

Exhibit 17

to the Declaration of Kurt M. Gosselin in Support of
Wells Fargo Bank, N.A.'s Motions to Exclude the Opinions of
Plaintiffs' Proffered Experts (Mar. 13, 2020) in
Commerzbank AG v. Wells Fargo Bank, N.A., Case No. 15-cv-10033-KPF-SN, and
Phoenix Light SF Ltd., et al. v. Wells Fargo Bank, N.A., No. 14-cv-10102-KPF-SN (S.D.N.Y.)

Highly Confidential

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

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PHOENIX LIGHT SF LIMITED, BLUE HERON	:	
FUNDING II LTD., BLUE HERON FUNDING V	:	
LTD., BLUE HERON FUNDING IX LTD.,	:	
KLEROS PREFERRED FUNDING V PLC,	:	
SILVER ELMS CDO PLC, SILVER ELMS CDO	:	
II LTD., C-BASS CBO XIV LTD., and	:	
C-BASS CBO XVII LTD.,	:	
	:	
	:	
Plaintiffs,	:	
	:	
v.	:	Index No. 14-cv-10102
	:	
WELLS FARGO BANK, N.A.,	:	
	:	
Defendant.	:	
	:	
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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.

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

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

B. Case Background and Assignment

12. Phoenix Light SF Limited (“Phoenix Light”), Blue Heron Funding II Ltd., Blue Heron Funding V Ltd., Blue Heron Funding IX Ltd., Kleros Preferred Funding V PLC, Silver Elms CDO PLC, Silver Elms CDO II Limited, C-BASS CBO XIV Ltd., and C-BASS CBO XVII Ltd. (collectively, “Plaintiffs”) bring this action against Wells Fargo Bank, N.A. (“Wells Fargo”) for alleged breaches of contractual and statutory duties by Wells Fargo in its role as trustee of eleven RMBS trusts (“Relevant Trusts”).^{1,2} Plaintiffs claim that they acquired certificates (“Relevant Certificates”) issued by each of the Relevant Trusts through direct purchases or pursuant to asset purchase agreements or other similar agreements or assignments with third parties.³ See **Exhibit 1: Plaintiffs’ Claimed Acquisitions**. Plaintiffs claim to have sold and no longer hold one of those Relevant Certificates, the IMM 2005-6 1M1 certificate.⁴
13. With respect to the Relevant Trusts, Plaintiffs allege 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

¹ 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) (“Complaint”) at preface, ¶ 1. I understand that Bear Stearns Mortgage Funding Trust 2006-AR3 (“BSMF 2006-AR3”) and Securitized Asset Backed Receivables LLC Trust 2006-WM2 (“SABR 2006-WM2”) are no longer at issue in this case. 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 Report”) at ¶ 9 n. 3.

² The Relevant Trusts are: Impac CMB Trust Series 2005-6 (“IMM 2005-6”); Impac Secured Assets Corp, Mortgage Pass-Through Certificates, Series 2005-2 (“IMSA 2005-2”); Park Place Securities, Inc., Asset-Backed Pass-Through Certificates, Series 2005-WLL1 (“PPSI 2005-WLL1”); Asset-Backed Funding Corporation Asset Backed Certificates, Series 2006-OPT2 (“ABFC 2006-OPT2”); Carrington Mortgage Loan Trust, Series 2006-NC3 (“CARR 2006-NC3”); Carrington Mortgage Loan Trust, Series 2006-NC4 (“CARR 2006-NC4”); First Franklin Mortgage Loan Trust Mortgage Pass-Through Certificates 2006-FFA (“FFML 2006-FFA”); Ownit Mortgage Loan Trust, Mortgage Loan Asset-Backed Certificates, Series 2006-2 (“OWNIT 2006-2”); Securitized Asset Backed Receivables LLC Trust 2006-FR2 (“SABR 2006-FR2”); Carrington Mortgage Loan Trust, Series 2007-FRE1 (“CARR 2007-FRE1”); and Option One Mortgage Loan Trust 2007-3 (“OOMLT 2007-3”). See Complaint at Exhibit B.

³ See Complaint at ¶¶ 29, 31, and Exhibit B; Defendant’s Exhibit PL-420. I understand that Wells Fargo disputes whether Plaintiffs acquired certain Relevant Certificates and my opinions are not intended to suggest otherwise.

⁴ Snow Report at ¶ 9 n. 2; Fig. 4 and n. 24; and ¶ 26 and n. 25.

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.⁵

14. Plaintiffs alleged causes of action for breach of contract, the covenant of good faith, and fiduciary duty; negligence; and violations of the Trust Indenture Act and the Streit Act.⁶ 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; (iii) breach of duty of due care and the duty to avoid conflicts of interest; and (iv) breach of Sections 315(b) and (c) of the Trust Indenture Act.⁷ Plaintiffs' 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 Plaintiffs' claims brought under the Streit Act.⁸
15. In support of their claims and contentions, Plaintiffs have submitted the expert report of Dr. Karl N. Snow. Plaintiffs retained Dr. Snow to calculate: (1) damages to Plaintiffs allegedly resulting from Wells Fargo's purported failure to enforce responsible parties' obligation to repurchase particular loans in four Relevant Trusts ("Repurchase Damages");⁹ and (2) damages to Plaintiffs allegedly resulting from Wells Fargo's claimed failure to prudently exercise its rights and powers to address alleged breaches by the servicers for ten Relevant Trusts ("Servicing Damages").¹⁰ Dr. Snow calculates Repurchase Damages for four of the eleven Relevant Trusts, and Servicing Damages for ten of the eleven Relevant Trusts. There are three Relevant Trusts for which Dr. Snow calculates both Repurchase and Servicing Damages.¹¹ For each Relevant Trust, Dr. Snow purports to calculate "Total Damages," which reflect both Repurchase Damages and Servicing Damages, if any, for each trust.¹²

⁵ Complaint at ¶¶ 6, 7, 78, 129.

⁶ *Id.* at ¶¶ 9-14.

⁷ Opinion and Order. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Mar. 30, 2017) at 25-26, 30, 32-33, 41.

⁸ *Id.* at 28-29, 32, 35, 39, 47.

⁹ Snow Report at ¶ 14.

¹⁰ *Id.*

¹¹ *Id.* These three Relevant Trusts are ABFC 2006-OPT2, OOMLT 2007-3, and OWNIT 2006-2.

¹² Snow Report at ¶ 46.

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 Plaintiffs' experts upon which Dr. Snow relies.

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 Plaintiffs 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 Servicing 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 or the realities of overseeing loan servicing. Consequently, Dr. Snow effectively treats Wells Fargo as a guarantor of warrantor and servicer conduct and ignores (or counterfactually assumes away) the elements of Plaintiffs' 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 or servicer conduct, as Plaintiffs claim 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 litigation or settlement, and the likely recovery from a settlement or court

judgment. Dr. Snow's failure to account for these contingencies results in Repurchase Damages calculations that do not accurately reflect damages attributable to the trustee, Wells Fargo.

- With respect to Servicing Damages, Dr. Snow does not model what actions Wells Fargo could or should have taken to address the alleged servicing performance issues here. So, instead of isolating increased revenues to the trusts and ultimately the certificateholders that purportedly would have arisen out of increased trustee oversight of servicers, Dr. Snow accepts, without critical analysis, that a "loss severity differential" computed by a different expert (Dr. Bruce D. Spencer) is attributable to Wells Fargo's alleged failure to properly oversee servicers. Dr. Snow's calculations are divorced from reasonable assumptions about whether, when, and in what manner Wells Fargo allegedly breached servicing oversight duties and the particular alleged losses that purportedly resulted from such breaches. This, again, results in a calculation that does not accurately reflect damages attributable to Wells Fargo as trustee.

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. 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 Plaintiffs' 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 Plaintiffs 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. Ingrid Beckles and Mr. Robert Hunter, 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. Hunter's opinions about the loans at issue. Ms. Beckles' and Mr. Hunter'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 Dr. Snow's Purchase Price calculations are unreliable and cannot be squared with the real world repurchase prices for numerous loans at issue that were actually repurchased. Indeed, the Purchase Prices calculated by Dr. Snow for repurchased loans differ starkly from the actual amounts paid in actual repurchase transactions involving the Relevant Trusts.

20. Additionally, 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 (\$6.42 million in Repurchase Damages)¹³ unreliable.

21. **Opinion Three.** Dr. Snow's Servicing Damages calculations rely on erroneous inputs, unsupported assumptions, and an inappropriate methodology. They do not calculate damages attributable to Wells Fargo.

- *First, Dr. Snow's calculations of "Servicing Damages" rely on "Severity Rate Differentials" provided by another of Plaintiffs' experts, Dr. Spencer, that are themselves unreliable.* Dr. Spencer asserts that the Severity Rate Differentials arise "from excess loss severities resulting from Wells Fargo's failure to take actions that Plaintiffs contend it should have taken to address servicing breaches and enforce prudent servicing standards."¹⁴ But because Dr. Spencer's calculations of Severity Rate Differentials rely on unsupported, unreasonable, and flawed assumptions, such as inappropriate benchmark loans, truncated covariates, and an improper "bias

¹³ *Id.* at Fig. 7.

¹⁴ Spencer, Bruce D. Amended Expert Report of Bruce D. Spencer, Ph.D. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Apr. 12, 2019) and supporting materials ("Spencer Report") at ¶ 3.

correction” procedure, Dr. Snow’s reliance on Dr. Spencer’s matching analysis renders his Servicing Damages calculations inaccurate and unreliable.

- *Second, Dr. Snow extrapolates the average Severity Rate Differentials to unmatched loans without a reasonable or well-founded basis.*
- *Third, as with Repurchase Damages, Dr. Snow fails to provide support for his choice of enforcement dates or his calculations of damages under various “sensitivities.”*
- *Fourth, Dr. Snow calculates Servicing Damages using an unfounded and unsupported one-time “catch-up” payment by servicers, which increases his total damages figures based on pre-breach conduct, i.e., servicer actions that occurred before Plaintiffs contend Wells Fargo allegedly breached the Governing Agreements.*
- *Finally, Dr. Snow’s Servicing Damages for IMM 2005-6 are based on the counterfactual assumption that Phoenix Light would have held the IM1 certificate to maturity when, in fact, it was sold in May 2012. There is no basis for Dr. Snow’s counterfactual assumption, which renders the entire Servicing Damages analysis for the trust unreliable.*

22. ***Opinion Four.*** Dr. Snow’s calculations of Servicing Damages for the PPSI 2005-WLL1 trust are based on a cashflow model, developed by The Oakleaf Group, which contains an error. Correcting this one error alone reduces Dr. Snow’s damages calculations for that trust by as much as \$3.52 million (or 49 percent).
23. ***Opinion Five.*** Dr. Snow’s calculation of damages fails to consider the costs associated with enforcing the Relevant Trusts’ claimed repurchase rights or servicing obligations against responsible parties. For repurchases, 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. For servicing, these costs would include the costs of replacing servicers.
24. ***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.

25. **Opinion Seven.** Dr. Snow's Repurchase Damages calculation for FFML 2006-FFA contradicts the facts, fails to consider a separate trustee appointment, and employs sampling. In calculating damages for the FFML 2006-FFA trust, Dr. Snow models damages using dates, timing, repurchase rates, and prices very different from the actual real-world repurchase process for this trust. He also ignores the fact that a separate trustee was appointed for the FFML 2006-FFA trust prior to the date he identifies as the date Wells Fargo should have enforced repurchase obligations and that the separate trustee enforced repurchases ultimately obtaining more than \$111 million in real world recoveries for the certificateholders.¹⁵ Thus, Dr. Snow's damages analysis for the FFML 2006-FFA trust is unreliable and does not calculate damages attributable to Wells Fargo. Making matters worse, Dr. Snow's damages calculations related to the FFML 2006-FFA trust also rely on the result of a sampling and extrapolation exercise conducted by Dr. Spencer, which I understand the Court in this case has held is insufficient to prove liability or damages. Dr. Snow conceded that he did not see or review the Court's Order addressing sampling in this case before or after offering his damages opinions.¹⁶

III. RELEVANT BACKGROUND

A. RMBS Structure and Administration

26. 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.¹⁷ Issuers of RMBS create a separate entity, a trust, which holds these residential mortgages. The trust issues RMBS certificates, which are sold to investors.

¹⁵ First Franklin Mortgage Loan Trust 2006-FFA Notice to Holders (Nov. 26, 2018). <www.ctslink.com> (accessed Dec. 26, 2018) at 3-5.

¹⁶ Snow, Karl. Deposition (June 28, 2019) and related exhibits ("Snow Dep.") at 161:5-11 ("Q. You are aware there is a court order addressing sampling in this case, right? A. No, I am not. Q. You haven't reviewed that court order? A. No. I have not.").

¹⁷ 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.

27. RMBS are divided into slices, or “tranches,” each of which bears a different level of risk and offers a different level of return.¹⁸ 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.¹⁹ 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.”
28. 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”).²⁰ A highly simplified example structure functions as 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.²¹ Investors that are more cautious can choose to purchase senior tranches.²² Similarly, return-

¹⁸ 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.

¹⁹ 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.

²⁰ *Id.* at 189; see Impac CMB Trust Series 2005-6, Wells Fargo Bank, N.A., Indenture (Sept. 9, 2005) (WF_PL_002109617 at WF_PL_002109631-5) (“IMM 2005-6 Indenture”); Impac Secured Assets Corp., Mortgage Pass-Through Certificates Series 2005-2, Pooling and Servicing Agreement (Dec. 1, 2005) (WF_PL_002110764 at WF_PL_002110860-6) (“IMSA 2005-2 PSA”); Park Place Securities, Inc., Asset-Backed Pass-Through Certificates Series 2005-WLL1, Pooling and Servicing Agreement (Mar. 1, 2005) (WF_PL_000000131 at WF_PL_000000234-42) (“PPSI 2005-WLL1 PSA”); Asset Backed Funding Corporation, ABFC 2006-OPT2 Trust, Pooling and Servicing Agreement (Sept. 1, 2006) (WF_PL_002121502 at WF_PL_002121632-42) (“ABFC 2006-2 PSA”); Stanwich Asset Acceptance Company, L.L.C., Carrington Mortgage Loan Trust, Series 2006-NC3, Pooling and Servicing Agreement (Aug. 1, 2006) (WF_PL_000019852 at WF_PL_000019940-6) (“CARR 2006-NC3 PSA”); Stanwich Asset Acceptance Company, L.L.C., Carrington Mortgage Loan Trust, Series 2006-NC4, Pooling and Servicing Agreement (Sept. 1, 2006) (WF_PL_002103032 at WF_PL_002103120-5) (“CARR 2006-NC4 PSA”); Structured Asset Securities Corporation, First Franklin Mortgage Loan Trust Mortgage Pass-Through Certificates Series 2006-FFA, Trust Agreement (Oct. 1, 2006) (WF_PL_000009938 at WF_PL_000010032-45) (“FFML 2006-FFA Trust Agreement”); Merrill Lynch Mortgage Investors, Inc., OWNIT Mortgage Loan Trust, Mortgage Loan Asset-Backed Certificates, Series 2006-2, Pooling and Servicing Agreement (Feb. 1, 2006) (WF_PL_000017886 at WF_PL_000017994-8) (“OWNIT 2006-2 PSA”); Securitized Asset Backed Receivables LLC, Securitized Asset-Backed Receivables LLC Trust 2006-FR2, Pooling and Servicing Agreement (June 1, 2006) (WF_PL_000013267 at WF_PL_000013362-7) (“SABR 2006-FR2 PSA”); Stanwich Asset Acceptance Company, L.L.C., Carrington Mortgage Loan Trust, Series 2007-FRE1, Pooling and Servicing Agreement (Apr. 1, 2007) (WF_PL_000014777 at WF_PL_000014868-73) (“CARR 2007-FRE1 PSA”); Option One Mortgage Acceptance Corporation, Option One Mortgage Loan Trust 2007-3, Pooling and Servicing Agreement (Apr. 1, 2007) (WF_PL_002085372 at WF_PL_002085495-500) (“OOMLT 2007-3 PSA”).

²¹ Vallee, David E. “A New Plateau for the U.S. Securitization Market.” *FDIC Outlook* (Fall 2006): 3-10 at 3.

²² Fabozzi, Bhattacharya & Berliner, *supra* note 19, at 25.

oriented investors can buy subordinate tranches, which are riskier but generally have higher expected yields.²³

29. 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.²⁴ Furthermore, the Governing Agreements memorialize R&Ws made by responsible parties, including R&Ws regarding loans sold to the trusts.²⁵ These documents also describe the distribution of interest, principal, and excess cashflow, as well as the allocation of losses, as discussed in detail below.
30. 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.²⁶ Prospectus supplements typically also disclose a range of loan characteristics within each supporting loan group and display these characteristics in the form of stratifications.²⁷
31. 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.
32. The Governing Agreements specify the duties of the trustee.²⁸ 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.²⁹

²³ *Id.* at 31.

²⁴ *Id.* at 190.

²⁵ *Id.*

²⁶ *Id.* at 189-90. For a list of offering documents pertaining to the Relevant Trusts, see **Appendix B: Materials Relied Upon**.

²⁷ *Id.* at 189.

²⁸ *See, e.g.*, ABFC 2006-OPT2 PSA at WF_PL_002121672-5.

²⁹ *See, e.g.*, IMSA 2005-2 PSA at WF_PL_002110896.

Such direction or consent is based on provisions regarding the assignment of voting rights or fractional undivided interests and specified minimum thresholds of certificateholders.³⁰

33. 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 Trustee may consider necessary or desirable” could be vested in persons acting as co-trustee or separate trustee.³¹ Similarly, the trust agreement for FFML 2006-FFA provides that the separate trustees “shall be trustees or custodians for the benefit of all the Certificateholders and shall have such powers, rights and remedies as shall be specified in the instrument of appointment[.]”³²
34. Separate trustees were appointed for each of the Relevant Trusts beginning in June 2012.³³ See **Exhibit 2: Separate Trustee Appointments** for the date a separate trustee was appointed for each Relevant Trust. 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.³⁴ For example, following the appointment of the separate trustee for FFML 2006-FFA, the judge’s order noted that Wells Fargo had “no further duty or obligation to the [t]rusts’ beneficiaries with respect to the enforcement of [r]epurchase [c]laims[.]”³⁵

B. RMBS Credit Enhancements

35. 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.³⁶ RMBS, like other asset-backed securities, often have credit

³⁰ See, e.g., *id.* at WF_PL_002110822 (specifying how voting rights will be allocated).

³¹ ABFC 2006-OPT2 PSA at WF_PL_002121680.

³² FFML 2006-FFA Trust Agreement at WF_PL_000010059.

³³ See, e.g., Impac CMB Trust Series 2005-6 Notice to Holders (Mar. 6, 2015). <www.ctslink.com> (accessed July 25, 2019).

³⁴ See, e.g., *id.* at 2.

³⁵ Order with Respect to Verified Petition of Wells Fargo Bank, N.A. as Trustee for Instructions in the Administration of a Trust Pursuant to Minn. Stat. § 501B.16. *In the Matter of First Franklin Mortgage Loan Trust, 2006-FFA; and First Franklin Mortgage Loan Trust, 2006-FFB* (Dist. Ct. Minn., Hennepin County No. 27-TR-CV-12-51) (June 6, 2012) (“FFML 2006-FFA Separate Trustee Order”) at 3.

³⁶ 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.

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,³⁷ play an important role in mitigating default risk.³⁸ Credit enhancements include:

- a. *Subordination*, a typical credit enhancement, "is the most direct approach to generate credit enhancement for senior tranches."³⁹ 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.⁴⁰ The senior-most investors typically experience losses only if they penetrate through all other subordinate classes.⁴¹
- 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.⁴² 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.

³⁷ Fabozzi, Bhattacharya & Berliner, *supra* note 19, at 195.

³⁸ 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.

³⁹ Hu & Goldstein, *supra* note 18, at 664.

⁴⁰ *Id.* at 666.

⁴¹ *Id.*

⁴² *Id.* at 666-7.

- d. *Excess spread* (or “excess interest”) is the amount of interest collected above and beyond the amount needed to pay interest to certificateholders.⁴³ 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.⁴⁴
 - e. *Cross-collateralization* is a credit enhancement that often applies when there are multiple supporting loan groups in the same trust.⁴⁵ Cross-collateralization occurs when funds from one supporting loan group can be released to another supporting loan group under certain circumstances.⁴⁶
 - 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.⁴⁷ 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.
 - g. *Private/primary mortgage insurance* is an insurance contract that protects the lender against default.⁴⁸ This insurance protects the entity that holds the credit risk of the loan by covering a percentage of the mortgage loan amount.⁴⁹
36. Other types of guarantees exist as well. As I understand, Phoenix Light was created to hold assets previously held by a German bank, WestLB, including the RMBS at issue here.⁵⁰ Phoenix Light issued CDO notes collateralized by these assets, and certain of these notes,

⁴³ Fabozzi, Bhattacharya & Berliner, *supra* note 19, at 104.

⁴⁴ *Id.* at 199.

⁴⁵ Hu & Goldstein, *supra* note 18, at 664.

⁴⁶ Fabozzi, Bhattacharya & Berliner, *supra* note 19, at 207.

⁴⁷ *Id.* at 206.

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ See Balz, Enno. Deposition (Feb. 16, 2017) 63:2-65:18.

specifically, the Class B Notes, were purchased by WestLB.⁵¹ These Class B notes enjoy a guarantee of 5 billion euros by German savings bank associations and the German State of North Rhine-Westphalia,⁵² and were subsequently transferred to EAA, a German government entity.⁵³ As of early 2017, there were no losses in the Phoenix Light CDO portfolio that had not been either paid by guarantors or offset by an atypical mechanism present in the Phoenix Light-WestLB transaction called an asset sufficiency ledger.⁵⁴

37. 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.
38. Plaintiffs' tranches benefitted from credit enhancements, including structural credit enhancements and derivative contracts. For example, as of June 2019, the 1A1 tranche of IMM 2005-6, which was acquired by Plaintiffs Blue Heron Funding II Ltd., Blue Heron Funding IX Ltd., Blue Heron Funding V Ltd., and Phoenix Light, has experienced no realized losses since trust closing.⁵⁵ The tranche also benefits from a bond guaranty insurance policy issued by Ambac Assurance Corporation.⁵⁶ This policy "unconditionally and irrevocably guarantee[s] certain payments" on the tranche.⁵⁷

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

39. 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

⁵¹ *Id.*

⁵² *Id.* at 65:13-66:3; Este Abwicklungsanstalt Annual Report (2018). <https://gb18.aa1.de/wp-content/uploads/GB-2018_en.pdf> (accessed July 16, 2019) at 7.

⁵³ *See* Donovan, Thomas. Deposition (Feb. 22, 2017) 38:21-39:8.

⁵⁴ *Id.* at 86:14-87:2.

⁵⁵ IMM 2005-6 Remittance Report (June 25, 2019).

⁵⁶ *See* IMM 2005-6 Prospectus Supplement at WF_PL_000016162.

⁵⁷ *Id.* at WF_PL_000016257.

occur when a defaulted loan has been liquidated and the proceeds of the liquidation do not fully cover the unpaid principal balance.⁵⁸ 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.⁵⁹ 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.⁶⁰

40. On each distribution date, the amount of funds available for distribution depends on the amount of funds received from mortgagors.⁶¹ 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.
41. The manner in which particular payments are distributed to the various certificateholders is often referred to as a “waterfall.”⁶² 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.
42. Within a trust, distributions pursuant to the waterfall are conditional on a number of factors, and may vary over time.⁶³ For example, many RMBS include a “stepdown date,”⁶⁴ a date after which subordinate tranches may begin to receive principal payments.⁶⁵ 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

⁵⁸ See, e.g., OOMLT 2007-3 PSA (“‘Realized Loss’: With respect to any Liquidated Mortgage Loan, the amount of loss realized equal to the portion of the Stated Principal Balance remaining unpaid after application of all Net Liquidation Proceeds in respect of such Mortgage Loan.”) at WF_PL_002085423.

⁵⁹ See, e.g., ABFC 2006-OPT2 PSA at WF_PL_002121536, WF_PL_002121561.

⁶⁰ See, e.g., PPSI 2005-WLL1 PSA at WF_PL_000000248.

⁶¹ Funds can also include receipts from derivatives owned by the trust.

⁶² Fabozzi, Bhattacharya & Berliner, *supra* note 19, at 169.

⁶³ *Id.* at 199-201.

⁶⁴ See, e.g., CARR 2006-NC3 PSA at WF_PL_000019901.

⁶⁵ Fabozzi, Bhattacharya & Berliner, *supra* note 19, at 199.

how it was expected to perform at issuance.”⁶⁶ Trigger events can affect which certificates receive the principal available for distribution on a given distribution date.

43. The presence of overcollateralization and the targets associated with it may also affect distributions.⁶⁷ If a trust has a target overcollateralization amount, the distribution of principal can vary depending on whether the target has been met.
44. 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.
45. Many of Plaintiffs’ claimed acquisitions incurred realized or implied losses prior to Plaintiffs’ claimed acquisition dates. For example, Phoenix Light alleges that it acquired the M3 tranche in FFML 2006-FFA on December 29, 2008 through two transactions, one with Harrier Finance and another with Kestrel Funding.⁶⁸ By this date, however, the M3 tranche had been fully written down, with the final write-down having occurred in October 2008.⁶⁹ In total, six of Plaintiffs’ claimed acquisitions, all in the FFML 2006-FFA trust, incurred realized or implied losses of about 60 percent of Plaintiffs’ claimed acquisition amount prior to the claimed acquisition date. Using the date Plaintiffs allege they obtained additional assignments, where available, this figure increases to almost 70 percent. Accordingly, many were valued at

⁶⁶ *Id.* at 200-201.

⁶⁷ *Id.* at 199.

⁶⁸ See Complaint at Exhibit B; Defendant’s Exhibit PL-420; Assignment Agreement between Rathgar Capital Corporation (trading as Harrier Finance Limited) and Harrier Finance Funding Ltd. (Feb. 12, 2012) (PhoenixLight000000986); and Standby Asset Purchase Agreement. Kestrel Funding P.L.C., Kestrel Funding (US) LLC and Phoenix Light SF Limited (Dec. 29, 2008) (PhoenixLight000001960) (“Standby Asset Purchase Agreement”). I understand that the transfer of this certificate is in dispute. The transfer of this certificate from Kestrel Funding P.L.C. and Harrier Finance Limited is not clearly reflected in trade documents. Plaintiffs’ purported date of acquisition is the date of two Standby Asset Purchase Agreements, neither of which reflect this certificate. Further, Defendant’s Exhibit PL-420 states that “[d]ue to scrivener’s error, parties failed to include the Certificate on Exercise Notice when transferring assets to Phoenix Light.” Defendant’s corporate representative explained that this was “meant to capture that the security had been written down to zero, so it was not reflected on the Exercise Notice.” Collins, Peter. Deposition (May 24, 2017) 144:10-13. I have no opinion regarding the actual transfer of this certificate.

⁶⁹ FFML 2006-FFA Remittance Report (Oct. 27, 2008).

substantially less than par at the time of Plaintiffs' claimed acquisition.⁷⁰ See **Exhibit 3a: Certificates With Realized or Implied Losses or Discount to Par at Alleged Acquisition or Assignment Date.**

D. Prior Phoenix Light Litigation Related to Relevant Trusts

46. Plaintiffs pursued securities fraud claims for five of the Relevant Trusts: CARR 2006-NC3, CARR 2007-FRE1, IMM 2005-6, OOMLT 2007-3, and ABFC 2006-OPT2.⁷¹ I looked at the three cases with settlement amounts that Mr. Warren identified in Appendix 12 of his report.

- J.P. Morgan settled claims arising from 68 certificates issued by 47 trusts⁷² for \$21 million.⁷³ I determined the J.P. Morgan settlement equated to approximately 8.62 percent of the applied historical write-downs (adjusted by plaintiffs' share) reported by Bloomberg as of June 2019.⁷⁴
- RBS settled claims arising from 44 certificates issued by 29 trusts⁷⁵ for \$12 million.⁷⁶ I determined the RBS settlement equated to approximately 7.47 percent of the applied historical write-downs (adjusted by plaintiffs' share) reported by Bloomberg as of June 2019.⁷⁷
- Merrill Lynch settled claims in *Phoenix Light SF Limited, et. al. v. Merrill Lynch & Co., Inc., et al.*, 653235/2013 (N.Y. Sup. Ct., N.Y. Cnty.) arising from 30 certificates

⁷⁰ Dr. Snow does not consider Plaintiffs' dates of additional assignments as reported on Exhibit B of the Complaint. Recalculating Dr. Snow's damages model utilizing these additional assignment dates can result in a reduction in damages by as much as 35.58 percent. See **Exhibit 3b: Dr. Snow's Damages Using Plaintiffs' Claimed Assignment Dates.**

⁷¹ Warren, Samuel. Corrected Expert Report of Samuel Warren. *Phoenix light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Mar. 1, 2019) ("Warren Report") at ¶ 176, Appendix 12.

⁷² Complaint. *Phoenix Light SF Limited, et. al. v. J.P. Morgan Securities LLC, et al.* (Sup. Ct. N.Y. Cnty. No. 651755/2012) (Oct. 5, 2012) at ¶ 113.

⁷³ Warren Report, Appendix 12 at 1.

⁷⁴ Bloomberg L.P. (accessed July 24, 2019).

⁷⁵ Amended Complaint. *Phoenix Light SF Limited, et. al. v. Royal Bank of Scotland Group Plc, et al.* (Sup. Ct., N.Y. Cnty. No. 653060/2013) (June 17, 2014) at Appendix A.

⁷⁶ Warren Report, Appendix 12 at 7.

⁷⁷ Bloomberg L.P. (accessed July 24, 2019).

issued by 22 trusts⁷⁸ for \$9.5 million.⁷⁹ I determined the Merrill Lynch settlement equated to approximately 9.11 percent of the applied historical write-downs (adjusted by plaintiffs' share) reported by Bloomberg as of June 2019.⁸⁰

47. The average settlement amounts for these three cases were 8.36 percent of applied historical write-downs (adjusted by plaintiffs' share) reported by Bloomberg as of June 2019. There are five Relevant Trusts that were not included in Appendix 12 of the Warren Report. For the fifteen tranches issued by these five Relevant Trusts, the historical write-downs (adjusted by Plaintiff's share) were approximately \$111.75 million as of June 2019.

IV. THE SNOW REPORT AND OPINIONS

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

A. Calculation of Repurchase Damages

49. Dr. Snow calculates Repurchase Damages for four of the eleven Relevant Trusts.⁸¹ "Repurchase Damages," in Dr. Snow's view, represent the difference between: (1) the principal and interest Plaintiffs have actually received and are projected to receive;⁸² and (2) the principal and interest that Plaintiffs 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.⁸³
50. 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'

⁷⁸ Amended Complaint. *Phoenix Light SF Limited, et. al. v. Merrill Lynch & Co., Inc., et al.* (Sup. Ct., N.Y. Cnty. No. 653235/2013) (June 18, 2014) at Appendix A.

⁷⁹ Warren Report, Appendix 12 at 8.

⁸⁰ Bloomberg L.P. (accessed July 24, 2019).

⁸¹ Snow Report at ¶ 20; Figure 3. These Relevant Trusts are ABFC 2006-OPT2; FFML 2006-FFA; OOMLT 2007-3; and OWNIT 2006-2.

⁸² In his supporting materials, Dr. Snow refers to this as the "baseline scenario."

⁸³ Snow Report at ¶ 15.

rights to repurchases of “Defective Loans.”⁸⁴ To do so, Dr. Snow relies upon a list of loans provided to him by counsel “that he understand[s] are based upon the work of Ms. [Ingrid] Beckles and Mr. [Robert W.] Hunter[.]”⁸⁵ These are what Dr. Snow calls the “loans eligible for repurchase.”⁸⁶ Ms. Beckles purports to identify loans with uncured material exceptions (“Document Defect Loans”),⁸⁷ and Mr. Hunter purports to identify loans that evidence the responsible parties having breached representations and warranties (“R&W Breach Loans”).⁸⁸ In the case of FFML 2006-FFA, Dr. Snow also relies on a sampling and extrapolation analysis conducted by Dr. Bruce D. Spencer. Dr. Snow undertook no independent investigation or analysis of the loans for which he simulates repurchases.⁸⁹

51. 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”),⁹⁰ and a date on which the repurchase supposedly would have occurred (a “Purchase Date”).⁹¹ He then calculates the price at which each loan would be repurchased (a “Purchase Price”).⁹² The sum of the Purchase Prices on all Defective Loans in a Relevant Trust constitute the Repurchase Amounts.⁹³

⁸⁴ *Id.* at ¶ 29.

⁸⁵ Snow Dep. 35:14-23 (“Q. In this case who is identifying those loans for you? A. I have been given a list of loans from counsel which I understand are based upon the work of Ms. Beckles and Mr. Hunter[.]”).

⁸⁶ Snow Report at ¶ 15.

⁸⁷ 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) and supporting materials (“Beckles Report”).

⁸⁸ Hunter, Robert W. Expert Report of Robert W. Hunter. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Oct. 29, 2018) and supporting materials (“Hunter Report”).

⁸⁹ Snow Dep. 41:15-42:3 (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. No. 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.”).

⁹⁰ Snow Report at ¶ 30, Figure 6.

⁹¹ *Id.* at ¶ 30 and Appendix D.

⁹² *Id.* at ¶¶ 29, 34-37.

⁹³ *Id.* at ¶ 37.

52. 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 the cashflows that would have been received and would be projected to be received by Plaintiffs under the but-for scenario (the “But-For Payments”).^{94, 95} To project cashflows in both the actual and but-for scenarios, Dr. Snow implements a forecast of loan performance beginning in June 2018.⁹⁶ Almost immediately, however, Dr. Snow’s forecasts of loan performance diverge from the actual data, and this divergence grows over time.
53. Dr. Snow then compares the But-For Payments to the principal and interest he contends that Plaintiffs have received and are projected to receive.⁹⁷ 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.”⁹⁸ About 11.52 percent (or \$15.60 million) of Dr. Snow’s Repurchase Damages calculations are attributable to the statutory prejudgment interest component of his calculations, and 4.7 percent (or \$6.42 million) of his Repurchase Damages calculations are attributable to the present value of future payments.⁹⁹

B. Calculation of Servicing Damages

54. According to Dr. Snow, “Servicing Damages represent the difference between (1) the principal and interest Plaintiffs have actually received (plus applicable accrued statutory interest) and are projected to receive in the future and (2) the principal and interest they would have received (plus applicable accrued statutory interest) and would have been projected to receive in the future had Wells Fargo taken actions Plaintiffs assert were required to address breaches by

⁹⁴ *Id.* at ¶ 27 n. 26.

⁹⁵ 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, N.A.* (S.D.N.Y. No. 1:14-cv-10067) (Jan. 25, 2018) (“Milner Report”) at ¶ 76. I reserve all rights to opine on these discrepancies, but my analyses in the report are based on the waterfall models Snow has used as further described.

⁹⁶ Snow Report at ¶ 32.

⁹⁷ *Id.* at ¶¶ 29, 38.

⁹⁸ *Id.* at ¶¶ 29, 39.

⁹⁹ *Id.* at Fig. 7.

servicers.”¹⁰⁰ Dr. Snow calculates Servicing Damages for only ten of the eleven Relevant Trusts.¹⁰¹

55. Dr. Snow’s Servicing Damages are based on calculations of the “amount of additional cash each Securitization would have received had Wells Fargo ensured that loans were serviced properly” (collectively, the “Servicing Loss Reductions”).¹⁰² In performing these calculations, Dr. Snow relies on SLG-specific severity rate differentials calculated by Dr. Spencer, whose analysis in turn relies on opinions set forth by Ms. Beckles.¹⁰³
56. To calculate the severity rate differentials, Dr. Spencer utilizes a matching estimator, in which he attempts to match certain loans in the Relevant Trusts with loans in a claimed control group.¹⁰⁴ The control group consists of loans held in the portfolios of government-sponsored enterprises (“GSEs”). In using this supposed control group, Dr. Spencer notes that, “[a]ccording to Ms. Beckles, this is an appropriate control group because the GSEs take reasonable steps to attempt to enforce industry standards for prudent servicing of loans in the GSE portfolios.”¹⁰⁵ Neither Dr. Spencer nor Dr. Snow had involvement in the selection of the claimed control group, and they rely on Ms. Beckles for the selection of the control group.¹⁰⁶
57. Dr. Spencer then tries to find control group loans that “match” loans at issue based on certain borrower, loan, and collateral characteristics.¹⁰⁷ Ms. Beckles identified these characteristics for

¹⁰⁰ *Id.* at ¶ 21.

¹⁰¹ *Id.* at ¶ 22. These securitizations are ABFC 2006-OPT2; CARR 2006-NC3; CARR 2006-NC4; CARR 2007-FRE1; IMM 2005-6; IMSA 2005-2; OOMLT 2007-3; OWNIT 2006-2; PPSI 2005-WLL1; and SABR 2006-FR2. Dr. Snow does not calculate Servicing Damages on FFML 2006-FFA, as he recognizes Servicing Damages and Repurchase Damages should not be calculated on the same loans (Snow Report at n. 56), and using sampling, he calculates Repurchase Damages on the loans identified in the October 2014 letter, leaving him unable to separate out loans on which to calculate Servicing Damages.

¹⁰² *Id.* at ¶ 25.

¹⁰³ *Id.* at ¶ 43; Spencer Report at ¶ 3.

¹⁰⁴ Spencer Report at ¶ 25.

¹⁰⁵ *Id.* at ¶ 15b.

¹⁰⁶ Snow Dep. 177:16-178:9 (“Q. Is it consistent with your understanding that Ms. Beckles recommended and then Dr. Spencer relied on the control population group of loans by government-sponsored entities, these GSEs, like Fannie Mae and Freddie Mac? A. Generally speaking, yes. Q. Were you involved in the selection of GSE loans as that control population for Dr. Spencer’s matching estimator? A. I was not involved in either Ms. Beckles’ or Dr. Spencer’s analysis. Q. Did you review any GSE loans or provide any input on the selection of the GSE loans for the control population? A. Again, I think I have answered, I have not been involved in any aspect of their analyses.”).

¹⁰⁷ Spencer Report at ¶¶ 26, 27.

Dr. Spencer.¹⁰⁸ Dr. Spencer acknowledges that, using these characteristics, he found matches for only approximately 82 percent of the at issue loans.¹⁰⁹

58. For those pairs of loans that Dr. Spencer matches, he also purports to implement a procedure to correct for potential bias due to discrepancies between the loan characteristics of the control group loans on the one hand and the matched Relevant Trust loans on the other.¹¹⁰ According to Dr. Spencer, this “bias correction procedure” adjusts each matched loan’s excess loss based on how discrepancies in four covariates used in the matching process (namely, FICO score, loan-to-value ratio, original balance, and loan term), as well as a fifth covariate, “local housing market performance”—which was not considered by the matching estimator—affect the magnitude of observed loan-level treatment effects.¹¹¹ After performing these adjustments, Dr. Spencer next calculates the “weighted average severity rate treatment effect” for each SLG for each Relevant Trust.¹¹²
59. Dr. Snow utilizes these weighted average severity rate treatment effects (which he describes in shorthand as “Severity Rate Differentials”) to calculate the claimed Servicing Loss Reduction for each trust. The Servicing Loss Reduction for each trust is calculated by multiplying the applicable Severity Rate Differential by the aggregate loan balances on their liquidation dates (plus prior modification losses) for those loans that liquidated with a loss, including the many loans for which Dr. Spencer failed to find a match.¹¹³
60. Dr. Snow then allocates these amounts according to The Oakleaf Group’s waterfall model to calculate But-For Payments (both historical and projected) that Plaintiffs would have received, and compares them to actual and projected payments (similar to his process for Repurchase Damages).¹¹⁴ The present value of the difference between the two, with prejudgment statutory

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* at ¶ 21 n. 9.

¹¹⁰ *Id.* at ¶ 31.

¹¹¹ *Id.*; see also Spencer Report at ¶ 26 and Table 2 for a list of loan and borrower characteristics utilized in the matching estimator (which does not include local housing market performance).

¹¹² *Id.* at ¶ 32.

¹¹³ Snow Report at ¶ 43.

¹¹⁴ *Id.* at ¶ 45.

interest, is what Dr. Snow calls “Servicing Damages,”¹¹⁵ up to 33.69 percent of which is attributable to the prejudgment statutory interest component of his calculation.

C. Amendment of Damages Calculation

61. Plaintiffs served Dr. Snow’s original damages report on October 29, 2018, along with reports from Dr. Spencer and Ms. Beckles.¹¹⁶ In his original report, Dr. Snow derived his Servicing Damages from two components, each of which utilized rate differentials formulated by Dr. Spencer. The first component was a claimed reduction in loss associated with an allegedly lower likelihood of default (“Liquidation Rate Loss”).¹¹⁷ The second component of Servicing Damages was the “Severity Rate Loss,” which, as described in more detail above, purported to represent a reduction in losses related to lower loss severity rates for defaulting loans.¹¹⁸
62. To calculate the Liquidation Rate Loss, Dr. Snow utilized “Liquidation Rate Differentials,”¹¹⁹ formulated by Dr. Spencer, which were meant to represent the percentages “by which average liquidation rates for first-lien loans would have been reduced” if Wells Fargo had addressed alleged imprudent servicing.¹²⁰ To calculate Liquidation Rate Differentials, Dr. Spencer attempted to match certain loans backing the Relevant Trusts with loans in another purported control group selected by Ms. Beckles.¹²¹ This control group was comprised of loans serviced by five specific servicers.¹²²
63. More than five months after the service of Plaintiffs’ original interrelated expert reports, Dr. Snow, Dr. Spencer, and Ms. Beckles all amended their respective reports and opinions. In his

¹¹⁵ *Id.* at ¶ 45, Fig. 8, Fig. 9.

¹¹⁶ Snow, Karl N. 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) (Oct. 29, 2018) and supporting materials (“Original Snow Report”); Spencer, Bruce D. Expert Report of Bruce D. Spencer, Ph.D. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Oct. 29, 2018) (“Original Spencer Report”); and Beckles, Ingrid. 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) (Oct. 29, 2018) (“Original Beckles Report”).

¹¹⁷ Original Snow Report at ¶ 43.

¹¹⁸ *Id.*

¹¹⁹ *Id.* at ¶ 44.

¹²⁰ *Id.*

¹²¹ Original Spencer Report at ¶ 15(b).

¹²² Original Beckles Report at ¶ 106.

amended report, Dr. Spencer abandoned the concept of Liquidation Rate Differentials.¹²³ Dr. Snow, in turn, completely removed all references to a Liquidation Rate Loss component of Servicing Damages and to the Liquidation Rate Differentials he utilized in his first report to calculate the Liquidation Rate Loss. In correspondence between counsel before service of the amended reports, Plaintiffs' counsel acknowledged that Dr. Spencer's amendments were meant "to correct for a bias he discovered in his liquidation rate benchmark."¹²⁴ Dr. Spencer "corrected" that bias by completely eliminating his analysis based on liquidation rates, and Dr. Snow did the same. Dr. Snow testified at his deposition that he understood the Liquidation Rate Loss was excised from his report due to "a bias," but he did not investigate the bias in Dr. Spencer's Liquidation Rate Differentials,¹²⁵ and he did not conduct additional analyses to validate the Severity Rate Differentials after the bias in the Liquidation Rate Differentials was discovered.¹²⁶ Dr. Snow thus continued to rely blindly on Dr. Spencer's analyses in his amended report, without investigation, despite Dr. Spencer's prior work proving to be unreliable, biased, and compromised.

64. In addition, in his amended report, Dr. Snow "correct[ed] minor issues regarding the calculation of future principal and interest payments" and "correct[ed] the repurchased loans used in the Amended Snow Report."¹²⁷
65. As a result of eliminating the Liquidation Rate Loss component of Servicing Damages, the Servicing Damages calculated by Dr. Snow in his current report are drastically lower than

¹²³ See Spencer, Bruce D. Deposition (May 30, 2019) ("Spencer Dep.") 161:10-163:9 ("Q. And that [liquidation rate differential] analysis was in your first report and it is not in your amended report? A. That's right. Q. Why? A. It had to do with a control group that we used... When we -- we developed the control group and did an analysis looking at liquidation differentials. And then an expert in another case, it was a case involving Bank of New York Mellon, made a point of noting that the loans in the [Reifsnyder] group were affected by a transfer issue, that many loans were transferred in. And the only loans that were transferred in were loans that had not yet liquidated. So when we were looking at liquidation rates in this control group, they were way too low because they were selective. And the - the other -- we did analysis in that case to see, well, was [Sabry] right. And we concluded that she was. And then I thought about, well, would that affect the analysis that I was doing in this case? And the answer was yes. It undercut the validity of the analysis and so I pulled it.").

¹²⁴ Email from Sean McGonigle, Wollmuth Maher & Deutsch LLP, to Mahesh Parlikad, Jones Day (Apr. 9, 2019).

¹²⁵ Snow Dep. 230:19-231:1; 231:9-13 ("Q. Did you undertake any investigation of what the bias was in the liquidation rate differential in those damages? A. No.").

¹²⁶ *Id.* at 232:13-19 ("Q. Did you undertake any additional analysis of his severity rate differential opinion after you were asked to remove the liquidation rate differential damages because of the bias that had been identified? A. I did not.").

¹²⁷ Letter from Sean McGonigle, Wollmuth Maher & Deutsch LLP, to Mahesh Parlikad, Jones Day (Apr. 15, 2019).

previously calculated. Dr. Snow's Servicing Damages dropped by 38.5 percent under the Post-enforcement Servicing Damages scenario¹²⁸ and by 49.7 percent under the so-called Catch-up Servicing Damages scenario.¹²⁹ This reflects a \$29.7 million reduction in Post-enforcement Servicing Damages and a \$54.06 million reduction in Catch-up Servicing Damages,¹³⁰ for a total combined damages reduction of \$46.04 million—what Dr. Snow admits to be a “significant change in the total damages,” cutting out “a lot of money” from the damages calculation and seriously undermining the reliability of Dr. Snow's opinions and reliance on Dr. Spencer's conclusions.¹³¹

D. Exclusion of Tort Damages

66. In another trustee case against Wells Fargo—the *Commerzbank* case—Dr. Snow also calculates so-called “tort damages,”¹³² which are, according to Dr. Snow, damages derived from comparing: (1) the price paid by the plaintiff for the certificates to (2) the principal and/or sale proceeds it would have received in the but-for scenario. In that case, Dr. Snow restricted the principal and/or sale proceeds the plaintiff received in the but-for scenario to be no greater than the price it paid in the real world. In other words, under Dr. Snow's tort damages theory in that case, the prices the plaintiff paid effectively served as a cap for damages. For reasons that are unexplained, Dr. Snow does not employ this method here.¹³³ When asked at his deposition why he did not calculate tort damages for this matter, Dr. Snow stated only that he made such calculations in *Commerzbank* because counsel requested that he do so in that case (the same firm that represents Plaintiffs here).¹³⁴ Dr. Snow acknowledged at deposition that if he had used the same tort damages methodology in this case as he did in *Commerzbank*, damages here, as a

¹²⁸ Compare Snow Original Report at ¶ 26 to Snow Report at ¶ 25.

¹²⁹ *Id.*

¹³⁰ Snow Dep. 232:20-233:16.

¹³¹ *Id.* at 234:4-16.

¹³² 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 *Commerzbank* Report”) at ¶ 23 *et seq.*

¹³³ Although Dr. Snow has not presented the results of calculations related to so-called out-of-pocket losses (also called “tort damages” in his Snow *Commerzbank* Report), Dr. Snow's supporting materials produced by Plaintiffs include files that appear to be related to such calculations. *See* Snow Report supporting materials (PL trusts, certificates, purchase dates and prices, positions for tort damages.xlsx).

¹³⁴ 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.”).

general proposition, “would go down because you would be using a lower price and hence a cap[.]”¹³⁵

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

67. 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.¹³⁶ 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 or to oversee servicers.¹³⁷
68. 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.¹³⁸ 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

¹³⁵ *Id.* at 301:19-302:3 (“Q. Can you tell me what would happen if you used the prices at transfer to the named plaintiffs in a tort damages analysis in the Phoenix Light case? A. Only as a general proposition, I think they would go down because you would be using a lower price and hence a cap but if so and by how much I would have to do the empirical work.”).

¹³⁶ *Id.* at 22:14-19.

¹³⁷ 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.”).

¹³⁸ 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.”).

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.

69. Similarly, with respect to Servicing Damages, Dr. Snow's damages calculations do not even attempt to isolate the damages due to Wells Fargo's alleged misconduct as trustee.¹³⁹
70. 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.¹⁴⁰
71. Consequently, Dr. Snow effectively treats Wells Fargo as a guarantor of warrantor and servicer conduct and ignores (or counterfactually assumes away) the elements of Plaintiffs' 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 or servicer conduct, as Plaintiffs claim 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.

72. In calculating Repurchase Damages, Dr. Snow uses the same definition of repurchase damages he has used in monoline and put-back litigation,¹⁴¹ and creates a but-for scenario in which 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

¹³⁹ Spencer Dep. 101:12-15 ("Q. You've made no effort to independently estimate the treatment affect (sic) of servicing separate from oversight? A. Correct.").

¹⁴⁰ Snow Dep. 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.").

¹⁴¹ *Id.* at 28:5-18.

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, he is not “connecting the dots between the trustee’s behavior and what should be repurchased.”¹⁴² This is a fundamental failure in his Repurchase Damages model.

73. 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).
74. 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 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.
75. 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

¹⁴² *Id.* at 34:6-9.

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.¹⁴³ 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.

76. 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 Plaintiffs 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 Servicing Damages Fail to Isolate and Measure Damages Resulting from the Alleged Failures of Trustee Oversight of Servicers.

77. Similar issues exist with regard to Dr. Snow's Servicing Damages. Dr. Snow admitted at his deposition that he has no idea what actions Wells Fargo could or should have taken to address the alleged servicing performance issues here.¹⁴⁴ Dr. Snow, in other words, fails to explain or understand what remedies Wells Fargo could have pursued to either prevent or remediate alleged losses attributable to servicing oversight failures. Without such understanding, it is impossible to build an accurate but-for model that calculates damages properly attributable to Wells Fargo as trustee.
78. In calculating his Servicing Damages, Dr. Snow does not even attempt to isolate increased revenues to the trusts and ultimately the certificateholders that purportedly would have arisen out of increased trustee oversight of servicers. Instead, Dr. Snow accepts, without critical analysis, that a "Loss Severity Differential" computed by a different expert (Dr. Spencer) is attributable to Wells Fargo's alleged failure to properly oversee servicers. Therefore,

¹⁴³ *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.").

¹⁴⁴ *Id.* at 114:5-23 ("Q. Does your model say anything about what enforcement options should have been pursued by the trustee? A. No. Q. Do you offer any opinions about what enforcement options the trustee should have pursued? A. I don't. I think I have been pretty clear. Counsel asked me to calculate damages based upon an assumption of certain loans being repurchased and when they should have been repurchased. Q. You can't say anything about the process that would have been necessary to obtain those repurchases by the trustee? A. No. I am not offering an opinion on that. If I were given different assumptions I would incorporate that into the model.").

Dr. Snow's calculations do not reflect whether, when, and in what manner Wells Fargo allegedly breached servicing oversight duties, much less the particular alleged losses that resulted from such breaches. This, again, results in a calculation that does not accurately reflect damages attributable to Wells Fargo.

79. To properly model the impact that enhanced servicing oversight by Wells Fargo would have had on Plaintiffs, Dr. Snow should have, but did not, account for the process Wells Fargo would have been required to go through to address the servicing-related breaches that underlie Plaintiffs' claims, including the amount of time required for Wells Fargo to address allegedly imprudent servicing, whether the impact of Wells Fargo's oversight would take effect immediately or vary over time, how much oversight would affect the servicing related to a particular loan or group of loans, whether loss severities of individual loans would have been uniformly impacted by such enforcement regardless of the borrowers' circumstances or how long they had been in the foreclosure process, whether servicer replacement would be necessary or appropriate to ensure prudent servicing, and the costs the Relevant Trusts would have endured had Wells Fargo sought to transfer servicing, as Plaintiffs now claim it should have. In ignoring these details and variables, Dr. Snow provides no way to assess (much less reliably quantify) how the results would have been different if Wells Fargo had taken some action with respect to the alleged servicing failures underlying Plaintiffs' claims.
80. Moreover, the damages attributable to a given servicer's allegedly poor servicing do not equate to the damages attributable to a trustee's failure to oversee the actions of servicers, and Dr. Snow again ignores what should, in fact, differentiate his baseline and but-for scenarios: actions of the trustee and the outcome of such actions. Indeed, when asked in his deposition to identify the steps he took to isolate and measure the impact of servicing oversight as opposed to the impact of servicing generally, Dr. Snow acknowledged that he did not attempt to separate out the effects of servicing as opposed to servicing oversight in his damages model, although he agreed that both impact loss severities.¹⁴⁵ The approach that Dr. Snow applies simply ignores that in the relevant but-for world, one would have to conduct loan-by-loan, borrower-by-borrower, and foreclosure-by-foreclosure inquiries to determine the extent to which losses were allegedly caused by the trustee as opposed to other factors. Because Dr. Snow has not properly accounted for the process and outcome of the enhanced servicing

¹⁴⁵ *Id.* at 186:15-22 ("Q. What steps in your damages model did you take to isolate the impact of servicing oversight from the impact of servicing on loss severities? A. Again, those two things are related. So I didn't try to, you know, tease out the marginal effects of both of them.").

oversight contemplated in his but-for scenario, his Servicing Damages do not accurately reflect damages to Plaintiffs arising out of Plaintiffs' claims here and Wells Fargo's alleged failure to provide proper servicing oversight.

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

81. Dr. Snow's damages calculation is not based on out-of-pocket losses or actual realized losses to the Relevant Certificates. He does not analyze or even consider whether Plaintiffs experienced realized losses on their claimed holdings in the Relevant Certificates, let alone realized losses or out-of-pocket losses during their claimed holding periods caused by Wells Fargo's conduct.
82. Indeed, at least one of the Relevant Certificates, for example, the 1A1 tranche of IMM 2005-6, has experienced no realized losses since trust closing.¹⁴⁶ The tranche also benefits from a bond guaranty insurance policy issued by Ambac Assurance Corporation.¹⁴⁷ This policy "unconditionally and irrevocably guarantee[s] certain payments" on the tranche.¹⁴⁸ Certain other Relevant Certificates have experienced no realized losses since Plaintiffs' alleged acquisitions. For example, by the time Plaintiff Phoenix Light claims to have acquired the M3 tranche in FFML 2006-FFA, the tranche had already been fully written down to zero.¹⁴⁹ See **Exhibit 3a: Certificates With Realized or Implied Losses or Discount to Par at Alleged Acquisition or Assignment Date.**
83. Dr. Snow also ignores the prices Plaintiffs paid for the Relevant Certificates and/or their values at acquisition. His model does not consider these prices or values, although he does take them into account in his so-called "Tort Damages" calculations in *another* trustee case against Wells Fargo.¹⁵⁰ Dr. Snow had no explanation for not doing so here, except for instructions of counsel,

¹⁴⁶ IMM 2005-6 Remittance Report (June 25, 2019).

¹⁴⁷ See IMM 2005-6 Prospectus Supplement at WF_PL_000016162.

¹⁴⁸ *Id.* at WF_PL_000016257. There is also a government guarantee on Plaintiffs' holdings for which Dr. Snow does not account. See *supra* Section III.B.

¹⁴⁹ FFML 2006-FFA Remittance Report (Oct. 27, 2008).

¹⁵⁰ Snow Dep. 300:2-300:9 ("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."); *id.* at 273:11-15 ("Q. Have you accounted for the purchase price or value at the time of acquisition by the named plaintiffs in this case in your damages analysis? A. That I haven't done yet, no.").

although he acknowledged that taking values or prices at acquisition into account would reduce damages here under his model.¹⁵¹

84. 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.¹⁵² These include macroeconomic variables and idiosyncratic variables, such as losing a job.¹⁵³ But despite acknowledging that one needs to look at all of these variables to determine what caused a loan to go into default,¹⁵⁴ Dr. Snow has not analyzed and proposes no method to isolate losses on allegedly defective loans that are attributable to Wells Fargo's conduct from those attributable to other factors.¹⁵⁵ Dr. Snow also does not include or address in his model Plaintiffs' actions (or lack of actions) that could have avoided the damages they now claim.¹⁵⁶
85. 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.¹⁵⁷ When home prices are increasing, and homeowners have equity in their homes, they are less likely to allow

¹⁵¹ *Id.* at 301:7-302:20.

¹⁵² *Id.* at 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.”).

¹⁵³ *Id.* at 101:6-11.

¹⁵⁴ *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.”).

¹⁵⁵ *Id.* at 100:7-11.

¹⁵⁶ Warren Report at ¶¶ 85 *et seq.*

¹⁵⁷ 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.

foreclosure to occur, choosing instead to sell the property to recover available equity.¹⁵⁸

Declining home prices, on the other hand, affect both the ability and willingness of mortgagors to honor their repayment commitments¹⁵⁹ and also impact the ability of a mortgagor to refinance the mortgage or sell the property in the face of difficulty making payments.¹⁶⁰ A borrower's decision to refinance also may be affected by changes in home prices.¹⁶¹

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,¹⁶² a borrower may be less willing to make payments or may choose to stop payment altogether. There is empirical evidence that negative equity and "strategic default" (homeowners stopping mortgage payment even though they can meet their obligations)¹⁶³ are correlated.¹⁶⁴

86. Dr. Snow also ignores the impact of increased unemployment. A strong economy, with a low unemployment rate, stimulates the housing market.¹⁶⁵ 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.¹⁶⁶ Some researchers have found that "job loss is the main 'single trigger' determinant of default."¹⁶⁷ Individual job loss, an

¹⁵⁸ 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.

¹⁵⁹ 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.

¹⁶⁰ Foote, Gerardi, Goette & Willen, *supra* note 158, at 293.

¹⁶¹ Pennington-Cross, Anthony, and Souphala Chomsisengphet. "Subprime Refinancing: Equity Extraction and Mortgage Termination." *Real Estate Economics* 35.2 (Summer 2007): 233-263 at 233.

¹⁶² Ellis, Luci. "How Many in Negative Equity? The Role of Mortgage Contract Characteristics." *BIS Quarterly Review* (Dec. 2008): 81-93 at 82.

¹⁶³ 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.

¹⁶⁴ *Id.* at 17, 23.

¹⁶⁵ 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.

¹⁶⁶ 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.

¹⁶⁷ Gerardi, Herkenhoff, Ohanian & Willen, *supra* note 163, at 25.

increase in the likelihood of job loss, and/or a decline in income can lead to difficulty or unwillingness to pay a mortgage.¹⁶⁸

87. 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 or out-of-pocket 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.
88. Because Dr. Snow fails to consider the impacts of macroeconomic trends on the performance of the loans at issue, or whether Wells Fargo actually caused any realized losses to the tranches in the real world during Plaintiffs' holding periods, his method is 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.

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

89. Dr. Snow suggested at his 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 his 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.¹⁶⁹

¹⁶⁸ 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.

¹⁶⁹ 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?

90. 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 Plaintiffs' claims, account for relevant contingencies, and do not contradict the facts.¹⁷⁰ 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.
91. 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 warrantors and loan-level breach claims. 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. He similarly applies uniform assumptions as to the length of time that it would have taken Wells Fargo to enforce servicers' obligations across trusts with claimed Events of Default or equivalent dates.
92. But had Wells Fargo acted as Plaintiffs allege 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 Plaintiffs' claims.
93. 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

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 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.”).

¹⁷⁰ 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. Lentz, and David P. Hoffman. Hoboken, New Jersey: John Wiley & Sons (2012) at §4.5.(d).

individualized assessment of the likelihood of success on repurchases of individual loans, given the specific defects identified by Mr. Hunter 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.

94. 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.¹⁷¹ For example, Dr. Snow does not account for a situation in which, due to Wells Fargo's intervention that Plaintiffs allege 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. The same can be said for the deficiencies in Dr. Snow's Servicing Damages calculations. He has no reasonable methodology to account for the steps Wells Fargo could or should have taken to address the alleged servicing failures underlying Plaintiffs' claims.
95. 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."¹⁷² 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.

¹⁷¹ See, e.g., ABFC 2006-OPT2 PSA at WF_PL_002121588 ("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_PL_002121590-1 ("[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 breach 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.").

¹⁷² Hearing Transcript. *BlackRock Allocation Target Shares: Series S portfolio, et al. v. U.S. Bank National Association*, (S.D.N.Y. 1:14-cv-9401) (Jan. 31, 2018) at 58-59.

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

96. Dr. Snow calculates Repurchase Damages allegedly attributable to Wells Fargo’s failure to effectuate repurchases of claimed Defective Loans in ABFC 2006-OPT2, FFML 2006-FFA, OOMLT 2007-3, and OWNIT 2006-2. The total Repurchase Damages are \$135.36 million (only \$119.76 million of which is not attributable to statutory interest).¹⁷³ 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”).¹⁷⁴
97. 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.^{175, 176} To calculate such damages, Dr. Snow simulates the repurchase of certain of these Defective Loans.
98. 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.

¹⁷³ Snow Report at Fig. 7.

¹⁷⁴ *Id.*

¹⁷⁵ *Id.* at ¶ 29.

¹⁷⁶ Dr. Snow’s calculations include damages for five loans that were not included in the list of loans disclosed by Plaintiffs on January 17, 2018. PL v WF - Loan Lists - Updated 01-17-18.xls attached to Email from Ryan Keenan, 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-KPF-SN; Commerzbank AG v. Wells Fargo Bank, No. 15-cv-10033* (Jan. 17, 2018). These five loans are Loan 0401008956 in ABFC 2006-OPT2; Loans 0120628771, 0121449011, and 0121996995 in FFML 2006-FFA; and Loan 0003260125 in OWNIT 2006-2. It is my understanding that these five 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 five loans for the sake of simplicity and to make apples-to-apples comparisons.

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

99. Dr. Snow's but-for scenario assumes that 100 percent of the loans Plaintiffs contend 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.¹⁷⁷
100. 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, Lehman Brothers Holdings Inc., a warrantor for mortgage loans collateralizing FFML 2006-FFA, petitioned for bankruptcy on September 15, 2008, and received confirmation for bankruptcy on December 6, 2011,¹⁷⁸ prior to Dr. Snow's Enforcement Date for R&W Breach Loans, October 17, 2014. Ownit Mortgage Solutions Inc., warrantor for mortgage loans collateralizing OWNIT 2006-2, also petitioned for bankruptcy prior to Dr. Snow's Enforcement Date for R&W Breach Loans.¹⁷⁹ This could have limited Wells Fargo's ability to achieve the results Dr. Snow assumes it would have under his but-for scenario.
101. Dr. Snow does not assess the relevant warrantors' financial ability to repurchase loans on request.¹⁸⁰ Instead of developing a methodology that accounts for the financial conditions of the warrantors on the repurchase rate,¹⁸¹ his calculations rest on the unwarranted assumption that repurchases would have occurred for every Defective Loan at 100 percent of the Purchase Price.¹⁸²

¹⁷⁷ Snow Report at ¶ 37 ("The Repurchase Amount is equal to the sum of the Purchase Price on all Defective Loans for a given Securitization.").

¹⁷⁸ Voluntary Petition for Bankruptcy. *Lehman Brothers Holdings Inc.* (Bankr. S.D.N.Y. No. 08-13555) (Sept. 15, 2008); Order Confirming the Chapter 11 Plan. *Lehman Brothers Holdings Inc.* (Bankr. S.D.N.Y. No. 08-13555) (Dec. 6, 2011).

¹⁷⁹ 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).

¹⁸⁰ 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.").

¹⁸¹ *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.").

¹⁸² See Snow Report at ¶¶ 34-37 and n. 39 for a discussion of how Dr. Snow calculates Purchase Prices.

102. 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.¹⁸³ 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.¹⁸⁴
103. The likelihood of warrantors refusing to repurchase loans was disclosed to investors like Plaintiffs prior to their investment. The prospectus supplements generally warn investors that 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.*
104. At least one court has held that damages calculations based on 100 percent repurchase rate assumptions are flawed.¹⁸⁵ Investors themselves have acknowledged repurchases occur at substantially less than 100 percent success.¹⁸⁶ Dr. Snow has not provided factual or empirical support to the contrary.
105. 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.

¹⁸³ 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).

¹⁸⁴ 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).

¹⁸⁵ *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].").

¹⁸⁶ 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.").

106. 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.¹⁸⁷ 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.¹⁸⁸
107. 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 4: 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.
108. 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 figures

¹⁸⁷ “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).

¹⁸⁸ 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).

are reduced to \$0.14 million and \$0.40 million, respectively. *See Exhibit 5: R&W Breach Repurchase Damages Using Historical Repurchase Demand Fulfillment Rates.*

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

109. At the request of counsel, Dr. Snow also provides three alternative damages calculations in which he assumes reductions of 10, 20, and 50 percent to the cashflows associated with allegedly Defective Loans.¹⁸⁹ These reductions purportedly reflect scenarios where 90, 80, and 50 percent “of the Defective, R&W [Breach Loans], or Document [Defect Loans] [...] are repurchased.”¹⁹⁰ 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.”¹⁹¹ 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.¹⁹²
110. Indeed, Dr. Snow conveys no explanation or empirical support whatsoever for the choice of 10, 20, and 50 percent reductions. In the *Commerzbank* case, Dr. Snow conducted an additional sensitivity analysis utilizing a 65 percent repurchase rate, again without explanation.¹⁹³ 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.
111. 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

¹⁸⁹ Snow Report at ¶ 20 n. 18; Snow Report Appendix I; *see also* Snow Dep. 147:24-148:10 (“Q. You calculated the sensitivities as you explain in Footnote 18 at the instruction of counsel? A. Correct. Q. The sensitivities you used were 90 percent, 80 percent and 50 percent, right? A. That is correct. Q. Did counsel provide those percentages to you? A. They did.”).

¹⁹⁰ *Id.* at ¶ 67 (Appendix I).

¹⁹¹ *Id.* at ¶ 20 n. 18.

¹⁹² 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.”).

¹⁹³ Snow *Commerzbank* Report at ¶ 81.

across-the-board 10, 20, or 50 percent.¹⁹⁴ 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.

112. 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 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.
113. 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 603 allegedly Defective Loans in ABFC 2006-OPT2. Instead of repurchasing half of each of the 603 allegedly Defective Loans as Dr. Snow did, I recalculated Dr. Snow’s Repurchase Damages assuming 301 allegedly Defective Loans were repurchased, while the other 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. I did this for each of the four trusts. For the 50 percent scenario, Dr. Snow’s Repurchase Damages for the four trusts change from \$69.4 million to \$24.1 million (or by 65.3 percent) if 50 percent of the loans are repurchased as opposed to half of each loan. *See Exhibit 6: Changing Dr. Snow’s “Sensitivity” Calculation Method Changes Repurchase Damages.*

¹⁹⁴ See Snow Report supporting materials; *see also* Snow Dep. 151:23-152:3 (“Q. [The] [s]ame loans are repurchased just all across the board are repurchased at 90, 80 or 50 percent of the purchase price, right? A. Correct.”).

114. 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.¹⁹⁵ However, a Monte Carlo analysis creates a very wide range of outcomes depending on which 50 percent of loans are excluded from repurchase,¹⁹⁶ 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.¹⁹⁷
115. 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 and Inconsistent with Real World Examples.

116. 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 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 is repurchased in his simulation.¹⁹⁸
117. 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.¹⁹⁹ He then makes the additional assumption that the principal balance is equal to the realized loss amount.²⁰⁰ He then accrues interest on the realized loss amounts. However, Dr. Snow fails to

¹⁹⁵ 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.").

¹⁹⁶ *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 analysis of what distribution would be? A. No, I have not.").

¹⁹⁷ *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.").

¹⁹⁸ *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.").

¹⁹⁹ *Id.* at 252:5-10.

²⁰⁰ *Id.* at 251:4-7.

provide support for these assertions, and the Purchase Prices he calculates for certain liquidated loans are demonstrably wrong.

118. 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."²⁰¹
119. And, Dr. Snow has acknowledged that certain responsible parties such as warrantors have taken the position that liquidated loans are not eligible for repurchase.²⁰² 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. Dr. Snow nevertheless simulates make whole repurchase transactions for 100 percent of Defective Loans that had liquidated as of the Enforcement Date.
120. 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 \$135.36 million to a negative amount, a reduction of 100.02 percent. *See Exhibit 7: Repurchase Damages Excluding Loans That Liquidated Prior to Dr. Snow's Purchase Dates.*²⁰³
121. Dr. Snow similarly provides no support for his related assumption that the Purchase Price definitions in the PSAs apply to liquidated loans or for 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.²⁰⁴ Instead, as he stated at deposition, in

²⁰¹ *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[.]").

²⁰² *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.").

²⁰³ 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.

²⁰⁴ *Id.* at 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

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.”²⁰⁵

122. The amounts received in actual repurchase transactions can deviate significantly from the amounts under Dr. Snow’s formula described above. The FFML 2006-FFA trust illustrates this. As Dr. Snow is aware, 522 loans subject to repurchase demands in FFML 2006-FFA were repurchased.²⁰⁶ For 99 percent of these loans, the amount paid for the repurchase was equal to or slightly less than the realized loss at liquidation; for the remaining six loans, the average increase above realized losses at liquidation was 2.3 percent.²⁰⁷ The Purchase Prices calculated by Dr. Snow for these liquidated loans, however, are substantially higher, primarily due to interest charged on losses from liquidation to his Purchase Dates.
123. Dr. Snow also calculates Purchase Prices for another 244 liquidated loans in the FFML 2006-FFA trust that he initially identified for repurchase but then purported to remove from his calculations because they were, in fact, repurchased in the real world. The actual recovery amount for the 244 loans totaled \$29.59 million (a recovery ratio of 99.25%), but the Purchase Prices Dr. Snow calculated totaled \$47.05 million. That is \$17.46 million or 59% above the recovery amount in the real world for these 244 loans.
124. Dr. Snow fails to remove from his calculations and mistakenly simulates repurchases for 23 loans in FFML 2006-FFA that were repurchased in the real world but were not correctly identified by Dr. Snow as being “repurchased.” Because Dr. Snow’s Purchase Prices are inconsistent with the real world recovery amounts, for these 23 loans in FFML 2006-FFA, Dr. Snow simulates a second repurchase that “recovers” the excess of his Purchase Price above the

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.”).

²⁰⁵ *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[.]”).

²⁰⁶ *Id.* at 165:7-16. *See also, e.g.*, First Franklin Mortgage Loan Trust 2006-FFA Notice to Holders (Apr. 16, 2018). <www.ctslink.com> (accessed July 25, 2019).

²⁰⁷ Claim Status 11.16.2016.xlsx.

real world recovery amount. See **Exhibit 8: Dr. Snow's Purchase Prices Are Inconsistent With Actual Recovery Amounts for 23 Loans.**

125. The amounts over losses Dr. Snow calculates can be significant. Take, for example, Loan 0121045678. This loan liquidated in December 2009 with losses of \$51,106. In the following month, Dr. Snow's calculations begin accumulating interest on this loss amount at a rate of 12.375% per year. Though the loan recovered \$30,551 between liquidation and June 2014, changing the loss amount on which Dr. Snow calculates interest, the accrual at 12.375% continued until October 2016, which is Dr. Snow's Purchase Date for this loan. By this time, according to Dr. Snow, the loan had accrued \$30,877 in interest. This amount plus the remaining \$20,555 in loss yields Dr. Snow's Purchase Price of \$51,432. This price is 250% of the loss on the loan.
126. These examples of actual repurchases demonstrate that Dr. Snow's Purchase Prices for liquidated loans can be dramatically higher than the recovery amounts in the real world. 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. For FFML 2006-FFA, cumulative realized losses for the liquidated loans that Dr. Snow repurchases are \$273,943,884. Dr. Snow repurchases these loans for \$498,745,699, an 82.06% increase over the realized losses.
127. I recalculated Repurchase Damages assuming the Purchase Price for liquidated loans was equal to the cumulative realized losses of each liquidated loan as of Dr. Snow's Purchase Date. Recalculating damages using realized loss amounts for liquidated loans reduces Repurchase Damages by \$37.32 million or 27.57 percent. See **Exhibit 9: Repurchase Damages Under Alternative Purchase Price Assumptions.**

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

128. 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.²⁰⁸ 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.

129. 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[.]”²⁰⁹ For each securitization, Dr. Snow utilizes one Enforcement Date for R&W Breach Loans and an Enforcement Date for Document Defect Loans, although in two trusts these dates are the same.²¹⁰ As explained at deposition, Dr. Snow relied on counsel’s identification of Enforcement Dates,²¹¹ 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.²¹² See **Table 1: Dr. Snow’s Enforcement Dates** for Dr. Snow’s Enforcement Date assumptions for Document Defect Loans and R&W Breach Loans.

Table 1: Dr. Snow’s Enforcement Dates

Trust	Document Defect	R&W Breach
ABFC 2006-OPT2	March 1, 2010	March 1, 2010
FFML 2006-FFA	N/A	October 17, 2014
OOMLT 2007-3	March 1, 2010	March 1, 2010
OWNIT 2006-2	December 1, 2009	October 9, 2011

130. 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

²⁰⁸ Snow Report at ¶ 30.

²⁰⁹ *Id.*

²¹⁰ *Id.* at 30 Fig. 6. For FFML 2006-FFA, Dr. Snow has not identified damages related to Document Defect Loans (see Snow Report at Fig. 11) and he does not identify a Document Defect Enforcement Date (Snow Report at Fig. 6).

²¹¹ Snow Dep. 63:8-10 (“I did not select the dates. The dates that I was provided are as listed in the report.”).

²¹² *Id.* at 66:25-67:24 (“Q. Did you conduct any independent investigation into the timing of the claimed breaches in this case?...A. ...No...I did not do any independent analysis or providing (sic) any opinion on the enforcement dates or the purchase dates.”).

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 Plaintiffs 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.

131. 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.

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

132. 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."²¹³ Dr. Snow's Enforcement Dates do not vary by loan within a trust. As he explained at his deposition, Dr. Snow relied on counsel to provide him with the Enforcement Dates.²¹⁴ Although his report includes an Appendix D, which purports to set forth certain information regarding the Enforcement Dates, Dr. Snow conceded that it was drafted by his staff and counsel, and he knows little about its creation.²¹⁵ Dr. Snow admitted that he has no opinion on the reasonableness of these assumptions;²¹⁶ that he conducted no independent review of the evidence provided to him by counsel to ostensibly support such dates;²¹⁷ that he

²¹³ *Id.* at 62:13-22.

²¹⁴ *Id.* at 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.").

²¹⁵ *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.").

²¹⁶ *Id.* at 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.").

²¹⁷ *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.").

designed his model before he was provided with Appendix D; and that he does not know what criteria were used to include or exclude information in his own Appendix D.²¹⁸

133. How counsel chose Enforcement Dates that they provided to Dr. Snow is unexplained. Appendix D, for example, claims that the March 1, 2010 Enforcement Date for Document Defect Loans and R&W Breach Loans in ABFC 2006-OPT2 “is based on evidence that a Servicer Termination Event was ongoing on March 1, 2010.”²¹⁹ Dr. Snow, however, admitted that he did not review any information that supports the March 1, 2010 date.²²⁰ He could not say what Servicer Termination Event was allegedly ongoing, when it allegedly began, or why March 1, 2010 was selected as opposed to any earlier date.²²¹
134. For OOMLT 2007-3, on the other hand, Appendix D cites to a spreadsheet, deposition testimony, and Dr. Snow’s understanding of the assertions of other Plaintiffs’ experts as alleged support for the March 1, 2010 Enforcement Date.²²² But none of the cited materials identify March 1, 2010, and Plaintiffs’ other expert says only “by 2010,” not March 1, 2010.²²³ Appendix D similarly cites the assertions of Plaintiffs’ experts for the OWNIT 2006-2 Enforcement Dates for claimed Document Defect Loans and R&W Breach Loans,²²⁴ but again, none of the cited documents uses or references the dates selected. For FFML 2006-FFA, Dr. Snow appears to base the October 17, 2014 Enforcement Date for R&W Breach Loans on Wells Fargo receiving a letter purportedly identifying the alleged breaches.²²⁵ Dr. Snow provides no explanation for why the inputs provided by counsel are reasonable and appropriate.

²¹⁸ *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.”).

²¹⁹ Snow Report at ¶ 51 (Appendix D).

²²⁰ Snow Dep. 72:18-73:10 (“Q. Did you personally review any evidence that supports this March 1st, 2010 date? A. No.”).

²²¹ *Id.* 73:11-25 (“Q. Can you tell me what servicer termination event was ongoing on March 1st, 2010? A. I can’t. Q. If the servicer termination event was ongoing on March 1st, 2010 when did it begin? A. I couldn’t tell you. Q. Why pick March 1st, 2010 for the enforcement date as opposed to any earlier date? A. Again, I am – I have not done any independent assessment of the purchase dates or the enforcement dates so I can’t tell you.”).

²²² Snow Report at ¶ 51 (Appendix D) and D-1 n. 59. With respect to R&W Breach Loans, Dr. Snow also points to certain correspondence from the record.

²²³ See Adelson, Mark. Expert Report of Mark Adelson. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Oct. 29, 2018) and supporting materials at ¶ 207.

²²⁴ Snow Report at ¶ 51 (Appendix D).

²²⁵ *Id.*

135. 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 1, 2010) he uses for such loans (March 3, 2010) in the *Commerzbank* matter.²²⁶ 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 March 1, 2010,²²⁷ in *Commerzbank* the Enforcement Date for this exact same trust is apparently based on the existence of an ongoing Servicer Termination Event as of January 1, 2010.²²⁸ Dr. Snow does not explain why the 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.²²⁹
136. Dr. Snow also uses one Enforcement Date per trust in his Repurchase Damages model, and the Enforcement Date does not vary by loan within a trust.²³⁰ He also uses March 1, 2010 across two different trusts for both claimed Document Defect Loans and alleged R&W Breach Loans.²³¹
137. 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 90 months after each Relevant Trust's closing date and continuing at six-month intervals until the present. As shown in **Exhibit 10: Repurchase Damages Vary Under Alternative Enforcement**

²²⁶ Compare Snow Report at ¶ 51 to Snow *Commerzbank* Report at ¶¶ 28 and 57.

²²⁷ Snow Report at ¶ 51.

²²⁸ Snow *Commerzbank* Report at ¶ 57.

²²⁹ 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.”).

²³⁰ Snow Report at ¶ 51 (Appendix D); *see also* Snow Dep. 74:20-75:2.

²³¹ *Id.* at 75:5-8 (“Q. For two of the trusts ABFC and OOMLT you use the same enforcement dates even between those two trusts, right? A. Yes.”).

Dates, Dr. Snow's claimed damages steadily decrease if later Enforcement Dates are assumed.²³²

138. This exercise demonstrates that Repurchase Damages, calculated by Dr. Snow as \$135 million, can vary significantly when the Enforcement Date assumptions are altered. Assuming an Enforcement Date of 120 months after each trust's closing date, for example, results in a reduction to Repurchase Damages of more than \$15 million (or 11 percent). 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.

139. As noted above, for each trust, Dr. Snow also utilizes a single Purchase Date, which signifies the date subsequent to the Enforcement Date upon which the claimed Defective Loans are 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.²³³ Dr. Snow admitted he did no independent investigation of his Purchase Date assumptions,²³⁴ again evidencing a lack of reasonable and objective economic analysis.
140. 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 the instruction of counsel, adds six months to arrive at his Purchase Date.²³⁵ 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 adds 24 months to the

²³² Note that a similar effect occurs if Enforcement Dates remain the same but assumed Purchase Dates are extended.

²³³ *Id.* at 77:12-25 ("Q. Document defect loans generally employ a six-month time period in between the enforcement date and the purchase date, right? A. Yes. Q. R&W breach loans generally employ a 24 month or two-year period between the enforcement date and the purchase date, right? A. Yes. Q. Were those time frames between the enforcement date and the purchase date provided to you by counsel? A. They were.").

²³⁴ *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.").

²³⁵ Snow Report at ¶ 31; *see also* Snow Dep. 77:8-16.

Enforcement Date to arrive at his Purchase Date.²³⁶ I refer to the loans reflecting the applicable condition (e.g., 90+ days delinquent) as of the Enforcement Date as “Distressed Loans.” Dr. Snow has testified 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.²³⁷

141. The Snow Report contains no evidence to support the use of six and 24 months. All it offers is that “[i]t is [Dr. Snow’s] understanding that the formulas [he] was given ... are based on the factual record.”²³⁸ When asked at 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.²³⁹ He could not identify or explain what was occurring during this six- or 24-month period.²⁴⁰ He also acknowledged that he did no investigation to determine how long it takes to put back loans after a decision to enforce repurchase.²⁴¹ Given that it is uncommon for repurchase litigation to begin and conclude within six months, as known to Dr. Snow,²⁴² 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.²⁴³ As reflected in **Exhibit 11: Repurchase Litigation Timelines for Cases in Dr.**

²³⁶ Snow Report at ¶ 31.

²³⁷ Snow Dep. 94:8-19 (“Q. You can’t tell me one way or the other why you selected for document defect loans the delinquency trigger being 90 days or more delinquent liquidated in REO or in foreclosure versus R&W breach loans where the delinquency trigger was only 90 days or more delinquent? A. First, I did not select these dates so I disagree with the characterization. Second, no, I do not know why there is a difference.”).

²³⁸ Snow Report at ¶ 51.

²³⁹ Snow Dep. 79:8-22 (“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...It is not something I have independently looked at.”).

²⁴⁰ *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.”).

²⁴¹ *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.”).

²⁴² *See 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).

²⁴³ *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

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.²⁴⁴

142. Moreover, as Dr. Snow acknowledged at deposition, the six-month increment for Document Defect Loans is uniform across all Relevant Trusts, 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.²⁴⁵ 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.
143. **Table 2: Material Exception Claims by Trust** shows the differences in quantities and types of Ms. Beckles' alleged material exception allegations by trust.²⁴⁶ Despite the differences in the nature, quantities, and types of claimed defects, Dr. Snow assumes the same repurchase timeline for all Relevant Trusts.

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.”).

²⁴⁴ *Id.* at 124:5-14; 124:16-129:13; 129:20-130:3.

²⁴⁵ *Id.* at 83:11-17 (“Q. This six-month period is a uniform assumption across all three of the trusts on which you calculate document defect damages, right? A. Correct. Q. There is no variation by trust? A. No.”); 84:2-10 (“Q. No variation based on the types of loans that are at issue? A. Correct. Q. No variation based on who the warrantors are? A. Correct. Q. No variation based on the types of document defects that are claimed? A. Correct.”).

²⁴⁶ This list includes only loans for which Dr. Snow simulated a repurchase. The 1,236 loans in these trusts for which Ms. Beckles alleged a material exception but Dr. Snow did not simulate a repurchase, as well as the 8,382 alleged material exception loans in the eight trusts where Document Defect Damages are not claimed, are not shown.

Table 2: Material Exception Claims by Trust

Document Type ²⁴⁷	ABFC 2006-OPT2	OOMLT 2007-3	OWNIT 2006-2
Assignment	176	132	
Mortgage Note		101	
Power of Attorney	1		
Security Instrument	121	124	616
Security Instrument Rider	3	11	7
Title Policy	192	277	1,012
Number of Loans ²⁴⁸	437	491	1,200

144. With respect to R&W Breach Loans, Dr. Snow similarly relies on counsel for his assumptions of 24 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 24-month time period to represent, other than “building in an assumption of time that it would actually take to effectuate things.”²⁴⁹ As with Document Defect Loans, Dr. Snow applies a uniform Purchase Date period across all four trusts for which he calculates R&W Breach Damages, despite the fact that the types of loans, the warrantors, and the types of R&W breaches vary across trusts.²⁵⁰

145. Similarly, **Table 3: R&W Breach Category Claims by Trust** shows the differences in quantities and types of Mr. Hunter’s allegations by trust,²⁵¹ and Dr. Snow conducts no analysis of repurchase timelines as to particular loans or breach claims.

²⁴⁷ Alleged material exceptions are consolidated by document type.

²⁴⁸ Loan counts are not equal to the sum of alleged material exceptions because a loan may have more than one alleged exception.

²⁴⁹ Snow Dep. 89:13-90:13 (“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.”).

²⁵⁰ *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.”).

²⁵¹ This list includes only loans for which Dr. Snow simulated a repurchase. This table excludes the thousands of FFML 2006-FFA loans to which Dr. Snow extrapolated Mr. Hunter’s allegations which are responsible for the majority of claimed damages.

Table 3: R&W Breach Category Claims by Trust

Breach Category	ABFC 2006-OPT2	FFML 2006-FFA	OOMLT 2007-3	OWNIT 2006-2
Appraisal	30	3	22	9
Assets	12	16	20	5
Compliance	2		4	1
Contractual Threshold	4		3	
Core Document	5	1	8	2
Credit	60	6	24	4
Data Integrity	120	34	102	30
Employment	28	6	38	27
Income	86	31	130	41
Insurance	1	3	1	
Misrepresentation	69	38	111	27
Program Guidelines	198	63	200	52
Property	2	1	2	1
Title	2			1
Underwriter Negligence	116	13	59	15
Number of Loans ²⁵²	170	65	179	59

146. There are an additional 4,520 alleged breaching FFML 2006-FFA loans to which Dr. Snow extrapolates Mr. Hunter's allegations which presumably have their own distinct breach types and impact on the repurchase timeline, though they cannot be tabulated here because there are no loan specific claims for them.²⁵³

147. 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*

²⁵² Loan counts are not equal to the sum of alleged R&W breached because a loan may have more than one alleged breach.

²⁵³ Dr. Snow uses a price weighted breach rate of 71.5% to account for alleged breaching proportion of the loans Mr. Hunter reviewed. It is not clear if Plaintiff's experts are alleging that all 4,520 should have had a repurchase demand issued for them and only 3,231.8 (71.5% of 4,520) would have ultimately been repurchased, or if only the alleged breaching 3,231.8 should have had a repurchase demand issued for them. Regardless, Dr. Snow assumes the same repurchase timeline for FFML 2006-FFA as he does for the other trusts.

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.²⁵⁴ It ordered the parties to engage a special master to determine how to apply the court's guidance to thousands of other loans so that a final judgment might be rendered.²⁵⁵ The case is still ongoing, more than six years after filing.

148. Also, in the *Commerzbank* case, Dr. Snow uses a notably different methodology to calculate Purchase Dates. There, he adds seven or 12 months to the Enforcement Date for R&W Breach Loans, rather than the 24 months he uses here.²⁵⁶ When asked at deposition, he could not explain the discrepancy, other than as instruction of counsel.²⁵⁷

149. Dr. Snow's use of a longer period before the Purchase Dates for R&W Breach Loans in this case results in him not simulating repurchases *before* certain of the Plaintiffs acquired assignments of their certificates. This ensures that repurchases related to the R&W Breach Loans are simulated in his model during Plaintiffs' real-life holding periods.²⁵⁸ Conversely, had Dr. Snow used, for example, the 24-month period that he used here for the R&W Breach Loans in *Commerzbank*, then the Purchase Dates for the R&W Breach Loans here would all *postdate* the plaintiff's sales of the Relevant Certificates. 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.

150. 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,

²⁵⁴ 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.

²⁵⁵ *Id.* at 237.

²⁵⁶ Snow *Commerzbank* Report at ¶ 29.

²⁵⁷ 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.").

²⁵⁸ *See, e.g.*, Complaint at Exhibit B (reflecting an assignment of ABFC 2006-OPT2 M6 from WestLB as of February 13, 2012).

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.²⁵⁹ 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.²⁶⁰ Mr. Milner's assumed timeframe can be even longer—up to nine years—for his alternative damages scenarios.²⁶¹

151. Repurchase enforcement efforts for FFML 2006-FFA, a trust at-issue in this matter, provide another example of how the repurchase demand process can far exceed the length of time assumed by Dr. Snow in calculating Repurchase Damages. For that trust, notice was given on January 9, 2013 that the master servicer had identified alleged breaches by the transferor, First Franklin Financial Corporation, of R&Ws regarding the mortgage loans and demanded that the transferor repurchase certain mortgage loans.²⁶² As of April 16, 2018, the separate trustee had obtained repurchases of more than 520 loans and recovered payments totaling approximately \$58 million for alleged breaches of R&Ws.²⁶³ However, “[r]ecognizing the cost, time and uncertainty involved with the [r]epurchase [p]rocess, the [s]eparate [t]rustee and its predecessor and First Franklin held multiple negotiation sessions” with regards to those breaches.²⁶⁴ A proposed settlement agreement, dated April 16, 2018, was a product of those negotiations.²⁶⁵ Under the proposed settlement agreement, First Franklin would make a cash payment of \$53.45 million to the trust in exchange for releasing First Franklin for all related claims.²⁶⁶ On August 24, 2018, the separate trustee provided notice to holders of certificates in the FFML 2006-FFA trust that the court had approved its petition seeking judicial approval of its decision

²⁵⁹ 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.

²⁶⁰ Milner Report at ¶ 47 and Exhibit D.

²⁶¹ *Id.* at Exhibit D.

²⁶² First Franklin Mortgage Loan Trust 2006-FFA Notice to Holders (Jan. 9, 2013). <www.ctslink.com> (accessed July 25, 2019) at 2.

²⁶³ First Franklin Mortgage Loan Trust 2006-FFA Notice to Holders (Apr. 16, 2018). <www.ctslink.com> (accessed July 25, 2019) at 3.

²⁶⁴ *Id.*

²⁶⁵ *Id.*

²⁶⁶ *Id.* at Exhibit 1: RMBS Trust Settlement Agreement 3.1, 3.2, and 3.3.

to accept the settlement offer.²⁶⁷ These funds were eventually distributed to certificateholders on December 26, 2018.²⁶⁸

152. In this example, the repurchase enforcement timeline lasted approximately six years. The process involved extended communications with responsible counterparties, negotiations, expert testimony, and court instruction prior to resolution of all claims and disbursement of funds, demonstrating the numerous steps and uncertainty involved in repurchase enforcement. Repurchases then occurred at various times. Dr. Snow ignores considerations such as these and fails to account for uncertainties over time to complete the repurchase process, despite his frequent participation in extended put-back litigation lasting much longer than the repurchase time periods he assumes.²⁶⁹ He also uses a but-for model for the FFML 2006-FFA trust with timelines that contradict the actual facts that occurred when the separate trustee pursued repurchases of the same loans identified by Plaintiffs here.
153. 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 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.

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

²⁶⁷ First Franklin Mortgage Loan Trust 2006-FFA Notice to Holders (Aug. 24, 2018). <www.ctslink.com> (accessed May 10, 2019) at 5.

²⁶⁸ FFML 2006-FFA Remittance Report (Dec. 26, 2018); First Franklin Mortgage Loan Trust 2006-FFA Notice to Holders (Nov. 26, 2018). <www.ctslink.com> (accessed Dec. 26, 2018) at 5.

²⁶⁹ See Snow Dep. 115:13-18.

155. With the exception of FFML 2006-FFA, 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 or 24 months for R&W Breach Loans.²⁷⁰
156. 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 2018.²⁷¹ For Document Defect Loans, the resulting repurchase occurs either six months after the loan becomes distressed or May 2018, whichever is earlier.²⁷² For R&W Breach Loans, the resulting repurchase occurs either 24 months after the loan becomes distressed, depending on the trust, or May 2018, whichever is earlier.²⁷³
157. I refer to this hypothetical practice Dr. Snow envisions of waiting for loans to become distressed before simulating their repurchase as delayed “rolling repurchases.”
158. 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. 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.²⁷⁴ 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.

²⁷⁰ Snow Report at ¶ 51 (Appendix D).

²⁷¹ 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.”).

²⁷² Snow Report at ¶ 31 and supporting materials.

²⁷³ *Id.*

²⁷⁴ ABFC 2006-OPT2 PSA at Section 2.03(a) (WF_PL_002121590 and WF_PL_002121592).

159. Loan 0401008956 from ABFC 2006-OPT2, for example, like all Document Defect Loans from that trust, is associated by Dr. Snow with an Enforcement Date of March 1, 2010. However, because the loan did not become 90 days delinquent until November 2017, it was not hypothetically repurchased until May 2018,²⁷⁵ over eight years after Dr. Snow's selected Enforcement Date and more than 11 years after the exception report from which this claimed document defect was derived.²⁷⁶
160. Similarly, Loan 0004716262 from the OWNIT 2006-2 trust became 90 days delinquent in September 2017. Under Dr. Snow's formula, this loan was hypothetically repurchased in March 2018. This again is more than eight years after the Enforcement Date of December 1, 2009 chosen by Dr. Snow for OWNIT 2006-2 Document Defect Loans.²⁷⁷ As discussed further below, using this rolling repurchase method has the effect of increasing Plaintiffs' damages as calculated by Dr. Snow.
161. 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 recognized that such an outcome is inconsistent with the allocations of rights and remedies set forth in Governing Agreements such as PSAs.²⁷⁸

²⁷⁵ 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 0401008956, only one month was added to the delinquency date.

²⁷⁶ The uncured exceptions report for this trust shows lists August 4, 2006 as the date for the uncleared exception for this loan. *See* Beckles Report at supporting materials (WF_CB_000741921).

²⁷⁷ Snow Report at ¶ 30 and Fig 6.

²⁷⁸ 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.").

162. I am not aware of a real world practice that is consistent with the rolling repurchases envisioned by Dr. Snow. Dr. Snow admitted at his deposition that he was aware of no basis in the PSAs that would have allowed it to be done.²⁷⁹ As such, for this additional reason, Dr. Snow's methodology is unreliable.
163. 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 utilized for ABFC 2006-OPT2, OOMLT 2007-3, and OWNIT 2006-2.²⁸⁰ I found that the Repurchase Damages for these three trusts would be reduced by \$2.41 million (or 10.89 percent).
164. 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.
165. I utilized the OOMLT 2007-3 trust 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 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 OOMLT 2007-3 are reduced by about 30 percent based on his selected Enforcement Date, and are reduced to as little as zero if an earlier Enforcement Date is selected. *See Exhibit 12: Repurchase Damages Utilizing Alternative Rolling Repurchase Assumptions for OOMLT 2007-3.*

²⁷⁹ Snow Dep. 97:6-21 ("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.").

²⁸⁰ FFML 2006-FFA is not included in this recalculation because Dr. Snow does not utilize the rolling repurchase assumption related to this trust.

166. 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. Hunter's Unreliable Materiality Determinations, His Methodology Is Unreliable.

167. 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. Hunter'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. Hunter'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.

168. In creating his but-for scenario and his calculation of damages arising out of Document Defect Loans, Dr. Snow relies on Ms. Ingrid Beckles. Plaintiffs retained Ms. Beckles to provide opinions relating to mortgage loan servicing generally and the Relevant Trusts specifically.²⁸¹ 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.

169. 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 foreclosing on the property may be delayed causing unnecessary losses to the [t]rusts."²⁸² Second, based on a comparison of certain exception reports for each Relevant Trust,²⁸³ Ms.

²⁸¹ See Beckles Report at ¶¶ 1-4.

²⁸² *Id.* at ¶¶ 126-127. The documents in question include the Security Instrument, the Note, Title Policy, Assignments, and Intervening Assignments, among others.

²⁸³ Specifically, Ms. Beckles compared the final certification and final exception reports for each of the Relevant Trusts with the cure and trailing exception reports that were sent out at a later time reflecting the status of the exceptions. Beckles Report at ¶ 130.

Beckles “assess[es] the quality of the Mortgage Files associated with the [Relevant] Trusts”²⁸⁴ and concludes that 11,746 of the loans supporting the Relevant Trusts (“Beckles Breaching Loans”) had material document exceptions that were never corrected or were left “uncured.”²⁸⁵,
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170. Dr. Snow relies solely on Ms. Beckles’ conclusions, and her identification of the loans for which he simulates repurchase.²⁸⁷ 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.
171. 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.”²⁸⁸ 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.
172. 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 slowed the pace of foreclosures across the United States.”²⁸⁹ 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.”²⁹⁰ The next sentence

²⁸⁴ Beckles Report at ¶ 130.

²⁸⁵ *Id.* at ¶¶ 131, 135.

²⁸⁶ 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 *Commerzbank* case. These two loans are 831066272 and 841016759.

²⁸⁷ 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.”).

²⁸⁸ Beckles Report at ¶ 131, 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).

²⁸⁹ *Id.*

²⁹⁰ *Id.*

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[.]”²⁹¹ 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.”²⁹²

173. 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 *shorter* than the median foreclosure timelines for loans without material document exceptions in approximately half the states, suggesting that Ms. Beckles’ assumption that these document exceptions negatively influence foreclosure timelines is incorrect.²⁹³ 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.²⁹⁴

174. 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

²⁹¹ *Id.*

²⁹² *Id.* at 41.

²⁹³ Ross, Peter M. Rebuttal Expert Report of Peter M Ross. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (July 25, 2019) and supporting materials at Exhibit 11.

²⁹⁴ 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.”).

calculation method employed by Ms. Beckles.²⁹⁵ 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. *See Exhibit 13: Loss Severity Comparison Between Loans with Uncured Exceptions Deemed Material and Uncured Exceptions Deemed Immaterial in the Beckles Report.*

175. 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.²⁹⁶ Nevertheless, he simulates the repurchase of certain Beckles Breaching Loans in his but-for scenario. Specifically, Dr. Snow repurchases 433 of 677 Beckles Breaching Loans in ABFC 2006-OPT2, 481 out of 660 Beckles Breaching Loans in OOMLT 2007-3, and 1,200 out of 2,027 Beckles Breaching Loans in OWNIT 2006-2. Dr. Snow testified that he was unaware that the list of Document Defect Loans on which he simulates repurchase transactions is different from the list of Beckles Breaching Loans.²⁹⁷ He could not explain any discrepancy,²⁹⁸ and it is unclear what filters may have been applied.
176. 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.²⁹⁹ 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

²⁹⁵ This result remains qualitatively true even after controlling for loan and borrower characteristics that Ms. Beckles opines have an impact on loss severity. *See Beckles Report* at ¶ 104.

²⁹⁶ 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.").

²⁹⁷ *Id.* at 48:9-12 ("Q. Are you aware that Ms. Beckles identifies more loans as having exceptions than you repurchase in your damages model? A. No, I am not.").

²⁹⁸ *Id.* at 48:23-49:7 ("Q. If the list of loans that you have used to calculate document defect damages is different than the list of loans that Ms. Beckles has identified as having document defects, can you explain the difference between the two? [objection omitted] THE WITNESS: I can't.").

²⁹⁹ *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.").

documents. I understand that Ms. Beckles determined certain loans to have been cured and that Oak Branch located the missing documents in the productions in this case for certain loans, and thus the exceptions were “cured.”

177. Separately, Dr. Snow has not analyzed whether it would be possible to cure the Document Defect Loans as alleged by Ms. Beckles.³⁰⁰ 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.
178. 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.
179. Recalculating damages using Dr. Snow’s methodology, and excluding the loans that had “cured” or “curable” exceptions or Mr. Ross identified as free of material document defects, Document Defect Repurchase Damages are reduced by \$16.24 million (or 99.99 percent). *See Exhibit 14: Document Defect Repurchase Damages Excluding Loans Without Material Exceptions.*
180. 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 3,596 loans for which they could have sought repurchase or substitution.”³⁰¹ She goes on to state that, in her view, “[i]t was incumbent upon the Servicers and Trustee to seek repurchase or substitution of these loans before liquidating them.”³⁰² 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.
181. 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.

³⁰⁰ *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.”).

³⁰¹ Beckles Report at ¶ 135.

³⁰² *Id.*

Beckles' unsupported assertions, his calculations are unreliable and do not identify damages attributable to the trustee.

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

182. 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 Plaintiffs' experts, Mr. Hunter ("Hunter Breaching Loans").
183. Mr. Hunter's determination of whether certain R&W breaches materially and adversely affected the values of the loans or interests of the certificateholders is not based on empirical analysis, and Mr. Hunter does not quantify the increase in credit risk associated with these alleged R&W breaches that he asserts exist.
184. I undertook a quantitative analysis (the "Risk Profile Analysis") to assess whether the claims made by Mr. Hunter following his re-underwriting exercise ("Plaintiffs' Loan Characteristic Claims"), even if true, would have resulted in a statistically significant increase in the risk profile of the loans he reviewed.³⁰³ To do so, 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 Plaintiffs' Loan Characteristic Claims identified by Mr. Hunter.
185. For each loan, if the risk profile calculated using the Plaintiffs' Loan Characteristic Claims identified by Mr. Hunter was not statistically distinguishable from the risk profile calculated using the loan characteristics reported on the loan tape, Plaintiffs' 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 15: Results of Risk Profile Analysis*, which includes the results of the Risk Profile Analysis for each Hunter Breaching Loan.
186. Using Dr. Snow's methodology, the R&W Breach Repurchase Damages decrease by \$113.27 million (or 99.98 percent) as result of excluding from the hypothetical repurchase in the but-for scenario those loans for which Mr. Hunter's allegations resulted in a statistically

³⁰³ 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**.

indistinguishable risk profile. *See Exhibit 16: Repurchase Damages Excluding Loans with Statistically Indistinguishable Risk Profiles.*

187. In addition, I ran an analysis utilizing the findings of a re-underwriting expert retained by Wells Fargo, Kori Keith.³⁰⁴ 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. 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 and third-party information that the original underwriter could not have considered, or would not have been required to consider. 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. When Dr. Snow’s R&W Breach Repurchase Damages are recalculated excluding loans Ms. Keith deemed to be without material defects and adverse R&W breaches in her “Day One” and “Post-Origination” analyses, the result is that R&W Breach Repurchase Damages are reduced by \$112.86 million (or 99.62 percent) and 109.14 million (or 96.33 percent) respectively. *See Exhibit 17: R&W Breach Repurchase Damages Excluding Loans Without Material and Adverse R&W Breaches.*
188. To demonstrate the combined impact of Dr. Snow’s reliance on Ms. Beckles’ and Mr. Hunter’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 \$134.93 million (or 99.68 percent) using the results of Ms. Keith’s “Day One” analysis, and by \$131.20 million (or 96.93 percent) using the results of Ms. Keith’s “Post Origination” analysis. *See Exhibit 18: Repurchase Damages Excluding Loans Without Material Exceptions and Without Material and Adverse R&W Breaches.*

F. Dr. Snow’s Repurchase Damages Do Not Accurately Reflect Future Damages.

189. As described above, 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

³⁰⁴ Keith, Kori. Expert Report of Kori Keith. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (July 25, 2019) and supporting materials.

than 23 years, up to 2041).³⁰⁵ 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.

190. Dr. Snow then discounts the projected cashflows using the pass-through rates for the Relevant Certificates³⁰⁶ to arrive the present value of change in future cashflows to certificates (“Future Damages”). Future Damages account for \$6.42 million (or 4.74 percent) of the total Repurchase Damages.³⁰⁷

191. To project cashflows in both the baseline and but-for scenarios, Dr. Snow implements a forecast of loan performance beginning in June 2018.³⁰⁸ Because Dr. Snow’s forecasting begins in June 2018, one 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.³⁰⁹

192. 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 IMM 2005-6, Dr. Snow predicts that by the end of June 2018 they would have a principal balance of \$144 million, but according to the remittance reports, the principal balance was \$141 million, a discrepancy of over \$2.3 million for that month. By March 2019, Dr. Snow forecasts a total balance of \$130 million. However, the principal balance as reported in the remittance reports is \$122 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

³⁰⁵ Dr. Snow’s forecasts for OOMLT 2007-3 in the combined damages scenario end on Sept. 25, 2041. *See* Snow Report at supporting materials (waterfall scenarios).

³⁰⁶ *Id.* at ¶ 39 n. 45.

³⁰⁷ *Id.* at Fig. 7. Specifically, Dr. Snow predicts future damages of \$4.93 million for OOMLT 2007-3 and \$2.24 million for OWNIT 2006-2. His prediction for FFML 2006-FFA is negative (-0.74 million).

³⁰⁸ *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.”).

³⁰⁹ *Id.* at 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.”).

increases over time. See **Exhibit 19: Differences Between Dr. Snow's Forecast and Remittance Reports (June 2018 – June 2019)** for the differences across all Relevant Trusts.

193. 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.³¹⁰
194. In December 2018, the FFML 2006-FFA trust received approximately \$53 million as part of a settlement between the separate trustee and the sponsors for R&W breach loans in Group 2.³¹¹ However, because Dr. Snow's Repurchase Damages calculation only considered historical data up to May 2018, the payments from this settlement were not taken into account in Dr. Snow's calculation.³¹² He testified he would need to account for the settlement in his going-forward calculations.³¹³
195. Dr. Snow's Future Damages, which depend on his forecasts, are incorrect and unreliable 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.

VII. OPINION THREE: DR. SNOW'S SERVICING DAMAGES CALCULATIONS RELY ON ERRONEOUS INPUTS, UNSUPPORTED ASSUMPTIONS, AND AN INAPPROPRIATE METHODOLOGY.

196. Dr. Snow claims that "Servicing Damages" represent 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 took steps Plaintiffs assert were necessary to address breaches by

³¹⁰ 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. Seven of the eleven 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.

³¹¹ First Franklin Mortgage Loan Trust 2006-FFA Notice to Holders (Apr. 16, 2018). <www.ctslink.com> (accessed July 25, 2019) at Exhibit 1: RMBS Trust Settlement Agreement 3.1, 3.2, and 3.3.

³¹² Snow Report at ¶ 33 n. 36.

³¹³ Snow Dep. 168:20-169:7 ("Q. The \$53 million settlement post-dates May of 2018? A. Yes, I believe it is either December or January -- December of last year, January of this year is when it finally hit the trust but that is just my rough recollection. Q. You haven't accounted for that \$53 million settlement in your damages model yet? A. No. I plan to do so when I update the model to account for new data.").

the servicers; and (2) the principal and interest Plaintiffs actually received and are projected to receive in the real world.³¹⁴

197. Dr. Snow calculates his Servicing Damages under two scenarios. In the “Post-enforcement Servicing Damages” scenario, Dr. Snow assumes that servicing behavior would have improved beginning six months after the date on which an Event of Default or the equivalent, remained uncured (hereafter, the “Servicing Enforcement Date”).³¹⁵ In the “Catch-Up Servicing Damages” scenario, Dr. Snow additionally assumes that the servicer would make a so-called “catch-up” payment on the Servicing Enforcement Date to compensate the trust for alleged poor servicing in the period from trust closing up to the Servicing Enforcement Date.³¹⁶ Dr. Snow calculates Servicing Damages for all Relevant Trusts except FFML 2006-FFA.³¹⁷
198. The Servicing Enforcement Dates are intended to represent Event of Default or equivalent dates in each Relevant Trust.³¹⁸ But Dr. Snow uses only two Servicing Enforcement Dates across all ten trusts on which he calculates Servicing Damages. *See Table 4: Dr. Snow’s Servicing Enforcement Dates* for Dr. Snow’s Servicing Enforcement Date assumptions.

³¹⁴ Snow Report at ¶ 41.

³¹⁵ *Id.* at ¶ 44.

³¹⁶ *Id.*

³¹⁷ *See* fn. 101, *supra* (describing Dr. Snow’s treatment of potential Servicing Damages for FFML 2006-FFA).

³¹⁸ Snow Report at ¶ 44.

Table 4: *Dr. Snow's Servicing Enforcement Dates*

Trust	Dr. Snow's Servicing Enforcement Date
ABFC 2006-OPT2	September 1, 2010
CARR 2006-NC3	July 1, 2009
CARR 2006-NC4	September 1, 2010
CARR 2007-FRE1	July 1, 2009
IMM 2005-6	July 1, 2009
IMSA 2005-2	July 1, 2009
OOMLT 2007-3	September 1, 2010
OWNIT 2006-2	July 1, 2009
PPSI 2005-WLL1	July 1, 2009
SABR 2006-FR2	July 1, 2009

199. According to Dr. Snow, calculation of Servicing Damages is based on the alleged additional cashflow each securitization purportedly would have received had Wells Fargo enforced third-party servicers' contractual obligations to the Relevant Trusts ("Servicing Loss Reductions").³¹⁹ To calculate Servicing Loss Reductions, Dr. Snow utilizes severity rate differentials that Dr. Spencer has calculated for each SLG in each trust for each of the two scenarios.^{320, 321} In calculating these differentials, Dr. Spencer, in turn relied on certain opinions from Ms. Beckles, as described below. Dr. Snow has acknowledged that he did not independently verify the methodologies employed by Dr. Spencer.³²²
200. Dr. Spencer calculates different severity rate differentials for different groups of loans. In the Post-enforcement Servicing Damages scenario, Dr. Spencer includes only first-lien loans that liquidated with a loss between the Servicing Enforcement Date and January 2018.³²³ In the Catch-up Servicing Damages scenario, Dr. Spencer includes all first-lien loans that liquidated

³¹⁹ *Id.* at ¶ 25.

³²⁰ *Id.* at ¶ 43 and n. 51.

³²¹ *See* Spencer Report at ¶¶ 3, 15.

³²² Snow Dep. 191:19-192:3 ("Q. Have you independently examined the methodology that Dr. Spencer uses for his matching estimator? A. As I mentioned earlier I have not independently verified his analysis. Q. How many times has Dr. Spencer used a matching estimator in his career? A. There is no way for me to know that.").

³²³ Spencer Report at ¶ 39 and Table 6; Appendix C ¶¶ 35-36.

at any point prior to January 2018.^{324, 325} I refer to the loans utilized by Dr. Spencer in each scenario as “Match Eligible Loans.”

201. To calculate an individual loan’s severity rate differential, Dr. Spencer attempts to find, for each Match Eligible Loan, a “matching” loan from a control group of loans.³²⁶ Both the control group of loans utilized and the characteristics used to match loans were chosen by Ms. Beckles.³²⁷ Dr. Spencer calculates the loan-specific severity rate differential as the difference in severities between the matched pairs. He then attempts to adjust for bias due to discrepancies between the loan characteristics of each Match Eligible Loan and its corresponding control group loan (a “bias correction” procedure).³²⁸
202. Dr. Spencer next calculates the “weighted average severity rate treatment effect” for each SLG for each Relevant Trust.³²⁹ Dr. Snow’s report refers to the SLG-specific weighted average severity rate treatment effects as the “Severity Rate Differentials.”³³⁰ I adopt that terminology throughout this report for the sake of clarity.
203. Dr. Snow utilizes these Severity Rate Differentials to calculate his Servicing Loss Reductions. Specifically, Dr. Snow multiplies the Severity Rate Differentials by the beginning balance on the liquidation date, plus prior modification losses, of each first-lien loan that liquidated with a loss.³³¹ The result is Dr. Snow’s so-called “Servicing Loss Reduction.”
204. Next, using the adjusted cashflows associated with the Servicing Loss Reductions, Dr. Snow calculates but-for collateral cashflows, and purports to run them through each securitization’s

³²⁴ *Id.* at ¶¶ 35-36 and Table 4; Appendix C ¶¶ 35-36.

³²⁵ In addition, Dr. Spencer provides Severity Rate Differential calculations based on an analysis in which, at the request of counsel, he excludes loans that Plaintiffs contend should have been repurchased. In one set of calculations, after excluding such loans, he includes only loans that liquidated on or after the Servicing Enforcement Date. *See* Spencer Report at ¶ 39 and Table 7. In the other calculation, after excluding the repurchased loans, he includes loans that liquidated at any time prior to January 2018. *See* Spencer Report at ¶ 37 and Table 5. Dr. Snow utilizes these Severity Rate Differentials when he calculates Combined Damages under the Post-enforcement Servicing and Catch-up Servicing Damages scenarios, respectively.

³²⁶ Spencer Report at ¶ 18.

³²⁷ *Id.* at ¶¶ 22-23, 26.

³²⁸ *Id.* at ¶ 31.

³²⁹ *Id.* at ¶ 32.

³³⁰ *Id.* at ¶ 43.

³³¹ *Id.*

waterfall model to determine the impact of the Servicing Loss Reductions on investors. The present value of the difference between actual bond cashflows and but-for bond cashflows represents Servicing Damages.³³²

205. Dr. Snow also calculates Servicing Damages under three alternative “damages sensitivities,” in which he arbitrarily reduces the Severity Rate Differentials by 10, 20 and 50 percent.³³³

206. As described below, Dr. Snow’s calculations of Servicing Damages are flawed in multiple ways.

A. Dr. Snow’s Servicing Damages are Unreliable Because The Severity Rate Differentials Calculated by Dr. Spencer and Relied Upon by Dr. Snow Are Inaccurate and Cannot Be Reliably Used To Support His Damages Calculation.

207. The Severity Rate Differentials calculated by Dr. Spencer and that underpin Dr. Snow’s calculation of Servicing Damages suffer from at least two flaws that I highlight here.³³⁴ First, the matching process utilized by Dr. Spencer excludes important loan characteristics, resulting in an inappropriate control group. Second, the “bias correction” procedure utilized by Dr. Spencer is inconsistent with the source Dr. Spencer cites for support. Separately and together, these flaws result in an unreliable damages calculation.

The Matching Process Utilized by Dr. Spencer Excludes Important Loan Attributes Including Product Type.

208. Dr. Spencer calculates the Severity Rate Differential for each SLG by comparing the loss severity of loans in a control group to the loans underlying the Relevant Trusts (the so-called

³³² *Id.* at ¶ 45.

³³³ *Id.* at Appendix I.

³³⁴ I understand that Wells Fargo has also retained Justin McCrary, Ph.D. to provide an expert opinion regarding Dr. Spencer’s report and model. As such, the discussion here regarding Dr. Spencer’s report and model should not be considered as a comprehensive list of all critiques, and additional criticisms are described in Dr. McCrary’s report. *See* McCrary, Justin. Expert Report of Justin McCrary, Ph.D. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (July 25, 2019).

treatment group).³³⁵ To do so, he matches loans from the control group with loans from the treatment group, based on a set of loan characteristics.³³⁶

209. Dr. Spencer utilizes a control group comprised of loans held in the portfolios of GSEs including Fannie Mae and Freddie Mac.³³⁷ According to Ms. Beckles, a control group comprised of loans held in GSE portfolios is an appropriate control group because “the GSEs take reasonable steps to attempt to enforce industry standards for prudent servicing of loans in their portfolios.”³³⁸ Dr. Snow relies completely on the opinions of Ms. Beckles and Dr. Spencer in the selection of the GSE loans for the control population and the selection of the variables used for the matching estimator, and he stated in his deposition that “he has not been involved in any aspect of their analyses[.]”³³⁹ Dr. Snow also testified that he did not review any GSE loans or provide any input on the selection of the GSE loans for the control population.³⁴⁰
210. Whereas the GSE-loan control group is composed entirely of fully-amortizing, fixed-rate mortgages,³⁴¹ the group of Match Eligible Loans in the Relevant Trusts contains a variety of loan types, including adjustable-rate mortgage loans, balloon mortgage loans, and interest-only mortgage loans.³⁴² In fact, only a small minority of Match Eligible Loans are fully-amortizing

³³⁵ Spencer Report at ¶ 22.

³³⁶ The original loan characteristics included in Dr. Spencer’s matching criteria, which were chosen by Ms. Beckles, are: FICO score, loan-to-value ratio, original balance, property type, occupancy type, loan term, the presence or absence of mortgage insurance, origination quarter and year, and state in which the relevant property was located. Spencer Report at ¶ 26 and Table 2.

³³⁷ *Id.* at ¶ 15(c). *See* Spencer Dep. 76:8-11 (“Q. Professor, how did you select your control group? A. Ms. Beckles selected the control group.”) and 78:15-17 (“A. [Ms. Beckles] told me that GSEs were, you know, the best control group, and I -- I took her at that.”).

³³⁸ *Id.* at ¶ 15(b).

³³⁹ Snow Dep. 177:23-178:25.

³⁴⁰ *Id.* 177:23-178:22 (“Q. Were you involved in the selection of GSE loans as that control population for Dr. Spencer’s matching estimator? A. I was not involved in either Ms. Beckles’ or Dr. Spencer’s analysis. Q. Did you review any GSE loans or provide any input on the selection of the GSE loans for the control population? A. Again, I think I have answered, I have not been involved in any aspect of their analyses. Q. Okay. So then that would hold true for selection of the variables on which to match the loans in the matching process as well? A. Correct. Q. So you were not involved then with the selection of the co-variables that were identified by Ms. Beckles and used by Dr. Spencer in his matching process? A. Correct. I believe that there are reasonable co-variables but it is the, you know, the appropriate set of co-variables, I am not offering an opinion on.”).

³⁴¹ Beckles Report at n. 59, citing the *Single Family Loan-Level Dataset General User Guide*, Freddie Mac (Mar. 2018) and *Fannie Mae Single-Family Loan Performance Data Glossary*, Fannie Mae (Apr. 25, 2018).

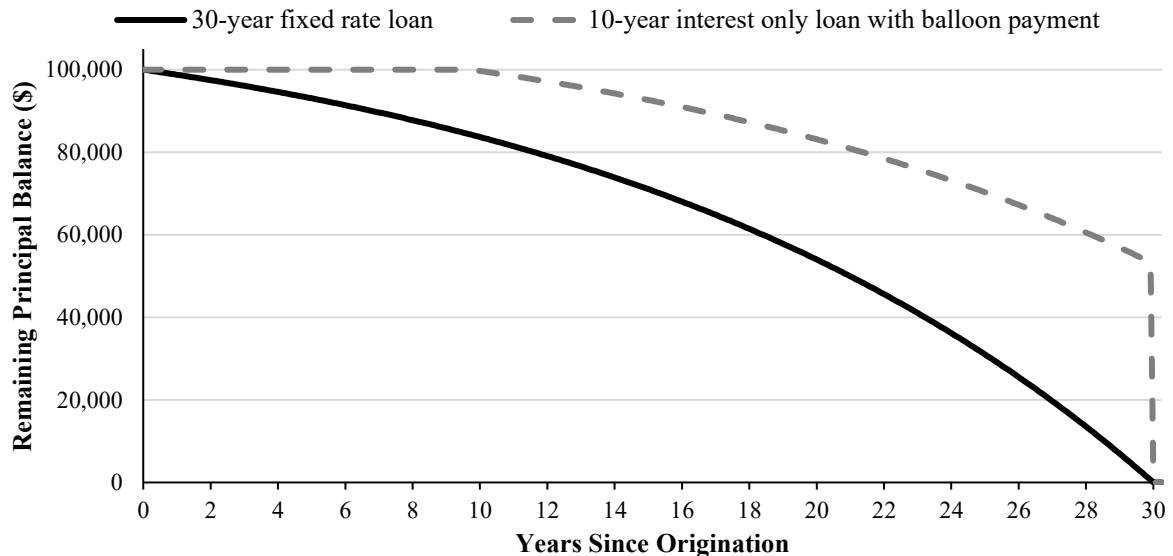
³⁴² I utilize the data source relied upon by Dr. Spencer, MBSData, to ascertain the presence or absence of adjustable-rate mortgage loans, balloon mortgage loans, or interest-only mortgage loans for Match Eligible Loans.

fixed-rate mortgages. For example, in the Post-enforcement Servicing Damages scenario, approximately 83.6 percent of Match Eligible Loans are adjustable-rate mortgage loans, 26.4 percent are interest-only mortgage loans, and 34.2 percent are balloon mortgage loans.³⁴³ Only 10.7 percent of Match Eligible Loans in the Relevant Trusts do not fall into at least one of these three categories. It is only because Dr. Spencer excludes product type from his matching criteria that he is able to match more than 80 percent of loans. This is a fundamental flaw undercutting the reliability of Dr. Spencer's and Dr. Snow's entire analyses and the calculations of Servicing Damages.

211. Consider two mortgage loans identical in all aspects, except one is a 30-year fixed rate mortgage loan and the other is a 30-year interest-only mortgage loan with a balloon payment.³⁴⁴ All else being equal, the unpaid balance of the interest-only mortgage loan would be greater than that of the fixed-rate mortgage loan because the interest-only mortgage loan would not have received principal payments that would reduce its outstanding balance. In addition, a balloon loan does not fully amortize over its lifetime and a large payment is required at maturity. See **Figure 1: Differences in Principal Balances For Loans With Different Product Types** for an illustration of how the balance on loans with different product types can differ over time.

³⁴³ These categories are not mutually exclusive. For example, an adjustable-rate mortgage loan may also have a balloon payment.

³⁴⁴ For such interest-loan mortgage loan, the interest-only period could, for example, last for 10 years, and the borrowers could start paying the principal off for the remainder of the loan term at an adjustable interest rate.

Figure 1: Differences in Principal Balances For Loans With Different Product Types

212. Consequently, in this example, if both mortgage loans liquidated at the same time, the loss severity of the interest-only/balloon mortgage would be higher than the fixed-rate loan. It is incorrect to attribute this differential to servicers' behavior, when the difference is simply attributable only to the payment schedule of the interest-only/balloon mortgage.
213. I did an analysis to determine how damages are affected when certain product type attributes are included by the matching estimator. Specifically, I included as covariates utilized by the matching estimator the covariates reflecting fixed rate versus adjustable rate; balloon versus non-balloon; and interest-only versus non-interest-only. This resulted in a match rate of only 8.1 percent in the Post-enforcement Servicing Damages Scenario and 6.5 percent in the Catch-up Servicing Damages scenario,³⁴⁵ leaving 10,323 loans unmatched in the Post-enforcement scenario and 17,411 loans unmatched in the Catch-up scenario. As Dr. Snow has admitted, such a low rate match rate is problematic and renders the entire analysis unreliable.³⁴⁶ This most likely explains why Dr. Spencer declined to include these covariates himself. But relevant

³⁴⁵ This simply illustrates how much Dr. Spencer's results are skewed by ignoring product type in his matching criteria. It is not my opinion that by controlling for product type, Dr. Spencer's matching criteria would be sufficient. As discussed in the next section and in other expert reports, Dr. Spencer's Severity Rate Differential calculations suffer from additional flaws.

³⁴⁶ Snow Dep. 196:7-14 ("Q. Anything other than zero as a match rate percentage at which you would lose confidence in using the severity rate differential? A. Again, it depends completely on the context. If it were, you know, very low, say 10 percent or otherwise, I would be concerned.").

covariates cannot be ignored in a valid matching analysis, as Dr. Spencer himself concedes.³⁴⁷

In this case, by failing to control for product type, Dr. Spencer's matching estimator is rendered unreliable. It follows that Dr. Snow's Servicing Damages calculations that derive from that unreliable matching estimator are equally unreliable.

214. But utilizing these important covariates despite the resultingly low match rate, I calculated the Severity Rate Differentials for each SLG and applied them to all Match Eligible Loans in the Relevant Trusts. This results in a reduction to Dr. Snow's Servicing Damages figures of \$11.52 million (or 26.2 percent) in the Post-enforcement Servicing Damages scenario and of \$5.27 million (or 9.7 percent) in the Catch-up Servicing Damages scenario.³⁴⁸
215. Further, calculating the Severity Rate Differentials using only fully-amortizing, fixed rate mortgage loans and applying these differentials to only those same types of loans results in a reduction to Dr. Snow's Servicing Damages of \$37.19 million (or 84.7 percent) in the Post-enforcement Servicing Damages scenario, and of \$47.34 million (or 87.1 percent) in the Catch-up Servicing Damages scenario. Notably, most of the remaining damages are attributable to the IMM 2005-6 trust—\$5.7 million out of the \$6.2 million in the Post-enforcement Servicing Damages scenario, and \$5.8 million out of \$6.3 million in the Catch-up Servicing Damages scenario. Plaintiffs sold the 1M1 tranche from the IMM 2005-6 tranche in May 2012. Dr. Snow assumes in his but-for scenarios that Plaintiffs continued to hold it to maturity. As discussed in more detail below, the counterfactual assumption that the 1M1 certificate would have been held to maturity in the but-for world is responsible for \$5.2 million of "residual" damages, even when the Severity Rate Differential is set to zero.

The Methodology Used for Dr. Spencer's "Bias Correction Procedure" Is Disfavored in the Very Source Cited by Dr. Spencer as Support.

216. Dr. Spencer's Severity Rate Differential calculations suffer from additional flaws. As part of his calculation of the SLG-specific Severity Rate Differentials, he purports to employ a process

³⁴⁷ Spencer Dep. at 101:21-24 ("Q. And identification of all important covariates is necessary to assure us that we don't have confoundedness? A. Right.").

³⁴⁸ The waterfall model Dr. Snow utilized in calculating Servicing Damages for PPSI 2005-WLL1 contains a typographical error as described in Section VIII, and these numbers reflect the correction of that error.

described by Guido Imbens and Donald Rubin (2015) (“Imbens and Rubin”)³⁴⁹ to “adjust for potential bias due to discrepancies between the loan characteristics of an at-issue loan and its matched GSE loan[.]”³⁵⁰ However, the “bias correction procedure” that Dr. Spencer carries out is inconsistent with the procedure endorsed by Imbens and Rubin.

217. In Dr. Spencer’s matching process, he requires the matched loans to be identical in certain characteristics but not others. Specifically, he allows discrepancies of up to ten percent in original balance, FICO score, loan-to-value ratio, and loan term.³⁵¹ For cases such as these, Imbens and Rubin have described bias correction procedures, the aim of which are to reduce the bias created by the matching discrepancies.³⁵² The three bias-correction approaches described by Imbens and Rubin attempt to reduce bias by using the same covariates used to match control group members and treatment group members, “combined with additional model-based adjustments[.]”³⁵³
218. Applying the Imbens and Rubin principles here, the bias correction procedure can use the same covariates and loan characteristics that were used in the matching estimator process. However, it does not follow that one can introduce an additional variable that was not part of the matching criteria.
219. Dr. Spencer’s methodology deviates from the approach described by Imbens and Rubin, because it does just that: it introduces changes in the local housing price index (“HPI”) between a loan’s origination date and its liquidation date as an additional variable in the bias correction procedure.³⁵⁴ Because changes in the HPI were not included in Dr. Spencer’s matching criteria, Dr. Spencer should not have included changes in the HPI in his bias correction procedure. By removing changes in the HPI from Dr. Spencer’s bias correction

³⁴⁹ Imbens, Guido W., and Donald B. Rubin. *Causal Inference in Statistics, Social, and Biomedical Sciences: An Introduction*. Cambridge University Press (2015). See Spencer Dep. 21:8-10 (“Q. Who recommends it? A. Imbens and Rubin in their -- in their book, which I’ve cited.”).

³⁵⁰ Spencer Report at ¶ 31.

³⁵¹ *Id.* at ¶ 28. See Spencer Dep. 154:7-10 (“A. ... [10 percent] is a compromise between matching super finely and matching very, very broadly. And when you have continuous measurements you always need to do some trade-off.”).

³⁵² Imbens & Rubin, *supra* note 349, at 415-417.

³⁵³ *Id.* at 416.

³⁵⁴ See Spencer Dep. 178:8-15 (“Q. Your bias correction procedure uses some of the covariates? A. Right. Q. And then it uses the loan’s local housing market? A. That’s right. Q. Which is not a covariate? A. That’s right.”).

procedure, Servicing Damages are reduced by about \$0.3 million (or 0.6 percent) in the Post-enforcement Servicing Damages scenario, or by about \$6.4 million (or 11.8 percent) in the Catch-up Servicing Damages scenario.

B. Dr. Snow's Application of Severity Rate Differentials to Unmatched Loans Is Not Supported.

220. As described above, Dr. Spencer's process to calculate SLG-specific Severity Rate Differentials involves attempting to pair each Match Eligible Loan in the Relevant Trusts with a control group loan based on certain loan characteristics.³⁵⁵
221. In a significant number of instances—3,381 loans, or 18 percent of Match Eligible Loans—Dr. Spencer was unable to match the loan with a control-group loan.³⁵⁶ Dr. Spencer calculates SLG-specific Severity Rate Differentials using matched loans and applies them to unmatched loans.³⁵⁷ By doing so, Dr. Spencer effectively presumes that matched loans can serve as a proxy for loans that he could not match. Dr. Spencer does not provide support for or even express confidence in this presumption.^{358, 359} Indeed, the literature makes clear that in cases such as this, it would be inappropriate to make data-based causal inferences about members of a treatment group that cannot be matched to control-group members.³⁶⁰
222. Dr. Spencer even applies averages *across* supporting loan groups. For IMM 2005-6 Group 2, Dr. Spencer could not match even a single Match Eligible Loan with a loan from the GSE control group. But Dr. Spencer instead assumes that IMM 2005-6 Group 2 would share the

³⁵⁵ Spencer Report at ¶¶ 28, 33.

³⁵⁶ *Id.* at ¶ 33. See Spencer Dep. 76:21-24 (“A. They’re able to provide matches to the vast majority of the at-issue loans. Q. Did you say the ‘vast majority’? A. Yes.”).

³⁵⁷ Spencer Report at ¶¶ 32, 33.

³⁵⁸ See Spencer Dep. 156:18-157:9 (“Q. So doesn’t the fact that you have this ‘18 percent of loans that you can’t match tell you can’t draw conclusions? Do you see the, sort of, common sense, intuitive point that I’m making here? A. Right. This is always an issue in these kinds of empirical studies. And I will say that I’m not as confident about our estimates for the unmatched as I am about the matched. Because the matched we were not able to match. And, therefore, they -- they’re different in some ways than the matched.”).

³⁵⁹ I understand that Wells Fargo’s expert Dr. Justin McCrary has opined that this extrapolation process is improper.

³⁶⁰ See Gelman, Andrew, and Jennifer Hill. *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Cambridge University Press (2006) at 201 (“If these are distributions for an important confounding covariate, then areas where there is no overlap represent observations about which we may not want to make causal inferences. Observations in these areas have no empirical counterfactuals. Thus, any inferences regarding these observations would have to rely on modeling assumptions in place of direct support from the data.”).

same Severity Rate Differential as Group 1,³⁶¹ even though the two groups of loans are different in many criteria Dr. Spencer considers in his matching exercise. For example, the Group 1 loans are primarily for single family properties, whereas all of the Group 2 loans are all for multifamily properties.³⁶² Nearly 85 percent of the Group 1 loans were owner occupied, whereas all of the Group 2 loans were investment properties.³⁶³ The original LTV ratios of the Group 1 loans ranged from 12.00% to 124.44%, whereas the original LTV ratios of the Group 2 loans ranged from 25.18% to 80.00%.³⁶⁴ Dr. Spencer simply has no basis for imputing claimed loss suffered by the Group 2 loans in IMM 2005-6 using the Severity Rate Differential calculated for the fundamentally different Group 1 loans.

223. Indeed, Dr. Spencer does not point to statistical tests that confirm the appropriateness of applying the average Severity Rate Differential to unmatched loans, either within a SLG or across SLGs. When I conducted such statistical tests, I determined that unmatched loans are, in fact, statistically significantly different from matched loans with respect to the vast majority of loan characteristics Dr. Spencer utilized in his matching criteria. *See Exhibit 20: Representativeness Tests Between Matched and Unmatched Loans in Dr. Spencer's Analysis.*

224. Removing unmatched loans from Dr. Snow's Servicing Loss Reduction calculations results in reductions to Dr. Snow's Servicing Damages of approximately \$7.7 million (or 17.5 percent) in the Post-enforcement Servicing Damages scenario, and approximately \$6.2 million (or 11.4 percent) in the Catch-up Servicing Damages scenario.

225. When the two elements of my separate analyses (modifying the covariates and excluding unmatched loans from extrapolation) are considered simultaneously, damages are further reduced. Specifically, when the Severity Rate Differentials are calculated using only fully-amortizing, fixed rate mortgage loans *and* such differentials are applied *only to* matched loans, Dr. Snow's Servicing Damages are reduced by \$37.6 million (or 85.6 percent) in the Post-enforcement Servicing Damages scenario, and \$47.9 million (or 88.0 percent) in the Catch-up Servicing Damages scenario. As described above and as discussed in more detail in Section

³⁶¹ Spencer Report at Tables 4-7 ("The Severity Rate Differential is imputed for IMM 2005-6 - 02 using the Severity Rate Differential of IMM 2005-6 - 01 since none of the liquidated loans in IMM 2005-6 - 02 matched to GSE loans.")

³⁶² IMM 2005-6 Prospectus Supplement at WF_PL_000016197 and WF_PL_000016207.

³⁶³ *Id.* at WF_PL_000016195 and WF_PL_000016206.

³⁶⁴ *Id.*

VII, the counterfactual assumption that the 1M1 certificate would have been held to maturity in the but-for world leads to the “residual” damages of \$5.2 million. Because I utilized this same assumption for the purposes of comparison, these recalculated damages figures include these questionable residual damages amounts.

226. A summary of the reductions to Dr. Snow’s Servicing Damages, by trust and scenario, under a variety of alternative assumptions is presented in **Exhibit 21: Reduction to Dr. Snow’s Servicing Damages Under Alternative Assumptions**.

C. Dr. Snow’s Selection of Servicing Enforcement Dates Is Unsupported.

227. Dr. Snow’s Servicing Damages calculations are further flawed due to his use of unsupported Servicing Enforcement Dates. Despite the fact that his Servicing Damages calculations hinge on the assumptions regarding these dates, Dr. Snow provides no explanation for how he selects them. He simply assumes that “six months after the date on which an Event of Default, or the equivalent, remained uncured, the [t]rustee began performing its duties appropriately and the loan servicing for each [s]ecuritization performs as it should going forward.”³⁶⁵ In his deposition, Dr. Snow stated that the event of default dates and six-month period were assumptions provided to him by counsel, and he has not performed any independent investigation of the claimed events of default.³⁶⁶ He could not say why one date was picked instead of another. In addition, he could not say what was happening during this six-month period and testified that he did not investigate how long it would take for a trustee to become successful in enforcing third-party servicers’ alleged servicing obligations.³⁶⁷
228. And yet the Servicing Enforcement Date is a crucial factor in Dr. Snow’s analysis. In his Post-enforcement Servicing Damages scenario, Dr. Snow applies the applicable Severity Rate Differential only to first-lien loans liquidated with a loss between the Enforcement Date and

³⁶⁵ Snow Report at ¶ 44.

³⁶⁶ Snow Dep. 213:11-14 (“Q. You might have mentioned this but who provided the [enforcement dates] to you? A. Counsel.”); 213:15-19 (“Q. Was there any independent investigation of the claimed events of default? A. No. That is ultimately a legal conclusion.”); 214:2-4 (“Q. That six-month period is another assumption, right? A. Correct.”).

³⁶⁷ *Id.* at 217:23-218:17 (“Q. ...What happens during that six-month period between the event of default and when the trustee becomes successful in enforcing its alleged servicing obligations in your model? A. Just that. They make a transition from a situation where there is alleged poor oversight to a situation where there is oversight consistent with that was estimated by Dr. Spencer. Q. What exactly is happening in that transition from alleged poor oversight to alleged proper oversight? A. I don’t know the specifics. Q. Did you undertake any investigation of how long those types of efforts would take to move from poor oversight allegedly to better oversight? A. No I did not.”).

January 2018.³⁶⁸ As such, the Enforcement Date dictates whether or not a loan is included in his Servicing Loss Damages calculations. In Dr. Snow's Catch-up Servicing Damages scenario, the Servicing Enforcement Date dictates when the trust would receive a lump-sum catch-up payment from the servicer in the but-for world and the amount of such payment, as all loans that had liquidated prior to this date would be included in the catch-up payment calculations.

229. To demonstrate how Dr. Snow's Servicing Enforcement Date impacts his calculation, I recalculated Dr. Snow's Servicing Damages using a range of alternative Servicing Enforcement Dates. I found that, for example, Dr. Snow's Servicing Damages in the Post-enforcement Servicing Damages scenario are reduced by \$16.5 million (or 37.47 percent) when the Servicing Enforcement Dates are delayed by one year. *See Exhibit 22: Post-enforcement Servicing Damages Utilizing Alternative Servicing Enforcement Dates*. Further reductions would occur using later Servicing Enforcement Dates.

D. Dr. Snow's Use of a "Catch-up Payment" Is Not Supported, Rendering His Analysis Unreliable.

230. In the Catch-up Servicing Damages scenario, in addition to assuming that servicing behavior would have improved after Wells Fargo enforced the servicers' obligations, Dr. Snow assumes that a so-called "catch-up" payment would be made by the current servicers to compensate the Relevant Trust for allegedly poor servicing prior to the date of enforcement.³⁶⁹ Dr. Snow contends that this payment would come from the underlying servicers.³⁷⁰ Dr. Snow provides no support for these assumptions.³⁷¹ Without such support, his use of the "catch-up payment" renders his methodology for calculating Servicing Damages unreliable.

³⁶⁸ Snow Report at ¶¶ 43-44.

³⁶⁹ *Id.* at ¶ 44.

³⁷⁰ Snow Dep. 225:16-226:5 ("Q. I wanted to say who makes the catch-up payments to Wells Fargo upon Wells Fargo enforcing the servicers servicing obligations in your but-for model? A. The servicers would make that payment. Q. Which servicers? A. The underlying servicers. Q. Is that the servicer at the time of the event of default or the original servicer? A. You know, it would be the servicer I think relevant to the loan at the time the loan defaults."); 295:12-20 ("Q. What about the servicing damages payments, the catch-up servicing damages payments? A. Correct. Q. Who would be paying those to Wells Fargo in the but-for world that you are modeling? A. I answered this earlier today, the underlying servicers.").

³⁷¹ *Id.* at 179:21-24 ("I was asked to calculate damages by counsel according to these two scenarios [post-enforcement and catch-up]. I understand there are different legal theories behind them.").

231. In his deposition, Dr. Snow stated that he did not rely on any specific text of the PSAs to support the claimed catch-up payments, he is not aware whether the PSAs for the trusts use the phrase “catch up,” and he could not identify any provision in the PSAs that makes Wells Fargo responsible for servicer conduct prior to an event of default.³⁷² He also admitted in his deposition that he does not know what responsibilities Wells Fargo would have prior to an event of default.³⁷³ He could not explain (and, in fact, wrongly explained)³⁷⁴ his Catch-up Servicing Damages model and its underlying assumptions and had to take a break during the deposition to call his team for information regarding the dates and timeframes he had used to calculate Catch-up Servicing Damages.³⁷⁵
232. In addition, Dr. Snow stated in his deposition that he is not aware of any instance or precedent from any source of an RMBS trustee demanding or servicer paying a catch-up payment.³⁷⁶ To his knowledge, a servicer making a catch-up payment would be unprecedented.³⁷⁷
233. When asked at his deposition how Wells Fargo would have known the amount of any catch-up payment to demand from a servicer, Dr. Snow testified that Wells Fargo could have done the

³⁷² *Id.* at 203:19-204:2 (“Q. You were not relying on any specific text of the PSAs to support the catch-up servicing payment? A. I have not been pointed to any essentially. Q. And you haven’t identified any, right? A. No, I have not.”); 203:3-7 (“Q. Do the PSAs for the trusts here use the phrase ‘catch up’ in relation to servicing at all? A. Not that I am aware of one way or the other.”); 226:14-19 (“Q. Can you identify any provision in the PSAs that makes Wells Fargo responsible for servicer conduct prior to an event of default? A. I can’t offhand. In other words, I can’t one way or the other.”).

³⁷³ *Id.* at 227:3-13 (“Q. What should Wells Fargo have done? A. I don’t-- [objection omitted] THE WITNESS: Yes. I don’t know if this is provide greater oversight. I don’t know exactly what their responsibilities are prior to the event of default. Again this was a calculation that counsel asked me to make.”); *see also id.* at 227:25-228:6 (“I mean I understand post default, that Wells Fargo has heightened responsibilities. I don’t know all the legal underpinnings of what is underlying the catch-up payments.”).

³⁷⁴ *Id.* at 220:13-222:15.

³⁷⁵ *Id.* at 222:24-223:12 (“Q. Dr. Snow, let’s pick up with the catch-up servicing damages. We took a break so you could connect with some folks on your team. A. Right. Q. Were you able to do that? A. I was. Q. All right. So let’s go back to the question as to the time period on which the catch-up servicing damages are being calculated. Have you gotten clarification on that? A. I do.”).

³⁷⁶ *Id.* at 205:15-18 (“Q. Are you aware of any instance from any source of an RMBS trustee demanding this type of catch-up payment? A. Not one way or another.”); 206:13-24 (“Q. You can’t identify any precedent for a trustee demanding this type of catch-up payment, can you? A. Again, that ultimately calls for legal analysis which again I don’t know one way or the other. Q. In your experience as an economist can you identify any precedent for a trustee demanding or obtaining this type of catch-up payment? A. It has not happened in my experience[.]”).

³⁷⁷ *Id.* at 206:13-207:15.

unreliable matching estimator analysis that Plaintiffs' experts did here,³⁷⁸ or something similar—*e.g.*, employing a Ph.D. statistician, matching GSE loans with loans in the Relevant Trusts, calculating weighted average Severity Loss Differentials based on Ms. Beckles' identified covariates, and then extrapolating to unmatched loans to calculate Servicing Damages. There is simply no basis for this assumption.

234. In essence, Dr. Snow's Catch-up Servicing Damages are an attempt to recover—and the equivalent of—pre-breach damages. He awards recoveries for servicing failures occurring from the trust closing to the Servicing Enforcement Date, years before any event of default and years before Wells Fargo had an obligation under the PSAs and Plaintiffs' own legal theory to enforce or act on alleged third-party servicing issues.

235. For all these reasons above, Dr. Snow's Catch-up Servicing Damages, which rely on his unsupported assumption of an unprecedented catch-up payment, are unreliable.

E. Dr. Snow's Assumption That the IMM 2005-6 1M1 Certificate Would Have Been Held Until Maturity in the But-For Scenario Is Unsupported.

236. Plaintiffs continue to hold the certificates they purchased in the Relevant Trusts with one exception. The IMM 2005-6 1M1 certificate, which was allegedly purchased by Phoenix Light, was apparently sold in May 2012.³⁷⁹ When calculating Servicing Damages with respect to that certificate, Dr. Snow assumes that Phoenix Light would have held the 1M1 certificate until maturity (through 2013) but-for Wells Fargo's alleged failure to address breaches by servicers.³⁸⁰ According to Dr. Snow, he bases this assumption on consultation with counsel.³⁸¹ Dr. Snow provides no facts, data, or analysis supporting the assumption. However, Dr. Snow's

³⁷⁸ *Id.* at 200:16-19 (“Q. Are you aware of any court that has accepted or awarded damages calculation (sic) of catch-up servicing damages? A. Not that specifically.”); 208:11-13 (“Q. How was Wells Fargo to come up with this calculation of this amount? A. Similar to what I have done.”); 210:4-21 (“Q. And a but-for world damages model is to model accurately and reliably what should have happened in the absence of the allegedly breaching conduct, right? A. I would – in this particular case it is modeling if Wells Fargo had made that type of payment, had done the type of analysis that is being presented here and/or made some estimate of the measure of the alleged servicing misdeeds and paid that to plaintiffs. Q. What I want to know is how was Wells Fargo supposed to know that this was the amount that it should have pursued in the but-for world? A. I presume Wells Fargo could have pro--could have done (sic) similar type of analysis.”).

³⁷⁹ Snow Report at ¶ 9 n. 2.

³⁸⁰ *Id.* at Fig. 4 n. 24.

³⁸¹ Snow Dep. 240:15-18.

application of this assumption leads to the creation of “damages,” under his own model, that cannot be reasonably tied to Wells Fargo’s alleged inaction.

237. Dr. Snow calculates Servicing Damages by multiplying, for each Match Eligible Loan, the unpaid balance and modification losses associated with such loan by the applicable Severity Rate Differential estimated by Dr. Spencer. In the absence of a Severity Rate Differential (*i.e.*, in the case where the at-issue loans in the Relevant Trusts had no better or worse recoveries at liquidation than Dr. Spencer’s control group), the Servicing Damages should equal zero. This is the case for all trusts except IMM 2005-6. When the Severity Rate Differential is set to zero for IMM 2005-6, Dr. Snow’s model nevertheless generates approximately \$5.15 million in claimed Servicing Damages, regardless of the scenario.

238. The presence of these “residual” damages are solely a consequence of Dr. Snow’s assumption that the 1M1 certificate would have been held to maturity in the but-for world. The \$5.15 million (31.8 percent of the \$16.2 million claimed in the Post-enforcement Servicing Damages scenario for IMM 2005-6, or 30.6 percent of the \$16.8 million claimed in the Catch-up Servicing Damages scenario) is a direct result of Dr. Snow’s assumption of continued holding of the certificate and unrelated to a difference in loss severity rates or action by Wells Fargo.

F. Dr. Snow’s Sensitivity Analysis Using Alternative Severity Rate Differentials Is Misguided.

239. As with Repurchase Damages, Dr. Snow calculates Servicing Damages using three alternative “damages sensitivities.”³⁸² In the first scenario, he reduces the Severity Rate Differential by 10 percent.³⁸³ In the second and third scenarios, respectively, he reduces the differentials by 20 and 50 percent.³⁸⁴

240. For Servicing Damages, Dr. Snow fails to provide an explanation of what his sensitivities analysis is meant to address. Such unsubstantiated reductions are unreliable and cannot address defects in Dr. Snow’s Servicing Damages calculations. Moreover, Dr. Snow does not provide a basis for selecting the 10, 20, and 50 percent reduction to Severity Rate Differentials.

³⁸² Snow Report at ¶ 67.

³⁸³ *Id.*

³⁸⁴ *Id.*

VIII. OPINION FOUR: CORRECTING AN ERROR IN THE WATERFALL MODEL DR. SNOW USES FOR PPSI 2005-WLL1 REDUCES DR. SNOW'S SERVICING DAMAGES BY UP TO 49 PERCENT FOR THAT TRUST.

241. Dr. Snow contends that Plaintiffs' Servicing Damages associated with the PPSI 2005-WLL1 trust total \$7.24 million in the Post-enforcement Servicing Damages scenario and \$11.05 million in the Catch-up Servicing Damages scenario.³⁸⁵ These calculations are based on a waterfall model that contains an error.
242. The PSA provisions for PPSI 2005-WLL1 specify that after the stepdown date, a loss trigger goes into effect when collateral losses exceed three percent of the collateral balance at issuance, with certain adjustments to that threshold occurring at pre-determined chronological intervals.³⁸⁶ In Dr. Snow's model, however, the loss trigger threshold value has an incorrect data format, which causes the waterfall model to act as though a loss trigger were in effect even where collateral losses had not yet met the relevant loss-trigger threshold.³⁸⁷
243. As a result, the principal distribution waterfall in the waterfall model is different than it would have been without a trigger event. Over \$10.47 million in principal distributions are diverted away from subordinate tranches as a result of this error, and three of these subordinate tranches are Relevant Certificates at-issue in this case. See **Exhibit 23a: Illustration of PPSI 2005-WLL1 Principal Waterfall After the Stepdown Date**. See also **Exhibit 23b: Dr. Snow's Incorrect Principal Distributions Resulting From PPSI 2005-WLL1 Waterfall Model Error**.
244. When this error is corrected, Dr. Snow's Servicing Damages associated with the PPSI 2005-WLL1 trust are reduced by approximately \$3.52 million (or 49 percent) and \$0.32 million (or 3 percent) in Dr. Snow's Post-enforcement and Catch-up Servicing Damages scenarios, respectively.
245. Dr. Snow also testified at his deposition about another error his team identified in the waterfall model (for the IMM 2005-6 A1 certificate). He indicated that the waterfall model he relies on does not calculate monoline reimbursement correctly, but he could and did not otherwise explain the error at his deposition.³⁸⁸ I reserve all rights to respond to any recalculation of

³⁸⁵ *Id.* at ¶ 45.

³⁸⁶ PPSI 2005-WLL1 PSA at WF_PL_000000187 and WF_PL_000000192.

³⁸⁷ *Id.* at WF_PL_000000191-2.

³⁸⁸ Snow Dep. 236:24-237:4.

damages correcting this unexplained error should Dr. Snow continue to include the IMM 2005-6 A1 tranche in his analysis after he submits his reply report..

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

246. 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. Nor does Dr. Snow analyze or account for costs or losses to the Relevant Trusts associated with the undefined servicing enforcement actions contemplated in his but-for scenario.
247. First, as to Repurchase Damages, 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; for negotiating an amicable resolution; and ultimately enforcing, if necessary, repurchases of specific loans.³⁸⁹ Each step necessary to effectuate repurchases costs time and money that Dr. Snow has not analyzed or incorporated.
248. Plaintiffs themselves 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."³⁹⁰
249. Plaintiffs have 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."³⁹¹ Indeed,

³⁸⁹ 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.

³⁹⁰ Coordinated Plaintiffs' Memorandum of Law Supporting Sampling, *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Jan. 11, 2017) at 3.

³⁹¹ Plaintiffs' Second Supplemental Responses and Objections to Interrogatory Nos. 1-6 of Wells Fargo Bank, N.A.'s Category 1 Interrogatories, Interrogatory No. 1 of Wells Fargo Bank, N.A.'s Category 2 Interrogatories, and

an examination of Plaintiffs' invoices from The Oakleaf Group LLC for services associated with 1,103 individual loans reveals that the Plaintiffs were charged based on the disposition of the loan file (categorized as "Withdrawn Loans," "Incomplete File," or "Loan Review," with base rates of \$131.63, \$131.63, and \$526.50, respectively).³⁹² 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 withdrawn or incomplete most frequently had associated charges totaling \$131.63, and loan reviews most frequently had associated charges totaling \$585.

250. Nevertheless, Plaintiffs' 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 Plaintiffs); as he summarily stated, he does not believe an analysis of costs associated with enforcement would be "relevant for [his] calculations."³⁹³ 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.³⁹⁴

251. 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

Interrogatory No. 1 of Wells Fargo Bank, N.A.'s Category 3 Interrogatories. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (May 15, 2019) at 24.

³⁹² Invoice #2017-05 - PLWR_MAY-17 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (May 31, 2017) (PL_EXPERT_WF_000001); Invoice #2017-12 - PLWR_DEC-17 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (Dec. 31, 2017) (PL_EXPERT_WF_000003); Invoice #2018-03 - PLWR_MAR-18 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (Mar. 31, 2018) (PL_EXPERT_WF_000011); Invoice #2018-03 - PLWR_MAR18B from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (Apr. 30, 2018) (PL_EXPERT_WF_000023); Invoice #2018-07 - PLWR_JUL-18 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (July 31, 2018) (PL_EXPERT_WF_000036); Invoice #2018-08 - PLWR_AUG-18 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (Aug. 31, 2018) (PL_EXPERT_WF_000044); and Invoice #2018-09 - PLWR_SEP-18 from The Oakleaf Group LLC to Wollmuth Maher & Deutsch LLP (Sept. 30, 2018) (PL_EXPERT_WF_000051).

³⁹³ Snow Dep. 85:9-14 ("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.").

³⁹⁴ For example, the OWNIT 2006-2 PSA provides that "[t]he Trustee shall be entitled to compensation...for all services rendered by it in the execution of the trusts hereby created and in the exercise and performance of any of the powers and duties hereunder of the Trustee." See OWNIT 2006-2 PSA at WF_PL_000018025.

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 mortgage loans from the trust.³⁹⁵ After lengthy and costly proceedings, the parties eventually settled for \$21.5 million and funds were distributed in November 2018.³⁹⁶

252. 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.”³⁹⁷ 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.³⁹⁸

253. 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.³⁹⁹ 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.⁴⁰⁰ 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

³⁹⁵ 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).

³⁹⁶ 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”).

³⁹⁷ Remittance Reports: MSM 2006-4SL (Jan. 2012 to Feb. 2019).

³⁹⁸ 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.”).

³⁹⁹ 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.”).

⁴⁰⁰ *Id.* at 115:13-18; *see also* Snow Report Appendix B.

actions had resulted in a final judgment in favor of plaintiffs. *See Exhibit 11: Repurchase Litigation Timelines for Cases in Dr. Snow's Appendix B.*

254. Second, and similarly, Dr. Snow has not considered potential costs associated with the hypothetical increased enforcement efforts undertaken by the trustee to address servicing breaches that are the basis for Dr. Snow's Servicing Damages. As noted by Plaintiffs' own expert, Ms. Beckles, Plaintiffs contend that Wells Fargo should have demanded that relevant servicers improve their performance and reimburse the trusts for prior uncured breaches, and where such efforts failed, should have replaced the servicer and/or sued for damages.⁴⁰¹ But Dr. Snow fails to identify, consider, or account for the costs associated with such efforts or servicer replacements. Dr. Snow assumes that the trustee's enforcement efforts with respect to servicers' performance would be successful, and he has not considered potential costs to replace the servicers or the impacts on losses to the Relevant Trusts resulting from replacing servicers, including at times of borrower distress.⁴⁰²
255. 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.

256. 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 Plaintiffs' but-for world. Certificateholders who invested in various tranches have different economic incentives regarding the actions of Wells Fargo as to repurchases and servicing enforcement. For

⁴⁰¹ Beckles Report at ¶ 88.

⁴⁰² According to CTSLink, servicer changes occurred in the at-issue trusts during Plaintiffs' claimed holding period. For example, Option One Mortgage Corp., the original servicer of ABFC 2006-OPT2 and OOMLT 2007-3, was acquired by American Home Mortgage Servicing, Inc. in April 2008. Servicing transfers were also recorded in remittance reports. *See, e.g.*, ABFC 2006-OPT2 Remittance Report (May 28, 2013) ("Due to the recent servicing transfer, Wells Fargo Bank, N.A., in its role as Trustee or Master Servicer and/or Securities Administrator ("Wells Fargo") obtained actual knowledge of loans previously modified as forbearances by the servicer(s) that were reclassified and reported to Wells Fargo as realized losses. Based on this information, the treatment and reporting of the related adjustments on active loans due to loan forbearance modifications are reflected as an increase in losses in this reporting period related to those loans that were modified by the servicer(s) in previous cycles.").

example, the servicer's foreclosure decision on a loan could benefit one tranche at the expense of another.⁴⁰³ These conflicts between tranches have been known as "tranche warfare."⁴⁰⁴

257. 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 2006-OPT2, 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)⁴⁰⁵ 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.⁴⁰⁶ 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," prior to a Servicer Event of Termination.⁴⁰⁷ Majority Certificateholders are defined as "[t]he Holders of Certificates evidencing at least 51% of the Voting Rights."⁴⁰⁸ See **Exhibit 24: Voting Rights Percent Over Time for Silver Elms CDO PLC's Holdings in ABFC 2006-OPT2**. Other Relevant Trusts have similar thresholds.

258. Dr. Snow's analysis is based on the premise that the trustee should have undertaken the actions contemplated in his but-for scenarios. However, Plaintiffs' collective 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. See **Exhibit 25: Plaintiffs' Alleged Highest Voting Percentage in Each Relevant Trust**. Dr. Snow disclaimed knowledge relating to

⁴⁰³ 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.").

⁴⁰⁴ 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[.]").

⁴⁰⁵ See ABFC 2006-OPT2 PSA (WF_PL_002121502 at WF_PL_002121555).

⁴⁰⁶ *Id.* at WF_PL_002121586.

⁴⁰⁷ *Id.* at WF_PL_002121676.

⁴⁰⁸ *Id.* at WF_PL_002121550.

whether the trustee could pursue certain actions in the absence of direction from certificateholders.⁴⁰⁹

259. Moreover, some certificateholders would have received reduced cashflows in Dr. Snow's but-for scenario as compared to in his baseline "real world" scenario. For example, the CARR 2006-NC3 A2 certificate was fully paid off as of March 2018. However, in calculating the Catch-up Servicing Damages, Dr. Snow's but-for scenario contemplates improved loss severity rates for loans in the CARR 2006-NC3 trust beginning in July 2009, which results in increased periodic cashflows and a sizeable influx of cash, as a "catch-up payment," to the trust in that month. Consequently, holders of the A2 tranche would have received the entire original balance of their tranche, *i.e.* been fully paid off, as of May 2015 in Dr. Snow's but-for scenario, almost three years earlier than they were actually paid off. As a consequence, the total interest distributions made to the A2 tranche under the but-for scenario through March 2018 would be nearly \$1.82 million less than the interest distributions in the baseline "real world" scenario.
260. Similar examples exist even when Dr. Snow's forecasted payments are considered. I identified which 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 nine tranches in three Relevant Trusts that would receive lower cumulative distributions in his Total Damages and Repurchase Damages but-for scenarios, and there are 23 tranches in seven Relevant Trusts that would receive lower cumulative distributions under Dr. Snow's Servicing Damages but-for scenario, establishing that these tranches would *do worse* under Dr. Snow's but-for scenarios than in the baseline "real world" scenario. See **Exhibit 26: Not-At-Issue Tranches With Lower Cumulative Payments in Dr. Snow's But-for Scenarios**.
261. 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.

⁴⁰⁹ 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.").

262. Dr. Snow fails to explain why his but-for world assumes that the trustee should have taken unilateral action to enforce repurchases or pursue alleged servicing issues 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,⁴¹⁰ he did not consider certificateholders other than the Plaintiffs in calculating damages⁴¹¹ and he did not set as a condition that all certificateholders and all tranches benefit under his but-for scenario.⁴¹²

XI. OPINION SEVEN: DR. SNOW’S REPURCHASE DAMAGES CALCULATION RELATED TO FFML 2006-FFA CONTRADICTS THE FACTS, FAILS TO CONSIDER THE APPOINTMENT OF A SEPARATE TRUSTEE, AND EMPLOYS A SAMPLING METHODOLOGY.

263. The overwhelming majority of Dr. Snow’s claimed Repurchase Damages relate to FFML 2006-FFA. Of the \$135.36 million in Repurchase Damages calculated by Dr. Snow, fully \$113.25 million are attributable to alleged R&W Breach Loans in the FFML 2006-FFA trust.⁴¹³ According to Dr. Snow, Plaintiffs do not assert claims based on Document Defect Loans for this trust,⁴¹⁴ and he calculates no Servicing Damages attributable to FFML 2006-FFA.⁴¹⁵

264. Dr. Snow’s methodology in calculating Repurchase Damages for FFML 2006-FFA suffers from the same flaws described in Sections V and VI above, such as failing to isolate the impact of alleged trustee inaction in the damages model, reliance on unsupported Enforcement and Purchase Dates, and reliance on Ms. Beckles’ and Mr. Hunter’s identifications of Defective Loans that were unsupported by quantitative analysis and/or contradicted by my analysis or the analysis of other defense experts.

265. But there are at least four additional important facts related to this trust or the issues in this matter that Dr. Snow ignores in calculating the claimed Repurchase Damages for FFML 2006-

⁴¹⁰ *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.”).

⁴¹¹ *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.”).

⁴¹² *Id.* at 282:5-11 (“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.”).

⁴¹³ Snow Report at ¶ 39, Fig. 7.

⁴¹⁴ *Id.* at ¶ 19 and n. 16.

⁴¹⁵ *Id.* at ¶ 45.

FFA. As a result, Dr. Snow's methodology does not accurately reflect damages attributable to Wells Fargo.

266. *First*, Dr. Snow models Repurchase Damages using dates, timing, repurchase rates, and Purchase Prices that contradict the real-world facts regarding repurchase enforcement in this trust. Dr. Snow ignores what happened when repurchases of loans were actually pursued in this trust, in favor of a different but-for world that is very different from the repurchase process in the real world.
267. For this trust, Wells Fargo, upon learning of alleged R&W breaches, issued repurchase demands and, in 2012, had a separate trustee appointed for the purpose of pursuing and enforcing, among other things, repurchases. Over the next six years, the separate trustee put back more than 520 loans before negotiating a court-approved settlement for the remaining repurchase claims on Group 2 loans, the same loans repurchased in Dr. Snow's Repurchase Damages model for FFML 2006-FFA. This real-world process is starkly different from the but-for world designed by Dr. Snow. Actual communications with the trustee, review of claims, enforcement timelines, appointment of a separate trustee, repurchase demand success, litigation, and settlement, are all elements, as discussed at length throughout this report, that are disregarded or without basis in Dr. Snow's model. He presumes, without basis, that Wells Fargo could or should have obtained a different result in pursuing repurchases than the actual repurchases and the court-approved settlement accomplished for FFML 2006-FFA.
268. *Second*, Dr. Snow's Repurchase Damages for FFML 2006-FFA are based on sampling and extrapolation. As explained in the Snow Report and Dr. Spencer's FFML 2006-FFA report, Plaintiffs assert that Wells Fargo received a letter dated October 17, 2014 alleging breaches of representations and warranties in 4,859 loans in FFML 2006-FFA (collectively, the "Population").⁴¹⁶ Dr. Spencer drew a 100-loan sample from among the Population for Mr. Hunter to review.⁴¹⁷ Mr. Hunter then reviewed loan files for a total of 100 loans, claiming R&W breaches in only 65 of them.⁴¹⁸

⁴¹⁶ Snow Report at ¶ 33; Spencer, Bruce D. Expert Report of Bruce D. Spencer, Ph.D. re FFML 2006-FFA. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Oct. 29, 2018) and supporting materials ("Spencer FFML 2006-FFA Report") at ¶ 1.

⁴¹⁷ *Id.* at ¶¶ 15, 19, 22.

⁴¹⁸ Hunter Report at ¶ 4. *See also* Spencer FFML 2006-FFA Report at Appendix C.

269. After removing certain loans that had already been repurchased, Dr. Spencer then calculated and extrapolated what he calls the “Price-Weighted Breach Rate.”⁴¹⁹ This extrapolation process, Dr. Spencer admits, does not identify individual loans that were in breach.⁴²⁰
270. Thus, Mr. Hunter reviewed only 100 loans in FFML 2006-FFA, but based on Mr. Hunter’s findings, Dr. Spencer calculated and extrapolated breach rates to 4,615 loans. As reported by Dr. Spencer, the Price-Weighted Breach Rate is 71.5 percent with a margin of error of 9.7 percent at a 95 percent confidence interval⁴²¹ (which gives a range between 61.8 and 81.2 percent).
271. Dr. Snow then used Dr. Spencer’s extrapolated Price-Weighted Breach Rate to scale the associated cashflows in simulated repurchases of each of the more than 4,000 loans in the October 2014 letter, using the Price-Weighted Breach Rate as a proxy for the amount that would have been repurchased in the but-for scenario and any subsequent cashflow from the loan on and after the Repurchase Date.⁴²² Dr. Snow claims that this calculation reflects “the cash flows expected to be generated through repurchase of the noticed loans on and after the appropriate Repurchase Date” for FFML 2006-FFA.⁴²³ Dr. Snow reports the Repurchase

⁴¹⁹ The Price-Weighted Breach Rate for the Non-Repurchased Population is calculated by taking the sum of Purchase Prices, provided by Dr. Snow, of sample loans that were deemed to have R&W breaches by Mr. Hunter, and dividing that by the sum of Purchase Prices for all the loans that were not repurchased. *Id.* at ¶ 32. Dr. Spencer also calculated and extrapolated an alternative “Confirmed Breach Rate.” The Confirmed Breach Rate for the Non-Repurchased Population is calculated by taking the number of sample non-repurchased loans that were deemed to have breaches according to Mr. Hunter and dividing that by the total number of loans in the Non-Repurchased Population. Dr. Spencer reported that the Confirmed Breach Rate for the Non-Repurchased Population is 65.1 percent with a margin of error of 9.54 percent at 95 percent confidence. Dr. Snow did not utilize the Confirmed Breach Rate in his damages calculation. *Id.* at ¶¶ 23-27.

⁴²⁰ See Spencer, Bruce D. Deposition (May 31, 2019) 46:10-14 (“My statistical analysis and my extrapolation is aimed at the population breach rate, and I don’t attempt to identify individual loans that were in breach.”).

⁴²¹ Spencer FFML 2006-FFA Report at ¶ 32.

⁴²² Snow Report at ¶¶ 33, 39. For example, suppose the Purchase Price for a noticed loan was \$10,000. Dr. Snow would repurchase 71.5 percent of this loan and distribute \$7,150 through the waterfall on the Purchase Date and adjust the cashflows on and after the Purchase Date to account for the fact that only 71.5 percent of this loan was repurchased.

⁴²³ *Id.* at ¶ 33.

Damages for FFML 2006-FFA, utilizing a Price-Weighted Breach Rate of 71.5, are \$113.25 million.⁴²⁴

272. Although they are included in Dr. Snow's Repurchase Damages calculation, 4,759 loans were not reviewed by Mr. Hunter, and he has not determined whether these loans suffer from R&W breaches, let alone R&W breaches that materially and adversely affect the values of the loans or interests of the certificateholders. However, I understand that the Court has held that such sampling is disallowed, because "sampling could not help [plaintiffs] identify the loans in breach, demonstrate that any breaches materially adversely affected particular loans, or ascertain the loan-specific cure and repurchase remedy."⁴²⁵ Dr. Snow testified at his deposition that he has not reviewed the Court's Order regarding sampling and was not even aware that such an Order existed.⁴²⁶ Dr. Snow's Repurchase Damages for FFML 2006-FFA would be reduced to \$59,857 if Dr. Snow repurchased only the 65 loans actually reviewed and deemed defective by Mr. Hunter.

273. *Third*, in calculating Repurchase Damages, Dr. Snow uses an Enforcement Date that purports to be the date Wells Fargo, as trustee, was purportedly on notice of potential R&W breaches and had an alleged obligation to act.⁴²⁷

274. In the case of FFML 2006-FFA, Dr. Snow uses an Enforcement Date of October 17, 2014.⁴²⁸ However, on June 6, 2012, almost two years prior, a separate trustee was appointed for the trust, tasked with taking action to enforce claims against potentially responsible parties, including, among other things, making demands on potentially responsible parties to repurchase mortgage loans.⁴²⁹ Further, according to the court's appointment order, upon appointment of the separate trustee, Wells Fargo "shall have no further duty or obligation to

⁴²⁴ *Id.* at ¶ 39, Fig. 7. Dr. Snow also reports the same amount of Repurchase Damages of \$113.25 million when he takes into account the 9.7 percent margin of error. In other words, the Repurchase Damages would be the same \$113.25 million if the Price-Weighted Breach Rate is 61.8%, 71.5%, or 81.2%.

⁴²⁵ Opinion and Order. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y No. 1:14-cv-10102) (filed Aug. 21, 2017) at 27.

⁴²⁶ Snow Dep. 161:5-11 ("Q. You are aware there is a court order addressing sampling in this case, right? A. No, I am not. Q. You haven't reviewed that court order? A. No. I have not.").

⁴²⁷ Snow Report at ¶ 30.

⁴²⁸ *Id.*

⁴²⁹ See FFML 2006-FFA Separate Trustee Order.

[FFML 2006-FFA]’s beneficiaries with respect to the enforcement of [r]epurchase [c]laims[.]”⁴³⁰

275. But in calculating Repurchase Damages here, Dr. Snow assumes that Wells Fargo continued to bear responsibility for enforcing repurchase demands after June 6, 2012. Dr. Snow ignores the separate trustee appointment in calculating damages. All of the simulated repurchases in this trust post-date the appointment of the separate trustee. When hypothetical but-for repurchases that Dr. Snow assumes occurred after the appointment of the separate trustee are removed, Dr. Snow’s Repurchase Damages for this trust are zero.
276. Finally, the separate trustee pursued repurchases of breaching loans in Group 2, and in December 2018, the trust received approximately \$53 million as part of the settlement between the separate trustee and the sponsors for R&W breach loans in Group 2. However, because Dr. Snow’s Repurchase Damages calculation only considered historical data up to May 2018, the payments from this settlement were not taken into account in Dr. Snow’s calculation. He testified he would need to account for the settlement in his going-forward calculations.
277. For all these reasons, the damages calculation for FFML 2006-FFA is unsupported and unreliable.

XII. CONCLUSION

278. 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 are unsupported, fundamentally flawed in many ways, and do not accurately forecast future damages.
 - Dr. Snow’s “Servicing Damages” are also unsupported, unreasonable, and flawed.

⁴³⁰ *Id.* at 3.

- 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 calculation of damages for the PPSI 2005-WLL1 and FFML 2006-FFA trusts are not reasonable or reliable.

279. For all these reasons, Dr. Snow's damages calculations are unreliable and unreasonable, and do not reflect damages to Plaintiffs 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.

Dated: July 25, 2019

A handwritten signature in black ink, appearing to read 'Ethan Cohen-Cole', written over a horizontal line.

Ethan Cohen-Cole, Ph.D.

Appendix A

Curriculum Vitae

Ethan Cohen-Cole, Ph.D., MPA, MA

Ethan Cohen-Cole, Ph.D., MPA, MA

Vega Economics

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Ethan Cohen-Cole is a Senior Advisor at Vega Economics. Dr. Cohen-Cole is an expert in banking, financial regulation, consumer credit, structured finance (RMBS, CMBS, CDS, CDO, ABS, etc.), financial markets, econometric methods, capital markets, analysis of networks, and systemic risk. Dr. Cohen-Cole is a former finance professor and has taught executives, MBA, and Masters in Finance candidates and undergraduates in a range of topics including corporate finance, macroeconomics, valuation, financial risk management, banking, and financial institution management.

Dr. Cohen-Cole has more than 17 years of experience in financial services, litigation consulting and bank supervision, including experience with the Federal Reserve Bank System as a bank regulator and as a policy and regulation expert. Dr. Cohen-Cole has worked with clients across the world such as central banks, including the Bank of France, the Bank of Austria, the Central Bank of Brazil, and the Bank for International Settlements (“BIS”). His financial sector clients have included the largest multinational banks in the US and Europe. Dr. Cohen-Cole has worked on client engagements in more than 25 countries in Europe, Asia, Africa, and the Americas.

Dr. Cohen-Cole has also been an invited visitor or speaker at more than 75 professional and academic seminars and training sessions. These have included programs sponsored by the U.S. Federal Reserve System, Central Bank of Chile, BIS, Bank of France, Bank of Austria, European Economic Association, Chicago/London Conferences on Financial Markets, Financial Management Association (US and Europe), RiskMinds Europe, University of California – Berkeley, Harvard University, FDIC, European Central Bank, Bank of Italy, American Finance Association, American Economic Association, and Cambridge University.

Dr. Cohen-Cole has worked in the banking sector in roles related to risk management. As financial economist in the Supervision and Regulation function of the Federal Reserve System, Dr. Cohen-Cole led quantitative reviews of large bank risk modeling efforts and was a designated system quantitative expert on risk management and Basel II. Dr. Cohen-Cole evaluated the credit, market, and operational risk models for many top-20 financial institutions and evaluated bank-wide risk management systems from a technical as well as a policy and governance perspective.

Dr. Cohen-Cole has also been closely involved with the creation of financial sector regulations. He was a steering committee member of the Center for Financial Policy at the University of Maryland, where he served on an advisory committee to the BIS in the drafting of Basel I and II, and served as an advisor to three central banks on systemic risk management.

He has written widely on topics including commodities markets, municipal bond markets, systemic risk, and financial markets in general. He has been published in *The Journal of Financial Economics*, *The Journal of Banking and Finance*, *Review of Economics and Statistics*, *The Journal of Macroeconomics*, *American Law and Economic Review*, *The Journal of Health Economics*, and *Economic Letters*.

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RECENT PROFESSIONAL HISTORY

Vega Economics <i>Senior Advisor</i>	2017-present
Econ One Research <i>Managing Director, Financial Services Practice Lead</i>	2014-2017
Alvarez & Marsal <i>Managing Director</i>	2012-2013
NERA Economic Consulting <i>Special Consultant</i>	2010-2012
University of Maryland <i>Finance Professor</i>	2009-2012
Federal Reserve Bank of Boston <i>Financial Economist, Bank Supervisor</i>	2006-2009

EDUCATION

Harvard University BA, <i>History</i>
Princeton University MPA, <i>Public Policy</i>
University of Wisconsin-Madison MA, <i>Economics</i>
University of Wisconsin-Madison Ph.D., <i>Economics</i>

BOARD MEMBERSHIP

Legal Momentum <i>Board of Directors</i>	2015-present
El Camino Hospital <i>Investment Committee</i>	2012-2015

SELECT AREAS OF EXPERTISE

Bank Regulation and Supervision
 Structured Finance (CDO, RMBS, CLN)
 Derivatives
 Risk Management
 Pricing Models
 Systemic Risk
 OTC Markets
 High Frequency / Algorithmic Trading
 Advisor to BIS for Basel II Creation
 Market Risk
 Operational Risk
 Foreign Exchange
 Damages

Capital Markets
 Macroeconomics
 Merchant Acquiring
 Consumer Payments
 Payment Systems
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 Commodities Markets
 Macro Prudential Regulation
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Ethan Cohen-Cole, Ph.D., MPA, MA

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2018

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Appendix B

Materials Relied Upon

Materials Relied Upon¹

LEGAL

Amended Complaint. *Phoenix Light SF Limited, et. al. v. Royal Bank of Scotland Group Plc, et al.* (Sup. Ct., N.Y. Cnty. No. 653060/2013) (June 17, 2014).

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¹ In preparing my report, I relied upon the documents listed here along with any items cited or referenced in the body and footnotes of my report, or in the attached exhibits, appendices, and any notes or footnotes thereto.

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Appendix C

Statements Regarding Repurchase

Statements Regarding Repurchase

ABFC 2006-OPT2

1. A repurchase is not required for all breaches by the warrantors.

The Originator, subject to certain limitations, will be obligated under the Option One Mortgage Loan Purchase Agreement to repurchase or substitute a similar mortgage loan for any Mortgage Loan as to which there exists deficient documentation or an uncured breach of any such representation or warranty, if such breach of any such representation or warranty materially and adversely affects the Certificateholders' interests in such Mortgage Loan.¹

2. A repurchase is one of the remedies in case of a breach by the warrantors.

The obligation of the Sponsor to repurchase or substitute for a Defective Mortgage Loan is the sole remedy regarding any defects in the Mortgage Loans and Related Documents available to the Trustee or the Certificateholders.²

3. There is no guarantee that a loan will be repurchased.

There can be no assurance that an Asset Seller or other named entity will fulfill this repurchase or substitution obligation, and neither the Servicer nor the Depositor will be obligated to repurchase or substitute for such Mortgage Loan if the Asset Seller or other named entity defaults on its obligation.³

4. Repurchases may affect the yield on the certificates.

The yield on the securities of each series will depend in part on the rate of principal payment on the assets (including prepayments, liquidations due to defaults and asset repurchases). Such yield may be adversely affected, depending upon whether a particular security is purchased at a premium or a discount, by a higher or lower than anticipated rate of prepayments on the related assets.⁴

CARR 2006-NC3

1. A repurchase is not required for all breaches by the warrantors.

If the representation by a mortgage collateral seller has been assigned to the trustee for the benefit of the certificateholders and that breach materially and adversely affects the interests of certificateholders, and cannot be cured, the breach may give rise to a repurchase obligation on the part of the mortgage collateral seller, as described under "The Trusts—Representations With Respect to Mortgage Collateral."⁵

¹ Asset Backed Funding Corporation, ABFC 2006-OPT2 Trust, Prospectus Supplement to Prospectus dated October 3, 2006 (Oct. 10, 2006) (WF_PL_002120454 at WF_PL_002120490).

² *Id.* at WF_PL_002120503.

³ Asset Backed Funding Corporation, Asset-Backed Certificates Asset-Backed Notes, Prospectus (Oct. 3, 2006) (WF_PL_002120588 at WF_PL_002120638).

⁴ *Id.* at WF_PL_002120597.

⁵ Stanwich Asset Acceptance Company, L.L.C., Mortgage Asset-Backed Pass-Through Certificates, Prospectus (Aug. 1, 2006) (WF_PL_000019641 at WF_PL_000019695).

Furthermore, the master servicer or servicer may pursue foreclosure or similar remedies concurrently with pursuing any remedy for a breach of a representation and warranty. However, the master servicer or servicer is not required to continue to pursue both remedies if it determines that one remedy is more likely to result in a greater recovery.⁶

2. A repurchase is one of the remedies in case of a breach by the warrantors.

Unless otherwise specified in the related prospectus supplement, in the event of a breach of any such representation or warranty that materially adversely affects the interests of the certificateholders in the mortgage loan, a designated seller or the mortgage collateral seller will be obligated to cure such breach or repurchase or substitute for the affected mortgage loan as described below.⁷

3. There is no guarantee that a loan will be repurchased.

Neither the depositor nor the master servicer or servicer will be obligated to purchase a mortgage loan if a seller or designated seller defaults on its obligation to do so, and no assurance can be given that the sellers will carry out those obligations with respect to mortgage loans.⁸

4. If a repurchase does not occur, it can result in losses.

Any mortgage loan not so purchased or substituted for shall remain in the related trust and any losses related thereto shall be allocated to the related credit enhancement, and to the extent not available, to the related certificates.⁹

In instances where a seller is unable, or disputes its obligation, to purchase affected mortgage loans, the master servicer or servicer, employing the standards described in the preceding paragraph, may negotiate and enter into one or more settlement agreements with that seller that could provide for, among other things, the purchase of only a portion of the affected mortgage loans or coverage of some loss amounts. Any such settlement could lead to losses on the mortgage loans which would be borne by the related credit enhancement, and to the extent not available, on the related certificates.¹⁰

5. Loans that are not repurchased or substituted will remain in the loan pool.

Any mortgage loan not so purchased or substituted for shall remain in the related trust and any losses related thereto shall be allocated to the related credit enhancement, and to the extent not available, to the related certificates.¹¹

6. Repurchases may affect the yield on the certificates.

The yield to maturity of a certificate will depend on the price paid by the holder for the certificate, the pass-through rate on any certificate entitled to payments of interest, which pass-through rate may vary if stated in the accompanying prospectus supplement, and the rate

⁶ *Id.* at WF_PL_000019659.

⁷ *Id.* at WF_PL_000019657.

⁸ *Id.* at WF_PL_000019659.

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.*

and timing of principal payments, including prepayments, defaults, liquidations and repurchases, on the mortgage collateral and the allocation thereof to reduce the principal balance of the certificate or its notional amount, if applicable.¹²

CARR 2006-NC4

1. A repurchase is not required for all breaches by the warrantors.

If the representation by a mortgage collateral seller has been assigned to the trustee for the benefit of the certificateholders and that breach materially and adversely affects the interests of certificateholders, and cannot be cured, the breach may give rise to a repurchase obligation on the part of the mortgage collateral seller, as described under “The Trusts—Representations With Respect to Mortgage Collateral.”¹³

Furthermore, the master servicer or servicer may pursue foreclosure or similar remedies concurrently with pursuing any remedy for a breach of a representation and warranty. However, the master servicer or servicer is not required to continue to pursue both remedies if it determines that one remedy is more likely to result in a greater recovery.¹⁴

2. A repurchase is one of the remedies in case of a breach by the warrantors.

Unless otherwise specified in the related prospectus supplement, in the event of a breach of any such representation or warranty that materially adversely affects the interests of the certificateholders in the mortgage loan, a designated seller or the mortgage collateral seller will be obligated to cure such breach or repurchase or substitute for the affected mortgage loan as described below.¹⁵

3. There is no guarantee that a loan will be repurchased.

Neither the depositor nor the master servicer or servicer will be obligated to purchase a mortgage loan if a seller or designated seller defaults on its obligation to do so, and no assurance can be given that the sellers will carry out those obligations with respect to mortgage loans.¹⁶

4. If a repurchase does not occur, it can result in losses.

Any mortgage loan not so purchased or substituted for shall remain in the related trust and any losses related thereto shall be allocated to the related credit enhancement, and to the extent not available, to the related certificates.¹⁷

In instances where a seller is unable, or disputes its obligation, to purchase affected mortgage loans, the master servicer or servicer, employing the standards described in the preceding paragraph, may negotiate and enter into one or more settlement agreements with that seller that could provide for, among other things, the purchase of only a portion of the affected

¹² *Id.* at WF_PL_000019713.

¹³ Stanwich Asset Acceptance Company, L.L.C., Mortgage Asset-Backed Pass-Through Certificates, Prospectus (Aug. 1, 2006) (WF_PL_002102823 at WF_PL_002102877).

¹⁴ *Id.* at WF_PL_002102841.

¹⁵ *Id.* at WF_PL_002102839.

¹⁶ *Id.* at WF_PL_002102841.

¹⁷ *Id.*

mortgage loans or coverage of some loss amounts. Any such settlement could lead to losses on the mortgage loans which would be borne by the related credit enhancement, and to the extent not available, on the related certificates.¹⁸

5. Loans that are not repurchased or substituted will remain in the loan pool.

Any mortgage loan not so purchased or substituted for shall remain in the related trust and any losses related thereto shall be allocated to the related credit enhancement, and to the extent not available, to the related certificates.¹⁹

6. Repurchases may affect the yield on the certificates.

The yield to maturity of a certificate will depend on the price paid by the holder for the certificate, the pass-through rate on any certificate entitled to payments of interest, which pass-through rate may vary if stated in the accompanying prospectus supplement, and the rate and timing of principal payments, including prepayments, defaults, liquidations and repurchases, on the mortgage collateral and the allocation thereof to reduce the principal balance of the certificate or its notional amount, if applicable.²⁰

CARR 2007-FRE1

1. A repurchase is not required for all breaches by the warrantors.

If the representation by a mortgage collateral seller has been assigned to the trustee for the benefit of the certificateholders and that breach materially and adversely affects the interests of certificateholders, and cannot be cured, the breach may give rise to a repurchase obligation on the part of the mortgage collateral seller, as described under “The Trusts—Representations With Respect to Mortgage Collateral.”²¹

Furthermore, the master servicer or servicer may pursue foreclosure or similar remedies concurrently with pursuing any remedy for a breach of a representation and warranty. However, the master servicer or servicer is not required to continue to pursue both remedies if it determines that one remedy is more likely to result in a greater recovery.²²

2. A repurchase is one of the remedies in case of a breach by the warrantors.

Unless otherwise specified in the related prospectus supplement, in the event of a breach of any such representation or warranty that materially adversely affects the interests of the certificateholders in the mortgage loan, a designated seller or the mortgage collateral seller will be obligated to cure such breach or repurchase or substitute for the affected mortgage loan as described below.²³

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.* at WF_PL_002102895.

²¹ Stanwich Asset Acceptance Company, L.L.C., Mortgage Asset-Backed Pass-Through Certificates, Prospectus (Mar. 27, 2007) (WF_PL_000014051 at WF_PL_000014105).

²² *Id.* at WF_PL_000014069.

²³ *Id.* at WF_PL_000014067.

3. There is no guarantee that a loan will be repurchased.

Neither the depositor nor the master servicer or servicer will be obligated to purchase a mortgage loan if a seller or designated seller defaults on its obligation to do so, and no assurance can be given that the sellers will carry out those obligations with respect to mortgage loans.²⁴

4. If a repurchase does not occur, it can result in losses.

Any mortgage loan not so purchased or substituted for shall remain in the related trust and any losses related thereto shall be allocated to the related credit enhancement, and to the extent not available, to the related certificates.²⁵

In instances where a seller is unable, or disputes its obligation, to purchase affected mortgage loans, the master servicer or servicer, employing the standards described in the preceding paragraph, may negotiate and enter into one or more settlement agreements with that seller that could provide for, among other things, the purchase of only a portion of the affected mortgage loans or coverage of some loss amounts. Any such settlement could lead to losses on the mortgage loans which would be borne by the related credit enhancement, and to the extent not available, on the related certificates.²⁶

5. Loans that are not repurchased or substituted will remain in the loan pool.

Any mortgage loan not so purchased or substituted for shall remain in the related trust and any losses related thereto shall be allocated to the related credit enhancement, and to the extent not available, to the related certificates.²⁷

6. Repurchases may affect the yield on the certificates.

The yield to maturity of a certificate will depend on the price paid by the holder for the certificate, the pass-through rate on any certificate entitled to payments of interest, which pass-through rate may vary if stated in the accompanying prospectus supplement, and the rate and timing of principal payments, including prepayments, defaults, liquidations and repurchases, on the mortgage collateral and the allocation thereof to reduce the principal balance of the certificate or its notional amount, if applicable.²⁸

FFML 2006-FFA

1. A repurchase is not required for all breaches by the warrantors.

Upon the discovery of the breach of any representation or warranty made by the depositor or another entity in respect of a Loan that materially and adversely affects the value of the Loan, such party will be obligated to cure the breach in all material respects, repurchase the Loan from the trustee, or, unless specified otherwise in the prospectus supplement, deliver a

²⁴ *Id.* at WF_PL_000014069.

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.* at WF_PL_000014123.

Qualified Substitute Mortgage Loan as described under “The Agreements—Assignment of Primary Assets.”²⁹

2. A repurchase is one of the remedies in case of a breach by the warrantors.

Unless otherwise provided in the prospectus supplement, the above-described cure, repurchase or substitution obligations constitute the sole remedies available to the securityholders or the trustee for a material defect in a Loan document.³⁰

3. There is no guarantee that a loan will be repurchased.

We cannot assure you that a Seller will fulfill its purchase obligation. The master servicer will not be obligated to purchase the Mortgage Loan if the Seller defaults on its purchase obligation.³¹

4. If a repurchase does not occur, it can result in losses.

To the extent that any Mortgage Loan as to which a representation or warranty has been breached is not repurchased or replaced by the Mortgage Loan Seller or the Seller and a Realized Loss occurs with respect to that Mortgage Loan, holders of the Certificates, in particular the Offered Subordinate Certificates and the Class B Certificates, may incur a loss.³²

5. Repurchases may affect the yield on the certificates.

Any repurchases or repayments of the Mortgage Loans may reduce the weighted average lives of the Offered Certificates and will reduce the yields on the Offered Certificates to the extent they are purchased at a premium.³³

IMM 2005-6

1. A repurchase is not required for all breaches by the warrantors.

As more particularly described in the prospectus, the Seller will have certain repurchase or substitution obligations in connection with a breach of any such representation or warranty, as well as in connection with an omission or defect in respect of certain constituent documents required to be delivered with respect to the mortgage loans, if such breach, omission or defect cannot be cured and it materially and adversely affects the interests of the Bondholders or the Bond Insurer.³⁴

With respect to a mortgage loan in default, the master servicer may pursue foreclosure (or similar remedies) concurrently with pursuing any remedy for a breach of a representation and

²⁹ Structured Asset Securities Corporation, Asset-Backed Certificates Asset-Backed Notes, Prospectus (Sept. 13, 2006) (WF_PL_000009583 at WF_PL_000009650).

³⁰ *Id.* at WF_PL_000009700.

³¹ *Id.* at WF_PL_000009699.

³² Structured Asset Securities Corporation, First Franklin Mortgage Loan Trust 2006-FFA, Prospectus Supplement to Prospectus dated September 13, 2006 (Oct. 27, 2006) (WF_PL_000009436 at WF_PL_000009509).

³³ *Id.* at WF_PL_000009516.

³⁴ IMH Assets Corp., Impac CMB Trust Series 2005-6, Prospectus Supplement to Prospectus dated September 8, 2005 (Sept. 8, 2005) (WF_PL_000016155 at WF_PL_000016179).

warranty. However, the master servicer is not required to continue to pursue both remedies if it determines that one remedy is more likely than the other to result in a greater recovery.³⁵

2. A repurchase is one of the remedies in case of a breach by the warrantors.

In the event of a breach of a Seller's representation or warranty that materially adversely affects the interests of the bondholders in a mortgage loan or mortgage security, the related Seller will be obligated to cure the breach or repurchase or, if permitted, replace the mortgage loan or mortgage security as described below.³⁶

This purchase or substitution obligation constitutes the sole remedy available to bondholders or the trustee for a breach of a representation by the company.³⁷

3. There is no guarantee that a loan will be repurchased.

However, there can be no assurance that a Seller will honor its obligation to repurchase or, if permitted, replace any mortgage loan or mortgage security as to which a breach of a representation or warranty arises.³⁸

Neither the company nor the master servicer will be obligated to purchase a mortgage loan or mortgage security if a Seller defaults on its obligation to do so, and no assurance can be given that the Sellers will carry out their purchase obligations.³⁹

4. If a repurchase does not occur, it can result in losses.

Any mortgage loan or mortgage security not so purchased or substituted for shall remain in the related trust fund and any losses related thereto shall be allocated to the related credit enhancement, to the extent available, and otherwise to one or more classes of the related series of bonds.⁴⁰

In instances where a Seller is unable, or disputes its obligation, to purchase affected mortgage loans and/or mortgage securities, the master servicer, employing the standards set forth in the preceding sentence, may negotiate and enter into one or more settlement agreements with the related Seller that could provide for the purchase of only a portion of the affected mortgage loans and/or mortgage securities. Any settlement could lead to losses on the mortgage loans and/or mortgage securities which would be borne by the related bonds.⁴¹

5. Loans that are not repurchased or substituted will remain in the loan pool.

Any mortgage loan not so purchased or substituted for shall remain in the related trust fund.⁴²

³⁵ IMH Assets Corp., Collateralized Asset-Backed Bonds, Prospectus (Sept. 8, 2005) (WF_PL_000016302 at WF_PL_000016321).

³⁶ *Id.* at WF_PL_000016315.

³⁷ *Id.* at WF_PL_000016332.

³⁸ *Id.* at WF_PL_000016315.

³⁹ *Id.* at WF_PL_000016316.

⁴⁰ *Id.* at WF_PL_000016316-7.

⁴¹ *Id.* at WF_PL_000016316.

⁴² *Id.* at WF_PL_000016332.

6. Repurchases may affect the yield on the certificates.

The timing of changes in the rate of principal payments on or repurchases of the mortgage loans may significantly affect an investor's actual yield to maturity, even if the average rate of principal payments experienced over time is consistent with an investor's expectation. In general, the earlier a prepayment of principal on the underlying mortgage loans or a repurchase thereof, the greater will be the effect on an investor's yield to maturity. As a result, the effect on an investor's yield of principal payments and repurchases occurring at a rate higher (or lower) than the rate anticipated by the investor during the period immediately following the issuance of a series of bonds would not be fully offset by a subsequent like reduction (or increase) in the rate of principal payments.⁴³

IMSA 2005-2

1. A repurchase is not required for all breaches by the warrantors.

As more particularly described in the prospectus, the Seller will have certain repurchase or substitution obligations in connection with a breach of any such representation or warranty, as well as in connection with an omission or defect in respect of certain constituent documents required to be delivered with respect to the mortgage loans, if such breach, omission or defect cannot be cured and it materially and adversely affects the interests of the certificateholders and the certificate insurer.⁴⁴

With respect to a mortgage loan in default, the master servicer may pursue foreclosure (or similar remedies) concurrently with pursuing any remedy for a breach of a representation and warranty. However, the master servicer is not required to continue to pursue both remedies if it determines that one remedy is more likely than the other to result in a greater recovery.⁴⁵

2. A repurchase is one of the remedies in case of a breach by the warrantors.

In the event of a breach of a Seller's representation or warranty that materially adversely affects the interests of the securityholders in a mortgage loan or mortgage security, the related Seller will be obligated to cure the breach or repurchase or, if permitted, replace the mortgage loan or mortgage security as described below.⁴⁶

3. There is no guarantee that a loan will be repurchased.

However, there can be no assurance that a Seller will honor its obligation to repurchase or, if permitted, replace any mortgage loan or mortgage security as to which a breach of a representation or warranty arises.⁴⁷

⁴³ *Id.* at WF_PL_000016362.

⁴⁴ Impac Secured Assets Corp., Mortgage Pass-Through Certificates, Series 2005-2, Prospectus Supplement to Prospectus dated July 11, 2005 (Dec. 28, 2005) (WF_PL_002110455 at WF_PL_002110476).

⁴⁵ Impac Secured Assets Corp., Mortgage Pass-Through Certificates Mortgage-Backed Notes, Prospectus (July 11, 2005) (WF_PL_002110591 at WF_PL_002110611).

⁴⁶ *Id.* at WF_PL_002110605.

⁴⁷ *Id.*

Neither the company nor the master servicer will be obligated to purchase a mortgage loan or mortgage security if a Seller defaults on its obligation to do so, and no assurance can be given that the Sellers will carry out their purchase obligations.⁴⁸

4. If a repurchase does not occur, it can result in losses.

Any mortgage loan or mortgage security not so purchased or substituted for shall remain in the related trust fund and any losses related thereto shall be allocated to the related credit enhancement, to the extent available, and otherwise to one or more classes of the related series of securities.⁴⁹

5. Loans that are not repurchased or substituted will remain in the loan pool.

Any mortgage loan not so purchased or substituted for shall remain in the related trust fund.⁵⁰

6. Repurchases may affect the yield on the certificates.

The timing of changes in the rate of principal payments on or repurchases of the mortgage loans may significantly affect an investor's actual yield to maturity, even if the average rate of principal payments experienced over time is consistent with an investor's expectation. In general, the earlier a prepayment of principal on the underlying mortgage loans or a repurchase thereof, the greater will be the effect on an investor's yield to maturity. As a result, the effect on an investor's yield of principal payments and repurchases occurring at a rate higher (or lower) than the rate anticipated by the investor during the period immediately following the issuance of a series of securities would not be fully offset by a subsequent like reduction (or increase) in the rate of principal payments.⁵¹

OOMLT 2007-3

1. A repurchase is not required for all breaches by the warrantors.

The same procedure and limitations that are set forth above for the substitution or repurchase of Deleted Mortgage Loans as a result of deficient documentation relating thereto will apply to the substitution or repurchase of a Deleted Mortgage Loan as a result of a breach of a representation or warranty in the Mortgage Loan Purchase Agreement that materially and adversely affects the interests of the Certificateholders.⁵²

With respect to a Mortgage Loan in default, the Master Servicer may pursue foreclosure (or similar remedies) concurrently with pursuing any remedy for a breach of a representation and warranty. However, the Master Servicer is not required to continue to pursue both such remedies if it determines that one such remedy is more likely to result in a greater recovery.⁵³

⁴⁸ *Id.* at WF_PL_002110607.

⁴⁹ *Id.*

⁵⁰ *Id.* at WF_PL_002110623.

⁵¹ *Id.* at WF_PL_002110656.

⁵² Option One Mortgage Acceptance Corporation, Option One Mortgage Loan Trust 2007-3, Prospectus Supplement to Prospectus dated February 28, 2007 (Apr. 2, 2007) (WF_BR_000241099 at WF_BR_000241174) ("OOMLT 2007-3 Prospectus Supplement").

⁵³ Option One Mortgage Acceptance Corporation, Mortgage Pass-Through Certificates, Prospectus (Feb. 28, 2007) (WF_BR_000241252 at WF_BR_000241276) ("OOMLT 2007-3 Prospectus").

2. A repurchase is one of the remedies in case of a breach by the warrantors.

Upon discovery of a breach of such representations and warranties that materially and adversely affects the interests of the certificateholders, either Option One Mortgage Capital Corporation or the Sponsor will be obligated to cure such breach or otherwise repurchase or replace such Mortgage Loan.⁵⁴

3. There is no guarantee that a loan will be repurchased.

In addition, numerous residential mortgage loan originators that originate subprime mortgage loans have recently experienced serious financial difficulties and, in some cases, bankruptcy. Those difficulties have resulted in part from declining markets for mortgage loans as well as from claims for repurchases of mortgage loans previously sold under provisions that require repurchase in the event of early payment defaults, or for material breaches of representations and warranties made on the mortgage loans, such as fraud claims. The inability to repurchase these loans in the event of early payment defaults or breaches of representations and warranties may also affect the performance and market value of the Class A and Mezzanine Certificates.⁵⁵

However, there can be no assurance that a Seller will honor its obligation to repurchase or, if permitted, replace any Mortgage Loan as to which such a breach of a representation or warranty arises.⁵⁶

4. If a repurchase does not occur, it can result in losses.

Any Mortgage Loan not so purchased or substituted for shall remain in the related Trust Fund and any losses related thereto shall be allocated to the related credit enhancement, to the extent available, and otherwise to one or more classes of the related series of Certificates.⁵⁷

5. Loans that are not repurchased or substituted will remain in the loan pool.

Any Mortgage Loan not so purchased or substituted for shall remain in the related Trust Fund.⁵⁸

6. Repurchases may affect the yield on the certificates.

The timing of changes in the rate of principal payments on or repurchases of the Mortgage Loans may significantly affect an investor's actual yield to maturity, even if the average rate of principal payments experienced over time is consistent with an investor's expectation. In general, the earlier a prepayment of principal on the underlying Mortgage Loans or a repurchase thereof, the greater will be the effect on an investor's yield to maturity.⁵⁹

⁵⁴ OOMLT 2007-3 Prospectus Supplement at WF_BR_000241108.

⁵⁵ *Id.* at WF_BR_000241115.

⁵⁶ OOMLT 2007-3 Prospectus at WF_BR_000241271.

⁵⁷ *Id.* at WF_BR_000241273.

⁵⁸ *Id.* at WF_BR_000241284.

⁵⁹ *Id.* at WF_BR_000241310.

OWNIT 2006-2

1. A repurchase is not required for all breaches by the warrantors.

If Ownit Mortgage Solutions Inc. or Merrill Lynch Mortgage Lending, Inc. fails to cure in a timely manner a material breach of its representations and warranties with respect to any mortgage loan sold by it, then Ownit Mortgage Solutions Inc. or Merrill Lynch Mortgage Lending, Inc., as applicable, would be required to repurchase or substitute for the defective mortgage loan.⁶⁰

2. A repurchase is one of the remedies in case of a breach by the warrantors.

Unless otherwise specified in the related Prospectus Supplement, this reimbursement, repurchase or substitution obligation will constitute the sole remedy available to holders of Securities or the Trustee for a breach of representation by a Warranting Party.⁶¹

3. There is no guarantee that a loan will be repurchased.

There can be no assurance that an Asset Seller will fulfill this repurchase or substitution obligation, and neither the Master Servicer nor the Depositor will be obligated to repurchase or substitute for such Mortgage Loan if the Asset Seller defaults on its obligation.⁶²

4. If a repurchase does not occur, it can result in losses.

It is possible that Ownit Mortgage Solutions Inc. or Merrill Lynch Mortgage Lending, Inc. may not be capable of repurchasing or substituting for any defective mortgage loans, for financial or other reasons. The inability of Ownit Mortgage Solutions Inc. or Merrill Lynch Mortgage Lending, Inc. to repurchase or substitute for defective mortgage loans would likely cause the mortgage loans to experience higher rates of delinquencies, defaults and losses. As a result, shortfalls in the distributions due on the certificates could occur.⁶³

5. Repurchases may affect the yield on the certificates.

The yield on any Offered Security will depend on the price paid by the Securityholder, the Pass-Through Rate or interest rate of the Security, the receipt and timing of receipt of distributions on the Security and the weighted average life of the Assets in the related Trust Fund (which may be affected by prepayments, defaults, liquidations or repurchases).⁶⁴

The yield to maturity and weighted average life of the certificates will be affected primarily by the rate and timing of principal payments (including prepayments, liquidations, repurchases and defaults) of, and losses on, the mortgage loans.⁶⁵

⁶⁰ Merrill Lynch Mortgage Investors, Inc., Ownit Mortgage Loan Trust Mortgage Loan Asset-Backed Certificates, Series 2006-2, Prospectus Supplement to Prospectus dated January 18, 2006 (Mar. 7, 2006) (WF_PL_000018798 at WF_PL_000018822) (“OWNIT 2006-2 Prospectus Supplement”).

⁶¹ Merrill Lynch Mortgage Investors, Inc., Asset Backed Certificates Asset Backed Notes, Prospectus (Jan. 18, 2006) (WF_PL_000018945 at WF_PL_000018987) (“OWNIT 2006-2 Prospectus”).

⁶² *Id.* at WF_PL_000018985.

⁶³ OWNIT 2006-2 Prospectus Supplement at WF_PL_000018822.

⁶⁴ OWNIT 2006-2 Prospectus at WF_PL_000018961.

⁶⁵ OWNIT 2006-2 Prospectus Supplement at WF_PL_000018815.

PPSI 2005-WLL1

1. A repurchase is not required for all breaches by the warrantors.

Upon a breach of any representation of the depositor that materially and adversely affects the value of a mortgage asset or the interests of the securityholders in the mortgage asset, the depositor will be obligated either to cure the breach in all material respects, repurchase the mortgage asset at the repurchase price or substitute for that mortgage asset as described in the paragraph below.⁶⁶

2. A repurchase is one of the remedies in case of a breach by the warrantors.

The obligation to repurchase or, other than with respect to the insurability representation if applicable, to substitute mortgage loans constitutes the sole remedy available to the securityholders or the trustee for any breach of the representations.⁶⁷

3. There is no guarantee that a loan will be repurchased.

However, there can be no assurance that a mortgage loan seller will honor its obligation to cure, repurchase or, if permitted, replace any mortgage loan as to which a breach of a representation or warranty arises.⁶⁸

4. If a repurchase does not occur, it can result in losses.

A mortgage loan seller's failure or refusal to honor its repurchase obligation could lead to losses that, to the extent not covered by credit support, may adversely affect the yield to maturity of the related securities.⁶⁹

In instances where a mortgage loan seller is unable, or disputes its obligation, to repurchase affected mortgage loans, the master servicer may negotiate and enter into one or more settlement agreements with the mortgage loan seller that could provide for the purchase of only a portion of the affected mortgage loans. Any settlement could lead to losses on the mortgage loans which would be borne by the related securities.⁷⁰

5. Loans that are not repurchased or substituted will remain in the loan pool.

Any mortgage loan not so repurchased or substituted for shall remain in the related trust fund and any related losses shall be allocated to the related credit support, to the extent available, and otherwise to one or more classes of the related series of securities.⁷¹

6. Repurchases may affect the yield on the certificates.

The yield to maturity on each class of Class A and Mezzanine Certificates will depend, in general, on [...] the rate and timing of principal payments (including prepayments and

⁶⁶ Park Place Securities, Inc., Asset-Backed Pass-Through Certificates Asset-Backed Notes, Prospectus (Jan. 21, 2005). <<https://www.sec.gov/Archives/edgar/data/1322223/000089109205000567/0000891092-05-000567-index.htm>> (accessed Apr. 23, 2019) at 28.

⁶⁷ *Id.* at 29.

⁶⁸ *Id.* at 4.

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

collections upon defaults, liquidations and repurchases) and the allocation thereof to reduce the certificate principal balances[.]⁷²

If the Seller is unable or otherwise fails to satisfy such obligations, the yield on the Class A and Mezzanine Certificates may be materially and adversely affected.⁷³

SABR 2006-FR2

1. A repurchase is not required for all breaches by the warrantors.

If with respect to any mortgage loan any of the representations and warranties made by the responsible party are breached in any material respect as of the date made, or there exists any uncured material document defect, the responsible party will be obligated to repurchase, or substitute for, the mortgage loan as further described under “*Description of the Certificates—Representations and Warranties Relating to Mortgage Loans*” and “*—Delivery of Mortgage Loan Documents*” in this prospectus supplement.⁷⁴

2. A repurchase is one of the remedies in case of a breach by the warrantors.

The obligation of the responsible party to cure the defect or to substitute or repurchase the defective mortgage loan and to indemnify for such breach will constitute the sole remedies available to the holders of the certificates and the trustee relating to the defect.⁷⁵

3. There is no guarantee that a loan will be repurchased.

Neither the depositor nor the master servicer unless the master servicer is an Unaffiliated Seller will be obligated to purchase or substitute for a residential loan if an Unaffiliated Seller defaults on its obligation to do so. We cannot assure you that Unaffiliated Sellers will carry out their repurchase and substitution obligations with respect to residential loans.⁷⁶

It is possible that Fremont Investment & Loan may not be capable of repurchasing or substituting any defective mortgage loans, for financial or other reasons.⁷⁷

4. If a repurchase does not occur, it can result in losses.

The inability of Fremont Investment & Loan to repurchase or substitute for defective mortgage loans would likely cause the mortgage loans to experience higher rates of delinquencies, defaults and losses. As a result, shortfalls in the distributions due on the certificates could occur.⁷⁸

⁷² Park Place Securities, Inc., Asset-Backed Pass-Through Certificates, Series 2005-WLL1, Prospectus Supplement to Prospectus dated January 21, 2005 (Mar. 28, 2005) (WF_PL_000000006 at WF_PL_000000020).

⁷³ *Id.* at WF_PL_000000017.

⁷⁴ Securitized Asset Backed Receivables LLC, Securitized Asset Backed Receivables LLC Trust 2006-FR2, Prospectus Supplement to Prospectus dated April 20, 2006 (July 3, 2006) (WF_PL_000012805 at WF_PL_000012823) (“SABR 2006-FR2 Prospectus Supplement”).

⁷⁵ *Id.* at WF_PL_000012862.

⁷⁶ Securitized Asset Backed Receivables LLC, Asset-Backed Securities, Prospectus (Apr. 20, 2006) (WF_PL_000012947 at WF_PL_000012995) (“SABR 2006-FR2 Prospectus”).

⁷⁷ SABR 2006-FR2 Prospectus Supplement at WF_PL_000012836.

⁷⁸ *Id.* at WF_PL_000012836.

5. Loans that are not repurchased or substituted will remain in the loan pool.

Any residential loan that is not repurchased or substituted for will remain in the related trust fund. Any resulting losses on that residential loan will be borne by holders of the securities, to the extent not covered by credit enhancement.⁷⁹

6. Repurchases may affect the yield on the certificates.

Material breaches of representations and warranties by sellers of residential loans not affiliated with the depositor, the originator or the master servicer may result in repurchases of assets of the trust fund. These repurchases may lead to prepayments of principal. The rate of prepayment of the residential loans comprising or underlying the assets of the trust fund may affect the yield to maturity on your securities.⁸⁰

⁷⁹ SABR 2006-FR2 Prospectus at WF_PL_000012995.

⁸⁰ *Id.* at WF_PL_000012963.

Appendix D

Statements Regarding Purchase Prices and Liquidated Loans

Statements Regarding Purchase Prices and Liquidated Loans

ABFC 2006-OPT2

Repurchase (PSA §2.03(a) – Repurchase or Substitution of Mortgage Loans by the Originator or the Seller)

Upon discovery or receipt of written notice of any materially defective document in, or that a document is missing from, a Mortgage File or of the breach by the Originator or the Seller of any representation or warranty under the Mortgage Loan Sale Agreement or the Mortgage Loan Purchase Agreement, as applicable, in respect of any Mortgage Loan which materially adversely affects the value of such Mortgage Loan, Prepayment Charge or the interest therein of the Certificateholders, the 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 breach 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. Notwithstanding the foregoing, any breach of a Deemed Material and Adverse Representation with respect to a Group 1 Mortgage Loan or Group 2 Mortgage Loan shall automatically be deemed to materially and adversely affect such Mortgage Loan or the interest of the related Certificateholders therein. If the Seller does not deliver such missing document or cure such defect or if the Originator or the Seller, as applicable, does not cure such breach in all material respects during such period, the Trustee shall enforce the Originator's or the Seller's obligation, as the case may be, under the Mortgage Loan Sale Agreement or the Mortgage Loan Purchase Agreement, as applicable, and cause the Originator or the Seller, as applicable, to repurchase such Mortgage Loan from the Trust Fund at the Purchase Price on or prior to the Determination Date following the expiration of such period (subject to Section 2.03(d)).¹

Purchase Price (PSA §1.01 – Defined Terms)

Purchase Price: With respect to any Mortgage Loan or REO Property to be purchased pursuant to or as contemplated by Section 2.03, 3.32 or 10.01, an amount equal to the sum of (i) 100% of the Principal Balance thereof as of the date of purchase (or such other price as provided in Section 10.01), (ii) in the case of a Mortgage Loan, accrued interest on such Principal Balance at the applicable Mortgage Interest Rate in effect from time to time from the Due Date as to which interest was last covered by a payment by the Mortgagor or an Advance by the Servicer, which payment or Advance had as of the date of purchase been distributed pursuant to Section 4.01, through the end of the calendar month in which the purchase is to be effected, (iii) any unreimbursed Servicing Advances and Advances and any unpaid Servicing Fees allocable to such Mortgage Loan or REO Property, (iv) any amounts previously withdrawn from the Collection Account in respect of such Mortgage Loan or REO Property pursuant to Section 3.13 and (v) in the case of a Mortgage Loan required to be purchased pursuant to Section 2.03, expenses reasonably incurred or to be incurred by the

¹ Asset Backed Funding Corporation, ABFC 2006-OPT2 Trust, Pooling and Servicing Agreement (Sept. 1, 2006) (WF_PL_002121502 at WF_PL_002121590-1).

Servicer or the Trustee in respect of the breach or defect giving rise to the purchase obligation.²

Principal Balance (PSA §1.01 – Defined Terms)

Principal Balance: As to any Mortgage Loan and any day, other than a Liquidated Mortgage Loan, the related Cut-off Date Principal Balance, minus the sum of (i) all collections and other amounts credited against the principal balance of any such Mortgage Loan, (ii) the principal portion of Advances, (iii) any Deficient Valuation and (iv) any principal reduction resulting from a Servicer Modification. For purposes of this definition, a Liquidated Mortgage Loan shall be deemed to have a Principal Balance equal to the Principal Balance of the related Mortgage Loan as of the final recovery of related Liquidation Proceeds and a Principal Balance of zero thereafter. As to any REO Property and any day, the Principal Balance of the related Mortgage Loan immediately prior to such Mortgage Loan becoming REO Property minus any REO Principal Amortization received with respect thereto on or prior to such day.³

Liquidated Mortgage Loan (PSA §1.01 – Defined Terms)

Liquidated Mortgage Loan: As to any Distribution Date, any Mortgage Loan in respect of which the Servicer has determined, in accordance with the servicing procedures specified herein, as of the end of the related Prepayment Period, that all Liquidation Proceeds, Condemnation Proceeds and Insurance Proceeds which it expects to recover with respect to the liquidation of the Mortgage Loan or disposition of the related REO Property have been recovered.⁴

FFML 2006-FFA

Repurchase (PSA §2.04 – Discovery of Breach)

Within 90 days of the discovery of a breach of any representation or warranty given to the Trustee by the Depositor or given by the Transferor or the Seller and assigned to the Trustee, the Depositor, the Transferor or the Seller, as applicable, shall either (a) cure such breach in all material respects, (b) repurchase such Mortgage Loan or any property acquired in respect thereof from the Trustee at the Purchase Price (or in the case of a Delinquency Default Mortgage Loan, the PPTL Purchase Price (excluding any PPTL Premium)) or (c) within the two-year period following the Closing Date, substitute a Qualifying Substitute Mortgage Loan for the affected Mortgage Loan. In the event of discovery of a breach of any representation and warranty of the Transferor assigned to the Trustee, the Trustee shall enforce its rights under the Transfer Agreement and the Mortgage Loan Sale Agreement for the benefit of Certificateholders and any NIMS Insurer.⁵

² *Id.* at WF_PL_002121560-1.

³ *Id.* at WF_PL_002121559.

⁴ *Id.* at WF_PL_002121549.

⁵ Structured Asset Securities Corporation, First Franklin Mortgage Loan Trust Mortgage Pass-Through Certificates Series 2006-FFA, Trust Agreement (Oct. 1, 2006) (WF_PL_000009938 at WF_PL_000010008) (“FFML 2006-FFA Trust Agreement”).

Repurchase (MLPA §8(b) – Remedies for Breach of Representations and Warranties; Additional Repurchase Obligations)

Within 60 days of the earlier of either discovery by or notice to the Seller of any Breach of a representation or warranty, the Seller shall use its best efforts promptly to cure such Breach in all material respects and, if such Breach cannot be cured, the Seller shall, at the Purchaser's option, repurchase such Mortgage Loan at the Repurchase Price.⁶

Purchase Price (PSA §1.01 – Definitions)

Purchase Price: With respect to the purchase of a Mortgage Loan or related REO Property pursuant to this Agreement, an amount equal to the sum of (a) 100% of the unpaid principal balance of such Mortgage Loan; (b) accrued interest thereon at the applicable Mortgage Rate, from the date as to which interest was last paid to (but not including) the Due Date in the Collection Period immediately preceding the related Distribution Date; (c) the amount of any costs and damages incurred by the Trust Fund as a result of any violation of any applicable federal, state or local predatory- or abusive-lending law arising from or in connection with the origination of such Mortgage Loan; and (d) any unreimbursed Servicing Advances with respect to such Mortgage Loan. The Master Servicer, the Servicer, the Custodian (or the Trustee, if applicable) shall be reimbursed from the Purchase Price for any Mortgage Loan or related REO Property for any Advances made or other amounts advanced with respect to such Mortgage Loan that are reimbursable to the Master Servicer or the Servicer under this Agreement or the Servicing Agreement (or to the Trustee, if applicable), together with any accrued and unpaid compensation due to the Master Servicer, the Servicer, the Custodian or the Trustee hereunder or thereunder.⁷

Repurchase Price (MLPA §1 – Definitions)

Repurchase Price: With respect to any Mortgage Loan, a price equal to (i) the Stated Principal Balance of the Mortgage Loan plus (ii) interest on such Stated Principal Balance at the Mortgage Interest Rate from the date on which interest has last been paid and distributed to the Purchaser to the date of repurchase, less amounts received, if any, plus amounts advanced, if any, by any servicer, in respect of such repurchased Mortgage Loan plus (iii) any costs and damages incurred by the trust with respect to any securitization of the Mortgage Loan in connection with any violation by such Mortgage Loan of any applicable predatory- or abusive lending law.⁸

Stated Principal Balance (MLPA §1 – Definitions)

Stated Principal Balance: As to each Mortgage Loan, (i) the principal balance of the Mortgage Loan at the related Cut-off Date after giving effect to payments of principal received on or before such date, minus (ii) all amounts previously distributed to the Purchaser

⁶ Flow Mortgage Loan Purchase and Warranties Agreement between Lehman Brothers Bank, FSB, and First Franklin Financial Corporation, Conventional Fixed and Adjustable Rate, Residential Mortgage Loans (Apr. 1, 2005) ("FFML 2006-FFA MLPA") at 28.

⁷ FFML 2006-FFA Trust Agreement at WF_PL_000009987-8.

⁸ FFML 2006-FFA MLPA at 8.

with respect to the related Mortgage Loan representing payments or recoveries of principal or advances in lieu thereof.⁹

OOMLT 2007-3

Repurchase (PSA §2.03(a) – Repurchase or Substitution of Mortgage Loans by the Originator or Responsible Party)

Upon discovery or receipt of written notice of any materially defective document in, or that a document is missing from, a Mortgage File or of the breach by the Originator or the Responsible Party of any representation, warranty or covenant under the Mortgage Loan Purchase Agreement in respect of any Mortgage Loan which materially adversely affects the value of such Mortgage Loan or the interest therein of the Certificateholders, the Trustee shall promptly notify the Originator, the Responsible Party, the NIMS Insurer and the Servicer of such defect, missing document or breach and request that the Originator or the Responsible Party, as applicable and as set forth in the Mortgage Loan Purchase Agreement, deliver such missing document or cure such defect or breach within 120 days from the date the Originator or the Responsible Party, as applicable, was notified of such missing document, defect or breach, and if the Originator or the Responsible Party, as applicable, does not deliver such missing document or cure such defect or breach in all material respects during such period, the Trustee shall enforce the Originator's or the Responsible Party's obligation under the Mortgage Loan Purchase Agreement and cause the Originator or the Responsible Party, as applicable, to repurchase such Mortgage Loan from the Trust Fund at the Purchase Price on or prior to the Determination Date following the expiration of such 120 day period (subject to Section 2.03(e)).¹⁰

Purchase Price (PSA §1.01 – Defined Terms)

“Purchase Price”: With respect to any Mortgage Loan or REO Property to be purchased pursuant to or as contemplated by Section 2.03, and as confirmed by an Officers' Certificate from the Servicer to the Trustee, an amount equal to the sum of (i) 100% of the Stated Principal Balance thereof as of the date of purchase, (ii) in the case of (x) a Mortgage Loan, accrued interest on such Stated Principal Balance at the applicable Mortgage Rate in effect from time to time from the Due Date as to which interest was last covered by a payment by the Mortgagor or an advance by the Servicer, which payment or advance had as of the date of purchase been distributed pursuant to Section 4.01, through the end of the calendar month in which the purchase is to be effected, and (y) an REO Property, the sum of (1) accrued interest on such Stated Principal Balance at the applicable Mortgage Rate in effect from time to time from the Due Date as to which interest was last covered by a payment by the Mortgagor or an advance by the Servicer through the end of the calendar month immediately preceding the calendar month in which such REO Property was acquired, plus (2) REO Imputed Interest for such REO Property for each calendar month commencing with the calendar month in which such REO Property was acquired and ending with the calendar month in which such purchase is to be effected, net of the total of all net rental income, Insurance Proceeds, Liquidation Proceeds and Advances that as of the date of purchase had been distributed as or to cover REO Imputed Interest pursuant to Section 4.04, (iii) any unreimbursed Servicing Advances

⁹ *Id.* at 9.

¹⁰ Option One Mortgage Acceptance Corporation, Option One Mortgage Loan Trust 2007-3, Pooling and Servicing Agreement (Apr. 1, 2007) (WF_PL_002085372 at WF_PL_002085449).

and Advances and any unpaid Servicing Fees allocable to such Mortgage Loan or REO Property, (iv) any amounts previously withdrawn from the Collection Account in respect of such Mortgage Loan or REO Property pursuant to Section 3.23 and (v) in the case of a Mortgage Loan required to be purchased pursuant to Section 2.03, expenses reasonably incurred or to be incurred by the Servicer, the NIMS Insurer or the Trustee in respect of the breach or defect giving rise to the purchase obligation including any costs and damages incurred by the Trust in connection with any violation by such loan of any predatory or abusive lending law.¹¹

Stated Principal Balance (PSA §1.01 – Defined Terms)

“Stated Principal Balance”: With respect to any Mortgage Loan: (a) as of any date of determination up to but not including the Distribution Date on which the proceeds, if any, of a Liquidation Event with respect to such Mortgage Loan would be distributed, the outstanding principal balance of such Mortgage Loan as of the Cut-off Date, as shown in the Mortgage Loan Schedule, minus the sum of (i) the principal portion of each Monthly Payment due on a Due Date subsequent to the Cut-off Date, to the extent received from the Mortgagor or advanced by the Servicer and distributed pursuant to Section 4.01 on or before such date of determination, (ii) all Principal Prepayments received after the Cut-off Date, to the extent distributed pursuant to Section 4.01 on or before such date of determination, (iii) all Liquidation Proceeds and Insurance Proceeds to the extent distributed pursuant to Section 4.01 on or before such date of determination, and (iv) any Realized Loss incurred with respect thereto as a result of a Deficient Valuation made during or prior to the Due Period for the most recent Distribution Date coinciding with or preceding such date of determination; and (b) as of any date of determination coinciding with or subsequent to the Distribution Date on which the proceeds, if any, of a Liquidation Event with respect to such Mortgage Loan would be distributed, zero. With respect to any REO Property: (a) as of any date of determination up to but not including the Distribution Date on which the proceeds, if any, of a Liquidation Event with respect to such REO Property would be distributed, an amount (not less than zero) equal to the Stated Principal Balance of the related Mortgage Loan as of the date on which such REO Property was acquired on behalf of the Trust Fund, minus the aggregate amount of REO Principal Amortization in respect of such REO Property for all previously ended calendar months, to the extent distributed pursuant to Section 4.01 on or before such date of determination; and (b) as of any date of determination coinciding with or subsequent to the Distribution Date on which the proceeds, if any, of a Liquidation Event with respect to such REO Property would be distributed, zero.¹²

Liquidation Event (PSA §1.01 – Defined Terms)

“Liquidation Event”: With respect to any Mortgage Loan, any of the following events: (i) such Mortgage Loan is paid in full, (ii) a Final Recovery Determination is made as to such Mortgage Loan or (iii) such Mortgage Loan is removed from the Trust Fund by reason of its being purchased, sold or replaced pursuant to or as contemplated by Section 2.03 or Section 10.01. With respect to any REO Property, either of the following events: (i) a Final Recovery Determination is made as to such REO Property or (ii) such REO Property is removed from

¹¹ *Id.* at WF_PL_002085421-2.

¹² *Id.* at WF_PL_002085430-1.

the Trust Fund by reason of its being sold or purchased pursuant to Section 3.23 or Section 10.01.¹³

Final Recovery Determination (PSA §1.01 – Defined Terms)

“Final Recovery Determination”: With respect to any defaulted Mortgage Loan or any REO Property (other than a Mortgage Loan or REO Property purchased by the Originator or the Servicer pursuant to or as contemplated by Section 2.03 or 10.01), a determination made by the Servicer that all Insurance Proceeds, Liquidation Proceeds and other payments or recoveries which the Servicer, in its reasonable good faith judgment, expects to be finally recoverable in respect thereof have been so recovered. The Servicer shall maintain records, prepared by a Servicing Officer, of each Final Recovery Determination made thereby.¹⁴

OWNIT 2006-2

Repurchase (PSA §2.03(c) – Representations, Warranties, and Covenants of the Depositor)

Upon discovery by any of the Depositor, the Servicer, the NIMs Insurer or the Trustee of a breach of any of such representations and warranties that adversely and materially affects the value of the related Mortgage Loan, Prepayment Charges or the interests of the Certificateholders, the party discovering such breach shall give prompt written notice to the other parties. Within 90 days of the discovery of such breach of any representation or warranty, the Transferor or the Sponsor, as applicable, shall either (a) cure such breach in all material respects, (b) repurchase such Mortgage Loan or any property acquired in respect thereof from the Trustee at the Purchase Price or (c) within the two year period following the Closing Date, substitute a Replacement Mortgage Loan for the affected Mortgage Loan. In the event of discovery of a breach of any representation and warranty of the Transferor or the Sponsor, the Trustee shall enforce its rights under the Transfer Agreement or the Sale Agreement for the benefit of Certificateholders and the NIMs Insurer.¹⁵

Purchase Price (PSA Article I)

Purchase Price: With respect to any Mortgage Loan required to be repurchased by the Sponsor or the Transferor pursuant to Section 2.02 or 2.03 hereof or purchased by the Servicer pursuant to Section 3.12(c) hereof, an amount equal to the sum of (i) 100% of the unpaid principal balance of the Mortgage Loan as of the date of such purchase together with any unreimbursed Servicing Advances, (ii) accrued interest on such unpaid principal balance at the applicable Mortgage Rate from (a) the date through which interest was last paid by the Mortgage Loan to (b) the Due Date in the month in which the Purchase Price is to be distributed to Certificateholders and (iii) any unreimbursed costs, penalties and/or damages incurred by the Trust Fund (or the Trustee on behalf of the Trust Fund) in connection with any violation relating to such Mortgage Loan of any predatory or abusive lending law. With respect to any

¹³ *Id.* at WF_PL_002085409.

¹⁴ *Id.* at WF_PL_002085403.

¹⁵ Merrill Lynch Mortgage Investors, Inc., OWNIT Mortgage Loan Trust, Mortgage Loan Asset-Backed Certificates, Series 2006-2, Pooling and Servicing Agreement (Feb. 1, 2006) (WF_PL_000017886 at WF_PL_000017955).

REO Property purchased by the Servicer pursuant to Section 3.12(c) hereof, an amount equal to the fair market value of such REO Property, as determined in good faith by the Servicer.¹⁶

¹⁶ *Id.* at WF_PL_000017939.

Appendix E

Technical Appendix for Risk Profile Analysis

Technical Appendix for Risk Profile Analysis

I. OVERVIEW

1. In the Risk Profile Analysis, I analyzed whether and to what extent Plaintiffs' claims arising out of the re-underwriting conducted by Mr. Robert Hunter ("Plaintiffs' Loan Characteristic Claims"),¹ if taken as true, would have resulted in a statistically significant increase in the risk of a given loan. The term "risk profile" is used to define the sequence of monthly expected cumulative default probabilities for a given loan, for the period starting from the closing date for each Relevant Trust as stated in the applicable prospectus supplement (the "Closing Date") and ending 85 months later.²
2. I carried out the following analysis for each of the four trusts for which Dr. Snow calculates Repurchase Damages (the "Analyzed Trusts").³
3. Specifically, I analyzed whether Plaintiffs' Loan Characteristic Claims would have increased the risk profiles of the group of loans that Mr. Hunter contends had material breaches and for which he offered alternative loan characteristics amenable to empirical analysis (the "Hunter Breaching Loans").
4. Plaintiffs' Loan Characteristic Claims refers to allegations made in the Hunter Report relating to original CLTV ratio, FICO score, original DTI ratio, occupancy status, property type, loan purpose, and documentation type.

II. LOAN PERFORMANCE DATABASE

5. I first created a set of loan performance databases that enabled me to estimate loan performance under a variety of scenarios that I describe below.
6. I created 101 databases comprised of loans that served as collateral in RMBS securitizations issued between 1998 and 2017.
7. The initial database of loan information was acquired from Moody's Analytics, a data vendor, and provided historical performance information on mortgage loans.⁴ This database contained information relating to approximately 30 million loans.
8. The database included loan-level information for a variety of loan characteristics, including but not limited to: loan origination date, original loan balance, original FICO score, original loan-to-value ("LTV") ratio, original combined loan-to-value ("CLTV") ratio, debt-to-income ("DTI")

¹ Hunter, Robert W. Expert Report of Robert W. Hunter. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Oct. 29, 2018) and supporting materials ("Hunter Report").

² Eighty-five months represents the time period for which data on loan performance is most complete.

³ 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) and supporting materials ("Snow Report") at ¶¶ 19, 39. The four trusts are ABFC 2006-OPT2, FFML 2006-FFA, OOMLT 2007-3, and OWNIT 2006-2.

⁴ Moody's Analytics Mortgage Database.

ratio, occupancy type, property type, loan purpose, documentation type, lien position, first payment date, state in which the relevant property was located, the presence or absence of a prepayment penalty, and the presence or absence of an adjustable rate mortgage. The database also included information on loan delinquency history.

9. To support my analysis, I created additional fields that reflected prepayment and default dates as follows:
 - a. Where a loan had one or more dates in the “PIFDate” field, I assigned the earliest such date as a loan’s prepayment date.
 - b. Where a loan was recorded to be at least 90-days delinquent according to the “OTSDelinq” field, I assigned the earliest date that such 90-day delinquency was recorded as a loan’s default date.
 - c. In certain instances, a loan had both prepayment and default dates in the database. If a loan was identified as having both a prepayment and a default date, I made a determination based on the following sequence of events:
 - i. If prepayment occurred before default, I excluded the loan from the database.
 - ii. If default occurred before prepayment, I considered the loan to have prepaid.
10. I further modified the database in the following ways:
 - a. If the reported original CLTV ratio or original LTV ratio value was equal to 0, I replaced the given value with an entry that indicated the value was missing.
 - b. If the reported original DTI ratio value was equal to 0, I replaced the given value with an entry that indicated the value was missing.
 - c. If the reported original FICO score value was less than 300 or greater than 850, I replaced the given value with an entry that indicated the value was missing.
 - d. Where I found a loan for which the “PropertyType” field indicated the property was a single family residence but the “NumberOfUnits” field indicated more than one unit (*i.e.*, the value was greater than 1), I replaced the value in the “PropertyType” field to indicate the property had more than one unit.
 - e. Where I found a pair of loans for which (a) the loans were in the same trust and had the same loan number; and (b) the loans had identical loan characteristics (allowing for up to a 0.1 percent variance in each numerical characteristic), I removed one loan.⁵
 - f. If a loan was missing its entire delinquency history (using the “OTSDelinq” field) and the loan did not have a prepayment date, I excluded the loan from the database.

⁵ The loan characteristics I analyzed were: original LTV ratio, original CLTV ratio, DTI ratio, FICO score, original loan balance, occupancy type, property type, loan purpose type, documentation type, prepayment penalty, lien position, loan origination date, whether the loan was an adjustable rate mortgage, and state in which the property was located.

- g. Any loans securitized in the Relevant Trusts were excluded.
 - h. I generated indicator variables for the following categorical variables: occupancy type, property type, loan purpose, documentation type, lien position, prepayment penalty, location of relevant property (by state), and adjustable rate mortgage.
 - i. I collected state-level unemployment data from the Federal Bureau of Labor Statistics and merged it with the database.⁶ Therefore, the database included an additional field indicating the state-level unemployment rate for each loan as of its origination date.
11. As a result, the database included the following loan characteristics: (1) numerical values for FICO score, original CLTV ratio, original LTV ratio, DTI ratio, and loan origination date; (2) indicators for occupancy type, property type, loan purpose, documentation type, lien position, the state in which the relevant property was located, prepayment penalty, and adjustable rate mortgage; (3) state-level unemployment rate as of loan origination date; and (4) prepayment and default dates.
 12. The resulting database (the “Database”) was used in the analyses described below.
 13. The loans in the Database were sampled with replacement to generate another 100 databases. In total, I created 101 databases (the “Databases”).

III. LOAN TAPE PREPARATION

14. I relied on the same loan tapes provided by Mr. Hunter.⁷ I processed these tapes in my analysis, as described below.
15. The variables listed in the loan tapes were renamed to ensure consistency with variable names in the Database.
16. In some cases, the values of the loan tape variables did not conform to the format used in the Database. In these instances, I reformatted the variables on the loan tape. For example, the Database standard for the occupancy type of second homes was “SEC.” If the loan tape used a different indicator variable, such as “S,” I replaced the second homes indicator in the loan tape with the Database standard, thereby allowing data from multiple sources to be used in a single analysis.
17. This resulted in a modified loan tape (the “Loan Tape”) for each of the Analyzed Trusts.

⁶ “State Level Unemployment Rate.” Unemployment Data. *Bureau of Labor Statistics*.
<http://download.bls.gov/pub/time.series/la/la.series>;
<http://download.bls.gov/pub/time.series/la/la.data.2.AllStatesU> (accessed June 18, 2019).

⁷ For a list of loan tapes used in my analysis, see **Appendix B: Materials Relied Upon**.

IV. COMPILATION OF REPORTED LOAN CHARACTERISTICS AND PLAINTIFFS' LOAN CHARACTERISTIC CLAIMS

18. I pared down the Loan Tape to only include the Hunter Breaching Loans ("Loan Information"). I refer to the loan characteristics reflected in the Loan Tape for each Hunter Breaching Loan as the Reported Loan Characteristics.
19. I then compiled Plaintiffs' Loan Characteristic Claims and included them in the Loan Information. For each loan characteristic for which Mr. Hunter alleged alternative values, I created a field that reflected those alternative values.

V. MODEL OF LOAN PERFORMANCE

20. I used an industry standard Cox proportional hazards model in order to establish loan performance expectations for each Hunter Breaching Loan based on the loan characteristics described above and applicable unemployment data.
21. *First*, each Database (as described above) was narrowed to include only the timeframe applicable to each Analyzed Trust—specifically, the period beginning with January 1, 1998 and ending with the Closing Date. By restricting the data in this way, only information that was available at the time of securitization was utilized.
22. Second, I created fields to indicate loan status as follows:
 - a. If a loan had prepaid before the Closing Date, it was marked as prepaid.
 - b. If a loan had defaulted before the Closing Date, it was marked as defaulted.
 - c. If a loan had neither prepaid nor defaulted before the Closing Date, I marked the loan as censored.
 - d. I created an "exit date" for each loan in the Database, which was defined as the date of prepayment, the date of default, or the last recorded date of performance on or before the Closing Date. I then created a field for loan age by calculating the difference between the loan origination date and the exit date.
23. *Third*, the variables in the Databases were used in an industry standard Cox proportional hazards model to estimate a prepayment hazard function. The hazard function provides a monthly estimate of expected prepayment. In other words, the Cox proportional hazards model established a relationship between certain loan characteristics, unemployment, and prepayment likelihood.
24. *Fourth*, the same variables were again used in a Cox proportional hazards model to estimate a default hazard function. This function, as with prepayment, provided a monthly estimate of expected default. In other words, the model established a relationship between loan characteristics, unemployment, and default likelihood.
25. *Fifth*, I repeated this process 100 times, that is, once for each of the additional Databases. As a result of this process, I had 101 pairs of default/prepayment hazard functions.

VI. RISK PROFILE ANALYSIS

A. Calculation of Risk Profiles

26. Using each pair of default/prepayment hazard functions, I created risk profiles for each of the Hunter Breaching Loans for:
 - a. the loan as reflecting the Reported Loan Characteristics (*baseline scenario*); and
 - b. the same loan, but as modified to reflect Plaintiffs' Loan Characteristic Claims (*Plaintiffs' claims scenario*).
27. Specifically, for each of the Hunter Breaching Loans, the hazard functions were used to calculate the likelihood of prepayment and default for each of the 85 monthly periods beginning on the Closing Date under each scenario. This likelihood was expressed as a percentage.
28. I then performed a multi-phased simulation to proxy for the realized performance of the loan in a given period, based on the estimated likelihoods.
29. Hypothetical prepayment and default histories were generated for each loan under each scenario, as follows. At each time period for each scenario, I generated a random number between zero and one from a uniform distribution.⁸ I then compared the random number with the estimated likelihood of default or prepayment under the applicable scenario. If the random number was less than or equal to the estimated likelihood of default, the loan was considered to have defaulted. Conversely, if the random number was greater than the estimated likelihood, the loan was considered to have not defaulted. The same procedure was applied to prepayment likelihood.
30. A default event was identified as the first period in the default history where the loan was indicated to have defaulted. A prepayment event was identified as the first period in the default history where the loan was indicated to have prepaid. If a default event occurred before a prepayment event, the loan was considered to have defaulted, and vice versa. Where the first event for both default and prepayment events occurred in the same month, the loan was deemed to have prepaid.
31. I generated hypothetical 85-month prepayment and default histories for each loan under each scenario.
32. The process was repeated for a total of 1,000 simulations, resulting in 1,000 hypothetical loan performance histories for each loan under each scenario.
33. For each scenario, the cumulative default rate (reflecting the aggregation of each of the 1,000 simulated loan performance histories) for each of the 85 months was calculated. These results comprised the risk profile of the loan for a given scenario for a given Database.

⁸ A uniform distribution exhibits constant probability, meaning each number has the same probability of being selected.

B. Comparison of Risk Profiles Using Chi-Square test

34. For each of the 101 Databases, I conducted a statistical test for each loan to determine if the risk profile under the *Plaintiffs' claims scenario* was statistically indistinguishable from the risk profile associated with the *baseline scenario*. A chi-square test was used to determine if the following statement was true:⁹

The risk profile in the *Plaintiffs' claims scenario* is the same as the risk profile in the *baseline scenario* ("Null Hypothesis").

35. Each chi-square test generated a p-value. The p-value is the greatest probability level for which the chi-square test fails to reject the Null Hypothesis. Therefore, it is more likely the Null Hypothesis is true when the p-value is higher.
36. The test also generated a z-score. The z-score summarizes the magnitude and direction of the differences between the two risk profiles. If the z-score is positive, it indicates that the risk in the *Plaintiffs' claims scenario* is lower than the *baseline scenario*.

C. Calculation and Comparison of Average P-Values

37. Through the process above, I obtained 101 p-values and z-scores for each Hunter Breaching Loan. Next, I averaged these p-values. Where the average p-value was greater than 0.05, the risk profiles were statistically indistinguishable for the given Hunter Breaching Loan.¹⁰ However, if for each of the 101 chi-square tests, the p-value did not indicate a rejection of the Null Hypothesis or the z-score was positive, I concluded that Plaintiffs' Loan Characteristic Claims did not have an adverse impact on the risk of the loan.
38. If the analysis determined that there was no statistically significant difference in the risk profiles in the *baseline scenario* and the *Plaintiffs' claims scenario*, I concluded that Plaintiffs' Loan Characteristic Claims did not have a material impact on risk of the loan.

D. Results

39. I report the results in **Exhibit 15: Results of Risk Profile Analysis**.

⁹ Gray, Robert J. "A Class of K-Sample Tests for Comparing the Cumulative Incidence of a Competing Risk." *The Annals of Statistics* 16.3 (Sept. 1988): 1141-1154 at 1146.

¹⁰ See, e.g., Peracchi, Franco. *Econometrics*. Chichester: John Wiley & Sons Ltd (2001) at 194.

Appendix F

Optional Termination Provisions in the Governing Agreements

Optional Termination Provisions in the Governing Agreements

ABFC 2006-OPT2

Termination (PSA §10.01)

The NIMS Insurer, if there is a NIMS Insurer, or if there is no NIMS Insurer, the Majority Class CE Certificateholders (and, if such holder is the Seller or an affiliate of the Seller, the Servicer of the Mortgage Loans) may, at its option, terminate the Trust Fund and retire the Certificates on the Distribution Date following the Distribution Date upon which the aggregate current Pool Balance is less than 10% of the sum of the aggregate Pool Balance of the Mortgage Loans as of the Cut-off Date by purchasing all of the outstanding Mortgage Loans and REO Properties in the Trust Fund at a price equal to (i) the sum of the outstanding Principal Balance of the Mortgage Loans and except to the extent previously advanced by the Servicer, accrued and unpaid interest thereon at the weighted average of the Mortgage Interest Rates through the end of the Collection Period preceding the final Distribution Date plus unreimbursed Servicing Advances, Advances and any unpaid Servicing Fees allocable to such Mortgage Loans, (ii) the fair market value of the REO Properties as determined in good faith by the Servicer and (iii) any Swap Termination Payment owed to the Swap Provider pursuant to the Interest Rate Swap Agreement (the "Termination Price"). If the NIMS Insurer or the Majority Class CE Certificateholders (or, if the Majority Class CE Certificateholder is the Seller or an affiliate of the Seller, the Servicer) is subject to regulation by the OCC, the FDIC, the Federal Reserve or the Office of Thrift Supervision, however, the option may not be exercised unless the aggregate fair market value of the Mortgage Loans and REO Properties is greater than or equal to the Termination Price. Notwithstanding the foregoing, no party may exercise this optional purchase right unless any Reimbursement Amount owed to the Trust pursuant to Section 2.03 hereof has been paid.¹

CARR 2006-NC3

Termination Upon Repurchase or Liquidation of All Mortgage Loans (PSA §9.01(b))

The majority Holder of the Class CE Certificates shall have the right (the party exercising such right, the "Terminator") to purchase all of the Mortgage Loans and each REO Property remaining in REMIC I pursuant to clause (i) of the preceding paragraph in the manner set forth in Section 9.01(c) below if the aggregate Stated Principal Balance of the Mortgage Loans and each REO Property remaining in the Trust Fund at the time of such election is reduced to less than 10% of the aggregate Stated Principal Balance of the Mortgage Loans as of the Cut-off Date. By acceptance of a Residual Certificate, the Holders of the Residual Certificates agree, in connection with any termination hereunder, to assign and transfer any amounts in excess of par, and to the extent received in respect of such termination, to pay any such amounts to the Holders of the Class CE Certificates.²

¹ Asset Backed Funding Corporation, ABFC 2006-OPT2 Trust, Pooling and Servicing Agreement (Sept. 1, 2006) (WF_PL_002121502 at WF_PL_002121686-7).

² Stanwich Asset Acceptance Company, L.L.C., Carrington Mortgage Loan Trust, Series 2006-NC3, Pooling and Servicing Agreement (Aug. 1, 2006) (WF_PL_000019852 at WF_PL_000019986).

CARR 2006-NC4*Termination Upon Repurchase or Liquidation of All Mortgage Loans (PSA §9.01(b))*

The majority Holder of the Class CE Certificates shall have the right (the party exercising such right, the “Terminator”) to purchase all of the Mortgage Loans and each REO Property remaining in REMIC I pursuant to clause (i) of the preceding paragraph in the manner set forth in Section 9.01(c) below if the aggregate Stated Principal Balance of the Mortgage Loans and each REO Property remaining in the Trust Fund at the time of such election is reduced to less than 10% of the aggregate Stated Principal Balance of the Mortgage Loans as of the Cut-off Date. By acceptance of a Residual Certificate, the Holders of the Residual Certificates agree, in connection with any termination hereunder, to assign and transfer any amounts in excess of par, and to the extent received in respect of such termination, to pay any such amounts to the Holders of the Class CE Certificates.³

CARR 2007-FRE1*Termination Upon Repurchase or Liquidation of All Mortgage Loans (PSA §9.01(b))*

The majority Holder of the Class CE Certificates shall have the right (the party exercising such right, the “Terminator”) to purchase all of the Mortgage Loans and each REO Property remaining in REMIC I pursuant to clause (i) of the preceding paragraph in the manner set forth in Section 9.01(c) below if the aggregate Stated Principal Balance of the Mortgage Loans and each REO Property remaining in the Trust Fund at the time of such election is reduced to less than 10% of the aggregate Stated Principal Balance of the Mortgage Loans as of the Cut-off Date.⁴

FFML 2006-FFA*Definitions (Trust Agreement §1.01)*

Initial Optional Termination Date: The first Distribution Date following the date on which the Aggregate Pool Balance is less than 10.00% of the Cut-off Date Balance.⁵

Purchase of Mortgage Loans; Termination of Trust Fund Upon Purchase or Liquidation of All Mortgage Loans: Purchase of Lower Tier REMIC 1 Uncertificated Regular Interests. (Trust Agreement §7.01(b))

On any Distribution Date occurring on or after the Initial Optional Termination Date, the Master Servicer or LTURI-holder, as applicable, with the prior written consent of any NIMS Insurer and the Seller, which consent shall not be unreasonably withheld, has the option to cause the Trust Fund to adopt a plan of complete liquidation pursuant to Section 7.03(a)(i) hereof to sell all of its property. Upon exercise of such option, the property of the Trust Fund

³ Stanwich Asset Acceptance Company, L.L.C., Carrington Mortgage Loan Trust, Series 2006-NC4, Pooling and Servicing Agreement (Sept. 1, 2006) (WF_PL_002103032 at WF_PL_002103167).

⁴ Stanwich Asset Acceptance Company, L.L.C., Carrington Mortgage Loan Trust, Series 2007-FRE1, Pooling and Servicing Agreement (Apr. 1, 2007) (WF_PL_000014777 at WF_PL_000014914).

⁵ Structured Asset Securities Corporation, First Franklin Mortgage Loan Trust Mortgage Pass-Through Certificates Series 2006-FFA, Trust Agreement (Oct. 1, 2006) (WF_PL_000009938 at WF_PL_000009973).

shall be sold to the Master Servicer at a price (the “Termination Price”) equal to the sum of (i) 100% of the unpaid principal balance of each Mortgage Loan on the day of such purchase plus interest accrued thereon at the applicable Mortgage Rate with respect to any Mortgage Loan to the Due Date in the Collection Period immediately preceding the related Distribution Date to the date of such repurchase, (ii) the fair market value of any REO Property and any other property held by any REMIC, such fair market value to be determined by an independent appraiser or appraisers mutually agreed upon by the Master Servicer, any NIMS Insurer and the Trustee (reduced, in the case of REO Property, by (1) reasonably anticipated disposition costs and (2) any amount by which the fair market value as so reduced exceeds the outstanding principal balance of the related Mortgage Loan plus interest accrued thereon at the applicable Net Mortgage Rate to the date of such purchase), (iii) any unreimbursed Servicing Advances and (iv) any Swap Termination Payment payable to the Swap Counterparty as a result of a termination pursuant to this Section 7.01; provided, however, if there are any NIM Securities outstanding, the Master Servicer may only exercise its option after receiving the prior written consent of the holders of such NIM Securities and, if such consent is given, the Termination Price shall also include an amount equal to the sum of (1) any accrued interest on the NIM Securities, (2) the unpaid principal balance of any such NIM Securities and (3) any other reimbursable expenses owed by the issuer of the NIM Securities (the “NIM Redemption Amount”).⁶

IMM 2005-6

Optional Redemption of the Bonds (Indenture §8.07(a))

The Majority Certificateholder shall have the option to redeem the, Group 1 Bonds in whole, but not in part, on any Payment Date on or after the earlier of (i) the Payment Date on which the aggregate Stated Principal Balance of the Group 1 Loans as of the end of the related Due Period is less than or equal to 20% of the aggregate Group 1 Cut-off Date Balance and (ii) the Payment Date occurring in August 2015. The Majority Certificateholder shall have the option to redeem the Group 2 Bonds in whole, but not in part, on any Payment Date on or after the earlier of (i) the Payment Date on which the aggregate Stated Principal Balance of the Group 2 Loans as of the end of the related Due Period is less than or equal to 20% of the aggregate Group 2 Cut-off Date Balance and (ii) the Payment Date occurring in August 2015. The aggregate redemption price for each Group of Bonds will be equal to the unpaid Bond Principal Balance of such Bonds as of the Payment Date on which the proposed redemption will take place in accordance with the foregoing, together with accrued and unpaid interest thereon at the applicable Bond Interest Rate through such Payment Date (including any related Unpaid Interest Shortfall and Basis Risk Shortfall Carry-Forward Amount), plus an amount sufficient to pay in full all amounts owing to the Bond Insurer and the Indenture Trustee under this Indenture and the Insurance Agreement (which amounts shall be specified in writing upon request of the Issuer by the Indenture Trustee and the Bond Insurer) and plus an amount equal to any amounts owing to the Derivative Contract Counterparties under the Derivative Contracts.⁷

⁶ *Id.* at WF_PL_000010077.

⁷ IMH Assets Corp., Trust Certificates, Series 2005-6, Amended and Restated Trust Agreement (Sept. 9, 2005) (WL_PL_002109617 at WF_PL_002109679-80).

IMSA 2005-2*Termination Upon Repurchase or Liquidation of All Mortgage Loans or upon Purchase of Certificates (PSA §9.01(a))*

The right of the Master Servicer or its designee to repurchase all Mortgage Loans pursuant to (i) above shall be conditioned upon the Aggregate Stated Principal Balance of such Mortgage Loans at the time of any such repurchase aggregating an amount equal to or less than 10% of the Cut-off Date Balance of the Mortgage Loans; provided, however, that no such purchase will be permitted if it would result in a draw on the Certificate Guaranty Insurance Policy, unless the Certificate Insurer consents in writing to such purchase. If such right is exercised, the Master Servicer upon such repurchase shall provide to the Trustee, notice of such exercise prior to the Determination Date in the month preceding the month of purchase and the certification required by Section 3.16.⁸

OOMLT 2007-3*Termination (PSA §10.01(a))*

The Servicer (or if the Servicer elects not to exercise such option, the NIMS Insurer) may, at its option (the party exercising such right the “Terminator”), terminate this Agreement on any date on which the aggregate Stated Principal Balance of the Mortgage Loans (after giving effect to scheduled payments of principal due during the related Due Period, to the extent received or advanced, and unscheduled collections of principal received during the related Prepayment Period) on such date is equal to or less than 10% of the aggregate Cut-off Date Principal Balance, by purchasing, on the next succeeding Distribution Date, all of the outstanding Mortgage Loans and REO Properties at a price equal to the fair market value of the Mortgage Loans and REO Properties (as determined by the Servicer, if it is the Terminator, the NIMS Insurer, if it is the Terminator and, to the extent that the Class A Certificates or a Class of Mezzanine Certificates will not receive all amounts owed to it as a result of the termination, the Trustee, as of the close of business on the third Business Day next preceding the date upon which notice of any such termination is furnished to the related Certificateholders pursuant to Section 10.01(c)), plus accrued and unpaid interest thereon at the weighted average of the Mortgage Rates through the end of the Due Period preceding the final Distribution Date plus unreimbursed Servicing Advances, Advances, any unpaid Servicing Fees allocable to such Mortgage Loans and REO Properties, any accrued unpaid Net WAC Rate Carryover Amount, any previously unpaid Allocated Realized Loss Amounts and any Swap Termination Payment to the Swap Provider then remaining unpaid or which is due to the exercise of such option[.]⁹

⁸ Impac Secured Assets Corp., Mortgage Pass-Through Certificates Series 2005-2, Pooling and Servicing Agreement (Dec. 1, 2005) (WF_PL_002110764 at WF_PL_002110907).

⁹ Option One Mortgage Acceptance Corporation, Option One Mortgage Loan Trust 2007-3, Pooling and Servicing Agreement (Apr. 1, 2007) (WF_PL_002085372 at WF_PL_002085548).

OWNIT 2006-2*Definitions (PSA Article I)*

Initial Optional Termination Date: The first Distribution Date on which the aggregate Stated Principal Balance of the Mortgage Loans (or if such Mortgage Loan is an REO Property, the fair market value of such REO Property) is equal to or less than 10% of the aggregate Stated Principal Balance of the Mortgage Loans as of the Cut-off Date.¹⁰

Termination upon Liquidation or Auction of all Mortgage Loans (PSA §9.01(b))

On or before the Determination Date following the Initial Optional Termination Date, the Trustee will attempt to terminate the Trust Fund through a one-time auction process and thereby effect the retirement of all of the Certificates. The Trustee will attempt to auction the remaining Trust Fund assets via a solicitation of bids from at least three bidders, each of which shall be a nationally recognized participant in mortgage finance (the “Auction”). The Trustee will also solicit bids from each Holder of a Class C and Class P Certificate. Any such termination will occur only if the highest bid received is at least equal to the Optional Termination Price (as determined by the Trustee). Proceeds from the purchase will be distributed to the Certificateholders in the order of priority described herein. Any such Optional Termination will result in an early retirement of the Certificates.

If the Trust Fund is not terminated because a sufficient purchase price is not achieved at such auction, the NIMS Insurer, if any, may purchase all of the Mortgage Loans, which would result in an early retirement of the Certificates and the termination of the Trust Fund. If the auction fails to achieve a sufficient purchase price and the NIMS Insurer, if any, fails to exercise its option to purchase all of the Mortgage Loans, the Servicer may purchase all of the Mortgage Loans at the Optional Termination Price, which similarly would result in an early retirement of the Certificates and the termination of the Trust Fund.¹¹

PPSI 2005-WLL1*Termination Upon Repurchase or Liquidation of All Mortgage Loans (PSA §9.01(a))*

Holders of at least 76% of the Voting Rights of the Class CE Certificates, the Servicer (or if the Servicer fails to exercise such right, the NIMS Insurer), in that order, shall have the right (the party exercising such right, the “Terminator”), to purchase all of the Mortgage Loans and each REO Property remaining in REMIC I pursuant to clause (i) of the preceding paragraph no later than the Determination Date in the month immediately preceding the Distribution Date on which the Certificates shall be retired; provided, however, that the Terminator may elect to purchase all of the Mortgage Loans and each REO Property remaining in REMIC I pursuant to clause (i) above only (A) if the aggregate Stated Principal Balance of the Mortgage Loans and each REO Property remaining in the Trust Fund at the time of such election is less than 10% of the aggregate Stated Principal Balance of the Mortgage Loans as of the Cutoff Date and (B) if the Terminator is the Servicer and is an affiliate of the Seller,

¹⁰ Merrill Lynch Mortgage Investors, Inc., OWNIT Mortgage Loan Trust, Mortgage Loan Asset-Backed Certificates, Series 2006-2, Pooling and Servicing Agreement (Feb. 1, 2006) (WF_PL_000017886 at WF_PL_000017900).

¹¹ *Id.* at WF_PL_000018031.

the Servicer shall have delivered to the Trustee and the NIMS Insurer a written certification that the burdens of servicing the Mortgage Loans and REO Properties remaining in REMIC I exceed the benefits of the Servicing Fees that would be realized by the Servicer if it continued to service such assets on behalf of the Trust Fund. By acceptance of the Residual Certificates, the Holders of the Residual Certificates agree, in connection with any termination hereunder, to assign and transfer any amounts in excess of par, and to the extent received in respect of such termination, to pay any such amounts to the Holders of the Class CE Certificates.¹²

SABR 2006-FR2

Definitions (PSA Article I)

Optional Termination Date: The Distribution Date on which the aggregate Stated Principal Balance of the Mortgage Loans, as of the last day of the related Due Period, is equal to 10% or less of the Cut-off Date Pool Principal Balance.¹³

Termination (PSA §9.01)

Subject to Section 9.03, the obligations and responsibilities of the Depositor, the Servicer and the Trustee created hereby with respect to the Trust Fund shall terminate upon the earlier of (a) the purchase, on or after the Optional Termination Date, by the Servicer of all Mortgage Loans (and REO Properties) at the price (the “Termination Price”) equal to the sum of (i) 100% of the unpaid principal balance of each Mortgage Loan (other than in respect of REO Property) plus accrued and unpaid interest thereon at the applicable Mortgage Rate, (ii) the lesser of (x) the appraised value of any REO Property as determined by the higher of two appraisals completed by two independent appraisers selected by the Servicer at the expense of the Servicer and (y) the unpaid principal balance of each Mortgage Loan related to any REO Property, in each case plus accrued and unpaid interest thereon at the applicable Mortgage Rate, (iii) all unreimbursed P&I Advances, Servicing Advances and indemnification payments payable to the Servicer, (iv) any Swap Termination Payment, other than a Defaulted Swap Termination Payment, owed to the Swap Provider pursuant to the Interest Rate Swap Agreement, and (v) any unreimbursed indemnification payments payable to the Trustee under this Agreement and (b) the later of (i) the maturity or other liquidation (or any Advance with respect thereto) of the last Mortgage Loan remaining in the Trust Fund and the disposition of all REO Property and (ii) the distribution to Certificateholders of all amounts required to be distributed to them pursuant to this Agreement.¹⁴

¹² Park Place Securities, Inc., Asset-Backed Pass-Through Certificates Series 2005-WLL1, Pooling and Servicing Agreement (Mar. 1, 2005) (WF_PL_000000131 at WF_PL_000000284-5).

¹³ Securitized Asset Backed Receivables LLC, Securitized Asset-Backed Receivables LLC Trust 2006-FR2, Pooling and Servicing Agreement (June 1, 2006) (WF_PL_000013267 at WF_PL_000013311).

¹⁴ *Id.* at WF_PL_000013408.

Exhibit 1

Plaintiffs' Claimed Acquisitions¹

Plaintiff	Trust	Certificate	Original Face Value	Claimed Acquisition or Assignment Date ²	Means of Claimed Acquisition ³
Blue Heron Funding II Ltd.	IMM 2005-6	1A1	\$ 11,000,000	Sept. 9, 2005	Market Purchase
	IMSA 2005-2	M1	\$ 14,106,000	July 5, 2006	Market Purchase
Blue Heron Funding IX Ltd.	IMM 2005-6	1A1	\$ 24,000,000	Sept. 9, 2005	Market Purchase
	IMSA 2005-2	A2C	\$ 17,002,000	July 7, 2006	Market Purchase
Blue Heron Funding V Ltd.	IMM 2005-6	1A1	\$ 20,000,000	Sept. 9, 2005	Market Purchase
	IMSA 2005-2	A2C	\$ 11,000,000	July 7, 2006	Market Purchase
C-BASS CBO XIV Ltd.	PPSI 2005-WLL1	M6	\$ 1,893,500	Sept. 22, 2005	Agreement with WestLB
	PPSI 2005-WLL1	M7	\$ 5,473,000	Sept. 22, 2005	Agreement with WestLB
	PPSI 2005-WLL1	M8	\$ 5,262,500	Sept. 22, 2005	Agreement with WestLB
	PPSI 2005-WLL1	M9	\$ 2,947,000	Sept. 22, 2005	Agreement with WestLB
	PPSI 2005-WLL1	M10	\$ 3,157,500	Sept. 22, 2005	Agreement with WestLB
C-BASS CBO XVII Ltd.	OWNIT 2006-2	B1	\$ 5,000,000	Oct. 17, 2006	Agreement with WestLB
	OWNIT 2006-2	B2	\$ 4,961,000	Oct. 17, 2006	Agreement with WestLB
	OWNIT 2006-2	B3	\$ 2,000,000	Oct. 17, 2006	Agreement with WestLB
	PPSI 2005-WLL1	M8	\$ 4,735,000	Oct. 17, 2006	Agreement with WestLB
	PPSI 2005-WLL1	M9	\$ 2,947,000	Oct. 17, 2006	Agreement with WestLB
	PPSI 2005-WLL1	M10	\$ 3,157,500	Oct. 17, 2006	Agreement with WestLB
	SABR 2006-FR2	M2	\$ 2,000,000	Oct. 17, 2006	Agreement with WestLB
Kleros Preferred Funding V PLC	CARR 2006-NC3	M4	\$ 12,000,000	Dec. 20, 2012	Agreement with WestLB
	CARR 2006-NC4	M4	\$ 7,000,000	Dec. 20, 2012	Agreement with WestLB
	CARR 2006-NC4	M6	\$ 5,000,000	Feb. 13, 2012	Agreement with WestLB
	CARR 2007-FRE1	M3	\$ 200,000	May 25, 2007	Market Purchase
Phoenix Light SF Limited	IMM 2005-6	1A1	\$ 20,000,000	Nov. 24, 2008	Agreement with WestLB AG and Greyhawk Funding
	IMM 2005-6	1M1	\$ 45,000,000	Feb. 13, 2012	Agreement with Harrier
	IMSA 2005-2	A2C	\$ 30,000,000	Dec. 20, 2012	Agreement with Kestrel
	IMSA 2005-2	M1	\$ 7,500,000	Dec. 20, 2012	Agreement with Kestrel
	FFML 2006-FFA	A4	\$ 43,722,000	Feb. 13, 2012	Agreement with Harrier
	FFML 2006-FFA	A4	\$ 18,000,000	Feb. 14, 2012	Agreement with Kestrel
	FFML 2006-FFA	M1	\$ 14,066,000	Feb. 13, 2012	Agreement with Harrier
	FFML 2006-FFA	M1	\$ 5,000,000	Apr. 22, 2013	Agreement with Kestrel
	FFML 2006-FFA	M3	\$ 14,957,000	Feb. 13, 2012	Agreement with Harrier
	FFML 2006-FFA	M3	\$ 5,000,000	Dec. 29, 2008	Agreement with Kestrel

Exhibit 1**Plaintiffs' Claimed Acquisitions¹**

Plaintiff	Trust	Certificate	Original Face Value	Claimed Acquisition or Assignment Date²	Means of Claimed Acquisition³
Silver Elms CDO PLC	ABFC 2006-OPT2	M6	\$ 3,500,000	Feb. 13, 2012	Agreement with WestLB
	CARR 2007-FRE1	M2	\$ 5,178,000	Apr. 5, 2007	Market Purchase
	OOMLT 2007-3	M3	\$ 4,500,000	Apr. 12, 2007	Market Purchase

Notes:

1. Information presented is taken from the Second Amended Complaint Exhibit B, unless otherwise noted. Trusts that are no longer at-issue in this case have been excluded. I understand Wells Fargo disputes whether Plaintiffs acquired certain of the Relevant Certificates.
2. The table presents the later of (i) Plaintiffs' claimed acquisition date and (ii) Plaintiffs' claimed date of additional assignments.
3. Certificates were allegedly acquired by Plaintiffs through either (1) purchase on the open market ("Market Purchase") or (2) by exercising rights under an agreement ("Agreement") with WestLB, WestLB AG, Greyhawk Funding, Harrier, or Kestrel.

Source:

- 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) at Exhibit B.

Exhibit 2**Separate Trustee Appointments**

Trust	Separate Trustee Appointment Date¹
ABFC 2006-OPT2	Mar. 25, 2014
CARR 2006-NC3	Dec. 21, 2015
CARR 2006-NC4	Dec. 21, 2015
CARR 2007-FRE1	Sept. 15, 2014
FFML 2006-FFA	June 7, 2012
IMM 2005-6	Feb. 27, 2015
IMSA 2005-2	Apr. 9, 2015
OOMLT 2007-3	Oct. 15, 2012
OWNIT 2006-2	June 9, 2014
PPSI 2005-WLL1	Oct. 28, 2014
SABR 2006-FR2	May 26, 2015

Note:

1. Separate Trustee Appointment Date is the stated effective date upon which Law Debenture Trust Company of New York accepted its court-ordered appointment as a separate trustee to enforce repurchase claims.

Source:

- Notices to Investors: ABFC 2006-OPT2 (Mar. 27, 2014); CARR 2006-NC3 (Dec. 29, 2015); CARR 2006-NC4 (Dec. 29, 2015); CARR 2007-FRE1 (Sept. 16, 2014); FFML 2006-FFA (June 11, 2012); IMM 2005-6 (Mar. 6, 2015); IMSA 2005-2 (Apr. 15, 2015); OOMLT 2007-3 (Oct. 18, 2012); OWNIT 2006-2 (June 12, 2014); PPSI 2005-WLL1 (Nov. 6, 2014); and SABR 2006-FR2 (June 2, 2015). <www.ctslink.com> (accessed July 25, 2019).

Certificates with Realized or Implied Losses or Discount to Par at Claimed Acquisition or Assignment Date¹

Plaintiff	Trust	Tranche	Amount	Claimed Acquisition Date	Realized or Implied Losses Prior to Claimed Acquisition Date ²	Realized or Implied Losses Prior to Claimed Acquisition Date as a Percent of Amount	Price ³
Phoenix Light	FFML 2006-FFA	A4 ⁴	\$18,000,000	May 29, 2009	\$6,222,897	34.57%	1.01
Phoenix Light	FFML 2006-FFA	A4 ⁴	\$43,722,000	Sept. 8, 2009	\$32,219,466	73.69%	0.80
Phoenix Light	FFML 2006-FFA	M1	\$14,066,000	Dec. 29, 2008	\$1,863,715	13.25%	n/a
Phoenix Light	FFML 2006-FFA	M1	\$5,000,000	Dec. 29, 2008	\$662,489	13.25%	0.00
Phoenix Light	FFML 2006-FFA	M3	\$14,957,000	Dec. 29, 2008	\$14,957,000	100.00%	n/a
Phoenix Light	FFML 2006-FFA	M3	\$5,000,000	Dec. 29, 2008	\$5,000,000	100.00%	n/a
Total			\$100,745,000		\$60,925,567	60.48%	

Plaintiff	Trust	Tranche	Amount	Claimed Additional Assignment Date	Realized or Implied Losses Prior to Claimed Assignment Date ²	Realized or Implied Losses Prior to Claimed Assignment Date as a Percent of Amount
Kleros	CARR 2006-NC3	M4	\$12,000,000	Dec. 20, 2012	\$12,000,000	100.00%
Kleros	CARR 2006-NC4	M4	\$7,000,000	Dec. 20, 2012	\$7,000,000	100.00%
Kleros	CARR 2006-NC4	M6	\$5,000,000	Feb. 13, 2012	\$5,000,000	100.00%
Phoenix Light	FFML 2006-FFA	A4 ⁴	\$18,000,000	Feb. 14, 2012	\$18,000,000	100.00%
Phoenix Light	FFML 2006-FFA	A4 ⁴	\$43,722,000	Feb. 13, 2012	\$43,722,000	100.00%
Phoenix Light	FFML 2006-FFA	M1	\$14,066,000	Feb. 13, 2012	\$14,066,000	100.00%
Phoenix Light	FFML 2006-FFA	M1	\$5,000,000	Apr. 22, 2013	\$5,000,000	100.00%
Phoenix Light	FFML 2006-FFA	M3	\$14,957,000	Feb. 13, 2012	\$14,957,000	100.00%
Phoenix Light	IMM 2005-6	1M1 ⁵	\$45,000,000	Feb. 13, 2012	\$9,732,914	21.63%
Phoenix Light	IMSA 2005-2	A2C	\$30,000,000	Dec. 20, 2012	\$1,822,713	6.08%
Phoenix Light	IMSA 2005-2	M1 ⁶	\$7,500,000	Dec. 20, 2012	\$7,500,000	100.00%
Silver Elms	ABFC 2006-OPT2	M6	\$3,500,000	Feb. 13, 2012	\$3,500,000	100.00%
Total			\$205,745,000		\$142,300,628	69.16%

Notes:

1. The alleged acquisition information presented in this table comes from Exhibit B of the Second Amended Complaint, unless otherwise specified. I understand that Wells Fargo disputes whether Plaintiffs acquired certain Relevant Certificates and this exhibit is not intended to reflect otherwise.

Exhibit 3a

Certificates with Realized or Implied Losses or Discount to Par at Claimed Acquisition or Assignment Date¹

Notes (cont.):

2. Realized or implied losses are calculated using remittance reports.
3. Price is from trade documents related to the claimed acquisition. It is not necessarily reflective of the price of the certificate as of Plaintiffs' claimed acquisition date. If trade documents do not contain price data, "n/a" is used.
4. The governing agreements precludes writedowns on the A4 tranche. As such, for this tranche, this value reflects implied losses, as of the relevant date, associated with Plaintiffs' claimed portion of the respective tranche. This value is derived by allocating the amount by which the group 2 certificate balances exceeded the ending scheduled balance of the group 2 collateral, reduced by the amount by which the ending scheduled balance of the group 1 collateral exceeded the group 1 certificate balance.
5. An exercise notice dated Dec. 29, 2008 related to this claimed acquisition contains a price of 13.22.
6. An exercise notice dated Dec. 29, 2008 related to this claimed acquisition contains a price of 1.16.

Sources:

- Defendant's Exhibit PL-420.
- Remittance Reports: FFML 2006-FFA (Nov. 27, 2006 - Aug. 25, 2009); IMM 2005-6 (Sept. 26, 2005 - Aug. 25, 2009); and IMSA 2005-2 (Jan. 25, 2006 - Apr. 26, 2010).
- 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) at Exhibit B.
- Structured Asset Securities Corporation, First Franklin Mortgage Loan Trust Mortgage Pass-Through Certificates Series 2006-FFA, Trust Agreement (Oct. 1, 2006) (WF_PL_000009938).
- Trade Documents: PhoenixLight000000962, PhoenixLight000000986, PhoenixLight002103779, PhoenixLight002129268, and PhoenixLight008630432.

Exhibit 3b**Dr. Snow's Damages Using Plaintiffs' Claimed Assignment Dates¹***For Illustrative Purposes Only²*

Claimed Damage Category	Alleged Repurchase Damages and Recalculated Amounts ³							
	Dr. Snow's Damages	Reduction Using Plaintiffs' Claimed Assignment Dates ³						Percentage Difference
		ABFC 2006-OPT2	CARR 2006-NC3	CARR 2006-NC4	IMM 2005-6	IMSA 2005-2	Total Reduction	
R&W Breach	\$ 113.30 M	\$ 0.00 M	n/a	n/a	n/a	n/a	\$ 0.00 M	0.00%
Document Defect	\$ 16.25 M	\$ (0.03 M)	n/a	n/a	n/a	n/a	\$ (0.03 M)	-0.16%
Repurchase	\$ 135.36 M	\$ (0.03 M)	n/a	n/a	n/a	n/a	\$ (0.03 M)	-0.02%
Post-enforcement ⁴	\$ 43.94 M	\$ 0.00 M	\$ (0.02 M)	\$ (0.01 M)	\$ (2.21 M)	\$ (10.71 M)	\$ (12.96 M)	-29.49%
Catch-up ⁴	\$ 54.36 M	\$ 0.00 M	\$ (0.01 M)	\$ (0.01 M)	\$ (6.18 M)	\$ (13.13 M)	\$ (19.34 M)	-35.58%
Repurchase with Post-enforcement	\$ 22.10 M	\$ (0.03 M)	n/a	n/a	n/a	n/a	\$ (0.03 M)	-0.14%
Repurchase with Catch-up	\$ 24.22 M	\$ (0.03 M)	n/a	n/a	n/a	n/a	\$ (0.03 M)	-0.13%

Notes:

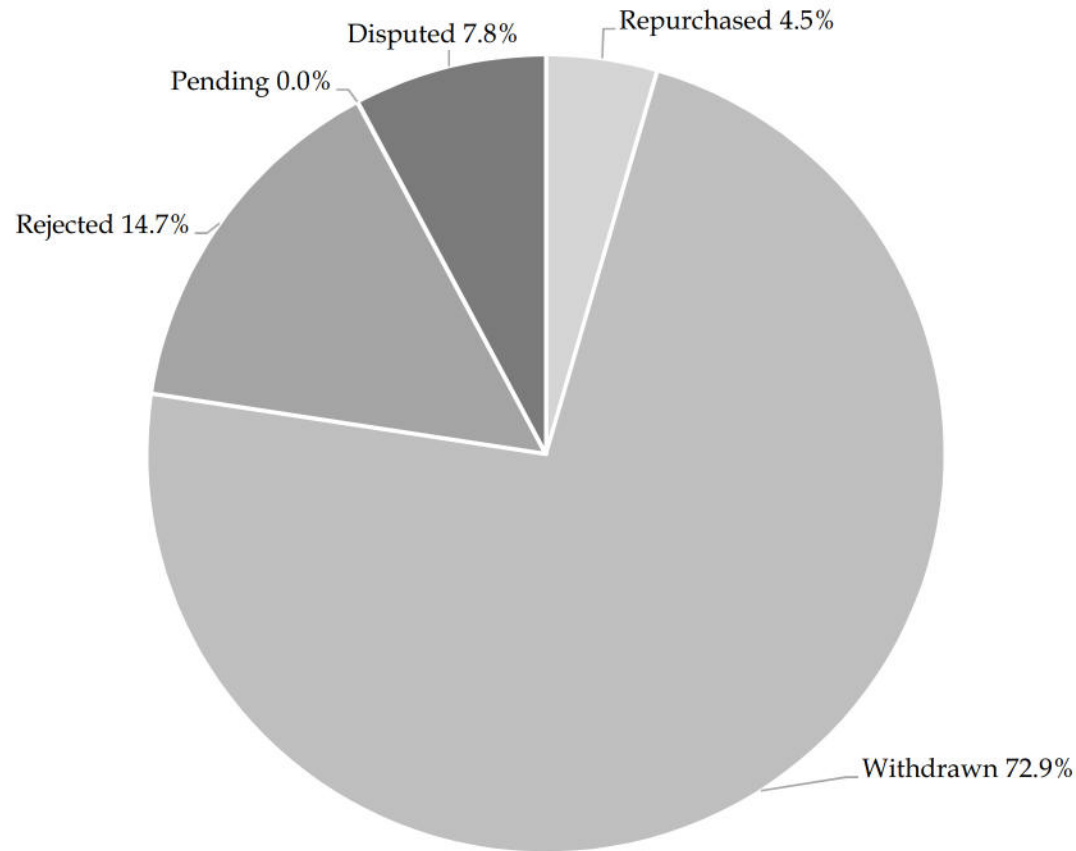
1. Claimed damages are recalculated assuming acquisition as of the Plaintiffs' alleged dates of additional assignments, as reflected on Exhibit B of the Second Amended Complaint.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated.
3. Values are presented rounded to the nearest .01 million. Difference and Percentage Difference are based on unrounded values.
4. Figures for Dr. Snow's Damages reflect a correction in the PPSI 2005-WLL1 waterfall model. As a result, Dr. Snow's Damages do not equal the values he presents in Figures 8 and 9 of his report.

Sources:

- 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) at Exhibit B.
- 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) and supporting materials.

Exhibit 4

Repurchase Demand Fulfillment (January 2012 - June 2019)¹



Note:

1. I collected over 3,500 ABS-15G forms filed by securitizers of residential mortgage-backed securities from January 1, 2012 to June 30, 2019. I determined the number of assets that were reported as having resolved repurchase demands (repurchased, withdrawn, or rejected) in each reporting period and the number of assets that were reported as having unresolved repurchase demands (pending or disputed) in the most recent reporting period for each securitizer. I then calculated the percent of demands in each category.
2. I reserve all the rights as to this analysis, as explained in more detail in my report.

Source:

- ABS-15G Filings from January 1, 2012 to June 30, 2019. <www.sec.gov> (accessed Feb. 28, 2019 and July 15, 2019).

Exhibit 5**R&W Breach Repurchase Damages Using Historical Repurchase Demand Fulfillment Rates¹***For Illustrative Purposes Only²*

Trust	Alleged R&W Breach Repurchase Damages and Recalculated Amounts ³		
	Dr. Snow's Damages	Using Historical Repurchase Demand Fulfillment Rates	
		Recalculated Amounts - 4.5%	Recalculated Amounts - 12.3%
ABFC 2006-OPT2	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M
FFML 2006-FFA	\$ 113.25 M	\$ 0.14 M	\$ 0.40 M
OOMLT 2007-3	\$ 0.04 M	\$ 0.00 M	\$ 0.00 M
OWNIT 2006-2	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M
Total	\$ 113.30 M	\$ 0.14 M	\$ 0.40 M

Notes:

1. R&W Breach Repurchase Damages are calculated using Dr. Snow's model assuming R&W Breach Loans are repurchased based on historical repurchase demand fulfillment rates. Based on my analysis of over 3,500 ABS-15G filings of repurchase requests for residential mortgage-backed securities from January 1, 2012 to June 30, 2019, 4.5 percent of demands had been fulfilled and 12.3 percent of demands were fulfilled, still pending, or still in dispute.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated.
3. Values are presented rounded to the nearest .01 million. Total is based on unrounded values.

Sources:

- ABS-15G Filings from January 1, 2012 to June 30, 2019. <www.sec.gov> (accessed Feb. 28, 2019 and July 15, 2019).
- 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) and supporting materials.

Exhibit 6**Changing Dr. Snow's "Sensitivity" Calculation Method Changes Repurchase Damages¹***For Illustrative Purposes Only²*

Trust	Alleged Repurchase Damages and Recalculated Amounts ³			
	Dr. Snow's 90% Sensitivity	90% Sensitivity		
		Recalculated Amounts	Difference	Percentage Difference
ABFC 2006-OPT2	\$ 0.05 M	\$ 0.04 M	\$ (0.01 M)	-22.55%
FFML 2006-FFA	\$ 113.25 M	\$ 108.65 M	\$ (4.60 M)	-4.06%
OOMLT 2007-3	\$ 2.43 M	\$ 0.16 M	\$ (2.27 M)	-93.46%
OWNIT 2006-2	\$ 16.06 M	\$ 15.23 M	\$ (0.84 M)	-5.20%
Total	\$ 131.79 M	\$ 124.07 M	\$ (7.72 M)	-5.86%

Trust	Alleged Repurchase Damages and Recalculated Amounts ³			
	Dr. Snow's 80% Sensitivity	80% Sensitivity		
		Recalculated Amounts	Difference	Percentage Difference
ABFC 2006-OPT2	\$ 0.03 M	\$ 0.01 M	\$ (0.02 M)	-60.18%
FFML 2006-FFA	\$ 113.25 M	\$ 85.13 M	\$ (28.12 M)	-24.83%
OOMLT 2007-3	\$ 0.21 M	\$ 0.08 M	\$ (0.13 M)	-60.59%
OWNIT 2006-2	\$ 16.09 M	\$ 4.21 M	\$ (11.88 M)	-73.83%
Total	\$ 129.58 M	\$ 89.43 M	\$ (40.15 M)	-30.98%

Trust	Alleged Repurchase Damages and Recalculated Amounts ³			
	Dr. Snow's 50% Sensitivity	50% Sensitivity		
		Recalculated Amounts	Difference	Percentage Difference
ABFC 2006-OPT2	\$ 0.00 M	\$ 0.00 M	\$ (0.00 M)	-89.01%
FFML 2006-FFA	\$ 69.01 M	\$ 24.04 M	\$ (44.97 M)	-65.16%
OOMLT 2007-3	\$ 0.07 M	\$ 0.04 M	\$ (0.04 M)	-50.29%
OWNIT 2006-2	\$ 0.34 M	\$ 0.00 M	\$ (0.34 M)	-100.00%
Total	\$ 69.43 M	\$ 24.08 M	\$ (45.35 M)	-65.32%

Notes:

1. Repurchase Damages are calculated using Dr. Snow's model by repurchasing the entire balance of each of Dr. Snow's Defective Loans beginning with the loan with the lowest Purchase Price and continuing until 90%, 80%, or 50% of the Defective Loans (by loan count) were repurchased.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated.

Exhibit 6

Changing Dr. Snow's "Sensitivity" Calculation Method Changes Repurchase Damages¹

For Illustrative Purposes Only²

Notes (cont.):

3. Values are presented rounded to the nearest .01 million. Difference, Percentage Difference, and Total are based on unrounded values.

Source:

- 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) at Exhibit 1, Exhibit 2, and Exhibit 3.

Exhibit 7**Repurchase Damages Excluding Loans That Liquidated Prior to Dr. Snow's Purchase Dates¹***For Illustrative Purposes Only²*

Trust	Alleged Repurchase Damages and Recalculated Amounts ³			
	Dr. Snow's Damages	Excluding Loans That Liquidated Prior to Dr. Snow's Purchase Dates		
		Recalculated Amounts	Difference	Percentage Difference
ABFC 2006-OPT2	\$ 0.06 M	\$ 0.00 M	\$ (0.06 M)	-100.00%
FFML 2006-FFA	\$ 113.25 M	\$ (0.04 M)	\$ (113.29 M)	-100.03%
OOMLT 2007-3	\$ 5.26 M	\$ 0.01 M	\$ (5.25 M)	-99.87%
OWNIT 2006-2	\$ 16.80 M	\$ 0.00 M	\$ (16.80 M)	-100.00%
Total	\$ 135.36 M	\$ (0.03 M)	\$ (135.39 M)	-100.02%

Notes:

1. Loans that liquidated prior to the Purchase Date are defined according to Dr. Snow's criteria. Generally, they are allegedly Defective Loans that had an ending scheduled balance of zero prior to Dr. Snow's Purchase Dates, as seen in Appendix D of the Snow Report.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated.
3. Values are presented rounded to the nearest .01 million. Difference, Percentage Difference, and Total are based on unrounded values.

Source:

- 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) and supporting materials.

Exhibit 8

Dr. Snow's Purchase Prices Are Inconsistent With Actual Recovery Amounts for 23 Loans

Loan Number	Losses	Recovery Amount	Dr. Snow's "Inflation" Amounts ¹	"Inflation" Percent
0120641121	\$93,601	\$92,850	\$29,669	31.95%
0120645049	\$155,790	\$154,360	\$56,995	36.92%
0120664933	\$189,149	\$189,149	\$2,324	1.23%
0121016828	\$83,499	\$82,789	\$28,165	34.02%
0121018618	\$120,038	\$119,156	\$33,736	28.31%
0121034482	\$112,689	\$111,730	\$38,012	34.02%
0121061535	\$74,483	\$73,864	\$24,518	33.19%
0121403570	\$93,003	\$92,155	\$32,046	34.77%
0121403760	\$135,858	\$134,781	\$42,114	31.25%
0121407803	\$83,903	\$83,125	\$30,234	36.37%
0121443840	\$135,091	\$133,918	\$47,868	35.74%
0121446629	\$30,618	\$30,388	\$1,097	3.61%
0121449011	\$183,473	\$183,487	\$18,046	9.84%
0121450043	\$140,414	\$139,274	\$43,911	31.53%
0121450738	\$100,954	\$100,041	\$36,516	36.50%
0121452338	\$124,304	\$123,247	\$41,929	34.02%
0121455067	\$121,867	\$120,789	\$38,789	32.11%
0121961916	\$111,396	\$110,540	\$32,893	29.76%
0121976211	\$120,306	\$119,222	\$43,132	36.18%
0121978233	\$156,267	\$158,443	\$5,017	3.17%
0121978852	\$102,260	\$101,382	\$33,926	33.46%
0121995658	\$116,564	\$115,631	\$35,898	31.05%
0122008741	\$130,312	\$129,227	\$44,009	34.06%
Total	\$2,715,836	\$2,699,550	\$740,844	27.44%

Note:

1. Dr. Snow's "Inflation" Amounts are the Purchase Price amounts calculated by Dr. Snow's model above the actual recovery amounts.

Sources:

- Claim Status 11.16.2016.xlsx
- 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) and supporting materials.

Exhibit 9**Repurchase Damages Under Alternative Purchase Price Assumptions¹***For Illustrative Purposes Only²*

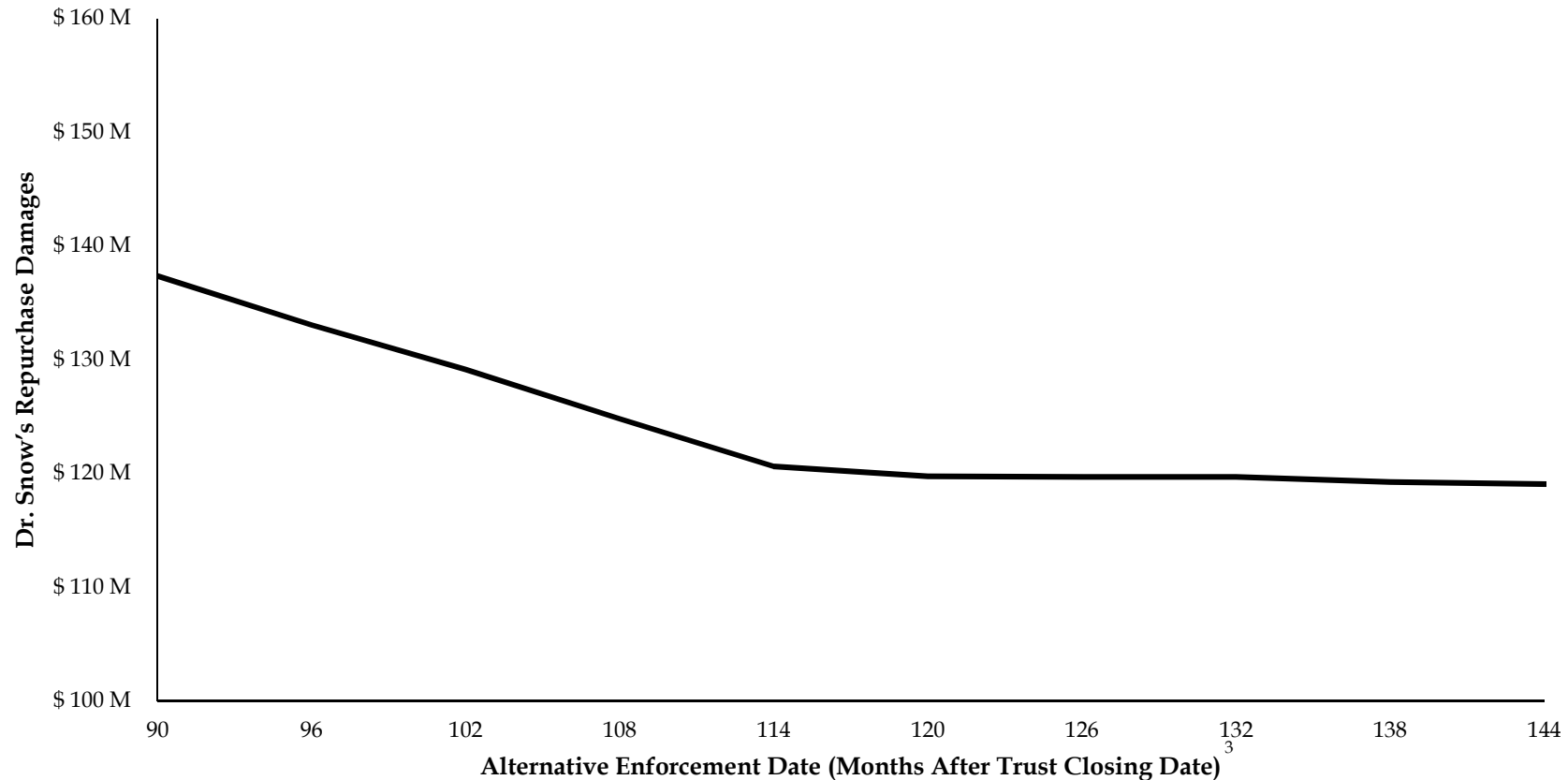
Trust	Alleged Repurchase Damages and Recalculated Amounts ³			
	Dr. Snow's Damages	Under Alternative Purchase Price Assumptions		
		Recalculated Amounts	Difference	Percentage Difference
ABFC 2006-OPT2	\$ 0.06 M	\$ 0.05 M	\$ (0.01 M)	20.19%
FFML 2006-FFA	\$ 113.25 M	\$ 78.56 M	\$ (34.69 M)	30.63%
OOMLT 2007-3	\$ 5.26 M	\$ 3.17 M	\$ (2.09 M)	39.75%
OWNIT 2006-2	\$ 16.80 M	\$ 16.27 M	\$ (0.52 M)	3.11%
Total	\$ 135.36 M	\$ 98.04 M	\$ (37.32 M)	27.57%

Notes:

1. Repurchase Damages are calculated using Dr. Snow's model assuming that liquidated loans, as defined by Dr. Snow, have a Purchase Price equal to their cumulative losses at or after liquidation on Dr. Snow's Purchase Date.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated.
3. Values are presented rounded to the .01 nearest million. Difference, Percentage Difference, and Total are based on unrounded values.

Source:

- 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) and supporting materials.

Exhibit 10**Repurchase Damages Vary Under Alternative Enforcement Dates¹***For Illustrative Purposes Only²***Notes:**

1. In this analysis, Dr. Snow's model is used assuming that all Document Defect Loans and R&W Breach Loans are purchased based on alternative Enforcement Dates. The Enforcement Dates and Purchase Dates are determined based on Dr. Snow's enforcement timeline assumptions in his Figure 6 and Appendix D. Results are presented as cumulative damages for all trusts. Similar results can be obtained by changing Dr. Snow's Purchase Dates in lieu of his Enforcement Dates.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated. This exercise is not a suggestion about how appropriate Enforcement Dates should be selected.
3. Dr. Snow's Enforcement Dates are 41 months after closing for ABFC 2006-OPT2, 35 months after closing for OOMLT 2007-3, 45 months after closing for OWNIT 2006-2 Document Defect loans, 67 months after closing for OWNIT 2006-2 R&W Breach loans, and 96 months after closing for FFML 2006-FFA. Dr. Snow's Purchase Dates occur 6 months and 24 months after his Enforcement Dates for Document Defect Loans and R&W Breach Loans, respectively.

Exhibit 10

Repurchase Damages Vary Under Alternative Enforcement Dates¹

For Illustrative Purposes Only²

Sources:

- Indenture: IMM 2005-6 (WF_PL_002109617 at WF_PL_002109742).
- 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) and supporting materials.
- Pooling and Servicing Agreements: ABFC 2006-OPT2 (WF_PL_002121502 at WF_PL_002121534); CARR 2006-NC3 (WF_PL_000019852 at WF_PL_000019871); CARR 2006-NC4 (WF_PL_002103032 at WF_PL_002103051); CARR 2007-FRE1 (WF_PL_000014777 at WF_PL_000014796); IMSA 2005-2 (WF_PL_002110764 at WF_PL_002110779); OOMLT 2007-3 (WF_PL_002085372 at WF_PL_002085399); OWNIT 2006-2 (WF_PL_000017886 at WF_PL_000017922); PPSI 2005-WLL1 (WF_PL_000000131 at WF_PL_000000155); and SABR 2006-FR2 (WF_PL_000013267 at WF_PL_000013296).
- 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) and supporting materials.
- Trust Agreement: FFML 2006-FFA (WF_PL_000009938 at WF_PL_000009965).

Repurchase Litigation Timelines for Cases in Dr. Snow's Appendix B¹

Active or Stayed Put-Back Cases					
Case Number	Trust(s)	Date Commenced ^{2,3}	Date Disposed ²	Case Status ²	Time Since Commencement ⁴
652619/2012	NAA 2006-S3	7/27/2012	n/a	Active	6 years, 11 months
653390/2012	NAA 2006-S4	9/27/2012	n/a	Active	6 years, 9 months
653783/2012	NHELI 2006-FM2	11/5/2012	n/a	Active	6 years, 7 months
654157/2012	HEAT 2006-8	11/30/2012	n/a	Active	6 years, 7 months
650339/2013	MSM 2007-2AX	1/31/2013	n/a	Active	6 years, 5 months
651124/2013	NHELI 2007-3	3/29/2013	n/a	Active	6 years, 3 months
651174/2013	HEAT 2007-2	4/2/2013	n/a	Active	6 years, 3 months
153945/2013	NTIX 2007-HE2	4/30/2013	n/a	Active	6 years, 2 months
651957/2013	EQLS 2007-1	6/3/2013	n/a	Active	6 years, 1 month
652699/2013	CSMC 2007-NC1	8/1/2013	n/a	Active	5 years, 11 months
652686/2013	MSM 2007-12	7/31/2013	n/a	Stayed	5 years, 11 months
651370/2014	OWNIT 2006-5	5/2/2014	n/a	Stayed	5 years, 2 months
651371/2014	SURF 2006-AB3	5/2/2014	n/a	Stayed	5 years, 2 months
651373/2014	OWNIT 2006-7	5/2/2014	n/a	Stayed	5 years, 2 months
651388/2014	SURF 2007-AB1	5/5/2014	n/a	Stayed	5 years, 1 month
652727/2014	MANA 2007-A3	9/5/2014	n/a	Active	4 years, 9 months
652842/2014	NAA 2007-1	9/17/2014	n/a	Active	4 years, 9 months
652877/2014	MSAC 2007-NC4	9/19/2014	n/a	Active	4 years, 9 months
654403/2012	MLMI 2006-RM4; MLMI 2006-RM5	12/18/2012	n/a	Active	6 years, 6 months
156016/2012	HEMT 2006-1; HEMT 2006-3; HEMT 2006-4	8/31/2012	n/a	Active	6 years, 10 months
650369/2013	HEAT 2007-1	2/4/2013	n/a	Active	6 years, 4 months
12-cv-5067	OOMLT 2006-2	6/28/2012	n/a	Active	7 years
12-cv-7322	MASTR 2006-OA2; MASTR 2007-1; MASTR 2007-3	9/28/2012	n/a	Active	6 years, 9 months

Repurchase Litigation Timelines for Cases in Dr. Snow's Appendix B¹

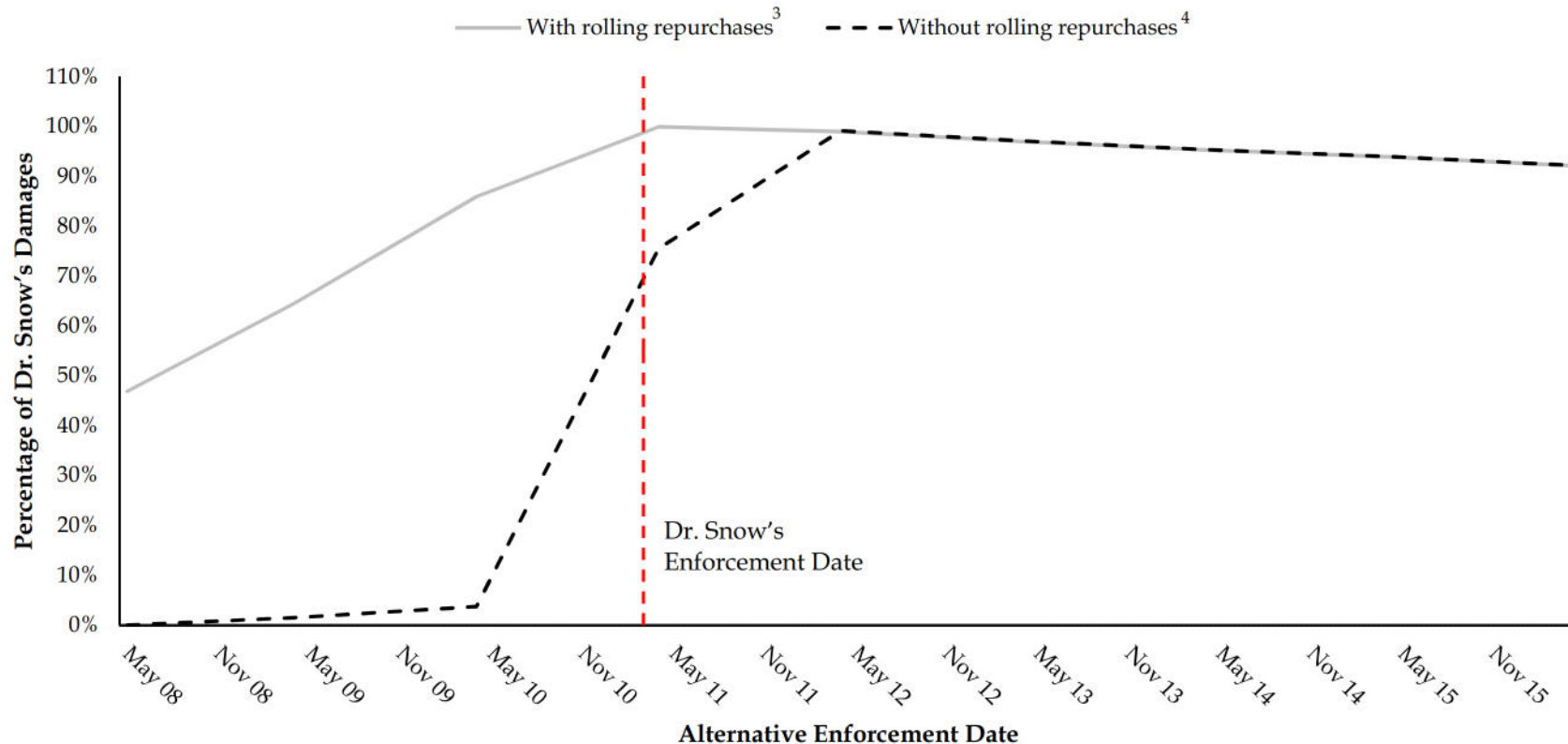
Resolved Put-Back Cases					
Case Number	Trust(s)	Date Commenced ^{2, 3}	Date Disposed ²	Case Status ²	Time Since Commencement ⁴
650579/2012	MSM 2006-4SL	2/29/2012	12/18/2018	Disposed	6 years, 9 months
652612/2012	MSM 2006-10SL	7/27/2012	5/7/2018	Disposed	5 years, 9 months
652763/2012	MSM 2006-14SL; MSM 2007-4SL	8/9/2012	10/15/2018	Disposed	6 years, 2 months
653816/2013	CMLTI 2007-AHL2	11/1/2013	4/19/2017	Disposed	3 years, 5 months
651820/2012	SACO 2006-5; SACO 2006-6	5/25/2012	12/5/2016	Disposed	4 years, 6 months
654464/2012	JPMAC 2006-WMC4	12/21/2012	1/22/2018	Disposed	5 years, 1 month
13-cv-2843	CMLTI 2007-AMC3	4/30/2013	8/3/2017	Closed	4 years, 3 months
13-cv-6989	CMLTI 2007-AR7	10/1/2013	8/3/2017	Closed	3 years, 10 months

Notes:

1. This exhibit reflects select put-back actions where Dr. Snow has provided testimony according to his Appendix B.
2. Date Commenced, Date Disposed, and Case Status were taken from the Case Information page on the New York Supreme Court Records On-Line Library or the Bloomberg LP docket for federal cases.
3. In cases where the Case Information page does not include Date Commenced information, the summons filing date was used.
4. Time Since Commencement represents the difference in years and months between the Date Commenced and July 3, 2019 or the date on which the case was disposed.

Sources:

- Bloomberg L.P. (accessed July 3, 2019).
- 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) at Appendix B.
- The County Clerk and Supreme Court of New York County, Supreme Court Records On-Line Library.
<<http://iapps.courts.state.ny.us/iscroll/index.jsp>> (accessed July 3, 2019).

Exhibit 12**Repurchase Damages Utilizing Alternative Rolling Repurchase Assumptions for OOMLT 2007-3¹***For Illustrative Purposes Only²***Notes:**

1. Repurchase Damages are calculated using Dr. Snow's model assuming that Document Defect Loans and R&W Breach Loans are repurchased based on alternative Enforcement Dates. Results are presented as a percentage of Dr. Snow's Repurchase Damages as reported in Figure 3 of his report.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated. This exercise is not a suggestion about how appropriate Enforcement Dates should be selected.
3. In this scenario, all of Dr. Snow's assumptions, with the exception of the Enforcement Dates, remain unchanged.
4. In this scenario, Document Defect Loans and R&W Breach Loans that are Distressed Loans according to Dr. Snow's criteria as of alternative Enforcement Dates are repurchased. Loans that are not Distressed Loans, according to Dr. Snow's criteria, are not repurchased.

Source:

- 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) and supporting materials.

Exhibit 13**Loss Severity Comparison Between Loans with Uncured Exceptions Deemed Material and Uncured Exceptions Deemed Immaterial in the Beckles Report**

Document Exception Type ¹	Average Loss Severity ²	p-value ^{3, 4}	Do Material Exceptions Result in Statistically Higher Loss Severity on Average? ⁵
Uncured Material Exceptions	73.85%	0.99998	No
Uncured Immaterial Exceptions	83.62%		
Difference	-9.76%		

Notes:

1. Following her review of exception reports for the Relevant Trusts, Ms. Beckles classifies uncured document exceptions as material or immaterial based on the type of missing or defective documents.
2. Loss severity for each liquidated first-lien loan with uncured document exception(s) was calculated as defined in the supporting materials for the Beckles Report. Average Loss Severity reflects the average loss severity for all these loans. Loss severity reflects the percentage of principal balance, accumulated interest, and fees that remain unpaid after loan liquidation, according to Ms. Beckles' calculations.
3. I used a one-sided t-test to test the statistical significance of the difference in Average Loss Severity between the two groups. Specifically, the following null hypothesis was tested: the average loss severity for the loans with uncured material exception(s) is not greater than the average loss severity for loans with uncured immaterial exceptions.
4. The p-value is the greatest probability level for which the t-test fails to reject the null hypothesis.
5. Because the p-value for the test is greater than 0.05, it is my opinion that there is no statistical evidence that the loss severity of loans with uncured material exceptions is higher than the loss severity of loans with uncured immaterial exceptions.

Sources:

- 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) and supporting materials (exception reports and cure reports).
- Davidson, Russell, and James MacKinnon. *Econometric Theory and Methods*. New York: Oxford University Press (1999) at 128.
- MBSData.

Document Defect Repurchase Damages Excluding Loans Without Material Exceptions¹
For Illustrative Purposes Only²

Trust	Alleged Document Defect Repurchase Damages and Recalculated Amounts ³			
	Dr. Snow's Damages	Without Material Exceptions ⁴		
		Recalculated Amounts	Difference	Percentage Difference
ABFC 2006-OPT2	\$ 0.03 M	\$ 0.00 M	\$ (0.03 M)	-100.00%
FFML 2006-FFA	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	0.00%
OOMLT 2007-3	\$ 0.08 M	\$ 0.00 M	\$ (0.08 M)	-97.33%
OWNIT 2006-2	\$ 16.14 M	\$ 0.00 M	\$ (16.14 M)	-100.00%
Total	\$ 16.25 M	\$ 0.00 M	\$ (16.24 M)	-99.99%

Notes:

1. Dr. Snow's Document Defect Repurchase Damages are recalculated using his model excluding Document Defect Loans that were determined by Wells Fargo's servicing expert, Peter Ross, as in fact free of any material exceptions. *See* Section VI.E. of my report.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated.
3. Values are presented rounded to the nearest .01 million. Difference, Percentage Difference, and Total are based on unrounded values.
4. I understand that Ms. Beckles determined certain loans to have been cured and that Oak Branch located the missing documents in the productions in this case for certain loans, and thus such exceptions were "cured." 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. I also understand that Mr. Ross has independently determined that certain loans are free of material exceptions. I recalculated Dr. Snow's Document Defect Repurchase Damages excluding these loans, as well as excluding loans with "cured" or "curable" exceptions.

Sources:

- 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) and supporting materials.
- pl_oakbranch_cured.csv.
- pl_oakbranch_cured_curable.csv.
- pl_ross_immaterial.csv.
- Ross, Peter M. Rebuttal Expert Report of Peter M. Ross. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (July 25, 2019) and supporting materials.
- 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) and supporting materials.

Exhibit 15

Results of Risk Profile Analysis

ABFC 2006-OPT2							
Risk Profiles Indistinguishable at the 95% Confidence Level ^{1, 2}							
Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable
101055698	✓	121048818	✓	31043946		401009363	✓
101056062	✓	121048885	✓	31044314	✓	401009438	✓
101056655	✓	121048908	✓	31044421	✓	51064734	✓
101058473	✓	121048957	✓	321034909	✓	51068274	✓
101058654	✓	121048989	✓	321035585	✓	51068367	✓
101058997	✓	141055935	✓	321036265	✓	51068483	
101059498		141055990	✓	331048208	✓	51069058	✓
101059506	✓	141056141	✓	331048440	✓	51069187	✓
101059574	✓	141056185	✓	331048484	✓	51069344	✓
101059601	✓	151035655	✓	331048499	✓	511046495	✓
101059678	✓	151035848	✓	331048519	✓	511048063	✓
101059694	✓	171032482	✓	341035028	✓	511048502	✓
101059788		171034198		351035880	✓	511049004	✓
101059875	✓	191032145	✓	351036080	✓	511049252	✓
101060191	✓	191032451	✓	351037799	✓	521041255	✓
101060269	✓	191032589	✓	351038253	✓	521041927	✓
101060479	✓	211046806	✓	371033447	✓	551013725	✓
101060492	✓	231079462	✓	371033542		551017671	✓
101060518	✓	231082437	✓	371035527	✓	551017877	✓
101060610	✓	231083569		371035787	✓	581010550	✓
101060618	✓	231083868	✓	371035915	✓	581010650	✓
101060670	✓	231083985		371036167		581011329	✓
101060866	✓	231084775	✓	371036200		581011618	✓
101060913	✓	271028125	✓	371036293	✓	61066511	
101060940	✓	271029186	✓	371036332	✓	61070082	✓
101061027	✓	271029525	✓	371036347		61070296	✓
101061060	✓	271029694	✓	371036369		61070828	✓
101061063	✓	291005833	✓	371036744	✓	611024488	✓
101061075	✓	291006618	✓	371037088	✓	621016700	✓
101061215	✓	291006862	✓	371037139	✓	621017119	✓
121048412	✓	291007147	✓	371037178	✓	621017332	✓
121048574	✓	291007148	✓	371037189	✓	621017774	✓
121048584	✓	291007206	✓	381028425	✓	621017812	✓
121048625	✓	291007231	✓	381028759	✓	621017922	✓
121048684	✓	291007338		381028794	✓	621017963	✓

Exhibit 15

Results of Risk Profile Analysis

ABFC 2006-OPT2

Risk Profiles Indistinguishable at the 95% Confidence Level^{1, 2}

Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable
621017964	✓	661017883	✓	71072722	✓	841012901	✓
631012725	✓	661017886	✓	71073363	✓	861002841	✓
651018749	✓	661017992		71073416		861003120	✓
651020544	✓	661018077		71073645	✓	861003210	✓
651021008	✓	671014040	✓	791007148	✓	871005186	✓
661016834	✓	671014152		831065993	✓	871005512	✓
661017330	✓	681013405	✓	831065997	✓	871005699	✓
661017549	✓	691009517	✓	831066001	✓		
661017698	✓	701004281	✓	831066526	✓		

FFML 2006-FFA

Risk Profiles Indistinguishable at the 95% Confidence Level^{1, 2}

Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable
120629613		121061428	✓	121425177	✓	121987747	✓
120638150	✓	121067201	✓	121425508	✓	121988968	✓
120653456	✓	121401574	✓	121426423	✓	121993695	✓
120657994	✓	121402291	✓	121426589	✓	121994271	✓
121017438	✓	121402432	✓	121429252	✓	121996292	✓
121027627	✓	121403315	✓	121441521	✓	121997860	✓
121031900	✓	121403422	✓	121444418	✓	122005234	✓
121036404	✓	121403570	✓	121445944	✓	122006000	✓
121036446		121404982	✓	121447320	✓	122006687	✓
121040422	✓	121406227	✓	121451223	✓	122013154	✓
121043558	✓	121408314	✓	121455000	✓	122013212	✓
121044556	✓	121408942	✓	121457584	✓	122453293	✓
121048441	✓	121411615	✓	121457790	✓	122453533	✓
121052104	✓	121415004	✓	121458400	✓	122467830	✓
121053532	✓	121415046	✓	121969463	✓		
121055461	✓	121418909	✓	121969679			
121058838	✓	121423370		121971485	✓		

Exhibit 15

Results of Risk Profile Analysis

OOMLT 2007-3							
Risk Profiles Indistinguishable at the 95% Confidence Level ^{1, 2}							
Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable
101066738		331052081	✓	511054622	✓	581015689	✓
101069294		331052104	✓	511054696	✓	581015708	✓
111002608	✓	331052457	✓	511054729		581016235	
111002674		331052531	✓	511054836	✓	581017403	✓
151040489	✓	331052702		511054887	✓	581017525	✓
151041028		331052728	✓	511054998	✓	611026400	✓
151041950	✓	331052783	✓	511055103	✓	621020230	
161052812	✓	331052806		511055295		621021009	✓
171039486	✓	331052869	✓	511055304	✓	621021221	✓
171039954	✓	331052961		511055433	✓	621021346	✓
171040247	✓	331053027		511055615	✓	621022039	✓
191034478	✓	331053121		511056118	✓	621022233	✓
191036096	✓	331053128	✓	511056916	✓	621022730	
191036172	✓	331053482	✓	511057116	✓	631015997	✓
191036516	✓	331053718	✓	511057575	✓	631016041	✓
211051511	✓	331054240	✓	521048509	✓	661020497	
211052124		331054967	✓	521049068	✓	661021321	✓
211052527	✓	371042149		521052809	✓	661021428	
211052921	✓	371043564	✓	521052936	✓	661021548	✓
211052951	✓	371043807		551026516		661021555	✓
211052976	✓	371043869		551027049	✓	661021612	✓
211053795	✓	371044874	✓	571017046		661021633	
231088817		411001259	✓	571017888	✓	661021676	✓
231089430		411002342	✓	571019224		661021777	✓
231089963	✓	411002641	✓	571019241		661021816	✓
231090279	✓	51074645		581012051	✓	661021819	✓
231090333	✓	511052836	✓	581013943	✓	661021822	✓
231090345		511052963	✓	581014152	✓	661021875	
231090443	✓	511053814	✓	581014246		661021899	✓
31046075	✓	511054056	✓	581014607	✓	661022043	✓
31046090	✓	511054251	✓	581014689		661022196	✓
31046356	✓	511054356	✓	581014834	✓	661022246	✓
321040323	✓	511054434	✓	581015176		661022327	✓
331048904	✓	511054544	✓	581015384	✓	661022577	✓
331051490	✓	511054550	✓	581015581	✓	661022601	

Exhibit 15

Results of Risk Profile Analysis

OOMLT 2007-3							
Risk Profiles Indistinguishable at the 95% Confidence Level ^{1,2}							
Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable
661022967		671017121	✓	671017663	✓	831073680	✓
671015479	✓	671017122	✓	671017827		831073681	
671015750	✓	671017219	✓	671017922	✓	831074207	
671016455	✓	671017226	✓	671017930	✓	831074340	✓
671016456	✓	671017298	✓	671017937	✓	871007110	
671016881		671017340	✓	671018795	✓	951000637	✓
671016936	✓	671017390		831072920	✓	951001148	
671016947	✓	671017393	✓	831073314	✓	961073456	✓
671016958	✓	671017492		831073405	✓	961074742	
671017064	✓	671017517	✓	831073672	✓		

OWNIT 2006-2							
Risk Profiles Indistinguishable at the 95% Confidence Level ^{1,2}							
Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable	Loan ID	Indistinguishable
3136061	✓	3704876	✓	4122560	✓	4715529	✓
3136226	✓	3866807	✓	4122622	✓	4715697	✓
3258496	✓	3866840	✓	4122650	✓	4717006	✓
3258560	✓	3867855	✓	4122785	✓	4801608	✓
3259815	✓	3867930	✓	4322595	✓	4801684	✓
3259956	✓	3868396	✓	4324291	✓	4801755	✓
3372386	✓	3868634	✓	4465917	✓	4801822	✓
3374683	✓	3868752	✓	4467419	✓	4903627	✓
3374897	✓	3869135	✓	4467599	✓	4903770	✓
3559124	✓	3869688	✓	4604928	✓	4903790	✓
3559494	✓	4118463	✓	4605013	✓	5000014	✓
3560342	✓	4120018	✓	4605289	✓		
3560360	✓	4122062	✓	4605362	✓		
3560751	✓	4122186	✓	4713063	✓		
3560791	✓	4122212	✓	4714276	✓		
3704340	✓	4122341	✓	4714415	✓		

Notes:

1. Where the risk profiles in the *Plaintiffs' claims scenario* and the *baseline scenario* were statistically indistinguishable at the 95 percent confidence level, I concluded that Plaintiffs' Loan Characteristic Claims, even if true, had no statistically significant impact on the risk of the loan.

Exhibit 15

Results of Risk Profile Analysis

Notes (cont.):

2. Where the risk profiles in the *Plaintiffs' claims scenario* and the *baseline scenario* were *not* statistically indistinguishable at the 95 percent confidence level, I have not concluded that these loans should have been included in Dr. Snow's damages model.

Sources:

- Hunter, Robert W. Expert Report of Robert W. Hunter. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Oct. 29, 2018) and supporting materials.
- Loan Tapes: ABFC 2006-OPT2 (WF_PL_000185271); FFML 2006-FFA (WF_PL_00021169); OWNIT 2006-2 (WF_PL_000021167); and OOMLT 2007-3 (WF_PL_000128473).
- Moody's Analytics Mortgage Database.

Exhibit 16**Repurchase Damages Excluding Loans with Statistically Indistinguishable Risk Profiles¹***For Illustrative Purposes Only²*

Trust	Alleged Repurchase Damages and Recalculated Amounts ³							
	Dr. Snow's Repurchase Damages	Loan Risk Profile On Repurchases ³			Dr. Snow's R&W Damages	Loan Risk Profile on R&W Repurchases ³		
		Recalculated Amounts	Difference	Percentage Difference		Recalculated Amounts	Difference	Percentage Difference
ABFC 2006-OPT2	\$ 0.06 M	\$ 0.03 M	\$ (0.02 M)	-39.10%	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	n/a
FFML 2006-FFA ⁴	\$ 113.25 M	\$ 0.02 M	\$ (113.23 M)	-99.98%	\$ 113.25 M	\$ 0.02 M	\$ (113.23 M)	-99.98%
OOMLT 2007-3	\$ 5.26 M	\$ 0.08 M	\$ (5.17 M)	-98.42%	\$ 0.04 M	\$ 0.00 M	\$ (0.04 M)	-100.00%
OWNIT 2006-2	\$ 16.80 M	\$ 16.14 M	\$ (0.66 M)	-3.92%	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	n/a
Total	\$ 135.36 M	\$ 16.28 M	\$ (119.08 M)	-87.98%	\$ 113.30 M	\$ 0.02 M	\$ (113.27 M)	-99.98%

Notes:

1. Repurchase Damages are recalculated using Dr. Snow's model excluding loans where my Risk Profile Analysis found the risk profiles in the *Plaintiffs' claims scenario* and the *baseline scenario* statistically indistinguishable at the 95 percent confidence level. See **Appendix E: Technical Appendix for Risk Profile Analysis** for additional details.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated.
3. Values are presented rounded to the nearest .01 million. Difference, Percentage Difference, and Total are based on unrounded values.
4. The FFML 2006-FFA "breach rate" used for extrapolation is also recalculated based on the findings of my Risk Profile Analysis.

Sources:

- Hunter, Robert W. Expert Report of Robert W. Hunter. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Oct. 29, 2018) and supporting materials.
- 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) and supporting materials.

R&W Breach Repurchase Damages Excluding Loans Without Material and Adverse R&W Breaches¹
For Illustrative Purposes Only²

Trust	Alleged Repurchase Damages and Recalculated Amounts ³						
	Dr. Snow's Damages	Day One Analysis ⁴			Post-Origination Analysis ⁵		
		Recalculated Amounts	Difference	Percentage Difference	Recalculated Amounts	Difference	Percentage Difference
ABFC 2006-OPT2	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	0.00%	\$ 0.00 M	\$ 0.00 M	0.00%
FFML 2006-FFA ⁶	\$ 113.25 M	\$ 0.43 M	\$ (112.82 M)	-99.62%	\$ 4.16 M	\$ (109.09 M)	-96.33%
OOMLT 2007-3	\$ 0.04 M	\$ 0.00 M	\$ (0.04 M)	-100.00%	\$ 0.00 M	\$ (0.04 M)	-100.00%
OWNIT 2006-2	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	0.00%	\$ 0.00 M	\$ 0.00 M	0.00%
Total	\$ 113.30 M	\$ 0.43 M	\$ (112.86 M)	-99.62%	\$ 4.16 M	\$ (109.14 M)	-96.33%

Notes:

1. R&W Breach Repurchase Damages are recalculated using Dr. Snow's model excluding loans that Wells Fargo's re-underwriting expert, Kori Keith, deemed to be without material and adverse breaches.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated.
3. Values are presented rounded to the nearest .01 million. Difference, Percentage Difference, and Total are based on unrounded values.
4. I understand that Ms. Keith's "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. I recalculated Dr. Snow's R&W Breach Repurchase Damages excluding loans that were deemed to be without material and adverse R&W breaches in her "Day One Analysis."
5. I understand that 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 and third-party information that the original underwriter could not have considered, or would not have been required to consider. I recalculated Dr. Snow's R&W Breach Repurchase Damages excluding loans that were deemed to be without material and adverse R&W breaches in her "Post-Origination Analysis."
6. The FFML 2006-FFA "breach rate" used for extrapolation is also recalculated based on the findings of Ms. Kori Keith.

Sources:

- Hunter, Robert W. Expert Report of Robert W. Hunter. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Oct. 29, 2018) and supporting materials.
- Keith, Kori. Expert Report of Kori Keith. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (July 25, 2019) and supporting materials.
- 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) and supporting materials.

Repurchase Damages Excluding Loans Without Material Exceptions and Without Material and Adverse R&W Breaches¹
For Illustrative Purposes Only²

Trust	Dr. Snow's Damages	Alleged Repurchase Damages and Recalculated Amounts ³					
		Day One Analysis ⁴			Post-Origination Analysis ⁵		
		Recalculated Amounts	Difference	Percentage Difference	Recalculated Amounts	Difference	Percentage Difference
ABFC 2006-OPT2	\$ 0.06 M	\$ 0.00 M	\$ (0.06 M)	-100.00%	\$ 0.00 M	\$ (0.06 M)	-100.00%
FFML 2006-FFA ⁶	\$ 113.25 M	\$ 0.43 M	\$ (112.82 M)	-99.62%	\$ 4.16 M	\$ (109.09 M)	-96.33%
OOMLT 2007-3	\$ 5.26 M	\$ 0.00 M	\$ (5.25 M)	-99.96%	\$ 0.00 M	\$ (5.25 M)	-99.96%
OWNIT 2006-2	\$ 16.80 M	\$ 0.00 M	\$ (16.80 M)	-100.00%	\$ 0.00 M	\$ (16.80 M)	-100.00%
Total	\$ 135.36 M	\$ 0.43 M	\$ (134.93 M)	-99.68%	\$ 4.16 M	\$ (131.20 M)	-96.93%

Notes:

1. Repurchase Damages are calculated using Dr. Snow's model excluding loans that Wells Fargo's servicing expert, Peter Ross, was able to determine were free of any material exceptions and that Wells Fargo's re-underwriting expert, Kori Keith, deemed to be without material and adverse R&W breaches.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated.
3. Values are presented rounded to the nearest .01 million. Difference, Percentage Difference, and Total are based on unrounded values.
4. I understand that Ms. Keith's "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. I have also 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. I recalculated Dr. Snow's Repurchase Damages excluding the loans that had "cured" or "curable" exceptions or Mr. Ross deemed to be without material exceptions and those loans that Ms. Keith deemed to be without material and adverse R&W breaches in her "Day One Analysis."
5. I understand that 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 and third-party information that the original underwriter could not have considered, or would not have been required to consider. I have also 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. I recalculated Dr. Snow's Repurchase Damages excluding the loans that had "cured" or "curable" exceptions or Mr. Ross deemed to be without material exceptions and those loans that Ms. Keith deemed to be without material and adverse R&W breaches in her "Post-Origination Analysis."
6. The FFML 2006-FFA "breach rate" used for extrapolation is also recalculated based on the findings of Ms. Kori Keith.

Sources:

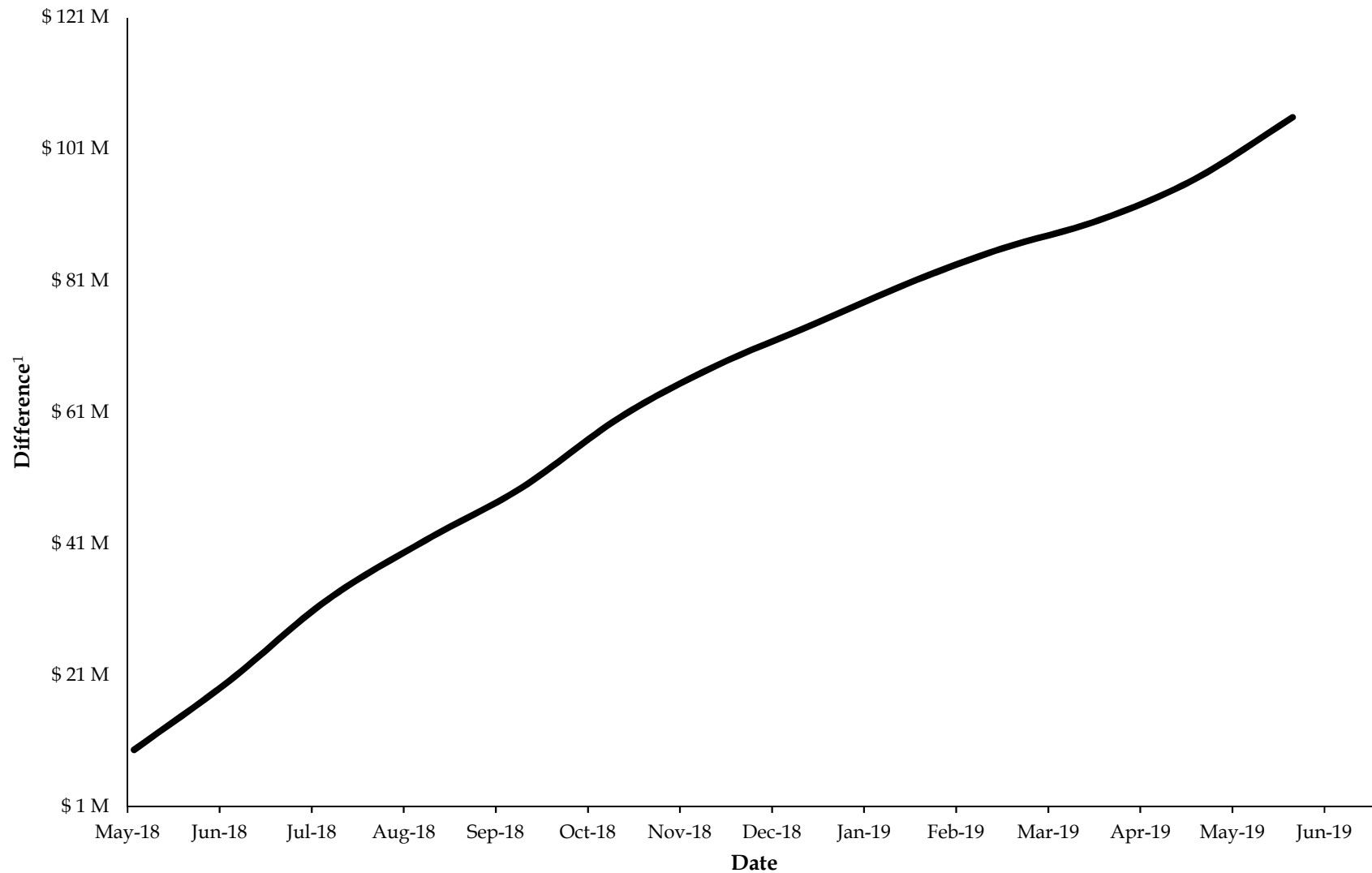
- Beckles, Ingrid. Amended Expert Report of Ingrid Beckles. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Apr. 12, 2019) and supporting materials.
- Hunter, Robert W. Expert Report of Robert W. Hunter. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Oct. 29, 2018) and supporting materials.

Exhibit 18

Repurchase Damages Excluding Loans Without Material Exceptions and Without Material and Adverse R&W Breaches¹
For Illustrative Purposes Only²

Sources (cont.):

- Keith, Kori. Expert Report of Kori Keith. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (July 25, 2019) and supporting materials.
- pl_oakbranch_cured.csv.
- pl_oakbranch_cured_curable.csv.
- pl_ross_immaterial.csv.
- Ross, Peter M. Rebuttal Expert Report of Peter M. Ross. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (July 25, 2019) and supporting materials.
- 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-

Exhibit 19**Differences Between Dr. Snow's Forecast and Remittance Reports (June 2018 - June 2019)****Note:**

1. Difference represents the cumulative difference between (A) the sum of (i) scheduled principal payments, (ii) unscheduled principal payments, and (iii) scheduled interest payments, minus (iv) realized losses of mortgage loans backing the Relevant Trusts, as reported in the remittance reports, and (B) the sum of (i) principal payments and (ii) interest payments, minus (iii) net realized losses of the loans backing the Relevant Trusts as forecasted by Dr. Snow.

Exhibit 19

Differences Between Dr. Snow's Forecast and Remittance Reports (June 2018 - June 2019)

Sources:

- Remittance Reports: ABFC 2006-OPT2 (June 25,2019 - June 25, 2019); CARR 2006-NC3 (June 25,2019 - June 25, 2019); CARR 2006-NC4 (June 25,2019 - June 25, 2019); CARR 2007-FRE1 (June 25,2019 - June 25, 2019); FFML 2006-FFA (June 25,2019 - June 25, 2019); IMM 2005-6 (June 25,2019 - June 25, 2019); IMSA 2005-2 (June 25,2019 - June 25, 2019); OOMLT 2007-3 (June 25,2019 - June 25, 2019); OWNIT 2006-2 (June 25,2019 - June 25, 2019); PPSI 2005-WLL1 (June 25,2019 - June 25, 2019); and SABR 2006-FR2 (June 25,2019 - June 25, 2019).
- 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) and supporting materials.

Representativeness Tests Between Matched and Unmatched Loans in Dr. Spencer's Analysis

Trust	Group ²	Statistically Different Loan Characteristics (Post-enforcement Scenario) ¹									Proportion of Yes
		FICO Score	LTV Ratio	Loan Term	Original Balance	Mortgage Insurance	Property Type	State	Occupancy Type	Origination Quarter and Year	
ABFC 2006-OPT2	1	Yes					Yes	Yes	Yes	Yes	5/9
ABFC 2006-OPT2	2						Yes	Yes	Yes	Yes	4/9
ABFC 2006-OPT2	3		Yes		Yes		Yes	Yes	Yes	Yes	6/9
CARR 2006-NC3	All	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	8/9
CARR 2006-NC4	All	Yes		Yes	Yes		Yes	Yes	Yes	Yes	7/9
CARR 2007-FRE1	All	Yes			Yes		Yes	Yes	Yes	Yes	6/9
IMM 2005-6	All				Yes		Yes	Yes	Yes	Yes	5/9
IMSA 2005-2	All		Yes		Yes		Yes	Yes	Yes	Yes	6/9
OOMLT 2007-3	1	Yes	Yes		Yes		Yes	Yes	Yes	Yes	7/9
OOMLT 2007-3	2				Yes		Yes	Yes	Yes	Yes	5/9
OWNIT 2006-2	1						Yes	Yes	Yes	Yes	4/9
OWNIT 2006-2	2				Yes		Yes	Yes	Yes	Yes	5/9
PPSI 2005-WLL1	All	Yes					Yes	Yes	Yes	Yes	5/9
SABR 2006-FR2	All				Yes		Yes	Yes	Yes	Yes	5/9

Trust	Group ²	Statistically Different Loan Characteristics (Catch-up Scenario) ¹									Proportion of Yes
		FICO Score	LTV Ratio	Loan Term	Original Balance	Mortgage Insurance	Property Type	State	Occupancy Type	Origination Quarter and Year	
ABFC 2006-OPT2	1	Yes			Yes		Yes	Yes	Yes	Yes	6/9
ABFC 2006-OPT2	2	Yes					Yes	Yes	Yes	Yes	5/9
ABFC 2006-OPT2	3				Yes		Yes	Yes	Yes	Yes	5/9
CARR 2006-NC3	All		Yes	Yes	Yes		Yes	Yes	Yes	Yes	7/9
CARR 2006-NC4	All	Yes		Yes	Yes		Yes	Yes	Yes	Yes	7/9
CARR 2007-FRE1	All	Yes			Yes		Yes	Yes	Yes	Yes	6/9
IMM 2005-6	All				Yes		Yes	Yes	Yes	Yes	5/9
IMSA 2005-2	All		Yes		Yes		Yes	Yes	Yes	Yes	6/9
OOMLT 2007-3	1	Yes	Yes		Yes		Yes	Yes	Yes	Yes	7/9
OOMLT 2007-3	2		Yes		Yes		Yes	Yes	Yes	Yes	6/9
OWNIT 2006-2	1						Yes	Yes	Yes	Yes	4/9
OWNIT 2006-2	2				Yes		Yes	Yes	Yes	Yes	5/9
PPSI 2005-WLL1	All	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	8/9
SABR 2006-FR2	All	Yes			Yes		Yes	Yes	Yes	Yes	6/9

Exhibit 20

Representativeness Tests Between Matched and Unmatched Loans in Dr. Spencer's Analysis

Notes:

1. I conducted a statistical test to determine whether unmatched loans were statistically different from matched loans in Dr. Spencer's analysis in terms of certain loan characteristics that he later used to calculate his Severity Rate Differential. I included the same set of loans as Dr. Spencer (first lien loans that had been liquidated from supporting loan groups of the Relevant Trusts and had no missing values for the variables used in the matching estimator) and the same data. For numeric variables, I used a t-test, and for categorical variables, I used a chi-squared test to determine whether the loan characteristics of matched loans were statistically significantly different at a 5% significance level from the loan characteristics of unmatched loans.
2. If the group is listed as "All," the trust contains only one supporting loan group.

Source:

- Loan Tapes: IMM 2005-6 (WF_PL_000021171) and IMSA 2005-2 (WF_PL_000021172).
- MBSDData.
- Spencer, Bruce D. Amended Expert Report of Bruce D. Spencer, Ph.D. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Apr. 12, 2019) and supporting materials.

Reductions to Dr. Snow's Servicing Damages Under Alternative Assumptions

*For Illustrative Purposes Only*¹

Alleged Servicing Damages and Reductions Under Alternative Assumptions						
Trust	Dr. Snow's Damages	Reductions to Post-enforcement Servicing Damages ^{2,3}				
		Match Including Product Types ⁴	Include Only Fixed-Rate, Fully Amortizing Loans ⁵	Exclude HPI from Bias Correction ⁶	Matched Loans Only ⁷	Match Including Product Types and Matched Loans Only ⁸
ABFC 2006-OPT2	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M
CARR 2006-NC3	\$ 0.02 M	\$ 0.01 M	\$ 0.02 M	\$ (0.00 M)	\$ 0.01 M	\$ 0.02 M
CARR 2006-NC4	\$ 0.01 M	\$ 0.01 M	\$ 0.01 M	\$ (0.00 M)	\$ 0.00 M	\$ 0.01 M
CARR 2007-FRE1	\$ 5.38 M	\$ 0.03 M	\$ 5.25 M	\$ 0.01 M	\$ 0.76 M	\$ 5.32 M
IMM 2005-6	\$ 16.18 M	\$ 0.10 M	\$ 10.19 M	\$ 0.19 M	\$ 1.75 M	\$ 10.46 M
IMSA 2005-2	\$ 18.62 M	\$ 9.25 M	\$ 18.29 M	\$ 0.25 M	\$ 4.15 M	\$ 18.34 M
OOMLT 2007-3	\$ 0.01 M	\$ 0.00 M	\$ 0.01 M	\$ 0.00 M	\$ 0.00 M	\$ 0.01 M
OWNIT 2006-2	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M
PPSI 2005-WLL1 ⁹	\$ 3.72 M	\$ 2.12 M	\$ 3.42 M	\$ (0.17 M)	\$ 1.03 M	\$ 3.48 M
SABR 2006-FR2	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	\$ (0.00 M)	\$ 0.00 M	\$ 0.00 M
Total	\$ 43.94 M	\$ 11.52 M	\$ 37.19 M	\$ 0.28 M	\$ 7.70 M	\$ 37.63 M

Alleged Servicing Damages and Reductions Under Alternative Assumptions						
Trust	Dr. Snow's Damages	Reductions to Catch-up Servicing Damages ^{2,3}				
		Match Including Loan Product Types ⁴	Include Only Fixed-Rate, Fully Amortizing Loans ⁵	Exclude HPI from Bias Correction ⁶	Matched Loans Only ⁷	Match Including Product Types and Matched Loans Only ⁸
ABFC 2006-OPT2	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M
CARR 2006-NC3	\$ 0.01 M	\$ 0.01 M	\$ 0.01 M	\$ 0.00 M	\$ 0.01 M	\$ 0.01 M
CARR 2006-NC4	\$ 0.01 M	\$ 0.00 M	\$ 0.01 M	\$ (0.00 M)	\$ 0.00 M	\$ 0.01 M
CARR 2007-FRE1	\$ 5.40 M	\$ 0.02 M	\$ 5.28 M	\$ 0.02 M	\$ 0.62 M	\$ 5.34 M
IMM 2005-6	\$ 16.81 M	\$ 0.04 M	\$ 10.67 M	\$ 0.28 M	\$ 0.36 M	\$ 10.99 M
IMSA 2005-2	\$ 21.23 M	\$ 2.43 M	\$ 20.88 M	\$ 1.32 M	\$ 1.60 M	\$ 20.96 M
OOMLT 2007-3	\$ 0.06 M	\$ (0.00 M)	\$ 0.06 M	\$ 0.01 M	\$ 0.03 M	\$ 0.06 M
OWNIT 2006-2	\$ 0.11 M	\$ 0.11 M	\$ 0.11 M	\$ 0.09 M	\$ 0.06 M	\$ 0.11 M
PPSI 2005-WLL1 ⁹	\$ 10.73 M	\$ 2.67 M	\$ 10.31 M	\$ 4.68 M	\$ 3.52 M	\$ 10.38 M
SABR 2006-FR2	\$ 0.00 M	\$ (0.00 M)	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M
Total	\$ 54.36 M	\$ 5.27 M	\$ 47.34 M	\$ 6.41 M	\$ 6.22 M	\$ 47.86 M

Reductions to Dr. Snow's Servicing Damages Under Alternative Assumptions

*For Illustrative Purposes Only*¹

Notes:

1. These scenarios illustrate how Dr. Snow's Servicing Damages calculations are unreliable and unreasonable. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated.
2. Reductions to damages reflect the amounts by which Dr. Snow's damages figures would be reduced in each scenario.
3. Values are presented rounded to the nearest .01 million. Total is based on unrounded values.
4. Under this scenario, Servicing Damages are calculated using a Severity Rate Differential that is based on a matching process that includes three additional covariates: payment type (fixed-rate mortgage or ARM); interest-only feature (presence or absence of interest-only loan); and balloon feature (presence or absence of balloon payment). The resulting Severity Rate Differentials were applied to all loans, regardless of their product types.
5. Under this scenario, Servicing Damages are calculated using a Severity Rate Differential that is based on a matching process that includes three additional covariates: payment type (fixed-rate mortgage or ARM); interest-only feature (presence or absence of interest-only loan); and balloon feature (presence or absence of balloon payment). The resulting Severity Rate Differentials were applied to only loans that are fixed-rate, non-balloon, and not interest only, whether or not they were successfully matched to a control-group loan.
6. Under this scenario, Servicing Damages are calculated using Severity Rate Differentials that were calculated using a modified version of Dr. Spencer's bias-correction procedure. In this calculation, the variable "HPI" is not utilized in the bias-correction procedure.
7. Under this scenario, Servicing Damages are calculated by applying the applicable Severity Rate Differential only to those loans that Dr. Spencer was able to match with a loan in the control group.
8. Under this scenario, Servicing Damages are calculated using a Severity Rate Differential that is based on a matching process that includes three additional covariates: payment type (fixed-rate mortgage or ARM); interest-only feature (presence or absence of interest-only loan); and balloon feature (presence or absence of balloon payment). The resulting Severity Rate Differentials were applied to all loans that could be matched with a loan in the control group.
9. Figures for this trust reflect a correction in the waterfall model. As a result, Dr. Snow's Servicing Damages do not equal the values he presents in Figures 8 and 9 of his report.

Sources:

- "Economic Data." Median Home Value. *Zillow*. < <https://www.zillow.com/research/data/#median-home-value> > (accessed from Spencer Report supporting materials).
- "Fannie Mae Single-Family Loan Performance Data." *Fannie Mae*. < <http://www.fanniemae.com/portal/funding-the-market/data/loan-performance-data.html> > (accessed from Spencer Report supporting materials).
- "Freddie Mac Single Family Loan-Level Dataset." *Freddie Mac*. < http://www.freddiemac.com/research/datasets/sf_loanlevel_dataset.html > (accessed from Spencer Report supporting materials).
- Loan Tapes: IMM 2005-6 (WF_PL_000021171) and IMSA 2005-2 (WF_PL_000021172).
- MBSData.
- 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) and supporting materials.

Exhibit 21

Reductions to Dr. Snow's Servicing Damages Under Alternative Assumptions

*For Illustrative Purposes Only*¹

Sources (cont.):

- Spencer, Bruce D. Amended Expert Report of Bruce D. Spencer, Ph.D. Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A. (S.D.N.Y. No. 1:14-cv-10102) (Apr. 12, 2019) and supporting materials.

Post-enforcement Servicing Damages Utilizing Alternative Servicing Enforcement Dates¹
For Illustrative Purposes Only²

Trust	Alleged Post-enforcement Servicing Damages and Recalculated Amounts ³			
	Dr. Snow's Damages	Utilizing Alternative Servicing Enforcement Dates		
		Recalculated Amount	Difference	Percentage Difference
ABFC 2006-OPT2	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	n/a
CARR 2006-NC3	\$ 0.02 M	\$ 0.02 M	\$ (0.00 M)	-2.93%
CARR 2006-NC4	\$ 0.01 M	\$ 0.00 M	\$ (0.01 M)	-97.65%
CARR 2007-FRE1	\$ 5.38 M	\$ 5.34 M	\$ (0.03 M)	-0.58%
IMM 2005-6	\$ 16.18 M	\$ 14.61 M	\$ (1.57 M)	-9.67%
IMSA 2005-2	\$ 18.62 M	\$ 4.93 M	\$ (13.69 M)	-73.51%
OOMLT 2007-3	\$ 0.01 M	\$ 0.00 M	\$ (0.01 M)	-100.00%
OWNIT 2006-2	\$ 0.00 M	\$ 0.00 M	\$ 0.00 M	n/a
PPSI 2005-WLL1 ⁴	\$ 3.72 M	\$ 2.57 M	\$ (1.16 M)	-31.12%
SABR 2006-FR2	\$ 0.00 M	\$ 0.00 M	\$ (0.00 M)	-100.00%
Total	\$ 43.94 M	\$ 27.47 M	\$ (16.47 M)	-37.47%

Notes:

1. Post-enforcement Servicing Damages are calculated using Dr. Snow's model assuming an alternative Servicing Enforcement Date twelve months later than those described by Dr. Spencer at ¶ 38 of his report.
2. This exercise is for illustrative purposes only and is not a calculation of damages nor an opinion about how damages should be calculated.
3. Values are presented rounded to the nearest .01 million. Difference, Percentage Difference, and Total are based on unrounded values.
4. Figures for this trust reflect a correction in the waterfall model. As a result, Dr. Snow's Post-enforcement Servicing Damages do not equal the values he presents in Figures 8 and 9 of his report.

Sources:

- "Economic Data." Median Home Value. *Zillow*. <<https://www.zillow.com/research/data/#median-home-value>> (accessed from Spencer Report supporting materials).
- "Fannie Mae Single-Family Loan Performance Data." *Fannie Mae*. <<http://www.fanniemae.com/portal/funding-the-market/data/loan-performance-data.html>> (accessed from Spencer Report supporting materials).
- "Freddie Mac Single Family Loan-Level Dataset." *Freddie Mac*. <http://www.freddiemac.com/research/datasets/sf_loanlevel_dataset.html> (accessed from Spencer Report supporting materials).
- Loan Tapes: IMM 2005-6 (WF_PL_000021171) and IMSA 2005-2 (WF_PL_000021172).
- MBSData.

Exhibit 22

Post-enforcement Servicing Damages Utilizing Alternative Servicing Enforcement Dates¹

For Illustrative Purposes Only²

Sources (cont.):

- 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) and supporting materials.
- Spencer, Bruce D. Amended Expert Report of Bruce D. Spencer, Ph.D. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (S.D.N.Y. No. 1:14-cv-10102) (Apr. 12, 2019) and supporting materials.

Illustration of PPSI 2005-WLL1 Principal Waterfall After the Stepdown Date¹

April 2008 - June 2008 Waterfall Model Characteristics		
Dr. Snow's Incorrect Waterfall Model		Corrected Waterfall Model
0.03%	Loss Trigger Threshold ²	3.00%
2.42% - 2.83%	Cumulative Loss %	2.42% - 2.83%
Yes	Trigger Event in effect?	No
\$0	M8 through M11 Principal Payments	\$10,475,914

PPSI 2005-WLL1 Principal Waterfall Decision Tree After the Stepdown Date³

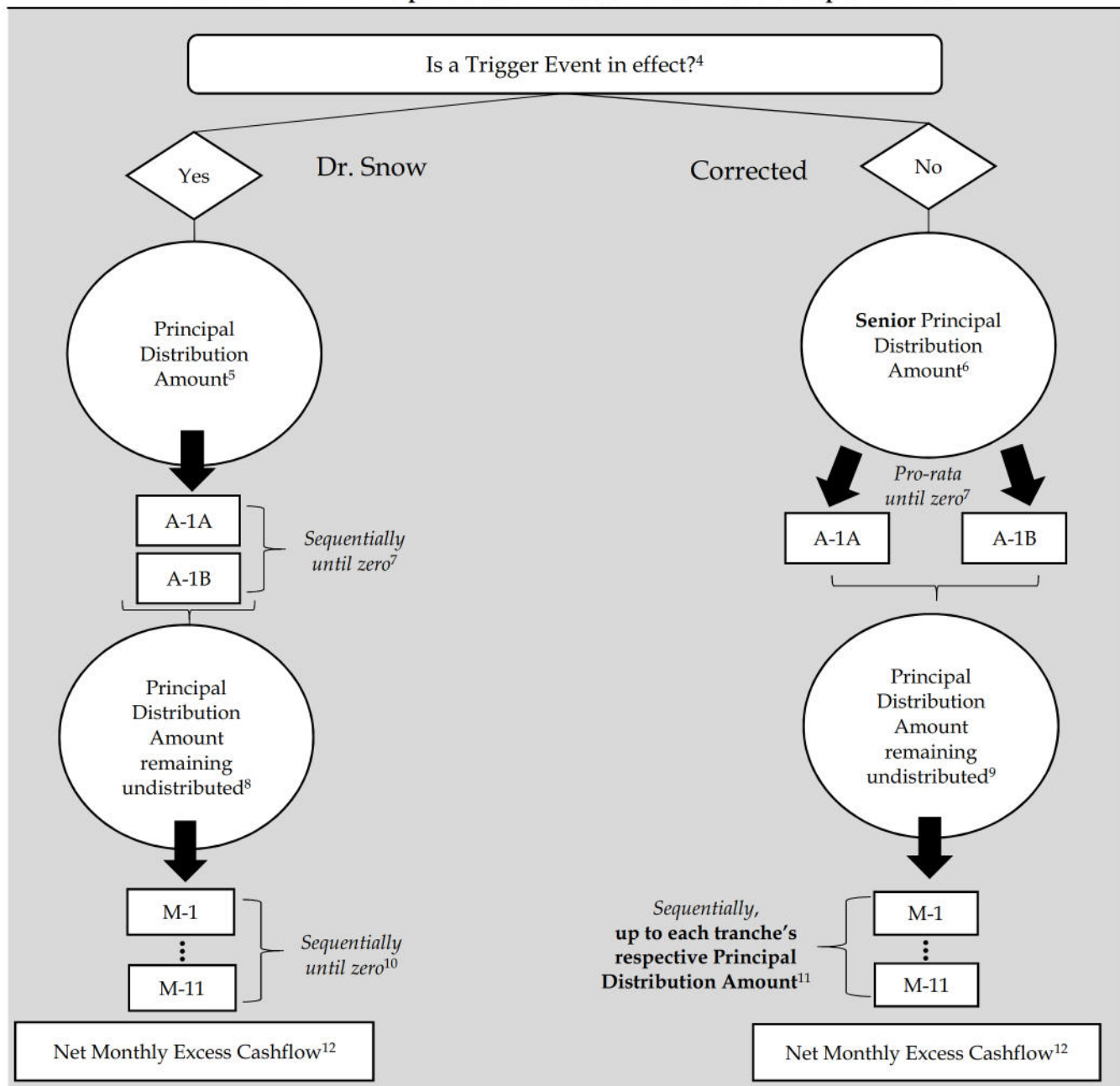


Illustration of PPSI 2005-WLL1 Principal Waterfall After the Stepdown Date¹

Notes:

1. The Stepdown Date is defined in the PSA. PPSI 2005-WLL1 remittance reports first report a Stepdown Date as in effect on April 25, 2008.
2. PPSI 2005-WLL1 PSA at Glossary (WF_PL_000000131 at WF_PL_000000192).
3. PPSI 2005-WLL1 PSA at Section 4.01 (WF_PL_000000131 at WF_PL_000000236-38).
4. Trigger Event is defined in the PSA. PPSI 2005-WLL1 remittance reports first report a Trigger Event occurring on July 25, 2008.
5. PPSI 2005-WLL1 PSA at Glossary and Section 4.01(3)(I)(b) (WF_PL_000000131 at WF_PL_000000175-6 and WF_PL_000000236).
6. PPSI 2005-WLL1 PSA at Glossary and Section 4.01(3)(III) (WF_PL_000000131 at WF_PL_000000187 and WF_PL_000000237).
7. PPSI 2005-WLL1 PSA at Glossary and Section 4.01(5) (WF_PL_000000131 at WF_PL_000000187, WF_PL_000000191-2, and WF_PL_000000239).
8. PPSI 2005-WLL1 PSA at Section 4.01(3)(II) (WF_PL_000000131 at WF_PL_000000236).
9. PPSI 2005-WLL1 PSA at Section 4.01(3)(IV) (WF_PL_000000131 at WF_PL_000000237).
10. PPSI 2005-WLL1 PSA at Section 4.01(3)(II) (WF_PL_000000131 at WF_PL_000000236-7).
11. PPSI 2005-WLL1 PSA at Glossary and Section 4.01(3)(IV)(i-xi) (WF_PL_000000131 at WF_PL_000000147-54 and WF_PL_000000237-8).
12. PPSI 2005-WLL1 PSA at Glossary and Section 4.01(4) (WF_PL_000000131 at WF_PL_000000168 and WF_PL_000000238).

Sources:

- PPSI 2005-WLL1 PSA (WF_PL_000000131).
- PPSI 2005-WLL1 Remittance Reports: Apr. 25, 2005 - July 25, 2008.
- 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) at supporting materials (PPSI 2005-WLL1 CashFlowModel.xlsx).

Dr. Snow's Incorrect Principal Distributions Resulting From PPSI 2005-WLL1 Waterfall Model Error

Tranche	Remittance Date	Dr. Snow's Waterfall Model Principal Distributions¹	Corrected Waterfall Model Principal Distributions²	Remittance Report Principal Distributions³
M8 ⁴	Apr. 2008	\$0	\$0	\$0
	May 2008	\$0	\$0	\$0
	June 2008	\$0	\$672,646	\$665,220
	Tranche Total	\$0	\$672,646	\$665,220
M9 ⁴	Apr. 2008	\$0	\$0	\$0
	May 2008	\$0	\$22,428	\$15,015
	June 2008	\$0	\$2,632,895	\$2,640,311
	Tranche Total	\$0	\$2,655,323	\$2,655,325
M10 ⁴	Apr. 2008	\$0	\$0	\$0
	May 2008	\$0	\$3,221,938	\$3,221,941
	June 2008	\$0	\$0	\$0
	Tranche Total	\$0	\$3,221,938	\$3,221,941
M11	Apr. 2008	\$0	\$3,039,751	\$3,032,355
	May 2008	\$0	\$886,257	\$893,654
	June 2008	\$0	\$0	\$0
	Tranche Total	\$0	\$3,926,008	\$3,926,009
Total		\$0	\$10,475,914	\$10,468,496

Notes:

1. Dr. Snow's Waterfall Model Principal Distributions are principal payments allocated to the M8 through M11 tranches. The loss trigger in his cashflow model does not match PSA specifications by a factor of 100.
2. Corrected Waterfall Model Principal Distributions are principal payments allocated to the M8 through M11 tranches after the loss trigger in his cashflow model is corrected to match PSA specifications.
3. Remittance Report Principal Distributions are the principal payments to the M8 through M11 tranches as reported in the remittance reports.
4. This tranche is at issue in this case.

Sources:

- PPSI 2005-WLL1 Pooling and Servicing Agreement (WF_PL_000000131 at WF_PL_000000191-2).
- Remittance Reports: PPSI 2005-WLL1 (Apr. 25, 2008 - June 25, 2008).

Exhibit 23b

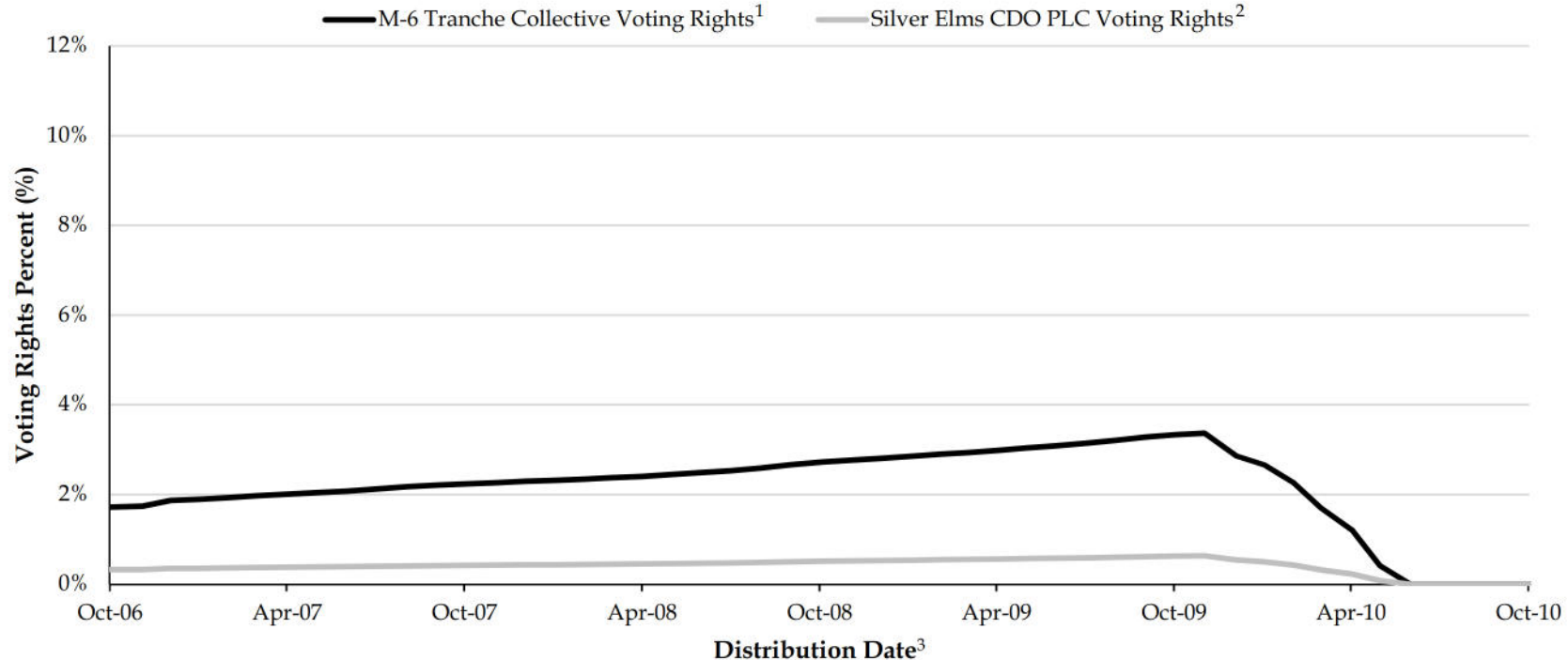
Dr. Snow's Incorrect Principal Distributions Resulting From PPSI 2005-WLL1 Waterfall Model Error

Sources (cont.):

- 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) at Exhibit B.
- 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) at supporting materials (PPSI 2005-WLL1 CashFlowModel.xlsx).

Exhibit 24

Voting Rights Percent Over Time for Silver Elms CDO PLC's Holdings in ABFC 2006-OPT2 (Oct. 2006 - Oct. 2010)



Notes:

1. According to the pooling and servicing agreement, 98 percent of voting rights are allocated among the certificateholders of Class A, M, and B certificates. Voting rights are calculated according to a fraction of which the numerator is the outstanding certificate principal balance of the class and the denominator is the outstanding aggregate certificate balance of class A, M, and B certificates. I calculated the percentage of voting rights as of each distribution date based on the ending certificate balance.
2. Silver Elms CDO PLC Voting Rights are calculated based on the percentage of the M-6 total certificate balance held by Silver Elms CDO PLC according to the Second Amended Complaint.
3. The M-6 tranche ceased having voting rights as of June 2010.

Sources:

- Asset Backed Funding Corporation, ABFC 2006-OPT2 Trust, Pooling and Servicing Agreement (Sept. 1, 2006) (WF_PL_002121502 at WF_PL_002121526, WF_PL_002121555, and WF_PL_002121586).
- Remittance Reports: ABFC 2006-OPT2 (Oct. 25, 2006 - June 25, 2018).
- 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) at Exhibit B.

Plaintiffs' Alleged Highest Voting Percentage in Each Relevant Trust

Trust	Term Defined in the Governing Agreement	Plaintiffs' Alleged Highest Voting Percentage (%) ¹	Date ²
ABFC 2006-OPT2	Voting Rights	0.63	Nov. 2009
CARR 2006-NC3	Voting Rights	1.51	May 2011
CARR 2006-NC4	Voting Rights	1.35	Apr. 2011
CARR 2007-FRE1	Voting Rights	1.36	Sept. 2015
FFML 2006-FFA	Voting Interests	46.54	June 2019
IMM 2005-6	% of the aggregate Principal Balance	6.98	Sept. 2005
IMSA 2005-2	Voting Rights	10.27	July 2009
OOMLT 2007-3	Voting Rights	0.80	Oct. 2010
OWNIT 2006-2	Voting Rights	3.56	Oct. 2008
PPSI 2005-WLL1	Voting Rights	13.77	Aug. 2009
SABR 2006-FR2	Voting Rights	1.00	Apr. 2009

Notes:

1. Voting percentages are calculated monthly according to the provisions in the governing agreements and based upon the outstanding certificate balances at the end of each remittance cycle using Plaintiffs' alleged holdings according to the Second Amended Complaint.
2. Date represents the month and year in which the remittance cycle ended when Plaintiffs allegedly held the highest voting percentage in the trust starting from the ownership date in Dr. Snow's supporting materials through June 2019.

Sources:

- Indenture: IMM 2005-6 (WF_PL_002109617 at WF_PL_002109660).
- Pooling and Servicing Agreements: ABFC 2006-OPT2 (WF_PL_002121502 at WF_PL_002121586); CARR 2006-NC3 (WF_PL_000019852 at WF_PL_000019906); CARR 2006-NC4 (WF_PL_002103032 at WF_PL_002103086-7); CARR 2007-FRE1 (WF_PL_000014777 at WF_PL_000014833); IMSA 2005-2 (WF_PL_002110764 at WF_PL_002110822); OOMLT 2007-3 (WF_PL_002085372 at WF_PL_002085442); OWNIT 2006-2 (WF_PL_000017886 at WF_PL_000017948); PPSI 2005-WLL1 (WF_PL_000000131 at WF_PL_000000195); and SABR 2006-FR2 (WF_PL_000013267 at WF_PL_000013325).
- Remittance Reports: ABFC 2006-OPT2 (Oct. 25, 2006 - June 25, 2019); CARR 2006-NC3 (Sept. 25, 2006 - June 25, 2019); CARR 2006-NC4 (Oct. 25, 2006 - June 25, 2019); CARR 2007-FRE1 (Oct. 25, 2006 - June 25, 2019); FFML 2006-FFA (Nov. 27, 2006 - June 25, 2019); IMM 2005-6 (Sept. 26, 2005 - June 25, 2019); IMSA 2005-2 (Jan. 25, 2006 - June 25, 2019); OOMLT 2007-3 (May 25, 2007 - June 25, 2019); OWNIT 2006-2 (Mar. 27, 2006 - June 25, 2019); PPSI 2005-WLL1 (Apr. 25, 2005 - June 25, 2019); and SABR 2006-FR2 (July 25, 2006 - June 25, 2019).
- 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) at Exhibit B.
- Snow, Karl N. Amended Expert Report of Karl N. Snow, PhD. *Phoenix Light SF Limited, et al. v. Wells Fargo Bank, N.A.* (1:14-cv-10102) (Apr. 15, 2019) at supporting materials (PL trusts, certificates, purchase dates, sale dates.xlsx).
- Trust Agreement: FFML 2006-FFA (WF_PL_000009938 at WF_PL_000009999).

Not-At-Issue Tranches With Lower Cumulative Payments in Dr. Snow's But-for Scenarios¹

Trust	Tranche	Cumulative Difference in Payments Under Dr. Snow's Damages Assumptions ^{2,3}						
		Total Damages		Repurchase Damages			Servicing Damages	
		w/ Catch-Up	w/ Post-enforcement	R&W Breach & Document Defect	R&W Breach	Document Defect	Catch-up	Post-enforcement
ABFC 2006-OPT2	A1	\$ (2.22 M)	\$ (2.16 M)	\$ (2.02 M)	\$ (1.47 M)	\$ (0.77 M)	\$ (0.75 M)	\$ (0.47 M)
ABFC 2006-OPT2	A2	\$ (1.12 M)	\$ (0.97 M)	\$ (0.71 M)	n/a	\$ (0.80 M)	\$ (0.48 M)	\$ (0.29 M)
ABFC 2006-OPT2	A3B	\$ (0.03 M)	\$ (0.03 M)	\$ (0.03 M)	n/a	\$ (0.03 M)	\$ (0.03 M)	\$ (0.01 M)
ABFC 2006-OPT2	A3C	\$ (2.17 M)	\$ (2.01 M)	\$ (1.85 M)	n/a	\$ (1.89 M)	\$ (0.84 M)	\$ (0.43 M)
ABFC 2006-OPT2	A3D	\$ (0.43 M)	\$ (0.17 M)	n/a	n/a	\$ (0.02 M)	\$ (0.13 M)	\$ (0.07 M)
CARR 2006-NC3	A2	n/a	n/a	n/a	n/a	n/a	\$ (1.82 M)	\$ (1.95 M)
CARR 2006-NC4	A1	n/a	n/a	n/a	n/a	n/a	\$ (0.01 M)	\$ (0.00 M)
CARR 2006-NC4	A2	n/a	n/a	n/a	n/a	n/a	\$ (0.83 M)	\$ (0.84 M)
CARR 2006-NC4	A5	n/a	n/a	n/a	n/a	n/a	\$ (0.78 M)	\$ (0.78 M)
CARR 2007-FRE1	A1	n/a	n/a	n/a	n/a	n/a	\$ (0.35 M)	\$ (0.23 M)
CARR 2007-FRE1	A2	n/a	n/a	n/a	n/a	n/a	\$ (2.39 M)	\$ (2.16 M)
CARR 2007-FRE1	A4	n/a	n/a	n/a	n/a	n/a	\$ (0.42 M)	\$ (0.41 M)
OOMLT 2007-3	IIA1	\$ (0.10 M)	\$ (0.10 M)	\$ (0.10 M)	\$ (0.01 M)	\$ (0.10 M)	\$ (0.09 M)	\$ (0.03 M)
OWNIT 2006-2	A1	\$ (1.38 M)	\$ (1.94 M)	\$ (1.94 M)	\$ (0.12 M)	\$ (1.94 M)	\$ (0.55 M)	\$ (0.29 M)
OWNIT 2006-2	A2B	\$ (9.19 M)	\$ (9.56 M)	\$ (9.52 M)	\$ (1.36 M)	\$ (9.55 M)	\$ (7.14 M)	\$ (3.13 M)
OWNIT 2006-2	A2C	\$ (2.23 M)	\$ (5.33 M)	\$ (5.33 M)	n/a	\$ (5.53 M)	\$ (0.73 M)	\$ (0.05 M)
PPSI 2005-WLL1	A1A	n/a	n/a	n/a	n/a	n/a	\$ (0.04 M)	\$ (0.01 M)
PPSI 2005-WLL1	A1B	n/a	n/a	n/a	n/a	n/a	\$ (0.02 M)	\$ (0.01 M)
PPSI 2005-WLL1	M1	n/a	n/a	n/a	n/a	n/a	\$ (0.10 M)	\$ (0.14 M)
PPSI 2005-WLL1	M2	n/a	n/a	n/a	n/a	n/a	\$ (0.18 M)	\$ (0.34 M)
PPSI 2005-WLL1	M3	n/a	n/a	n/a	n/a	n/a	\$ (0.03 M)	\$ (0.15 M)
PPSI 2005-WLL1	M4	n/a	n/a	n/a	n/a	n/a	\$ (0.03 M)	\$ (0.06 M)
PPSI 2005-WLL1	M5	n/a	n/a	n/a	n/a	n/a	\$ (0.06 M)	\$ (0.13 M)
Total		\$ (18.86 M)	\$ (22.27 M)	\$ (21.50 M)	\$ (2.96 M)	\$ (20.64 M)	\$ (17.79 M)	\$ (11.97 M)

Notes:

1. In these cases, Dr. Snow's but-for scenario would have resulted in investors in the above tranches receiving less cumulative payments. Tranches with a reduction in cumulative payments of less than \$1,000 are excluded.
2. Cumulative Difference represents the difference between (1) but-for payments and (2) actual payments to a tranche, which are both sourced from Dr. Snow's supporting materials. Negative values indicate that (a) the amount a tranche receives in Dr. Snow's baseline scenario and/or is expected to receive in Dr. Snow's baseline forecasts, exceeds (b) the amount it would have received and/or would be forecast to receive in Dr. Snow's but-for scenario over the life of the trust. Forecasted payments are discounted using Dr. Snow's methodology as explained in footnote 45 of his report.

Exhibit 26

Not-At-Issue Tranches With Lower Cumulative Payments in Dr. Snow's But-for Scenarios¹

Notes (cont.):

3. Values are presented rounded to the nearest .01 million. Total is based on unrounded values.

Source:

- 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) at supporting materials (waterfall scenarios).