EXHIBIT 16

[REDACTED]

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

Royal Park Investments SA/NV, Individually and on Behalf of All Others Similarly Situated, Plaintiff, v. Wells Fargo Bank, N.A., as Trustee, Defendant.	Index No. 1:14-cv-09764

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

CONFIDENTIAL

MARCH 31, 2017

CONTENTS

I. INTRODUCTION

A. Qualifications

1. I am a Managing Director and Financial Services Practice Lead at Econ One Research, a company that provides consulting services on issues related to structured finance and the macroeconomy. I hold a Ph.D. and M.A. in Economics from 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 economics and finance journals, including the Review of Economics and Statistics, the Journal of Macroeconomics, the American Law and Economic Review, the 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, the Journal of Monetary Economics, the Review of Economic Studies, the Review of Economics and Statistics, the American Economic Journal – Economic Policy, the Journal of Financial Intermediation, the Journal of Money, Credit and Banking, the Journal of Banking and Finance, and the 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 of my publications for the last ten years and all of my expert witness testimony for the last four years.

10. For a list of materials considered in forming my opinions, please see **Appendix B**: Materials Considered.

11. For my work on this matter, I am being compensated at a rate of $875/hour. In performing my analysis, I utilized a team of Econ One Research personnel who worked under my supervision and direction at rates of $280 to $725. Neither my compensation nor Econ One Research's is contingent upon my findings or the outcome of this matter. I reserve the right to express additional opinions or otherwise supplement my analysis or the opinions expressed herein.

B. Case Background and Assignment

12. Royal Park Investments SA/NV ("Royal Park" or "Plaintiff") brings this putative class action against Wells Fargo Bank, N.A., as Trustee ("Wells Fargo"), for breach of contract duties and alleged obligations arising out of Wells Fargo's role as a trustee of two residential mortgage-backed securities ("RMBS") trusts, ABFC 2006-OPT1 and SASC 2007-BC1 (the "Covered Trusts").[1, 2] Plaintiff seeks to represent a class of investors who held RMBS certificates in the Covered Trusts.[3]

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[1] Amended Class Action Complaint and Alternative Verified Derivative Action for Breach of the Trust Indenture Act, Breach of Contract, Breach of Trust and Violation of the Streit Act, dated March 13, 2015, Royal Park Investments SA/NV v. Wells Fargo Bank, N.A., No. 1:14-cv-09764-KPF-SN (Doc. No. 24) ("Complaint") at preface, ¶¶ 1-4.

[2] The Covered Trusts are the following securitizations: Asset Backed Funding Corporation Series 2006-OPT1 ("ABFC 2006-OPT1") and Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1 ("SASC 2007-BC1").

[3] Royal Park alleges that it brings this action as a class action on behalf of "all current and former investors who acquired RMBS certificates in the Covered Trusts (the 'class') and who held such certificates at or after the time when Wells Fargo discovered breaches of the Warrantors' R&Ws or Wells Fargo had actual knowledge of SEOTs by the Master Servicers and Servicers to the Covered Trusts, and suffered damages as a result of Wells Fargo's breaches of the Governing Agreements, the Streit Act, the TIA and common law." Complaint at ¶ 162; see also Letter from Christopher M. Wood to The Honorable Katherine Polk Failla, dated December 8, 2016, Royal Park Investments SA/NV v. Wells Fargo Bank, N.A., No. 1:14-cv-09764-KPF-SN (Doc. No. 197) (describing class as "[a]ll persons and entities who held Certificates in the ABFC 2006-OPT1 Trust and Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1 and were damaged as a result of Wells Fargo Bank, N.A.'s conduct alleged in the Complaint. Excluded from the Class are Wells Fargo Bank, N.A., the loan originators, the Warrantors, the Master Servicers and Servicers to the Covered Trusts, and their officers and directors, their legal representatives, successors or assigns, and any entity in which they have or had a controlling interest."); see also Dalrymple, W. Scott. Expert Report of W. Scott Dalrymple, CFA, dated January 30, 2017, Royal Park Investments SA/NV v. Wells Fargo Bank, N.A., No. 1:14-cv-09764-KPF-SN ("Dalrymple Report") at ¶ 2 ("It is my understanding that the proposed class consists of all persons and entities who held certificates in the Covered Trusts (collectively referred

13. Specifically, Royal Park alleges that Wells Fargo breached its duties to Royal Park and the proposed class by failing to enforce representations and warranties ("R&Ws") allegedly breached by sellers, deal-sponsors, and loan-originators (the "Warrantors") relating to the underlying loans after such breaches were allegedly discovered by Wells Fargo.[4] Royal Park alleges that, despite Wells Fargo's alleged discovery and knowledge of breaches of R&Ws by the Warrantors, Wells Fargo failed to notify the Warrantors or other parties of the breaches, and failed to enforce the Warrantors' obligations to cure, substitute, or repurchase the breaching mortgage loans.[5] Royal Park also alleges that Wells Fargo was required, but failed, to take steps to protect the Covered Trusts whenever Wells Fargo allegedly became aware of loan servicing failures by the Covered Trusts' servicers that amounted to "Servicer Events of Termination" ("SEOTs").[6]

14. Plaintiff alleges that Wells Fargo discovered the alleged breaches by Warrantors as early as January 2009,[7] had actual knowledge of SEOTs by servicers as early as the end of October 2010,[8] and for both Warrantors and servicers "absolutely" had knowledge of breaches or failures no later than April 13, 2011[9] (collectively, "Alleged Breach Dates").

15. According to Royal Park, Wells Fargo's alleged breaches caused damages in the "hundreds of millions of dollars."[10]

16. Royal Park alleges that it acquired two certificates (the M-4 certificate in the ABFC 2006-OPT1 trust and the M6 certificate in the SASC 2007-BC1 trust) on February 12, 2010 via liquidation of a financial instrument called a collateralized debt obligation ("CDO") that previously owned interests in such certificates.[11] Royal Park alleges that it acquired interests in the CDO on or about May 12, 2009 from the initial purchasers of the CDO.[12] Royal Park also alleges that it "obtained all the rights and causes of action against Wells Fargo held by all of the previous holders" of its certificates.[13]

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to as the 'Certificates' and individually referred to as a 'Certificate') and were damaged as a result of Wells Fargo's conduct alleged in the Complaint.").

[4] Complaint at ¶¶ 7-8, 10.

[5] Id. at ¶ 10.

[6] According to the Complaint, "An SEOT occurs under the [g]overning [a]greements whenever a [m]aster [s]ervicer or [s]ervicer **fails** to ensure that the [m]ortgage [l]oans are so serviced. The [m]aster [s]ervicers/[s]ervicers also commit an SEOT whenever they discover breaches of the Warrantors' R&Ws and fail to promptly give notice of those breaches to Wells Fargo." Id. at ¶ 11 (emphasis in original).

[7] Id. at ¶¶ 74-5.

[8] Id. at ¶¶ 112, 118.

[9] Id. at ¶¶ 15, 76.

[10] Id. at ¶¶ 10, 16, 18, 103, 146, 154.

[11] Id. at ¶¶ 30, 32.

[12] Id. at ¶ 32.

[13] Id.

17. Royal Park has submitted the Dalrymple Report in support of class certification. The Dalrymple Report offers opinions in favor of class certification, including the opinion that "damages for all class members are calculable on a class-wide basis."[14]

18. Mr. Dalrymple proposes that damages can be measured by modeling collateral cash flows to the Covered Trusts assuming that Wells Fargo had acted to enforce repurchase or other obligations.[15] Mr. Dalrymple states that the difference between "but-for" and actual collateral cash flows reflects damages to investors in the Covered Trusts.[16] Mr. Dalrymple proposes a scenario ("Dalrymple's But-For Scenario") in which loans that were "materially and adversely affected by the Warrantors' R&W breaches" were "repurchased, replaced, or cured."[17] Mr. Dalrymple does not describe in any detail his approach to model collateral cash flows, but provides the opinion that it is "formulaic" and "straightforward" to determine damages using each Covered Trust's "waterfall structure."[18]

19. Mr. Dalrymple also proposes, again without specifics regarding a methodology, that damages can be measured by calculating the decline in certificate values attributable to Wells Fargo's conduct.[19]

20. I have been retained by Wells Fargo, through its counsel Jones Day, to provide quantitative analysis and opinions regarding: (1) which tranches in the Covered Trusts have not to date experienced any cumulative realized losses under applicable waterfall rules and distributions; (2) the degree of complexity and differences between the Covered Trusts' waterfall rules and other structural features that Mr. Dalrymple does not address; (3) factors impacting the Covered Trusts' waterfall distributions under Dalrymple's But-For Scenario, including the degree to which waterfall distributions vary over time and based on assumptions regarding (a) how Wells Fargo would have acted, (b) when additional funds would be recovered, and (c) how recoveries would be treated; and (4) how those different assumptions, though required by Dalrymple's

[14] Dalrymple Report at ¶¶ 4, 49-58.

[15] Id. at ¶¶ 51-4.

[16] Id. at ¶ 54.

[17] Id. at ¶ 36.

[18] Id. at ¶ 54 ("Under Plaintiff's allegations, collateral losses would have been lower and collateral value would have been higher if the Trustee had met its obligations. This difference between 'but-for' and actual collateral losses/values reflects damages to all Investors within each Covered Trust. In order to apportion damages among each Covered Trust's Investors, it is necessary to understand each Covered Trust's deal structure to determine how the values of the different Certificates were affected by losses to the common mortgage loan collateral."). See also id. at ¶ 55 ("It is therefore formulaic to apportion collateral losses that would have been avoided and additional cash flows that would have been realized (if the Trustee had fulfilled its obligations) among the [i]nvestors according to the waterfall structure and related provisions of the Covered Trust. Such an exercise is straightforward since the waterfall structure and other relevant provisions are provided in the deal documents; similarly, write-downs of Certificate principal are reported in monthly trustee reports and are therefore readily observable.").

[19] Id. at ¶¶ 56-7 (With respect to this proposal, Mr. Dalrymple states that there are "multiple widely-used techniques for performing such a valuation analysis, discounted cash flow ('DCF') analysis, analysis of market and transaction prices, and third-party pricing services," and that "[c]omponents of these methodologies include quoted market prices, indicative quotes for proxy instruments, quotes from recent and less regular transactions, broker quotes, and valuation modeling that is based on industry standard models as well as more sophisticated modeling techniques.").

But-For Scenario, would impact investors at different places in the capital structure and over time.

C. Summary of Opinions

21. The opinion in the Dalrymple Report that damages can be calculated on a class-wide basis, including the "but-for" scenario that he intends to utilize, overlooks key aspects of the RMBS issued by the Covered Trusts and fails to include crucial information regarding assumptions he would make and how he would implement his proposed approach.[20]

22. Although Mr. Dalrymple opines that all certificates are negatively impacted by collateral losses,[21] the Dalrymple Report fails to acknowledge that many of the certificates held by proposed class members have not experienced any cumulative realized losses. Mr. Dalrymple fails to explain whether or how he would address these facts regarding significant variations in certificate performance over time in building a class-wide damages model.

23. In addition, the Dalrymple Report fails to address how the Covered Trusts' waterfall rules differ in material ways and themselves function differently over time. As explained herein, the waterfall rules are complex and how funds are allocated will vary from month to month based on whether senior tranches have been paid down and whether certain other events have occurred (among other conditions set forth in the relevant documents). Mr. Dalrymple nowhere explains how he would address these issues on a class-wide basis when creating an after-the-fact counterfactual world. This is of particular importance because inputs affect certificateholders differently over time and assumptions that would be required to implement Dalrymple's But-For Scenario would impact proposed class members differently.

24. The Dalrymple Report also fails to set forth any clear method for calculating damages. Mr. Dalrymple neglects to provide critical information regarding, among other things, how and when Wells Fargo should have acted and fails to describe how the recovery of funds as a result of purported action by Wells Fargo would be characterized for the purpose of employing the relevant trust's waterfall rules in Dalrymple's But-For Scenario. Without such crucial details, it is impossible to conceptualize how Mr. Dalrymple's analysis would function in practice or, as a result of this lack of detail, to conclude that it could, in fact, determine damages on a class-wide basis.

25. Finally, using a trust's waterfall structure in Dalrymple's But-For Scenario gives rise to intra-class conflicts. Certain assumptions left unspecified by Mr. Dalrymple would need to be made, would have differing effects on proposed class members, and would result in different

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[20] Dalrymple, W. Scott. Deposition (Mar. 23, 2017) ("Q. Certain assumptions would be required for you to model damages in the context of this case, right? A. Yes, certain assumptions would be required. Q. Is it fair to say you haven't yet developed the assumptions that would be required for a damages model here? … A. Well, I covered this generally in the report in -- starting around paragraph 50 I discuss what would be involved in developing those assumptions. I have not developed any specific assumptions regarding the damages model in this case. Q. So you don't have a specific set of assumptions to apply, right? A. I do not.") at 96:12-97:6.

[21] Dalrymple Report at ¶ 38 ("While the amount of the effect would differ for the different Certificates (i.e., it would depend on each security's position in the waterfall structure), all Certificates would be affected directionally the same way – that is, negatively – by collateral losses and reductions in expected cash flows.") (emphasis in original).

outcomes, which creates conflicts. Quantitative but illustrative examples demonstrate these intra-class conflicts inherent in Mr. Dalrymple's approach.[22]

26. For all these reasons, and as explained in more detail below, the approach proposed by Mr. Dalrymple is unreliable and cannot be applied consistently on a class-wide basis.

II. RELEVANT BACKGROUND

A. RMBS Structure and Administration

27. RMBS are secured by collateral in the form of loan pools with each pool containing many residential mortgages.[23]

28. Each purchaser of an RMBS certificate is typically entitled to cash flows associated, in a highly complex way, with the principal and interest payments made by the mortgagors over the life of the certificate.[24]

29. RMBS are divided into slices, or "tranches," each of which bears a different level of risk and offers a different level of return.[25] 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.[26] Investors that are more cautious can choose to purchase senior tranches.[27] Similarly, return-oriented investors can buy subordinate tranches, which are riskier but generally have higher expected yields.[28]

30. The specific structure of an RMBS trust is described in the prospectuses/prospectus supplements and the pooling and servicing agreement ("PSA") or trust agreement.[29]

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[22] The quantitative examples in this report are meant to illustrate how the waterfall structures in Dalrymple's But-For Scenario create intra-class conflicts. The examples are illustrative only and not damages calculations. They require making multiple key assumptions unspecified in the Dalrymple Report, do not determine any amounts at the investor level, and only show the undefined nature and unreliability of Mr. Dalrymple's approach and its inability to calculate damages on a class-wide basis.

[23] 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.

[24] 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.

[25] 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): 645-80 at 645.

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

[27] Fabozzi, Bhattacharya & Berliner, supra note 24, at 25.

[28] Id. at 31.

[29] Id. at 189; See Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Pooling and Servicing Agreement (July 1, 2006) (WF_RP_000978667) ("ABFC 2006-OPT1 PSA"); Structured Asset Securities Corporation,

31. The PSA or trust agreement generally provides information regarding the process through which loans will be transferred into the trust and how such loans will be serviced, and describes what constitutes an event of default on the part of the servicer.[30] Furthermore, the PSA or trust agreement specifies the R&Ws regarding the loan collateral.[31] Prospectuses/prospectus supplements describe information about the tranches in the RMBS, cash flow structures, credit enhancements, performance of the tranches under different payment speeds, risk factors, and other items such as tax treatment.[32] Prospectus supplements typically also disclose a range of loan characteristics within each supporting loan group and display these characteristics in the form of stratifications.[33] These documents also describe the distribution of interest, principal, and excess cashflow, as well as the allocation of losses, as discussed in detail below.

32. Over the term of the trust, a 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, mortgage pool information, certificate balances, and realized losses, among other things.[34]

B. RMBS Credit Enhancements

33. 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.[35]

34. RMBS issuers structure investments such that a certain level of losses associated with defaults in the underlying collateral can occur without senior tranches suffering losses. Credit enhancements, typically measured as a percent of the total pool that can experience losses

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Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Trust Agreement (Jan. 1, 2007) (WF_RP_000975360) ("SASC 2007-BC1 Trust Agreement"); Asset Backed Funding Corporation, Asset-Backed Certificates Asset-Backed Notes, Prospectus (Feb. 16, 2006) (WF_RP_000978399); Structured Asset Securities Corporation, Asset-Backed Certificates Asset-Backed Notes, Prospectus (Nov. 13, 2006) (WF_RP_000974963); Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Prospectus Supplement to Prospectus dated February 16, 2006 (Aug. 8, 2006) (WF_RP_000978260) ("ABFC 2006-OPT1 Prospectus Supplement"); and Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Prospectus Supplement to Prospectus dated November 13, 2006 (Jan. 25, 2007) (WF_RP_000974773) ("SASC 2007-BC1 Prospectus Supplement").

[30] Fabozzi, Bhattacharya & Berliner, supra note 24, at 190.

[31] Id.

[32] Id. at 189-90.

[33] Id. at 189.

[34] See ABFC 2006-OPT1 PSA at 183-8 (WF_RP_000978859-64); SASC 2007-BC1 Trust Agreement at 89-93 (WF_RP_000975454-8); and SASC 2007-BC1 Prospectus Supplement at S-90-1 (WF_RP_000974866-7).

[35] 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.

before a given certificateholder's claim to cash flows declines,[36] play an important role in mitigating default risk.[37]

35. RMBS, like other asset-backed securities, often have credit enhancements to improve the credit profile through various structural or external mechanisms. Credit enhancements may include:

a. Subordination, a typical credit enhancement, "is the most direct approach to generate credit enhancement for senior tranches."[38] 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.[39] The senior-most investors typically experience losses only if they penetrate through all other subordinate classes.[40]

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.[41] For example, an RMBS may be issued for $100 million while the loans collateralizing the security may have a total face value of $105 million. In this example, the security is overcollateralized by $5 million, or 5 percent. Such overcollateralization can act as a buffer in the event that the underlying collateral experiences defaults. Trusts often have complex rules around the maintenance of overcollateralization levels.

d. Excess spread (or "excess interest") is the amount of interest collected above and beyond the amount needed to pay interest to certificateholders.[42] This excess spread is used to pay the ongoing expenses of the transaction. It may also be distributed as principal, thus building overcollateralization for the trust over time.[43]

e. Cross-collateralization is a credit enhancement that often applies when there are multiple supporting loan groups in the same trust.[44] Cross-collateralization occurs when funds

[36] Fabozzi, Bhattacharya & Berliner, supra note 24, at 195.

[37] 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.

[38] Hu & Goldstein, supra note 25, at 664.

[39] Id. at 666.

[40] Id.

[41] Id. at 666-7.

[42] Fabozzi, Bhattacharya & Berliner, supra note 24, at 104.

[43] Id. at 199.

[44] Hu & Goldstein, supra note 25, at 664.

from one supporting loan group can be released to another supporting loan group under certain circumstances.[45]

f. Insurance provided by bond insurers (such as MBIA 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. By guaranteeing some degree of payment to investors irrespective of the cash flows 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.[46] This insurance protects the entity that holds the credit risk of the loan by covering a percentage of the mortgage loan amount.[47]

36. While credit enhancements take various forms, they generally function to mitigate potential shortfalls between payments made into an RMBS trust and the payments due to investors from the trust.

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. For example, if a trust is overcollateralized, as long as the losses to the trust are lower than the overcollateralization amount, no tranche will experience a loss of principal.

38. 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.

39. Certain investors in the Covered Trusts benefitted from the credit enhancements provided. For example, tranche A2 from SASC 2007-BC1 had 53.118 percent original credit enhancement. This means that more than 53 percent of the total loan pool would have to experience a loss before the A2 certificate's principal balance would be negatively affected. In contrast, tranche B2 had only 1.700 percent original credit enhancement. Investors with different risk tolerances were incentivized to purchase tranches that corresponded to such risk tolerances. See **Exhibit 1**: Credit Enhancement by Tranche for total original credit enhancement by tranche. Such differing levels of credit enhancement as stated in this exhibit set up, inform, and create differing economic incentives among RMBS investors regarding actions by Wells Fargo on behalf of the Covered Trusts.

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

40. 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.

[45] Fabozzi, Bhattacharya & Berliner, supra note 24, at 207.

[46] Id. at 206.

[47] Id.

41. 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. Conversely, in certain circumstances, a certificate principal balance can be increased, or "written up," when a trust receives a payment that offsets a prior loss (as discussed below).

42. On each distribution date, the amount of funds available for distribution depends on the amount of funds received from mortgagors.[48] This includes regularly scheduled payments of principal and interest, funds from the sale or refinance of a property, and any other funds received by the trust. In addition, any unscheduled payments resulting from sales or refinances increase funds available to distribute to the investors, which could pay down their certificate balances.

43. In certain instances, a trust may receive funds in connection with a loan that has been previously liquidated. These funds typically are referred to as a "subsequent recovery."[49] Subsequent recoveries may be included in the principal distribution amount and certificate balances are written up to the extent that the recovery funds reverse realized losses.[50]

44. In addition, in instances where the seller has repurchased a loan, the purchase price of such loan (as defined in the applicable documents) is included in the funds to be distributed to certificateholders.[51]

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

46. How available funds are distributed through a waterfall is based on a number of factors. For example, many RMBS include a "stepdown date,"[53] a date after which subordinate tranches typically become eligible to receive principal payments.[54] The prospectus supplement or PSA/trust agreement may also include one or more "trigger events." If these trigger events have occurred, cash flows may be distributed as if the stepdown date had not occurred.[55] Trigger

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

[49] See ABFC 2006-OPT1 Prospectus Supplement at S-73 (WF_RP_000978334); ABFC 2006-OPT1 PSA at 72 (WF_RP_000978748); SASC 2007-BC1 Prospectus Supplement at S-127 (WF_RP_000974903); and SASC 2007-BC1 Trust Agreement at 58 (WF_RP_000975423).

[50] See, e.g., ABFC 2006-OPT1 Prospectus Supplement at S-73 (WF_RP_000978334); and SASC 2007-BC1 Trust Agreement at 86 (WF_RP_000975451).

[51] See ABFC 2006-OPT1 PSA at 125-6 (WF_RP_000978801-2); and SASC 2007-BC1 Trust Agreement at 71-2 WF_RP_000975436-7).

[52] Fabozzi, Bhattacharya & Berliner, supra note 24, at 169.

[53] See ABFC 2006-OPT1 PSA at 72 (WF_RP_000978748); ABFC 2006-OPT1 Prospectus Supplement at S-73 (WF_RP_000978334); SASC 2007-BC1 Trust Agreement at 57 (WF_RP_000975422); and SASC 2007-BC1 Prospectus Supplement at S-6 (WF_RP_000974782).

[54] Fabozzi, Bhattacharya & Berliner, supra note 24, at 199.

[55] Id. at 201.

events are "highly deal- and issuer-specific, depending both on the type of collateral backing the deal and how it was expected to perform at issuance."[56]

47. As another example, an RMBS might contain a provision pursuant to which senior certificates receiving payments from a given loan group are paid differently depending on whether a "subordination depletion date" has or has not been reached.[57] A subordination depletion date typically refers to the date on which the aggregate certificate principal balances of the junior tranches and the overcollateralization (if any) have been reduced to zero. An illustration of how such a provision can change the distribution of funds is provided in **Exhibit 2:** Example Principal Waterfall Distribution, which is based on an illustration of the ABFC 2006-OPT1 principal waterfall. It reflects that for ABFC 2006-OPT1, once the subordination depletion date has been reached, certain tranches (specifically, the Group 3 certificates) share distributions pro rata rather than receiving them sequentially.

48. Another feature that can affect the cash flow is an overcollateralization target. Overcollateralization can be part of a trust from the outset, or it can be built over time using excess spread.[58] If a trust has a target overcollateralization amount, the distribution of principal can depend on whether the target is met.

49. Features such as cross-collateralization can also affect cash flows to an RMBS based on timing. For instance, the trust agreement and prospectus supplement for SASC 2007-BC1 specify that, if the senior tranches from one loan group have been paid off, principal payments that were previously going to those tranches can be directed to senior tranches from another loan group.[59]

50. As to losses, just as the prospectus supplement and/or PSA/trust agreement typically describe the terms pursuant to which payments of principal and interest are allocated to certificateholders, they will typically also describe how losses are to be allocated. Whereas payments of principal and interest are typically allocated first to senior tranches, and only later to the more junior tranches, realized losses are often first allocated to the most junior tranches and only later are applied to the more senior tranches.

51. Realized losses occur when a defaulted loan has been liquidated and the proceeds of the liquidation do not fully cover the unpaid principal balance.[60] 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.[61]

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[56] Id. at 200-1.

[57] ABFC 2006-OPT1 PSA at 72, 172 (WF_RP_000978748, WF_RP_000978848); and ABFC 2006-OPT1 Prospectus Supplement at S-6-7 (WF_RP_000978267-8).

[58] Fabozzi, Bhattacharya & Berliner, supra note 24, at 199.

[59] See SASC 2007-BC1 Trust Agreement at 99-100 (WF_RP_000975464-5); and SASC 2007-BC1 Prospectus Supplement at S-11 (WF_RP_000974787).

[60] See, e.g., ABFC 2006-OPT1 PSA at 59 (WF_RP_000978735); ABFC 2006-OPT1 Prospectus Supplement at S-74-5 (WF_RP_000978335-6).

[61] Id.

D. Differences in Collateral Between the Covered Trusts

52. Because RMBS are secured by loan pools with each pool containing many residential mortgages,[62] and each loan pool contains different loans, the characteristics of the loans in a pool can affect the pool performance. The Covered Trusts have different collateral characteristics. For instance, the Covered Trusts differ in terms of the number of loans in the pools, the loan balances, and the total balance of the pools.

53. Furthermore, the Covered Trusts differ in terms of other loan characteristics that are known to affect cash flows to the trust over time, such as the maximum length of the original loan term and whether the mortgage loan, for example, has an adjustable rate or is an interest-only loan.

54. Even pairs of loans that share a similar characteristic, such as a roughly-identical credit score, can have other characteristics that diverge significantly from one another. As illustrated in **Exhibit 3**: Loan Differences, loans from the Covered Trusts that were extremely similar with respect to credit score, for example, could have vastly different original balances; similarly, small balloon loans of near-equal size could vary significantly in terms of credit score.

55. Loan performance can also be affected by local factors, so the percent of loans in the same state was relevant to investors. The Covered Trusts had different geographical concentrations. As reflected in **Exhibit 4**: Trust Differences, whereas 24.91 percent of the loans underlying ABFC 2006-OPT1 related to properties in California, 35.80 percent of the SASC 2007-BC1 loans related to such properties.

56. Moreover, tranches in the same trust may be collateralized by different pools of loans. ABFC 2006-OPT1 had three supporting loan pools, and SASC 2007-BC1 had two supporting loan pools. ABFC 2006-OPT1 had a prefunding account, and all the prefunded loans belonged to a certain pool.[63] SASC 2007-BC1, on the other hand, did not utilize a prefunding account. For a comparison of the attributes of the Covered Trusts, see **Exhibit 4**: Trust Differences.

III. FIRST OPINION: MANY CERTIFICATES HELD BY PROPOSED CLASS MEMBERS HAVE NOT EXPERIENCED REALIZED LOSSES

57. Mr. Dalrymple opines that all certificates are negatively impacted by collateral losses.[64] A key fact that Mr. Dalrymple does not note or acknowledge in his report, however, is that many certificates in the Covered Trusts have not realized any losses.

58. As described above, certificate principal balances can be written down as the result of a "realized loss." The fact that a loss is taken in a given supporting loan group, however, does not necessarily mean that any or all tranches associated with the applicable loan group will be impacted. Such is the case for several of the tranches in the Covered Trusts.

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[62] Fabozzi, Ferri & Mann, supra note 23, at 16.

[63] A prefunding account is a set amount of funds that will be used to purchase additional loans after the closing date. See, e.g., ABFC 2006-OPT1 Prospectus Supplement at S-35 (WF_RP_000978296).

[64] Dalrymple Report at ¶ 38 ("[A]ll [c]ertificates would be affected directionally the same way – that is, negatively – by collateral losses and reductions in expected cash flows.").

59. There are many reasons why a tranche might not realize losses. In the case of a trust that is overcollateralized, a realized loss will typically be absorbed first by an overcollateralization amount.[65] Each of the Covered Trusts featured overcollateralization. Furthermore, to the extent that no overcollateralization amount exists or an overcollateralization amount has already been exhausted, realized losses are typically next applied to the junior tranches, according to rules set out in the applicable documents. Such provisions are described in the ABFC 2006-OPT1 prospectus supplement and PSA and the SASC 2007-BC1 prospectus supplement and trust agreement.[66]

60. Moreover, when and if a tranche has been paid in full, it can no longer be written down to reflect realized losses.

61. In order to determine which tranches in the Covered Trusts have not experienced any realized losses, I utilized the information in the applicable remittance reports through the report on February 27, 2017. I examined the realized loss history for each tranche, including the status for each tranche as of February 27, 2017, and as of three of the Alleged Breach Dates specified in the Complaint (January 2009; October 2010; and April 2011).

62. I found that seven ABFC 2006-OPT1 tranches, A-1, A-2, A-3A, A-3B, A-3C1, A-3C2, and A-3D, had not experienced any realized losses as of January 2009, October 2010, April 2011, or February 27, 2017.[67] See **Exhibit 5**: Cumulative Realized Losses as of Specified Dates. These tranches represent nearly three-quarters of the financial value of the trust, as a percent of the aggregate original certificate principal balance. Notably, tranches A-3A and A-3B have been completely paid off and thus are not in a position to incur losses in the future. See **Exhibit 6**: Fully Paid-Off Tranches.

63. For SASC 2007-BC1, I found that six of its tranches, A1, A2, A3, A4, A5, and A6, had not experienced any realized losses as of the four dates, including the most recent date of February 27, 2017.[68] See **Exhibit 5**: Cumulative Realized Losses as of Specified Dates. These tranches represent three-quarters of the financial value of the trust, as a percent of the aggregate original certificate principal balance. Among these tranches, tranches A2 and A3 are completely paid off. See **Exhibit 6**: Fully Paid-Off Tranches.

64. Mr. Dalrymple does not acknowledge these facts regarding significant variations in certificate performance over time; nor does he explain whether or how he would address them in building a class-wide damages model. These significant variations in certificate performance over time, however, evidence the differing interests and incentives among investors in the Covered Trusts.

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[65] ABFC 2006-OPT1 Prospectus Supplement at S-20 (WF_RP_000978281); and SASC 2007-BC1 Prospectus Supplement at S-10 (WF_RP_000974786).

[66] ABFC 2006-OPT1 PSA at 182 (WF_RP_000978858); ABFC 2006-OPT1 Prospectus Supplement at S-74-5 (WF_RP_000978335-6); SASC 2007-BC1 Trust Agreement at 109 (WF_RP_000975474); and SASC 2007-BC1 Prospectus Supplement at S-10-1 (WF_RP_000974786-7).

[67] Additionally, there are tranches with an original certificate balance of zero, such as P, R, and R-X in ABFC 2006-OPT1, which therefore cannot have a principal loss.

[68] Additionally, there are tranches with an original certificate balance of zero, including LT-R and R, which by definition cannot have a principal loss. Furthermore, class P has maintained its original certificate balance of $100, and has therefore not experienced a loss.

IV. SECOND OPINION: THE COVERED TRUSTS' WATERFALL STRUCTURES DIFFER IN MEANINGFUL WAYS AND THEMSELVES FUNCTION DIFFERENTLY OVER TIME

65. The Covered Trusts have differing and complex waterfall structures. Because waterfalls vary across trusts, each trust must be analyzed separately to understand its payment structure.

66. There is not a single waterfall structure within a given trust, but rather several waterfall structures that vary over time, as events occur, and based on how funds are classified. Typically, an interest waterfall determines how interest is distributed to certificateholders,[69] a principal waterfall determines the distribution of principal payments,[70] and an excess cashflow waterfall specifies how available funds in excess of the principal and interest distribution amounts on a given payment date will be allocated.[71] When the trust receives cash flows, the classification of those cash flows affects how the funds are paid to investors.

A. Differences in Waterfall Structures Between the Covered Trusts

67. There are several significant differences in the processes by which payments of principal and interest are to be allocated for each of the Covered Trusts, as well as how losses are to be allocated. For example, in ABFC 2006-OPT1, the credit risk manager receives fees from interest payments prior to certificateholders; in SASC 2007-BC1, on the other hand, the credit risk manager only receives payment from the interest waterfall after all certificateholders.[72]

68. Although each of the Covered Trusts has a stepdown date,[73] a date after which subordinate tranches would generally be eligible to receive principal payments,[74] the stepdown date is reached based on different conditions.[75] Similarly, while both the Covered Trusts specify

[69] See ABFC 2006-OPT1 PSA at 169-71 (WF_RP_000978845-7); ABFC 2006-OPT1 Prospectus Supplement at S-18 (WF_RP_000978279); SASC 2007-BC1 Trust Agreement at 96-8 (WF_RP_000975461-3); and SASC 2007-BC1 Prospectus Supplement at S-35-7 (WF_RP_000974811-3).

[70] See ABFC 2006-OPT1 PSA at 172-8 (WF_RP_000978848-54); ABFC 2006-OPT1 Prospectus Supplement at S-18 (WF_RP_000978279); SASC 2007-BC1 Trust Agreement at 98-103 (WF_RP_000975463-8); and SASC 2007-BC1 Prospectus Supplement at S-38-41 (WF_RP_000974814-7).

[71] See ABFC 2006-OPT1 PSA at 178-80 (WF_RP_000978854-6); ABFC 2006-OPT1 Prospectus Supplement at S-19 (WF_RP_000978280); SASC 2007-BC1 Trust Agreement at 103-5 (WF_RP_000975468-70); and SASC 2007-BC1 Prospectus Supplement at S-43-4 (WF_RP_000974819-20).

[72] ABFC 2006-OPT1 PSA at 169-71 (WF_RP_000978845-7); ABFC 2006-OPT1 Prospectus Supplement at S-18 (WF_RP_000978279); SASC 2007-BC1 Trust Agreement at 96-8 (WF_RP_000975461-3); and SASC 2007-BC1 Prospectus Supplement at S-6 (WF_RP_000974782).

[73] See ABFC 2006-OPT1 PSA at 72 (WF_RP_000978748); ABFC 2006-OPT1 Prospectus Supplement at S-73 (WF_RP_000978334); SASC 2007-BC1 Trust Agreement at 57 (WF_RP_000975422); and SASC 2007-BC1 Prospectus Supplement at S-126 (WF_RP_000974902).

[74] Fabozzi, Bhattacharya & Berliner, supra note 24, at 199.

[75] See ABFC 2006-OPT1 PSA at 72 (WF_RP_000978748); ABFC 2006-OPT1 Prospectus Supplement at S-73 (WF_RP_000978334); SASC 2007-BC1 Trust Agreement at 57 (WF_RP_000975422); and SASC 2007-BC1 Prospectus Supplement at S-126 (WF_RP_000974902).

"trigger events" that are based on certain delinquency or cumulative loss levels, the applicable percentages differ between ABFC 2006-OPT1 and SASC 2007-BC1.[76]

69. An additional and significant difference between the two Covered Trusts relates to how distributions are affected in the event that subordination to senior tranches is reduced to zero. Whereas in ABFC 2006-OPT1, the order of distributions to the Group 3 certificates is affected,[77] in SASC 2007-BC1, there is no such change.

70. Furthermore, the Covered Trusts differ with respect to overcollateralization targets. In ABFC 2006-OPT1, the target overcollateralization on or after the stepdown date with no trigger in effect is the greater of (i) 6.5 percent of the ending trust balance (including any prefunding amounts) in the current distribution period and (ii) 0.5 percent of the initial trust balance (including any prefunding amounts).[78] In SASC 2007-BC1, the target overcollateralization in the same situation is the greater of (i) the lesser of (a) 3.4 percent of the ending trust balance for the current distribution period and (b) $20,589,983.62 and (ii) $6,055,759.92.[79]

B. The Waterfall Structures Vary Over Time, As Events Occur, and Depending on How Funds are Classified

71. To illustrate the complexity of a waterfall, and the various facts/factors impacting the waterfall over time, consider the principal waterfall for SASC 2007-BC1 described in the trust agreement. See **Exhibit 7**: Principal Waterfall Decision Trees. The first consideration in the waterfall is whether the stepdown date has passed and whether there is a trigger event in effect.[80] The next consideration is whether there is an outstanding interest rate swap payment.[81] If so, funds are to be allocated to pay the swap amount or any swap termination payment. Each supporting loan group has its own share to pay of the swap amount, but if one group has a

[76] See, e.g., **Exhibit 4**: Trust Differences.

[77] ABFC 2006-OPT1 PSA at 4.02(a)(i)(first)(III)(A and B) (WF_RP_000978848); 4.02(a)(i)(second)(I)(B)(1 and 2) (WF_RP_000978849); 4.02(a)(i)(second)(II)(B)(1 and 2) (WF_RP_000978849-50); 4.02(a)(ii)(first)(III)(A and B) (WF_RP_000978851); 4.02(a)(ii)(second)(I)(B)(1 and 2) (WF_RP_000978852); and 4.02(a)(ii)(second)(II)(B)(1 and 2) (WF_RP_000978853).

[78] ABFC 2006-OPT1 PSA at 73 (WF_RP_000978749); and ABFC 2006-OPT1 Prospectus Supplement at S-73 (WF_RP_000978334).

[79] SASC 2007-BC1 Trust Agreement at 43 and 59-60 (WF_RP_000975408 and WF_RP_000975424-5); and SASC 2007-BC1 Prospectus Supplement at S-118 and S-128-9 (WF_RP_000974894 and WF_RP_000974904-5).

[80] SASC 2007-BC1 Trust Agreement at 5.02(e)(i)(WF_RP_000975463); and 5.02(e)(iv)(WF_RP_000975465).

[81] An interest-rate swap is a contract used to manage interest-rate risk. The counterparties make an agreement to exchange interest payments periodically based on a notional amount. The parties pay one another an agreed upon periodic interest rate payment times the notional amount. Commonly, one party pays a fixed-rate and the other has a floating-rate. See Fabozzi, Frank J., Steven V. Mann, and Moorad Choudhry. "Interest-Rate Swaps and Swaptions." The Handbook of Fixed Income Securities. 8th ed. Eds. Frank J. Fabozzi and Steven V. Mann. New York: McGraw Hill (2012): 1445-78 at 1445-6.

shortfall, funds from the other group will be used to make the payment. Once the swap has been paid, funds begin to be paid to the certificateholders.[82]

72. Prior to the stepdown date (or if any triggers are in effect), all principal is directed to senior tranches until they are paid in full.[83] Once all senior certificates from one group are paid in full, funds are used to pay the senior certificates from the other group until they too are paid in full.[84] Only after all senior certificates are paid off can principal be distributed to junior tranches.[85] If funds remain after all junior tranches are paid in full, they are to be distributed according to the excess cashflow waterfall.[86]

73. After the stepdown date (as long as triggers are not in effect), senior tranches are to be paid an amount determined according to specified credit enhancement percentages.[87] If senior certificates from one group have been paid up to the target amount, but senior certificates from another loan group have not reached the target amount, they will be paid until such target is met.[88] Once all senior certificates have reached the target amount, the junior tranches are to be paid sequentially until their target amounts are met.[89] Finally, if funds remain in the trust after the abovementioned payments, such funds would be classified as excess cashflow and would be distributed using the excess cashflow waterfall.[90]

74. The principal waterfall for ABFC 2006-OPT1 functions differently. There are no swap payments to be considered in the principal waterfall.[91] The waterfall functions differently depending on whether the subordination depletion date has been reached.[92] Furthermore, if the stepdown has occurred and there is no trigger in effect, excess funds from one supporting loan group could be applied to senior tranches supported by another supporting loan group to cover any payment shortfall.[93]

75. Thus, how an individual trust's waterfall structure functions will vary over time. As an initial matter, whether the stepdown date has been met may differ from one month to the next.

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[82] In SASC 2007-BC1, principal funds were distributed to the swap counterparty before the certificateholders. See SASC 2007-BC1 Trust Agreement at 98-9 (WF_RP_000975463-4); and SASC 2007-BC1 Prospectus Supplement at S-7 (WF_RP_000974783).

[83] SASC 2007-BC1 Trust Agreement at 5.02(e)(i)(A)(3)(WF_RP_000975464); and 5.02(e)(i)(B)(3)(WF_RP_000975464).

[84] SASC 2007-BC1 Trust Agreement at 5.02(e)(ii)(A)(WF_RP_00975464).

[85] SASC 2007-BC1 Trust Agreement at 5.02(e)(ii)(B)(WF_RP_00975465).

[86] SASC 2007-BC1 Trust Agreement at 5.02(e)(ii)(C)(WF_RP_000975465).

[87] SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(C)(WF_RP_000975466).

[88] SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(C)(WF_RP_000975466).

[89] SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(D-L)(WF_RP_000975466-7).

[90] SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(M)(WF_RP_000975465).

[91] If there was a swap payment shortfall from the interest waterfall, payments could be taken from the principal distribution amount prior to the waterfall being run. See ABFC 2006-OPT1 PSA at 58-9 (WF_RP_000978734-5).

[92] ABFC 2006-OPT1 PSA at 4.02(a)(ii)(first)(III)(A and B)(WF_RP_000978851); and 4.02(a)(i)(first)(III)(A and B)(WF_RP_000978848).

[93] ABFC 2006-OPT1 PSA at 4.02(a)(ii)(second)(I-III)(WF_RP_000978852-3).

Moreover, in any given month, the certificate balances will differ from the preceding month. If some of these certificate balances have reached zero, certain additional tranches may be paid. Similarly, whether or not overcollateralization targets have been met, or conversely, whether overcollateralization has been reduced to zero, may differ from one month to the next. This may change the distribution process. In every single month, the "decision tree" analysis must be undertaken. Consequently, the results—in terms of which tranches receive distributions, and in what amounts—will vary from month to month depending on dynamic factors.[94] Mr. Dalrymple nowhere explains how he would address these issues on a class-wide basis in the creation of an after-the-fact counterfactual world, particularly when inputs could shift performance and payment recipients over time, or how assumptions he would need to make to implement Dalrymple's But-For Scenario using a trust's waterfall structure would impact different proposed class members differently.

V. THIRD OPINION: DALRYMPLE'S BUT-FOR SCENARIO BASED ON THE TRUSTS' WATERFALL STRUCTURES GIVES RISE TO INTRA-CLASS CONFLICTS

76. Although Mr. Dalrymple provides limited detail, fails to select a model, and excludes important information about any possible model, the Dalrymple Report claims that the damages to the proposed class members can be calculated by taking the difference between "but-for" and actual collateral losses or certificate values.[95] Dalrymple's But-For Scenario is based on the premise that it is possible to calculate the difference in the financial outcomes between (1) what actually occurred; and (2) what would have occurred had Wells Fargo behaved differently on an unspecified date or dates.

77. Mr. Dalrymple claims that the "mechanisms through which this works" are the waterfall structures and the values of certificates,[96] but he fails to specify just what actions he intends to impute to Wells Fargo under his hypothetical "but for" scenario, and he is silent regarding when additional payments would be made to the trusts and how they would be characterized. Without these crucial details, it is impossible to conceptualize how Mr. Dalrymple's analysis would function in practice or, in the absence of such essential detail, to conclude that it could, in fact, distribute or calculate damages on a class-wide basis. In addition, Mr. Dalrymple's proposed approach based on the trusts' waterfall structures gives rise to conflicts among proposed class members.[97]

[94] See **Exhibit 2:** Example Principal Waterfall Distribution for an illustration of how the principal waterfall can differ before and after the subordination depletion date.

[95] Dalrymple Report at ¶¶ 36-7; ¶¶ 51-4; ¶¶ 56-7.

[96] Dalrymple Report at ¶ 37.

[97] Mr. Dalrymple describes using the waterfall structures in connection with his collateral cash flow analysis, and does not explain if his proposed certificate value approach would rely on the waterfall structures in any way. Dalrymple Report at ¶¶ 56-7. To the extent that it would, my opinions that Dalrymple's But-For Scenario using the trusts' waterfall rules gives rise to intra-class conflicts would apply to both his collateral cash flow and his certificate value approaches.

A. Mr. Dalrymple's Approach Requires Assumptions Unspecified by Mr. Dalrymple that Impact Different Proposed Class Members Differently

1. Mr. Dalrymple Fails to Specify How Wells Fargo Would Have Acted in Dalrymple's But-For Scenario.

78. Mr. Dalrymple's approach requires assumptions regarding how Wells Fargo would have acted under Dalrymple's But-For Scenario.[98] The Dalrymple Report does not clarify whether loans would be assumed to be cured, repurchased, or substituted as a result of Wells Fargo's actions.[99]

79. Moreover, even if we assume that under Dalrymple's But-For Scenario, loans found to have breaches of R&Ws, for example, are to be repurchased, multiple questions remain unanswered. For example, would Mr. Dalrymple assume that in his "but-for" world, affected loans were willingly and expeditiously repurchased? If not, what is the alternative outcome assumed by Mr. Dalrymple and what are the ramifications? If, on the other hand, Mr. Dalrymple assumes that the Warrantors would not have willingly and expeditiously repurchased the loans, and that litigation would have been necessary, how does he account for the impact to the cash flow? Mr. Dalrymple does not address these issues in his report, and his assumptions regarding these issues in Dalrymple's But-For Scenario would impact proposed class members differently.[100]

2. Mr. Dalrymple Fails to Specify When Additional Funds Would Be Distributed in Dalrymple's But-For Scenario.

80. Mr. Dalrymple's approach requires assumptions regarding when additional funds would be distributed into the trusts under Dalrymple's But-For Scenario.[101] Even if Mr. Dalrymple decides to make the assumption that allegedly defective loans would be willingly and expeditiously cured or repurchased, the Dalrymple Report is silent regarding when, under Dalrymple's But-For Scenario, Wells Fargo would act to effect the cure or repurchase of

[98] Dalrymple, W. Scott. Deposition (Mar, 23, 2017) ("So, as I explained in the report, the difference between the actual and counterfactual world is Wells Fargo's enforcement of its obligations, so specifically that would involve identifying the actions that Wells Fargo would have had to have taken in order to meet its obligations as trustee. Once those actions are identified, those actions can then be articulated into a set of specific assumptions surrounding, in your example, servicing failures and that set of assumptions would then be used to drive a set of but-for cash flows.") at 153:8-21.

[99] Dalrymple, W. Scott. Deposition (Mar, 23, 2017) ("Q. We've been talking about repurchases, but do you know one way or the other whether the plaintiff alleges that replacement, repurchase or cure should have occurred for defaulting loans? A. I don't have a specific understanding. Q. Your damages analysis could be different if you assumed that a warrantor repurchased as opposed to replaced a loan, right? A. It could be.") at 127:8-19; and ("Q. So if a loan was replaced instead of repurchased, that would impact your damages model for those reasons, right? A. It would because the timing of the cash flows would be different.") at 128:21-25.

[100] Dalrymple, W. Scott. Deposition (Mar. 23, 2017) ("No. No, what I just described is the -- so the repurchase amount would be an input to the model and I, for instance, would not be able to specifically develop an assumption without input from another source, as to what the repurchase amount and timing should have been. Those are assumptions that go into the model.") at 121:16-24.

[101] Dalrymple, W. Scott. Deposition (Mar. 23, 2017) ("Again, the timing of the counterfactual assumptions that I make when constructing the counterfactual world will affect or could affect which investors would recover.") at 162:23-163:3.

affected loans.[102] It is unclear whether Mr. Dalrymple (1) assumes that all allegedly defective loans would be repurchased or cured at the same time, regardless of their performance status as of the as-yet-unspecified repurchase date or, alternatively, (2) assumes that these loans would be repurchased or cured at different points in time.[103]

81. If he decides to assume that all these loans would be repurchased or cured at the same time, it is not readily apparent how Mr. Dalrymple would treat loans that were already liquidated as of the chosen date.

82. Depending on the date or dates chosen to carry out Dalrymple's But-For Scenario, it is possible that a significant fraction of loans would already have been liquidated. For example, 33.1 percent of loans in ABFC 2006-OPT1 and 42.8 percent of loans in SASC 2007-BC1 had defaulted and been liquidated by April 2011. Would Mr. Dalrymple have these loans hypothetically "repurchased," or would he apply an alternative treatment?

83. To illustrate the wide range of dates upon which loans in the Covered Trusts were liquidated, [redacted]

84. This demonstrates that whichever date or dates that Mr. Dalrymple selects to carry out Dalrymple's But-For Scenario will result in a loan pool with a different percentage of liquidated loans. Therefore, the combination of the date selection and the treatment of liquidated loans will result in different calculations in the but-for scenario.

3. Mr. Dalrymple Fails to Specify How Certain Recoveries Would Be Treated in Dalrymple's But-For Scenario.

85. Mr. Dalrymple's approach also requires assumptions regarding how certain recoveries would be treated under Dalrymple's But-For Scenario.[105] As described above, the Dalrymple Report

[102] Dalrymple, W. Scott. Deposition (Mar. 23, 2017) ("Q. You're not offering an opinion as to when Wells Fargo should have acted, right? A. I'm not.") at 92:19-21.

[103] Dalrymple, W. Scott. Deposition (Mar. 23, 2017) ("Q. Would there be one distribution or multiple distributions through the waterfall? A. It would just depend. Q. Can you tell me one way or the other, sitting here today, whether there would be one distribution or multiple distributions through the waterfall? A. I don't know. I don't have a specific understanding of what the amount or timing of those inputs would be.") at 126:6-15; see also id. at 130:7-131:17.

[104] [redacted]

[105] Dalrymple, W. Scott. Deposition (Mar. 23, 2017) ("Q. You need to know whether or not funds are principal, interest, prepayment of principal, a subsequent recovery; you need to know that classification in order to apply the waterfall rules, right? A. You might. My recollection is with these particular trusts that that does affect how certain proceeds are distributed. Q. Would you be making the determinations as to how the additional funds should be

seems to imply that under the But-For Scenario at least certain affected loans would be repurchased. However, because the exercise Mr. Dalrymple is suggesting is a recreation of a "but-for" world that did not occur, it is unclear how Mr. Dalrymple would propose to do such recreation, and what assumptions he would make about how to treat recoveries in Dalrymple's But-For Scenario.[106]

86. Imagine a loan that was current as of an Alleged Breach Date but was liquidated as of the Plaintiff's sampling date. Does one place new funds in the trust and remove that loan's payment history from the deal? Alternatively, does one leave that loan in the deal to keep paying until it actually defaults? Conversely, if a loan had been liquidated as of the Alleged Breach Date but a future subsequent recovery had not yet been realized, should one place new funds in the deal as of the Alleged Breach Date and then remove funds on the date that the subsequent recovery arrives? Should one credit the expenses of Wells Fargo for that foreclosure? Should one just pay the losses associated with that given loan? Mr. Dalrymple answers none of these questions, each of which will impact who recovers and in what amounts.

87. More confusingly, Mr. Dalrymple does not explain whether he intends to apply some methodology to unsampled loans on an extrapolated basis. If so, how will he determine to which loans he should extrapolate the findings and how will those loans be treated?

88. Additionally, if, under Dalrymple's But-For Scenario, one attempts to place new funds into the waterfall, how should one treat the payments in each of the circumstances mentioned above? Would payments for repurchase of a current loan and a previously liquidated one be treated the same? Would debits for later recoveries be treated as losses? How would these hypothetical payments ("Hypothetical Payments") be treated for purposes of the waterfall by Mr. Dalrymple? There is no waterfall expressly applicable to breach of contract damages recovered from Wells Fargo. Hypothetical Payments could theoretically, among other things, be distributed through the principal waterfall, interest waterfall, excess cashflow waterfall, could be treated as a subsequent recovery, could be held in escrow, or could be paid pro-rata according to some unknown formula. Mr. Dalrymple, however, nowhere explains which of these approaches he would use to implement Dalrymple's But-For Scenario. By doing so, he fails to disclose assumptions that could impact different proposed class members differently, as illustrated below.

89. Even if certain parties should agree as to which of these options should apply for the Hypothetical Payment, additional necessary assumptions remain. For example, it will be

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characterized under the waterfall rules or would somebody else be making the determinations in your but-for world? A. Well, I think it depends on what specifically you're talking about. So if I were to have an input and I knew that input related to prepayments and it's clear under the PSA how prepayments would be treated, then I would simply treat them accordingly. If, however, you have something like a repurchase proceed and it may not be clear -- it may not be clear how that repurchase proceed would be treated as, for instance, a subsequent recovery or not, then it's possible that I might need guidance as to how it would be treated under the waterfall structure.") at 136:22-137:24.

[106] Dalrymple, W. Scott. Deposition (Mar. 23, 2017) ("Q. Have you set out a methodology in your report as to how additional cash flows that would be coming into the trust in your but-for world could be characterized for purposes of the waterfall structure? A. In this report I don't specifically talk about how those additional cash flows would be characterized.") at 138:12-19.

necessary to determine whether the stepdown date has occurred[107] or whether triggers are in effect[108] during the time period of any distribution or distributions in Dalrymple's But-For Scenario. Mr. Dalrymple has not explained how he would make that decision, although the decision will impact how funds flow through the waterfall and which certificates recover over time.

90. Furthermore, even if it is possible to determine which certificates should receive the Hypothetical Payment, investors who may have held the certificates at different points in time will need to be identified and their damages, if any, determined. Mr. Dalrymple only claims to be able to calculate damages at the certificate level, and has not developed a method for determining damages at an investor level.[109]

91. In sum, whereas Mr. Dalrymple characterizes his analysis as "formulaic" or "straightforward," it in fact requires the making of numerous decisions. The application of these decisions has a significant impact on the outcome for different certificateholders depending on which decision is made. The Dalrymple Report does not mention let alone provide any guidance on these issues – each of which would lead to different outcomes for certificateholders.[110] As a result, his methods are unreliable and would lead to conflict. Some specific quantitative but illustrative examples of these conflicts follow.

B. Specific Quantitative But Illustrative Examples Demonstrate Intra-Class Conflicts Inherent in Mr. Dalrymple's Approach

92. As described above, I believe that the "methodology" described in the Dalrymple Report suffers from so many gaps and flaws as to make it practically infeasible. Nevertheless, in the section that follows, I ignore these flaws solely for the purposes of further discussing the intra-class conflicts inherent in Dalrymple's But-For Scenario.

93. There are numerous conflicts between proposed class members that would arise under Dalrymple's But-For Scenario.

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[107] See, e.g., ABFC 2006-OPT1 PSA at 72 (WF_RP_000978748); ABFC 2006-OPT1 Prospectus Supplement at S-73 (WF_RP_000978334); SASC 2007-BC1 Trust Agreement at 57 (WF_RP_000975422); and SASC 2007-BC1 Prospectus Supplement at S-6 (WF_RP_000974782).

[108] See, e.g., ABFC 2006-OPT1 PSA at 74-5 (WF_RP_000978750-1); ABFC 2006-OPT1 Prospectus Supplement at S-74 (WF_RP_000978335); SASC 2007-BC1 Trust Agreement at 26-7 (WF_RP_000975391-2); and SASC 2007-BC1 Prospectus Supplement at S-6-7 (WF_RP_000974782-3).

[109] Dalrymple, W. Scott. Deposition (Mar. 23, 2017) ("Q. And you've mentioned, but I just want to confirm, that the waterfall distribution that you're proposing gets you damages at a certificate level, not the investor level. Right? A. Yes. The method I proposed calculates damages at the certificate level which would then be distributed to the investors based on their holdings.") at 189:16-24; and ("Q. You haven't proposed a method, though, to translate those certificate-level damages to investor level damages, right? A. Do you mean something like a plan of allocation by which the certificate-level damages would be allocated to the individual investors? Q. Yes. A. No, I haven't proposed a specific plan of allocation.") at 192:18-193:3.

[110] Dalrymple, W. Scott. Deposition (Mar. 23, 2017) ("Q. You haven't assessed how different assumptions might impact your model, have you? A. When you say how specific assumptions would impact the model, I have not analyzed how selecting one set of inputs versus another would have an impact on the model. No, I've not done that analysis.") at 97:15-22.

94. First, if Mr. Dalrymple "repurchases" or "cures" certain allegedly defective loans in Dalrymple's But-For Scenario, the choice of remedy can affect the distribution, as well as the remaining collateral amount. As shown in **Exhibit 9**: Comparison of Distribution by Choice of Loan-Specific Remedies, if Mr. Dalrymple were to "repurchase" all the allegedly defective loans, certain certificateholders will receive an increased amount of payments in the month that repurchase was assumed to take place, while the remaining collateral pool will be reduced. On the other hand, if Mr. Dalrymple were to "cure" all the allegedly defective loans, certificateholders at the time when this remedy was assumed to take place will not receive any additional payment. However, the collateral pool would not change.[111] Depending on the preferences of different certificateholders, and the dates during which they held certificates, some may prefer receiving higher payments earlier with a corresponding reduction in the collateral pool, while some may prefer not to have higher payments made immediately but to keep the collateral pool the same (or approximately the same) with distributions to occur in the "but-for" world during, for example, a later period of ownership.

95. Second, in Dalrymple's But-For Scenario, it is necessary to choose the date on which funds are assumed to have come into the trust as the result of Wells Fargo's actions. This choice will change who receives payments in Dalrymple's But-For Scenario. This choice also can have a disparate impact on various tranches. As reflected in **Exhibit 10**: Comparison of Distributions by Date, the amount each tranche receives can significantly vary when different dates are utilized.

96. In the example reflected there, I assumed a Hypothetical Payment of $15 million was received by the trust and distributed based on the aggregate certificate balance of each loan pool. If the funds were received in January 2009, tranche A-3B of ABFC 2006-OPT1 would have received almost $9 million in the month of distribution. If the funds were received in October 2010, on the other hand, tranche A-3B would have received almost $3 million in the month of distribution. If the funds were received in April 2011, tranche A-3B would have already been paid in full and thus would not have been eligible to receive any of the funds. However, the A-1 tranche would have received the highest payment if the distribution date was determined to be April 2011. The dates on which the alleged breaches and their economic consequences are determined to have occurred, therefore, impact different proposed class members differently.

97. Third, in the event of sampling or any other analysis of loans that is not loan-specific, a determination will have to be made as to how funds received as a result of Wells Fargo's actions will be allocated to each supporting loan group. The relevant documents are silent as to which allocation/distribution would be applicable, as is the Dalrymple Report. Two options produce significantly different results: (1) allocating the funds according to the principal certificate balance as of the distribution date; or (2) allocating the funds according to the cumulative realized losses as of the distribution date. See **Exhibit 11**: Distribution of Hypothetical Payment, Loan Group Share of Principal Balance Versus Realized Losses, which illustrates how this choice could affect the distribution. These are not the only options available to allocate funds across groups, and other options could also produce different results.

98. In the example reflected there, I assumed a Hypothetical Payment of $100 million in April 2011. For ABFC 2006-OPT1, the certificate backed by loan group 1 (A-1) would receive almost $5 million more in distributions if funds were allocated based on principal balance instead of on realized losses. In contrast, the certificates backed by loan group 3 would receive just over $4

[111] Alternatively, Mr. Dalrymple can assume certain loans were to be repurchased while others are to be cured or substituted.

million less in the same scenario. For SASC 2007-BC1, the certificates backed by loan group 1 (A1 and A6) would each have a reduction of over $1.3 million on the distribution date if funds were allocated based on realized losses instead of principal balance. In contrast, the group 2 certificates (specifically, the A3 certificate) would gain nearly $2.7 million in the same scenario. How funds are allocated to supporting loan groups, therefore, impacts different proposed class members differently.

99. Finally, Mr. Dalrymple suggests that all investors would be uniformly better off under Dalrymple's But-For Scenario. However, he does not support this statement with evidence—quantitative or otherwise.[112] He has not analyzed or modeled the waterfalls here, and key assumptions including stepdown dates, triggers, and characterizations of funds will impact which certificates recover.

100. In fact, there are circumstances under which some certificateholders could receive, over time, lower cumulative principal payments in a "but-for" scenario than in the actual scenario. See **Exhibit 12:** Example But-For Scenario With Lower Principal Distributions for an illustration, which assumes both a significant lump-sum distribution in January 2009 and fewer liquidations and lower loss severity over time, as a result of actions taken by Wells Fargo for ABFC 2006-OPT1. Depending on these assumptions, different proposed class members are affected differently.

101. In this example, under Dalrymple's But-For Scenario, the class A-1 certificateholders receive lower aggregate principal distributions between January 2009, the first Alleged Breach Date, and February 2017 than they actually received over that time period. This results from the fact that, if performance were improved, a portion of the principal payments could be distributed to certificateholders of subordinate tranches, rather than being diverted to the senior tranches.

102. Although the trust arguably performs "better" overall in this application of Dalrymple's But-For Scenario, senior certificateholders would have received less over the same period of time. Mr. Dalrymple ignores the possibility that certain certificateholders, such as A-1, could be better off as of February 27, 2017 than they would have been in his but-for scenario in terms of amount of principal payments received. Would these certificateholders have to reimburse the amount to the trust to offset damages to other certificateholders? Would credits be given to the trust for "stronger" performances in the actual world? Results could therefore conflict with Mr. Dalrymple's assumption that all investors are negatively impacted by collateral losses.[113]

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[112] Dalrymple, W. Scott. Deposition (Mar. 23, 2017) ("Q. So you have not analyzed whether the but-for world for the ABFC and SASC trusts might result in lower payments to some certificates during the time period at issue? … A. Well, based on my understanding of the allegations, I'm not -- I don't have an understanding of how that would have occurred. However, to the extent that this requires building out a waterfall model, I have not done that.") at 212:24-213:10.

[113] Dalrymple Report at ¶ 38. Mr. Dalrymple's suggestion at his deposition that he would just find these certificateholders undamaged (Dalrymple, W. Scott. Deposition (Mar. 23, 2017) at 215:20-228:13) is no answer to the conflicts his approach creates. He would still be creating a but-for world that benefits only some certificateholders and applying it only where there is an upside for certain investors. This would not be a consistent application of his approach on a class-wide basis, nor does it consider investor incentives. See id. ("Q. For proposing damages to be calculated on a class-wide basis on behalf of a class of investors, and the result of the model is a circumstance where some of those members of the class, some of those investors, are worse off in the but-for world than the actual world, how does that benefit those members of the class? A. I don't know. I haven't opined on the

103. In addition to these examples, other conflicts of interest exist and are inherent in the economic frameworks of these Covered Trusts, as explained in this report. Who recovers, which certificates are paid, and in what amounts will vary depending on the various assumptions described. Whichever methods Mr. Dalrymple chooses for determining damages will create winners and losers.

104. Mr. Dalrymple has not considered and in no way addresses or resolves these significant issues in his report. Without addressing or resolving these issues, Mr. Dalrymple provides no reliable methodology that damages can be calculated on a class-wide basis and without intra-class conflicts.

VI. CONCLUSION

105. As explained above, the opinion in the Dalrymple Report that damages can be calculated on a class-wide basis is unreliable.

106. The Dalrymple Report fails to acknowledge that many of the certificates held by proposed class members have not experienced any cumulative realized losses. In addition, the Dalrymple Report fails to acknowledge that the waterfall rules employed by the Covered Trusts differ in significant ways, and that application of the waterfall rules in a given trust will lead to varying allocations of available cash flows from month to month in a but-for scenario.

107. The Dalrymple Report also fails to set forth any clear method for calculating damages. Furthermore, Mr. Dalrymple neglects to provide critical information regarding how and when Wells Fargo should have acted and leaves open many questions, including how the recovery of funds as a result of purported action by Wells Fargo would be characterized for the purpose of employing the relevant trust's waterfall rules.

108. Finally, Dalrymple's But-For Scenario based on a trust's waterfall structure gives rise to intra-class conflicts as described herein.

Submitted under penalty of perjury on:

March 31, 2017

Ethan Cohen-Cole, Ph.D.

model that responds to investor incentives. It's just a model based on class-wide damages at the certificate level. It's not driven by investor incentives.") at 222:21-223:10.

Appendix A

Curriculum Vitae

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

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Ethan Cohen-Cole is a Managing Director with Econ One Research. 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 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. Broadly experienced, 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 175 professional and academic seminars and training sessions. These have included programs sponsored by the 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 U.S. 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.

RECENT PROFESSIONAL HISTORY

Econ One Research 2013-present
Managing Director, Financial Services Practice Lead

Alvarez & Marsal 2012-2013
Managing Director

NERA Economic Consulting 2010-2012
Special Consultant

University of Maryland 2009-2012
Finance Professor

Federal Reserve Bank of Boston 2006-2009
Financial Economist, Bank Supervisor

EDUCATION

Harvard University
BA, History

Princeton University
MPA, Public Policy

University of Wisconsin-Madison
MA, Economics

University of Wisconsin-Madison
Ph.D., Economics

BOARD MEMBERSHIP

Legal Momentum 2015-present
Board of Directors

El Camino Hospital 2012-2015
Investment Committee

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
Capital Markets
Macroeconomics
Merchant Acquiring
Consumer Payments
Payment Systems
Consumer Credit
Credit Cards
Commodities Markets
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Repo Markets, Securities Lending
Credit Risk

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Stender et al. v. Archstone-Smith Operating Trust, et al. (D. Colo. No. 07-cv-02503).

Massachusetts Mutual Life Insurance Company v. Credit Suisse First Boston Mortgage Securities Corp., et al. (D. Mass. No. 3:11-cv-30048).

Massachusetts Mutual Life Insurance Company v. DLJ Mortgage Capital, Inc., et al. (D. Mass. No. 3:11-cv-30047).

2017

Federal Deposit Insurance Corporation as Receiver for Colonial Bank v. Credit Suisse First Boston Mortgage Securities Corp., et al. (Cir. Ct. Ala., No. 03-CV-2012-901035.00).

Appendix B

Materials Considered

Materials Considered[1]

LEGAL

Amended Class Action Complaint and Alternative Verified Derivative Action for Breach of the Trust Indenture Act, Breach of Contract, Breach of Trust and Violation of the Streit Act, dated March 13, 2015, Royal Park Investments SA/NV v. Wells Fargo Bank, N.A., No. 1:14-cv-09764-KPF-SN (Doc. No. 24).

Letter from Christopher M. Wood to The Honorable Katherine Polk Failla, dated December 8, 2016, Royal Park Investments SA/NV v. Wells Fargo Bank, N.A., No. 1:14-cv-09764-KPF-SN (Doc. No. 197).

Opinion & Order, dated March 10, 2017, Blackrock Allocation Target Shares: Series S Portfolio, et al. v. Wells Fargo Bank, N.A., No. 1:14-cv-09371-KPF-SN; Royal Park Investments SA/NV v. Wells Fargo Bank, N.A., No. 1:14-cv-09764-KPF-SN; National Credit Union Administration Board v. Wells Fargo Bank, N.A., No. 1:14-cv-10067-KPF-SN; Phoenix Light SF LTD., et al. v. Wells Fargo Bank, N.A., No. 1:14-cv-10102-KPF-SN; and Commerzbank A.G. v. Wells Fargo Bank, N.A., No. 1:15-cv-10033-KPF-SN (Doc. No. 273).

EXPERT REPORTS

Cowan, Dr. Charles D., Lipshutz, Dr. Nelson, and Snow, Dr. Karl. Coordinated Plaintiffs' Expert Sampling Report of Dr. Charles Cowan, Dr. Nelson Lipshutz, and Dr. Karl Snow, dated December 2, 2016, Blackrock Allocation Target Shares: Series S Portfolio, et al. v. Wells Fargo Bank, N.A., No. 1:14-cv-09371-KPF-SN; Royal Park Investments SA/NV v. Wells Fargo Bank, N.A., No. 1:14-cv-09764-KPF-SN; National Credit Union Administration Board v. Wells Fargo Bank, N.A., No. 1:14-cv-10067-KPF-SN; Phoenix Light SF LTD., et al. v. Wells Fargo Bank, N.A., No. 1:14-cv-10102-KPF-SN; and Commerzbank A.G. v. Wells Fargo Bank, N.A., No. 1:15-cv-10033-KPF-SN, and Supporting Materials.

Dalrymple, W. Scott. Expert Report of W. Scott Dalrymple, CFA, dated January 30, 2017, Royal Park Investments SA/NV v. Wells Fargo Bank, N.A., No. 1:14-cv-09764-KPF-SN.

DEPOSITIONS

Dalrymple, W. Scott. Deposition (Mar. 23, 2017) and related exhibits.

RELEVANT DOCUMENTS

Pooling and Servicing Agreement

Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Pooling and Servicing Agreement (July 1, 2006) (WF_RP_000978667).

[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.

Prospectuses

Asset Backed Funding Corporation, Asset-Backed Certificates Asset-Backed Notes, Prospectus (Feb. 16, 2006) (WF_RP_000978399).

Structured Asset Securities Corporation, Asset-Backed Certificates Asset-Backed Notes, Prospectus (Nov. 13, 2006) (WF_RP_000974963).

Prospectus Supplements

Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Prospectus Supplement to Prospectus dated February 16, 2006 (Aug. 8, 2006) (WF_RP_000978260), and related supplement (Aug. 18, 2006).

Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Prospectus Supplement to Prospectus dated November 13, 2006 (Jan. 25, 2007) (WF_RP_000974773).

Trust Agreement

Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Trust Agreement (Jan. 1, 2007) (WF_RP_000975360).

REMITTANCE REPORTS

Asset Backed Funding Corporation, Asset Backed Certificates Series 2006-OPT1, Remittance Reports (Aug. 25, 2006 to Feb. 27, 2017).

Structured Asset Securities Corporation, Mortgage Pass-Through Certificates Series 2007-BC1, Remittance Reports (Feb. 26, 2007 to Feb. 27, 2017).

DATA SOURCES

"1-Month London Interbank Offered Rate (LIBOR), based on U.S. Dollar." ICE Benchmark Administration Limited (IBA). Retrieved from FRED, Federal Reserve Bank of St. Louis. <https://fred.stlouisfed.org/series/USD1MTD156N> (accessed Mar. 2, 2017).

"6-Month London Interbank Offered Rate (LIBOR), based on U.S. Dollar." ICE Benchmark Administration Limited (IBA). Retrieved from FRED, Federal Reserve Bank of St. Louis. <https://fred.stlouisfed.org/series/USD6MTD156N> (accessed Mar. 2, 2017).

Bloomberg, L.P. (accessed Feb. 7, Feb. 13, and Feb. 24, 2017).

Wells Fargo (CTSLink) Monthly Remittance Reports.

Intex Solutions, Inc. (accessed Mar. 9, 2017).

PUBLICATIONS

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).

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.

Fabozzi, Frank J., Steven V. Mann, and Moorad Choudhry. "Interest-Rate Swaps and Swaptions." The Handbook of Fixed Income Securities. 8th ed. Eds. Frank J. Fabozzi and Steven V. Mann. New York: McGraw Hill (2012): 1445-1478.

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.

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

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

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.

Exhibit 1
Credit Enhancement by Tranche

ABFC 2006-OPT1[1]	
Class	Total Original Credit Enhancement (%)[3, 4]
A-1	26.588
A-2	26.588
A-3A	26.588
A-3B	26.588
A-3C1	26.588
A-3C2	26.588
A-3D	26.588
M-1	21.229
M-2	16.072
M-3	14.201
M-4	12.028
M-5	10.055
M-6	8.538
M-7	6.617
M-8	5.454
M-9	4.038
B	2.168
CE	N/A
P	N/A
R	N/A
R-X	N/A

SASC 2007-BC1[2]	
Class	Total Original Credit Enhancement (%)[3, 4]
A1	25.000
A2	53.118
A3	45.093
A4	29.221
A5	25.000
A6	25.000
M1	16.600
M2	12.600
M3	11.000
M4	9.250
M5	8.050
M6	6.900
M7	5.800
M8	5.000
M9	4.050
B1	2.850
B2	1.700
X	N/A
P	N/A
R	N/A
LT-R	N/A

Notes:

1. The Credit Enhancements listed in the ABFC 2006-OPT1 Prospectus Supplement are Overcollateralization, Subordination, Excess Interest, and Cross-Collateralization.
2. The Credit Enhancements listed in the SASC 2007-BC1 Prospectus Supplement are Overcollateralization, Subordination, Excess Interest, Loss Allocation, Limited Cross-Collateralization Features, and Primary Mortgage Insurance.
3. Credit enhancement is generally measured as the percentage of the total loan pool that can withstand losses before the certificateholder's expected cash flow declines.
4. "Total Original Credit Enhancement" percent reflects the value for original credit support as reported by Bloomberg.

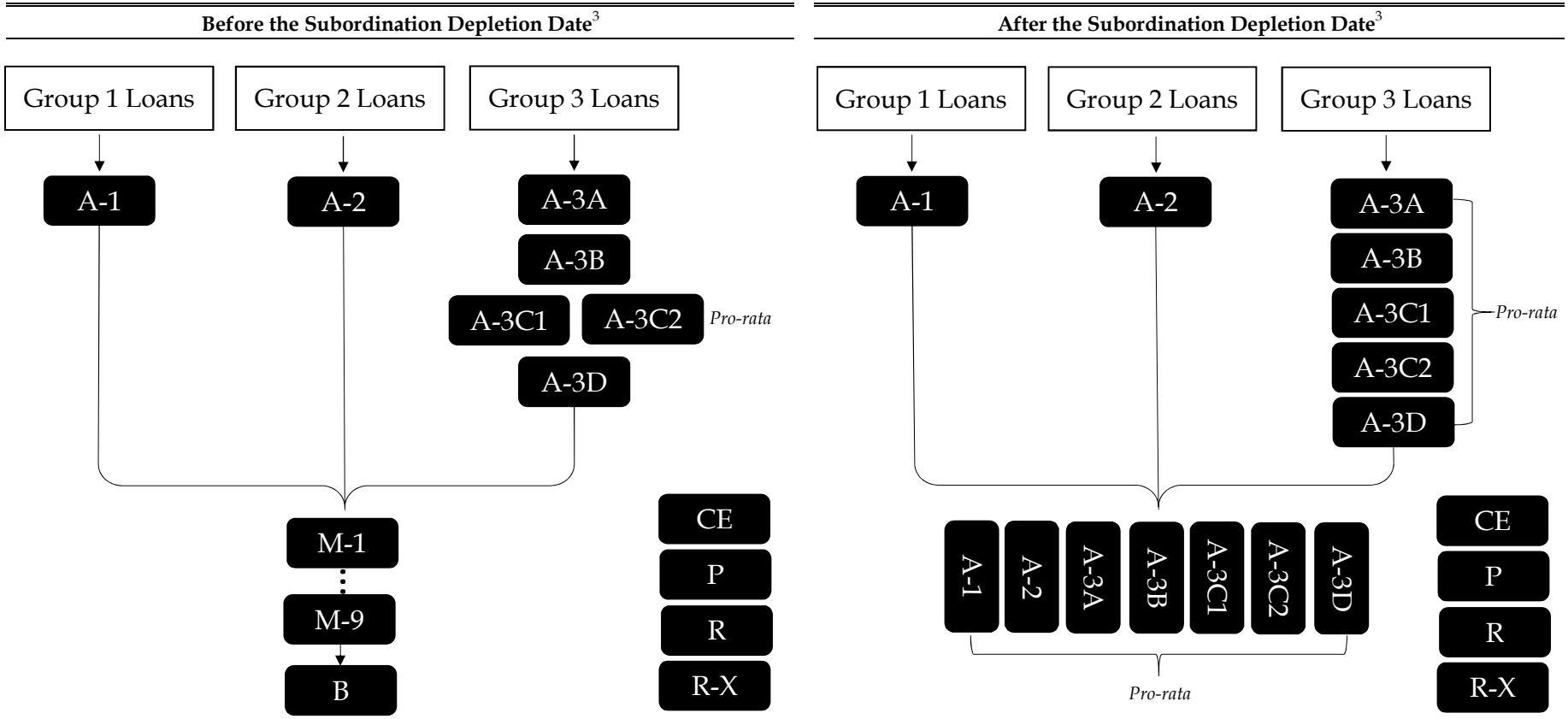
Sources:

-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Prospectus Supplement to Prospectus dated February 16, 2006 (Aug. 8, 2006) (WF_RP_000978260).
-Bloomberg, L.P. (accessed Feb. 13, 2017).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Prospectus Supplement to Prospectus dated November 13, 2006 (Jan. 25, 2007) (WF_RP_000974773).

Exhibit 2

Example Principal Waterfall Distribution[1, 2]

ABFC 2006-OPT1



Notes:

1. Example waterfall distribution illustrates how principal payments from underlying collateral loan groups are to be distributed to certificateholders under these conditions: (1) after the stepdown date, (2) a trigger event is not in effect, and (3) there are sufficient funds available to satisfy the principal to which each senior certificate group is entitled.
2. Distributions to the CE, P, R, and R-X certificates are not directly related to the principal distribution waterfall.
3. The Subordination Depletion Date, as defined in the ABFC 2006-OPT1 Pooling and Servicing Agreement, is the distribution date on which the Class M and Class B certificates and the overcollateralization amount are reduced to zero.

Sources:

-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Pooling and Servicing Agreement (July 1, 2006) (WF_RP_000978667).
-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Prospectus Supplement to Prospectus dated February 16, 2006 (Aug. 8, 2006) (WF_RP_000978260).

Exhibit 3

Loan Differences[1]

Category[2]	Trust	Loan ID	Original Balance	Doc. Type[3]	Original CLTV	Credit Score	Lien	Balloon Loan	MSA or State[4]
Highest Credit Score	ABFC 2006-OPT1	571010399	$21,000	F	100	814	2	No	Tampa-St. Petersburg-Clearwater, FL
	SASC 2007-BC1	123283046	$150,000	F	77	814	1	No	Phoenix-Mesa-Scottsdale, AZ
Lowest Credit Score	ABFC 2006-OPT1	511046712	$336,000	L	80	500	1	No	Riverside-San Bernardino-Ontario, CA
	SASC 2007-BC1	123259178	$369,000	F	55	500	1	Yes	San Francisco-Oakland-Hayward, CA
Smallest First Lien	ABFC 2006-OPT1	211044396	$50,000	L	30	515	1	Yes	South Carolina
	SASC 2007-BC1	122909088	$25,001	F	50	574	1	No	Milwaukee-Waukesha-West Allis, WI
Largest Second Lien	ABFC 2006-OPT1	351036250	$182,000	F	100	670	2	No	Houston-The Woodlands-Sugar Land, TX
	SASC 2007-BC1	123266116	$167,000	L	100	698	2	No	Atlanta-Sandy Springs-Roswell, GA
Smallest Balloon Loan	ABFC 2006-OPT1	551014292	$24,780	F	100	681	2	Yes	Dallas-Fort Worth-Arlington, TX
	SASC 2007-BC1	123243867	$22,580	L	100	717	2	Yes	Chicago-Naperville-Elgin, IL-IN-WI
Largest Balloon Loan	ABFC 2006-OPT1	671013117	$1,188,000	F	90	626	1	Yes	Los Angeles-Long Beach-Santa Ana, CA
	SASC 2007-BC1	123255754	$1,000,000	F	55	625	1	Yes	Honolulu, HI
Smallest ARM	ABFC 2006-OPT1	51066202	$50,000	L	80	525	1	No	Savannah, GA
	SASC 2007-BC1	123240939	$30,100	F	37	588	1	No	Virginia Beach-Norfolk-Newport News, VA-NC
Largest Fixed Rate	ABFC 2006-OPT1	671012928	$1,240,000	F	80	611	1	No	Salinas, CA
	SASC 2007-BC1	122674856	$1,190,000	F	85	622	1	No	San Diego-Carlsbad, CA

Exhibit 3
Loan Differences[1]

Category[2]	Trust	Loan ID	Original Balance	Doc. Type[3]	Original CLTV	Credit Score	Lien	Balloon Loan	MSA or State[4]
Smallest Full Doc.[3]	ABFC 2006-OPT1	701003340	$13,100	F	100	612	2	No	Arkansas
	SASC 2007-BC1	122909740	$20,000	F	100	617	2	No	Ogden-Clearfield, UT
Largest Full Doc.[3]	ABFC 2006-OPT1	671013126	$1,275,000	F	83	603	1	No	Honolulu, HI
	SASC 2007-BC1	123276628	$1,445,000	F	85	655	1	No	Provo-Orem, UT
Smallest Limited Doc.[3]	ABFC 2006-OPT1	121046922	$15,476	L	100	670	2	No	Minnesota
	SASC 2007-BC1	122905060	$20,000	L	100	679	2	No	Kansas City, MO-KS
Largest Limited Doc.[3]	ABFC 2006-OPT1	371034681	$1,700,000	L	54	630	1	No	Naples-Immokalee-Marco Island, FL
	SASC 2007-BC1	121193593	$1,060,000	L	80	624	1	No	Cape Coral-Fort Myers, FL
Smallest No Doc.[3]	ABFC 2006-OPT1	291005889	$64,000	N	79	670	1	No	Lynchburg, VA
	SASC 2007-BC1	123253916	$52,700	N	85	731	1	No	Flint, MI
Largest No Doc.[3]	ABFC 2006-OPT1	671012610	$874,995	N	N/A[5]	682	N/A[5]	No	San Francisco-Oakland-Hayward, CA
	SASC 2007-BC1	123254559	$500,000	N	78	694	1	No	Chicago-Naperville-Elgin, IL-IN-WI

Notes:

1. All loan characteristics are listed as they were reported on the loan tape downloaded from Bloomberg.
2. The largest and smallest loans are determined by original loan balance.
3. Doc. Type refers to the documentation type field in the respective loan tapes. The value F refers to loans with full documentation. The value L refers to loans with limited documentation. The value N refers to loans with no documentation.
4. MSA refers to the Metropolitan Statistical Area, as defined by the U.S. Census Bureau. If the MSA was not available, the state was listed.
5. The loan tape does not provide a value for this characteristic.

Source:

Bloomberg, L.P. (accessed Feb. 7, 2017).

Exhibit 4
Trust Differences

Trust Collateral[1]	ABFC 2006-OPT1	SASC 2007-BC1
Closing Date	Aug. 10, 2006	Jan. 30, 2007
Number of Mortgage Loans[2]	4,808	5,069
Initial Pool Balance[3]	$988,027,916	$1,211,151,983.62
Number of Loan Groups[4]	3	2
Maximum Original Term to Maturity	360 months	480 months
Adjustable Rate Mortgage Loans (%)	96.83	72.66
Interest Only Mortgage Loans (%)	12.37	26.55
Mortgage Insurance	N/A	28.68% of first lien mortgages with 80% or greater LTV ratio
Loans in California (%)[5]	24.91	35.80
Originators	Option One Mortgage Corp. (100%)[6]	BNC Mortgage, Inc. (82.51%) Option One Mortgage Corp. (9.80%) Lehman Brothers Bank, FSB (7.70%)
Prefunding Account	Yes	No
Interest Rate Agreements	Interest Rate Swap Agreement	Interest Rate Swap Agreement; Interest Rate Cap Agreement

Waterfall Structures[1]	ABFC 2006-OPT1	SASC 2007-BC1
Targeted Overcollateralization[7] (the greater of)	(i) 6.5% of the Outstanding Pool Balance[8] (including any prefunding amounts) after principal prepayments; (ii) 0.5% of the Initial Pool Balance[3] (including any prefunding amounts)	(i) the lesser of (a) $20,589,983.62 and (b) 3.4% of the Outstanding Pool Balance[8] after principal prepayments; (ii) $6,055,759.92
Initial Cumulative Loss Trigger (%)[9]	1.70	1.15
Final Cumulative Loss Trigger (%)[9]	8.50	5.90
Senior Delinquency Trigger Threshold[10]	29.20	32.00
Stepdown Date (earlier to occur of)	(i) Aggregate senior certificate balance equals zero; (ii) Later to occur of: (a) August 2009 Distribution Date and (b) Credit enhancement of seniors[11] is greater than or equal to 54.8%	(i) Aggregate senior certificate balance equals zero; (ii) Later to occur of: (a) February 2010 Distribution Date and (b) Credit enhancement of seniors[11] is greater than or equal to 50%
Subordination Depletion Date	Aggregate subordinate certificate balance and the overcollateralization amount equal zero	N/A
Optional Termination Date	Outstanding Pool Balance[8] is 10% or less of the Initial Pool Balance[3] (including any prefunding amounts)	Outstanding Pool Balance[8] is 10% or less of the Initial Pool Balance[3]

Exhibit 4
Trust Differences

Notes:

1. Trust Collateral and Waterfall Structures use the definitions in the ABFC 2006-OPT1 Pooling and Servicing Agreement and the SASC 2007-BC1 Trust Agreement, unless otherwise noted.
2. This represents the number of mortgage loans as of the cut-off date as reported in the prospectus supplements.
3. Initial Pool Balance is the cumulative outstanding balance of the mortgage loans as of the cut-off date as reported in the prospectus supplements. The ABFC 2006-OPT1 Pooling and Servicing Agreement refers to it as the "Pool Balance of the Initial Mortgage Loans on the Cut-off Date." The SASC 2007-BC1 Trust Agreement refers to it as the "aggregate Scheduled Principal Balance."
4. The SASC 2007-BC1 Trust Agreement refers to these as "Mortgage Pools."
5. The prospectus supplements refer to this as the "Geographic Concentration."
6. According to the ABFC 2006-OPT1 Prospectus Supplement, one mortgage loan was originated by a different originator.
7. This represents the Targeted Overcollateralization Amount on or after the Stepdown Date with no trigger in effect.
8. Outstanding Pool Balance is the aggregate principal balance of the mortgage loans as of the current period. The ABFC 2006-OPT1 Pooling and Servicing Agreement refers to it as the "Pool Balance." The SASC 2007-BC1 Trust Agreement refers to it as the "Aggregate Pool Balance."
9. The ABFC 2006-OPT1 Pooling and Servicing Agreement refers to the cumulative loss trigger as "the aggregate amount of Realized Losses incurred since the Cut-off Date." The SASC 2007-BC1 Trust Agreement refers to it as the "Cumulative Loss Trigger Event."
10. The ABFC 2006-OPT1 Pooling and Servicing Agreement refers to the delinquency trigger as "the three-month rolling average of 60+ Day Delinquent Loans." The SASC 2007-BC1 Trust Agreement refers to it as a "Delinquency Event." The senior trigger threshold is the percent specified for the senior certificates.
11. The ABFC 2006-OPT1 Pooling and Servicing Agreement refers to this as the "Credit Enhancement Percentage for the Senior Certificates." The SASC 2007-BC1 Trust Agreement refers to it as the "Senior Enhancement Percentage."

Sources:

-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Pooling and Servicing Agreement (July 1, 2006) (WF_RP_000978667).
-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Prospectus Supplement to Prospectus dated February 16, 2006 (Aug. 8, 2006) (WF_RP_000978260).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Prospectus Supplement to Prospectus dated November 13, 2006 (Jan. 25, 2007) (WF_RP_000974773).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Trust Agreement (Jan. 1, 2007) (WF_RP_000975360).

Exhibit 5

Cumulative Realized Losses as of Specified Dates

ABFC 2006-OPT1

Class	Original Certificate Principal Balance[1]	Percent of Total Original Principal Balance	Cumulative Realized Losses as of Specified Dates[2]			
			January 2009	October 2010	April 2011	February 2017
A-1	$167,027,000.00	15.43%	0.00%	0.00%	0.00%	0.00%
A-2	$166,946,000.00	15.43%	0.00%	0.00%	0.00%	0.00%
A-3A	$244,701,000.00	22.61%	0.00%	0.00%	0.00%	0.00%
A-3B	$79,718,000.00	7.37%	0.00%	0.00%	0.00%	0.00%
A-3C1	$75,000,000.00	6.93%	0.00%	0.00%	0.00%	0.00%
A-3C2	$33,495,000.00	3.10%	0.00%	0.00%	0.00%	0.00%
A-3D	$18,763,000.00	1.73%	0.00%	0.00%	0.00%	0.00%
M-1	$57,354,000.00	5.30%	0.00%	0.00%	0.00%	14.38%
M-2	$55,191,000.00	5.10%	0.00%	0.00%	0.00%	100.00%
M-3	$20,020,000.00	1.85%	0.00%	0.00%	0.00%	100.00%
M-4	$23,256,000.00	2.15%	0.00%	0.00%	60.12%	100.00%
M-5	$21,112,000.00	1.95%	0.00%	74.44%	100.00%	100.00%
M-6	$16,233,000.00	1.50%	0.00%	100.00%	100.00%	100.00%
M-7	$20,561,000.00	1.90%	0.00%	100.00%	100.00%	100.00%
M-8	$12,445,000.00	1.15%	0.00%	100.00%	100.00%	100.00%
M-9	$15,150,000.00	1.40%	0.00%	100.00%	100.00%	100.00%
B	$20,020,000.00	1.85%	46.40%	100.00%	100.00%	100.00%
CE	$35,170,766.21	3.25%	0.00%	0.00%	0.00%	0.00%
P	$0.00	0.00%	0.00%	0.00%	0.00%	0.00%
R	$0.00	0.00%	0.00%	0.00%	0.00%	0.00%
R-X	$0.00	0.00%	0.00%	0.00%	0.00%	0.00%

Notes:

1. Original Certificate Principal Balance is referred to as "Initial Certificate Balance" in the ABFC 2006-OPT1 Prospectus Supplement and "Original Certificate Principal Balance" in the ABFC 2006-OPT1 Pooling and Servicing Agreement.
2. The dates reflected here are: (1) the three Alleged Breach Dates specified in my report; and (2) the date of a more recent remittance report. To determine the realized losses on or around these time periods, I used the remittance report corresponding to each time period.

Sources:

-ABFC 2006-OPT1 Remittance Reports (Jan. 26, 2009, Oct. 25, 2010, Apr. 25, 2011, and Feb. 27, 2017).
-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Pooling and Servicing Agreement (July 1, 2006) (WF_RP_000978667).
-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Prospectus Supplement to Prospectus dated February 16, 2006 (Aug. 8, 2006) (WF_RP_000978260).

Exhibit 5

Cumulative Realized Losses as of Specified Dates

SASC 2007-BC1

Class	Original Certificate Principal Balance[1]	Percent of Total Original Principal Balance	Cumulative Realized Losses as of Specified Dates[2]			
			January 2009	October 2010	April 2011	February 2017
A1	$237,022,000.00	19.57%	0.00%	0.00%	0.00%	0.00%
A2	$271,493,000.00	22.42%	0.00%	0.00%	0.00%	0.00%
A3	$46,472,000.00	3.84%	0.00%	0.00%	0.00%	0.00%
A4	$91,913,000.00	7.59%	0.00%	0.00%	0.00%	0.00%
A5	$24,442,000.00	2.02%	0.00%	0.00%	0.00%	0.00%
A6	$237,022,000.00	19.57%	0.00%	0.00%	0.00%	0.00%
M1	$101,737,000.00	8.40%	0.00%	0.00%	0.00%	42.83%
M2	$48,446,000.00	4.00%	0.00%	0.00%	0.00%	100.00%
M3	$19,378,000.00	1.60%	0.00%	0.00%	0.00%	100.00%
M4	$21,195,000.00	1.75%	0.00%	25.90%	60.27%	100.00%
M5	$14,534,000.00	1.20%	0.00%	100.00%	100.00%	100.00%
M6	$13,928,000.00	1.15%	0.00%	100.00%	100.00%	100.00%
M7	$13,323,000.00	1.10%	0.00%	100.00%	100.00%	100.00%
M8	$9,690,000.00	0.80%	0.00%	100.00%	100.00%	100.00%
M9	$11,506,000.00	0.95%	0.00%	100.00%	100.00%	100.00%
B1	$14,534,000.00	1.20%	11.77%	100.00%	100.00%	100.00%
B2	$13,927,000.00	1.15%	100.00%	100.00%	100.00%	100.00%
X	$20,589,883.62	1.70%	0.00%	0.00%	0.00%	0.00%
P	$100.00	0.00%	0.00%	0.00%	0.00%	0.00%
R	$0.00	0.00%	0.00%	0.00%	0.00%	0.00%
LT-R	$0.00	0.00%	0.00%	0.00%	0.00%	0.00%

Notes:

1. Original Certificate Principal Balance is referred to as "Class Principal Amount" in the SASC 2007-BC1 Prospectus Supplement and "Initial Class Principal Amount" in the SASC 2007-BC1 Trust Agreement.
2. The dates reflected here are: (1) the three Alleged Breach Dates specified in my report; and (2) the date of a more recent remittance report. To determine the realized losses on or around these time periods, I used the remittance report corresponding to each time period.

Sources:

-SASC 2007-BC1 Remittance Reports (Jan. 26, 2009, Oct. 25, 2010, Apr. 25, 2011, and Feb. 27, 2017).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Prospectus Supplement to Prospectus dated November 13, 2006 (Jan. 25, 2007) (WF_RP_000974773).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Trust Agreement (Jan. 1, 2007) (WF_RP_000975360).

Exhibit 6

Fully Paid-Off Tranches[1]

Trust	Class	Original Certificate Principal Balance[2]	Paid-Off Date[3]
ABFC 2006-OPT1	A-3A	$244,701,000	Oct. 2008
ABFC 2006-OPT1	A-3B	$79,718,000	Nov. 2010
SASC 2007-BC1	A2	$271,493,000	July 2013
SASC 2007-BC1	A3	$46,472,000	June 2016

Notes:

1. Fully paid-off tranches are those certificates that have received cumulative principal distributions equal to their original certificate principal balance.
2. Original Certificate Principal Balance is referred to as "Initial Certificate Balance" in the ABFC 2006-OPT1 Prospectus Supplement, "Original Certificate Principal Balance" in the ABFC 2006-OPT1 Pooling and Servicing Agreement, "Class Principal Amount" in the SASC 2007-BC1 Prospectus Supplement, and "Initial Class Principal Amount" in the SASC 2007-BC1 Trust Agreement.
3. Paid-Off Date reflects the month and year on which a tranche received its last principal distribution and its certificate balance was reduced to zero.

Sources:

-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Pooling and Servicing Agreement (July 1, 2006) (WF_RP_000978667).
-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Prospectus Supplement to Prospectus dated February 16, 2006 (Aug. 8, 2006) (WF_RP_000978260).
-ABFC 2006-OPT1 Remittance Reports (Aug. 25, 2006 - Nov. 26, 2010).
-SASC 2007-BC1 Remittance Reports (Feb. 26, 2007 - June 27, 2016).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Prospectus Supplement to Prospectus dated November 13, 2006 (Jan. 25, 2007) (WF_RP_000974773).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Trust Agreement (Jan. 1, 2007) (WF_RP_000975360).

Exhibit 7

Principal Waterfall Decision Trees[1]

ABFC 2006-OPT1

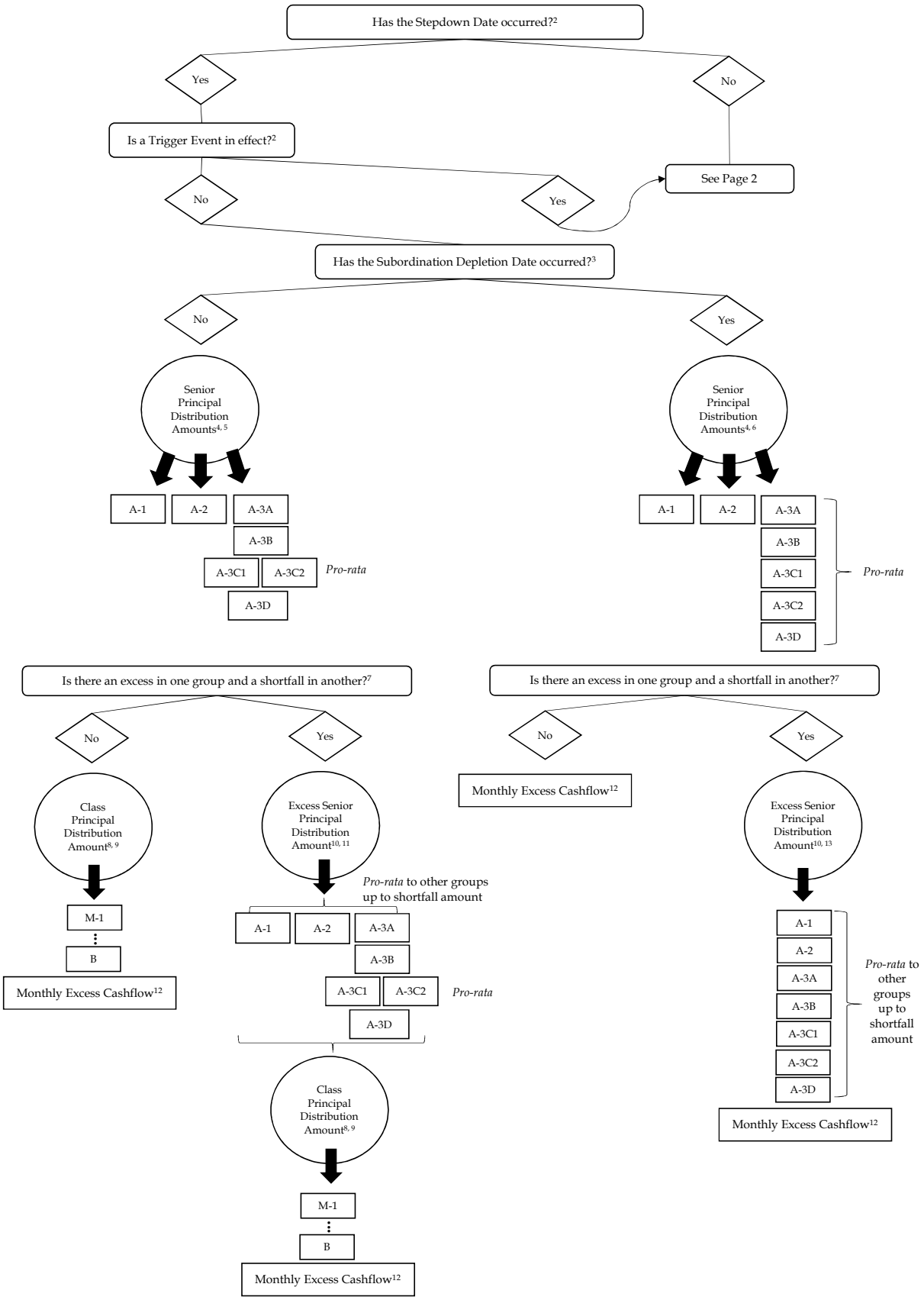


Exhibit 7

Principal Waterfall Decision Trees[1]

ABFC 2006-OPT1

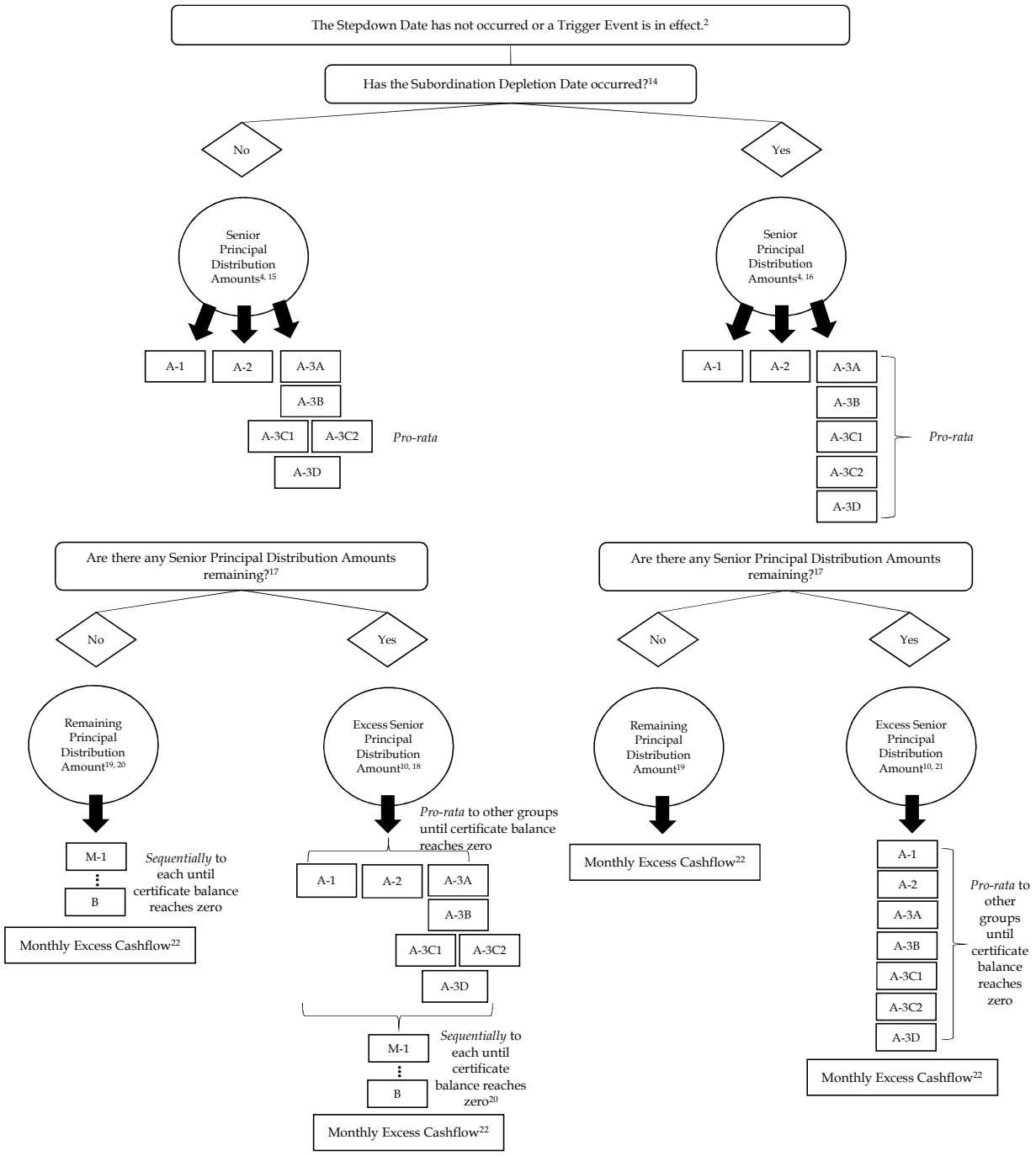


Exhibit 7

Principal Waterfall Decision Trees[1]

ABFC 2006-OPT1

Notes:

1. Waterfall refers to the principal distribution priorities. Capitalized terms are defined in the ABFC 2006-OPT1 PSA unless otherwise noted.
2. ABFC 2006-OPT1 PSA at 4.02(a)(i and ii)(WF_RP_000978848 and WF_RP_000978851).
3. ABFC 2006-OPT1 PSA at 4.02(a)(ii)(*first*)(III)(A-B)(WF_RP_000978851).
4. Senior Principal Distribution Amounts refers to the Group 1 Senior Principal Distribution Amount, the Group 2 Senior Principal Distribution Amount, and the Group 3 Senior Principal Distribution Amount.
5. ABFC 2006-OPT1 PSA at 4.02(a)(ii)(*first*)(I, II, and III(A))(WF_RP_000978851).
6. ABFC 2006-OPT1 PSA at 4.02(a)(ii)(*first*)(I, II, and III(B))(WF_RP_000978851).
7. ABFC 2006-OPT1 PSA at 4.02(a)(ii)(*second*)(I, II, and III)(WF_RP_000978852).
8. Up to the respective Class Principal Distribution Amount as described in the prospectus supplement.
9. ABFC 2006-OPT1 PSA at 4.02(a)(ii)(*third - twelfth*)(WF_RP_000978853-4).
10. Excess Senior Principal Distribution Amount is the Senior Principal Distribution Amount remaining after the associated senior certificate group has received the full extent of the Senior Principal Distribution Amount to which it is entitled.
11. ABFC 2006-OPT1 PSA at 4.02(a)(ii)(*second*)(I & II)(A and B(1))(WF_RP_000978852-3); 4.02(a)(ii)(*second*)(III)(WF_RP_000978852-3).
12. ABFC 2006-OPT1 PSA at 4.02(a)(ii)(*thirteenth*)(WF_RP_000978854).
13. ABFC 2006-OPT1 PSA at 4.02(a)(ii)(*second*)(I-II)(A and B(2))(WF_RP_000978852) and 4.02(a)(ii)(*second*)(III)(WF_RP_000978853).
14. ABFC 2006-OPT1 PSA at 4.02(a)(i)(*first*)(III)(A-B)(WF_RP_000978848).
15. ABFC 2006-OPT1 PSA at 4.02(a)(i)(*first*)(I, II, III(A))(WF_RP_000978848).
16. ABFC 2006-OPT1 PSA at 4.02(a)(i)(*first*)(I, II, III(B))(WF_RP_000978848).
17. ABFC 2006-OPT1 PSA at 4.02(a)(i)(*second*)(I, II, III)(WF_RP_000978849).
18. ABFC 2006-OPT1 PSA at 4.02(a)(i)(*second*)(I and II)(A and B(1))(WF_RP_000978849) and 4.02(a)(i)(*second*)(III)(WF_RP_000978850).
19. Remaining Principal Distribution Amount refers to the principal distribution amount remaining after higher payment priorities have been satisfied.
20. ABFC 2006-OPT1 PSA at 4.02(a)(i)(*third - twelfth*)(WF_RP_ 000978850-1).
21. ABFC 2006-OPT1 PSA at 4.02(a)(i)(*second*)(I and II)(A and B(2))(WF_RP_ 000978849-50) and 4.02(a)(i)(*second*)(III)(WF_RP_000978850).
22. ABFC 2006-OPT1 PSA at 4.02(a)(i)(*thirteenth*)(WF_RP_000978851).

Sources:

-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Pooling and Servicing Agreement (July 1, 2006) (WF_RP_000978667).

-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Prospectus Supplement to Prospectus dated February 16, 2006 (Aug. 8, 2006) (WF_RP_000978260).

Exhibit 7

Principal Waterfall Decision Trees[1]

SASC 2007-BC1

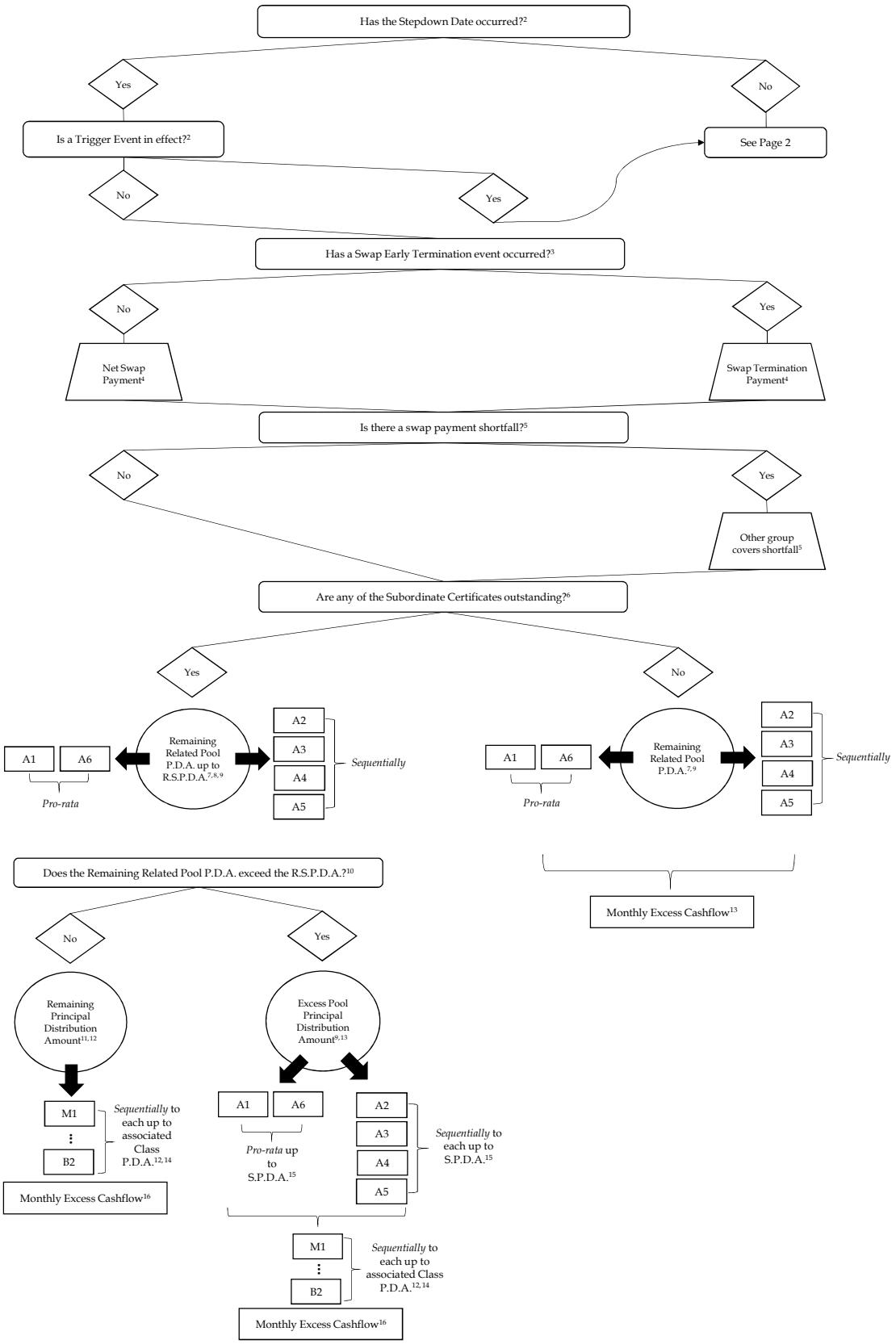


Exhibit 7

Principal Waterfall Decision Trees[1]

SASC 2007-BC1

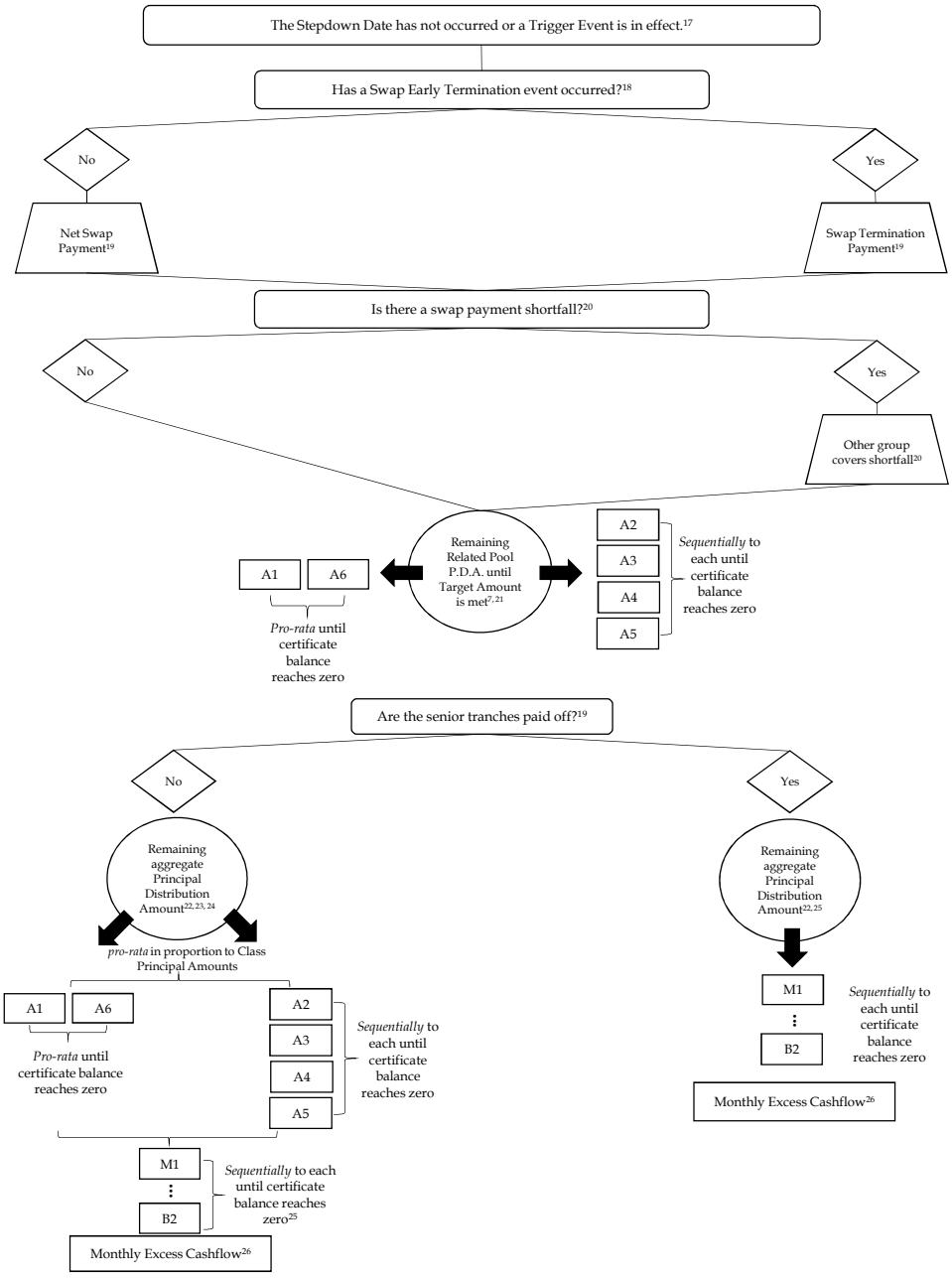


Exhibit 7

Principal Waterfall Decision Trees[1]

SASC 2007-BC1

Notes:

1. Waterfall refers to the principal distribution priorities. Capitalized terms are defined in the trust agreement unless otherwise noted.
2. SASC 2007-BC1 Trust Agreement at 5.02(e)(i and iv)(WF_RP_000975463 and WF_RP_000975465).
3. SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(A)(WF_RP_000975465) and 5.02(e)(iv)(B)(WF_RP_000975465).
4. SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(A)(WF_RP_000975465).
5. SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(B)(WF_RP_000975465).
6. SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(C)(WF_RP_000975465-6).
7. Remaining Related Pool P.D.A. refers to the Principal Distribution Amount for the Group 1 Senior Certificates and the Principal Distribution Amount for the Group 2 Senior Certificates in each case reduced by applicable swap payments.
8. R.S.P.D.A. refers to the Related Senior Principal Distribution Amount.
9. SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(C)(WF_RP_000975465-6).
10. SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(C)(*provided, however*)(WF_RP_000975466).
11. Remaining Principal Distribution Amount refers to the Principal Distribution Amount remaining after higher payment priorities have been satisfied.
12. SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(D-L)(WF_RP_000975466-8).
13. Excess Pool Principal Distribution Amount refers to the amount by which the Principal Distribution Amount for either the Group 1 or Group 2 Senior Certificates exceeds the Related Senior Principal Distribution Amount.
14. Class P.D.A. refers to the M3 Principal Distribution Amount, the M4 Principal Distribution Amount, the M5 Principal Distribution Amount, etc.
15. S.P.D.A. refers to the Senior Principal Distribution Amount.
16. SASC 2007-BC1 Trust Agreement at 5.02(e)(iv)(M)(WF_RP_000975468).
17. SASC 2007-BC1 Trust Agreement at 5.02(e)(i)(WF_RP_000975463).
18. SASC 2007-BC1 Trust Agreement at 5.02(e)(i)(A-B)(1 & 2)(WF_RP_000975463-4).
19. SASC 2007-BC1 Trust Agreement at 5.02(e)(i)(A-B)(1)(WF_RP_000975463-4).
20. SASC 2007-BC1 Trust Agreement at 5.02(e)(i)(A-B)(2)(WF_RP_000975463-4).
21. SASC 2007-BC1 Trust Agreement at 5.02(e)(i)(A-B)(3)(WF_RP_000975464).
22. Remaining aggregate Principal Distribution Amount refers to the sum of each Remaining Related Pool P.D.A. as reduced by principal payments to the senior certificates.
23. SASC 2007-BC1 Trust Agreement at 5.02(e)(ii)(WF_RP_000975464).
24. SASC 2007-BC1 Trust Agreement at 5.02(e)(ii)(A)(WF_RP_000975464-5).
25. SASC 2007-BC1 Trust Agreement at 5.02(e)(ii)(B)(WF_RP_000975465).
26. SASC 2007-BC1 Trust Agreement at 5.02(e)(ii)(C)(WF_RP_000975465).

Sources:

-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Prospectus Supplement to Prospectus dated November 13, 2006 (Jan. 25, 2007) (WF_RP_000974773).

-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Trust Agreement (Jan. 1, 2007) (WF_RP_000975360).

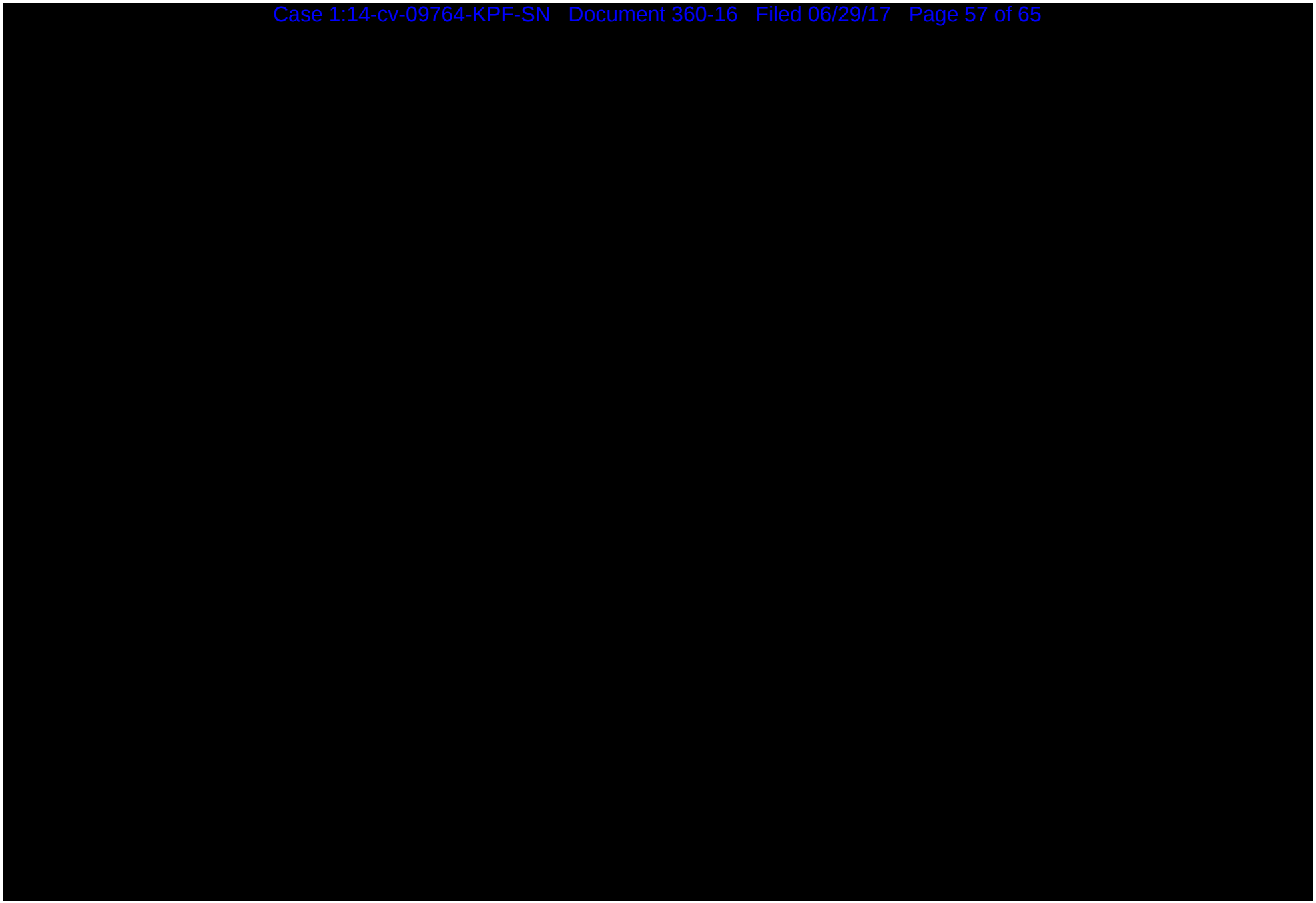


Exhibit 9

Comparison of Distribution by Choice of Loan-Specific Remedies[1]
Illustrative Figures Only
SASC 2007-BC1

Class	Repurchase Scenario	Cure Scenario	Distribution Difference
A1	$6,009,201.06	$0.00	$6,009,201.06
A2	$0.00	$0.00	$0.00
A3	$0.00	$0.00	$0.00
A4	$10,481,597.87	$0.00	$10,481,597.87
A5	$0.00	$0.00	$0.00
A6	$6,009,201.06	$0.00	$6,009,201.06
M1	$0.00	$0.00	$0.00
M2	$0.00	$0.00	$0.00
M3	$0.00	$0.00	$0.00
M4	$0.00	$0.00	$0.00
M5	$0.00	$0.00	$0.00
M6	$0.00	$0.00	$0.00
M7	$0.00	$0.00	$0.00
M8	$0.00	$0.00	$0.00
M9	$0.00	$0.00	$0.00
B1	$0.00	$0.00	$0.00
B2	$0.00	$0.00	$0.00
X	$0.00	$0.00	$0.00
P	$0.00	$0.00	$0.00
R	$0.00	$0.00	$0.00
LT-R	$0.00	$0.00	$0.00
Totals	**$22,500,000.00**	**$0.00**	**$22,500,000.00**
	Collateral Balance $862,916,223.82	**Collateral Balance $885,416,223.82**	

Note:

1. In the "Repurchase Scenario," I assume $22.5 million worth of loans are repurchased in January 2009, and I adjust the ending scheduled balance downward by the same amount. In the "Cure Scenario," I assume that the same amount of loans are cured and that these loans remain in the pool, leaving the ending scheduled balance unchanged.

Sources:

-SASC 2007-BC1 Remittance Report (Jan. 26, 2009).

-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Prospectus Supplement to Prospectus dated November 13, 2006 (Jan. 25, 2007) (WF_RP_000974773).

-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Trust Agreement (Jan. 1, 2007) (WF_RP_000975360).

Exhibit 10

Comparison of Distributions by Date[1]
Illustrative Figures Only
ABFC 2006-OPT1

Class	January 2009		October 2010		April 2011	
	Certificate Principal Balance[2]	Distribution	Certificate Principal Balance[2]	Distribution	Certificate Principal Balance[2]	Distribution
A-1	$67,268,729.97	$3,104,858.43	$48,069,522.79	$3,246,912.45	$45,068,348.40	$3,290,782.65
A-2	$63,671,736.11	$2,938,835.42	$43,759,116.89	$2,955,761.01	$39,515,341.71	$2,885,315.43
A-3A	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
A-3B	$66,786,061.80	$8,956,306.15	$2,983,666.57	$2,983,666.57	$0.00	$0.00
A-3C1	$75,000,000.00	$0.00	$75,000,000.00	$4,018,844.16	$70,567,698.63	$6,099,752.47
A-3C2	$33,495,000.00	$0.00	$33,495,000.00	$1,794,815.80	$31,515,534.21	$2,724,149.45
A-3D	$18,763,000.00	$0.00	$18,763,000.00	$0.00	$18,763,000.00	$0.00
M-1	$57,354,000.00	$0.00	$57,354,000.00	$0.00	$57,354,000.00	$0.00
M-2	$55,191,000.00	$0.00	$55,191,000.00	$0.00	$55,191,000.00	$0.00
M-3	$20,020,000.00	$0.00	$20,020,000.00	$0.00	$20,020,000.00	$0.00
M-4	$23,256,000.00	$0.00	$23,256,000.00	$0.00	$11,386,120.66	$0.00
M-5	$21,112,000.00	$0.00	$9,970,878.41	$0.00	$0.00	$0.00
M-6	$16,233,000.00	$0.00	$0.00	$0.00	$0.00	$0.00
M-7	$20,561,000.00	$0.00	$0.00	$0.00	$0.00	$0.00
M-8	$12,445,000.00	$0.00	$0.00	$0.00	$0.00	$0.00
M-9	$15,150,000.00	$0.00	$0.00	$0.00	$0.00	$0.00
B	$14,386,474.34	$0.00	$0.00	$0.00	$0.00	$0.00
Totals	**$580,693,002.22**	**$15,000,000.00**	**$387,862,184.66**	**$15,000,000.00**	**$349,381,043.61**	**$15,000,000.00**

Notes:

1. I assume that a $15 million Hypothetical Payment is distributed according to the principal distribution waterfall *pro-rata* based on the aggregate certificate balance of each loan group at the given date.
2. Amount shown is the Beginning Certificate Balance as reported on each month's respective remittance report.

Source:

ABFC 2006-OPT1 Remittance Reports (Jan. 26, 2009, Oct. 25, 2010, and Apr. 25, 2011).

Exhibit 11

Distribution of Hypothetical Payment, Loan Group Share of Principal Balance Versus Realized Losses[1, 2]

Illustrative Figures Only

Summary Table

Trust	Loan Group	Distribution Amount		Distribution Difference
		Loan Group Principal Balance	Loan Group Realized Losses	
ABFC 2006-OPT1	1	$23,468,288.06	$18,555,846.73	$4,912,441.33
	2	$20,254,499.17	$20,990,407.91	-$735,908.74
	3	$56,277,212.77	$60,453,745.36	-$4,176,532.59
SASC 2007-BC1	1	$54,519,911.27	$51,832,355.31	$2,687,555.96
	2	$45,480,088.73	$48,167,644.69	-$2,687,555.96

Notes:

1. The allocation of a $100 million Hypothetical Payment is based on the loan group principal balances as a percent of total principal balance as of April 2011 or the loan group realized losses as a percent of total realized losses as of April 2011.
2. The allocation methods shown are merely illustrative. Other methods of allocating a Hypothetical Payment may exist.

Sources:

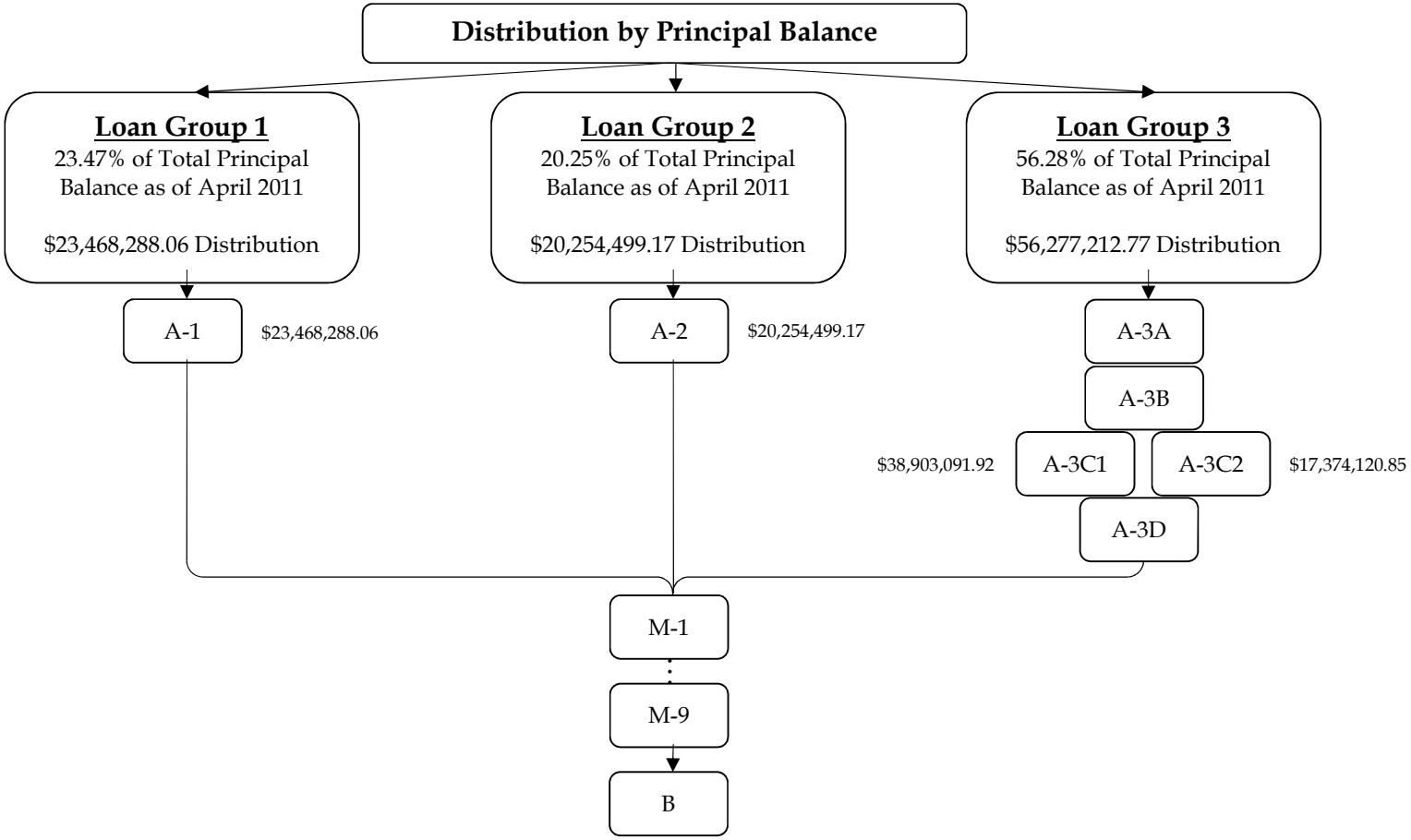
-ABFC 2006-OPT1 Remittance Report (Apr. 25, 2011).
-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Pooling and Servicing Agreement (July 1, 2006) (WF_RP_000978667).
-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Prospectus Supplement to Prospectus dated February 16, 2006 (Aug. 8, 2006) (WF_RP_000978260).
-SASC 2007-BC1 Remittance Report (Apr. 25, 2011).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Prospectus Supplement to Prospectus dated November 13, 2006 (Jan. 25, 2007) (WF_RP_000974773).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Trust Agreement (Jan. 1, 2007) (WF_RP_000975360).

Exhibit 11

Distribution of Hypothetical Payment, Loan Group Share of Principal Balance Versus Realized Losses[1]

Illustrative Figures Only

ABFC 2006-OPT1



Note:

1. The allocation of a $100 million Hypothetical Payment is based on the loan group principal balances as a percent of total principal balance as of April 2011.

Sources:

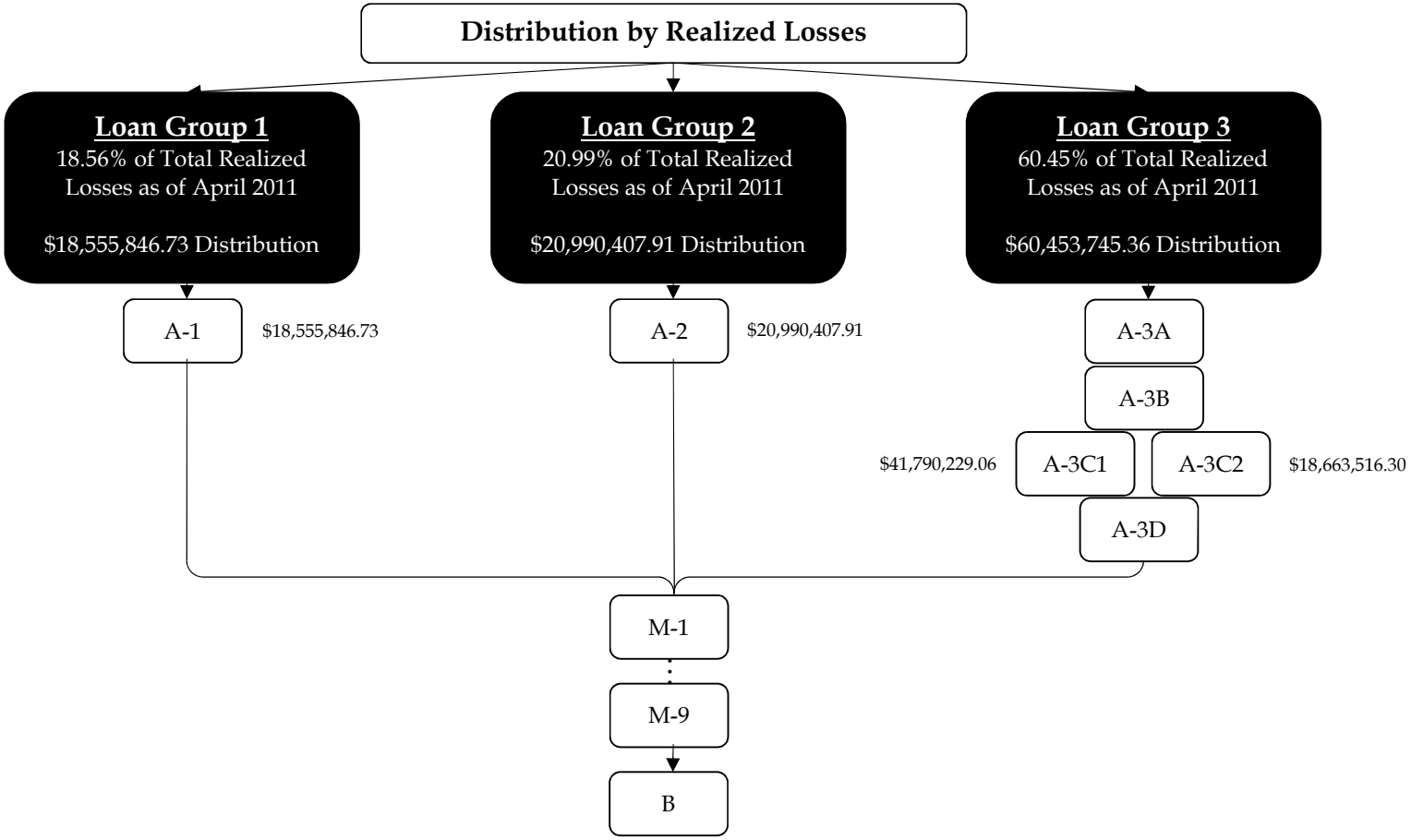
-ABFC 2006-OPT1 Remittance Report (Apr. 25, 2011).
-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Pooling and Servicing Agreement (July 1, 2006) (WF_RP_000978667).
-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Prospectus Supplement to Prospectus dated February 16, 2006 (Aug. 8, 2006) (WF_RP_000978260).

Exhibit 11

Distribution of Hypothetical Payment, Loan Group Share of Principal Balance Versus Realized Losses[1]

Illustrative Figures Only

ABFC 2006-OPT1



Note:

1. The allocation of a $100 million Hypothetical Payment is based on the loan group realized losses as a percent of total realized losses as of April 2011.

Sources:

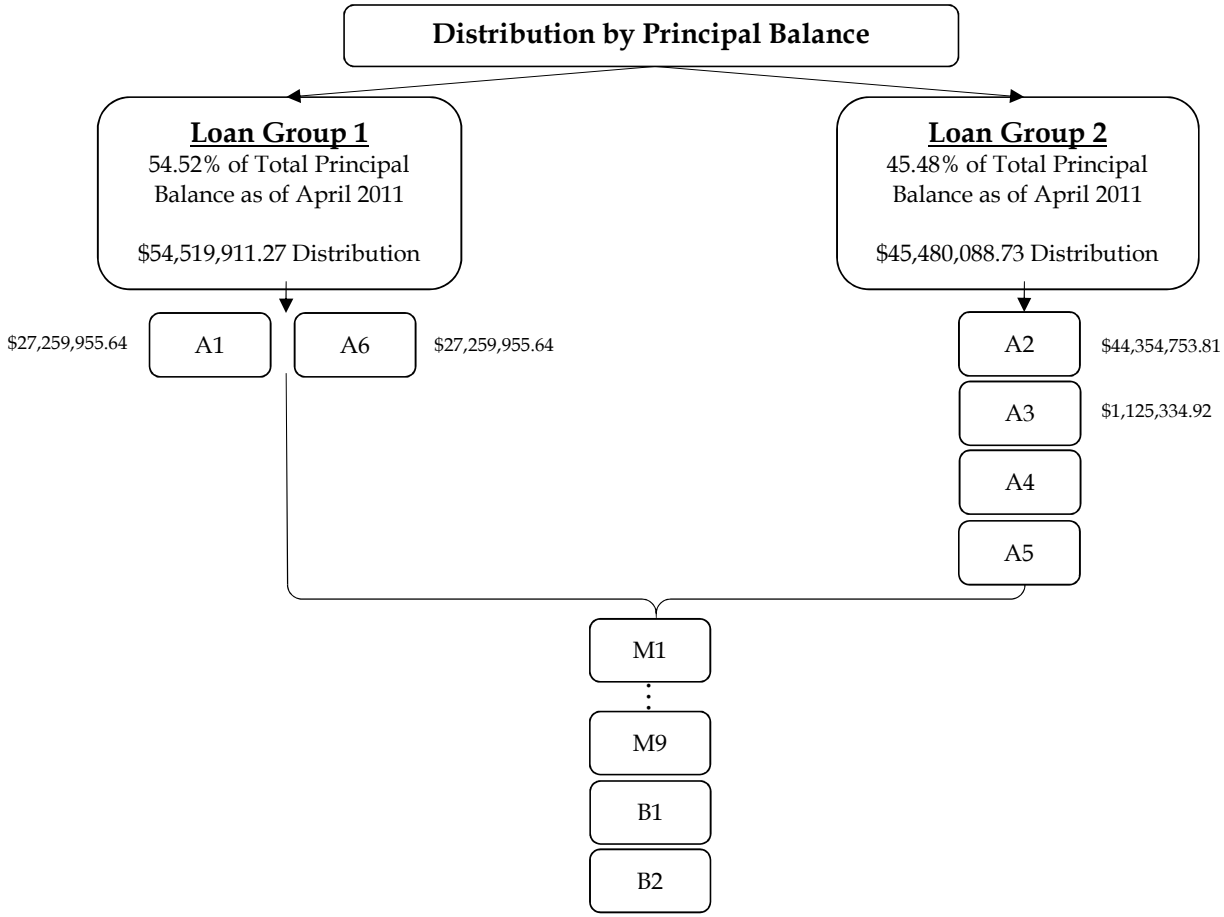
-ABFC 2006-OPT1 Remittance Report (Apr. 25, 2011).
-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Pooling and Servicing Agreement (July 1, 2006) (WF_RP_000978667).
-Asset Backed Funding Corporation, ABFC 2006-OPT1 Trust, Prospectus Supplement to Prospectus dated February 16, 2006 (Aug. 8, 2006) (WF_RP_000978260).

Exhibit 11

Distribution of Hypothetical Payment, Loan Group Share of Principal Balance Versus Realized Losses[1]

Illustrative Figures Only

SASC 2007-BC1



Note:

1. The allocation of a $100 million Hypothetical Payment is based on the loan group principal balances as a percent of total principal balance as of April 2011.

Sources:

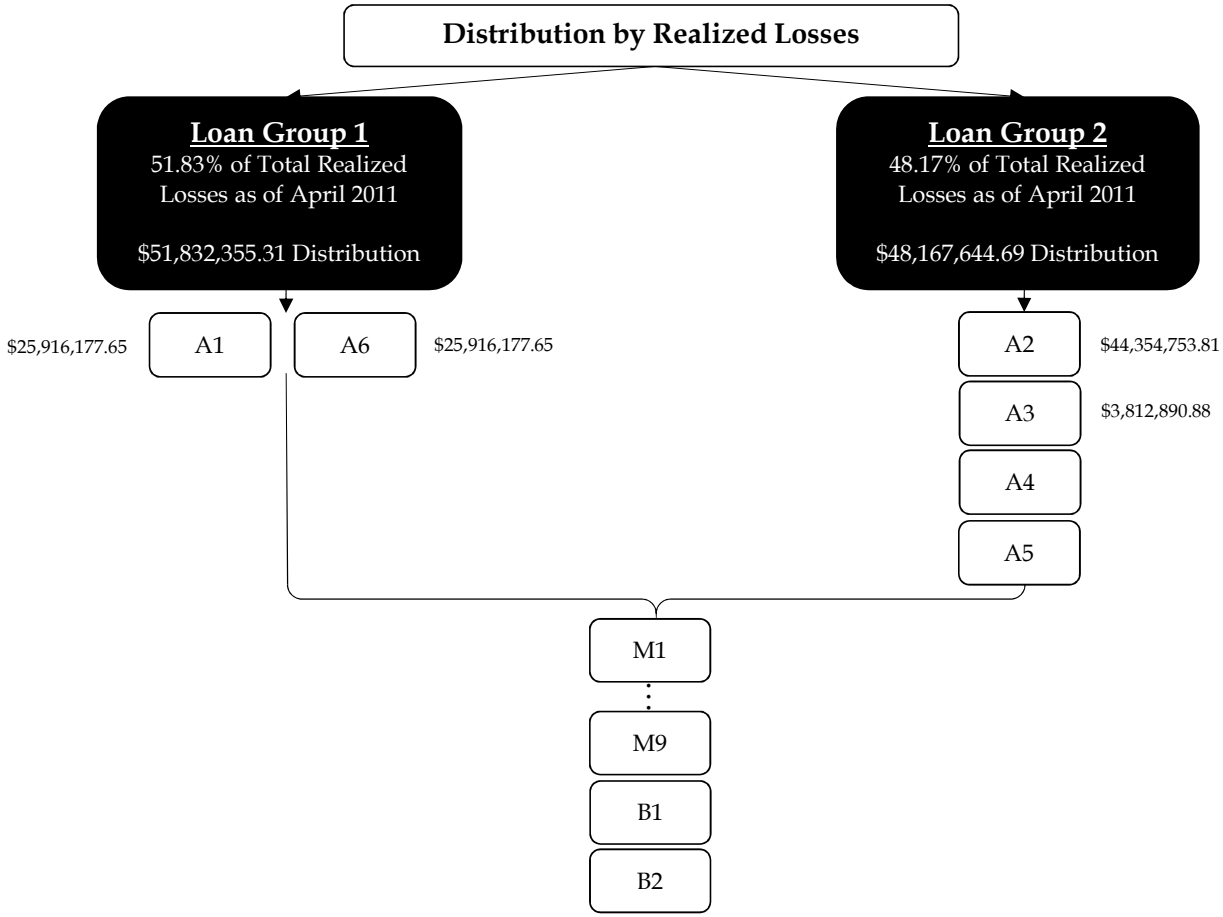
-SASC 2007-BC1 Remittance Report (Apr. 25, 2011).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Prospectus Supplement to Prospectus dated November 13, 2006 (Jan. 25, 2007) (WF_RP_000974773).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Trust Agreement (Jan. 1, 2007) (WF_RP_000975360).

Exhibit 11

Distribution of Hypothetical Payment, Loan Group Share of Principal Balance Versus Realized Losses[1]

Illustrative Figures Only

SASC 2007-BC1



Note:

1. The allocation of a $100 million Hypothetical Payment is based on the loan group realized losses as a percent of total realized losses as of April 2011.

Sources:

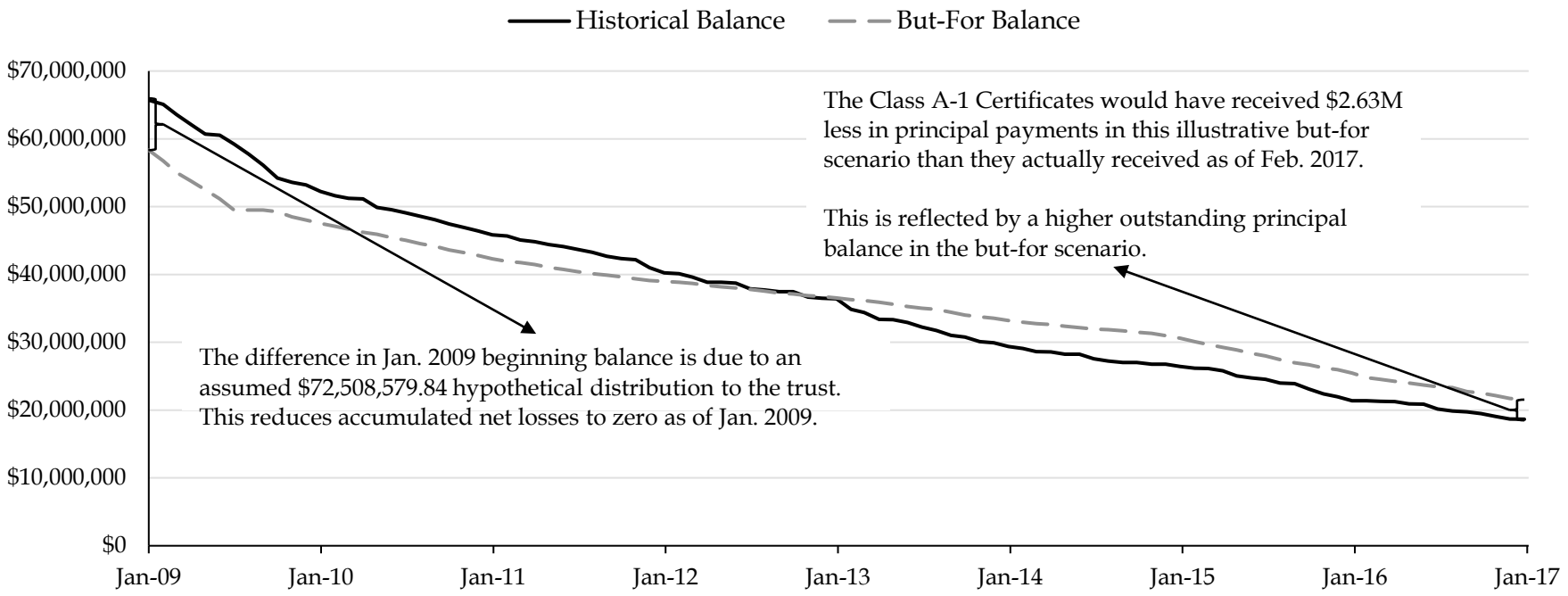
-SASC 2007-BC1 Remittance Report (Apr. 25, 2011).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Prospectus Supplement to Prospectus dated November 13, 2006 (Jan. 25, 2007) (WF_RP_000974773).
-Structured Asset Securities Corporation, Structured Asset Securities Corporation Mortgage Loan Trust 2007-BC1, Trust Agreement (Jan. 1, 2007) (WF_RP_000975360).

Exhibit 12

Example But-For Scenario With Lower Principal Distributions[1, 2]

Illustrative Figures Only

ABFC 2006-OPT1 (Class A-1)



Notes:

1. The Dalrymple Report provides no details on how performance might differ in a but-for scenario (*e.g.* performance improves as a result of trustee behavior). Consequently, it was necessary to make several model decisions about potential alternate performance. These model decisions are not meant to constitute an opinion on how performance *would,* in fact, differ in a but-for scenario. They are meant only to illustrate how investors could be affected if such model decisions are made.
2. For the example but-for scenario, I assumed a distribution of $72,508,579.84 as of January 2009, a forty percent reduction in liquidations, and a forty percent reduction in loss severity in each period modeled.

Sources:

-"1-Month London Interbank Offered Rate (LIBOR), based on U.S. Dollar." *ICE Benchmark Administration Limited (IBA)* . Retrieved from FRED, *Federal Reserve Bank of St. Louis* . <https://fred.stlouisfed.org/series/USD1MTD156N> (accessed Mar. 2, 2017).

-"6-Month London Interbank Offered Rate (LIBOR), based on U.S. Dollar." *ICE Benchmark Administration Limited (IBA)* . Retrieved from FRED, *Federal Reserve Bank of St. Louis* . <https://fred.stlouisfed.org/series/USD6MTD156N> (accessed Mar. 2, 2017).

-ABFC 2006-OPT1 Remittance Reports (Jan. 26, 2009 - Feb. 27, 2017).

-Intex Solutions, Inc. (accessed Mar. 9, 2017).