

Single Family Loan-Level Dataset Summary Statistics

November 2017

Background

- Freddie Mac is making the Single Family Loan-Level Dataset available at the direction of its regulator, the Federal Housing Finance Agency (FHFA) as part of a larger effort to increase transparency and help investors build more accurate credit performance models in support of the risk-sharing initiatives highlighted in FHFA’s Conservatorship Scorecard.¹
- The Single Family Loan-Level Dataset includes loan-level origination and loan performance and actual loss data on a portion of Single Family mortgages acquired by Freddie Mac. Approximately 24.4 million loans are in the “full” Single Family Loan-Level Dataset, and additional approximately 1 million loans in the Single Family HARP Loan-Level Dataset, meeting the following selection criteria²:
 - » Fully amortizing, 30-year fixed-rate mortgages originated from January 1, 1999, through December 31, 2016 with monthly loan performance data through June 30, 2017 that were sold to Freddie Mac or issued in Freddie Mac Participation Certificates (PCs).
 - » Fully amortizing, fixed-rate mortgages originated from January 1, 2005, through December 31, 2016 with monthly loan performance data through June 30, 2017 that were sold to Freddie Mac or issued in Freddie Mac Participation Certificates (PCs).
 - » Mortgages categorized as having verified or waived documentation (i.e. “full documentation”).
- Freddie Mac has created a smaller dataset for those who may not require, or have the capability, to download the full dataset. The sample dataset is a simple random sample³ of 50,000 loans selected from each vintage year of the full Single Family Loan-Level Dataset, totaling 900,000 loans. This sample dataset doesn’t include loans from the Single Family HARP Loan-Level Dataset.

¹The 2017 Conservatorship Scorecard can be found at

<https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/2017-Scorecard-for-Fannie-Mae-Freddie-Mac-and-CSS.pdf>

² Refer to the Appendix A for a summary of the criteria excluding loans from the Single Family Loan-Level Dataset

³ In simple random sampling, each loan in the full Single Family Loan-Level Dataset has an equal probability of being selected once for inclusion in the sample dataset. A simple random sample is meant to be an unbiased representation of the larger population.

Full Volume Dataset – Origination Summary Statistics								
Year	Loan Count	Total Original UPB (\$B)	Average Original UPB (\$)	Credit Score ¹	Original Combined Loan-to-Value (CLTV) Ratio ¹	Original Loan-to-Value (LTV) Ratio ¹	Original Debt-to-Income (DTI) Ratio ¹	Weighted Average Coupon (WAC) ¹
1999	1,095,017	137.91	125,942	712	77.6	77.5	33.2	7.3
2000	786,274	103.65	131,824	712	78.8	78.2	35.2	8.1
2001	1,755,368	259.45	147,802	715	76.2	75.5	33.7	7.0
2002	1,682,973	261.71	155,506	718	74.8	73.8	34.0	6.5
2003	1,927,087	311.17	161,473	725	73.5	72.1	32.8	5.7
2004	1,128,052	188.11	166,755	718	75.3	73.6	35.6	5.8
2005	1,691,791	289.32	171,012	725	72.2	70.5	36.3	5.8
2006	1,260,661	226.55	179,709	724	74.2	71.7	37.6	6.4
2007	1,220,340	223.87	183,451	725	75.8	73.1	37.8	6.3
2008	1,179,133	240.16	203,672	742	72.5	70.7	37.2	6.0
2009	1,973,651	423.15	214,399	763	67.7	65.9	32.3	4.9
2010	1,270,156	265.12	208,731	764	68.6	67.1	32.2	4.6
2011	953,388	207.84	218,005	765	69.3	67.9	32.3	4.3
2012	1,329,526	295.62	222,352	767	69.9	68.6	31.4	3.6
2013	1,299,244	283.24	218,004	760	72.5	71.4	32.6	3.8
2014	970,212	212.63	219,156	752	76.8	76.0	34.4	4.3
2015	1,304,977	298.55	228,781	753	75.1	74.3	34.4	4.0
2016	1,556,287	375.46	241,255	752	74.3	73.6	34.6	3.8
Total	24,384,137	4603.51	188,791	741	73.1	71.7	34.1	5.2

¹ Weighted averages using Original UPB

Full Volume Dataset – Performance Summary Statistics¹

Year	Loan Count	Prepay % ²	Cumulative Default Event % ³	Remaining % ⁴	Cumulative Post-Default Event Repurchase % ⁵	Ever D180 % ⁶	D180 and Pre-D180 Credit Event % ⁷	Cumulative Modification % ⁸	Ever D120 % ⁹	Ever D120 and Pre-D120 Credit Event % ¹⁰	Pre-D120 Modification rate ¹¹	Cumulative Loss amount (\$ B) ¹²
1999	1,095,017	96.8%	1.3%	1.9%	0.1%	2.1%	2.3%	0.6%	2.9%	3.0%	0.1%	0.2
2000	786,274	97.5%	1.4%	1.0%	0.2%	2.1%	2.3%	0.6%	2.8%	2.9%	0.1%	0.2
2001	1,755,368	96.2%	1.6%	2.2%	0.2%	2.3%	2.5%	0.7%	3.0%	3.1%	0.1%	0.8
2002	1,682,973	94.0%	2.0%	4.0%	0.2%	2.8%	3.1%	0.9%	3.6%	3.7%	0.1%	1.1
2003	1,927,087	89.0%	2.3%	8.7%	0.1%	3.5%	3.8%	1.4%	4.5%	4.6%	0.2%	1.8
2004	1,128,052	85.9%	3.8%	10.3%	0.2%	5.7%	6.1%	2.5%	7.0%	7.2%	0.3%	2.2
2005	1,691,791	82.3%	5.6%	12.1%	0.2%	8.0%	8.5%	3.7%	9.5%	9.8%	0.5%	7.1
2006	1,260,661	81.8%	7.9%	10.3%	0.4%	10.8%	11.6%	5.1%	12.6%	12.9%	0.8%	8.7
2007	1,220,340	79.3%	8.9%	11.9%	0.8%	12.7%	13.5%	6.1%	14.8%	15.1%	0.9%	9.1
2008	1,179,133	84.6%	4.6%	10.8%	0.4%	7.4%	7.8%	3.7%	8.7%	8.9%	0.4%	4.3
2009	1,973,651	79.9%	0.6%	19.5%	0.0%	1.1%	1.2%	0.5%	1.4%	1.5%	0.0%	0.7
2010	1,270,156	68.7%	0.3%	31.0%	0.0%	0.7%	0.7%	0.3%	0.9%	0.9%	0.0%	0.2
2011	953,388	59.6%	0.1%	40.3%	0.0%	0.4%	0.4%	0.2%	0.6%	0.6%	0.0%	0.1
2012	1,329,526	33.3%	0.1%	66.7%	0.0%	0.2%	0.2%	0.1%	0.3%	0.3%	0.0%	0
2013	1,299,244	29.7%	0.1%	70.2%	0.0%	0.2%	0.2%	0.1%	0.3%	0.3%	0.0%	0
2014	970,212	33.0%	0.0%	67.0%	0.0%	0.2%	0.2%	0.1%	0.4%	0.4%	0.0%	0
2015	1,304,977	16.0%	0.0%	84.0%	0.0%	0.1%	0.1%	0.0%	0.2%	0.2%	0.0%	0
2016	1,556,287	4.2%	0.0%	95.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
Total	24,384,137	68.1%	2.2%	29.6%	0.2%	3.3%	3.6%	1.5%	4.1%	4.2%	0.2%	37

¹ Reflects monthly performance data through June 30, 2017

² Count of loans that prepaid in full or were repurchased prior to default (Zero Balance Code = 01 or 06) divided by Loan Count; partial prepayments (curtailments) are excluded from the calculation

³ Count of loans that were terminated in the dataset due to a non-prepayment default event (Zero Balance Code = 03 or 09) divided by Loan Count

⁴ Count of active loans, divided by Loan Count

⁵ Count of loans that were terminated in the dataset due to a non-prepayment default event and subsequently repurchased (Zero Balance Code = 03 or 09 AND repurchase flag = 'Y'), divided by Loan Count

⁶ Count of loans that reached a delinquency status of D180, including at REO Acquisition, divided by Loan Count

⁷ Count of loans that reached a delinquency status of D180, including at REO Acquisition, and loans that were terminated in the dataset due to a non-prepayment credit event (Zero Balance Code = 03 or 09) divided by Loan Count.

⁸ Count of loans that were modified divided by Loan Count. Repeat mods on a loan are not part of the calculation.

⁹ Count of loans that reached a delinquency status of D120, including at REO Acquisition, divided by loan count.

¹⁰Count of loans that reached a delinquency status of D120, including at REO acquisition, and loans that were terminated in the dataset due to a non-prepayment credit event (Zero Balance Code = 03 or 09) divided by Loan Count.

¹¹Count of loans that were modified at or before a delinquency status of D120 divided by Loan count. Repeat modifications s on a loan are not part of the calculation.

¹² Sum of actual loss column for loans with a non-prepayment credit event (zero balance code = 03 or 09).

Full Volume Dataset – Performance Summary Statistics¹ (Cont'd)

Year	Total Original UPB (\$B)	% of Original UPB Prepaid ²	UPB-Weighted Cumulative Default Event % ³	% of Original UPB Remaining ⁴	UPB-Weighted Cumulative Post-Default Event Repurchase % ⁵	% of Original UPB Ever D180 ⁶	% of Original UPB D180 and Pre D180 Credit Event ⁷	UPB-Weighted Cumulative Modification % ⁸	UPB weighted Ever D120% ⁹	UPB Weighted Ever D120 and Pre-D120 Credit Event% ¹⁰	UPB Weighted Pre-D120 Modification rate ¹¹
1999	137.91	91.4%	0.9%	0.9%	0.1%	2.3%	2.3%	0.1%	1.6%	1.7%	0.5%
2000	103.65	95.6%	1.0%	0.5%	0.2%	2.1%	2.2%	0.1%	1.6%	1.7%	0.5%
2001	259.45	93.5%	1.1%	1.0%	0.2%	2.2%	2.2%	0.1%	1.6%	1.8%	0.5%
2002	261.71	90.6%	1.3%	2.0%	0.1%	2.5%	2.6%	0.1%	1.9%	2.1%	0.7%
2003	311.17	81.1%	1.7%	4.9%	0.1%	3.5%	3.6%	0.1%	2.8%	3.0%	1.2%
2004	188.11	79.1%	3.1%	6.3%	0.1%	6.0%	6.1%	0.3%	4.9%	5.2%	2.4%
2005	289.32	72.5%	5.5%	7.2%	0.2%	9.3%	9.5%	0.6%	7.8%	8.4%	3.8%
2006	226.55	75.5%	7.9%	7.0%	0.5%	12.8%	13.1%	0.9%	11.0%	11.8%	5.5%
2007	223.87	74.7%	8.9%	8.3%	0.8%	15.1%	15.5%	1.0%	13.1%	13.9%	6.7%
2008	240.16	81.2%	4.3%	6.7%	0.4%	8.6%	8.8%	0.5%	7.3%	7.7%	4.0%
2009	423.15	75.8%	0.5%	11.7%	0.0%	1.3%	1.3%	0.0%	1.0%	1.1%	0.4%
2010	265.12	66.7%	0.2%	19.3%	0.0%	0.7%	0.7%	0.0%	0.5%	0.5%	0.3%
2011	207.84	59.7%	0.1%	26.4%	0.0%	0.4%	0.4%	0.0%	0.3%	0.3%	0.2%
2012	295.62	31.2%	0.0%	53.0%	0.0%	0.2%	0.2%	0.0%	0.2%	0.2%	0.1%
2013	283.24	28.9%	0.0%	58.4%	0.0%	0.3%	0.3%	0.0%	0.2%	0.2%	0.1%
2014	212.63	36.5%	0.0%	56.3%	0.0%	0.3%	0.3%	0.0%	0.2%	0.2%	0.1%
2015	298.55	17.6%	0.0%	76.9%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%
2016	375.46	4.3%	0.0%	93.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	4603.51	60.6%	1.9%	27.9%	0.1%	3.5%	3.6%	0.2%	2.9%	3.1%	1.4%

¹ Reflects monthly performance data through June 30, 2017.

² Calculated by dividing the ending UPB of all prepaid loans (Zero Balance Code = 01 or 06) by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

³ Calculated by dividing the sum of the default event UPB by the Total Original UPB. The calculation does not include Prepayments or pre-default Repurchases (Zero Balance Code = 01 or 06). The UPB is determined using the priority in Footnote 12.

⁴ Calculated by dividing the ending UPB of all active loans (for which the Zero Balance Code is null in the terminal record) by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

⁵ Calculated by dividing the sum of the post-default event repurchase UPB by the Total Original UPB, for loans that were terminated due to a non-prepayment default event (see Footnote 3) and subsequently repurchased (Zero Balance Code = 03 or 09 AND repurchase flag = 'Y'). See Footnote 12 for determining the post-default event repurchase UPB

⁶ Calculated by dividing the ending UPB of all loans that reached a delinquency status of D180, including at REO Acquisition, by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

⁷ Calculated by dividing the ending UPB of all loans that reached a delinquency status as of D180, including at REO Acquisition, and loans that were terminated in the dataset due to a non-prepayment credit event (Zero Balance Code = 03 or 09) by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

⁸ Calculated by dividing the sum of the modification UPB by the Total Original UPB. The modification UPB is the current actual UPB as of the month of modification (modification flag = 'Y'). Repeat mods on a loan are not part of the calculation.

⁹ Calculated by dividing the ending UPB of all loans that reached a delinquency status of D120, including at REO Acquisition, by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

¹⁰ Calculated by dividing the ending UPB of all loans that reached a delinquency status as of D120, including at REO Acquisition, and loans that were terminated in the dataset due to a non-prepayment credit event (Zero Balance Code = 03 or 09) by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

¹¹ Calculated by dividing the ending UPB of all loans that were modified at or before D120 by the Total Original UPB. Repeat mods on a loan are not part of the calculation.

¹² If the ending UPB on the terminal record is null, determine the UPB by using the following priority: 1. Use the Current Actual UPB from the previous period; 2. if the Current Actual UPB in the previous period is null, use the Original UPB.

Sample Dataset – Origination Summary Statistics								
Year	Loan Count	Total Original UPB (\$B)	Average Original UPB (\$)	Credit Score ¹	Original Combined Loan-to-Value (CLTV) Ratio ¹	Original Loan-to-Value (LTV) Ratio ¹	Original Debt-to-Income (DTI) Ratio ¹	Weighted Average Coupon (WAC) ¹
1999	50000	6.3	125,689	711	78.0	77.9	33.6	7.4
2000	50000	6.5	130,919	712	79.0	78.4	35.2	8.1
2001	50000	7.4	148,132	715	76.5	75.7	33.8	7.0
2002	50000	7.7	154,680	717	75.0	74.0	34.1	6.6
2003	50000	8.0	160,419	724	73.7	72.4	33.0	5.8
2004	50000	8.3	166,583	718	75.4	73.7	35.7	5.8
2005	50000	8.5	170,652	724	72.1	70.3	36.3	5.8
2006	50000	9.0	179,593	724	74.3	71.8	37.6	6.4
2007	50000	9.2	183,764	725	75.8	73.1	37.8	6.3
2008	49999	10.2	203,979	743	72.7	70.9	37.0	6.0
2009	50001	10.7	213,723	763	67.9	66.1	32.5	4.9
2010	50000	10.4	208,389	763	68.7	67.2	32.4	4.6
2011	50000	10.9	217,079	764	69.5	68.1	32.4	4.4
2012	50000	11.1	222,672	767	69.9	68.5	31.4	3.6
2013	50000	10.9	217,600	759	73.1	72.0	32.9	3.9
2014	50000	11.0	219,868	752	76.7	76.0	34.3	4.3
2015	50000	11.5	229,368	752	75.1	74.4	34.4	4.0
2016	50000	12.0	239,713	751	74.3	73.7	34.7	3.8
Total	900,000	169.6	188,490	741	73.4	72.1	34.3	5.3

¹ Weighted averages using Original UPB

Sample Dataset – Performance Summary Statistics ¹												
Year	Loan Count	Prepay % ²	Cumulative Default Event % ³	Remaining % ⁴	Cumulative Post-Default Event Repurchase % ⁵	Ever D180 % ⁶	D180 and Pre-D180 Credit Event % ⁷	Cumulative Modification % ⁸	Ever D120% ⁹	Ever D120 and Pre-D120 Credit Event% ¹⁰	Pre-D120 Modification rate ¹¹	Cumulative Loss amount (\$ B) ¹²
1999	50000	96.9%	1.4%	1.7%	0.2%	2.2%	2.4%	0.6%	3.2%	3.2%	0.1%	0
2000	50000	97.5%	1.5%	1.0%	0.2%	2.1%	2.4%	0.5%	2.9%	2.9%	0.1%	0
2001	50000	96.2%	1.6%	2.2%	0.2%	2.3%	2.5%	0.7%	3.0%	3.1%	0.1%	0
2002	50000	94.2%	1.9%	3.9%	0.2%	2.9%	3.2%	0.9%	3.7%	3.7%	0.1%	0
2003	50000	88.9%	2.4%	8.7%	0.1%	3.7%	4.0%	1.4%	4.7%	4.8%	0.2%	0
2004	50000	86.1%	3.7%	10.2%	0.2%	5.6%	6.0%	2.4%	6.9%	7.1%	0.3%	0.1
2005	50000	82.5%	5.4%	12.1%	0.2%	7.7%	8.3%	3.6%	9.2%	9.5%	0.5%	0.2
2006	50000	81.6%	8.1%	10.3%	0.4%	11.0%	11.8%	5.1%	12.8%	13.1%	0.8%	0.4
2007	50000	79.2%	8.7%	12.0%	0.8%	12.5%	13.3%	6.0%	14.6%	15.0%	0.9%	0.4
2008	49999	85.2%	4.1%	10.7%	0.3%	6.8%	7.2%	3.4%	8.1%	8.2%	0.4%	0.2
2009	50001	79.3%	0.6%	20.1%	0.0%	1.1%	1.2%	0.5%	1.4%	1.4%	0.0%	0
2010	50000	69.6%	0.3%	30.1%	0.0%	0.7%	0.7%	0.3%	0.9%	0.9%	0.0%	0
2011	50000	61.0%	0.1%	38.9%	.	0.4%	0.4%	0.2%	0.6%	0.6%	0.0%	0
2012	50000	34.7%	0.0%	65.2%	0.0%	0.2%	0.2%	0.1%	0.3%	0.3%	0.0%	0
2013	50000	31.5%	0.1%	68.4%	0.0%	0.2%	0.2%	0.1%	0.4%	0.4%	0.0%	0
2014	50000	34.1%	0.0%	65.8%	0.0%	0.3%	0.3%	0.2%	0.4%	0.4%	0.0%	0
2015	50000	15.8%	0.0%	84.2%	0.0%	0.1%	0.1%	0.0%	0.2%	0.2%	0.0%	0
2016	50000	4.8%	0.0%	95.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
Total	900,000	67.7%	2.2%	30.0%	0.2%	3.4%	3.6%	1.5%	4.1%	4.2%	0.2%	1.3

¹ Reflects monthly performance data through June 30, 2017

² Count of loans that prepaid in full or were repurchased prior to default (Zero Balance Code = 01 or 06) divided by Loan Count; partial prepayments (curtailments) are excluded from the calculation

³ Count of loans that were terminated in the dataset due to a non-prepayment default event (Zero Balance Code = 03 or 09) divided by Loan Count

⁴ Count of active loans, divided by Loan Count

⁵ Count of loans that were terminated in the dataset due to a non-prepayment default event and subsequently repurchased (Zero Balance Code = 03 or 09 AND repurchase flag = 'Y'), divided by Loan Count

⁶ Count of loans that reached a delinquency status of D180, including at REO Acquisition, divided by Loan Count

⁷ Count of loans that reached a delinquency status of D180, including at REO Acquisition, and loans that were terminated in the dataset due to a non-prepayment credit event (Zero Balance Code = 03 or 09) divided by Loan Count

⁸ Count of loans that were modified divided by Loan Count. Repeat modifications on a loan are not part of the calculation.

⁹ Count of loans that reached a delinquency status of D120, including at REO Acquisition, divided by loan count.

¹⁰Count of loans that reached a delinquency status of D120, including at REO acquisition, and loans that were terminated in the dataset due to a non-prepayment credit event (Zero Balance Code = 03 or 09) divided by Loan Count.

¹¹Count of loans that were modified at or before a delinquency status of D120 divided by Loan count. Repeat modifications on a loan are not part of the calculation.

¹² Sum of actual loss column for loans with a non-prepayment credit event (zero balance code = 03 Or 09).

Sample Dataset – Performance Summary Statistics¹ (Cont'd)

Year	Total Original UPB (\$B)	% of Original UPB Prepaid ²	UPB-Weighted Cumulative Default Event % ³	% of Original UPB Remaining ⁴	UPB-Weighted Cumulative Post-Default Event Repurchase % ⁵	% of Original UPB Ever D180 ⁶	% of Original UPB D180 and Pre D180 Credit Event ⁷	UPB-Weighted Cumulative Modification % ⁸	UPB weighted Ever D120% ⁹	UPB Weighted Ever D120 and Pre-D120 Credit Event% ¹⁰	UPB Weighted Pre-D120 Modification rate ¹¹
1999	6.3	92.0%	1.0%	0.8%	0.1%	2.4%	2.5%	0.1%	1.7%	1.9%	0.5%
2000	6.5	95.5%	1.1%	0.4%	0.2%	2.2%	2.3%	0.1%	1.6%	1.8%	0.4%
2001	7.4	93.6%	1.1%	1.0%	0.2%	2.2%	2.2%	0.1%	1.6%	1.8%	0.5%
2002	7.7	91.0%	1.2%	2.0%	0.1%	2.6%	2.6%	0.1%	2.0%	2.2%	0.7%
2003	8.0	81.5%	1.8%	4.9%	0.0%	3.7%	3.8%	0.2%	2.9%	3.1%	1.2%
2004	8.3	79.5%	3.0%	6.2%	0.1%	6.0%	6.1%	0.3%	4.9%	5.2%	2.3%
2005	8.5	72.7%	5.3%	7.1%	0.2%	9.0%	9.2%	0.6%	7.6%	8.1%	3.9%
2006	9.0	75.4%	8.2%	6.9%	0.4%	12.9%	13.3%	0.9%	11.3%	12.0%	5.5%
2007	9.2	74.8%	8.8%	8.4%	0.8%	15.0%	15.3%	1.0%	13.0%	13.7%	6.7%
2008	10.2	82.1%	3.8%	6.7%	0.4%	7.9%	8.0%	0.4%	6.8%	7.1%	3.6%
2009	10.7	75.6%	0.5%	11.9%	0.0%	1.2%	1.2%	0.0%	0.9%	1.0%	0.4%
2010	10.4	67.6%	0.2%	18.7%	0.0%	0.7%	0.7%	0.0%	0.5%	0.5%	0.3%
2011	10.9	60.8%	0.1%	25.6%	.	0.5%	0.5%	0.0%	0.3%	0.4%	0.2%
2012	11.1	33.0%	0.0%	51.1%	0.0%	0.2%	0.2%	0.0%	0.1%	0.1%	0.1%
2013	10.9	31.2%	0.1%	56.7%	0.0%	0.3%	0.3%	0.0%	0.2%	0.2%	0.1%
2014	11.0	37.9%	0.0%	54.9%	.	0.4%	0.4%	0.0%	0.2%	0.2%	0.2%
2015	11.5	17.5%	0.0%	77.2%	.	0.1%	0.1%	.	0.1%	0.1%	0.0%
2016	12.0	5.0%	.	92.4%	.	0.0%	0.0%	.	0.0%	0.0%	0.0%
Total	169.6	60.7%	1.9%	28.1%	0.1%	3.5%	3.6%	0.2%	2.9%	3.1%	1.4%

¹ Reflects monthly performance data June 30, 2017.

² Calculated by dividing the ending UPB of all prepaid loans (Zero Balance Code = 01 or 06) by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

³ Calculated by dividing the sum of the default event UPB by the Total Original UPB. The calculation does not include Prepayments or pre-default Repurchases (Zero Balance Code = 01 or 06). The UPB is determined using the priority in Footnote 12.

⁴ Calculated by dividing the ending UPB of all active loans (for which the Zero Balance Code is null in the terminal record) by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

⁵ Calculated by dividing the sum of the post-default event repurchase UPB by the Total Original UPB, for loans that were terminated due to a non-prepayment default event (see Footnote 3) and subsequently repurchased (Zero Balance Code = 03 or 09 AND repurchase flag = 'Y'). See Footnote 12 for determining the post-default event repurchase UPB

⁶ Calculated by dividing the ending UPB of all loans that reached a delinquency status of D180, including at REO Acquisition, by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

⁷ Calculated by dividing the ending UPB of all loans that reached a delinquency status as of D180, including at REO Acquisition, and loans that were terminated in the dataset due to a non-prepayment credit event (Zero Balance Code = 03 or 09) by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

⁸ Calculated by dividing the sum of the modification UPB by the Total Original UPB. The modification UPB is the current actual UPB as of the month of modification (modification flag = 'Y'). For repeat modifications, the modification UPB of each is included. The UPB is determined using the priority in Footnote 12.

⁹ Calculated by dividing the ending UPB of all loans that reached a delinquency status of D120, including at REO Acquisition, by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

¹⁰ Calculated by dividing the ending UPB of all loans that reached a delinquency status as of D120, including at REO Acquisition, and loans that were terminated in the dataset due to a non-prepayment credit event (Zero Balance Code = 03 or 09) by the Total Original UPB. The UPB is determined using the priority in Footnote 12.

¹¹ Calculated by dividing the ending UPB of all loans that were modified at or before D120 by the Total Original UPB. Repeat modifications on a loan are not part of the calculation.

¹² If the ending UPB on the terminal record is null, determine the UPB by using the following priority: 1. Use the Current Actual UPB from the previous period; 2. if the Current Actual UPB in the previous period is null, use the Original UPB.

Origination Summary Statistics – Variances (Sample – Full)						
Year	Average Original UPB (\$)	Credit Score	Original Combined Loan-to-Value (CLTV) Ratio	Original Loan-to-Value (LTV) Ratio	Original Debt-to-Income (DTI) Ratio	Weighted Average Coupon (WAC)
1999	-253	0	0	0	0	0
2000	-905	0	0	0	0	0
2001	330	0	0	0	0	0
2002	-826	-1	0	0	0	0
2003	-1,054	-1	0	0	0	0
2004	-172	0	0	0	0	0
2005	-360	0	0	0	0	0
2006	-116	0	0	0	0	0
2007	313	0	0	0	0	0
2008	306	1	0	0	0	0
2009	-676	0	0	0	0	0
2010	-342	-1	0	0	0	0
2011	-925	-1	0	0	0	0
2012	320	0	0	0	0	0
2013	-404	-1	1	1	0	0
2014	712	0	0	0	0	0
2015	587	0	0	0	0	0
2016	-1,542	0	0	0	0	0

Performance Summary Statistics – Variances (Sample – Full)

Year	Prepay %	Cumulative Default Event %	Remaining %	Cumulative Post-Default Event Repurchase %	Ever D180 %	D180 and Pre-D180 Credit Event %	Cumulative Modification %	Ever D120%	Ever D120 and Pre-D120 Credit Event%	Pre-D120 Modification rate
1999	0.10%	0.10%	-0.20%	0.10%	0.10%	0.10%	0.00%	0.30%	0.20%	0.00%
2000	0.00%	0.10%	0.00%	0.00%	0.00%	0.10%	-0.10%	0.10%	0.00%	0.00%
2001	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2002	0.20%	-0.10%	-0.10%	0.00%	0.10%	0.10%	0.00%	0.10%	0.00%	0.00%
2003	-0.10%	0.10%	0.00%	0.00%	0.20%	0.20%	0.00%	0.20%	0.20%	0.00%
2004	0.20%	-0.10%	-0.10%	0.00%	-0.10%	-0.10%	-0.10%	-0.10%	-0.10%	0.00%
2005	0.20%	-0.20%	0.00%	0.00%	-0.30%	-0.20%	-0.10%	-0.30%	-0.30%	0.00%
2006	-0.20%	0.20%	0.00%	0.00%	0.20%	0.20%	0.00%	0.20%	0.20%	0.00%
2007	-0.10%	-0.20%	0.10%	0.00%	-0.20%	-0.20%	-0.10%	-0.20%	-0.10%	0.00%
2008	0.60%	-0.50%	-0.10%	-0.10%	-0.60%	-0.60%	-0.30%	-0.60%	-0.70%	0.00%
2009	-0.60%	0.00%	0.60%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.10%	0.00%
2010	0.90%	0.00%	-0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	1.40%	0.00%	-1.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	1.40%	-0.10%	-1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	1.80%	0.00%	-1.80%	0.00%	0.00%	0.00%	0.00%	0.10%	0.10%	0.00%
2014	1.10%	0.00%	-1.20%	0.00%	0.10%	0.10%	0.10%	0.00%	0.00%	0.00%
2015	-0.20%	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2016	0.60%	0.00%	-0.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Performance Summary Statistics – Variances (Sample – Full, Cont'd)									
Year	% of Original UPB Prepaid	% of Original UPB Remaining	UPB-Weighted Cumulative Default Event %	UPB-Weighted Cumulative Post-Default Event Repurchase %	D180 and Pre-D180 Credit Event %	UPB-Weighted Cumulative Modification %	Ever D120%	Ever D120 and Pre-D120 Credit Event%	Pre-D120 Modification rate
1999	0.60%	0.10%	<u>-0.10%</u>	0.00%	0.10%	0.20%	0.00%	0.10%	0.20%
2000	-0.10%	0.10%	-0.10%	0.00%	0.10%	0.10%	0.00%	0.00%	0.10%
2001	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2002	0.40%	-0.10%	0.00%	0.00%	0.10%	0.00%	0.00%	0.10%	0.10%
2003	0.40%	0.10%	0.00%	-0.10%	0.20%	0.20%	0.10%	0.10%	0.10%
2004	0.40%	-0.10%	-0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	0.20%	-0.20%	-0.10%	0.00%	-0.30%	-0.30%	0.00%	-0.20%	-0.30%
2006	-0.10%	0.30%	-0.10%	-0.10%	0.10%	0.20%	0.00%	0.30%	0.20%
2007	0.10%	-0.10%	0.10%	0.00%	-0.10%	-0.20%	0.00%	-0.10%	-0.20%
2008	0.90%	-0.50%	0.00%	0.00%	-0.70%	-0.80%	-0.10%	-0.50%	-0.60%
2009	-0.20%	0.00%	0.20%	0.00%	-0.10%	-0.10%	0.00%	-0.10%	-0.10%
2010	0.90%	0.00%	-0.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	1.10%	0.00%	-0.80%	#VALUE!	0.10%	0.10%	0.00%	0.00%	0.10%
2012	1.80%	0.00%	-1.90%	0.00%	0.00%	0.00%	0.00%	-0.10%	-0.10%
2013	2.30%	0.10%	-1.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	1.40%	0.00%	-1.40%	0.00%	0.10%	0.10%	0.00%	0.00%	0.00%
2015	-0.10%	0.00%	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2016	0.70%	0.00%	-0.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

HARP (Table#1) Dataset – Performance Summary Statistics¹

Year	Loan Count	Loan count weighted Credit Score	Loan count weighted Loan to Value %	Loan count weighted Interest Rate %	Loan count weighted -Original Unpaid Principal Balance	Prepay % ²	Cumulative Default Event% % ³	Remaining % ⁴	Cumulative Post-Default Event Repurchase % ⁵	EverD120 and Pre-D120 Modification Rate ⁶	Ever D120 % ⁷	Ever D180 % ⁸	D180 and Pre-D180 Credit Event % ⁹	Cumulative Modification % ¹⁰
2009	71,512	737	91.9	5.2	225,412	63.6%	4.9%	31.6%	0.2%	8.5%	8.2%	6.6%	7.3%	3.2%
2010	156,723	745	92.9	5.0	224,091	56.6%	3.2%	40.1%	0.1%	5.9%	5.7%	4.6%	5.0%	2.2%
2011	136,565	742	96.2	4.8	206,103	47.3%	2.3%	50.5%	0.0%	4.4%	4.3%	3.4%	3.7%	1.7%
2012	342,326	740	111.4	4.1	194,701	29.2%	1.6%	69.2%	0.0%	3.0%	2.9%	2.2%	2.5%	1.0%
2013	228,049	726	106.7	4.1	178,599	20.5%	1.2%	78.3%	0.0%	2.6%	2.6%	2.0%	2.2%	0.9%
2014	51,031	711	100.7	4.6	166,305	15.1%	0.9%	83.9%	0.0%	2.6%	2.6%	1.9%	2.1%	1.0%
2015	28,572	710	98.8	4.2	162,846	7.4%	0.3%	92.4%	0.0%	1.3%	1.2%	0.9%	1.0%	0.6%
2016	14,549	706	97.1	4.0	161,759	2.2%	0.0%	97.8%	0.0%	0.3%	0.3%	0.2%	0.2%	0.2%
Total	1,029,327	735	103.1	4.4	189,977	34.5%	2.0%	63.5%	0.0%	3.8%	3.7%	2.9%	3.2%	1.4%

¹ Reflects monthly performance data through June 30, 2017

² Count of loans that prepaid in full or were repurchased prior to default (Zero Balance Code = 01 or 06) divided by Loan Count; partial prepayments (curtailments) are excluded from the calculation

³ Count of loans that were terminated in the dataset due to a non-prepayment default event (Zero Balance Code = 03 or 09) divided by Loan Count.

⁴ Count of active loans, divided by Loan Count.

⁵ Count of loans that were terminated in the dataset due to a non-prepayment default event and subsequently repurchased (Zero Balance Code = 03 or 09 AND repurchase flag = 'Y'), divided by Loan Count

⁶ Count of loans that reached a delinquency status of D120, including at REO Acquisition or were modified prior to delinquency status of D120 divided by loan count.

⁷ Count of loans that reached a delinquency status of D120, including at REO Acquisition, divided by loan count.

⁸ Count of loans that reached a delinquency status of D180, including at REO Acquisition, divided by Loan Count

⁹ Count of loans that reached a delinquency status of D180, including at REO Acquisition, and loans that were terminated in the dataset due to a non-prepayment credit event (Zero Balance Code = 03 or 09) divided by Loan Count

¹⁰ Count of loans that were modified divided by Loan Count. Repeat mods on a loan are not part of the calculation

HARP (Table#2) Dataset – Performance Summary Statistics¹

Year	Loan Count	UPB weighted Credit Score	UPB Weighted Loan to Value	UPB weighted Interest Rate	UPB weighted Cumulative Loss % ²	UPB weighted Prepay% ³	UPB weighted Cumulative Default Event% ⁴	UPB weighted Remaining % ⁵	UPB weighted Cumulative Post-Default Event Repurchase % ⁶	UPB weighted Ever D120 % ⁷	UPB weighted EverD120 and Pre-D120 Modification Rate ⁸	UPB weighted Ever D180 % ⁹	UPB weighted D180 and Pre-D180 Credit Event % ¹⁰	UPB weighted Cumulative Modification % ¹¹
2009	71,512	738	92.1	5.2	1.6%	60.2%	4.6%	24.0%	0.2%	8.1%	7.8%	6.3%	6.9%	3.3%
2010	156,723	745	93.1	5.0	1.0%	53.9%	3.1%	31.0%	0.1%	5.7%	5.5%	4.4%	4.8%	2.3%
2011	136,565	742	96.5	4.8	0.7%	45.7%	2.1%	39.7%	0.0%	4.3%	4.1%	3.2%	3.6%	1.8%
2012	342,326	740	111.6	4.1	0.5%	28.1%	1.5%	57.9%	0.0%	2.8%	2.7%	2.0%	2.3%	1.0%
2013	228,049	725	106.5	4.1	0.3%	20.0%	1.1%	68.2%	0.0%	2.5%	2.4%	1.9%	2.0%	0.9%
2014	51,031	709	100.2	4.6	0.2%	15.8%	0.8%	75.5%	0.0%	2.5%	2.4%	1.8%	1.9%	1.0%
2015	28,572	709	98.0	4.2	0.1%	7.6%	0.2%	86.4%	0.0%	1.2%	1.2%	0.9%	0.9%	0.6%
2016	14,549	704	96.3	4.0	0.0%	2.3%	0.0%	94.8%	0.0%	0.4%	0.4%	0.2%	0.2%	0.2%
Total	1,029,327	736	102.8	4.4	0.6%	34.7%	1.9%	51.9%	0.0%	3.8%	3.6%	2.9%	3.2%	1.5%

¹ Reflects monthly performance data through June 30, 2017

² Sum of actual loss columns for loans with a non-prepayment credit event (zero balance code = 03 or 09) divided by Total Loan OUPB.

³ UPB of loans that prepaid in full or were repurchased prior to default (Zero Balance Code = 01 or 06) divided by Total Loan OUPB; partial prepayments (curtailments) are excluded from the calculation

⁴ UPB of loans that were terminated in the dataset due to a non-prepayment default event (Zero Balance Code = 03 or 09) divided by Total Loan OUPB.

⁵ UPB of active loans, divided by Total Loan OUPB

⁶ UPB of loans that were terminated in the dataset due to a non-prepayment default event and subsequently repurchased (Zero Balance Code = 03 or 09 AND repurchase flag = 'Y'), divided by Total Loan OUPB

⁷ UPB of loans that reached a delinquency status of D120, including at REO Acquisition, divided by Total Loan OUPB.

⁸ UPB of loans that reached a delinquency status of D120, including at REO Acquisition or were modified prior to delinquency status of D120 divided by OUPB. Repeat modifications on a loan are not part of the calculation

⁹ UPB of loans that reached a delinquency status of D180, including at REO Acquisition, divided by Total Loan OUPB

¹⁰ UPB of loans that reached a delinquency status of D180, including at REO Acquisition, and loans that were terminated in the dataset due to a non-prepayment credit event (Zero Balance Code = 03 or 09) divided by Total Loan OUPB

¹¹ UPB of loans that were modified divided by Total Loan OUPB. Repeat mods on a loan are not part of the calculation

Additional Information

- For additional information, please visit our Web site at FreddieMac.com in the Research Additional Datasets area:
http://www.freddieMac.com/research/datasets/sf_loanlevel_dataset.html
- For support with technical issues related to downloading the Single Family Loan-Level Dataset files, please send an email to Support@eMBS.com
- For support with data questions related to the Single Family Loan-Level Dataset, please send an email to [SF Loan Level Data Inquiry@FreddieMac.com](mailto:SF_Loan_Level_Data_Inquiry@FreddieMac.com)

Appendix A: Loan Exclusion Criteria

- The following types of mortgages were excluded from the Single Family Loan-Level Dataset:
 1. Adjustable Rate Mortgages (ARMs), Initial Interest, balloons, and any mortgages with step rates
 2. Government-insured mortgages, including Federal Housing Administration/Veterans Affairs (FHA/VA), Guaranteed Rural Housing (GRH), and HUD-Guaranteed Section 184 Native American mortgages
 3. Home Possible®/Home Possible Neighborhood Solution® Mortgages and other affordable mortgages (including lender branded affordable loan products)
 4. Mortgages delivered to Freddie Mac under alternate agreements
 5. Mortgages for which the documentation is not verified or not waived
 6. Mortgages associated with Mortgage Revenue Bonds purchased by Freddie Mac
 7. Mortgages delivered to Freddie Mac with credit enhancements other than primary mortgage insurance, with the exception of certain lender-negotiated credit enhancements
- Mortgages with original loan terms of 420 months or more, and 300 months or less if originated prior to 1/1/2005. If loan was originated on/after 1/1/2005, this exclusion does not apply.

Appendix B: Loan Termination Events

- Loan performance information in the Single Family Loan-Level Dataset includes monthly loan balance, delinquency status and certain workout information up to and including the earliest of the following termination events:
 1. Prepaid or Matured (Voluntary Payoff)
 2. Foreclosure Alternative Group (Short Sale, Third Party Sale, Charge Off or Note Sale)
 3. Repurchase prior to Property Disposition
 4. REO Disposition