. In fact, Dr. Snow's but-for scenario results in reduced cashflows to certain tranches, and he has not provided analysis as to why, in his but-for world, Wells Fargo should have pursued a course of action as trustee that would have reduced cashflows to other certificateholders.

24. ***Opinion Seven***. Dr. Snow's Tort Damages calculation is unsupported and unreliable. As an initial matter, Dr. Snow provides no rationale for why so-called Tort Damages are appropriate or tied to claims in this case. In addition, Dr. Snow's Tort Damages calculations are derived from his Repurchase Damages calculations, which, as described above, suffer from numerous flaws. Lastly, the method by which Dr. Snow makes adjustments to his calculations for certain certificates is unexplained and unsupported.

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III. RELEVANT BACKGROUND

A. RMBS Structure and Administration

25. Residential mortgage-backed securities ("RMBS") are financial instruments that are secured by loan groups ("supporting loan groups," or "SLGs"), with each group containing many residential mortgages.[14] Issuers of RMBS create a separate entity, a trust, which holds these residential mortgages. The trust issues RMBS certificates, which are sold to investors.

26. RMBS are divided into slices, or "tranches," each of which bears a different level of risk and offers a different level of return.[15] Each purchaser of an RMBS certificate is typically entitled to cashflows associated with the principal and interest payments made by the mortgagors on the loans supporting the purchasers' tranches over the life of the certificate.[16] As discussed further below, these payments are distributed to the various certificateholders pursuant to the governing agreements in a highly complex way often referred to as a trust's "waterfall."

27. The specific structure of an RMBS trust is described in the prospectuses/prospectus supplements and the pooling and servicing agreement ("PSA"), indenture, or trust agreement (together, "Governing Agreements").[17] A highly simplified example structure functions as

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[14] Fabozzi, Frank J., Michael G. Ferri, and Steven V. Mann. "Overview of the Types and Features of Fixed Income Securities." *The Handbook of Fixed Income Securities*. 8th ed. Eds. Frank J. Fabozzi and Steven V. Mann. New York: McGraw Hill (2012): 3-19 at 16.

[15] Hu, Dapeng, and Robert Goldstein. "Nonagency Residential Mortgage-Backed Securities." *The Handbook of Fixed Income Securities.* 8th ed. Eds. Frank J. Fabozzi, and Steven V. Mann. New York: McGraw Hill (2012): 645-680 at 645.

[16] Fabozzi, Frank J., Anand K. Bhattacharya, and William S. Berliner. *Mortgage-Backed Securities: Products, Structuring, and Analytical Techniques.* 2nd ed. Hoboken, NJ: John Wiley & Sons, Inc. (2011) at 25.

[17] *Id.* at 189; *see* Asset Backed Funding Corporation, ABFC 2005-HE2 Trust, Pooling and Servicing Agreement (Aug. 1, 2005) (WF_CB_001698407 at WF_CB_001698513-22) ("AFBC 2005-HE2 PSA"); Asset Backed Funding Corporation, ABFC 2005-OPT1 Trust, Pooling and Servicing Agreement (Oct. 1, 2005) (WF_CB_001700063 at WF_CB_001700196-206) ("ABFC 2005-OPT1 PSA"); Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Pooling and Servicing Agreement (July 1, 2006) (WF_CB_001715744 at WF_CB_001715922-35) ("ABFC 2006-OPT1 PSA"); Asset Backed Funding Corporation, ABFC 2006-OPT2 Trust, Pooling and Servicing Agreement (Sept. 1, 2006) (WF_CB_001720936 at WF_CB_001721066-76) ("ABFC 2006-OPT2 PSA"); Asset Backed Securities Corporation, Asset Backed Securities Corporation Home Equity Loan Trust, Series WMC 2005-HE5, Pooling and Servicing Agreement (June 1, 2005) (WF_CB_001697517 at WF_CB_001697628-40) ("ABSHE 2005-HE5 PSA"); Citigroup Mortgage Loan Trust Inc., Citigroup Mortgage Loan Trust, Series 2005-OPT4, Pooling and Servicing Agreement (Sept. 1, 2005) (WF_CB_001783143 at WF_CB_001783245-53) ("CMLTI 2005-OPT4 PSA"); Structured Asset Mortgage Investments II, Inc., GreenPoint Mortgage Funding Trust 2005-AR4, Pooling and Servicing Agreement (July 1, 2005) (WF_CB_001795924 at WF_CB_001796032-8) ("GPMF 2005-AR4 PSA"); Bear Stearns Asset Backed Securities I LLC, GreenPoint Mortgage Funding Trust 2006-AR1, Pooling and Servicing Agreement (Feb. 1, 2006) (WF_CB_001796244 at WF_CB_001796342-5) ("GPMF 2006-AR1 PSA"); Structured Asset Mortgage Investments II, Inc., GreenPoint Mortgage Funding Trust 2006-AR2, Pooling and

follows: the holders of the most senior tranche have the first right to receive principal and interest payments, and each successive tranche is junior to the tranche or tranches above it.[18] Investors that are more cautious can choose to purchase senior tranches.[19] Similarly, return-oriented investors can buy subordinate tranches, which are riskier but generally have higher expected yields.[20]

28. The Governing Agreements generally provide information regarding the process through which loans will be transferred into the trust and how such loans will be serviced, as well as a description of what constitutes events of default.[21] Furthermore, the Governing Agreements memorialize R&Ws made by responsible parties, including R&Ws regarding loans sold to the trusts.[22] These documents also describe the distribution of interest, principal, and excess cashflow, as well as the allocation of losses, as discussed in detail below.

29. Prospectuses/prospectus supplements describe information about the tranches in the RMBS, cashflow structures, credit enhancements, performance of the tranches under different payment speeds, risk factors, and other items such as tax treatment.[23] Prospectus supplements typically

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Servicing Agreement (Mar. 1, 2006) (WF_CB_001239667 at WF_CB_001239788-93) ("GPMF 2006-AR2 PSA"); Structured Asset Mortgage Investments II, Inc., GreenPoint Mortgage Funding Trust 2006-AR3, Pooling and Servicing Agreement (Apr. 1, 2006) (WF_CB_001794147 at WF_CB_001794269-74) ("GPMF 2006-AR3 PSA"); Morgan Stanley ABS Capital I Inc., Morgan Stanley ABS Capital I Inc. Trust 2005-WMC2, Pooling and Servicing Agreement (Mar. 1, 2005) (WF_CB_001693562 at WF_CB_001693644-51) ("MSAC 2005-WMC2 PSA"); Morgan Stanley ABS Capital I Inc., Morgan Stanley ABS Capital I Inc. Trust 2005-WMC3, Pooling and Servicing Agreement (Apr. 1, 2005) (WF_CB_000753366 at WF_CB_000753450-9) ("MSAC 2005-WMC3 PSA"); Morgan Stanley ABS Capital I Inc., Morgan Stanley ABS Capital I Inc. Trust 2005-WMC5, Pooling and Servicing Agreement (June 1, 2005) (WF_CB_001709856 at WF_CB_001709936-43) ("MSAC 2005-WMC5 PSA"); Morgan Stanley ABS Capital I Inc., Morgan Stanley ABS Capital I Inc. Trust 2006-HE1, Pooling and Servicing Agreement (Feb. 1, 2006) (WF_CB_001713687 at WF_CB_001713782-8) ("MSAC 2006-HE1 PSA"); and Option One Mortgage Acceptance Corporation, Option One Mortgage Loan Trust 2006-2, Pooling and Servicing Agreement (June 1, 2006) (WF_CB_001784819 at WF_CB_001784935-40) ("OOMLT 2006-2 PSA").

[18] Vallee, David E. "A New Plateau for the U.S. Securitization Market." *FDIC Outlook* (Fall 2006): 3-10 at 3.

[19] Fabozzi, Bhattacharya & Berliner, *supra* note 16, at 25.

[20] *Id*. at 31.

[21] *Id.* at 190.

[22] *Id*.

[23] *Id*. at 189-90. For a list of offering documents pertaining to the Relevant Trusts, see **Appendix B**: *Materials Relied Upon*.

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also disclose a range of loan characteristics within each supporting loan group and display these characteristics in the form of stratifications.[24]

30. Over the life of the trust, the trustee typically provides reports, sometimes referred to as "remittance reports," to investors based on data it receives from the servicer. Remittance reports include information relating to the trust's performance, including distribution amounts, servicer advances, certificate balances, and realized losses, among other things.

31. The Governing Agreements specify the duties of the trustee.[25] These documents generally permit certificateholders to direct the trustee only in certain limited circumstances; in other instances, consent from certificateholders is required before a trustee can take certain actions.[26] Such direction or consent is based on provisions regarding the assignment of voting rights or fractional undivided interests and specified minimum thresholds of certificateholders.[27]

32. The Governing Agreements further specify terms related to a co-trustee or separate trustee. For example, the PSA for ABFC 2006-OPT2 states that "such powers, duties, obligations, rights and trusts as the Servicer and the Trustee may consider necessary or desirable" could be vested in persons acting as co-trustee or separate trustee.[28]

33. Separate trustees were appointed for ten of the Relevant Trusts beginning in August 2012.[29] *See* **Exhibit 2**: *Separate Trustee Appointments* for the date a separate trustee was appointed for these Relevant Trusts. Under the terms of the separate trustee appointment agreements and court orders, certain rights and duties belonging to Wells Fargo, such as those related to repurchases, were transferred to the separate trustees.[30] For example, following the appointment of the separate trustee for AFBC 2006-OPT2, the judge's order noted that Wells

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[24] *Id*. at 189.

[25] *See, e.g.*, CMLTI 2005-OPT4 PSA at WF_CB_001783281.

[26] *See, e.g.*, OOMLT 2006-2 PSA at WF_CB_001784970.

[27] *See, e.g.*, ABSHE 2005-HE5 PSA at WF_CB_001697571, WF_CB_001697663 (specifying how voting rights will be allocated).

[28] ABFC 2006-OPT2 PSA at WF_CB_001721114.

[29] *See, e.g.*, GreenPoint Mortgage Funding Trust 2005-AR4 Notice to Holders (Sept. 7, 2012). <www.ctslink.com> (accessed July 25, 2019) at 3.

[30] *See, e.g.*, *id.* at 2.

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Fargo had "no further duty or obligation to the [t]rusts' beneficiaries with respect to the enforcement of [r]epurchase [c]laims[.]"[31]

B. RMBS Credit Enhancements

34. Even high credit quality loans can default. In fact, default rates on prime loans, generally considered to have better credit quality than subprime and Alt-A loans, increased rapidly throughout the mid-2000s.[32] RMBS, like other asset-backed securities, often have credit enhancements that insulate certain investors from the impact of loans defaulting and failing to provide expected revenue streams. Credit enhancements, sometimes expressed as a percent of the total pool that can experience losses before a given certificateholder's claim to cashflows declines,[33] play an important role in mitigating default risk.[34] Credit enhancements include:

a. *Subordination*, a typical credit enhancement, "is the most direct approach to generate credit enhancement for senior tranches."[35] With a subordinated structure, senior classes have one or more supporting classes. When funds are received, the senior tranches are generally the first to receive payments.

b. *Allocation of losses* is a related mechanism by which these supporting classes act as a cushion to the senior classes, often in highly complex ways, in the event that losses occur. Losses are typically absorbed more or less in a "bottom-up" fashion, with the junior-most class absorbing initial losses and increasingly senior classes absorbing losses afterward.[36] The senior-most investors typically experience losses only if they penetrate through all other subordinate classes.[37]

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[31] Order with Respect to Verified Petition of Wells Fargo Bank, National Association as Trustee for Instructions in the Administration of a Trust Pursuant to Minn. Stat. § 501B.16. *In the Matter of: ABFC 2006-OPT2 Trust* (Dist. Ct. Minn., Hennepin County No. 27-TR-CV-14-30) (Mar. 19, 2014) at 3.

[32] Schelkle, Thomas. "Mortgage Default During the U.S. Mortgage Crisis." *University of Cologne Working Paper Series in Economics* 72 (May 16, 2014): 1-48 at 2.

[33] Fabozzi, Bhattacharya & Berliner, *supra* note 16, at 195.

[34] Ward, Warrick, and Simon Wolfe. "Asset-Backed Securitization, Collateralized Loan Obligations and Credit Derivatives." *Handbook of International Banking*. Eds. Andrew W. Mullineux and Victor Murinde. Cheltenham, UK: Edward Elgar Publishing (Apr. 2003): 60-101 at 62-3.

[35] Hu & Goldstein, *supra* note 15, at 664.

[36] *Id*. at 666.

[37] *Id.*

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c. *Overcollateralization* is a credit enhancement common to asset-backed securities, including RMBS. In the case of overcollateralization, the face value of the collateral is larger than the value of the security backed by those assets.[38] For example, an RMBS may be issued for $100 million while the loans collateralizing the security may have a total face value of $105 million. In this example, the security is overcollateralized by $5 million, or 5 percent. Such overcollateralization can act as a buffer in the event that the underlying collateral experiences defaults. Trusts often have complex rules around the maintenance of overcollateralization levels.

d. *Excess spread* (or "excess interest") is the amount of interest collected above and beyond the amount needed to pay interest to certificateholders.[39] This excess spread is used to pay ongoing expenses associated with the transaction. It may also be distributed as principal, thus building overcollateralization for the trust over time.[40]

e. *Cross-collateralization* is a credit enhancement that often applies when there are multiple supporting loan groups in the same trust.[41] Cross-collateralization occurs when funds from one supporting loan group can be released to another supporting loan group under certain circumstances.[42]

f. *Insurance provided by bond insurers* (such as MBIA, FGIC, Ambac, and Assured Guaranty) also serves as a form of credit enhancement. For securities with bond insurance "wraps," bond insurers guarantee some portion of the principal and/or interest payments owed to investors in certain (typically senior) tranches.[43] By guaranteeing some degree of payment to investors irrespective of the cashflows from the underlying mortgages, investors in those tranches are insulated to some degree from the effects of losses on the underlying collateral.

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[38] *Id.* at 666-7.

[39] Fabozzi, Bhattacharya & Berliner, *supra* note 16, at 104.

[40] *Id*. at 199.

[41] Hu & Goldstein, *supra* note 15, at 664.

[42] Fabozzi, Bhattacharya & Berliner, *supra* note 16, at 207.

[43] *Id*. at 206.

g. *Private/primary mortgage insurance* is an insurance contract that protects the lender against default.[44] This insurance protects the entity that holds the credit risk of the loan by covering a percentage of the mortgage loan amount.[45]

35. Because of credit enhancements and the complexity of trust structures, losses to the pool of mortgages may not translate into losses for RMBS investors. In instances where there are losses that must be allocated to tranches, credit enhancements may lead to some tranches experiencing losses while others experience none.

36. Plaintiff's tranches benefitted from credit enhancements, including structural credit enhancements and derivative contracts. In fact, as of June 2019, five of Plaintiff's tranches have not experienced realized losses since trust closing. The tranches experiencing no realized losses to date include the M5 and M6 tranches of CMLTI 2005-OPT4, the M4 tranche of MSAC 2005-WMC2, the M6 tranche of MSAC 2005-WMC5, and the A4 tranche of MSAC 2006-HE1.[46] *See* **Exhibit 3**: *At-Issue Tranches Without Realized Losses as of June 2019.* For example, the A4 tranche from MSAC 2006-HE1 has not experienced any realized losses and has a credit support of 37.39 percent to protect against future losses as of June 2019.[47] It is currently the most senior outstanding tranche and receiving monthly principal distributions.

C. Distribution of Payments and Allocation of Losses Pursuant to Waterfall Provisions

37. The original certificate principal balance is the balance of each tranche as of the closing date. The certificate principal balance of a tranche *decreases* over time in each of the following two ways. First, the balance can be reduced as the result of payments made by mortgagors. Second, the balance can be reduced as a result of a "write-down" process. Write-downs reflect the realization of losses that can occur for a variety of reasons discussed below. Realized losses occur when a defaulted loan has been liquidated and the proceeds of the liquidation do not fully

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[44] *Id*.

[45] *Id*.

[46] *See* CMLTI 2005-OPT4 Remittance Report (June 25, 2019); MSAC 2005-WMC2 Remittance Report (June 25, 2019), MSAC 2005-WMC5 Remittance Report (June 25, 2019); and MSAC 2006-HE1 Remittance Report (June 25, 2019).

[47] Bloomberg L.P. (accessed July 16, 2019). According to Bloomberg, current credit support represents the percentage of the underlying collateral pool that should be written down as a credit loss, before the tranche takes the first dollar of loss.

cover the unpaid principal balance.[48] A realized loss may also occur when a mortgage loan has been modified and the principal is reduced or a bankruptcy court reduces the amount owed on the mortgage.[49] The Governing Agreements specify how these losses are applied to the tranches. They are generally first allocated from the "bottom up," that is, beginning with the most junior certificates.[50]

38. On each distribution date, the amount of funds available for distribution depends on the amount of funds received from mortgagors.[51] This includes regularly scheduled payments of principal and interest, and other funds received by the trust. In addition, unscheduled payments resulting from sales or refinances increase funds available to distribute to the investors, which could pay down their certificate balances.

39. The manner in which particular payments are distributed to the various certificateholders is often referred to as a "waterfall."[52] There are typically separate, complex waterfall rules for distribution of interest, principal, and excess cashflow in each trust. Implementation of these rules varies over time, as events occur, and depending on how proceeds are characterized.

40. Within a trust, distributions pursuant to the waterfall are conditional on a number of factors, and may vary over time.[53] For example, many RMBS include a "stepdown date,"[54] a date after which subordinate tranches may begin to receive principal payments.[55] RMBS may also include certain "trigger events" that redirect the allocation of payments. Trigger events are "highly deal- and issuer-specific, depending on both the type of collateral backing the deal and how it was expected to perform at issuance."[56] Trigger events can affect which certificates receive the principal available for distribution on a given distribution date.

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[48] *See, e.g.*, MSAC 2005-WMC3 PSA at WF_CB_000753407-8.

[49] *See, e.g.*, ABFC 2006-OPT1 PSA at WF_CB_001715785 and WF_CB_001715812.

[50] *See, e.g.*, OOMLT 2006-2 PSA at WF_CB_001784950-1.

[51] Funds can also include receipts from derivatives owned by the trust.

[52] Fabozzi, Bhattacharya & Berliner, *supra* note 16, at 169.

[53] *Id.* at 199-201.

[54] *See, e.g.*, ABFC 2005-HE2 PSA at WF_CB_001698470.

[55] Fabozzi, Bhattacharya & Berliner, *supra* note 16, at 199.

[56] *Id*. at 200-201.

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41. The presence of overcollateralization and the targets associated with it may also affect distributions.[57] If a trust has a target overcollateralization amount, the distribution of principal can vary depending on whether the target has been met.

42. Cross-collateralization provisions can also cause the reallocation of principal and interest payments received from one supporting loan group to tranches backed by other supporting loan groups if certain defined conditions are met. Cross-collateralization can depend on whether, and to what extent, losses impact other tranches, and other rules set out in a trust's governing agreements.

43. The majority of the Relevant Certificates did not experience realized losses prior to Plaintiff's acquisition or between Plaintiff's acquisition and sale dates. The majority of the realized losses incurred by the Relevant Certificates occurred only *after* Plaintiff sold the Relevant Certificates. *See* **Exhibit 4**: *Realized Losses Prior to Plaintiff's Alleged Acquisition, Between Plaintiff's Alleged Acquisition and Sale, and After Plaintiff's Sale.* The realized losses incurred after Plaintiff's sales of the Relevant Certificates were incurred by subsequent purchasers and *not* Plaintiff.

IV. THE SNOW REPORT AND OPINIONS

44. The Snow Report contains calculations relating to two different types of purported damages: "Repurchase Damages" and "Tort Damages."

A. Calculation of Repurchase Damages

45. "Repurchase Damages," in Dr. Snow's view, represent the difference between: (1) the principal and interest Plaintiff has actually received and is projected to receive, plus any sale proceeds, plus applicable prejudgment interest;[58] and (2) the principal, interest, sales proceeds and prejudgment interest that Plaintiff would have received and would be projected to receive, had Wells Fargo taken steps to ensure that certain loans allegedly eligible for repurchase were repurchased.[59]

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[57] *Id.* at 199.

[58] In his supporting materials, Dr. Snow refers to this as the "baseline scenario."

[59] Snow Report at ¶ 35.

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46. To calculate Repurchase Damages, Dr. Snow begins by calculating what he calls "Repurchase Amounts," which, according to Dr. Snow, represent the amounts that would have been paid by responsible parties had Wells Fargo appropriately taken steps to enforce the Relevant Trusts' rights to repurchases of "Defective Loans."[60] To do so, Dr. Snow relies upon the determination of Plaintiff's other experts to identify "loans eligible for repurchase."[61] Ms. Ingrid Beckles purports to identify loans with uncured material exceptions ("Document Defect Loans"),[62] and Mr. Richard Bitner purports to identify loans that evidence the responsible parties having breached representations and warranties ("R&W Breach Loans").[63] Dr. Snow undertook no independent investigation or analysis of the loans on which he simulates repurchases.[64]

47. For the Document Defect Loans and the R&W Breach Loans, Dr. Snow uses a date that he describes as the date by which Wells Fargo "should" have enforced a repurchase (an "Enforcement Date"),[65] and a date on which the repurchase supposedly would have occurred (a "Purchase Date").[66] He then calculates the price at which each loan would be repurchased (a "Purchase Price").[67] The sum of the Purchase Prices on all Defective Loans in a Relevant Trust constitute the Repurchase Amounts.[68]

48. After tabulating Repurchase Amounts, Dr. Snow distributes these amounts to certificateholders on the Purchase Dates using waterfall models developed by The Oakleaf Group to determine

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[60] *Id.* at ¶¶ 21, 27.

[61] *Id.* at ¶ 15.

[62] *Id.* at ¶ 57 (Appendix D) and n. 48; *see also* Beckles, Ingrid. Expert Report of Ingrid Beckles. *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (Nov. 28, 2018) and supporting materials ("Beckles Report").

[63] Snow Report at ¶ 29 and n. 23; *see also* Bitner, Richard. Expert Report of Richard Bitner. *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (Nov. 28, 2018) and supporting materials ("Bitner Report").

[64] Snow, Karl. Deposition. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (June 28, 2019) and related exhibits ("Snow Dep.") 41:15-42:4 (regarding material exceptions) ("Q. Did you do any independent review of loan files to confirm that material exceptions actually existed for any particular loans? A. I did not…Q. Did you do any independent assessment of what might have been missing from a loan file? A. I did not."); 53:6-54:4 (regarding R&W breaches) ("Q. Did you independently review any loan files to confirm the R&W breaches in the loans that were identified for you are having R&W breaches? A. No…Q. You also did not do an independent assessment of what breaches did or didn't have an (sic) material and adverse effect on the interest of the certificate holders in the loan or the value of the related loan, right? A. No. I have not done that type of analysis.").

[65] Snow Report at ¶ 28.

[66] *Id.* at ¶¶ 28, 29.

[67] *Id.* at ¶¶ 31-34.

[68] *Id.* at ¶ 34.

the cashflows that would have been received and would be projected to be received by Plaintiff under the but-for scenario (the "But-For Payments").[69, 70] To project cashflows in both the actual and but-for scenarios, Dr. Snow implements a forecast of loan performance beginning in June 2018.[71] Almost immediately, however, Dr. Snow's forecasts of loan performance diverge from the actual data, and this divergence grows over time.

49. Dr. Snow then compares the But-For Payments to the principal and interest he contends that Plaintiff has received and is projected to receive.[72] Dr. Snow then takes (a) the present value of the difference between the two and adds (b) his calculation of prejudgment statutory interest using a nine percent rate, to reach what he calls "Repurchase Damages."[73] Up to 27.9 percent of his Repurchase Damages calculations are attributable to the statutory prejudgment interest component of his calculations, and up to 53.54 percent of his Repurchase Damages calculations are attributable to the present value of future payments.[74]

50. For the 21 certificates that are no longer held by Plaintiff, Dr. Snow calculates Repurchase Damages under two different scenarios. In the Held-to-Maturity scenario, Dr. Snow assumes that Plaintiff would not have sold the certificates had Wells Fargo performed the obligations Plaintiff alleges it failed to perform.[75] In the Sold scenario, Dr. Snow assumes that Plaintiff would still have sold the certificates at the same point in time, but at the price that purportedly would have prevailed had Wells Fargo fulfilled its obligations.[76]

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[69] *Id.* at ¶¶ 21 n. 13, 27, 30.

[70] The Oakleaf Group's waterfall models allow the generated certificate principal payments to be different from what was reported in the remittance reports. *See* Milner, Christopher J. Corrected Expert Report of Christopher J. Milner. *National Credit Union Administration Board, et al. v. Wells Fargo Bank, National Association* (S.D.N.Y. No. 1:14-cv-10067) (Jan. 25, 2019) ("Milner Report") at ¶ 76. I reserve all rights to opine on these discrepancies, but my analyses in this report are based on the waterfall models Dr. Snow has used as further described.

[71] Snow Report at ¶ 30.

[72] *Id.* at ¶¶ 27, 35.

[73] *Id.* at ¶ 40 and Fig. 5; ¶ 45 and Fig. 6.

[74] *Id.* at Figs. 5 and 6.

[75] As discussed in more detail in section VIII, the counterfactual assumption that sold certificates would have been held to maturity in the but-for world gives rise to "residual" Repurchase Damages of $48.43 million (27.16 percent of Repurchase Damages), even when the repurchase rate is set to zero.

[76] Snow Report at ¶ 20.

51. Dr. Snow provides no rationale for either the Held-to-Maturity or Sold scenarios, and he calculates alternative damages amounts under each of them. He fails to explain which scenario is more likely or primary and provides no economic analysis of either scenario. Yet Repurchase Damages under the Held-to-Maturity scenario are more than double the amount of damages under the Sold scenario. As described below and as discussed in more detail in section VIII, the counterfactual assumption that the Sold Certificates would have been held to maturity in the but-for world in Dr. Snow's Held-to-Maturity scenario leads to the "residual" damages of $48.43 million, even when no repurchases are simulated.

52. At the direction of counsel, Dr. Snow's damages calculations also assume that "all legal rights and claims arising from the initial purchase of the [Relevant] Certificates have been assigned to the Plaintiff,"[77] and in at least 18 instances, Dr. Snow calculates damages from dates of acquisition by entities other than the Plaintiff, Commerzbank. Dr. Snow, however, provides no support for this assumption, and I understand that Wells Fargo disputes it. Dr. Snow's Repurchase Damages are reduced by $16.64 million (or 9.33 percent) in the Held-to-Maturity scenario, or by $15.98 million (or 18.60 percent) in the Sold scenario, if he had instead utilized Commerzbank's acquisition dates as listed in the Appendix 4 of the Warren Report.[78] *See* **Exhibit 5a**: *Dr. Snow's Repurchase Damages Under Alternative Acquisition Dates and Prices*.

B. Calculation of Tort Damages

53. Dr. Snow also purports to calculate what he calls "Tort Damages." Based on instruction from counsel, Dr. Snow states that Tort Damages represent the "out-of-pocket harm to the Plaintiff caused by Wells Fargo's purported failure to perform its duties, accounting for any discount relative to par in the price the Plaintiff paid."[79] According to Dr. Snow, he understands that "out-of-pocket harm in this matter is equivalent to Repurchase Damages […] provided that the principal received in the but-for world does not exceed the amount that the Plaintiff paid for the [Relevant] Certificate."[80]

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[77] *Id.* at ¶ 9 n. 2.

[78] Warren, Samuel. Expert Report of Samuel Warren. *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (Dec. 21, 2018) ("Warren Report") at Appendix 4.

[79] Snow Report at ¶ 24.

[80] *Id.*

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54. According to Dr. Snow, eight of the Relevant Certificates were purchased by Plaintiff at a price below par.[81, 82] Dr. Snow determined that three of these eight were purchased at prices above 99 percent of par based on the trade tickets from the original purchase of the certificates.[83] For the remaining five, he determined the purchase prices were between 47.03 to 86.29 percent of par based on "cash paid" for repo certificates as reflected on Plaintiff's records as of November 2007.[84] As described below, Dr. Snow makes adjustments for these five certificates that were purchased at prices below 99 percent of par.

55. To calculate Tort Damages, Dr. Snow first compares: (a) the nominal amount paid by Plaintiff to purchase each certificate to (b) the nominal principal received by Plaintiff in the relevant but-for scenario.[85] If, in the but-for world, Plaintiff would have received more in principal than it paid for the certificate, Dr. Snow makes an adjustment to the principal payments under the but-for scenario.[86] In so doing, Dr. Snow sets a "cap" on the claimed damages. This "cap" is based on the price paid for a given certificate.[87] Tort Damages are then calculated as the sum of: (1) the difference between past and projected but-for cashflows (as adjusted, if applicable) and past and projected actual cashflows to the Plaintiff (including sales proceeds); and (2) nine percent statutory prejudgment interest.[88] Again, even for claimed Tort Damages, statutory prejudgment interest increases Dr. Snow's damages calculations by up to $17.9 million or 22 percent.[89]

56. Dr. Snow applies adjustments to the five Relevant Certificates that were purchased at prices below 99 percent of par.[90] For three of these certificates, Dr. Snow reports that the adjustments

[81] *Id.* at ¶ 47.

[82] I understand that Wells Fargo disputes these were the prices Plaintiff paid for the Relevant Certificates and asserts that the actual prices are lower for certain Relevant Certificates. *See* Warren Report at ¶¶ 98, 104, 112. Recalculating damages at these lower prices reduces Dr. Snow's damages as described further below.

[83] Snow Report at ¶ 47 and Fig. 7 (ABSHE 2005-HE5 M8; GPMF 2006-AR3 4A2; and MSAC 2005-WMC2 M4).

[84] *Id.* (GPMF 2005-AR4 2A2, GPMF 2006-AR1 A3, GPMF 2006-AR2 3A3, MSAC 2006-HE1 A4, and OOMLT 2006-2 2A4).

[85] *Id.* at ¶ 48.

[86] *Id.* at ¶¶ 48-49.

[87] *Id.* at ¶ 49.

[88] *Id.* at Figs. 8 and 9.

[89] *Id.*

[90] *Id.* at n. 45. This footnote erroneously excludes the OOMLT 2006-2 2A4 certificate.

result in $0 Tort Damages in both the Held-to-Maturity and Sold scenarios.[91] For the remaining two certificates, damages are significantly reduced.[92] For the MSAC 2006-HE1 A4 certificate, for example, Dr. Snow calculated $4.97 million in Repurchase Damages in the Held-to-Maturity scenario.[93] After applying an adjustment to nominal principal received in the but-for world of 0.86, Dr. Snow arrives at $3.87 million in Tort Damages under the same scenario,[94] a reduction of approximately 22 percent.

57. Notably, Dr. Snow declined to calculate Tort Damages in another trustee case against Wells Fargo, the *Phoenix Light* case.[95] When asked at his deposition why he did not calculate tort damages for *Phoenix Light*, Dr. Snow stated only that he calculated Tort Damages here because it was requested by counsel (although the same firm represents the plaintiffs in the *Phoenix Light* case and Plaintiff in this case).[96] He had no other explanation or understanding as to why he calculated Tort Damages in this case, and he made no analysis of the appropriateness of Tort Damages here.

58. Finally, Dr. Snow's Tort Damages are reduced by $101.48 million (or 60.40 percent) in the Held-to-Maturity scenario, or by $35.76 million (or 44.04 percent) in the Sold scenario, if he had utilized Commerzbank's acquisition dates and acquisition prices as listed in the Appendix 4 of the Warren Report, as opposed to the earlier acquisition dates of other entities.[97] *See* **Exhibit 5b:** *Dr. Snow's Tort Damages Under Alternative Acquisition Dates and Prices*.

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[91] *Id.* at Figs. 8 and 9 (reflecting $0 in Tort Damages for GPMF 2005-AR4 2A2, GPMF 2006-AR1 A3, and GPMF 2006-AR2 3A3 certificates). Although Dr. Snow reports $0 in damages for these certificates, in reality, the sum of the three columns that comprise Tort Damages, "Nominal historical damages," "PJI," and "PV of change in future cash flow to Certificates" is negative, which would imply negative damages on these certificates. Dr. Snow does not provide Wells Fargo any credit for these negative amounts, which total $5.43 million in the Held-to-Maturity scenario or $7.76 million in the Sold scenario.

[92] *Id.* at Figs. 5-6, 8-9 (relating to the MSAC 2006-HE1 A4 certificate and OOMLT 2006-2 2A4 certificate).

[93] *Id.* at Fig. 5.

[94] *Id.* at Fig. 8 and n. 42.

[95] *See* Snow, Karl N. Amended Expert Report of Karl N. Snow, PhD. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Apr. 15, 2019) ("Snow *Phoenix Light* Report").

[96] Snow Dep. 300:2-9 ("Q. Were tort damages calculated in the *Commerzbank* [case] at the request of counsel? A. Yes, correct. Q. Is there any other reason why you calculated tort damages in the *Commerzbank* case but not in the *Phoenix Light* [case]? A. No.").

[97] Warren Report at Appendix 4.

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C. Exclusion of Servicing Damages

59. In the *Phoenix Light* case, Dr. Snow also calculates Servicing Damages, which represent, according to Dr. Snow, the difference between (1) the principal and interest plaintiffs would have received and would be projected to receive in the but-for scenario where Wells Fargo addressed breaches by third-party servicers of their contractual obligations to the Relevant Trusts; and (2) the principal and interest plaintiffs actually received and are projected to receive in the real world.[98]

60. Plaintiff presents no Servicing Damages calculations in this case. Dr. Snow does not calculate Servicing Damages for the Relevant Trusts here, including the ABFC 2006-OPT2 trust, which is a Relevant Trust for both this case and *Phoenix Light*. When asked at his deposition why he did not calculate Servicing Damages for this case, Dr. Snow had no explanation or understanding, stating only that such calculations were not requested by counsel.[99]

V. OPINION ONE: DR. SNOW'S DAMAGES MODEL DOES NOT PROPERLY ACCOUNT FOR THE TRUSTEE'S DISTINCT ROLE.

61. As Dr. Snow has acknowledged, the intent of a "but-for" damages calculation is to "accurately and reliably reflect what would have happened" if alleged wrongful conduct or inaction had not occurred.[100] Calculating damages attributable to Wells Fargo's alleged failure to fulfill its duties as trustee thus requires an understanding and analysis of the role of a trustee, the elements of the claims against a trustee, and what it is alleged Wells Fargo could or should have done to address alleged document defects and R&W breaches.[101]

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[98] Snow *Phoenix Light* Report at ¶ 41.

[99] Snow Dep. 302:14-24 ("Q. What is the basis for calculating servicing damages in the Phoenix Light case but not in the Commerzbank case? A. Just it is what counsel asked me to calculate. They did not ask me to calculate servicing damages in the Commerzbank matter. Q. Is it the case that Commerzbank was not impacted by servicing as Phoenix Light claims it was? A. That I can't tell you.").

[100] *Id*. at 22:14-19.

[101] *See* Allen, Mark A., Robert E. Hall, and Victoria A. Lazear. "Reference Guide on Estimation of Economic Damages." *Reference Manual on Scientific Evidence*. 3rd ed. Washington, D.C.: National Academies Press (2011): 425-502 at 432 ("The characterization of the harmful event begins with a clear statement of what occurred. The characterization also will include a description of the defendant's proper actions in place of its unlawful actions and a statement about the economic situation absent the wrongdoing, with the defendant's proper actions replacing the unlawful ones (the but-for scenario). Damages measurement then determines the plaintiff's hypothetical value in the but-for scenario. Economic damages are the difference between that value and the actual value that the plaintiff achieved.").

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62. In building his but-for model relating to Repurchase Damages, however, Dr. Snow does none of these things, relying instead on counsel for many significant assumptions that drive his results and recycling a model that he has used in non-trustee cases involving fundamentally different claims.[102] In short, Dr. Snow's model is not designed to address a multitude of complexities peculiar to this case, *i.e.*, it fails to account adequately for the different claims, the trustee's role, and numerous other facts and circumstances relevant here but not in standard put-back and monoline cases where Dr. Snow has previously deployed his model.

63. Dr. Snow testified that he is not offering an opinion on what constitutes a breach by Wells Fargo. He acknowledged that he had not analyzed the question of causation and that he does not have an understanding of what must be proven for each claim to establish causation of damages.[103]

64. Consequently, Dr. Snow effectively treats Wells Fargo as a guarantor of warrantor conduct and ignores (or counterfactually assumes away) the elements of Plaintiff's claims which allege that Wells Fargo failed to pursue specific action. That is, for each asserted breach, Dr. Snow did not model what would have happened if Wells Fargo had pursued remedies with regard to allegedly breaching loans, as Plaintiff claims Wells Fargo was required to do.

A. Dr. Snow's Repurchase Damages Inappropriately Assume Damages Attributable to Warrantors' Alleged Breaches Are Equal to Damages Attributable to the Trustee's Alleged Failure to Enforce Repurchase Obligations.

65. In calculating Repurchase Damages, Dr. Snow uses the same definition of repurchase damages he has used in monoline and put-back litigation,[104] and creates a but-for scenario in which

[102] Snow Dep. 26:2-28:4 ("Q. …Have you ever used the same definition of repurchase damages before to calculate damages in any other case than the currently pending Commerzbank case against Wells Fargo? [omitted] A. In probably 35 different [put-back or monoline] cases."); *see also id.* at 28:5-18 ("Q. Are there any differences between the definition of repurchase damages that you are using here and the definition of repurchase damages that you used in a monoline or put-back case? [objection omitted] A. If we are talking generally, you know, that the construct is what actually happened versus what was the impact or what would have been the impact of repurchasing various loans, no, at a general level.").

[103] *Id.* at 273:16-20 ("Q. Do you have an understanding of what must be proven for each claim to establish causation of damages? A. No. I don't. I am assuming liability."); 18:10-19:17; 33:19-34:9 ("Q. Sitting here can you identify any different elements that you have incorporated into your repurchase damages model to account for the trustee's duties and obligations? [objection omitted] THE WITNESS: Like I said I have been given certain assumptions by counsel. I have general understandings of what drives those assumptions but I am not in a sense connecting the dots between the trustee's behavior and what should be repurchased."); 66:17-67:24.

[104] *Id.* at 28:5-18.

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warrantors would have repurchased 100 percent of the allegedly defective loans at issue. Using the same analysis is inappropriate here, however, because the damages attributable to warrantors' alleged breaches (as in put-back cases) are not the same as the damages attributable to a trustee's alleged failure to enforce warrantors' obligations to repurchase. What is missing from Dr. Snow's analysis here is what is supposed to differ between Dr. Snow's but-for and actual world scenarios: actions that would or should have been taken *by the trustee* and the outcome of such actions. Indeed, as acknowledged by Dr. Snow in his deposition in the *Phoenix Light* case, he is not "connecting the dots between the trustee's behavior and what should be repurchased."[105] This is a fundamental failure in his Repurchase Damages model.

66. The process of enforcing repurchase of defective loans involves multiple layers of contingencies, the outcomes of which are beyond the direct control of the trustee. Measuring damages due to the trustee's alleged failure to properly address R&W breaches or document defects necessitates filtering out the effects of contingencies in the repurchase process that are beyond the trustee's control (*e.g.*, effects of warrantors' ability and willingness to repurchase allegedly breaching loans; duration, costs, and outcome of litigation that is pursued by the trustee if the warrantors fail to cure R&W breaches or document defects). Quantifying such contingencies in the but-for world requires individualized inquiry of the allegedly defective loans and multiple counterfactual inputs (*e.g.*, expected duration and outcomes of repurchase litigation).

67. Therefore, to properly model the impact of a trustee's alleged inactions regarding repurchases, Dr. Snow must account for the process and uncertainties the trustee would have faced in pursuing repurchases. This would include, for example, the potential costs the trusts would have incurred during the repurchase process; the length of time the process would have taken and uncertainties regarding how long this process would have taken; the likely outcome of such a process and uncertainties regarding the outcome of that process; whether such outcomes were likely to have been impacted by the financial conditions of the warrantors; whether litigation would have been necessary to force warrantors to repurchase loans; whether the trustee would have been directed and indemnified to pursue such litigation and at what expense to the Relevant Trusts; the outcome of any litigation and possible appeals; and the likely recovery

[105] *Id.* at 34:6-9.

resulting from either settlement or a final judgment. As explained in more detail in the following sections of this report, Dr. Snow has analyzed none of these things.

68. Dr. Snow also has used and applied uniform assumptions as to timing, repurchase rate and recovery amounts, and other factors, without regard to trust-, loan- or breach-specific considerations such as strength of claims or numbers of loans at issue. In other words, the assumptions Dr. Snow has used involve no variation by trust, no variation based on the types of loans that are at issue, no variation based on the warrantors that are at issue, and no variation in the types of R&W breaches or document defects that are claimed.[106] He undertakes no loan-by-loan or trust-by-trust analysis as to these facts, although they vary over time and based on loan-specific information.

69. Because Dr. Snow has not properly accounted for the process and outcome of the trustee's action in enforcing repurchases on a loan-by-loan or trust-by-trust basis, his model and Repurchase Damages do not accurately reflect damages to Plaintiff arising out of Wells Fargo's alleged breaches of its trustee duties or its purported failure to enforce repurchase obligations, as explained in more detail in section VI.

B. Dr. Snow's Damages Methodology Ignores Causation.

70. Dr. Snow presents two sets of damages calculations—what he calls "Repurchase Damages" and "Tort Damages"—based on the same but-for world, where the same loans are simulated for repurchase.[107] He describes Tort Damages as being so-called "out-of-pocket" damages, claiming that his Tort Damages model is distinct from "benefit of the bargain" damages models by virtue of the fact that his "benefit of the bargain" model does not include prices.[108] However, both damages calculations use the same but-for scenario predicated on Wells Fargo's alleged compliance with its promised contractual duties. He does not analyze or even consider whether Plaintiff experienced realized losses on its claimed holdings in the Relevant

[106] Dr. Snow acknowledged this in his testimony in the *Phoenix Light* matter. *Id.* at 90:14-91:17 ("Q. It is a uniform assumption or instruction across all four of the trusts on which you calculate R&W breach damages, right? A. Correct. Q. No variation by trust? A. Correct. Q. No variation based on the types of loans that are at issue? A. Correct…Q. No variation based on the warrantors that are at issue -- A. Correct. Q. -- of the types of R&W breaches that are claimed? A. Correct…Q. No statistical analysis, survey of repurchase demands, right? A. No. It is an assumption I was given.").

[107] Dr. Snow then "make[s] the adjustment by reducing the principal received in the but-for world through time in order to set a 'cap' on the benefit to the Plaintiff based on its purchase price." *See* Snow Report at ¶ 49.

[108] *Id.* at ¶ 46.

Certificates, let alone realized losses during its claimed holding periods caused by Wells Fargo's conduct.

71. Indeed, as stated above, five Relevant Certificates have not experienced realized losses since trust closing. Dr. Snow's model predicts that these tranches will be paid in full before the trusts mature even if no repurchases occur, thus also experiencing no realized losses in the future.[109] *See* **Exhibit 3**: *At-Issue Tranches Without Realized Losses as of June 2019.*

72. Many of Plaintiff's other holdings experienced no realized losses during Plaintiff's holding periods, with tranche-level losses occurring only *after* Plaintiff's sales of the Relevant Certificates. *See* **Exhibit 4**: *Realized Losses Prior to Plaintiff's Alleged Acquisition, Between Plaintiff's Alleged Acquisition and Sale, and After Plaintiff's Sale.* Dr. Snow does not tie the Relevant Certificates' performance to Wells Fargo's conduct, ignoring whether Plaintiff suffered realized losses in the real world because of Wells Fargo, as opposed to the other many factors that impact loan performance.

73. Dr. Snow similarly ignores and cannot attribute a particular defective loan's default to Wells Fargo's conduct, or the alleged R&W breaches or document defects claimed for that loan, acknowledging that he has not undertaken an analysis of the many factors that cause and impact loans' defaults.[110] These include macroeconomic variables and idiosyncratic variables, such as losing a job.[111] But despite acknowledging that one needs to look at all of these variables to determine what caused a loan to go into default,[112] Dr. Snow has not analyzed and proposes no method to isolate losses on allegedly defective loans that are attributable to Wells

[109] These tranches are the M5 and M6 tranches of CMLTI 2005-OPT4, the M4 tranche of MSAC 2005-WMC2, the M6 tranche of MSAC 2005-WMC5, and the A4 tranche of MSAC 2006-HE1.

[110] Snow Dep. 101:12-24 ("Q. So you couldn't tell us if a particular breach caused a loan to default or whether it was because someone lost their job or any of these other factors that you just mentioned? A. Again, I disagree sort of with the premise of the question. There isn't a single cause. It is a matter of looking at all the different factors and seeing how they all interact and I have not done the type of analysis to be able to look at what the marginal impact of all those factors are.").

[111] *Id.* at 101:6-11.

[112] *Id.* at 100:19-101:11 ("Q. If we wanted to know if a breach that has been identified in this case caused a loan to default or whether the borrower didn't pay back because he or she lost a job we can't figure that out based on the work you have done, right? A. The causation, right, is again an interaction of a number of different things. It is a function of the loan terms, the borrower characteristics, macroeconomic variables and idiosyncratic variables. You mentioned one idiosyncratic variable, someone losing their job which is a trigger. One would have to look at all of those things in conjunction and so I have not performed and have not been asked to perform that type of analysis to date.").

Fargo's conduct from those attributable to other factors.[113] Dr. Snow also does not include or address in his model Plaintiff's actions (or lack of actions) that could have avoided the damages it now claims.[114]

74. Dr. Snow's refusal to utilize or even propose a methodology that would assess, consider, or isolate the impact of, for example, macroeconomic factors is particularly noteworthy, given the interrelationship among housing prices, unemployment, and mortgage loan performance. Home prices are an important factor influencing mortgage default rates.[115] When home prices are increasing, and homeowners have equity in their homes, they are less likely to allow foreclosure to occur, choosing instead to sell the property to recover available equity.[116] Declining home prices, on the other hand, affect both the ability and willingness of mortgagors to honor their repayment commitments,[117] and also impact the ability of a mortgagor to refinance the mortgage or sell the property in the face of difficulty making payments.[118] A borrower's decision to refinance also may be affected by changes in home prices.[119] Furthermore, if declining home prices place a borrower in a situation where the value of the property is less than the outstanding balance of the mortgage,[120] a borrower may be less willing to make payments or may choose to stop payment altogether. There is empirical evidence that

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[113] *Id.* at 100:7-11.

[114] *See* Warren Report at ¶¶ 129 *et seq*.

[115] Gerardi, Kristopher, Adam Hale Shapiro, and Paul S. Willen. "Subprime Outcomes: Risky Mortgages, Homeownership Experiences, and Foreclosures." *Federal Reserve Bank of Boston Working Papers* 07–15 (Dec. 3, 2007): 1–57 at 1.

[116] Foote, Christopher L., Kristopher Gerardi, Lorenz Goette, and Paul S. Willen. "Just the Facts: An Initial Analysis of Subprime's Role in the Housing Crisis." *Journal of Housing Economics* 17 (2008): 291–305 at 293.

[117] Doms, Mark, Fred Furlong, and John Krainer. "Subprime Mortgage Delinquency Rates." *Federal Reserve Bank of San Francisco Working Paper* 2007–33 (Nov. 2007): 1-29 at 5-6.

[118] Foote, Gerardi, Goette & Willen, *supra* note 116, at 293.

[119] Pennington-Cross, Anthony, and Souphala Chomsisengphet. "Subprime Refinancing: Equity Extraction and Mortgage Termination." *Real Estate Economics* 35.2 (Summer 2007): 233-263 at 233.

[120] Ellis, Luci. "How Many in Negative Equity? The Role of Mortgage Contract Characteristics." *BIS Quarterly Review* (Dec. 2008): 81-93 at 82.

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negative equity and "strategic default" (homeowners stopping mortgage payment even though they can meet their obligations)[121] are correlated.[122]

75. Dr. Snow also ignores the impact of increased unemployment. A strong economy, with a low unemployment rate, stimulates the housing market.[123] Conversely, increases in unemployment and decreases in income have been found to be correlated with significantly increased default rates and to have a negative impact on mortgage performance.[124] Some researchers have found that "job loss is the main 'single trigger' determinant of default."[125] Individual job loss, an increase in the likelihood of job loss, and/or a decline in income can lead to difficulty or unwillingness to pay a mortgage.[126]

76. Dr. Snow proposes no methodology to assess, consider, or isolate the impact of these factors that impact loans, RMBS performance, and prices separate and apart from the trustee's claimed conduct. He does not analyze whether the Relevant Certificates have experienced realized losses, let alone realized losses attributable to Wells Fargo's alleged conduct, during their holding periods. He also does not attempt to separate out the impact of R&W Breaches Wells Fargo allegedly discovered from those it allegedly did not discover.

77. Because Dr. Snow fails to consider the impacts of macroeconomic trends on the performance of the loans at issue, or whether Wells Fargo's conduct contributed to any realized losses experienced by the tranches in the real world during Plaintiff's holding periods, his method is

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[121] Gerardi, Kristopher, Kyle F. Herkenhoff, Lee E. Ohanian, and Paul S. Willen. "Unemployment, Negative Equity, and Strategic Default." *Federal Reserve Bank of Atlanta Working Paper* 2013-4 (Aug. 2013): 1-50 at 2.

[122] *Id*. at 17, 23.

[123] Harvey, James, and Kenneth Spong. "Home Financing for Low- and Moderate-Income Borrowers: What Are the Trends in Denver?" *Federal Reserve Bank of Kansas City Financial Industry Perspectives* (Oct. 2005): 1-16 at 2.

[124] Deng, Yongheng, John M. Quigley, and Robert van Order. "Mortgage Terminations, Heterogeneity and the Exercise of Mortgage Options." *Econometrica* 68.2 (Mar. 2000): 275–307 at 289; *see also*, Capozza, Dennis R., Dick Kazarian, and Thomas A. Thomson. "Mortgage Default in Local Markets." *Real Estate Economics* 25.4 (1997): 631-655 at 654; Yang, Tyler T., Henry Buist, and Isaac F. Megbolugbe. "An Analysis of the Ex Ante Probabilities of Mortgage Prepayment and Default." *Real Estate Economics* 26.4 (Dec. 1998): 651–676 at 675.

[125] Gerardi, Herkenhoff, Ohanian & Willen, *supra* note 121, at 25.

[126] Nettleton, Sarah, and Roger Burrows. "Mortgage Debt, Insecure Home Ownership and Health: An Exploratory Analysis." *Sociology of Health & Illness* 20.5 (Sept. 1998): 731–753 at 735-736; *See also*, Carroll, Christopher D., Karen E. Dynan, and Spencer D. Krane. "Unemployment Risk and Precautionary Wealth: Evidence from Households' Balance Sheets." *The Review of Economics and Statistics* 85.3 (Aug. 2003): 586-604 at 602; and Guiso, Luigi, Paola Sapienza, and Luigi Zingales. "The Determinants of Attitudes Toward Strategic Default on Mortgages." *The Journal of Finance* 68.4 (Aug. 2013): 1473–1515 at 1475.

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incomplete and unreliable. Macroeconomic factors such as unemployment and home prices may impact loan performance, and it is unreasonable to assume without analysis that any losses accrued are due to Wells Fargo.

C. Decisions Regarding the Assumptions in Dr. Snow's Model Cannot Reasonably Be Fixed or Changed at a Later Date.

78. Dr. Snow suggested at his *Phoenix Light* deposition that his damages model can be changed or modified at any time based on the decisions of the factfinder or other case developments. In fact, at deposition, Dr. Snow reserved the right to amend or change nearly every assumption on which his model is built, while simultaneously acknowledging that these assumptions are fundamental to his model and that changing them changes his damages calculations.[127]

79. The numerous flaws in Dr. Snow's model previously described cannot be adequately addressed by adjusting assumptions at some date in the future. A damages model should be based on reasonable assumptions that account for and match Plaintiff's claims, account for relevant contingencies, and do not contradict the facts.[128] This would begin with an understanding of what constitutes a breach, and then attempt to assess the economic consequences that would flow from that breach. Dr. Snow has failed to build such a model, and the deficiencies cannot be corrected by, at a later date, merely substituting in different assumptions.

80. As one example, Dr. Snow has proposed no methodology to account for variations at a loan or trust level, as his model is built from uniform assumptions without a loan-by-loan or trust-by-trust analysis of the repurchase process Wells Fargo would have faced with the different

[127] Snow Dep. 320:21-321:9 ("Q. You testified earlier that your damages calculations could change if the inputs to your model change, right? A. Correct. Q. You have reserved the right to change the assumptions and inputs that you use in your model, right? A. Yes. Both in terms of say additional data that happens as time passes as well as different or alternative scenarios that counsel asked me to calculate or in response to defendant's rebuttal reports or that the court may decide on."); 322:6-323:22 ("Q. What assumptions do you reserve the right to change in your damages model? A. To the extent -- I reserve the right to change any of them based upon additional evidence that is presented to me based upon reports from defendant, based upon decisions by the court. Q. Would that include the assumptions you have used as to timing in your damages model? A. Yes. Q. Would that include the purchase dates? A. Yes. Q. The enforcement dates? A. Yes. Q. The specific document defect loans that are repurchased? A. Yes. Q. The R&W breach loans that are repurchased? A. Yes. Q. The loss severity differential that is used? A. Yes. Q. The event of default dates? A. Yes. Q. The time period between the event of default dates and when post enforcement servicing damages are calculated? A. Yes. I am not saying that I would change all of these. These are ones that could potentially change. Q. You reserve the right to amen -- amend any and all of those assumptions? A. Yes, correct. Q. Under what circumstances then would you contemplate changing those inputs and assumptions? A. The ones that I have just mentioned.").

[128] Evans, Elizabeth A., Joseph J. Galanti, and Daniel G. Lentz. "Chapter 4. Developing Damages Theories and Models." *Litigation Services Handbook: The Role of the Financial Expert*. 5th ed. Eds. Roman L. Weil, Daniel G. Lenz, and David P. Hoffman. Hoboken, New Jersey: John Wiley & Sons (2012) at §4.5.(d).

warrantors and loan-level breaches claimed. In particular, Dr. Snow does not account in his model for the timing of Wells Fargo's alleged discovery of breaches on a loan-by-loan basis, or the alleged economic consequences of such breaches. Instead, he applies uniform assumptions across loans and trusts as to the length of time that it would have taken Wells Fargo to pursue repurchases of defective loans in trusts after alleged discovery of breaches.

81. But had Wells Fargo acted as Plaintiff alleges it should have, repurchases or other remedies would have been initiated at various and multiple points in time in the past, resulting in repurchase payments flowing to the Relevant Trusts over time. Dr. Snow ignores this aspect of Plaintiff's claims.

82. Dr. Snow likewise presumes a 100 percent repurchase rate at 100 percent of his calculated Purchase Prices across all loans in all Relevant Trusts. Alternatively, he applies global sensitivities to scale cashflows across all loans in all Relevant Trusts. He makes no individualized assessment of the likelihood of success on repurchases of individual loans given the specific defects identified by Mr. Bitner or the complications that certain R&W Breach or Document Defect theories might present during the put-back process, despite variations in the loans, trusts, and claimed breaches at issue.

83. Dr. Snow similarly fails to consider the warrantors' rights to avail themselves of alternatives to repurchases, such as curing breaches or substituting loans, rights which the warrantors may have had depending on when Wells Fargo allegedly breached its obligations with respect to a given loan.[129] For example, Dr. Snow does not account for a situation in which, due to Wells Fargo's intervention that Plaintiff alleges should have occurred, an allegedly defective loan or exception was cured or replaced with a non-defective loan. By ignoring alternative remedies, Dr. Snow's model overstates damages, and he has developed no method to account for these and other relevant facts or circumstances.

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[129] *See, e.g.*, ABFC 2006-OPT2 PSA at WF_CB_001721022 ("If the Seller does not cure such defect or deliver such missing document within such time period, the Seller shall either repurchase or substitute for such Mortgage Loan in accordance with Section 2.03.") and WF_CB_001721024-5 ("[T]he Trustee shall promptly notify the Originator or the Seller, as the case may be, the Servicer and the NIMS Insurer of such defect, missing document or breach and request that, in the case of a defective or missing document, the Seller cure such defect or deliver such missing document within 120 days from the date the Seller was notified of such missing document or defect or, in the case of a beach of a representation or warranty, request the Originator or the Seller, as applicable, cure such breach within 90 days from the date the Originator or the Seller, as the case may be, was notified of such breach.").

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84. Indeed, in another trustee case, the court explained in a hearing that "an appropriate model of damages would have to account for: (1) whether and when [the trustee] discovered the breaches; (2) whether the seller would have been in the financial position to repurchase or substitute the loan had [the trustee] acted; (3) if not, whether litigation would have been appropriate; (4) for any litigation, whether it would have succeeded and whether any damages would have been collectible."[130] Dr. Snow's damages model has not addressed these issues, and addressing these issues would require fundamentally changing Dr. Snow's damages model itself, not simply changing the assumptions within his current damages model.

VI. OPINION TWO: DR. SNOW'S REPURCHASE DAMAGES CALCULATIONS ARE UNSUPPORTED AND FLAWED.

85. Dr. Snow calculates Repurchase Damages allegedly attributable to Wells Fargo's failure to effectuate repurchases of all the claimed Defective Loans in the Relevant Trusts. According to Dr. Snow's model, the total Repurchase Damages are $178.29 million in the Held-to-Maturity scenario (only $155.94 million of which is not attributable to statutory interest) and $85.95 million in the Sold scenario (only $61.97 million of which is not attributable to statutory interest).[131] Dr. Snow also separately calculates damages purportedly arising out of Document Defect Loans ("Document Defect Repurchase Damages") and R&W Breach Loans ("R&W Breach Repurchase Damages").[132]

[130] Hearing Transcript. *BlackRock Allocation Target Shares: Series S portfolio, et al. v. U.S. Bank National Association* (S.D.N.Y. No. 1:14-cv-9401) (Jan. 31, 2018) at 58-59.

[131] Snow Report at Fig. 3.

[132] *Id.*

86. Dr. Snow's calculation of Repurchase Damages derives from his calculation of Repurchase Amounts, which represent, in his view, the amounts that responsible parties would have paid to the Relevant Trusts had Wells Fargo enforced the warrantors' obligations to the Relevant Trusts to repurchase Defective Loans, plus statutory interest.[133] To calculate such damages, Dr. Snow simulates the repurchase of certain of these Defective Loans.

87. There are fundamental flaws in the assumptions made by Dr. Snow to calculate the Repurchase Amounts, as described below, which render his damages methodology unreliable and unsupported.

A. Dr. Snow's Assumption That One Hundred Percent of Defective Loans Would Have Been Repurchased Contradicts the Reality of the Loan Repurchase Process.

88. Dr. Snow's but-for scenario assumes that 100 percent of the loans Plaintiff contends are eligible for repurchase would have been successfully repurchased and that 100 percent of the Purchase Prices he identifies would have been credited to the relevant securitizations.[134]

89. This blanket assumption ignores warrantors' regular refusals or inability to repurchase loans despite requests to do so. Warrantors have refused to repurchase loans for a number of reasons, including lack of financial ability or bankruptcy. For example, Ownit Mortgage Solutions Inc. ("Ownit") was a warrantor for mortgage loans collateralizing the ABFC 2005-HE2 trust.[135] Ownit petitioned for bankruptcy on December 28, 2006 and received confirmation for

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[133] *Id.* at ¶¶ 21, 30. Dr. Snow's calculations include damages for 130 loans that were not included in the list of loans disclosed by Plaintiff on December 1, 2017. Commerzbank v. Wells Fargo – Loan List.xlsx. Attached to Letter from Ryan A. Kane, Wollmuth Maher & Deutsch LLP, to Howard F. Sidman, Jones Day, *Re: Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A., No. 14-cv-10102; Commerzbank AG v. Wells Fargo Bank, N.A., No. 15-cv-10033* (Dec. 1, 2017). These 130 loans are in ABFC 2005-HE2, CMLTI 2005-OPT4, GPMF 2005-AR4, MSAC 2005-WMC2, MSAC 2005-WMC3, MSAC 2005-WMC5, ABFC 2006-OPT1, ABFC 2006-OPT2, GPMF 2006-AR1, MSAC 2006-HE1, and OOMLT 2006-2 Relevant Trusts. *See* **Exhibit 6**: *Dr. Snow's Defective Loans Not Reflected on Plaintiff's December 1, 2017 Loan List*. It is my understanding that these 130 undisclosed loans should not be included in the damages calculation for this matter. Nevertheless, for analyses described below that I conducted and that take as their starting point Dr. Snow's damages calculations, I included these 130 loans for the sake of simplicity and to make apples-to-apples comparisons.

[134] Snow Report at ¶ 34 ("The Repurchase Amount is equal to the sum of the Purchase Price on all Defective Loans for a given Securitization.").

[135] *See* ABFC 2005-HE2 PSA at WF_CB_001698454, WF_CB_001698478-9. *See also* ABFC 2005-HE2 Prospectus Supplement at WF_CB_001698055.

bankruptcy on January 16, 2008,[136] prior to Dr. Snow's Enforcement Date for R&W Breach Loans, January 1, 2010.[137] This could have limited Wells Fargo's ability to achieve the result Dr. Snow assumes it would have under his but-for scenario.

90. Dr. Snow does not assess the relevant warrantors' financial ability to repurchase loans on request.[138] Instead of developing a methodology that accounts for the financial conditions of the warrantors or the repurchase rate,[139] his calculations rest on the unwarranted assumption that repurchases would have occurred for every Defective Loan at 100 percent of the Purchase Price.[140]

91. Moreover, even when relevant warrantors have the financial means to repurchase loans, repurchase demands were and are still regularly contested or rejected. For example, Wells Fargo, as trustee for ABFC 2006-OPT2, demanded on June 26, 2013 that the warrantor Sand Canyon repurchase 228 mortgage loans.[141] Sand Canyon responded on October 3, 2013 and refused to repurchase any of the 228 mortgage loans, arguing that 187 of these loans had been liquidated and therefore were unavailable for repurchase, and that for the remaining 41 loans, any alleged breaches of R&Ws for such loans did not materially and adversely affect the value of the loan or the interest therein of any certificateholder.[142]

92. The likelihood of warrantors refusing to repurchase loans was disclosed to investors like Plaintiff prior to their investment. The prospectus supplements generally warn investors that

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[136] Voluntary Petition for Bankruptcy. *Ownit Mortgage Solutions, Inc.* (Bankr. C.D. Cal. No. 06-12579) (Dec. 28, 2006); Order Confirming the Chapter 11 Plan. *Ownit Mortgage Solutions, Inc.* (Bankr. C.D. Cal. No. 06-12579) (Jan. 16, 2008).

[137] Snow Report at ¶ 57 (Appendix D).

[138] He acknowledged this in his deposition in the *Phoenix Light* case. Snow Dep. 294:14-19 ("Q. Have you investigated the financial conditions then of the potentially obligated responsible parties that would be paying the repurchase demands in your damages model? A. No, I have not.").

[139] *Id.* at 295:6-11 ("Q. Have you developed any methodology to account for the financial conditions of the responsible parties on the repurchase demands that you are simulating in your model? A. No, I have not.").

[140] *See* Snow Report at ¶¶ 31-34 for a discussion of how Dr. Snow calculates Purchase Prices.

[141] Letter from Alex Humphries, Wells Fargo, to Angela Hansgen, Option One Mortgage Corporation c/o Sand Canyon Corporation, *Re: Repurchase Demand for Loan Number(s): See Appendix A; Asset Backed Funding Corporation Asset Backed Certificates, Series 2006-OPT2; Wells Fargo Reference Number: MD-005104* (June 26, 2013) (WF_BR_003893497).

[142] Letter from Angela Hansgen, Sand Canyon Corporation, to Alex Humphries, Wells Fargo, *Re: Asset Backed Funding Corporation 2006-OPT2 (the "Trust")* (Oct. 3, 2013) (WF_BR_003894397).

parties otherwise obligated to do so might nevertheless not repurchase or substitute a given loan due to financial inability or other reasons. *See* **Appendix C**: *Statements Regarding Repurchase*.

93. At least one court has held that damages calculations based on 100 percent repurchase rate assumptions are flawed.[143] Investors themselves have acknowledged repurchases occur at substantially less than 100 percent success.[144] Dr. Snow has not provided factual or empirical support to the contrary.

94. I did an empirical analysis to assess whether Dr. Snow's 100 percent repurchase rate assumption is consistent with historical repurchase activity as it relates to repurchase demands arising out of alleged R&W breaches.

95. I collected more than 3,500 ABS-15G forms filed by securitizers of residential mortgage-backed securities with the Securities Exchange Commission between January 1, 2012 and June 30, 2019 ("Analyzed Period"). Beginning in 2012, the SEC required securitizers of asset-backed securities to periodically file such forms, where the underlying transaction agreements contain a covenant to repurchase in the event of breaches of representations or warranties.[145] These filings disclose, for each reporting period, the total number of repurchase demands made, fulfilled, rejected, withdrawn, disputed, and still pending. I calculated the repurchase rate by aggregating information contained in these filings.[146]

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[143] *See* Final Judgment Entry and Findings of Fact and Conclusions of Law. *The Western and Southern Life Insurance Company, et al. v. The Bank of New York Mellon* (Ohio Com. Pl., Hamilton County No. A1302490) (Aug. 4, 2017), 2017 WL 3392855, *14, 17 ("W&S Final Judgment Entry") at ¶ 101 ("The evidence does not support [an] assumption [of full repurchase rates].").

[144] Institutional Investors Response to Settlement Objections. *In the matter of the application of The Bank of New York Mellon* (N.Y. Super. No. 651786-2011) (May 13, 2013) at 16 (BlackRock and TIAA as plaintiffs, among others, stating that, "[w]e are aware of no case…in which any party pursuing repurchase claims has alleged—much less achieved—a 100% success rate on loan repurchases.").

[145] "Disclosure for Asset-Backed Securities Required by Section 943 of the Dodd-Frank Wall Street Reform and Consumer Protection Act." Securities and Exchange Commission Release Nos. 33-9175; 34-63741 (Mar. 28, 2011). <https://www.sec.gov/rules/final/2011/33-9175.pdf> (accessed Feb. 26, 2019).

[146] Specifically, for each securitizer and for each reporting period during the Analyzed Period, I identified the number of securitized mortgage assets for which a resolved repurchase demand (repurchased, withdrawn, or rejected) was reported. I totaled these amounts for all reporting periods and all securitizers. To avoid potential double-counting of unresolved demands, I identified the number of assets that were reported as "pending" or "disputed" on the last report filed by each securitizer during the Analyzed Period. I aggregated these amounts for all securitizers. I then calculated the percent of assets in each category (repurchased, withdrawn, rejected, disputed, and pending).

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96. Based on my analysis of these filings, the historical repurchase rate is far lower than 100 percent. For the Analyzed Period, only 4.5 percent of demands had been fulfilled, 0.0 percent of demands were still pending, and 7.8 percent of demands were still in dispute; the remainder had been rejected or withdrawn. Even assuming that all of the pending and disputed requests could eventually be repurchased, the repurchase rate would range from 4.5 to at most 12.3 percent. *See* **Exhibit 7**: *Repurchase Demand Fulfillment (January 2012-June 2019)*. This evidence directly contradicts Dr. Snow's unfounded assumptions that all repurchase requests would have been found by the trustee to be valid and that all warrantors could have and would have repurchased a loan if requested to do so.

97. As I describe more fully below, Dr. Snow's methodology for calculating damages using alternative repurchase rate assumptions is flawed. Nevertheless, to provide a comparison, I utilized Dr. Snow's methodology to recalculate his Repurchase Damages using more realistic repurchase rates. Specifically, I calculated his R&W Breach Repurchase Damages using Dr. Snow's methodology assuming repurchase rates of 4.5 and 12.3 percent for R&W Breach Loans. Applying these assumptions, Dr. Snow's R&W Breach Repurchase Damages in the Held-to-Maturity scenario are reduced from $103.33 million to $45.18 million when a 4.5 percent repurchase rate is utilized and to $53.29 million when a 12.3 percent repurchase rate is used.[147] *See* **Exhibit 8a**: *R&W Breach Repurchase Damages Using Historical Repurchase Demand Fulfillment Rates*. In Dr. Snow's Sold Scenario, the results are particularly significant. When a 4.5 percent repurchase rate is applied using Dr. Snow's methodology, R&W Breach Repurchase Damages are reduced from $20.15 million to $2.10 million. When a 12.3 percent repurchase rate is utilized, R&W Breach Repurchase Damages are reduced to $2.85 million.[148]

B. Dr. Snow Does Not Use a Reasonable Methodology to Calculate Repurchase Damages for a Repurchase Rate Lower Than 100 Percent.

98. At the request of counsel, Dr. Snow also provides four alternative damages calculations in which he assumes reductions of 10, 20, 35, and 50 percent to the cashflows associated with

[147] As discussed in more detail in section VIII, the counterfactual assumption that sold certificates would have been held to maturity in the but-for world gives rise to "residual" R&W Breach Repurchase Damages of $43.93 million (42.51 percent of R&W Breach Repurchase Damages), even when the repurchase rate is set to zero.

[148] For the impact on R&W Breach Tort Damages, s*ee* **Exhibit 8b**: *R&W Breach Tort Damages Using Historical Repurchase Demand Fulfillment Rates.*

allegedly Defective Loans.[149] These reductions purportedly reflect scenarios where 90, 80, 65, and 50 percent "of the Defective, R&W Breach, or Document Defect Loans are repurchased."[150] The purported purpose of the so-called "sensitivity" calculations is to enable "the fact finder to adjust any damages awarded to the extent the fact finder concludes it is appropriate to do so."[151] As with other assumptions underlying his damages calculations, Dr. Snow relied on counsel for these inputs, did not undertake any analysis to assess the reasonableness of the assumptions, and is not aware of a factual basis for their use.[152]

99. Indeed, Dr. Snow conveys no explanation or empirical support whatsoever for the choice of 10, 20, 35, and 50 percent reductions. In the *Phoenix Light* case, Dr. Snow declined to use the 35 percent figure.[153] With no discernible basis for these figures, I conclude that they are arbitrary and without empirical support. Dr. Snow thus leaves the factfinder with no usable method to ascertain what damages might be in a scenario other than 100 percent repurchase.

100. Even if Dr. Snow had provided support for his figures, his method for applying these sensitivities would still be flawed, because it is inconsistent with how repurchases occur in the real world. To adjust the repurchase rate from 100 percent, Dr. Snow takes the aggregate Repurchase Amounts for all hypothetically-repurchased loans and reduces that amount by an across-the-board 10, 20, 35, or 50 percent.[154] This process departs from how repurchase occurs in the real world, where individual loans are repurchased, not partial loans or parts of loans. And, here, when individual loans are repurchased instead of partial loans, it impacts the damages calculations.

101. To illustrate, consider two loans subject to repurchase demands in the but-for scenario. By scaling the cashflows associated with both loans by 50 percent, Dr. Snow effectively assumes that half of each loan was repurchased. This assumption is inconsistent with the reality of the process—a loan was either repurchased or it was not. This problem is compounded when one

[149] Snow Report at Fig. 3 n. 16, Appendices I-L.

[150] *Id.* at ¶ 79 (Appendix I).

[151] *Id.* at Fig. 3 n. 16.

[152] Dr. Snow admitted this in his *Phoenix Light* deposition. Snow Dep. 148:17-21 ("Q. Did you undertake any analysis to determine that 90, 80 or 50 were the correct sensitivity percentages to apply in the context of this case? A. No. I did not."); 149:6-9 ("Q. Are you aware of any particular factual basis for the 90, 80, or 50 percentages? A. No.").

[153] *See* Snow *Phoenix Light* Report at Exhibits 1-3.

[154] *See, e.g.*, Snow Report supporting materials (waterfall inputs – 10% sensitivity).

considers the different prices, performance, losses, and timing associated with individual loans. If the first loan was repurchased for $500,000 six months after the repurchase demand and the other was repurchased at $1 million one year after the repurchase demand, Dr. Snow would distribute an additional $250,000 through the waterfall in month six and $500,000 through the waterfall at one year. This yields a significantly different result than assuming one or the other loan was repurchased.

102. To demonstrate this, I recreated Dr. Snow's sensitivity analysis but assumed that the relevant percentage of whole loans was repurchased, rather than repurchasing partial loans. For example, there are 657 allegedly Defective Loans in ABFC 2006-OPT2 that Dr. Snow repurchases in his but-for scenarios.[155] Instead of repurchasing half of each of the 657 allegedly Defective Loans as Dr. Snow did, I recalculated Dr. Snow's Repurchase Damages assuming 328 allegedly Defective Loans were repurchased, while the other 329 allegedly Defective Loans were not. To illustrate the impact of Dr. Snow's assumptions on his own damages calculations, I chose the loans to repurchase by first ordering the loans in terms of Purchase Price, starting with the loans with the lowest Purchase Price. I purchased the loans in succession until the relevant percentage of the Defective Loans was repurchased. For example, instead of the $4.17 million in Repurchase Damages calculated by Dr. Snow for ABFC 2006-OPT2 M2 in the Held-to-Maturity scenario with 50% sensitivity,[156] this method would result in $0.50 million in Repurchase Damages—a reduction of 88.03 percent compared to Dr. Snow's 50% sensitivity result. I did this for each of the Relevant Certificates. Using this methodology, Dr. Snow's Repurchase Damages for all Relevant Certificates in the Held-to-Maturity scenario at 50% sensitivity change from $134.26 million to $102.03 million (or by 24.01 percent) when 50 percent of the loans are repurchased as opposed to half of each loan.[157] Similarly, Dr. Snow's Repurchase Damages in the Sold scenario change from $42.56 million to $15.16 million (or by 64.39 percent) if 50 percent of the loans are repurchased as opposed to half of

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[155] *See* Plaintiff's Supplemental Responses and Objections to Wells Fargo Bank, N.A.'s Interrogatories, *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (Dec. 19, 2018) at Appendices A and B.

[156] Snow Report at Fig. 76.

[157] As discussed in more detail in section VIII, the counterfactual assumption that sold certificates would have been held to maturity in the but-for world gives rise to "residual" Repurchase Damages of $48.43 million (27.16 percent of Repurchase Damages), even when the repurchase rate is set to zero.

each loan.[158] *See* **Exhibit 9a**: *Changing Dr. Snow's "Sensitivity" Calculation Method Changes Repurchase Damages*.[159]

103. In deposition, Dr. Snow contended that his across-the-board method of scaling cashflows is equivalent to the median outcome he would have obtained had he instead simulated repurchase of a random 50 percent of loans using a Monte Carlo analysis.[160] He, however, performed no Monte Carlo analysis, and a Monte Carlo analysis creates a very wide range of outcomes depending on which 50 percent of loans are excluded from repurchase,[161] such that the specific loans selected for repurchase impact the outcome here. Yet Dr. Snow undertook no analysis of specific loans to exclude from repurchase, as he has done in other cases.[162]

104. Indeed, trust waterfalls can create discontinuities in the tranche-level cashflows. Triggers, for example, can dramatically change how payments are passed through to certificateholders when certain thresholds are reached. As an example, I ran multiple iterations of Dr. Snow's damages model for ABFC 2005-OPT1 under his Sold scenario, each time randomly selecting 50 percent of the allegedly Defective Loans to repurchase. For each iteration, I calculated alleged Repurchase Damages to the M4 tranche as a percentage of the Repurchase Damages Dr. Snow claimed for this tranche under his 50 percent sensitivity scenario. **Figure 1**: *Monte Carlo Distribution of Repurchase Damages for ABFC 2005-OPT1 M4 At 50 Percent Repurchase Assumptions (Sold Scenario)* below shows the Monte Carlo distribution of Repurchase Damages under the Sold scenario for this tranche.

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[158] *Id.* at Fig. 77. In addition, Tort Damages in the Held-to-Maturity scenario decrease from $129.69 million to $98.60 million (or by 23.98 percent) if 50 percent of the loans are repurchased as opposed to half of each loan. Similarly, Tort Damages in the Sold scenario decrease from $40.30 million to $13.33 million (or by 66.95 percent) if 50 percent of the loans are repurchased as opposed to half of each loan. *Id.* at Figs. 76 and 77.

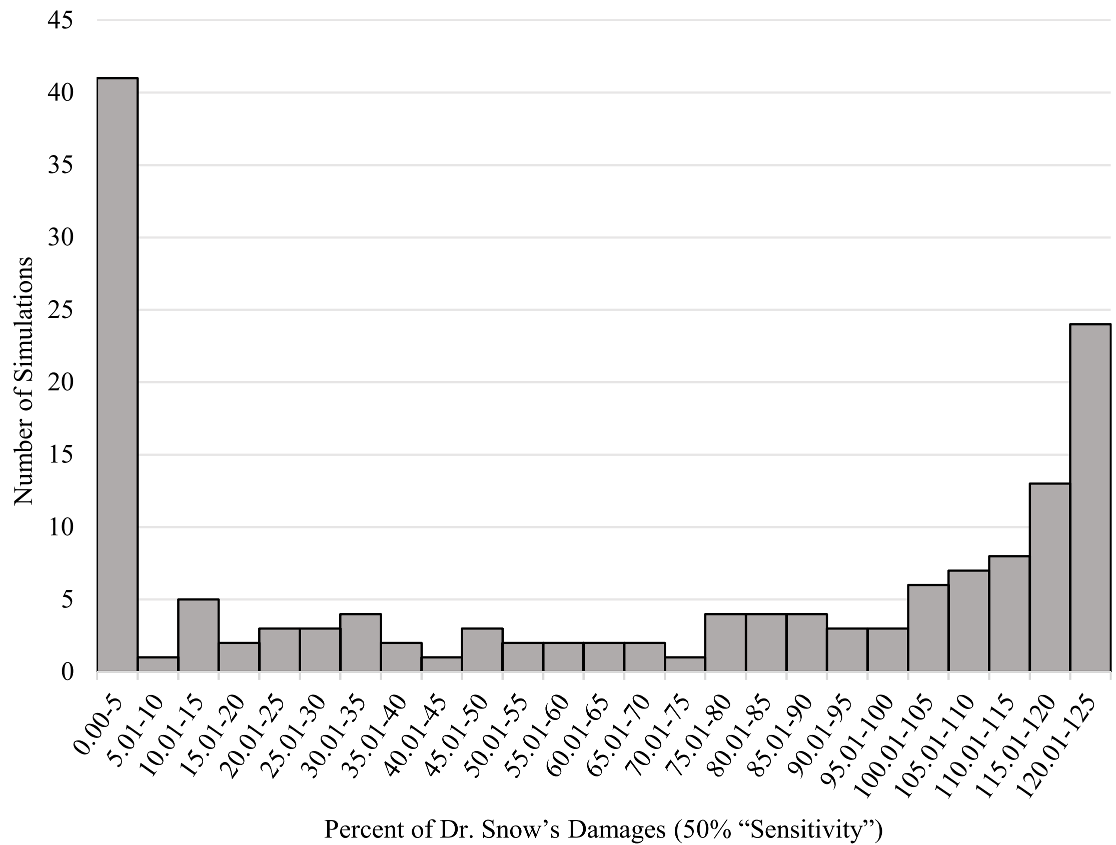
[159] For the impact on Tort Damages, *see* **Exhibit 9b**: *Changing Dr. Snow's "Sensitivity" Calculation Method Changes Tort Damages*.

[160] Snow Dep. 153:3-9 ("Q. […] You do not pull specific loans out of the calculation for your sensitivities analysis? A. No. I could do a Monte Carlo but that is – would get you essentially the same answer because you don't know which loans to pull.").

[161] *Id.* at 154:11-16 ("Q. But the distribution [of outcomes from the Monte Carlo analysis] could be wide, right? A. Correct. Q. You haven't done any analysis of what distribution would be? A. No, I have not.").

[162] *Id.* at 150:15-20 ("I have done everything from using different breach rates to using different specific loans to as I have done here basically scaling the cash flows which is equivalent to what I have done in other matters.").

Figure 1: *Monte Carlo Distribution of Repurchase Damages for ABFC 2005-OPT1 M4 At 50 Percent Repurchase Assumptions (Sold Scenario)*



105. Dr. Snow's across-the-board method of scaling cashflows is not equivalent to the median outcome he claimed he would have obtained by using a Monte Carlo analysis. In addition, the most likely outcome is close to zero Repurchase Damages, much lower than Dr. Snow's $5.62 million in claimed Repurchase Damages at 50 percent sensitivity for this tranche.

106. Because repurchases and repurchase demands are loan-specific, and identifying specific loans for repurchase significantly impacts the damages calculations here, including the Repurchase Amounts and timing of distributions, the across-the-board scaling of cashflows in Dr. Snow's sensitivities analysis is improper and without basis.

C. Dr. Snow's Purchase Prices for Liquidated Loans Are Unsupported.

107. An additional, crucial factor in the calculation of Dr. Snow's Repurchase Amounts, and thus Repurchase Damages, is the Purchase Price assigned to each allegedly Defective Loan. Unlike

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many other inputs, for which he defers to counsel, Dr. Snow takes responsibility for calculating each Purchase Price, which represents the price at which each loan would be repurchased in his simulation.[163]

108. With respect to liquidated loans, for which he simulates make whole transactions, Dr. Snow first makes the threshold assumption that liquidated loans are eligible for repurchase.[164] He then makes the additional assumption that the principal balance is equal to the realized loss amount.[165] He then accrues interest on the realized loss amounts. However, Dr. Snow fails to provide support for these assertions, and the Purchase Prices he calculates for certain liquidated loans are demonstrably wrong.

109. As to Dr. Snow's first assumption, he assumes that all the liquidated loans are eligible for repurchase. When asked what particular provision of the PSAs he relied on for this assumption, Dr. Snow was not able to cite to any provision of any PSA that supported his position, other than "the entire PSA as well as the economic purpose of repurchase."[166]

110. And, Dr. Snow has acknowledged that certain responsible parties such as warrantors have taken the position that liquidated loans are not eligible for repurchase.[167] In a real world example for the Relevant Trusts, Sand Canyon refused to repurchase 187 mortgage loans in the ABFC 2006-OPT2 trust because of their liquidated status.[168] Dr. Snow nevertheless simulates make whole repurchase transactions for 100 percent of Defective Loans that had liquidated as of the Enforcement Date.

111. When loans that had been liquidated prior to their assumed Purchase Dates are excluded from the calculation of damages, Dr. Snow's Repurchase Damages are reduced from $178.29

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[163] *Id.* at 36:18-25 ("Q. The repurchase price was another element that you listed as an input into your model, right? A. Correct. Q. Who is providing that information in your model? A. That is a calculation that I am making.").

[164] *Id.* at 252:5-10.

[165] *Id.* at 251:4-7.

[166] *Id.* at 251:15-18; *see also id.* at 252:13-16 ("Q. …Can you cite to me a particular provision that makes liquidated loans eligible for repurchase? A. I cannot[.]").

[167] *Id.* at 251:8-14 ("Q. Are you aware of any responsible parties taking the position that liquidated loans are not eligible for repurchase? A. Yes. I am aware of that.").

[168] Letter from Angela Hansgen, Sand Canyon Corporation, to Alex Humphries, Wells Fargo, *Re: Asset Backed Funding Corporation 2006-OPT2 (the "Trust")* (Oct. 3, 2013) (WF_BR_003894397).

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million to $106.15 million (or by 40.46 percent) in the Held-to-Maturity scenario,[169] or from $85.95 million to $18.65 million (or by 78.30 percent) in the Sold scenario.[170] *See* **Exhibit 10**: *Damages Excluding Loans That Liquidated Prior to Dr. Snow's Purchase Dates.*[171]

112. Dr. Snow similarly provides no support for his related assumption that the Purchase Price definitions in the PSAs apply to liquidated loans or the specific way he calculates Purchase Prices for liquidated loans. Dr. Snow ignored the Governing Agreement provisions in his damages calculations (*See* **Appendix D**: *Statements Regarding Purchase Prices and Liquidated Loans*). Although he is aware that provisions related to liquidated loans sometimes exist, he does not believe they apply in this case.[172] Instead, as he stated at deposition, in calculating Purchase Prices for liquidated loans, Dr. Snow defines the principal balance as "the realized loss which is essentially the unpaid or stated principal balance of the loan plus accrued interest…plus servicing advances less liquidation proceeds."[173]

113. Dr. Snow applies this assumption across all Relevant Trusts on which he calculates Repurchase Damages, and his assumption that the Purchase Price is applicable to liquidated loans and his accrual of interest on realized loss amounts allows him to put back hundreds of millions of dollars more than the aggregate realized loss amounts for liquidated loans. Across the trusts here, cumulative realized losses for the liquidated loans that Dr. Snow repurchases are $664.11

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[169] As discussed in more detail in section VIII, the counterfactual assumption that sold certificates would have been held to maturity in the but-for world gives rise to "residual" Repurchase Damages of $48.43 million (27.16 percent of Repurchase Damages), even when the repurchase rate is set to zero.

[170] **Exhibit 10**: *Damages Excluding Loans That Liquidated Prior to Dr. Snow's Purchase Dates* also reports the impact of this calculation on Tort Damages.

[171] Throughout my report and exhibits, I analyze the impact on Dr. Snow's damages calculations if certain loans are excluded, assumptions are altered, or other variables in his analysis are changed. These analyses are for illustrative purposes only and are not intended to be calculations of damages or an agreement with any portion of Dr. Snow's model, which I have opined is inappropriate and does not reliably calculate damages attributable to Wells Fargo for the many reasons stated in my report.

[172] Snow Dep. 252:11-23 ("Q. …Can you cite to me a particular provision that makes liquidated loans eligible for repurchase? A. I cannot -- either can I give you a specific provision that says they are not eligible. I know that there are sometimes provisions to say the price of a liquidated loan or the stated principal balance of a liquidated loan is zero but I don't think that those apply in this particular case."); 255:19-256:9 ("Q. Okay. And in the instances where the purchase price definitions say that the principal balance is zero you are still using the realized loss amount to calculate the principal balance for liquidated loans? A. That is absolutely correct. That provision is typically from my understanding in both and makes sense from an economic perspective an accounting necessity in order to write-down collateral and write-down principal balances on certificates. It is not, again from an economic perspective, designed to say that a liquidated loan has no value or purchase price.").

[173] *Id.* at 254:16-18 ("Q. In your model what do you use as the principal balance for liquidated loans? A. I use the realized loss[.]").

million. Dr. Snow, however, repurchases these loans for $733.36 million, a 10.43 percent increase over the realized losses.[174]

D. Dr. Snow's Hypothetical Enforcement and Repurchase Dates Are Unsupported.

114. In addition to assumptions about *how many of the* Defective Loans would have been repurchased in the but-for scenario and at what prices, Dr. Snow's calculations depend on unsupported and arbitrary assumptions concerning *when* such Defective Loans would have been repurchased by warrantors. Dr. Snow defers to counsel for the relevant date assumptions and disclaims responsibility for assessing their validity. As such, these assumptions are evidence of a failure of reasonable and objective economic analysis.

115. Dr. Snow's process of identifying "Purchase Dates" involves identifying a hypothetical "Enforcement Date" for each relevant securitization. These dates purportedly represent "the date on which Wells Fargo should have started to enforce the obligation to repurchase Defective Loans[.]"[175] For each securitization, Dr. Snow utilizes an Enforcement Date for R&W Breach Loans and an Enforcement Date for Document Defect Loans, which are often the same date.[176] As explained at deposition, Dr. Snow relied on counsel's identification of Enforcement Dates,[177] and he made no independent investigation into the timing of the alleged breaches to ensure that they were objectively reasonable or otherwise had some basis in real world experiences.[178] Dr. Snow uses only two Enforcement Dates across all breaches and Relevant Trusts here, with January 1, 2010 being the Enforcement Date in all but four instances. *See* **Table 1**: *Dr. Snow's Enforcement Dates* for Dr. Snow's Enforcement Date assumptions for Document Defect Loans and R&W Breach Loans.

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[174] Recalculating damages using realized loss amounts for liquidated loans reduces Dr. Snow's Repurchase Damages by $0.71 million (or 0.40 percent) in the Held-to-Maturity scenario, or by $2.17 million (or 2.52 percent) in the Sold scenario. The same analysis results in reductions to Dr. Snow's Tort Damages of $0.61 million (or 0.36 percent) in the Held-to-Maturity scenario, or by $1.64 million (or 2.02 percent) in the Sold scenario.

[175] Snow Report at ¶ 28.

[176] *Id.* at ¶¶ 28-29.

[177] Snow Dep. 63:8-10 ("I did not select the dates. The dates that I was provided are as listed in the report."); *see also id*. at 66:9-11 ("Q. In fact, in the Commerzbank case you chose different dates, right? A. Again, I didn't choose the dates.").

[178] Dr. Snow acknowledged he did not do an independent investigation of breaches at *Phoenix Light* deposition. *See id.* at 66:25-67:24.

Table 1: *Dr. Snow's Enforcement Dates*

Trust	Document Defect Enforcement Date	R&W Breach Enforcement Date
ABFC 2005-HE2	January 1, 2010	January 1, 2010
ABFC 2005-OPT1	January 1, 2010	March 1, 2010
ABFC 2006-OPT1	January 1, 2010	March 1, 2010
ABFC 2006-OPT2	January 1, 2010	March 1, 2010
ABSHE 2005-HE5	January 1, 2010	January 1, 2010
CMLTI 2005-OPT4	January 1, 2010	March 1, 2010
GPMF 2005-AR4	January 1, 2010	January 1, 2010
GPMF 2006-AR1	January 1, 2010	January 1, 2010
GPMF 2006-AR2	January 1, 2010	January 1, 2010
GPMF 2006-AR3	January 1, 2010	January 1, 2010
MSAC 2005-WMC2	January 1, 2010	January 1, 2010
MSAC 2005-WMC3	January 1, 2010	January 1, 2010
MSAC 2005-WMC5	January 1, 2010	January 1, 2010
MSAC 2006-HE1	January 1, 2010	January 1, 2010
OOMLT 2006-2	January 1, 2010	January 1, 2010

116. Dr. Snow then calculates the Purchase Dates by adding time to the Enforcement Dates to ostensibly reflect the time it takes to fully effectuate a repurchase (*i.e.*, to notify responsible parties, reply to rebuttals, and enforce repurchase). Dr. Snow's Enforcement and Purchase Date assumptions are critical to the Repurchase Amounts he calculates and to his but-for distributions. This is because his Purchase Price calculations are dependent on timing and because, according to the waterfall rules that dictate whether and to what extent Plaintiff would benefit from repurchases, the allocation of payments of principal and interest vary through time, depending on whether certain dates have been reached or whether certain triggers have been met.

117. Dr. Snow fails to provide support for the Enforcement Date assumptions provided to him by counsel, and similarly fails to support his methodology for calculating Purchase Dates, rendering his damages calculation unreliable. Because the Enforcement and Purchase Dates significantly affect Dr. Snow's damages calculation, Dr. Snow's failure to provide support for these crucial assumptions undermines the reliability of his model.

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The Enforcement Dates Utilized in Dr. Snow's Analysis Are Not Adequately Explained or Supported.

118. According to Dr. Snow, the Enforcement Date that he utilizes for a given trust in his repurchase simulations represents the date that Wells Fargo's duty "to do something about [a] breach kicked in."[179] Dr. Snow uses a single, uniform Enforcement Date, January 1, 2010, for all the Document Defect Loans for all 15 Relevant Trusts.[180] For the R&W Breach Loans, he uses a single, uniform Enforcement Date, January 1, 2010 for eleven Relevant Trusts and March 1, 2010 for the remaining four Relevant Trusts.[181] His Enforcement Dates do not vary by loan within a trust, or even across most trusts.

119. As he explained at his *Phoenix Light* deposition, Dr. Snow relied on counsel to provide him with the Enforcement Dates.[182] According to Dr. Snow, his Appendix D in that matter—which purports to set forth certain information regarding the Enforcement Date assumptions—merely reflects the discussions between his staff and counsel, and he knows little about its creation.[183] His Appendix D here has a verbatim explanation of Dr. Snow's understanding of and basis for his Enforcement Date assumptions.[184] Dr. Snow admitted that he had no opinion on the reasonableness of these assumptions;[185] that he conducted no independent review of the evidence provided to him by counsel to ostensibly support such dates;[186] that he designed his

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[179] *Id.* at 62:13-22.

[180] Snow Report at ¶ 57 (Appendix D).

[181] *Id.*

[182] Snow Dep. 64:15-20 ("Q. Just to make sure I have it clear, what is the source of the enforcement and purchase date assumptions that you were using in your model? A. Those are instructions or assumptions given to me by counsel."); *see also id*. at 66:9-11.

[183] *Id.* at 69:17-70:16 (Appendix D was created by Mara Albaugh and reflects Dr. Snow team's understanding as to "what was motivating counsel's choices of the various repurchase dates. So again this was not independently created.").

[184] *Compare* Snow Report at ¶ 57 (Appendix D) to Snow *Phoenix Light* Report at ¶ 51 (Appendix D).

[185] Snow Dep. 66:4-8 ("I am not offering an independent opinion as to whether or not they are the correct dates or whether some other set of dates could be equally reasonable.").

[186] *Id.* at 70:17-20 ("Q. Was there any independent review of the record or evidence in the case that was done to create Appendix D? A. No, it was not."); *see also id.* at 72:6-8 ("Q. Did you personally review the claim support [sic] for these dates? A. No.").

model before he was provided with Appendix D;[187] and that he does not know what criteria were used to include or exclude information in his own Appendix D.[188]

120. How counsel chose the dates that they provided to Dr. Snow is unexplained in Dr. Snow's report. For certain of the trusts, Dr. Snow bases his Enforcement Dates for both R&W Breach and Document Defect Loans on the alleged existence of unspecified but allegedly ongoing Servicer Termination Events.[189] For the remainder, Dr. Snow relies only on his understanding of what other Plaintiff's experts have opined. Specifically, with respect to Document Defect Loans, he notes only that Ms. Beckles and Mr. Adelson "both agree" that, as of January 1, 2010, the Trustee "should have ensured the [r]esponsible [p]arty" repurchased loans.[190] As to R&W Breach Loans, Dr. Snow relies on Plaintiff having "assert[ed]" that Wells Fargo had facts "suggestive of" widespread breaches and Mr. Adelson's opinion that a review should have been undertaken,[191] with reference to a variety of different types of documents. None of the cited documents, reports, or other materials identify or support the exact dates chosen here, particularly across all Relevant Trusts.

121. Indeed, with respect to the ABFC 2006-OPT2 trust, in his report for this matter, Dr. Snow uses a nearly identical Enforcement Date for R&W Breach Loans (March 3, 2010) as he uses for such loans (March 1, 2010) in the *Phoenix Light* matter.[192] However, with respect to the Enforcement Date for Document Defect Loans, whereas here counsel and Dr. Snow assert that there was an ongoing Servicer Termination Event as of January 1, 2010,[193] in *Phoenix Light* the Enforcement Date for this exact same trust is apparently based on the existence of an ongoing Servicer Termination Event as of March 1, 2010.[194] Dr. Snow does not explain why the

[187] *Id.* at 71:6-8 ("The model was designed before we had any of the input assumptions given to us so the model was created first.").

[188] *Id.* at 70:24-71:2 ("Q. What criteria were used to include or exclude information on Appendix D? A. That I can't tell you.").

[189] Snow Report at ¶ 57 (Appendix D) (describing ABFC 2005-HE2, ABFC 2005-OPT1, ABFC 2006-OPT1, ABFC 2006-OPT2, and OOMLT 2006-2).

[190] *Id.* (describing ABSHE 2005-HE5, CMLTI 2005-OPT4, GPMF 2005-AR4, GPMF 2006-AR1, GPMF 2006-AR2, GPMF 2006-AR3, MSAC 2005-WMC2, MSAC 2005-WMC3, MSAC 2005-WMC5, and MSAC 2006-HE1).

[191] *Id.* (describing ABSHE 2005-HE5, CMLTI 2005-OPT4, GPMF 2005-AR4, GPMF 2006-AR1, GPMF 2006-AR2, GPMF 2006-AR3, MSAC 2005-WMC2, MSAC 2005-WMC3, and MSAC 2005-WMC5).

[192] Compare Snow Report at ¶¶ 28 and 57 to Snow *Phoenix Light* Report at ¶ 51.

[193] Snow Report at ¶ 57.

[194] Snow *Phoenix Light* Report at ¶ 51.

Enforcement Date for a single trust, based on the same claims against the trustee and alleged breaches in the same loans, could differ by two months. He testified that these were simply assumptions he was asked to make by counsel that he did not question or investigate.[195]

122. The choice of Enforcement Dates is crucial because these dates dictate the amounts distributed, which certificates are affected and to what extent, and whether hypothetical repurchases are classified as repurchases or subsequent recoveries. To demonstrate that Dr. Snow's damages would decrease if the assumed Enforcement Date post-dated Dr. Snow's assumed Enforcement Dates, I re-ran his damages model assuming alternative Enforcement Dates beginning 60 months after each Relevant Trust's closing date and continuing at six-month intervals until the present. As shown in **Exhibit 11a**: *Repurchase Damages Vary Under Alternative Enforcement Dates*, Dr. Snow's claimed damages steadily decrease if later Enforcement Dates are assumed.[196]

123. This exercise demonstrates that Dr. Snow's Repurchase Damages across the Relevant Trusts can vary significantly when the Enforcement Date assumptions are altered. Repurchase Damages in the Held-to-Maturity scenario may be reduced by more than $95.4 million (or 53.5 percent) to less than $82.9 million if the Enforcement Dates occur at 156 months after trust closing.[197] Similarly, Repurchase Damages in the Sold scenario may be reduced by more than $61.7 million (or 71.8 percent) to less than $22.2 million if the Enforcement Dates occur at 144 months after trust closing. Failure to support the Enforcement Dates he uses in his model undermines the validity of his model and the reliability of his damages calculations.

The Purchase Dates Utilized by Dr. Snow for Distressed Loans Are Unsupported.

124. As noted above, for each trust, Dr. Snow also utilizes Purchase Dates, which signifies the date subsequent to the Enforcement Date upon which the claimed Defective Loans are

[195] Snow Dep. 74:14-19 ("Q. Can you tell me why you would have selected January 2010 in that case and March 2010 in this case? A. Yes, instructions from counsel. Q. Any other reason? A. No."); *see also id.* at 311:3-13 ("Q. Again, I ask what is the basis for using two different time periods for the same type of breach in those securitizations in two different cases? A. …I don't know…These were assumptions I was asked to make by counsel.").

[196] For the impact on Tort Damages, *see* **Exhibit 11b**: *Tort Damages Vary Under Alternate Enforcement Dates*. Note that a similar effect occurs if Enforcement Dates remain the same but assumed Purchase Dates are extended.

[197] As discussed in more detail in section VIII, the counterfactual assumption that sold certificates would have been held to maturity in the but-for world gives rise to $48.43 million (27.16 percent of Repurchase Damages), even when the repurchase rate is set to zero.

hypothetically repurchased in Dr. Snow's but-for scenario. To assign Purchase Dates, Dr. Snow employs two approaches based on whether a given loan was delinquent or otherwise distressed as of the Enforcement Date. As with Enforcement Dates, counsel provided the assumptions underlying these approaches to Dr. Snow.[198] In his *Phoenix Light* deposition, Dr. Snow admitted he did no independent investigation of his Purchase Date assumptions,[199] again evidencing a lack of reasonable and objective economic analysis.

125. For Document Defect Loans that were 90 or more days delinquent, liquidated, in REO, or in foreclosure prior to the applicable Enforcement Date, Dr. Snow, at instruction of counsel, adds six months to arrive at his Purchase Date.[200] For R&W Breach Loans that were 90 or more days delinquent prior to the Enforcement Date (he makes no mention of liquidated or REO/foreclosure loans), again at the instruction of counsel, Dr. Snow applies two different methods, based on the securitization. For Distressed Loans in the ABFC 2005-HE2, ABFC 2006-OPT1, and ABFC 2006-OPT2 trusts, he adds twelve months to the Enforcement Date to arrive at a Purchase Date.[201] For all other securitizations, he adds seven months to arrive at a Purchase Date.[202] Dr. Snow testified in his *Phoenix Light* deposition that the differing "triggers" set for the different type of loan defects (R&W breaches versus document defects) were chosen by counsel and that he does not know why there is a difference.[203]

126. The Snow Report contains no evidence to support these time periods. All it offers is that "[i]t is [Dr. Snow's] understanding that the formulas [he] was given … are based on the factual record."[204] When asked at his *Phoenix Light* deposition what the six-month time period between the Enforcement Date and the Purchase Date was meant to represent, Dr. Snow stated only that adding the time is what he was asked to do by counsel and was not something he looked at independently.[205] He could not identify or explain what was occurring during this

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[198] Snow Dep. 77:12-25; *see also id*. at 66:9-11.

[199] *Id.* at 67:21-24 ("Yes, I am agreeing with you that I did not do any independent analysis or providing [sic] any opinion on the enforcement dates or the purchase dates.").

[200] Snow Report at ¶ 29; *see also* Snow Dep. 77:8-16.

[201] Snow Report at ¶ 57.

[202] *Id.*

[203] Snow Dep. 94:8-19.

[204] Snow Report at ¶ 57.

[205] Snow Dep. 79:8-22.

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time period.[206] He also acknowledged that he did no investigation to determine how long it takes to put back loans after a decision to enforce repurchase.[207] Given that it is uncommon for repurchase litigation to begin and conclude within six months, as known to Dr. Snow,[208] the choice of a six-month interval effectively assumes that repurchase will be effected *without* litigation. But Dr. Snow provides no support for this assumption and disclaims making a choice in his analysis.[209] As reflected in **Exhibit 12**: *Repurchase Litigation Timelines for Cases in Dr. Snow's Appendix B*, Dr. Snow's own expert work involves at least 31 different put-back cases, and not one of those 31 matters was resolved in fewer than 41 months. Some have been pending for significantly longer periods of time.[210]

127. Moreover, the six-month increment for Document Defect Loans is uniform across all Relevant Trusts,[211] despite significant variation in the number of loans repurchased, types of loans at issue, identities of obligated counterparties, and types of document defects, among other things, for each trust in the repurchase simulations.[212] For example, if warrantors contest the materiality of the alleged document defects for certain loans, it could take substantially longer for the trustee to complete the repurchase enforcement for these loans. **Exhibit 13**: *Material Exception Claims by Trust* shows the differences in quantities and types of Ms. Beckles'

[206] *Id.* at 78:20-79:18 ("Q. What is happening during this six-month time period between the enforcement date and the purchase date? A. I don't understand the question. […] Q. Why are you assuming a six-month time period? A. Again, it is because that is what I was asked to do by counsel. I have an understanding that there was some lag to allow for the effectuation of the actual repurchase. Q. Why was six months selected? A. I don't know. I believe that it is based upon legal theories and other evidence but I don't know specifically.").

[207] *Id.* at 80:14-19 ("Q. Did you [conduct] any independent research or investigation to determine how long it takes to put back loans with document defects after a decision to enforce those has been made? A. No, I did not.").

[208] *Id.* at 82:16-83:2 (acknowledging that he does not believe any of the 35 cases in which he was involved have started and ended within six months).

[209] *Id.* at 81:15-82:14 ("Q. Are you presuming repurchases within six months without litigation? A. I am not presuming anything. I am presuming that the repurchase would happen on the purchase date. Q. Have you considered or assessed whether litigation would be necessary to enforce the document defects that are claimed here? A. No. Not one way or the other. Q. Would the time frame change if in fact litigation was necessary to enforce those document defect claims? A. It may or may not. I don't know. Q. You have no idea whether repurchases would be able to be pursued through litigation in six months? [objection omitted] THE WITNESS: I think that ultimately calls for legal conclusions and it is not something that I have investigated so I don't have an opinion on that.").

[210] *Id*. at 124:5-14, 125:16-129:13, 129:20-130:2.

[211] Snow Report at ¶ 57 (Appendix D).

[212] Snow Dep. 84:2-10.

alleged material exception allegations by trust. Despite the differences in the nature, quantities, and types of claimed defects, Dr. Snow assumes the same repurchase timeline for all.

128. Dr. Snow similarly relies on counsel for his assumptions of the numbers of months elapsing between the Enforcement Date and the Purchase Date for R&W Breach Loans. At deposition, Dr. Snow stated he had no understanding of what counsel intended the time period to represent, other than "building in an assumption of time that it would actually take to effectuate things."[213] As with Document Defect Loans, Dr. Snow applies a nearly-uniform Purchase Date period across trusts for which he calculates R&W Breach Damages, despite the fact that the number of loans, the types of loans, the warrantors, and the types of R&W breaches vary across trusts.[214] Similarly, **Exhibit 14**: *R&W Breach Category Claims by Trust* shows the differences in quantities and types of Mr. Bitner's allegations by trust. Dr. Snow conducts no analysis of repurchase timelines as to particular loans or breach claims.

[213] *Id.* at 89:13-90:13; *see also id.* at 89:25-90:5 ("Q. Do you have any understanding of what is going on during that time period to attempt to effectuate the repurchases that you are modeling? A. Not specifically, no.").

[214] *Id.* at 90:14-91:13.

129. **Table 2**: *Number of Alleged Document Defect Loans and R&W Breach Loans by Trust* shows the number of loans with alleged defects differs dramatically across trusts.

Table 2: *Number of Alleged Document Defect Loans and R&W Breach Loans by Trust*

Trust	Document Defect Loans[215]	R&W Breach Loans[216]	Total
ABFC 2005-HE2	741	179	920
ABFC 2005-OPT1	228	55	283
ABFC 2006-OPT1	381	115	496
ABFC 2006-OPT2	443	218	661
ABSHE 2005-HE5	333	44	377
CMLTI 2005-OPT4	117	28	145
GPMF 2005-AR4	566	64	630
GPMF 2006-AR1	308	78	386
GPMF 2006-AR2	269	24	293
GPMF 2006-AR3	499	25	524
MSAC 2005-WMC2	423	38	461
MSAC 2005-WMC3	379	42	421
MSAC 2005-WMC5	303	44	347
MSMC 2006-HE1	744	0	744
OOMLT 2006-2	1,699	0	1,699

130. Notably, in one of the few RMBS repurchase cases litigated through trial in recent years, the court addressed claims as to 20 loans on a loan-by-loan basis, of which it accepted claims as to 13 loans and rejected claims as to seven loans after four years of contentious litigation, and litigation is ongoing as to what recovery a final judgment will provide. *See,* for example, the court's September 6, 2016 decision in *MASTR Adjustable Rate Mortgages Trust 2006-OA2 et al. v. UBS Real Estate Securities Inc.*, S.D.N.Y. No. 12-cv-7322. This 248-page decision in a case filed in 2012 contains a nearly 100-page review of 20 loans done on a loan-by-loan basis to determine which were required to be repurchased.[217] It ordered the parties to engage a

[215] This list includes only loans for which Dr. Snow simulated a repurchase. Loans in these trusts for which Ms. Beckles alleged a material exception but Dr. Snow did not simulate a repurchase are not listed.

[216] This list includes only loans for which Dr. Snow simulated a repurchase. Loans in these trusts for which Mr. Bitner alleged a material breach but Dr. Snow did not simulate a repurchase are not listed.

[217] Memorandum and Order. *MASTR Adjustable Rate Mortgages Trust 2006-OA2, et al. v. UBS Real Estate Securities Inc.* (S.D.N.Y. No. 1:12-cv-7322) (Sept. 6, 2016) at 143-236.

special master to determine how to apply the court's guidance to thousands of other loans so that a final judgment might be rendered.[218] The case is still ongoing, more than six years after filing.

131. Also, in the *Phoenix Light* case, Dr. Snow uses a notably different methodology to calculate Purchase Dates. There, he adds six months for Document Defect Loans (same as here) and a flat 24 months for all R&W Breach Loans, rather than the seven and twelve months he uses here.[219] When asked at deposition, he could not explain the discrepancy, other than as the product of an instruction from counsel.[220]

132. Dr. Snow's seven- and 12-month Purchase Date periods here for R&W Breach Loans result in the initial Purchase Dates *pre*dating the sale of Plaintiff's Relevant Certificates. Had Dr. Snow used, for example, the 24-month period that he used in *Phoenix Light* for the R&W Breach Loans, then the Purchase Dates for all R&W Breach Loans here would *post*date the *Commerzbank* Plaintiff's sales for all but five of the Relevant Certificates, meaning that no repurchases related to the R&W Breach Loans would be simulated in his model during Plaintiff's real-life holding periods and reducing R&W Breach Repurchase damages to zero.[221] Conversely, had Dr. Snow used his shorter Purchase Date periods from this case in the *Phoenix Light* case, then he would be simulating repurchases *before* certain of the plaintiffs in *Phoenix Light* acquired assignments of their certificates there.[222] Dr. Snow makes no attempt to account for these choices, including how it could be reasonable to have different repurchase periods for the R&W Breach Loans in the two cases, including as to ABFC 2006-OPT2, a trust at issue in both cases. Recalculating Dr. Snow's R&W Breach Repurchase Damages using the 24-month period that he used in *Phoenix Light* for the R&W Breach Loans completely or nearly eliminates damages for 14 certificates in the Sold scenario. As shown in **Exhibit 15**: *R&W*

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[218] *Id.* at 237.

[219] Snow *Phoenix Light* Report at ¶ 31.

[220] Snow Dep. 311:3-13 ("Q. Again, I ask what is the basis for using two different time periods for the same type of breach in those securitizations in two different cases? A. (…) I don't know (…) These were assumptions I was asked to make by counsel.").

[221] The sale dates for ABFC 2006-OPT1 M1, ABSHE 2005-HE5 M8, GPMF 2006-AR1 A3, GPMF 2006-AR2 3A3, and MSAC 2005-WMC2 M4 occur more than 24 months after the assumed Enforcement Dates.

[222] *See, e.g.*, Second Amended Complaint. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (filed Feb. 24, 2016) ("*Phoenix Light* Complaint") at Exhibit B (reflecting an assignment of ABFC 2006-OPT2 M6 from WestLB as of February 13, 2012).

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Breach Repurchase Damages in the Sold Scenario Using Phoenix Light Repurchase Timeline, R&W Breach Repurchase Damages would be reduced by $8.57 million (or 42.50 percent) if R&W Breach Loans are assumed to be repurchased 24 months after the Enforcement Date.

133. Dr. Snow's methodology in each of these two cases also conflicts with the methodologies utilized by a damages expert in another similar case against Wells Fargo, underscoring that such assumptions are arbitrary. The damages expert in that case, Mr. Christopher J. Milner, determined the Funding Date (analogous to Dr. Snow's Purchase Date) in his primary damages scenario for document defect loans to be 46 to 47 months after the date of the final certifications and exceptions reports.[223] He adds a one month period for notice to cure, 90 or 120 days for expiration of a cure period that differed by trust, six months before filing a lawsuit, and three years for a lawsuit to be resolved.[224] Mr. Milner's assumed timeframe can be even longer—up to nine years—for his alternative damages scenarios.[225]

134. Although Dr. Snow assumes a fixed timeframe for the trustee to complete the repurchase process for all the Defective Loans across all Relevant Trusts in his but-for scenario, the time to complete the repurchase process would vary by loan, based on the types of loans or breaches, or the involved obligated parties. For example, if warrantors contest the materiality of the alleged breaches for certain loans, it could take longer for the trustee to complete the repurchase enforcement for these loans.

135. Furthermore, in the event that litigation is necessary to enforce repurchase obligations, the time it takes to complete the repurchase process would be even longer and individualized to each particular case.

136. As with his choice of sensitivity scaling factors and Enforcement Dates, Dr. Snow provides no discernible basis for the assumptions underlying his calculation of Purchase Dates; as such, they are arbitrary and lack support and they render his model unreliable. He leaves the

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[223] One of the Relevant Trusts, ABFC 2006-OPT2, is also at-issue in the *NCUA* matter, and Mr. Milner applies yet a third set of very different Funding Dates assumptions when calculating damages for this trust in *NCUA*. Specifically, Mr. Milner uses the following various dates for repurchases in ABFC 2006-OPT2: July 25, 2008, April 7, 2009, July 25, 2011, April 7, 2012, September 1, 2012, and September 1, 2015.

[224] Milner Report at ¶ 47 and Exhibit D.

[225] *Id.* at Exhibit D.

factfinder with no reasonable methodology by which to determine repurchase timelines on a loan-by-loan or trust-by-trust basis.

Dr. Snow's Use of Delayed "Rolling" Purchase Dates for Non-Distressed Loans Ties Repurchase to Delinquency in Ways Inconsistent with the Governing Agreements.

137. Dr. Snow employs a different method of calculating Purchase Dates for loans that were not distressed as of the applicable Enforcement Date.

138. Specifically, Dr. Snow applies an alternative approach for "Non-Distressed Loans," which are R&W Breach Loans that were not 90 or more days delinquent as of the Enforcement Date or Document Defect Loans that were not 90 or more days delinquent, liquidated or in REO or foreclosure as of the Enforcement Date. Dr. Snow does not tie the Purchase Date to the Enforcement Date for Non-Distressed Loans. Instead, in his but-for scenario, he waits until each loan becomes distressed and then adds six months for Document Defect Loans,[226] or seven or 12 months for R&W Breach Loans, depending on the trust.[227] Because Dr. Snow calculates the damages as of May 2018, for loans in good standing as of the Enforcement Date, repurchase occurs only if the loan becomes distressed between the Enforcement Date and May 2018.[228] For Document Defect Loans, the resulting repurchase occurs either six months after the loan becomes distressed or May 2018, whichever is earlier.[229] For R&W Breach Loans, the resulting repurchase occurs either seven or 12 months after the loan becomes distressed, depending on the trust, or May 2018, whichever is earlier.[230]

139. I refer to this hypothetical practice Dr. Snow envisions of waiting for loans to become distressed before simulating their repurchase as delayed "rolling repurchases."

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[226] Snow Report at ¶ 29.

[227] *Id.* For ABFC 2005-HE2, ABFC 2006-OPT1 and ABFC 2006-OPT2, repurchases are assumed to occur 12 months after the delinquency date. For all other securitizations, repurchases are assumed to occur seven months after the delinquency date.

[228] Dr. Snow used this terminology in the *Phoenix Light* deposition. *See* Snow Dep. 94:22-95:4 ("Q. …For loans that are performing on the enforcement date the trustee[']s discovering the breach but pursuing a repurchase only if the loan hits the delinquency triggers that you have described here? A. Correct.").

[229] *Id.* at ¶ 29 n. 22 and supporting materials.

[230] *Id.*

140. Dr. Snow's adoption of rolling repurchases is inconsistent with my understanding of the Governing Agreements. For ABFC 2006-OPT2, for example, the PSA provides that a document defect should be addressed within 120 days, and an R&W breach should be cured within 90 days, each from the date of discovery, and only if having a materially adverse effect of some kind.[231] It provides that repurchase obligations arising out of failure to cure such defect or breach shall be effected shortly after the expiration of such period.[232] Dr. Snow's methodology contradicts these terms. In fact, under the delayed rolling repurchase methodology utilized by Dr. Snow, the time elapsed between alleged notice to Wells Fargo related to a given loan and that loan's hypothetical repurchase can be very long. When the dates of the exception reports are considered, these hypothetical repurchase timelines are even longer.

141. Loan 11110775 from MSAC 2005-WMC3, for example, like all Document Defect Loans from that trust, is associated by Dr. Snow with an Enforcement Date of January 2010. However, because the loan did not become 90 days delinquent until May 2018, it was not hypothetically repurchased until May 2018,[233] over eight years after Dr. Snow's selected Enforcement Date and more than 10 years after the exception report from which this claimed document defect was derived.[234] As discussed further below, using this rolling repurchase method has the effect of increasing Plaintiff's damages as calculated by Dr. Snow.

142. In sum, Dr. Snow's but-for scenario does not contemplate a repurchase even when he assumes that the trustee was "on notice" of relevant breaches. Rather, it assumes the trust continues receiving principal and interest payments from performing loans, and later, *if* and *only if* such loans default or are liquidated, the trustee seeks to have the loan repurchased. This approach transfers credit risk back to the seller or other responsible parties by hinging a repurchase decision not on whether there was a R&W breach or defect in the mortgage file but on whether the borrower repaid the loan in a timely fashion. At least one court that I am aware of has

[231] ABFC 2006-OPT2 PSA at § 2.03 (WF_CB_001721024-5).

[232] *Id.*

[233] Although Dr. Snow's methodology typically requires that six months be added to the date upon which a loan became 90 days delinquent, he sets an end date for repurchases of May 2018. Consequently, in the case of Loan 0011110775, the loan was repurchased in the same month it became delinquent.

[234] The uncured exceptions report for this trust shows lists August 1, 2007 as the date for the uncleared exception for this loan. *See* Beckles Report at supporting materials (U002_XT_Uncleared_Exception_Export_122016).

recognized that such an outcome is inconsistent with the allocations of rights and remedies set forth in Governing Agreements such as PSAs.[235]

143. I am not aware of a real world practice that is consistent with the rolling repurchases envisioned by Dr. Snow. And Dr. Snow admitted at his *Phoenix Light* deposition that he was aware of no basis in the PSAs that would have allowed it to be done.[236] As such, for this additional reason, Dr. Snow's methodology is unreliable.

144. To show the impact of Dr. Snow's rolling repurchase assumption on his damages calculation, I recalculated Dr. Snow's Repurchase Damages but removed from the repurchase simulation loans that were performing as of the Enforcement Dates. I found that the Repurchase Damages would be reduced by $5.24 million in the Held-to-Maturity scenario,[237] or $11.10 million in the Sold scenario.[238]

145. When considering alternative Enforcement Dates, the impact of the rolling repurchase assumptions on Dr. Snow's Repurchase Amounts, and by extension, Repurchase Damages, varies depending on the Enforcement Date assumption. Because fewer Defective Loans fit Dr. Snow's Distressed Loan criteria as of earlier Enforcement Dates, fewer loans would be repurchased as of such earlier Enforcement Dates.

146. I utilized the 2A2 tranche of GPMF 2005-AR4 to illustrate how Dr. Snow's Repurchase Damages change significantly when alternative Enforcement Dates are used and his rolling repurchase assumption is omitted. I considered a set of alternative Enforcement Dates, ranging from trust closing through May 2018. For each of these alternative Enforcement Dates, I excluded Dr. Snow's rolling repurchase assumption and calculated the resulting reduction in

[235] W&S Final Judgment Entry at ¶¶ 107-108 ("[Plaintiffs' expert] assumes that the Trustee could discover breaches across the board, and then wait and see how each loan performed. [His] model assumes that the Trustee would have collected all principal and interest payments in the meantime and then demand repurchase if and when the loan defaulted…This assumption is not based on a reasonable interpretation of the PSAs" and "would transfer the credit risk that the investors agreed upon…back to the Seller…because whether Countrywide repurchased the loan would not depend on whether it had a breach, but on whether the borrower repaid it.").

[236] Snow Dep. 97:15-21 ("Q. Can you identify sitting here today any provision of the PSA that supports a delayed repurchase process? [objection omitted] THE WITNESS: I can't find anything that supports or disproves it.").

[237] As discussed in more detail in section VIII, the counterfactual assumption that sold certificates would have been held to maturity in the but-for world gives rise to "residual" Repurchase Damages of $48.43 million (27.16 percent of Repurchase Damages), even when the repurchase rate is set to zero.

[238] Similarly, removing loans from Dr. Snow's damages model that were performing as of his chosen Enforcement Dates results in reductions to his Tort Damages figures of approximately $5.05 million in the Held-to-Maturity scenario and $10.33 million in the Sold scenario.

Repurchase Damages. That is, where a loan was not in a distressed state (according to Dr. Snow's criteria) as of a given Enforcement Date, it was not repurchased in the but-for scenario. As illustrated, by excluding the rolling repurchase assumption, Dr. Snow's Repurchase Damages for GPMF 2005-AR4 2A2 are reduced significantly if an earlier or later Enforcement Date is selected in both the Held-to-Maturity and Sold scenarios. *See* **Exhibit 16**: *Repurchase Damages Utilizing Alternative Rolling Repurchase Assumptions for GPMF 2005-AR4 2A2.*

147. Given the significant impact that Dr. Snow's Enforcement Date and rolling repurchase assumptions have on his damages calculations, a reasonable and objective economic analysis would require support for these assumptions in this case. Here, Dr. Snow's support for these key assumptions is insufficient.

E. Because Dr. Snow Relies on Ms. Beckles' and Mr. Bitner's Unreliable Materiality Determinations, His Methodology Is Unreliable.

148. In his but-for scenario, Dr. Snow simulates repurchase of loans that reflect either (1) Ms. Beckles' findings of allegedly material defects in documentation, or (2) Mr. Bitner's findings of R&W breaches that materially and adversely impact the value of the loans or the certificateholders' interests in the loans. But Ms. Beckles' and Mr. Bitner's conclusions are wholly unsupported by empirical analysis.

Dr. Snow Relies on Ms. Beckles' Findings Regarding Document Defects, But the Findings Are Not Supported by Quantitative Analysis.

149. In creating his but-for scenario and his calculation of damages arising out of Document Defect Loans, Dr. Snow relies on Ms. Ingrid Beckles. Plaintiff retained Ms. Beckles to provide opinions relating to mortgage loan servicing generally and the Relevant Trusts specifically.[239] As described below, Dr. Snow relies on Ms. Beckles' materiality-related opinions even though Ms. Beckles does not support them with empirical analysis. I performed a quantitative analysis to evaluate Ms. Beckles' materiality-related opinions and determined that her opinions cannot withstand empirical scrutiny.

150. First, Ms. Beckles identifies certain loan documents that she regards as "critical" and asserts that, "[i]f some of the critical mortgage documents are missing or defective, the process of

[239] *See* Beckles Report at ¶¶ 1-3.

foreclosing on the property may be delayed causing unnecessary losses to the [t]rust."[240] Second, based on a comparison of certain exception reports for each Relevant Trust,[241] Ms. Beckles "assess[es] the quality of the Mortgage Files associated with the [Relevant] Trusts"[242] and concludes that 63,204 of the 87,978 loans supporting the Relevant Trusts ("Beckles Breaching Loans") had material document exceptions, of which 22,295 were never corrected or were left "uncured."[243, 244]

151. Dr. Snow relies solely on Ms. Beckles' conclusions, and her identification of the loans for which he simulates repurchase.[245] Dr. Snow performs no independent analysis to validate her opinions. As a result, Dr. Snow's analysis rises and falls on her conclusions. But, as discussed below, Ms. Beckles' opinions are not supported by empirical analysis. Dr. Snow's adoption of them therefore renders his calculations unreliable.

152. Ms. Beckles fails to offer quantitative support for her claim that the exceptions she identifies are considered "material in the industry and impact that [sic] value and salability of the loan."[246] Ms. Beckles does not quantify how the alleged document defects and missing documents are material or have affected the value of a specific individual loan or the loan pools in the aggregate.

153. In the absence of empirical support for her claim, Ms. Beckles cites to a government report to buttress her opinion that missing or defective documents cause unnecessary losses to securitization trusts. Specifically, she cites to a report prepared by the U.S. Government Accountability Office ("GAO"), which states that "foreclosure documentation problems have

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[240] *Id.* at ¶ 89. The documents in question include the Note, Title Policy, Endorsements, Assignments, and Security Instruments, among others. *Id.* at ¶ 68.

[241] Specifically, Ms. Beckles compared the final certification and final exception reports for each of the at-issue Trusts with the cure and trailing exception reports that were sent out at a later time reflecting the status of the exceptions. *Id.* at ¶ 93.

[242] *Id.*

[243] *Id.* at ¶¶ 94, 98.

[244] Notably, for ABFC 2006-OPT2, there are two loans Ms. Beckles makes different determination whether the loan was left "uncured" in this case versus in the *Phoenix Light* case. These two loans are 831066272 and 841016759.

[245] Dr. Snow acknowledged he relied on Ms. Beckles' determinations in the *Phoenix* Light case. Snow Dep. 16:16-20 ("Q. …[A]re you relying on [Ms. Beckles] to identify the loans that contain document defects that you then simulate repurchase transactions on in this case? A. That is correct.").

[246] Beckles Report at ¶ 94.

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slowed the pace of foreclosures across the United States."[247] However, her quotation is selective. The sentence also states that, "most entities GAO interviewed indicated that such errors were correctible and that affected foreclosures would proceed."[248] The next sentence goes on to state that "[d]elays in the pace of foreclosures as servicers correct and refile cases and implement more rigorous processes may benefit borrowers by providing more time to modify loans[.]"[249] She similarly declines to acknowledge the GAO's finding that "[b]orrowers whose mortgage loans are in default may benefit from the additional delays in the foreclosure process if the additional time allows them to obtain income that allows them to bring mortgage payments current or cure the default, or to work out other payment solutions, such as loan modifications."[250]

154. Her assertions regarding foreclosure delays are unsupported. Mr. Peter M. Ross examined Ms. Beckles' determinations regarding the foreclosure timeframes for loans with alleged material document exceptions and found that the median foreclosure timelines for loans with alleged material document exceptions were in fact the same or shorter than the median foreclosure timelines for loans without material document exceptions in many of the states, suggesting that Ms. Beckles' assumption that these document exceptions negatively influence foreclosure timelines is incorrect.[251] In addition, Dr. Snow has not performed an analysis of whether a particular document exception slowed down or impacted the foreclosure process, or if a given document exception had an impact on the timing of liquidation or foreclosure, or if a document defect increased losses.[252]

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[247] *Id.* at ¶ 92, citing to "Mortgage Foreclosures: Documentation Problems Reveal Need for Ongoing Regulatory Oversight." *United States Government Accountability Office* GAO-11-433 (May 2, 2011) ("GAO Report") at foreword. <https://www.gao.gov/products/GAO-11-433> (accessed Mar. 12, 2019).

[248] GAO Report at foreword.

[249] *Id.*

[250] *Id.* at 41.

[251] Ross, Peter M. Rebuttal Expert Report of Peter M. Ross. *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (July 25, 2019) and supporting materials.

[252] Snow Dep. 101:25-102:7 ("Q. Did you undertake any analysis of whether a particular claim document exception slowed down or impacted the foreclosure process? A. …I have not done that."); 104:8-19 ("Q. You have not analyzed whether the document defect that Ms. Beckles identifies associated with the loan had anything to do with for example the timing of the foreclosure, right? A. …I have not done that type of analysis."); 104:24-105:5 ("Q. You don't know whether any particular document defect that is identified here increased losses? A. I have not done that type of analysis.").

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155. If Ms. Beckles were correct that certain alleged uncured exceptions are material and result in increased losses to the Relevant Trusts, one would expect increased loss severities for the loans she has identified as having material exceptions vis-à-vis loans with what she deems to be immaterial exceptions. But my statistical analysis demonstrates that is not the case. I calculated the average loss severity of the loans that Ms. Beckles identifies as having uncured material document exceptions and compared it to the average loss severity of loans identified by Ms. Beckles as having uncured immaterial document exceptions, utilizing the loss severity calculation method employed by Ms. Beckles in a similar case.[253] This comparison reveals that the average loss severity of loans with uncured material document exceptions is not statistically significantly greater than the average loss severity of loans reflecting uncured immaterial document exceptions.[254] *See* **Exhibit 17**: *Loss Severity Comparison Between Loans with Uncured Exceptions Deemed Material and Loans with Uncured Exceptions Deemed Immaterial in the Beckles Report.*

156. Despite the lack of empirical evidence for Ms. Beckles' assertions, Dr. Snow did not review loan files to confirm that material exceptions existed for any particular loan, and he made no independent assessment of what was material in terms of the claimed document defects.[255] Nevertheless, he simulates the repurchase of certain Beckles Breaching Loans in his but-for scenario.

157. Furthermore, Dr. Snow ignores the fact that certain of the exceptions identified by Ms. Beckles were either not material or could have been cleared based on the contents of loan files. He did not do any independent assessment of what might have been missing from a loan file and has not examined whether the material exception claims asserted by Ms. Beckles based on missing documents could have been cleared based on the contents of loan files.[256] I have been informed by counsel that Oak Branch reviewed the list of loans identified by Ms. Beckles as having "material" document exceptions, including those exceptions based on purportedly missing documents. I understand that Ms. Beckles determined certain loans to have been cured and that

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[253] *See* Beckles, Ingrid. Amended Expert Report of Ingrid Beckles. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Apr. 12, 2019) ("Beckles *Phoenix Light* Report") at supporting materials.

[254] This result remains qualitatively true even after controlling for loan and borrower characteristics that Ms. Beckles opines have an impact on loss severity in her report for a similar case. *See id.* at ¶ 104.

[255] Snow Dep. 41:15-19 ("Q. Did you do any independent review of loan files to confirm that material exceptions actually existed for any particular loans? A. I did not.").

[256] *Id.* at 45:16-19 ("Q. Have you done any analysis of whether the claimed exceptions here could be cleared based on the contents of loan files? A. No. I have not.").

Oak Branch located the missing documents in the productions in this case for certain loans, and thus the exceptions were "cured." Recalculating damages using Dr. Snow's methodology but excluding the loans where Oak Branch located the missing documents, Document Defect Repurchase Damages are reduced by $6.03 million in the Held-to-Maturity scenario and by $9.59 million in the Sold scenario.

158. Separately, Dr. Snow has not analyzed whether it would be possible to cure the Document Defect Loans as alleged by Ms. Beckles.[257] I also understand that, based on Oak Branch's review of the produced files in this case, Mr. Ross classifies certain document exceptions as "curable," meaning that they could easily be resolved. Recalculating damages using Dr. Snow's methodology but excluding the loans where Oak Branch located the missing document or the document exception was "curable," Document Defect Repurchase Damages are reduced by $42.28 million in the Held-to-Maturity scenario and by $40.49 million in the Sold scenario.

159. Further, I have been informed by counsel that Mr. Ross has independently determined that a significant number of the loans identified by Ms. Beckles as having material exceptions were, in fact, free of material exceptions because, for example, the exceptions would not affect the foreclosure process. Recalculating damages using Dr. Snow's methodology, and excluding the loans had "cured" or "curable" exceptions or Mr. Ross identified as free of material document exceptions, Document Defect Repurchase Damages are reduced by $120.62 million (or 70.13 percent) in the Held-to-Maturity scenario,[258] or by $72.21 million (or 98.63 percent) in the Sold scenario. *See* **Exhibit 18a**: *Document Defect Repurchase Damages Excluding Loans Without Material Exceptions*.[259]

160. Ms. Beckles also offers the additional opinion that "it was imprudent of the Servicers and the Trustee to permit the REO (and incur the related costs) of the 3,010 loans for which they could have sought repurchase or substitution."[260] She goes on to state that, in her view, "[i]t was

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[257] *Id.* at 47:11-14 ("Q. You haven't analyzed whether a cure or clearing of an exception would be possible for any of those loans? A. No.").

[258] As discussed in more detail in section VIII, the counterfactual assumption that sold certificates would have been held to maturity in the but-for world gives rise to "residual" Document Defect Repurchase Damages of $48.43 million (28.16 percent of Document Defect Repurchase Damages), even when the repurchase rate is set to zero.

[259] For the impact on Tort Damages, *see* **Exhibit 18b**: *Document Defect Tort Damages Excluding Loans Without Material Exceptions.*

[260] Beckles Report at ¶ 98.

incumbent upon the Servicers and Trustee to seek repurchase or substitution of these loans before liquidating them."[261] Underlying Ms. Beckles' opinion is an assumption that it would have been economically beneficial to certificateholders had the servicers and trustee sought to have loans repurchased instead of foreclosing on properties. This assumption is unsupported by empirical analysis.

161. In sum, Ms. Beckles' assertions are not based in empirical analysis, and are undermined by the results of my analysis. Because Dr. Snow's Repurchase Amount calculations rely on Ms. Beckles' unsupported assertions, his calculations are unreliable and do not identify damages attributable to the trustee.

Dr. Snow Adopts Mr. Bitner's Findings Regarding R&W Breaches, But the Findings Are Not Supported by Quantitative Analysis.

162. Dr. Snow similarly selects for repurchase loans with R&W breaches that allegedly materially and adversely affect the value of the loan or interests of the certificateholders as identified by a second of Plaintiff's experts, Mr. Bitner ("Bitner Breaching Loans").

163. Mr. Bitner's determination of whether certain R&W breaches materially and adversely affected the values of the loans or interests of certificateholders is not based on empirical analysis, and Mr. Bitner does not quantify the increase in credit risk associated with these alleged R&W breaches that he asserts exists.[262]

164. I undertook a quantitative analysis (the "Risk Profile Analysis") to assess whether the claims made by Mr. Bitner following his re-underwriting exercise ("Plaintiff's Loan Characteristic Claims"), even if true, would have resulted in a statistically significant increase in the risk profile of the loans he reviewed.[263] In particular, I compared the risk profiles of each loan under two scenarios: (1) using the loan characteristics reported on the loan tape; and (2) using the Plaintiff's Loan Characteristic Claims identified by Mr. Bitner.

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[261] *Id.*

[262] Bitner Report at ¶¶ 8-9.

[263] The term "risk profile" is used to define the sequence of monthly expected cumulative default probabilities for a given loan. A full description of the Risk Profile Analysis is available in **Appendix E**: *Technical Appendix for Risk Profile Analysis*.

165. For each loan, if the risk profile calculated using the Plaintiff's Loan Characteristic Claims identified by Mr. Bitner was not statistically distinguishable from the risk profile calculated using the loan characteristics reported on the loan tape, Plaintiff's Loan Characteristic Claims for that loan did not have an empirical impact on the risk profile of the loan. Because loan value is a function of the risk profile of a loan, two loans with indistinguishable risk profiles similarly have indistinguishable values. *See* **Exhibit 19**: *Results of Risk Profile Analysis*, which includes the results of the Risk Profile Analysis for each Bitner Breaching Loan.

166. Using Dr. Snow's methodology, the R&W Breach Repurchase Damages decrease by $59.16 million (or 57.25 percent) in the Held-to-Maturity scenario,[264] or by $19.86 million (or 98.55 percent) in the Sold scenario, as a result of excluding from the hypothetical repurchase in the but-for scenario those loans for which Mr. Bitner's allegations resulted in a statistically indistinguishable risk profile. *See* **Exhibit 20a**: *R&W Breach Repurchase Damages Excluding Loans with Statistically Indistinguishable Risk Profiles*.[265]

167. In addition, I ran an analysis utilizing the findings of a re-underwriting expert retained by Wells Fargo, Kori Keith. I understand that Ms. Keith performed two analyses. Her "Day One Analysis" included a review of loans using only the information in the loan files that would have been available to an underwriter at the time of origination and third-party information that the original underwriter could not have considered, or would not have been required to consider. Ms. Keith's "Post-Origination Analysis" included a review of loans using information in the loan files at the time of origination as well as post-origination information. In each analysis, Ms. Keith determined that certain R&W Breach Loans were free of material defects based on her industry experience as an underwriter.[266] When Dr. Snow's R&W Breach Repurchase Damages are recalculated excluding loans Ms. Keith deemed to be without material and adverse R&W breaches in her "Day One" and "Post Origination" analyses, the result is that R&W Breach Repurchase Damages in the Held-to-Maturity Scenario are reduced

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[264] As discussed in more detail in section VIII, the counterfactual assumption that sold certificates would have been held to maturity in the but-for world gives rise to "residual" R&W Breach Repurchase Damages of $43.93 million (42.51 percent of R&W Breach Repurchase Damages), even when the repurchase rate is set to zero.

[265] For the impact on Tort Damages, *see* **Exhibit 20b**: *R&W Breach Tort Damages Excluding Loans with Statistically Indistinguishable Risk Profiles.*

[266] Keith, Kori. Expert Report of Kori Keith. *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (July 25, 2019) and supporting materials.

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by $49.60 million and $46.67 million, respectively.[267] R&W Breach Repurchase Damages in the Sold scenario are reduced by $18.08 million and $17.32 million, respectively. *See* **Exhibit 21a**: *R&W Breach Repurchase Damages Excluding Loans Without Material and Adverse R&W Breaches.*[268]

168. To demonstrate the combined impact of Dr. Snow's reliance on Ms. Beckles' and Mr. Bitner's unreliable materiality calculations, I recalculated Dr. Snow's Repurchase Damages excluding loans deemed free of material document defects by Mr. Ross and deemed to be without material and adverse R&W breaches by Ms. Keith. I found that Dr. Snow's Repurchase Damages are reduced by $113.39 million (or 63.60 percent) in the Held-to-Maturity scenario using the results of Ms. Keith's "Day One" analysis, and by $110.50 million (or 61.98 percent) using the results of Ms. Keith's "Post Origination" analysis.[269] Similarly, damages are reduced by $83.05 million (or 96.63 percent) in the Sold scenario using the results of Ms. Keith's "Day One" analysis, and by $83.49 million (or 97.14 percent) using the results of Ms. Keith's "Post Origination" analysis. *See* **Exhibit 22a**: *Repurchase Damages Excluding Loans Without Material Exceptions and Without Material and Adverse R&W Breaches*.[270]

VII. OPINION THREE: DR. SNOW'S REPURCHASE DAMAGES DO NOT ACCURATELY REFLECT FUTURE DAMAGES.

169. To calculate Repurchase Damages, Dr. Snow compares cashflows under the but-for scenario and cashflows in the baseline "real world" scenario. For both scenarios, Dr. Snow's calculation of cashflows includes *projected* cashflows through trust maturity (more than 22 years, up to

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[267] As discussed in more detail in section VIII, the counterfactual assumption that sold certificates would have been held to maturity in the but-for world gives rise to "residual" R&W Breach Repurchase Damages of $43.93 million (42.51 percent of R&W Breach Repurchase Damages), even when the repurchase rate is set to zero.

[268] For the impact on Tort Damages, *see* **Exhibit 21b**: *R&W Breach Tort Damages Excluding Loans Without Material and Adverse R&W Breaches.*

[269] As discussed in more detail in section VIII, the counterfactual assumption that sold certificates would have been held to maturity in the but-for world gives rise to "residual" Repurchase Damages of $48.43 million (27.16 percent of Repurchase Damages), even when the repurchase rate is set to zero.

[270] For the impact on Tort Damages, *see* **Exhibit 22b**: *Tort Damages Excluding Loans Without Material Exceptions and Without Material and Adverse R&W Breaches.*

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2040).[271] Specifically, Dr. Snow forecasts future cashflows for the Relevant Trusts for the period beginning in June 2018 and ending at the final maturity date for each Relevant Trust.

170. Dr. Snow then discounts the projected cashflows using the pass-through rates for the Relevant Certificates[272] to arrive the present value of change in future cashflows to certificates ("Future Damages"). Future Damages account for $95.45 million (or 53.54 percent) of the total Repurchase Damages in his Held-to-Maturity scenario, or $22.04 million (or 25.65 percent) in his Sold scenario. *See* **Exhibit 23**: *Dr. Snow's "Future Damages" Calculations.*

171. To project cashflows in both the baseline and but-for scenarios, Dr. Snow implements a forecast of loan performance beginning in June 2018.[273] Because Dr. Snow's forecasting begins in June 2018, I can use trust performance data, as reported from the remittance reports, from June 2018 to the present to determine whether and to what extent his forecasting methodology is consistent with the data. It is not. Dr. Snow has not done this comparison.[274]

172. In fact, almost immediately, Dr. Snow's forecasts of loan performance diverge from the actual data, and this divergence grows over time. For instance, for all loans in GPMF 2005-AR4, Dr. Snow predicts that by the end of June 2018 they would have a principal balance of $201 million, but according to the remittance reports, the principal balance was $199 million, a discrepancy of over $2 million for that month. By March 2019, Dr. Snow forecasts a total balance of $185 million. However, the principal balance as reported in the remittance reports is $176 million. Dr. Snow is similarly unable to accurately forecast the payments associated with the collateral pool for all Relevant Trusts and the difference between the actual world and his forecast increases over time. *See* **Exhibit 24**: *Difference Between Dr. Snow's Forecast and Remittance Reports (June 2018 – June 2019)* for the differences across all Relevant Trusts.

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[271] Dr. Snow's forecasted last principal payment date for ABFC 2006-OPT1 is Oct. 25, 2040. *See* Snow Report at supporting materials (waterfall scenarios).

[272] *Id.* at ¶ 40 n. 32.

[273] *Id.* at ¶ 30. *See also* Snow Dep. 262:5-13 ("I have done a pool level forecasting methodology based on time, housing price index indices and Treasury rates to capture the relevant macroeconomic factors. I have done the forecasts at first lien levels and second lien levels to reflect the differences and at group levels when it is relevant for the securitization.").

[274] Snow Dep. 265:18-22 ("Q. Have you done any comparison of the post May 2018 forecasted performance that you have made to the actual performance between May of 2018 and today? A. No. I have not.").

173. Additionally, Dr. Snow does not consider, nor does his model allow for, optional redemption of the certificates in either the baseline or but-for scenarios.[275]

174. Further, four of the Relevant Trusts (GPMF 2005-AR4, GPMF 2006-AR1, GPMF 2006-AR2, and GPMF 2006-AR3) are expected to receive funds as part of a settlement with JPMorgan Chase & Co.[276] These distributions are expected in September 2019.[277] However, Dr. Snow's Repurchase Damages calculation only considers historical data up to May 2018 and did not consider this settlement. As such, the payments from this settlement were not included in Dr. Snow's calculation.

175. Dr. Snow's Future Damages, which rely on his forecasts, are unreliable and incorrect because of the large discrepancies between his forecasts and the actual data. He has not accounted for the discrepancies in his Future Damages, and thus Repurchase Damages, calculations.

VIII. OPINION FOUR: DR. SNOW'S "HELD-TO-MATURITY" AND "SOLD" SCENARIOS ARE UNSUPPORTED AND FLAWED.

176. As noted above, for all of the Relevant Certificates—that is, the 21 certificates that were sold by Plaintiff (the "Sold Certificates") and the three that have been retained by them—Dr. Snow calculates Repurchase Damages under what he calls the "Held-to-Maturity" scenario. Under the Held-to-Maturity scenario, Dr. Snow assumes that Plaintiff holds the certificates until maturity. For the Sold Certificates, this is a counterfactual assumption, in that it assumes that Plaintiff did not sell these certificates, when in the real world Plaintiff did so.[278]

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[275] The Governing Agreements generally grant certain parties the option to purchase the mortgages and terminate the trusts when the aggregate pool balance of the mortgage loans falls below 10 percent of the original pool balance. Thirteen of the fifteen at-issue trusts are currently eligible for optional redemption. The trusts become eligible for optional redemption at various times across Dr. Snow's scenarios. *See* **Appendix F**: *Optional Termination Provisions in the Governing Agreements*. The margin paid on certificates also increases once a trust is eligible for optional termination, typically by 50 percent for junior certificates and 100 percent for senior certificates.

[276] *See* "Informational Notice to Certificateholders" (Jan. 25, 2019). <http://www.rmbstrusteesettlement.com/docs/Notice_Dated_January_25_2019_Regarding_Updates_and_Developments.pdf> (accessed July 18, 2019).

[277] Bloomberg L.P. (accessed July 18, 2019).

[278] Under Dr. Snow's but-for scenario, Document Defect Loans that have become severely delinquent, have been liquidated, or are in REO or foreclosure by May 2018 are repurchased. R&W Breach Loans that are severely delinquent by May 2018 are repurchased. Snow Report at ¶ 29 n. 22.

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177. With respect to Sold Certificates, Dr. Snow also calculates Repurchase Damages under an *additional* scenario: what he calls the "Sold" scenario.[279] In the Sold scenario, Dr. Snow assumes that Plaintiff would still have sold its certificates on the same date as the real-world sale.[280] That is, contrary to the Held-to-Maturity scenario, the Sold scenario assumes that Plaintiff would not have changed its investment decisions after Wells Fargo undertook the actions Plaintiff claims Wells Fargo should have taken. Dr. Snow purports to ascertain the price that would have prevailed had Wells Fargo fulfilled its alleged obligations and uses that figure in his calculations.[281]

178. There are fundamental flaws in Dr. Snow's approach. As an initial matter, Dr. Snow provides no support for his choice to calculate damages under these two different scenarios. Further, Dr. Snow's methodology in his Held-to-Maturity scenario assigns damages to Wells Fargo even where no repurchases are assumed to have occurred. Moreover, his methodology for calculating the "but-for" prices in the Sold scenario relies on flawed assumptions.

A. Dr. Snow Has Not Explained or Supported the Use of Two Conflicting Scenarios.

179. Other than vague references to instructions by counsel,[282] Dr. Snow provides no basis for calculating damages under two different and contradictory scenarios.

180. Dr. Snow provides no qualitative or quantitative support for the differing assumptions underlying his methodologies with respect to the three held certificates on the one hand and the 21 Sold Certificates on the other. For the three certificates Plaintiff still holds, Dr. Snow calculates Repurchase Damages only under the Held-to-Maturity scenario, but not the Sold scenario.[283] Dr. Snow has not explained why, under the but-for scenario in which Wells Fargo took steps to enforce the repurchase of the claimed Defective Loans, Plaintiff would not have elected to sell any or all of these three certificates.

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[279] *Id.* at ¶ 41.

[280] *Id.* at ¶ 20.

[281] *Id.*

[282] *Id.* ("Counsel for the Plaintiff has asked me to calculate Repurchase Damages for these Certificates under two scenarios.").

[283] *Id.* ("For Certificates that the Plaintiff has not sold, Repurchase Damages reported under the Sold scenario are the same as Repurchase Damages reported under the Held-to-Maturity scenario.").

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181. For the Sold Certificates, Dr. Snow similarly fails to offer a rationale for his decision to calculate Repurchase Damages under two mutually exclusive scenarios. Dr. Snow does not explain why, in the but-for world, Plaintiff might have elected to hold until maturity those certificates that in the real world it sold. Dr. Snow also provides no support for assuming that Plaintiff would have still sold its certificates, even in the hypothetical but-for scenario where loans were repurchased. He also fails to explain why he uses the actual sale date in his damages analysis rather than, say, one before or after.

182. In fact, with respect to all of the certificates (including the three held certificates and the Sold Certificates), Dr. Snow could have decided which scenario was more likely to occur in the hypothetical circumstance in which Wells Fargo enforced the repurchase of the allegedly Defective Loans. That is, he could have engaged in an economic or other analysis and opined as to whether it was more likely for Plaintiff to keep its certificates or sell them. Instead of making such a determination, however, Dr. Snow refuses to make a choice and instead runs two mutually exclusive scenarios for the Sold Certificates. Much like the case where he presents alternative damages figures based on various "sensitivities," Dr. Snow refuses to opine about or provide a rationale for his contradictory calculations. In declining to make such a decision, Dr. Snow abdicates an important part of his function as an expert opining on damages in this case.

183. Thus, Dr. Snow does not say whether he believes the damages are actually $178.29 million (the figure he provides under the Held-to-Maturity scenario) or $85.95 million (the figure he provides under the Sold scenario).[284] Nor does he explain when or how the determination of the appropriate measure of damages will be resolved. He does not, for example, explain what additional facts or information would be necessary to determine the actual and appropriate measure of damages here or what variables might make one calculation appropriate over the other.

184. The result here is the presentation of two significantly different damages figures without explanation of which actually represents Plaintiff's damages claim. I am not aware of any of Plaintiff's other experts that have addressed or clarified this.

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[284] *Id.* at Figs. 5 and 6.

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B. Dr. Snow's Methodology Results in Repurchase Damages Under the Held-to-Maturity Scenario Even When No Loans Are Assumed to Be Repurchased.

185. As discussed above, Dr. Snow's Repurchase Damages are calculated as the difference between his baseline scenario and his but-for scenario. Under the Held-to-Maturity scenario, Dr. Snow's Repurchase Damages for the Sold Certificates are based on the assumption that Plaintiff would have held these certificates to maturity in the but-for world. However, in Dr. Snow's baseline scenario, while Sold Certificates receive sales proceeds in Dr. Snow's simulation, they cease receiving principal and interest payments beginning on the date of the sale.[285] As a result, Dr. Snow compares a but-for scenario where certificates are held to maturity and continue receiving principal and interest to a baseline scenario where the Sold Certificates *do not* receive principal and interest after their sale date. This comparison is flawed.

186. As described herein, Dr. Snow calculates Repurchase Damages by simulating the purchase of certain allegedly Defective Loans as identified by Ms. Beckles and Mr. Bitner. In the absence of hypothetical repurchases of such loans, it would be expected that Repurchase Damages would equal zero. However, this is not the case for the Sold Certificates under the Held-to-Maturity scenario. When I calculate damages using Dr. Snow's methodology but assume that none of the allegedly Defective Loans are repurchased, I nevertheless obtain $48.43 million (or 27.16 percent of the $178.29 million claimed in the Held-to-Maturity scenario) in Repurchase Damages. Considering Dr. Snow's Document Defect and R&W Breach Repurchases separately, that is $48.43 million in Document Defect Repurchase Damages and $43.93 million in R&W Breach Repurchase Damages. These damages, which I deem "residual damages," are a consequence of his flawed comparison. *See* **Exhibit 25**: "*Residual Damages" in Dr. Snow's Held-to-Maturity Scenario.*

187. As an example of this, take the M6 tranche of MSAC 2005-WMC5. As discussed above, this tranche has not experienced any realized losses since trust closing. Dr. Snow's model predicts that this tranche will be paid in full before the trust matures regardless of whether any repurchases are assumed to occur.[286] However, Dr. Snow's baseline scenario for this trust reflects that Plaintiff sold this certificate on November 3, 2011;[287] it therefore reflects the

[285] *Id.* at ¶ 39.

[286] Snow Report at supporting materials.

[287] Trade Ticket: MSAC 2005-WMC5 M6 (CB_WFB004198938).

deposit of sale proceeds on that date and the cessation of principal and interest payments as of such date. Dr. Snow compares this baseline scenario to a counterfactual but-for scenario where the tranche is instead held to maturity and paid in full. All of the Repurchase Damages for this trust in Dr. Snow's Held-to-Maturity scenario are "residual damages" and are not due to any hypothetical repurchases.[288]

188. This example highlights another point regarding the unsupported and counterfactual "hold" assumptions in Dr. Snow's Held-to-Maturity scenario. Dr. Snow has not established that Plaintiff sold its Sold certificates in the Relevant Trusts because of Wells Fargo's alleged misconduct. For example, the M6 tranche of MSAC 2005-WMC5 had experienced no principal losses at the time of sale, and Dr. Snow predicts no such losses in the future; Dr. Snow has not established that Plaintiff sold this certificate due to performance concerns.[289] This renders Dr. Snow's counterfactual "hold" assumptions without basis.

189. Because "residual damages" such as these are a direct result of Dr. Snow's flawed comparison and assumptions, relying on such numbers for a damages model is unreliable.

C. Dr. Snow's Pricing Method Under the Sold Scenario Rests on Flawed Pricing Assumptions.

190. Dr. Snow's Sold scenario assumes the sale of each of the Sold Certificates at what Dr. Snow contends is the price that would have prevailed on the actual sale date, had Wells Fargo enforced repurchase obligations with respect to the allegedly Defective Loans. To calculate the "but-for prices" for the Sold Certificates at the sale date, Dr. Snow constructs a regression model to estimate the relationship among: (1) the prices of the Sold Certificates, as estimated by Bloomberg; (2) trust- and certificate-level characteristics that Dr. Snow claims capture the performance of the loans and the distributions made under the applicable waterfalls; (3) the ABX index that corresponds to the origination date and the credit rating of the certificate at origination; and (4) certificate fixed effects.[290] Utilizing the regression coefficients, Dr. Snow next calculates two prices for each certificate for the month the certificate was actually sold:

[288] Dr. Snow's model predicts that all five certificates that have experienced no realized losses since trust closing will be paid in full regardless of whether repurchases are assumed to occur. These tranches are the M5 and M6 tranches of CMLTI 2005-OPT4, the M4 tranche of MSAC 2005-WMC2, the M6 tranche of MSAC 2005-WMC5, and the A4 tranche of MSAC 2006-HE1.

[289] I understand that one of Wells Fargo's experts asserts that Commerzbank sold certain certificates for reasons other than performance concerns. *See, e.g.*, Warren Report at ¶¶ 115-125.

[290] Snow Report at ¶¶ 42, 61.

the "predicted but-for price" and the "predicted price."[291] He multiplies the ratio of the two by the price at which Plaintiff actually sold the certificate in order to obtain his final predicted but-for price for each certificate.[292, 293]

191. Dr. Snow's pricing calculations are unreliable, however, due to: (1) his reliance on Bloomberg pricing data, which is problematic for several reasons; and (2) the way he treats missing data.

192. As an initial matter, Bloomberg prices for the Relevant Certificates are not comprehensive and may not accurately reflect transaction prices. RMBS are traded in over-the-counter markets, which are bilateral in nature, which means that two parties negotiate and agree on a price at which to trade.[294] Moreover, the RMBS market is opaque and dealers in this market "do not necessarily quote the same prices to all customers."[295] Therefore, "[e]ven when quotes are displayed on electronic systems, they…can differ from actual transaction prices."[296]

193. For example, the ABFC 2005-OPT1 M5 certificate was sold by Plaintiff at a price of 2.03 on February 10, 2012,[297] while the Bloomberg price for the same certificate is reported as 1.34 on the same date,[298] 34 percent below the actual sale price. As another example, the MSAC 2005-WMC5 M6 certificate was sold by Plaintiff on November 3, 2011 at a price of 12.00,[299] while the Bloomberg price for the same date is 20.95,[300] nearly 75 percent above the actual sold

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[291] *Id.* at ¶ 62.

[292] *Id.* at ¶ 63.

[293] For example, for the GPMF 2006-AR1 A2A certificate, Plaintiff sold this certificate on November 4, 2011 for 16.69. According to Dr. Snow's regression, the "predicted but-for price" is 224.33 (in the but-for scenario when all the Defective Loans were repurchased) and the "predicted price" is 172.64. Instead of questioning the accuracy of his regression model when the actual sale price was overpredicted by approximately 934.54 percent, Dr. Snow makes an assumption that his predicted but-for price would be overpredicted by the same 934.54 percentage. Therefore, he simply reduces the predicted but-for price of 224.33 by the overpredicted percent to get his but-for price, 21.68.

[294] Zhu, Hoaxing. "Finding a Good Price in Opaque Over-the-Counter Markets." *Review of Financial Studies* 25.4 (2012): 1255-1285 at 1255.

[295] Dodd, Randall. "Markets: Exchange or Over-the-Counter." *International Monetary Fund: Finance and Development.* (July 29, 2017). <http://www.imf.org/external/pubs/ft/fandd/basics/markets.htm> (accessed May 17, 2019).

[296] Zhu, *supra* note 294, at 1255.

[297] Trade Ticket: ABFC 2005-OPT1 M5 (CB_WFB004197095).

[298] Bloomberg L.P. (accessed Apr. 5, 2019 and May 6, 2019).

[299] Trade Ticket: MSAC 2005-WMC5 M6 (CB_WFB004198938).

[300] Bloomberg L.P. (accessed Apr. 5, 2019 and May 6, 2019).

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price. In other words, the Bloomberg prices (the input to Dr. Snow's regression model), when available, are not necessarily reflective of actual transaction prices. As reflected in **Exhibit 26**: *Price Comparison Among Sale Prices, Bloomberg Prices, and Dr. Snow's Predicted Prices*, the Bloomberg price (Dr. Snow's input) is within 10 percent of the sale price for only four of the Sold Certificates.

194. Additionally, Bloomberg prices for the Relevant Certificates are unavailable for many periods Dr. Snow considers in his regression. For example, Bloomberg pricing data are completely missing from January 2007 to December 2009 for all of the Sold Certificates. For the GPMF 2006-AR1 A3 certificate, Bloomberg pricing data are missing for the entire period that Dr. Snow includes in his regression. Similarly, for the ABFC 2005-HE2 M5 certificate, Bloomberg price data for January 2010 are missing for all but two business days, and for the ABFC 2005-HE2 M6 certificate, the Bloomberg pricing data are missing for 136 entire months, or 85.5% of the months included in Dr. Snow's regression. *See* **Exhibit 27**: *Missing Bloomberg Price Data in Dr. Snow's Bond Price Regression*.

195. Because of the extent of missing price data, Dr. Snow makes multiple flawed and unfounded assumptions. Dr. Snow, for example, calculates a single price for each month, based on the average of all available daily Bloomberg prices. When the Bloomberg price of a certificate is not available on a given day, Dr. Snow calculates the average monthly price of the certificate using the pricing data from available days. This gives disproportionate weight to days for which pricing information is available. Moreover, when the Bloomberg price of a certificate is completely unavailable for an entire month, Dr. Snow simply excludes that month for that certificate from his regression analysis. Because Bloomberg pricing data are missing for the entire period that Dr. Snow includes in his regression for the GPMF 2006-AR1 A3 certificate, GPMF 2006-AR1 A3 is actually not included in Dr. Snow's regression analysis.[301] Dr. Snow has provided no justification for ignoring missing daily price data when he computes monthly averages or for dropping from his regression months where data is missing in its entirety.

[301] Because Dr. Snow did not include the GPMF 2006-AR1 A3 certificate in his regression, he cannot estimate its fixed effect coefficient; without this coefficient, Dr. Snow was unable to predict prices for this certificate. Dr. Snow instead calculates the average of the certificate fixed effect estimates of GPMF 2005-AR4 2A2, GPMF 2006-AR1 A2A, GPMF 2006-AR2 3A3, and GPMF 2006-AR3 4A2 and uses this average as the certificate fixed effect for GPMF 2006-AR1 A3. Dr. Snow does not explain why averaging certificate fixed effects from other certificates to a wholly different certificate is a reasonable method.

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196. Dr. Snow's method of completely excluding missing observations from his regression is a process known as "listwise deletion." Listwise deletion, however, is appropriate when the missing data satisfies a statistical property called Missing Completely at Random ("MCAR").[302] Listwise deletion, when employed in non-MCAR situations can discard potential useful information, and results in bias and loss of precision.[303] Dr. Snow has not established how his use of listwise deletion is appropriate for the purpose of his analysis when the Bloomberg pricing data are missing for portions of months, entire months, or entire years for many securities. My opinion is that Dr. Snow's failure to establish the appropriateness of his methodology here renders the related analysis unreliable and unusable.

197. Moreover, even in certain instances when the Bloomberg prices are arguably available and represent market prices, Dr. Snow's regression model still does not predict prices that match. For example, the Bloomberg price for the CMLTI 2005-OPT4 M6 certificate on Plaintiff's sale date (November 3, 2011), was 15.29; the actual price paid to Plaintiff was 15.00,[304] which is within 2 percent of the Bloomberg quote. Yet Dr. Snow predicts the price for this certificate on the same date to be 26.67, which is higher than the Bloomberg price by 74.4 percent.

198. Due to these flaws, it is not surprising that Dr. Snow's model cannot and does not accurately predict actual sale prices. In fact, Dr. Snow's calculations are highly inaccurate compared to sale prices. Take as just one example the CMLTI 2005-OPT4 M5 certificate. Dr. Snow's regression model estimated a predicted price of 39.61 for the sale date of November 3, 2011.[305] In reality, however, Plaintiff sold the CMLTI 2005-OPT4 M5 certificate on that date at a price of 21.50. Dr. Snow's predicted price thus overestimated the actual price of the certificate by 84.21 percent. As reflected in **Exhibit 26**: *Price Comparison Among Sale Prices, Bloomberg Prices, and Dr. Snow's Predicted Prices,* Dr. Snow's predicted prices are highly inaccurate and only within 10 percent of the sale price for one of the Sold Certificates.

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[302] Allison, Paul D. "Missing Data." *The SAGE Handbook of Quantitative Methods in Psychology.* Ed. Roger E. Millsap and Alberto Maydeu-Olivares. Thousand Oaks, CA: Sage Publications (2009): 72-89 at 73-76.

[303] Little, Roderick J. A., and Donald B. Rubin. *Statistical Analysis with Missing Data*. 2nd ed. Hoboken, NJ: Wiley (2002) at 41-42.

[304] Trade Ticket: CMLTI 2005-OPT4 M6 (CB_WFB004198953).

[305] Snow Report at supporting materials.

199. Because Dr. Snow's but-for prices are wholly unreliable, the Repurchase Damages under the Sold scenario are unreliable, flawed, and cannot be used as a basis of a damages claim against Wells Fargo.

IX. OPINION FIVE: DR. SNOW FAILS TO CONSIDER THE COSTS ASSOCIATED WITH HYPOTHETICAL ENFORCEMENT.

200. Noticeably absent from Dr. Snow's damages analysis is a consideration of the duration of, or costs associated with, the large-scale repurchases of loans that are contemplated in his but-for scenario for Repurchase Damages.

201. There are several steps that may need to be completed, and financial costs incurred, before a trustee can effectuate the repurchase of one or more loans. These steps include, among other things, obtaining origination, credit, and servicing files associated with potentially defective loans; re-underwriting loans deemed worthy of repurchase; sending notices to the responsible parties for repurchases or consideration; allowing cure periods for loans still outstanding; reviewing and responding to rebuttals; negotiating an amicable resolution; and ultimately enforcing, if necessary, repurchases of specific loans.[306] Each step necessary to effectuate repurchases costs time and money that Dr. Snow has not analyzed or incorporated.

202. Plaintiff acknowledged in this case that "re-underwriting each of the tens of thousands of loans backing the trusts would be prohibitively expensive and time consuming."[307]

203. Plaintiff has also acknowledged that the cost of forensic review "could range from $50-$600 per loan, depending upon the type of review, with an average cost of $275 per loan."[308] Indeed, an examination of Plaintiff's invoices from The Oakleaf Group LLC for services associated with 1,309 individual loans reveals that the Plaintiff was charged based on the disposition of the loan file (categorized as "Incomplete File," "Stop Work – In Enrichment," "Stop Work – In

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[306] *See* Jablansky, Paul, Desmond Macauley, CFA, and Ying Wang. "Non-Agency MBS Strategy Special Report." RBS; September 17, 2010 (filed as exhibit to Institutional Investors' Statement in Support of Settlement and Consolidated Response to Settlement Objections in *In the Matter of the Application of the Bank of New York Mellon v. Walnut Place LLC*, 2011-cv-5988 (S.D.N.Y. Oct 31, 2011) at 1.

[307] Coordinated Plaintiffs' Memorandum of Law Supporting Sampling. *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (Jan. 11, 2017) at 3.

[308] Plaintiff's Second Supplemental Responses and Objections to Interrogatory Nos. 7-10 of Wells Fargo Bank, N.A.'s Set 1 Interrogatories, and Interrogatory Nos. 1-3 of Wells Fargo Bank, N.A.'s Set 2 Interrogatories. *Commerzbank AG v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:15-cv-10033) (May 24, 2019) at 27.

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Review," "Stop Work – In QC," or "Loan Review," with base rates of $131.63, $131.63, $421.20, $473.85 and $526.50, respectively).[309] These services were further subject to Adjustments and Page Overage fees, based on the condition of the loan file. Overall, loans that were categorized as either stop work or incomplete most frequently had associated charges totaling $131.63, and loan reviews most frequently had associated charges totaling $526.50.

204. Nevertheless, Plaintiff's own damages expert, Dr. Snow, fails to take into account the time and costs associated with this component of the repurchase process. Instead, Dr. Snow assumes that the efforts undertaken by the trustee even prior to initiating litigation would come at no financial cost to the trusts and the certificateholders (including Plaintiff); as he summarily stated, he does not believe an analysis of costs associated with enforcement would be "relevant for [his] calculations."[310] Contrary to Dr. Snow's assumption of costless repurchase efforts, the trusts themselves would likely bear the financial burden of costs that are typically incurred during the course of repurchase enforcement efforts and then additional costs during subsequent litigation.[311]

205. This is consistent with what I have seen in repurchase enforcement litigation. One example is the case wherein U.S. Bank, N.A. ("U.S. Bank"), acting in its capacity as trustee of the Morgan Stanley Mortgage Loan Trust 2006-4SL and Mortgage Pass-Through Certificates, Series 2006-4SL, where U.S. Bank filed a complaint in August 2012 against Morgan Stanley Mortgage Capital Inc. ("MSMC") to enforce MSMC's obligation to repurchase approximately 3,000

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[309] *See* Invoice #CBWF_JUN-17 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (June 30, 2017) (CB_EXPERT_WF_0000001); Invoice #CBWF_JUL-17 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (July 31, 2017) (CB_EXPERT_WF_0000009); Invoice #CBWF_AUG-17 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (Aug. 31, 2017) (CB_EXPERT_WF_0000016); Invoice #CBWF_AUG-18 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (Aug. 31, 2018) (CB_EXPERT_WF_0000021); Invoice #CBWF_SEP-18 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (Sept. 30, 2018) (CB_EXPERT_WF_0000029); Invoice #CBWF_OCT-18 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (Oct. 31, 2018) (CB_EXPERT_WF_0000039); and Invoice #CBWF_NOV-18 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (Nov. 30, 2018) (CB_EXPERT_WF_0000049).

[310] Snow Dep. 85:9-13 ("Q. Have you analyzed what it would cost the trust to perform any type of enforcement activities during the six-month period? A. No. I have not. Don't think it is relevant for my calculations.").

[311] For example, the MSAC 2005-WMC5 PSA provides that "The Trustee and any director, officer, employee, or agent of the Trustee shall be indemnified by the Trust Fund and held harmless against any loss, liability, or expense […] resulting from the performance of any of the Trustee's duties pursuant to this Agreement, other than any loss, liability, or expense […] resulting from any breach of the Responsible Party's obligations in connection with this Agreement for which the Responsible Party has performed its obligation to indemnify the Trustee pursuant to Section 2.03(j)." *See* MSAC 2005-WMC5 PSA at WF_CB_001709963.

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mortgage loans from the trust.[312] After lengthy and costly proceedings, the parties eventually settled for $21.5 million and funds were distributed in November 2018.[313]

206. The litigation resulted in significant expenses that were charged to the trust both during the litigation and taken from the settlement amount prior to distribution of settlement funds to certificateholders, in contrast to Dr. Snow's assumption that litigation is costless. In particular, over $1.5 million in extraordinary trust fund expenses were reported in the trust's remittance reports over the course of the litigation as "fees and expenses associated with litigation undertaken by the Trustee."[314] Additionally, even after the parties settled, there were additional attorneys' fees and litigation expenses that were taken out from the settlement amount prior to distribution to certificateholders.[315]

207. Indeed, litigation around repurchase obligations is commonplace, and is frequently necessary to enforce put-back claims where warrantors have refused to repurchase. Nevertheless, Dr. Snow's damages model neglects to take into account the likelihood of litigation.[316] Litigation would compound costs and delays, and the duration and outcomes of such litigation could be varied and uncertain. Dr. Snow has been directly involved in about 35 repurchase litigation cases as a damages expert according to his testimony.[317] As of July 3, 2019, only eight of the 31 relevant matters for which Dr. Snow has offered testimony and that he disclosed in his report have been resolved; the remaining 23 are still pending. As of that date, none of these actions had resulted in a final judgment in favor of plaintiffs. *See* **Exhibit 12**: *Repurchase Litigation Timelines for Cases in Dr. Snow's Appendix B.*

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[312] Complaint. *Morgan Stanley Mortgage Loan Trust 2006-4SL and Mortgage Pass-Through Certificates, Series 2006-4SL v. Morgan Stanley Mortgage Capital Inc*. (N.Y. Sup. No. 650579/2012) (Aug. 7, 2012).

[313] Morgan Stanley Mortgage Loan Trust 2006-4SL Notice to Holders Regarding Settlement Payment Distribution Date (Oct. 30, 2018). <https://usbtrustgateway.usbank.com> (accessed July 11, 2019) ("MSM 2006-4SL Settlement Distribution Notice").

[314] Remittance Reports: MSM 2006-4SL (Jan. 25, 2012 to Feb. 25, 2019).

[315] MSM 2006-4SL Settlement Distribution Notice at 2 ("Pursuant to the Trust Agreement, the Trust Fund is obligated to pay the fees, costs and expenses of the Putback Action (as defined in the Trust Instruction Proceeding) and the Trust Instruction Proceeding. This includes, but is not limited to, compensation for the Trustee time spent, and the fees and costs of counsel and other agents it employs, to pursue remedies or other actions to protect the interests of Holders. These amounts will be paid prior to distributions to Holders.").

[316] Snow Dep. 81:20-24 ("Q Have you considered or assessed whether litigation would be necessary to enforce the document defects that are claimed here? A No. Not one way or the other.").

[317] *Id.* at 115:13-18; s*ee also* Snow Report at Appendix B.

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208. Because Dr. Snow's damages calculations fail to take into account potential costs associated with the trustee's enforcement efforts, they are unreliable.

X. OPINION SIX: SOME INVESTORS WOULD RECEIVE REDUCED CASHFLOWS IN DR. SNOW'S BUT-FOR SCENARIOS.

209. Dr. Snow's analysis disregards the disparate interests and incentives of different classes within a trust that Wells Fargo, as trustee, would have had to consider in Plaintiff's but-for world. Certificateholders who invested in various tranches have different economic incentives regarding the actions of Wells Fargo. For example, the servicer's foreclosure decision on a loan could benefit one tranche at the expense of another.[318] These conflicts between tranches have been known as "tranche warfare."[319]

210. Governing Agreements, therefore, generally include provisions regarding the assignment of voting rights and minimum thresholds of voting rights necessary to direct trustee action. For ABFC 2005-OPT1, voting rights are allocated among some of the tranches, and some tranches do not have voting rights. Ninety-eight percent of the voting rights are collectively allocated to the "Offered Certificates" (the Class A and Class M tranches)[320] and the Class B certificates. Each certificate's share of this 98 percent of voting rights is determined by a formula wherein the outstanding balance of a given certificate is divided by the aggregate outstanding balance of the Offered Certificates and the Class B certificates.[321] In the absence of a Servicer Event of Termination, the trustee is prevented from making "any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, bond or other paper or documents, unless requested in writing to do so by the Majority Certificateholders or the NIMS Insurer[.]"[322] Majority Certificateholders are defined as "[t]he Holders of Certificates evidencing at least 51% of the Voting Rights."[323] *See*

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[318] Gerardi, Kristopher, and Wenli Li. "Mortgage Foreclosure Prevention Efforts." *Federal Reserve Bank of Atlanta Economic Review* 2 (2010): 1-13 at 9 ("Since investors in the various tranches have different claims to the cash flows from the MBS, a modification could alter the flows in a way that would benefit one tranche at the expense of another.").

[319] *See, e.g.*, *id.* ("Thus, there may be enough ambiguity in the PSAs to make servicers wary of getting caught up in so-called tranche warfare[.]").

[320] *See* ABFC 2005-OPT1 PSA at WF_CB_001700113.

[321] *Id.* at WF_CB_001700160.

[322] *Id.* at WF_CB_001700237.

[323] *Id.* at WF_CB_001700108.

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Exhibit 28: *Voting Rights Percent Over Time for Plaintiff's Holdings in ABFC 2005-OPT1.* Other Relevant Trusts have similar thresholds.

211. Plaintiff's voting rights, based on their ownership share in the Relevant Trusts, have never exceeded the minimum threshold necessary to effectuate certain actions by the trustee. As reflected in **Exhibit 29**: *Plaintiff's Highest Voting Rights or Fractional Undivided Interest in Each Relevant Trust,* the highest voting rights or fractional undivided interest in the Relevant Trusts ranged from 0.37 percent (for the GPMF 2005-AR4 trust) to 18.41 percent (for the CMLTI 2005-OPT4 trust).

212. Despite this, Dr. Snow's analysis is based on the premise that the trustee should have undertaken the actions contemplated in his but-for scenarios. Dr. Snow disclaimed knowledge relating to whether the trustee could pursue certain actions in the absence of direction from certificateholders.[324]

213. Moreover, for 14 of the 15 Relevant Trusts, one or more tranches would have received reduced cumulative principal and interest payments in the but-for scenario as compared to the baseline "real world" scenario according to Dr. Snow's damages methodology. In total, there are 50 not-at-issue tranches in the Relevant Trusts that would receive lower cumulative distributions, when only Document Defect Repurchase Damages are considered; there are 49 not-at-issue tranches when only R&W Breach Repurchase Damages are considered. When total Repurchase Damages are considered, there are 46 not-at-issue tranches where the cumulative principal and interest payments in the but-for-scenario are *lower* than in the real world, establishing that these tranches would *do worse* under Dr. Snow's scenarios than in the baseline "real world" scenario. *See* **Exhibit 30**: *Not-At-Issue Tranches With Lower Cumulative Payments in Dr. Snow's Held-to-Maturity But-for Scenarios*.

214. Most tranches receiving lower cumulative distributions in Dr. Snow's but-for scenarios are senior tranches, reflecting the disparate interests of certificateholders across the seniority spectrum of RMBS.

[324] Snow Dep. 117:3-12 ("Q. Can a trustee just pursue litigation or does it need direction from investors? A. That -- again, you are asking me a legal question which I can't answer. Q. So you have no idea whether the trustee could pursue litigation or whether it needed direction from investors? A. It may or may not. It depends again on the contracts.").

215. In addition, there are three tranches where investors holding the same tranche as Plaintiff from trust closing to the present would receive lower cumulative principal and interest payments in the but-for scenario than in the baseline "real world" scenario according to Dr. Snow's damages methodology. For example, Plaintiff held only 3.89 percent of the A4 tranche of MSAC 2006-HE1 and sold that holding as of November 10, 2011. In Dr. Snow's but-for scenario, the investors holding the other 96.11 percent of the tranche from trust closing to the present would have received approximately $6.5 million lower cumulative payments over the life of the trust. *See* **Exhibit 31**: *At-Issue Tranches With Lower Cumulative Payments in Dr. Snow's Held-to-Maturity But-for Scenarios.*

216. Dr. Snow fails to explain why his but-for world assumes that the trustee should have taken unilateral action to enforce repurchases when such action would have resulted in *reduced* cashflows to many tranches and the investors holding certificates in such tranches. Dr. Snow has admitted that, although he calculated the impact to all tranches of his but-for scenario,[325] he did not consider certificateholders other than the Plaintiff in calculating damages,[326] and he did not set as a condition that all certificateholders and all tranches benefit under his but-for scenario.[327]

XI. OPINION SEVEN: DR. SNOW'S TORT DAMAGES CALCULATION IS UNRELIABLE BECAUSE IT SUFFERS FROM THE SAME FLAWS AS HIS REPURCHASE DAMAGES, AND HE PROVIDES NO RATIONALE FOR ADJUSTING PRINCIPAL PAYMENTS ONLY.

217. In addition to calculating Repurchase Damages, Dr. Snow calculates "Tort Damages," relying on an instruction from Plaintiff's counsel that Tort Damages "represent the out-of-pocket harm to the Plaintiff caused by Wells Fargo's purported failure to perform its duties, accounting for any discount relative to par in the price the Plaintiff paid."[328] As with Repurchase Damages,

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[325] *Id.* at 281:25-282:4 ("I have accounted for the waterfall so any time you put money into the waterfall you are accounting for how all of the certificates are impacted.").

[326] *Id.* at 280:8-13; 281:6-10 ("Q. Do you know whether any tranche holders would actually make -- have fewer payments in your but-for world than the actual world? A. I don't know one way or the other.").

[327] *Id.* at 282:5-14 ("Q. In developing or presenting your model there was no condition that all certificate holders and all tranches benefited before you calculated and offered an opinion on damages in this case, was there? A. No.").

[328] Snow Report at ¶ 24.

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Dr. Snow calculates Tort Damages under two scenarios: the Held-to-Maturity scenario[329] and the Sold scenario.

218. According to Dr. Snow, on instruction of counsel, "the out-of-pocket harm in this matter is equivalent to Repurchase Damages," so long as "the principal received in the but-for world does not exceed the amount that the Plaintiff paid for the [c]ertificate."[330] Thus, to calculate Tort Damages, Dr. Snow compared: (a) the nominal amount paid by Plaintiff for each certificate to (b) the nominal principal received by Plaintiff in the relevant but-for scenario.[331] Where the principal received in the but-for world does not exceed the amount paid or a certificate was purchased at or above par, Dr. Snow does not make adjustments and Tort Damages equal Repurchase Damages.[332] Where, on the other hand, Plaintiff would have received more principal in Dr. Snow's but-for scenario than the amount it paid for the certificate and the certificate was purchased at a price below par, Dr. Snow adjusts the but-for principal payments.[333] That is, he scales the principal payments in the but-for scenario downward such that the total principal payments do not exceed the purchase amount paid by Plaintiff.[334] The difference between the adjusted but-for cashflows and the actual cashflows comprise Tort Damages for the certificates purchased below par.[335]

219. Dr. Snow's Tort Damages scenarios are based on the but-for cashflows calculated in his Repurchase Damages scenarios. Consequently, all of the flaws in his Repurchase Damages (including, but not limited to, arbitrary Enforcement and Purchase Dates, unrealistic repurchase rate assumptions, and a reliance on materiality determinations that are not empirically sound) are carried through into Dr. Snow's calculation of Tort Damages.[336] His Tort Damages,

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[329] As discussed in more detail in section VIII, the counterfactual assumption that sold certificates would have been held to maturity in the but-for world gives rise to "residual" Tort Damages of $47.49 million (28.44 percent of Tort Damages), even when the repurchase rate is set to zero.

[330] *Id.*

[331] *Id.* at ¶ 48. In the Sold scenario, "principal" includes but-for sale proceeds. *Id.* at ¶ 49 n. 40.

[332] *Id.* at ¶ 51.

[333] *Id.* at ¶¶ 48-49.

[334] *Id.* at ¶ 49.

[335] *Id.* at ¶ 50.

[336] *See* **Exhibit 8b**: *R&W Breach Tort Damages Using Historical Repurchase Demand Fulfillment Rates,* **Exhibit 9b**: *Changing Dr. Snow's "Sensitivity" Calculation Method Changes Tort Damages,* **Exhibit 10**: *Damages Excluding Loans That Liquidated Prior to Dr. Snow's Purchase Dates,* **Exhibit 11b**: *Tort Damages Vary Under Alternative Enforcement Dates*, **Exhibit 18b**: *Document Defect Tort Damages Excluding Loans Without Material*

therefore, fail to reflect damages attributable to the Trustee for all the same reasons explained in my Opinions One and Two and elsewhere in this report.

220. Moreover, Dr. Snow's Tort Damages are unsupported. First, he provides no explanation as to why he calculated Tort Damages in this case but not in the *Phoenix Light* case—the other, similar RMBS trustee action against Wells Fargo where Dr. Snow is also acting as a damages expert, and certain Relevant Certificates were acquired at discounts to par in both cases according to Dr. Snow's supporting materials.[337]

221. Second, Dr. Snow fails to provide support for the specific method he employs to calculate Tort Damages. For example, as noted above, where a certificate was purchased by Plaintiff at a price below par, Dr. Snow scales the principal payments in the but-for scenario downward such that the principal payments do not exceed the purchase amount paid by Plaintiff.[338] He provides no explanation for why he does not make a similar adjustment to interest payments.

222. Consider OOMLT 2006-2 2A4 as an example. Dr. Snow reports that Plaintiff paid a price of 83.80 for this certificate on a purchase amount of $4.32 million; thus, the amount paid by Plaintiff, according to Dr. Snow's calculation, was $3.62 million (*i.e.*, $4.32 million x 0.838). In the but-for world under the Held-to-Maturity scenario, without adjustments, Plaintiff would have received a total of $4.32 million in principal and $0.49 million in interest.

223. However, because Plaintiff paid below par, Dr. Snow scales down the but-for principal payments by 16.20 percent to cap the total but-for principal payments at $3.62 million. Despite making this adjustment for the but-for principal payments, Dr. Snow declines to also scale the but-for interest payments, assuming instead that Plaintiff would have received the full amount of $0.49 million in interest in the but-for scenario. Consequently, in this example, the adjusted but-for payments would be $3.62 million in principal and $0.49 million in interest, which

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Exceptions, **Exhibit 20b:** *R&W Breach Tort Damages Excluding Loans with Statistically Indistinguishable Risk Profiles,* **Exhibit 21b**: *R&W Breach Tort Damages Excluding Loans Without Material and Adverse R&W Breaches,* **Exhibit 22b**: *Tort Damages Excluding Loans Without Material Exceptions and Material and Adverse R&W Breaches*, **Exhibit 23**: *Dr. Snow's "Future Damages" Calculations*, and **Exhibit 25**: *"Residual Damages" in Dr. Snow's Held-to-Maturity Scenario.*

[337] In Dr. Snow's supporting materials in the *Phoenix Light* case, the purchase prices for PPSI 2005-WLL1 M7, PPSI 2005-WLL1 M8, and PPSI 2005-WLL1 M10 were below par (*see* PL trusts certificates purchase dates and prices positions for tort damages.xlsx). I understand that Wells Fargo disputes the purchase prices and dates for these and other certificates at issue in the *Phoenix Light* case.

[338] Snow Report at ¶ 49.

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together exceed the amount paid by Plaintiff by $0.49 million. Dr. Snow has not explained why this result is appropriate.

224. Had Dr. Snow capped the total but-for payments, including interest, to the amount paid by Plaintiff for all Relevant Certificates, Tort Damages would have been reduced by $43.18 million in the Held-to-Maturity scenario or by $3.09 million in the Sold scenario. *See* **Exhibit 32**: *Impact of Considering But-for Interest Distributions on Dr. Snow's Tort Damages Calculation.*

XII. CONCLUSION

225. As described herein, Dr. Snow's damages calculations are flawed in many ways and contain numerous errors:

- Dr. Snow's damages model does not properly account for the trustee's distinct role.
- Dr. Snow's "Repurchase Damages" calculations and Held-to-Maturity and Sold scenarios are unsupported, fundamentally flawed in many ways, and do not accurately forecast future damages.
- Dr. Snow ignores the costs associated with his simulated, hypothetical repurchases and ignores investors who would have received reduced cashflows, doing worse under his but-for scenarios.
- Dr. Snow's Tort Damages calculation is also unreliable for all the same reasons as his Repurchase Damages calculation, and he provides no rationale for his definition or application of Tort Damages here.

226. For all these reasons, Dr. Snow's damages calculations are unreliable and unreasonable, and do not reflect damages to Plaintiff arising out of Wells Fargo's alleged failure to fulfill its claimed duties. Therefore, Dr. Snow has not established damages attributable to Wells Fargo's alleged misconduct.

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Dated: July 25, 2019

Ethan Cohen-Cole, Ph.D.