



Structured Agency Credit Risk Single Family Loan Level Dataset Historical Performance

October 2017

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Historical Loss Summary

Assumptions for Summary Severity/ Timelines /Loss Components



- To assist investors with their understanding of Freddie Mac’s historical loss experience, on the following slides we provide loss severity and liquidation timelines by origination year and judicial/non-judicial states
- Additionally, we have summarized the contributions from each of the components of net loss
 - » Net loss calculated as follows: Collateral Deficiency + Delinquent Interest + Expenses – MI Recoveries – Non MI Recoveries
- Data included in tables were derived from Freddie Mac’s Single Family Loan Level Dataset (SF LLD) as of September 2017 refresh: Originations 1999-September 30, 2016. Performance data: 1999-March 31, 2017, losses reported for loans liquidated as of 4Q2016. Loans with LTV > 81% and <= 97%.
- Assumptions/Calculations:
 - » Population includes only disposed loans with OLV between 60.01-97%
 - » Populations for this analysis = Fixed 30 loans (identified by loans with original loan term between 301 and 419 months)
 - » Loans with Repurchase flag = Y have been set to zero loss
 - » “FA” references liquidations through foreclosure alternatives
 - » “J” indicates judicial states; “NJ” indicates non-judicial states
 - » Timelines are in months weighted by default UPB
 - » If default UPB on last record is zero, the prior period default UPB was used
 - » Calculation for Collateral Deficiency: default UPB – net sales proceeds
 - » Calculation for Delinquent Interest is = default UPB * (current interest rate – 0.35%) * days delinquent / 360 /100
 - » For Net Sales proceeds = “C”; set loss = zero
 - » For Net Sales proceeds = “U”; removed from population if applicable
 - » Severity is net loss/default UPB
 - » Judicial states: CT, DE, FL, HI, IA, IL, IN, KS, KY, LA, ME, ND, NE, NJ, NM, NY, OH, OK, OR, PA, PR, SC, SD, VI, WI

Disclosed Loan-Level Fields

For more information on file layout and field definition, please refer to the *STACR Reference Pool Disclosure Guide* (http://www.freddiemac.com/creditriskofferings/docs/reference_pool_disclosure_guide.pdf).

#	Field Name	Historical	Actual Loss STACR	#	Field Name	Historical	Actual Loss STACR
1	Adjusted Remaining Months to Maturity (aka RMM)		X	15	Modification Flag	X	X
2	Channel (aka TPO Flag)	X	X	16	Mortgage Insurance Percentage (MI %)	X	X
3	Credit Score	X	X	17	Number of Borrowers	X	X
4	Current Actual UPB	X	X	18	Number of Units	X	X
5	Current Interest Rate	X	X	19	Occupancy Status	X	X
6	Current Loan Delinquency Status	X	X	20	Original Combined Loan-to-Value (CLTV)	X	X
7	First Payment Date	X	X	21	Original Debt-to-Income Ratio (DTI)	X	X
8	First Time Homebuyer	X	X	22	Original Interest Rate (aka Note Rate)	X	X
9	Current Interest Bearing UPB (for modified loans)		X	23	Original Loan-to-Value (LTV)	X	X
10	Loan Age	X	X	24	Original Loan Term	X	X
11	Loan Purpose	X	X	25	Original UPB (aka Mortgage Loan Amount)	X	X
12	Loan Identifier (aka Loan Sequence Number)	X	X	26	Payment History	D	X
13	Maturity Date	X	X	27	Postal Code (3 digit)	X	X
14	Metropolitan Statistical Area (MSA)	X	X	28	Prepayment Penalty Indicator (aka PPM Flag)	X	X

D = not disclosed, but derivable from other disclosed fields.

Disclosed Loan-Level Fields (cont.)

#	Field Name	Historical	Actual Loss STACR	#	Field Name	Historical	Actual Loss STACR
29	Product Type	X	X	45	Non MI Recoveries	X	
30	Property State	X	X	46	Expenses	X	
31	Property Type	X	X	47	Taxes and Insurance		X
32	Remaining Months to Legal Maturity	X	X	48	Legal Costs		X
33	Underwriting Defect or Major Servicing Defect Settlement Date*		X	49	Maintenance and Preservation Costs		X
34	Repurchase Flag	X		50	Bankruptcy Cramdown Costs		X
35	Seller Name	X	X	51	Miscellaneous Expenses		X
36	Servicer Name	X	X	52	Miscellaneous Credits		X
37	UPB at Issuance		X	53	Loan in Eligible Disaster Area		X
38	UPB at Time of Removal from the Reference Pool	D	X	54	Bankruptcy Flag		X
39	Zero Balance Code	X	X	55	Date Referred to Foreclosure		X
40	Zero Balance Effective Date	X	X	56	MI Credit		X
41	Current Deferred UPB	X		57	Estimated LTV (at issuance for seasoned collateral only)		X
42	Due Date of Last Paid Installment*	X	X	58	Updated Credit Score (at issuance for seasoned collateral only)		X
43	MI Recoveries	X		59	Mortgage Insurance Cancellation Indicator		X
44	Net Sales Proceeds*	X	X	60	MI: Lender Paid or Borrower Paid		X

D = not disclosed, but derivable from other disclosed fields.

Disclosed Loan-Level Fields (cont.)

#	Field Name	Historical	Actual Loss STACR	#	Field Name	Historical	Actual Loss STACR
60	Estimated LTV - Updated Quarterly		X	67	Modification Debt-to-Income Ratio		X
61	Forecast Standard Deviation (FSD) - Updated Quarterly		X	68	Total Capitalized Amount		X
62	Updated Credit Score - Updated Quarterly		X	69	Interest Rate Step Indicator		X
63	Number of Modifications		X	70	First to Fifth Step Rate Adjustment Date		X
64	Modification Program		X	71	First to Fifth Step Rate		X
65	Modification Type		X	72	Delinquent Accrued Interest		X
66	Modification First Payment Date		X	73	Modification Costs		X

Net Loss Comparison DN vs. HQ

Net Loss Analysis (All 80-97% LTV vs. 60-80% LTV)



Origination Year	80.01-97 LTV (HQ-HQA Series)*					60-80 LTV (DN-DNA Series)*					Net Loss Ratios (80-97 LTV/60-80 LTV)
	Loan Count	Default Rate	Severity Rate	Net Loss Rate	Timeline DDLPI to Disposition	Loan Count	Default Rate	Severity Rate	Net Loss Rate	Timeline DDLPI to Disposition	
1999-2004	81,561	3.3%	25.3%	0.8%	20	83,445	1.2%	39.3%	0.5%	22	1.70
2005	21,076	11.3%	35.6%	4.0%	23	59,109	6.6%	48.5%	3.2%	22	1.25
2006	19,974	14.2%	37.0%	5.2%	23	63,763	9.0%	52.9%	4.8%	22	1.10
2007	29,472	15.9%	35.3%	5.6%	23	59,348	9.0%	52.6%	4.7%	22	1.18
2008	18,365	9.5%	30.6%	2.9%	22	28,550	4.6%	49.5%	2.3%	23	1.28
2009	2,067	1.6%	18.2%	0.3%	18	8,014	0.7%	38.0%	0.3%	20	1.03
2010	582	0.6%	14.6%	0.1%	17	2,216	0.3%	34.6%	0.1%	20	0.88
2011	285	0.3%	12.0%	0.0%	17	691	0.1%	33.1%	0.0%	19	0.90
2012-2016	660	0.0%	8.0%	0.0%	14	641	0.0%	26.1%	0.0%	16	0.86
Total	174,042	3.5%	30.8%	1.1%	21	305,777	2.2%	48.3%	1.1%	22	1.00

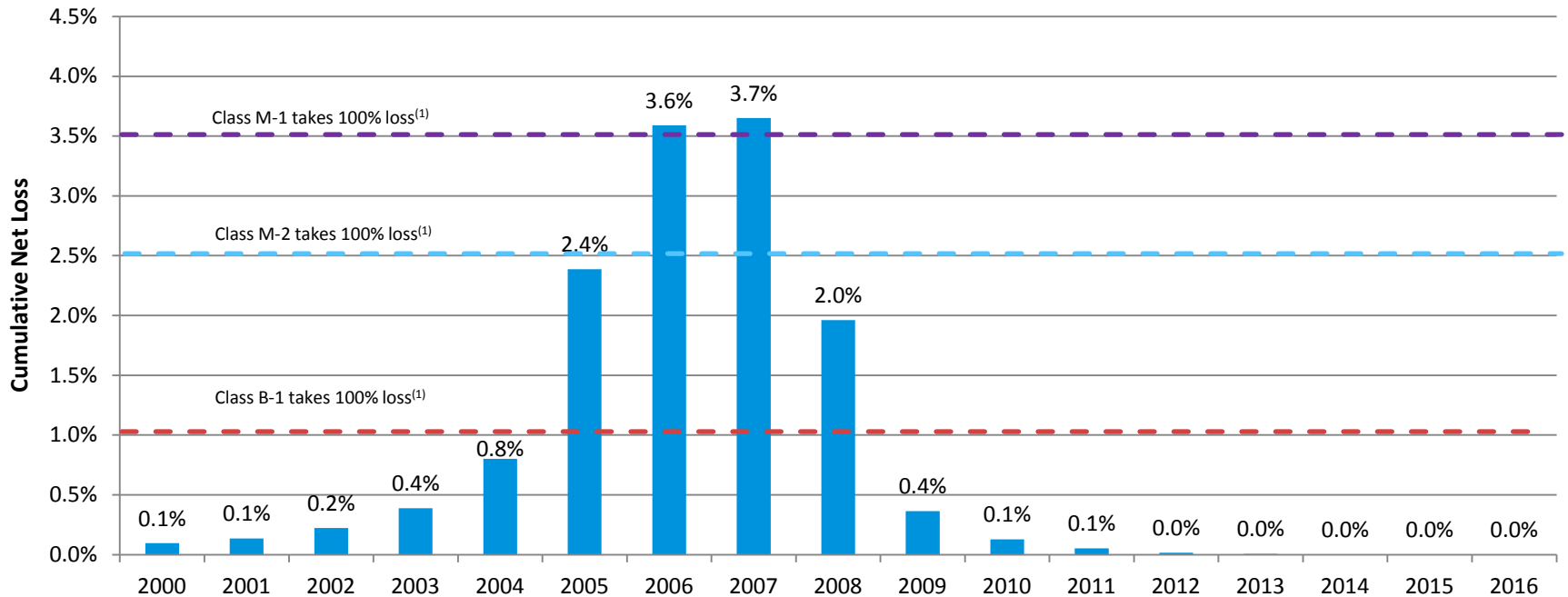
- The net loss rates for the HQ/HQA Series above are based on MI recovery, while MI Credit for STACR Investors is based on MI claim amount.

Notes: Data included in tables were derived from Freddie Mac's Single Family Loan Level Dataset (SF LLD) as of September 2017 refresh: Originations 1999-September 30, 2016 Performance data: March 31, 2017, losses reported for loans liquidated as of 4Q2016. STACR DN-DNA Series (issued beginning in 2013) and HQ-HQA Series (issued beginning in 2014) reference 60.01-80 LTV and 80.01-97 LTV 241 – 360 months fixed rate collateral. STACR pools are a subset of the population of loans in the above table.

DN/A (60-80 LTV) Series Historical Performance

STACR 2017-DNA3 Proxy Cohort Performance

Reference Pool Proxy



For Freddie Mac data above:

- Net Losses are calculated as noted on the “Actual Loss Calculation” slide:
Collateral Deficiency + Delinquent Interest + Expenses – MI Recoveries – Non MI Recoveries
- Freddie Mac data does not include bulk settlements
- Assumes 35bps g-fee to calculate delinquent interest
- Collateral Deficiency: Defaulted UPB – Net Sales Proceeds
- Loans with Repurchase flag = Y have been set to zero loss

Notes: Data included in tables were derived from Freddie Mac’s Single Family Loan Level Dataset (SF LLD) as of June 2017 refresh: Originations 1999-June 30, 2016. Performance data: 1999-December 31, 2016, losses reported for loans liquidated as of 3Q2016.
Cumulative Losses do not include modification losses.
Data is weighted in proportion to 2017-DNA3 FICO and LTV cohorts.

(1) Assuming no principal payments.

Loss Components by Disposition & Origination Year (All 60.01-80% LTV)



All Default Loans 60-80 LTV

Disposition Yr	Loan Count	Default UPB	Net Loss	Severity %	As Percentage of Net Loss					
					Collateral Loss	Expenses	MI Recoveries	Non-MI Recoveries	Delinquent Interest	Timeline (months)
99-2004	8,817	889,796,431	129,462,496	15%	43%	36%	-2%	-11%	35%	14
2005	4,032	397,321,897	92,069,632	23%	46%	30%	-1%	-5%	29%	15
2006	4,054	406,743,615	109,275,429	27%	53%	26%	-1%	-5%	27%	16
2007	5,001	575,712,238	151,877,471	26%	56%	25%	0%	-4%	23%	15
2008	8,824	1,345,938,566	425,832,986	32%	70%	15%	0%	-3%	17%	13
2009	20,363	3,674,290,984	1,486,401,850	40%	77%	11%	0%	-2%	14%	13
2010	39,962	7,391,007,361	3,415,876,191	46%	77%	10%	0%	-2%	15%	15
2011	49,454	9,283,212,198	4,809,646,815	52%	75%	11%	0%	-2%	16%	18
2012	52,252	9,503,158,548	4,782,608,082	50%	70%	14%	0%	-2%	18%	20
2013	36,774	6,084,451,358	3,027,282,941	50%	59%	21%	0%	-2%	22%	25
2014	31,557	4,988,939,992	2,816,163,327	56%	49%	27%	0%	-2%	27%	34
2015	23,911	3,888,375,833	2,204,951,654	57%	47%	27%	0%	-2%	28%	36
2016	12,778	2,135,454,177	1,302,568,278	61%	45%	28%	0%	-2%	29%	40
Total	303,648	51,618,771,008	24,754,017,152	48%	65%	17%	0%	-2%	20%	22

Origination Yr	Loan Count	Default UPB	Net Loss	Severity %	As Percentage of Net Loss					
					Collateral Loss	Expenses	MI Recoveries	Non-MI Recoveries	Delinquent Interest	Timeline (months)
99-2004	82,906	9,641,106,380	3,767,974,495	39%	52%	29%	0%	-4%	23%	22
2005	58,774	10,644,218,882	5,114,302,992	48%	66%	17%	0%	-2%	19%	22
2006	63,449	12,352,671,501	6,477,649,425	52%	68%	14%	0%	-2%	19%	22
2007	58,973	11,357,335,241	5,929,897,032	52%	68%	14%	0%	-2%	19%	22
2008	28,343	5,605,969,717	2,739,779,963	49%	65%	16%	0%	-2%	21%	23
2009	7,853	1,493,207,281	557,960,228	37%	61%	22%	0%	-2%	20%	20
2010	2,133	341,212,799	114,992,995	34%	55%	28%	0%	-3%	20%	20
2011	650	99,153,801	31,472,742	32%	55%	29%	0%	-2%	18%	19
2012	297	44,981,129	11,787,821	26%	60%	28%	0%	-3%	15%	17
2013	167	26,062,783	5,572,713	21%	71%	18%	0%	-4%	15%	16
2014	84	10,896,025	2,366,130	22%	68%	20%	0%	-4%	16%	14
2015	19	1,955,469	260,616	13%	72%	24%	0%	-1%	6%	8
Total	303,648	51,618,771,008	24,754,017,152	48%	65%	17%	0%	-2%	20%	22

Notes: Performance data: 1999-December 31, 2016, losses reported for loans liquidated as of 3Q2016
Cumulative Losses do not include modification losses

STACR 2017-DNA3 Historical Cohort Performance (60% < LTV <= 80%)



- Summary collateral characteristics for the different vintages are seen below
- Analysis and stratifications only include loans with LTVs between 60% and 80%

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	13- DN1	13- DN2	14- DN1	14- DN2	14- DN3	14- DN4	15- DN1	15- DNA1	15- DNA2	15- DNA3	16- DNA1	16- DNA2	16- DNA3	16- DNA4	17- DNA1	17- DNA2	17- DNA3
Orig UPB (\$BN)	58	163	163	197	124	162	139	127	124	213	120	86	120	23	36	33	28	20	16	28	32	32	35	36	30	26	25	34	61	56
WA FICO	718	717	720	725	720	723	725	726	741	762	762	763	766	766	764	761	760	755	753	753	766	752	754	754	752	748	748	751	751	749
WA DTI (%)	35	33	34	33	35	37	38	38	38	33	34	34	32	32	32	33	33	35	35	35	32	35	35	35	35	35	35	35	35	35
WA OCLTV (%)	77	77	77	76	78	78	79	80	77	76	76	76	76	76	75	76	76	77	77	77	76	77	76	76	77	76	76	76	76	76
WA OLTV (%)	76	76	75	75	76	76	76	76	75	74	75	75	75	75	74	75	75	76	76	76	74	76	75	75	76	75	75	75	75	75
% Owner Occ.	91	93	93	94	92	93	91	89	87	92	89	88	89	89	89	86	88	86	85	86	89	86	87	87	86	85	85	87	88	87
FICO Score Range																														
0-679	23%	23%	22%	19%	23%	22%	22%	22%	12%	3%	3%	3%	2%	2%	2%	3%	3%	5%	6%	6%	2%	6%	5%	5%	6%	8%	8%	7%	6%	7%
680-719	22%	23%	22%	22%	23%	22%	22%	22%	19%	11%	12%	11%	10%	10%	11%	13%	14%	16%	17%	17%	11%	18%	17%	17%	18%	19%	19%	18%	18%	19%
720-759	29%	28%	28%	29%	27%	25%	24%	23%	26%	26%	24%	23%	23%	22%	24%	24%	25%	26%	26%	25%	23%	25%	26%	26%	26%	26%	26%	26%	26%	27%
760-779	15%	15%	15%	17%	15%	14%	14%	14%	17%	22%	20%	21%	21%	20%	21%	20%	20%	19%	18%	18%	21%	17%	18%	18%	17%	16%	17%	17%	17%	17%
780 and Greater	10%	11%	12%	13%	12%	17%	18%	20%	26%	39%	40%	42%	44%	45%	42%	40%	38%	34%	33%	35%	44%	34%	34%	34%	33%	31%	30%	32%	32%	30%

Severity Rates and Disposition Timelines (All 60.01-80% LTV)



All Defaulted 60-80 LTV Loans
Severity Rates by Disposition & Origination Year

		Origination Year																														Total						
		99-04			2005			2006			2007			2008			2009			2010			2011			2012			2013				2014			2015		
		All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ			
Disposition Yr	99-04	15	19	12																																		15
	2005	23	30	19	2	-	3																															23
	2006	28	35	22	10	16	8																															27
	2007	30	37	25	18	22	16	14	16	14	9	-	11																									26
	2008	36	40	34	32	32	32	29	30	28	23	25	22	31	30	32																						32
	2009	39	44	37	43	44	43	42	42	43	37	37	38	30	26	31	21	40	14																			40
	2010	42	46	40	48	49	47	50	51	49	46	48	46	40	42	40	30	29	30	2	3	-																46
	2011	46	51	44	52	54	52	56	58	55	54	58	53	48	55	46	34	39	32	28	37	25	26	64	2													52
	2012	45	51	42	50	55	48	55	61	51	54	61	50	48	56	44	36	42	33	27	28	26	21	13	23													50
	2013	43	51	37	48	57	41	55	63	47	54	64	46	51	61	43	36	42	33	32	37	29	32	25	35	13	29	9										50
	2014	49	55	42	55	64	43	62	71	50	62	71	51	58	68	48	41	48	35	38	44	33	32	36	27	28	32	26	28	47	22							57
	2015	49	56	39	55	63	44	63	70	50	63	71	51	60	68	49	44	50	36	40	46	33	38	46	33	38	39	35	27	32	24	33	37	31				57
2016	55	63	42	60	69	45	68	77	51	68	76	52	65	72	49	47	54	38	43	47	36	42	49	34	33	36	29	32	35	29	27	43	23	22	48	21	61	
Total	39	46	35	48	54	45	53	59	48	52	60	48	49	58	43	38	44	33	34	39	30	32	36	30	28	31	24	24	26	21	21	21	26	20	13	19	12	48

Disposition Timelines (# months delinquent at disposition)

		Origination Year																														Total						
		99-04			2005			2006			2007			2008			2009			2010			2011			2012			2013				2014			2015		
		All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ			
Disposition Yr	99-04	14	16	13	-																																	14
	2005	15	18	14	4	6	4																															15
	2006	16	18	14	9	10	9	7	-	7																												16
	2007	16	18	14	12	14	11	10	11	9	6	7	6																									15
	2008	15	18	14	13	15	12	13	11	10	9	10	10	5	5	4																						13
	2009	16	19	14	14	15	13	13	14	13	12	13	12	10	10	11	4	5	4																			13
	2010	17	21	15	15	18	14	15	17	14	15	17	15	14	15	13	10	10	10	7	7	7																15
	2011	19	23	18	18	21	17	18	21	17	18	20	17	17	19	16	13	14	12	9	10	9	5	4	6													18
	2012	22	27	19	20	25	18	20	25	18	20	25	18	19	23	17	14	16	14	12	13	12	10	9	10	5	-	5										20
	2013	26	31	22	25	31	20	25	31	20	25	30	20	25	30	21	19	21	17	16	18	15	13	11	14	10	9	10										25
	2014	32	38	26	34	40	28	36	41	29	35	40	29	34	39	28	24	28	21	20	22	19	18	19	17	14	15	13	11	12	-							34
	2015	37	43	28	37	43	29	38	43	30	37	42	30	37	42	30	28	31	23	24	26	22	20	21	19	17	18	15	13	14	10	10	11	10				36
2016	39	46	28	42	48	31	44	50	33	43	49	32	43	49	30	31	35	25	26	29	21	22	24	19	19	21	18	18	21	14	15	17	14	9	7	9	40	
Total	22	27	18	22	29	18	22	29	18	22	29	18	23	30	19	20	25	17	20	23	17	19	20	17	17	18	16	16	18	14	14	14	13	14	8	6	8	22

Notes: Performance data: 1999-December 31, 2016, losses reported for loans liquidated as of 3Q2016
Cumulative Losses do not include modification losses

Severity Rates and Disposition Timelines (REO 60.01-80% LTV)



REOs 60-80 LTV
Severity Rates by Disposition & Origination Year

Disposition Yr	Origination Year																														Total							
	99-04			2005			2006			2007			2008			2009			2010			2011			2012			2013				2014			2015			
	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ	
99-04	18	23	15																															18				
2005	28	38	22																																28			
2006	34	44	26	14	23	11																													33			
2007	36	46	30	23	27	21	16	15	17																										36			
2008	42	48	40	35	36	35	32	35	31	25	32	24	100	-	100																				33			
2009	46	51	44	48	50	47	46	47	46	41	41	41	32	29	33																				45			
2010	49	53	47	52	57	50	54	59	52	50	53	49	44	45	43	38	44	37																	51			
2011	52	57	50	57	61	55	60	67	58	59	68	57	54	65	50	41	52	38	32	-	32														57			
2012	52	58	49	56	63	52	60	69	55	60	69	55	54	66	50	43	56	39	34	38	33	21	37	43											56			
2013	53	62	46	55	64	47	63	73	53	62	74	52	58	70	50	42	49	38	38	48	33	42	38	35	13	32	32								57			
2014	56	63	50	61	70	49	68	77	56	67	76	57	63	72	53	47	54	41	43	49	37	37	54	41	32	51	41	26	-	26					62			
2015	61	71	50	66	72	57	73	80	62	73	80	63	71	80	62	52	59	43	45	54	36	45	64	38	47	42	46	39	63	20	54	45	59				67	
2016	67	77	55	69	80	55	74	82	61	79	90	65	74	83	62	53	62	44	50	57	44	48	64	38	44	42	46	36	35	37	36	80	30	10	-	10		70
Total	45	52	41	54	61	49	58	67	52	58	69	53	55	67	49	44	53	39	40	48	34	39	44	37	35	41	31	29	37	23	29	63	24	9	-	10	53	

Disposition Timelines (# months ddipi to REO acquisition)

Disposition Yr	Origination Year																														Total						
	99-04			2005			2006			2007			2008			2009			2010			2011			2012			2013				2014			2015		
	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ
99-04	10	13	9																																		10
2005	10	13	8																																		10
2006	11	13	9	7	10	6	6	-	6																												11
2007	10	14	8	8	11	7	8	11	7																												10
2008	10	14	8	9	12	8	9	12	8	8	11	7	5	-	5																					9	
2009	11	15	9	11	14	9	11	14	9	10	13	9	9	12	9																						11
2010	13	17	11	13	17	12	13	17	12	13	16	12	12	14	11	8	11	8																			13
2011	14	18	12	15	19	13	15	19	14	15	18	14	13	16	12	10	13	9	8	-	8																14
2012	16	22	14	18	24	15	18	24	15	18	23	15	16	21	14	12	15	11	10	12	9	8	9	8												17	
2013	20	25	15	22	28	16	23	29	17	21	27	16	20	26	16	14	17	12	12	16	10	9	10	9	7	9	9	7								21	
2014	24	31	18	28	34	21	30	35	22	28	34	22	26	32	21	18	22	15	15	17	13	12	14	10	9	12	8	8	-	8					27		
2015	28	34	21	32	36	25	33	38	26	32	36	25	30	36	24	22	27	17	18	20	16	15	16	15	12	13	10	10	11	10	9	11	9			30	
2016	28	35	20	32	39	23	33	39	25	34	40	24	32	38	23	22	27	16	17	19	14	16	20	14	14	15	14	13	14	11	10	6	10	7	-	7	30
Total	15	20	12	18	25	14	18	26	14	19	26	15	18	26	15	16	20	13	15	18	12	14	17	12	12	14	11	12	14	11	10	8	10	6	2	7	17

Disposition Timelines (# months REO acquisition to disposition)

Disposition Yr	Origination Year																														Total						
	99-04			2005			2006			2007			2008			2009			2010			2011			2012			2013				2014			2015		
	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ
99-04	6	5	6																																	6	
2005	7	6	7																																		7
2006	7	6	7	4	3	5	4	-	4																												7
2007	7	6	8	5	4	6	4	4	4	5																											7
2008	7	6	8	6	5	6	5	5	5	4	3	4	4	-	4																						6
2009	7	6	7	6	5	6	5	5	6	5	5	5	5	4	4	4																					6
2010	7	6	7	6	6	6	6	5	6	5	5	5	6	5	5	5	4	4	4																		6
2011	8	8	9	8	8	7	7	8	7	7	8	7	7	8	7	6	6	6	4	-	4																7
2012	9	8	9	8	8	9	8	8	8	8	8	8	7	8	7	7	6	6	6	6	6	5	4	5												8	
2013	9	8	10	9	8	9	8	8	9	8	8	9	8	8	8	8	8	8	7	7	7	7	6	7	4	4	4									9	
2014	10	9	11	9	9	10	9	8	10	9	9	9	9	9	9	8	8	8	8	8	8	8	8	8	7	7	7	5	-	5						9	
2015	11	10	13	11	10	12	11	10	12	10	10	11	10	10	11	10	10	9	8	8	9	8	7	9	7	7	6	6	5	6	4	7					10
2016	11	11	12	11	11	12	11	11	13	11	11	12	11	12	11	10	10	8	9	8	8	8	8	7	7	7	7	7	7	7	4	-	4				11
Total	8	7	8	8	8	8	7	8	7	7	8	7	8	8	7	8	8	7	8	8	7	8	8	8	7	7	7	8	7	8	6	7	6	4	6	4	8

Severity Rates and Disposition Timelines (FA 60.01-80% LTV)



FA Loans 60-80 LTV
Severity Rates by Disposition & Origination Year

Disposition Yr	Origination Year																											Total									
	99-04			2005			2006			2007			2008			2009			2010			2011			2012				2013			2014			2015		
	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ			
99-04	5	7	4																													5					
2005	6	9	4	2	-	3																										6					
2006	7	10	5	7	11	5																										7					
2007	10	17	4	8	13	5	11	18	8	9	-	11																				10					
2008	15	20	12	22	24	21	23	24	23	21	22	20	29	30	28																	21					
2009	23	28	21	37	38	37	37	38	37	34	33	34	28	25	29	21	40	14														34					
2010	30	33	29	43	41	43	46	44	47	43	44	42	37	39	36	25	26	24														42					
2011	36	39	34	48	46	48	51	49	52	49	49	49	43	46	41	28	31	26	26	37	19											47					
2012	34	41	31	46	49	44	51	55	49	49	55	46	43	49	39	29	32	26	21	24	20	21	11	25							46						
2013	27	33	22	41	48	36	47	54	42	47	54	41	43	52	35	29	35	24	23	26	21	20	20	19	15	23	5				42						
2014	36	43	27	46	56	35	54	63	41	54	64	42	53	63	39	34	40	27	31	36	27	26	35	15	25	33	19	28	47	19	48						
2015	44	50	32	50	58	37	57	65	44	57	66	44	54	62	42	38	44	31	37	41	30	33	41	25	33	34	32	25	24	25	30	35	28	51			
2016	49	57	33	56	64	39	65	74	45	63	71	44	60	69	40	44	50	33	38	42	30	38	42	30	27	34	19	29	35	25	23	34	20	29	48	27	57
Total	29	36	25	43	47	40	48	52	45	47	53	43	43	52	38	31	37	26	29	33	24	27	32	21	24	27	19	22	23	21	19	21	18	14	23	13	43

Disposition Timelines (# months delinquent at disposition)

Disposition Yr	Origination Year																											Total									
	99-04			2005			2006			2007			2008			2009			2010			2011			2012				2013			2014			2015		
	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ	All	J	NJ
99-04	10	11	8																																	10	
2005	11	13	9	4	6	4																															11
2006	10	12	8	7	8	7	5	-	5																												10
2007	10	12	8	8	10	7	7	8	6	6	7	6																									9
2008	10	13	8	8	10	7	8	8	7	7	8	7	4	5	4																						8
2009	11	14	10	10	11	9	9	10	9	9	9	9	8	8	8	4	5	4																			9
2010	12	16	11	12	13	11	12	13	11	12	13	12	11	12	11	8	9	8																			12
2011	14	17	13	13	14	13	14	15	13	14	15	14	13	15	13	9	10	9	8	10	7																14
2012	17	23	14	15	20	14	16	21	14	16	21	14	16	20	14	11	12	10	10	10	9	8	9	8												16	
2013	20	26	15	19	25	15	20	25	15	20	25	16	20	26	16	14	17	13	12	13	11	10	10	11	8	8	8									20	
2014	29	34	21	31	37	23	33	38	25	32	37	25	31	37	23	21	24	18	17	18	16	16	16	12	12	12	10	12	9								30
2015	37	42	26	35	41	26	35	41	27	35	41	26	36	40	28	24	28	20	23	25	20	17	20	15	15	17	13	12	14	11	10	10	9				34
2016	39	46	26	41	47	29	44	50	29	42	48	30	42	49	27	30	34	24	26	29	20	20	22	15	18	20	16	15	20	12	14	18	13	8	7	9	40
Total	19	27	14	18	25	14	19	25	14	19	26	15	20	28	15	18	22	14	18	21	15	17	19	14	16	17	14	14	17	12	13	13	13	7	5	8	19

Notes: Performance data: 1999-December 31, 2016, losses reported for loans liquidated as of 3Q2016
Cumulative Losses do not include modification losses

DN Proxy Cohort Historical Delinquency Roll Rates



2000 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	50%	37%	13%	0%	0%	0%	0%	0%
60	23%	18%	27%	31%	0%	0%	0%	0%
90	13%	6%	10%	17%	53%	0%	0%	1%
120	11%	2%	2%	5%	13%	64%	0%	3%
150	11%	1%	1%	1%	5%	13%	65%	3%
180	10%	1%	0%	1%	1%	4%	13%	70%
180+	5%	0%	0%	0%	0%	0%	1%	93%

2003 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	44%	41%	15%	0%	0%	0%	0%	0%
60	14%	16%	36%	34%	0%	0%	0%	0%
90	8%	4%	9%	23%	55%	0%	0%	1%
120	8%	1%	2%	5%	16%	66%	0%	2%
150	8%	1%	1%	1%	4%	15%	68%	3%
180	7%	0%	0%	0%	1%	3%	14%	74%
180+	4%	0%	0%	0%	0%	0%	0%	95%

2001 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	49%	38%	13%	0%	0%	0%	0%	0%
60	19%	19%	30%	31%	0%	0%	0%	0%
90	11%	5%	10%	21%	52%	0%	0%	1%
120	11%	2%	2%	6%	15%	63%	0%	3%
150	11%	1%	1%	2%	5%	14%	64%	4%
180	9%	1%	0%	0%	1%	5%	14%	70%
180+	5%	0%	0%	0%	0%	0%	1%	94%

2004 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	40%	43%	17%	0%	0%	0%	0%	0%
60	12%	15%	36%	36%	0%	0%	0%	0%
90	7%	3%	9%	23%	57%	0%	0%	1%
120	7%	1%	2%	4%	16%	67%	0%	2%
150	7%	1%	1%	1%	3%	15%	70%	3%
180	6%	0%	0%	0%	1%	3%	14%	75%
180+	3%	0%	0%	0%	0%	0%	0%	96%

2002 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	46%	40%	14%	0%	0%	0%	0%	0%
60	17%	17%	33%	32%	0%	0%	0%	0%
90	10%	4%	10%	22%	53%	0%	0%	1%
120	9%	1%	2%	5%	15%	65%	0%	3%
150	9%	1%	1%	1%	4%	14%	68%	3%
180	7%	0%	0%	0%	1%	4%	14%	73%
180+	4%	0%	0%	0%	0%	0%	1%	95%

2005 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	35%	45%	21%	0%	0%	0%	0%	0%
60	10%	13%	35%	41%	0%	0%	0%	0%
90	6%	2%	7%	21%	62%	0%	0%	1%
120	6%	1%	1%	4%	16%	70%	0%	2%
150	6%	0%	0%	1%	3%	14%	72%	3%
180	5%	0%	0%	0%	1%	2%	12%	79%
180+	3%	0%	0%	0%	0%	0%	0%	97%

Notes: Data included in tables were derived from Freddie Mac's Single Family Loan Level Dataset (SF LLD) as of June 2017 refresh: Originations 1999-June 30, 2016 Performance data: December 31, 2016, losses reported for loans liquidated as of 3Q2016. Loans with LTV > 60% and <= 80%. Values represent the monthly average proportion UPB with beginning delinquency status (indicated by row heading) that transitions into the ending delinquency status (as indicated by column heading). Data is weighted in proportion to 2017-DNA3 FICO and LTV cohorts. Current loans also include voluntary prepayments and repurchases. 180+ also includes liquidations.

DN Proxy Cohort Historical Delinquency Roll Rates (contd.)



2006 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	31%	45%	24%	0%	0%	0%	0%	0%
60	9%	12%	34%	45%	0%	0%	0%	0%
90	5%	2%	6%	20%	65%	0%	0%	1%
120	5%	1%	1%	3%	15%	73%	0%	2%
150	5%	0%	0%	1%	2%	13%	75%	3%
180	5%	0%	0%	0%	0%	2%	11%	81%
180+	3%	0%	0%	0%	0%	0%	0%	97%

2009 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	43%	43%	15%	0%	0%	0%	0%	0%
60	14%	15%	33%	38%	0%	0%	0%	0%
90	8%	3%	8%	20%	61%	0%	0%	1%
120	7%	1%	1%	3%	14%	71%	0%	2%
150	8%	0%	0%	1%	2%	13%	73%	3%
180	7%	0%	0%	0%	0%	2%	10%	80%
180+	4%	0%	0%	0%	0%	0%	0%	95%

2007 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	30%	46%	24%	0%	0%	0%	0%	0%
60	9%	11%	35%	45%	0%	0%	0%	0%
90	5%	2%	6%	20%	66%	0%	0%	1%
120	5%	1%	1%	3%	15%	73%	0%	2%
150	6%	0%	0%	1%	2%	13%	75%	3%
180	5%	0%	0%	0%	0%	2%	11%	81%
180+	3%	0%	0%	0%	0%	0%	0%	96%

2010 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	50%	36%	14%	0%	0%	0%	0%	0%
60	16%	16%	33%	35%	0%	0%	0%	0%
90	10%	4%	8%	20%	58%	0%	0%	0%
120	9%	1%	1%	4%	16%	68%	0%	1%
150	10%	0%	0%	1%	3%	15%	69%	2%
180	9%	0%	0%	0%	1%	2%	12%	76%
180+	4%	0%	0%	0%	0%	0%	0%	95%

2008 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	32%	46%	22%	0%	0%	0%	0%	0%
60	9%	12%	36%	42%	0%	0%	0%	0%
90	6%	2%	6%	21%	64%	0%	0%	1%
120	6%	1%	1%	3%	15%	72%	0%	1%
150	6%	0%	0%	1%	2%	13%	74%	2%
180	6%	0%	0%	0%	1%	2%	11%	80%
180+	4%	0%	0%	0%	0%	0%	0%	96%

2011 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	54%	34%	12%	0%	0%	0%	0%	0%
60	17%	16%	33%	34%	0%	0%	0%	0%
90	11%	4%	10%	20%	54%	0%	0%	0%
120	11%	1%	2%	3%	16%	66%	0%	1%
150	11%	0%	1%	0%	2%	17%	67%	1%
180	10%	1%	0%	0%	0%	3%	14%	72%
180+	6%	0%	0%	0%	0%	0%	0%	93%

Notes: Data included in tables were derived from Freddie Mac's Single Family Loan Level Dataset (SF LLD) as of June 2017 refresh. Originations 1999-June 30, 2016 Performance data: December 31, 2016, losses reported for loans liquidated as of 3Q2016. Loans with LTV > 60% and <= 80%. Values represent the monthly average proportion UPB with beginning delinquency status (indicated by row heading) that transitions into the ending delinquency status (as indicated by column heading). Data is weighted in proportion to 2017-DNA3 FICO and LTV cohorts. Current loans also include voluntary prepayments and repurchases. 180+ also includes liquidations.

DN Proxy Cohort Historical Delinquency Roll Rates (contd.)



2012 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	62%	29%	9%	0%	0%	0%	0%	0%
60	23%	15%	29%	32%	0%	0%	0%	0%
90	14%	4%	8%	18%	56%	0%	0%	0%
120	10%	1%	2%	4%	16%	66%	0%	1%
150	11%	1%	0%	0%	2%	17%	68%	1%
180	10%	0%	0%	0%	0%	3%	13%	72%
180+	7%	0%	0%	0%	0%	0%	0%	92%

2014 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	64%	26%	10%	0%	0%	0%	0%	0%
60	26%	15%	27%	33%	0%	0%	0%	0%
90	13%	4%	8%	17%	57%	0%	0%	0%
120	9%	2%	1%	3%	20%	63%	1%	0%
150	12%	1%	1%	0%	3%	19%	64%	1%
180	10%	0%	0%	1%	0%	2%	17%	69%
180+	7%	0%	0%	0%	0%	0%	1%	91%

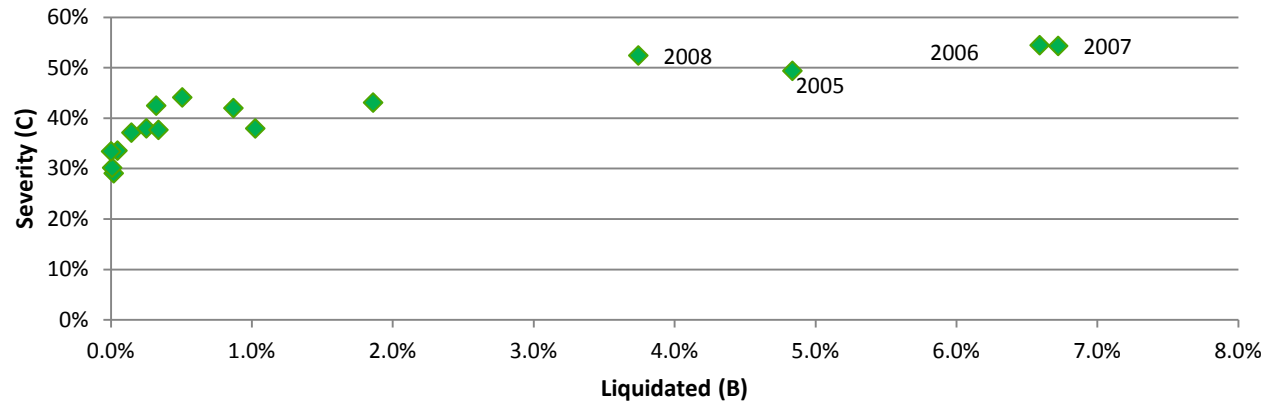
2013 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	63%	28%	9%	0%	0%	0%	0%	0%
60	24%	14%	29%	33%	0%	0%	0%	0%
90	12%	4%	8%	20%	56%	0%	0%	0%
120	11%	1%	1%	4%	21%	61%	0%	0%
150	15%	0%	1%	1%	2%	19%	61%	1%
180	13%	0%	0%	0%	0%	2%	14%	70%
180+	6%	0%	0%	0%	0%	0%	0%	93%

2015 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	74%	19%	7%	0%	0%	0%	0%	0%
60	31%	14%	20%	35%	0%	0%	0%	0%
90	21%	2%	7%	11%	59%	0%	0%	0%
120	10%	1%	1%	4%	14%	71%	0%	1%
150	9%	2%	0%	0%	0%	16%	69%	4%
180	14%	1%	0%	0%	0%	0%	8%	76%
180+	10%	1%	0%	0%	0%	0%	1%	88%

Notes: Data included in tables were derived from Freddie Mac's Single Family Loan Level Dataset (SF LLD) as of June 2017 refresh: Originations 1999-June 30, 2016 Performance data: December 31, 2016, losses reported for loans liquidated as of 3Q2016. Loans with LTV > 60% and <= 80%. Values represent the monthly average proportion UPB with beginning delinquency status (indicated by row heading) that transitions into the ending delinquency status (as indicated by column heading). Data is weighted in proportion to 2017-DNA3 FICO and LTV cohorts. Current loans also include voluntary prepayments and repurchases. 180+ includes liquidations.

DN Proxy Cohort Historical Severities

Vintage	Cum D180 (A)	Liquidated (B)	Severity (C)	Cum. Loss (D=B*C)
2000	0.5%	0.3%	38%	0.1%
2001	0.6%	0.3%	42%	0.1%
2002	0.9%	0.5%	44%	0.2%
2003	1.9%	1.0%	38%	0.4%
2004	3.2%	1.9%	43%	0.8%
2005	7.2%	4.8%	49%	2.4%
2006	9.5%	6.6%	54%	3.6%
2007	10.0%	6.7%	54%	3.7%
2008	6.4%	3.7%	52%	2.0%
2009	1.8%	0.9%	42%	0.4%
2010	1.0%	0.3%	38%	0.1%
2011	0.6%	0.1%	37%	0.1%
2012	0.3%	0.0%	34%	0.0%
2013	0.2%	0.0%	29%	0.0%
2014	0.1%	0.0%	30%	0.0%
2015	0.0%	0.0%	33%	0.0%



Notes: Data included in tables were derived from Freddie Mac’s Single Family Loan Level Dataset (SF LLD) as of June 2017 refresh: Originations 1999-June 30, 2016 Performance data: December 31, 2016, losses reported for loans liquidated as of 3Q2016. Loans with LTV > 60% and <= 80%.
 Loans with Repurchase flag = Y have been set to zero loss
 Cumulative Losses do not include modification losses
 Data is weighted in proportion to 2017-DNA3 FICO and LTV cohorts

DN Proxy Cohort Historical Modifications

Proxy Cohort Stats as of December 31, 2016

Vintage	Current Pool Factor	Cumulative Principal Loss	Cumulative Modification Loss ⁽¹⁾	Modification Loss as % of Principal Loss	Ever modified %	Proxy Cohort Stats as of December 31, 2016		
						Orig WAC	Current WAC	Current Mod WAC SF
2000	0.27%	0.10%	0.01%	6%	0.09%	8.10%	7.87%	0.23%
2001	0.73%	0.14%	0.01%	7%	0.13%	6.85%	6.69%	0.17%
2002	1.64%	0.22%	0.02%	11%	0.24%	6.35%	6.18%	0.17%
2003	4.57%	0.39%	0.05%	14%	0.62%	5.64%	5.50%	0.14%
2004	5.46%	0.80%	0.12%	15%	1.10%	5.77%	5.53%	0.24%
2005	6.92%	2.39%	0.32%	13%	2.42%	5.80%	5.33%	0.47%
2006	5.98%	3.59%	0.56%	16%	3.28%	6.37%	5.40%	0.97%
2007	7.00%	3.65%	0.64%	17%	3.66%	6.30%	5.34%	0.97%
2008	6.87%	1.96%	0.44%	23%	2.59%	6.01%	5.32%	0.69%
2009	15.74%	0.36%	0.02%	6%	0.63%	5.02%	4.99%	0.03%
2010	24.61%	0.13%	0.01%	6%	0.35%	4.74%	4.74%	0.01%
2011	30.70%	0.05%	0.00%	5%	0.24%	4.53%	4.53%	0.00%
2012	60.43%	0.02%	0.00%	1%	0.10%	3.81%	3.81%	0.00%
2013	63.11%	0.01%	0.00%	3%	0.06%	3.95%	3.95%	0.00%
2014	58.92%	0.00%	0.00%	3%	0.03%	4.41%	4.41%	0.00%
2015	80.70%	0.00%	0.00%	0%	0.00%	4.10%	4.10%	0.00%



Notes: Data included in tables were derived from Freddie Mac’s Single Family Loan Level Dataset (SF LLD) as of June 2017 refresh: Originations 1999-June 30, 2016 Performance data: December 31, 2016, losses reported for loans liquidated as of 3Q2016. Loans with LTV > 60% and <= 80%.

Cumulative Principal Loss do not include modification losses

Loans with Repurchase flag = Y have been set to zero loss

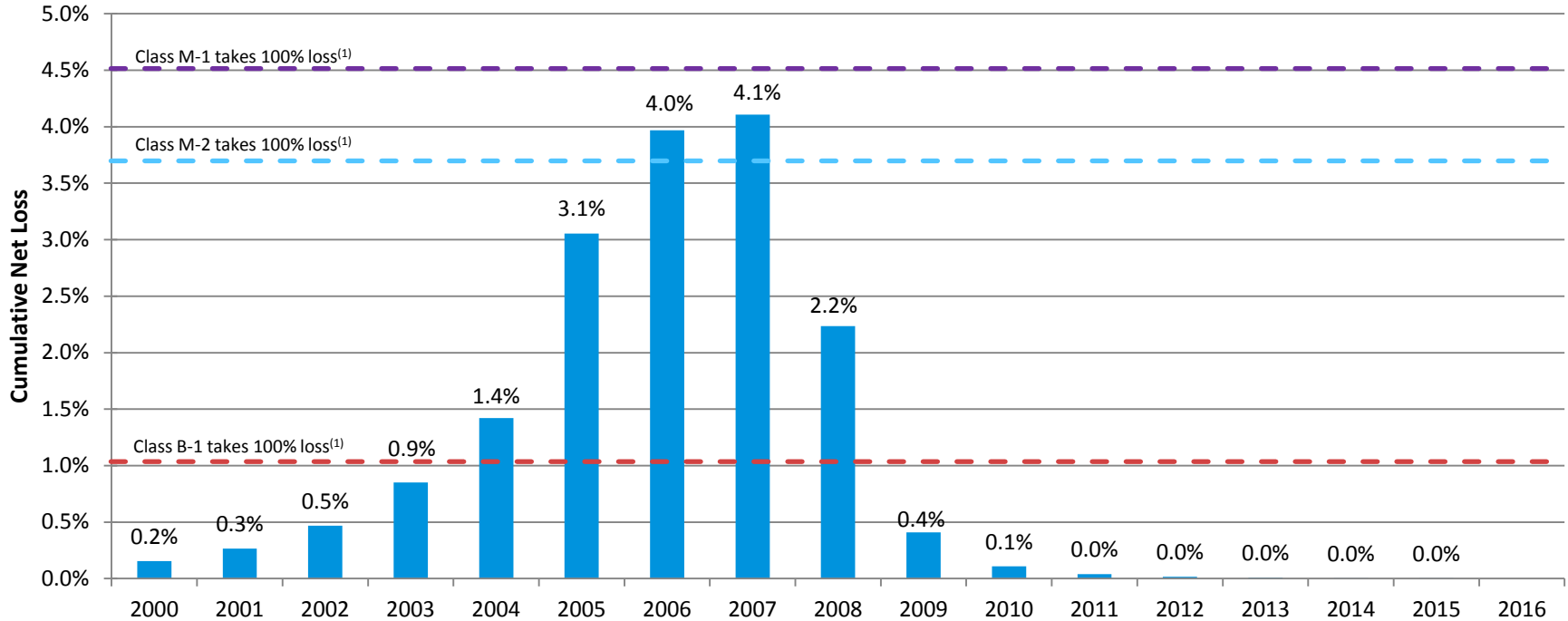
Data is weighted in proportion to 2017-DNA3 FICO and LTV cohorts

(1) Cumulative losses attributable to interest rate and forbearance modifications using same methodology as 2017-DNA3 transaction.

HQ/A (80-97 LTV) Series Historical Performance

STACR 2017-HQA3 Proxy Cohort Performance

Reference Pool Proxy



For Freddie Mac data above:

- Net Losses are calculated as noted on the “Actual Loss Calculation” slide:
Collateral Deficiency + Delinquent Interest +Expenses – MI Recoveries – Non MI Recoveries
- Freddie Mac data does not include bulk settlements
- Assumes 35bps g-fee to calculate delinquent interest
- Collateral Deficiency: Defaulted UPB – Net Sales Proceeds
- Loans with Repurchase flag = Y have been set to zero loss

Notes: Data included in tables were derived from Freddie Mac’s Single Family Loan Level Dataset (SF LLD) as of September 2017 refresh: Originations 1999-September 30, 2016. Performance data: 1999-March 31, 2017, losses reported for loans liquidated as of 4Q2016.
Cumulative Losses do not include modification losses
Data is weighted in proportion to 2017-HQA3 FICO and LTV cohorts

(1) Assuming no principal payments

Loss Components by Disposition & Origination Year (All 80.01-97% LTV)



Disposition Year	Loan Count	Default UPB	Net Loss	Severity %	As Percentage of Net Loss					
					Collateral Loss	Expenses	MI Recoveries	Non-MI Recoveries	Delinquent Interest	Timeline (months)
99-2004	17,195	1,952,747,090	117,087,419	6%	223%	91%	-283%	-27%	92%	14
2005	7,377	786,169,757	91,560,583	12%	129%	68%	-151%	-11%	65%	16
2006	6,083	643,383,421	85,729,818	13%	132%	65%	-148%	-11%	61%	16
2007	5,542	611,701,956	92,343,989	15%	135%	54%	-130%	-8%	50%	16
2008	7,158	957,318,329	171,625,363	18%	148%	34%	-112%	-5%	34%	14
2009	12,176	1,942,348,151	465,742,215	24%	135%	21%	-76%	-4%	24%	14
2010	19,963	3,250,449,641	934,770,642	29%	126%	20%	-65%	-4%	23%	16
2011	23,010	3,798,789,348	1,308,757,758	34%	117%	21%	-58%	-4%	24%	19
2012	24,319	3,972,039,066	1,395,811,457	35%	110%	25%	-56%	-5%	26%	21
2013	18,540	2,832,729,015	1,050,781,673	37%	97%	32%	-55%	-5%	30%	25
2014	13,726	1,970,812,211	851,273,923	43%	81%	38%	-48%	-4%	33%	32
2015	9,750	1,402,501,372	649,308,148	46%	75%	38%	-42%	-4%	33%	35
2016	8,098	1,209,591,352	644,806,383	53%	53%	33%	-26%	-3%	25%	37
Total	174,042	25,487,169,465	7,859,599,371	31%	105%	30%	-61%	-5%	29%	21

Origination Year	Loan Count	Default UPB	Net Loss	Severity %	As Percentage of Net Loss					
					Collateral Loss	Expenses	MI Recoveries	Non-MI Recoveries	Delinquent Interest	Timeline (months)
99-2004	81,561	8,946,891,325	2,265,416,215	25%	101%	43%	-73%	-7%	35%	20
2005	21,076	3,280,725,656	1,169,361,462	36%	106%	28%	-58%	-4%	26%	23
2006	19,974	3,399,267,226	1,256,514,066	37%	107%	24%	-56%	-4%	27%	23
2007	29,472	5,463,505,030	1,926,470,147	35%	106%	22%	-53%	-3%	27%	23
2008	18,365	3,714,154,105	1,136,724,265	31%	106%	24%	-57%	-4%	29%	22
2009	2,067	407,666,420	74,364,739	18%	127%	41%	-98%	-7%	34%	18
2010	582	101,840,987	14,862,358	15%	140%	59%	-134%	-9%	40%	17
2011	285	52,808,153	6,313,397	12%	148%	70%	-162%	-10%	44%	17
2012	226	39,330,505	4,189,335	11%	137%	80%	-161%	-10%	34%	17
2013	224	39,513,624	3,435,936	9%	147%	78%	-178%	-14%	37%	15
2014	164	31,777,725	1,730,888	5%	186%	95%	-298%	-18%	48%	12
2015	44	9,015,316	219,643	2%	218%	91%	-299%	-45%	39%	11
Total	174,042	25,487,169,465	7,859,599,371	31%	105%	30%	-61%	-5%	29%	21

Notes: Performance data: 1999-1Q2017, losses reported for loans liquidated as of 4Q2016
Cumulative Losses do not include modification losses

STACR 2017-HQA3 Historical Cohort Performance (80% < LTV <= 97%)



- Summary collateral characteristics for the different vintages are seen below
- Analysis and stratifications only include loans with LTVs between 80% and 97%

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	STACR 15-HQ1	STACR 15-HQ2	STACR 15-HQA1	STACR 15-HQA2	STACR 16-HQA1	STACR 16HQA2	STACR 16HQA4	STACR 17HQA1	STACR 17HQA2	STACR 17HQA3
Orig UPB (\$BN)	34	61	53	53	32	32	27	41	40	27	17	17	33	47	55	71	15	16	30	19	17	18	19	16	30	32	22
WA FICO	696	696	695	703	699	703	701	705	729	756	758	758	759	755	748	749	747	748	757	747	749	750	749	748	747	747	747
WA DTI (%)	37	36	37	36	38	39	41	41	40	33	33	33	33	34	35	35	35	35	33	35	35	35	35	35	35	36	36
WA OCLTV (%)	92	91	91	91	91	91	92	92	91	90	91	91	91	92	92	92	92	92	92	92	92	92	92	92	92	92	92
WA OLTV (%)	92	91	91	91	91	92	92	92	91	90	91	91	91	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Owner Occ. (%)	95	96	95	95	92	92	92	92	93	99	100	100	100	100	99	99	99	100	100	99	99	99	99	99	99	99	99
FICO Score Range																											
0-679 (%)	38	38	40	34	38	35	38	36	16	1	1	2	2	3	5	5	6	5	2	6	5	4	4	5	5	5	5
680-719 (%)	25	25	25	26	25	25	23	23	24	14	14	13	13	15	19	19	19	19	13	19	19	18	19	19	20	21	20
720-759 (%)	23	23	22	24	22	21	20	20	27	33	31	30	31	32	31	31	31	32	31	31	32	32	31	31	31	31	32
760-779 (%)	8	8	9	10	9	10	9	10	15	23	22	23	22	21	19	19	19	19	22	19	19	19	19	19	18	18	18
780 and Greater (%)	4	5	5	6	6	9	10	11	17	29	32	32	33	29	26	26	25	25	31	25	26	27	27	25	25	25	24

Severity Rates and Disposition Timelines (All 80.01-97% LTV)



All Defaulted 80-97 LTV Loans
Severity Rates by Disposition & Origination Year

Disposition Yr	Origination Year																											Total									
	99-04			2005			2006			2007			2008			2009			2010			2011			2012				2013			2014			2015		
	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ			
99-04	6	8	5																														6				
2005	12	15	9	9	(0)	17																											12				
2006	14	17	10	4	5	3	(2)	0	(3)																								13				
2007	17	20	14	8	9	7	6	5	7	1	(0)	2																					15				
2008	23	25	21	15	14	16	13	13	13	11	10	11	4	7	2																		18				
2009	28	29	27	27	27	26	24	23	24	21	18	22	18	14	19	2	-	2															24				
2010	33	35	32	32	33	31	32	33	31	27	28	27	21	23	21	12	10	13	5	12	-												29				
2011	38	41	37	39	41	37	38	41	36	34	37	33	28	33	26	16	15	16	6	15	2												35				
2012	38	42	36	39	42	37	40	44	37	36	40	33	30	37	26	15	16	14	10	12	9	5	2	7								35					
2013	40	45	35	39	43	34	41	46	35	39	46	31	33	42	25	17	18	16	12	13	11	7	9	6	10	7	13					37					
2014	45	50	38	45	50	37	49	54	39	46	53	37	40	49	29	20	26	15	16	21	11	13	13	13	9	15	7	6	2	7		43					
2015	49	54	40	50	55	40	52	58	41	51	59	39	44	55	30	25	29	19	19	22	15	13	14	12	9	9	9	15	6	4	11	3	47				
2016	56	63	42	57	63	43	62	69	46	58	68	41	55	66	35	33	39	21	25	32	17	24	26	22	15	18	13	13	13	12	7	11	5	53			
Total	25	30	21	36	40	32	37	42	33	35	42	31	31	40	25	18	23	15	15	19	12	13	15	11	11	13	9	9	11	8	6	9	4	2	1	3	31

Disposition Timelines (# months delinquent at disposition)

Disposition Yr	Origination Year																											Total									
	99-04			2005			2006			2007			2008			2009			2010			2011			2012				2013			2014			2015		
	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ			
99-04	14	16	13																															14			
2005	16	18	14	2	5	-																													16		
2006	17	18	15	10	10	10	8	3	10																										16		
2007	17	18	15	12	13	12	10	10	10	6	4	9																							16		
2008	16	18	15	14	15	13	12	13	12	10	10	10	6	6	6																				14		
2009	17	19	15	15	17	14	14	15	13	13	14	13	11	11	11	5	-	5																	14		
2010	18	21	16	17	19	15	17	18	16	16	18	15	15	17	14	10	9	11	5	-	9														16		
2011	21	24	19	20	23	18	20	22	18	19	21	18	18	20	17	13	12	13	9	8	9														19		
2012	23	27	20	22	26	19	22	26	19	22	25	19	19	23	18	13	15	12	11	12	10														21		
2013	26	30	21	27	31	21	27	31	21	26	31	20	24	29	20	17	18	16	14	15	14	13	13	12	11	11	12							25			
2014	32	37	25	34	39	26	34	39	25	34	39	27	31	37	25	21	25	17	18	21	16	17	18	16	14	18	13	9	9	-				32			
2015	34	39	26	36	41	27	36	41	28	37	43	30	35	41	27	27	28	25	21	21	21	20	22	19	16	16	15	12	13	9	9	9	12	9	35		
2016	36	42	24	39	44	29	40	45	29	40	45	29	41	47	29	29	33	23	24	25	24	22	23	20	19	20	18	17	20	12	12	14	12	11	13	10	37
Total	20	24	17	23	27	18	23	27	18	23	29	19	22	28	18	18	21	15	17	19	16	17	19	15	17	18	16	15	18	11	12	14	11	11	11	10	21

Notes: Performance data: 1999-1Q2017, losses reported for loans liquidated as of 4Q2016
Cumulative Losses do not include modification losses

Severity Rates and Disposition Timelines (REO 80.01-97% LTV)



		Origination Year																											Total									
		99-04			2005			2006			2007			2008			2009			2010			2011			2012				2013			2014			2015		
		All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ			
Disposition Yr	99-04	7	9	6																																		7
	2005	13	18	10																																		13
	2006	15	20	12	4	6	4	(3)	-	(3)																												15
	2007	19	23	16	10	11	9	9	7	11	2	-	2																									17
	2008	25	27	23	17	18	17	16	16	15	12	14	12	6	-	6																						21
	2009	30	32	29	29	30	29	26	27	26	23	22	24	20	18	21	2	-	2																			27
	2010	34	37	32	35	37	33	35	38	32	29	31	28	24	25	23	15	13	15																			31
	2011	40	44	38	41	45	38	41	45	38	38	43	35	32	41	29	20	25	19	11	33	5																38
	2012	42	47	39	43	47	40	43	48	39	40	47	36	35	46	31	19	24	18	17	18	17	7	9	9													40
	2013	46	51	41	43	48	37	46	52	39	43	52	34	39	51	30	21	24	19	16	15	18	9	17	15	16	9	11										43
	2014	48	53	42	48	53	39	51	56	41	50	56	41	44	53	33	26	33	19	16	23	11	16	15	15	11	9	16	3	4	2							47
	2015	53	60	43	53	57	44	54	60	43	55	63	44	48	57	36	32	19	20	23	16	15	37	23	12	17	17	10	14	18	11	10	7	11				51
	2016	64	71	52	59	65	45	61	67	53	61	70	47	56	64	42	31	37	23	21	29	12	31	37	23	17	17	17	14	14	13	9	12	8	3	13	1	56
	Total	26	32	22	38	43	33	40	45	34	39	47	33	34	45	28	22	29	18	17	21	13	16	19	13	13	13	13	11	13	10	7	9	6	1	3	0	33

Disposition Timelines (# months ddipi to REO acquisition)

		Origination Year																											Total									
		99-04			2005			2006			2007			2008			2009			2010			2011			2012				2013			2014			2015		
		All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ			
Disposition Yr	99-04	10	12	9																																		10
	2005	10	13	8																																		10
	2006	11	13	9	7	9	7	7	-	7																												11
	2007	11	14	8	9	11	7	8	10	6	7	-	7																									10
	2008	10	13	8	9	11	8	9	11	8	8	10	7	6	-	6																						10
	2009	11	15	9	11	14	9	11	14	9	10	13	9	9	12	9	6	-	6																			11
	2010	13	16	11	14	17	11	14	17	11	13	16	12	12	15	11	8	12	8	6	-	6																13
	2011	14	18	12	15	19	13	15	19	13	15	18	14	14	17	13	10	12	10	8	10	7																15
	2012	17	21	14	18	23	15	19	23	15	18	23	15	16	22	14	11	14	10	9	10	8	8	-	8													17
	2013	20	25	15	23	28	16	22	27	16	22	27	16	20	25	16	14	17	12	11	12	10	10	12	9	11	13	10										21
	2014	25	31	18	28	33	19	28	33	18	28	33	21	26	31	18	16	20	12	13	17	10	12	14	10	10	16	9	8	9	8							26
	2015	28	33	19	30	35	21	30	34	22	32	37	23	29	35	21	21	23	19	15	17	12	15	16	15	11	12	9	8	7	8	7	7	7				29
	2016	29	35	20	32	37	22	33	39	23	34	40	23	33	39	23	24	28	17	17	16	19	19	22	15	14	15	14	14	15	13	9	10	9	8	4	9	31
	Total	14	18	11	18	23	13	18	24	13	19	25	14	18	25	14	15	20	12	13	15	11	14	16	12	13	15	11	13	14	12	9	10	9	8	4	9	16

Disposition Timelines (# months REO acquisition to disposition)

		Origination Year																											Total									
		99-04			2005			2006			2007			2008			2009			2010			2011			2012				2013			2014			2015		
		All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ			
Disposition Yr	99-04	6	5	6																																		6
	2005	7	7	7																																		7
	2006	7	6	7	5	4	5	3	-	3																												7
	2007	7	6	8	5	5	6	4	4	5	2	-	2																									7
	2008	7	6	8	6	5	6	5	5	5	4	4	4	2	-	2																						6
	2009	7	6	7	6	5	6	6	5	6	5	5	5	4	4	4	2	-	2																			6
	2010	7	6	7	6	5	6	6	5	6	5	5	6	5	5	6	4	3	5																			6
	2011	8	8	8	7	8	7	7	7	7	7	8	7	7	8	6	6	7	6	4	5	4																7
	2012	8	9	8	8	8	8	7	7	7	7	8	7	7	8	7	6	6	6	6	6	6	6	-	6													8
	2013	9	8	9	8	8	8	8	8	8	8	8	8	8	9	8	7	7	7	6	6	6	6	5	6	5	6	4										8
	2014	9	8	9	9	8	9	9	9	9	9	8	9	9	9	8	8	7	7	7	7	7	7	7	6	6	6	6	4	3	4							9
	2015	10	9	11	10	9	11	9	9	10	10	9	10	10	10	9	9	8	9	8	8	9	8	8	8	8	8	8	6	5	6	5	10	3				10
	2016	10	10	10	11	11	11	11	11	11	10	10	11	10	10	10	9	9	9	9	9	8	8	8	8	8	8	8	7	7	7	6	6	6	5	6	4	10
	Total	7	7	7	7	7	7	7	7	7	7	8	7	7	8	7	7	8	7	7	7	7	7	7	7	7	7	7	7	7	7	6	6	6	5	8	5	7

Severity Rates and Disposition Timelines (FA 80.01-97% LTV)



FA Loans 80-97 LTV
Severity Rates by Disposition & Origination Year

Disposition Yr.	Origination Year																											Total									
	99-04			2005			2006			2007			2008			2009			2010			2011			2012				2013			2014			2015		
	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ			
99-04	3	3	2																														3				
2005	4	6	3	9	(0)	17																											4				
2006	4	5	3	2	4	1	0	0	-																								4				
2007	6	9	4	2	2	2	1	2	1	(0)	(0)	-																					5				
2008	9	12	6	7	7	8	7	8	7	8	7	9	4	7	(1)																		8				
2009	16	15	16	21	22	19	18	18	19	16	14	17	14	10	15	2	-	2															17				
2010	28	26	29	27	27	27	27	27	27	25	24	25	18	19	17	9	9	8															24				
2011	33	33	34	33	33	33	32	33	32	27	28	26	21	23	20	10	9	10	2	6	0												28				
2012	29	30	28	34	36	32	35	38	32	30	31	29	23	28	21	10	11	10	6	8	4	5	2	7								29					
2013	26	29	22	32	35	28	34	37	27	32	37	26	25	32	18	11	13	11	8	10	7	4	8	2	2	3	1					29					
2014	36	41	28	36	40	29	41	46	31	35	42	25	32	40	19	13	17	9	15	16	13	8	8	8	7	20	3	8	0	-		34					
2015	43	48	35	47	53	33	49	55	36	44	53	33	39	52	24	22	25	18	17	20	14	11	14	8	7	9	3	7	14	3	4	11	3	-	-	-	41
2016	50	57	34	55	61	41	62	70	38	56	66	36	54	68	31	34	40	20	29	34	22	17	15	20	13	20	6	12	11	5	6	10	5	8	0	15	51
Total	22	26	18	32	35	28	33	37	28	30	35	26	26	34	20	14	18	11	13	17	10	9	10	8	9	14	4	8	10	4	5	9	4	3	0	5	27

Disposition Timelines (# months delinquent at disposition)

Disposition Yr.	Origination Year																											Total										
	99-04			2005			2006			2007			2008			2009			2010			2011			2012				2013			2014			2015			
	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ	All	J	NJ		All	J	NJ	All	J	NJ				
99-04	9	10	8																																	9		
2005	10	12	9	2	5	-																															10	
2006	11	12	9	7	7	6	3	3	-																												10	
2007	10	12	9	8	9	8	6	5	7	4	4	-																									9	
2008	10	11	8	8	9	7	7	8	7	7	7	6	5	6	4																						8	
2009	11	12	9	10	11	9	9	10	8	9	9	9	8	8	8	3	-	3																			9	
2010	12	14	11	12	13	10	12	13	11	12	13	12	11	12	10	8	8	8	6	5	7																12	
2011	14	17	13	14	16	12	14	15	12	13	15	12	12	14	12	8	8	8	9	10	8	6	5	7												13		
2012	16	21	13	16	20	12	17	20	13	16	19	14	14	17	13	9	10	8	9	10	8	5	5	5												15		
2013	20	25	15	21	24	15	20	24	14	20	25	14	19	24	15	11	12	11	10	9	11	9	10	9	6	5	6									19		
2014	26	31	17	28	32	20	26	30	20	26	31	21	25	29	19	17	20	15	14	15	12	13	13	12	15	11	8	5	8							25		
2015	30	36	20	32	37	21	32	37	21	32	37	25	31	37	23	22	23	20	19	16	22	18	20	15	14	14	11	14	10	9	11	11	9				30	
2016	33	39	19	37	41	26	37	42	24	36	42	24	39	47	26	26	28	21	22	24	20	16	15	16	14	16	10	14	17	12	11	13	10	11	13	8	8	34
Total	16	21	12	18	22	13	18	21	13	18	23	14	18	23	14	13	16	11	14	15	13	13	14	11	13	15	11	13	16	11	11	11	13	10	9	11	8	17

Notes: Performance data: 1999-1Q2017, losses reported for loans liquidated as of 4Q2016
Cumulative Losses do not include modification losses

HQA Proxy Cohort Historical Delinquency Roll Rates

2000 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	46%	39%	15%	0%	0%	0%	0%	0%
60	21%	16%	26%	37%	0%	0%	0%	0%
90	12%	5%	9%	16%	56%	0%	0%	2%
120	10%	1%	2%	5%	12%	66%	0%	4%
150	8%	1%	1%	1%	4%	13%	66%	7%
180	6%	0%	0%	0%	1%	5%	10%	77%
180+	8%	0%	0%	0%	0%	0%	1%	91%

2001 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	44%	41%	15%	0%	0%	0%	0%	0%
60	17%	18%	29%	35%	0%	0%	0%	0%
90	10%	5%	9%	17%	57%	0%	0%	2%
120	10%	2%	1%	5%	11%	66%	0%	5%
150	10%	1%	0%	1%	4%	11%	67%	6%
180	8%	0%	0%	0%	1%	3%	10%	78%
180+	5%	0%	0%	0%	0%	0%	1%	93%

2002 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	42%	42%	16%	0%	0%	0%	0%	0%
60	16%	17%	31%	36%	0%	0%	0%	0%
90	10%	4%	9%	19%	57%	0%	0%	1%
120	7%	1%	2%	5%	14%	66%	0%	4%
150	8%	1%	1%	1%	4%	12%	68%	5%
180	7%	1%	0%	1%	1%	3%	12%	76%
180+	4%	0%	0%	0%	0%	0%	0%	95%

2003 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	41%	42%	17%	0%	0%	0%	0%	0%
60	14%	15%	32%	38%	0%	0%	0%	0%
90	8%	4%	8%	20%	59%	0%	0%	1%
120	7%	1%	1%	4%	15%	67%	0%	3%
150	7%	1%	0%	1%	3%	13%	71%	4%
180	7%	0%	0%	0%	1%	2%	11%	79%
180+	3%	0%	0%	0%	0%	0%	0%	96%

2004 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	37%	43%	19%	0%	0%	0%	0%	0%
60	12%	14%	33%	40%	0%	0%	0%	0%
90	7%	3%	8%	20%	61%	0%	0%	1%
120	7%	1%	1%	4%	15%	70%	0%	3%
150	6%	0%	0%	1%	3%	13%	72%	4%
180	6%	1%	0%	0%	1%	2%	10%	80%
180+	3%	0%	0%	0%	0%	0%	0%	97%

2005 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	34%	43%	23%	0%	0%	0%	0%	0%
60	10%	12%	32%	45%	0%	0%	0%	0%
90	6%	2%	6%	19%	65%	0%	0%	2%
120	5%	1%	1%	3%	12%	75%	0%	3%
150	5%	0%	0%	1%	2%	11%	76%	4%
180	4%	0%	0%	0%	0%	2%	9%	83%
180+	2%	0%	0%	0%	0%	0%	0%	97%

Notes: Data included in tables were derived from Freddie Mac's Single Family Loan Level Dataset (SF LLD) as of September 2017 refresh: Originations 1999-September 30, 2016. Performance data: 1999-March 31, 2017, losses reported for loans liquidated as of 4Q2016. Loans with LTV > 80% and <= 97%. Values represent the monthly average proportion UPB with beginning delinquency status (indicated by row heading) that transitions into the ending delinquency status (as indicated by column heading). Data is weighted in proportion to 2017-HQA3 FICO and LTV cohorts. Current loans also include voluntary prepayments and repurchases. 180+ also includes liquidations.

HQA Proxy Cohort Historical Delinquency Roll Rates (contd.)



2006 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	31%	43%	25%	0%	0%	0%	0%	0%
60	9%	11%	31%	49%	0%	0%	0%	1%
90	5%	2%	6%	18%	68%	0%	0%	1%
120	5%	0%	1%	2%	13%	75%	0%	3%
150	5%	0%	0%	1%	2%	10%	77%	5%
180	4%	0%	0%	0%	0%	2%	9%	84%
180+	3%	0%	0%	0%	0%	0%	0%	97%

2007 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	29%	44%	27%	0%	0%	0%	0%	0%
60	8%	10%	32%	49%	0%	0%	0%	1%
90	5%	2%	5%	18%	68%	0%	0%	1%
120	5%	0%	1%	2%	13%	76%	0%	2%
150	5%	0%	0%	0%	2%	11%	78%	3%
180	4%	0%	0%	0%	0%	1%	10%	84%
180+	3%	0%	0%	0%	0%	0%	0%	96%

2008 Vintage	Current	30	60	90	120	150	180	180+
Current	99%	1%	0%	0%	0%	0%	0%	0%
30	30%	45%	25%	0%	0%	0%	0%	0%
60	9%	11%	34%	46%	0%	0%	0%	0%
90	5%	2%	6%	20%	66%	0%	0%	1%
120	6%	0%	1%	2%	14%	74%	0%	2%
150	6%	0%	0%	0%	2%	12%	76%	4%
180	5%	0%	0%	0%	0%	2%	10%	82%
180+	4%	0%	0%	0%	0%	0%	0%	96%

2009 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	41%	41%	18%	0%	0%	0%	0%	0%
60	13%	13%	30%	44%	0%	0%	0%	1%
90	8%	3%	6%	15%	66%	0%	0%	2%
120	5%	1%	1%	2%	12%	74%	0%	5%
150	7%	1%	0%	0%	2%	10%	75%	5%
180	5%	0%	0%	0%	0%	2%	8%	84%
180+	4%	0%	0%	0%	0%	0%	1%	95%

2010 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	47%	38%	15%	0%	0%	0%	0%	0%
60	15%	14%	33%	38%	0%	0%	0%	0%
90	8%	4%	7%	20%	59%	0%	0%	2%
120	10%	0%	1%	3%	13%	69%	0%	3%
150	8%	1%	0%	1%	2%	13%	71%	4%
180	7%	0%	0%	0%	1%	2%	10%	79%
180+	4%	0%	0%	0%	0%	0%	0%	96%

2011 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	50%	36%	14%	0%	0%	0%	0%	0%
60	16%	15%	30%	38%	0%	0%	0%	0%
90	10%	3%	8%	19%	58%	0%	0%	1%
120	6%	0%	1%	3%	14%	74%	0%	1%
150	11%	1%	0%	1%	2%	16%	65%	4%
180	6%	0%	0%	0%	1%	3%	12%	78%
180+	5%	0%	0%	0%	0%	0%	0%	94%

Notes: Data included in tables were derived from Freddie Mac's Single Family Loan Level Dataset (SF LLD) as of September 2017 refresh: Originations 1999-September 30, 2016. Performance data: 1999-March 31, 2017, losses reported for loans liquidated as of 4Q2016. Loans with LTV > 80% and <= 97%. Values represent the monthly average proportion UPB with beginning delinquency status (indicated by row heading) that transitions into the ending delinquency status (as indicated by column heading). Data is weighted in proportion to 2017-HQA3 FICO and LTV cohorts. Current loans also include voluntary prepayments and repurchases. 180+ also includes liquidations.

HQA Proxy Cohort Historical Delinquency Roll Rates (contd.)



2012 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	56%	32%	12%	0%	0%	0%	0%	0%
60	22%	15%	26%	37%	0%	0%	0%	0%
90	11%	3%	7%	17%	62%	0%	0%	0%
120	10%	1%	1%	3%	17%	67%	0%	1%
150	12%	0%	0%	1%	3%	18%	63%	2%
180	12%	0%	0%	0%	1%	3%	15%	69%
180+	5%	0%	0%	0%	0%	0%	0%	94%

2013 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	58%	31%	11%	0%	0%	0%	0%	0%
60	21%	13%	27%	38%	0%	0%	0%	0%
90	12%	3%	7%	18%	59%	0%	0%	0%
120	9%	1%	1%	3%	17%	68%	0%	1%
150	11%	0%	1%	0%	2%	19%	64%	3%
180	10%	0%	0%	0%	0%	2%	11%	75%
180+	6%	0%	0%	0%	0%	0%	0%	93%

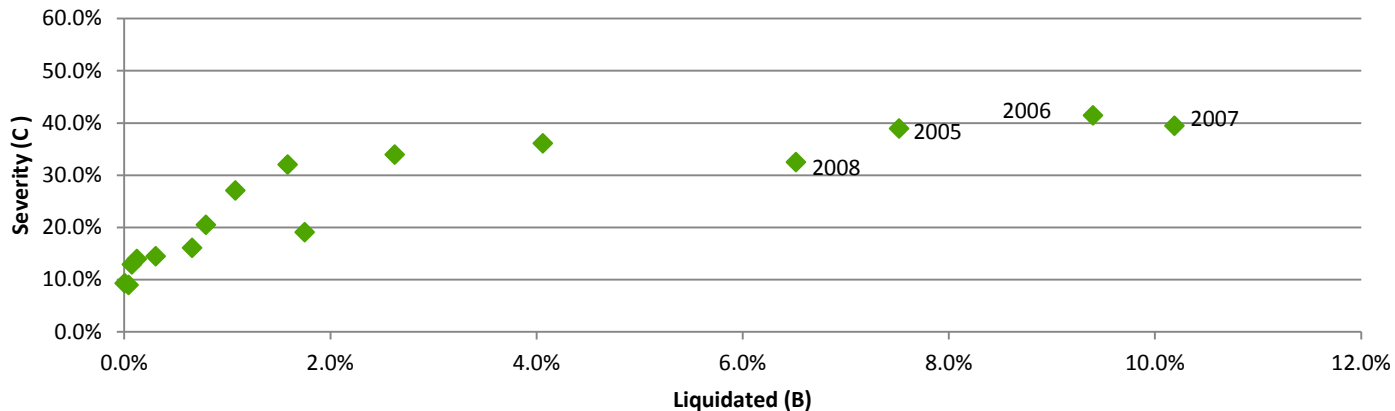
2014 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	60%	29%	11%	0%	0%	0%	0%	0%
60	22%	13%	25%	40%	0%	0%	0%	0%
90	10%	4%	4%	16%	65%	0%	0%	0%
120	9%	1%	1%	2%	14%	73%	0%	1%
150	10%	0%	0%	0%	1%	17%	69%	3%
180	9%	0%	1%	1%	0%	2%	15%	72%
180+	6%	0%	0%	0%	0%	0%	1%	93%

2015 Vintage	Current	30	60	90	120	150	180	180+
Current	100%	0%	0%	0%	0%	0%	0%	0%
30	67%	23%	10%	0%	0%	0%	0%	0%
60	26%	14%	20%	39%	0%	0%	0%	0%
90	15%	2%	6%	13%	63%	0%	0%	0%
120	9%	1%	1%	2%	13%	73%	0%	1%
150	8%	0%	0%	1%	2%	17%	69%	3%
180	6%	0%	0%	1%	0%	0%	8%	84%
180+	7%	0%	0%	0%	0%	1%	0%	92%

Notes: Data included in tables were derived from Freddie Mac's Single Family Loan Level Dataset (SF LLD) as of September 2017 refresh: Originations 1999-September 30, 2016. Performance data: 1999-March 31, 2017, losses reported for loans liquidated as of 4Q2016. Loans with LTV > 80% and <= 97%. Values represent the monthly average proportion UPB with beginning delinquency status (indicated by row heading) that transitions into the ending delinquency status (as indicated by column heading). Data is weighted in proportion to 2017-HQA3 FICO and LTV cohorts. Current loans also include voluntary prepayments and repurchases. 180+ also includes liquidations.

HQ Proxy Cohort Historical Severities

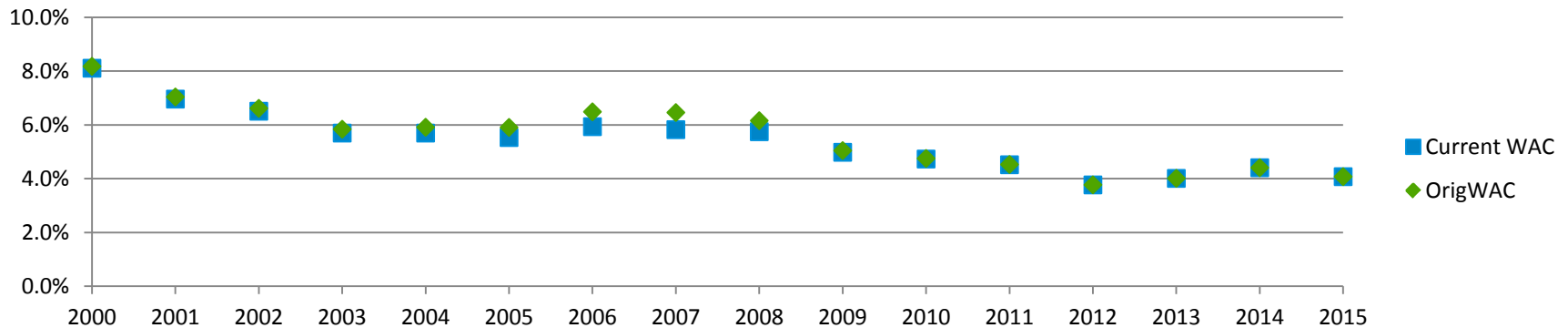
Vintage	Cum D180 (A)	Liquidated (B)	Severity (C)	Cum Loss (D=B*C)
2000	1.4%	0.8%	20.5%	0.2%
2001	1.9%	1.1%	27.1%	0.3%
2002	2.7%	1.6%	32.0%	0.5%
2003	4.3%	2.6%	34.0%	0.9%
2004	6.5%	4.1%	36.1%	1.5%
2005	10.9%	7.5%	39.0%	2.9%
2006	13.8%	9.4%	41.5%	3.9%
2007	16.9%	10.2%	39.5%	4.0%
2008	11.7%	6.5%	32.5%	2.1%
2009	2.8%	1.8%	19.1%	0.3%
2010	1.3%	0.7%	16.1%	0.1%
2011	0.8%	0.3%	14.5%	0.0%
2012	0.4%	0.1%	14.0%	0.0%
2013	0.3%	0.1%	12.9%	0.0%
2014	0.2%	0.0%	9.0%	0.0%
2015	0.1%	0.0%	9.3%	0.0%



Notes: Data included in tables were derived from Freddie Mac’s Single Family Loan Level Dataset (SF LLD) as of September 2017 refresh: Originations 1999-September 30, 2016. Performance data: 1999-March 31, 2017, losses reported for loans liquidated as of 4Q2016. Loans with LTV > 81% and <= 97%.
 Loans with Repurchase flag = Y have been set to zero loss
 Cumulative Losses do not include modification losses
 Data is weighted in proportion to 2017-HQA3 FICO and LTV cohorts

Proxy Cohort Historical Modifications

Vintage	Current Pool Factor	Cumulative Principal Loss	Cumulative Modification Loss	Modification Loss as % of Principal Loss	Ever Modified %	Proxy Cohort Stats as of December 31, 2016		
						Orig WAC	Curr WAC	Current Mod WAC SF
2000	0.43%	0.17%	0.01%	9%	0.29%	8.17%	8.10%	0.07%
2001	1.13%	0.28%	0.02%	8%	0.45%	7.04%	6.96%	0.08%
2002	2.59%	0.48%	0.05%	10%	0.76%	6.61%	6.51%	0.11%
2003	6.31%	0.87%	0.09%	11%	1.47%	5.84%	5.69%	0.14%
2004	8.22%	1.43%	0.20%	14%	2.51%	5.91%	5.69%	0.22%
2005	9.34%	2.89%	0.36%	12%	3.98%	5.91%	5.53%	0.38%
2006	7.98%	3.87%	0.61%	16%	5.19%	6.49%	5.93%	0.55%
2007	9.31%	4.04%	0.88%	22%	6.97%	6.46%	5.82%	0.64%
2008	8.66%	2.18%	0.66%	30%	5.74%	6.16%	5.74%	0.41%
2009	15.62%	0.39%	0.03%	7%	1.09%	5.04%	4.98%	0.06%
2010	28.26%	0.11%	0.01%	8%	0.63%	4.75%	4.73%	0.02%
2011	35.30%	0.04%	0.00%	11%	0.51%	4.53%	4.52%	0.01%
2012	59.47%	0.01%	0.00%	1%	0.25%	3.77%	3.77%	0.00%
2013	61.40%	0.01%	0.00%	5%	0.20%	4.01%	4.01%	0.00%
2014	63.85%	0.00%	0.00%	10%	0.15%	4.41%	4.41%	0.00%
2015	84.43%	0.00%	0.00%	6%	0.02%	4.07%	4.07%	0.00%



Notes: Data included in tables were derived from Freddie Mac’s Single Family Loan Level Dataset (SF LLD) as of September 2017 refresh: Originations 1999-September 30, 2016. Performance data: 1999-March 31, 2017, losses reported for loans liquidated as of 4Q2016. Loans with LTV > 81% and <= 97%.
 Loans with Repurchase flag = Y have been set to zero loss
 Cumulative Losses do not include modification losses
 Data is weighted in proportion to 2017-HQA3 FICO and LTV cohorts

(1) Cumulative losses attributable to interest rate and forbearance modifications using same methodology as 2017-HQA2 transaction.

Freddie Mac Key Contacts



Team Member	Email Address	Business Phone
James Amico Vice President, Costing and Analytics	James_Amico@freddiemac.com	(571) 382-3095
Michael S. Reynolds Vice President, STACR	michael_s_reynolds@freddiemac.com	(571) 382-4852
Rushi Patel Director, Costing and Analytics	rushi_patel@freddiemac.com	(571) 382-4524
Christian Valencia Director, STACR	christian_valencia@freddiemac.com	(571) 382-3727