Real Estate Owned (REO) Stabilization Opportunity Score
A Brief Explanation

What is the intended use of the REO Stabilization Opportunity Score (SOS) Index?
After properties are foreclosed and being auctioned off unsuccessfully, they will become Real Estate Owned (REO) properties when lenders take over their ownership. The REO SOS Index is designed to help local agencies, organizations, and other entities identify opportunities for rehabilitating, acquiring, and/or redeveloping REO properties in order to stabilize communities impacted by foreclosures and REOs.

Although the Index was produced to help participating agencies of the Neighborhood Stabilization Program, any entity interested in REO stabilization work can use it.

How is the score calculated?
The Index evaluates two main areas (current and future availability of REOs and local REO/real estate market health) using four criteria:

1) *REO availability:* This criterion evaluates the number of REOs in each ZIP as of December 2008, weighted by the concentration of these REOs. Previous studies consistently suggest that when foreclosures and REOs are spatially clustered, the negative spillover effects are more intense. The concentration weight reflects that fact. The number of REOs is based on the LPS (Lender Processing Services Inc.) Applied Analytics (formerly McDash) dataset, which covers the majority of active mortgages. Nonetheless, because of the dataset does not cover the entire pool of active mortgages, the actual number of REOs within each ZIP may be slightly higher than the estimates indicated in the attached table. Please refer to Footnote 3 in the table for more detailed coverage information for a specific state.

2) *90-day and more delinquency:* This criterion serves as a proxy for possible future REOs. Similar to the "REO availability" criterion, this criterion evaluates the number of 90-day and longer delinquencies, weighted by their spatial concentrations. The estimates are subject to the same coverage limitations discussed in the "REO availability" section.

3) *Median time of an REO on the market:* This criterion evaluates the median length of time on the market for the properties that have become REO since 2005. The calculation includes not only the properties that have been repurchased since they became REO, but also those that are currently for sale. A longer median time on the market usually suggests a more stagnant local REO/real estate market.

4) *Median home sales price decline:* This criterion evaluates the absolute decline of the median home sales price, weighted by the percentage of such decline, between the period of January 2005 to June 2006 and the period of July 2007 to December 2008. ZIP codes with fewer than 15 transactions in either period are excluded since a small transaction volume could significantly skew the median sales price. Transactions with a price lower than $10,000 are also excluded in the calculation as they are usually unconventional sales, such as transfers between family members. A negative value here suggests that the median home sale price has gone up. This criterion uses the data provided by the Warren Group.

Every ZIP code that has sufficient data for each of these four criteria is analyzed and compared against the rest of such ZIP codes within the state. A standardized score is then given in each of these four

areas, 1.000 represents the higher level in the state (e.g. the longest median time of an REO on the market), while 0.000 represents the lowest level in the state. The final composite standardized score takes into consideration all four criteria.

What does the score mean?
The SOS Index is a standardized score, and it reflects the relative distressed level of a ZIP code with respect to the other ZIP codes in the state. A higher score indicates a higher distressed level. For instance, a ZIP code with a higher composite score may have a higher volume of REOs and 90-day+ delinquency. Compared with other ZIP codes in the state, it takes longer for REOs there to sell at a greater discount.

However, a higher score should not be interpreted simply as having higher stabilization potential: other factors may be in play.

On one hand, REO stabilization efforts in highly distressed areas may be more cost-effective than in a marginally distressed area. For instance, basic rehabilitation efforts on REOs in a highly distressed neighborhood could be a significant improvement, but it might not be that significant in a marginally distressed neighborhood where the few foreclosed properties are in relatively good condition. On the other hand, stabilization efforts in highly distressed neighborhoods could be less effective if the conditions are dire.

Therefore, the REO Index should serve only as a starting point, and policymakers should consider the specific local conditions when formulating REO strategies.

What is the difference between the REO SOS Index and the HUD and LISC indexes?
In addition to the obvious difference in each index's methodology, the REO SOS Index focuses exclusively on factors closely related to REOs. Nonetheless, the HUD Foreclosure Risk Score and the LISC Foreclosure Needs Score consider factors related to potential foreclosures, such as the prevalence of high-cost (or subprime) mortgages, vacancy rate, unemployment rate, etc. If an organization's program seeks to target areas with high foreclosure risks, then HUD and LISC indexes may be more appropriate. If an organization is interested in stabilizing the properties that have already become REOs, then the REO SOS Index is more appropriate.

Although foreclosure risk and REOs are somewhat related, they are not necessarily correlated. For instance, only a portion of the foreclosures will eventually end up in REOs. In addition, even after foreclosed properties have become REOs, some local areas, especially the relatively healthy ones, could leave such properties to market forces and not need additional (public) intervention efforts.

In addition, there are more-minor differences between the REO SOS Index and the HUD/LISC indexes. The REO SOS Index uses more recent data and is calculated at the ZIP code level. The HUD Index is calculated at the Census Block Group level, although the LISC Index uses ZIP codes.

Where can I obtain further information on the REO SOS index?
A discussion paper with more in-depth discussion of the Index and related REO issues is underway. Please contact Kai-yan Lee (*kai-yan.lee@bos.frb.org*) for questions regarding the index.

Rhode Island REO Stabilization Opportunity Score

(Discussion Draft)

ZIP Code [1]	Town [2]	REO Stability Opportunity Score	Number of REOs [3]	REOs per Square Mile	Index: REO Availability	Number of 90-day and more Delinquency [3]	90-day and more Delinquency per Square Mile	Index: 90-day and more Delinquency	Median time of REO on Market (month) [4]	Index: Median Time of REO on Market	Median Home Sales Price Decline [5]	Percent of Median Home Sales Price Decline	Index: Home Sales Price Decline
02804	ASHAWAY	0.245	2	0.16	0.189	4	0.32	0.132	6.90	0.792	$20,000	8.0%	0.113
02809	BRISTOL	0.340	4	0.40	0.358	23	2.27	0.566	4.94	0.208	$36,000	10.7%	0.340
02813	CHARLESTOWN	0.226	3	0.08	0.132	8	0.22	0.151	2.45	0.019	$79,000	21.4%	0.887
02814	CHEPACHET	0.377	4	0.09	0.208	17	0.38	0.245	6.85	0.774	$37,500	13.6%	0.415
02816	COVENTRY	0.660	20	0.54	0.547	73	1.96	0.660	6.90	0.792	$26,000	10.2%	0.283
02817	WEST GREENWICH	0.019	6	0.12	0.302	16	0.32	0.189	4.94	0.208	$23,700	7.2%	0.132
02818	EAST GREENWICH	0.151	6	0.26	0.377	20	0.88	0.472	3.90	0.094	$30,000	6.2%	0.170
02822	EXETER	0.075	2	0.04	0.019	8	0.14	0.094	5.94	0.660	$27,500	8.4%	0.226
02825	FOSTER	0.094	5	0.09	0.245	7	0.12	0.057	5.84	0.396	$34,000	11.4%	0.358
02827	GREENE	0.170	3	0.14	0.226	3	0.14	0.019	2.94	0.038	$67,500	21.8%	0.849
02828	GREENVILLE	0.321	1	0.20	0.113	6	1.20	0.283	5.94	0.660	$36,900	12.9%	0.396
02830	HARRISVILLE	0.132	2	0.08	0.094	17	0.68	0.396	5.90	0.509	$19,600	7.7%	0.094
02835	JAMESTOWN	0.566	1	0.10	0.057	3	0.31	0.075	7.87	0.962	$155,000	26.7%	1.000
02837	LITTLE COMPTON	0.094	1	0.05	0.000	4	0.19	0.038	14.74	1.000	-$45,000	-10.0%	0.019
02840	NEWPORT	0.642	19	2.39	0.660	17	2.14	0.528	5.94	0.660	$40,000	10.5%	0.377
02842	MIDDLETOWN	0.189	1	0.08	0.038	10	0.77	0.302	5.90	0.509	$36,250	10.0%	0.321
02852	NORTH KINGSTOWN	0.698	12	0.37	0.509	23	0.70	0.434	7.39	0.943	$46,000	13.9%	0.528
02857	NORTH SCITUATE	0.019	8	0.19	0.340	15	0.35	0.208	4.94	0.208	$6,750	2.2%	0.075
02859	PASCOAG	0.283	3	0.11	0.170	7	0.25	0.170	6.90	0.792	$22,750	8.3%	0.189
02860	PAWTUCKET	0.887	58	10.70	0.906	98	18.08	0.943	6.39	0.717	$38,000	17.5%	0.547
02861	PAWTUCKET	0.868	19	5.37	0.755	66	18.64	0.887	6.90	0.792	$46,174	20.1%	0.660
02863	CENTRAL FALLS	0.943	42	34.71	0.943	38	31.40	0.868	5.90	0.509	$80,000	32.0%	0.981
02864	CUMBERLAND	0.604	20	0.75	0.604	53	1.98	0.642	5.40	0.302	$51,550	17.2%	0.623
02865	LINCOLN	0.472	14	0.81	0.566	33	1.91	0.604	3.94	0.132	$40,000	14.0%	0.472
02871	PORTSMOUTH	0.453	9	0.39	0.453	14	0.61	0.321	4.44	0.189	$65,000	16.7%	0.717
02874	SAUNDERSTOWN	0.000	2	0.15	0.151	2	0.15	0.000	2.94	0.038	-$58,000	-11.8%	0.000
02878	TIVERTON	0.717	10	0.34	0.434	22	0.75	0.453	6.90	0.792	$60,500	20.5%	0.811
02879	WAKEFIELD	0.415	5	0.13	0.283	22	0.59	0.415	5.42	0.358	$55,750	15.6%	0.604
02882	NARRAGANSETT	0.264	4	0.31	0.321	12	0.92	0.377	1.97	0.000	$57,250	13.7%	0.566
02885	WARREN	0.358	5	0.81	0.491	13	2.11	0.509	5.40	0.302	$29,250	10.4%	0.302
02886	WARWICK	0.547	27	1.82	0.679	71	4.79	0.717	5.90	0.509	$21,000	8.6%	0.151
02888	WARWICK	0.585	21	3.44	0.736	49	8.03	0.736	4.94	0.208	$35,000	15.2%	0.453
02889	WARWICK	0.830	51	5.82	0.849	91	10.38	0.849	5.90	0.509	$46,000	20.1%	0.642
02891	WESTERLY	0.189	9	0.34	0.415	17	0.63	0.358	3.94	0.132	$27,500	9.6%	0.264
02892	WEST KINGSTON	0.509	2	0.07	0.075	6	0.21	0.113	6.84	0.736	$87,462	25.0%	0.962
02893	WEST WARWICK	0.774	49	6.41	0.868	67	8.77	0.792	5.87	0.415	$44,000	19.0%	0.585
02895	WOONSOCKET	0.906	57	7.39	0.887	77	9.99	0.811	6.84	0.736	$50,500	23.4%	0.755
02896	NORTH SMITHFIELD	0.057	6	0.27	0.396	11	0.49	0.226	3.90	0.094	$28,500	8.9%	0.245
02903	PROVIDENCE	0.491	8	5.00	0.642	4	2.50	0.340	6.90	0.792	-$3,750	-1.5%	0.057
02904	PROVIDENCE	0.755	39	7.36	0.830	66	12.45	0.830	5.89	0.453	$34,000	15.5%	0.434
02905	PROVIDENCE	0.981	59	15.25	0.925	75	19.38	0.925	7.35	0.925	$68,299	30.3%	0.943
02906	PROVIDENCE	0.377	15	4.55	0.717	14	4.24	0.585	5.40	0.302	-$6,500	-1.7%	0.038
02907	PROVIDENCE	0.925	87	38.50	0.962	112	49.56	1.000	5.90	0.509	$48,278	25.4%	0.792

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02908	PROVIDENCE	0.962	108	32.83	0.981	122	37.08	0.962	6.90	0.792	$54,000	25.1%	0.830
02909	PROVIDENCE	1.000	145	42.52	1.000	135	39.59	0.981	7.87	0.962	$60,000	30.8%	0.906
02910	CRANSTON	0.849	30	8.29	0.792	67	18.51	0.906	5.89	0.453	$50,500	21.6%	0.736
02911	NORTH PROVIDENCE	0.717	25	10.59	0.811	31	13.14	0.755	5.87	0.415	$38,200	15.6%	0.509
02914	EAST PROVIDENCE	0.679	13	2.40	0.623	32	5.90	0.679	5.42	0.358	$50,000	20.8%	0.698
02915	RIVERSIDE	0.623	8	1.54	0.585	20	3.86	0.623	5.90	0.509	$37,500	15.5%	0.491
02916	RUMFORD	0.302	5	1.92	0.528	10	3.85	0.547	3.94	0.132	$23,000	8.4%	0.208
02917	SMITHFIELD	0.528	9	0.43	0.472	20	0.95	0.491	3.44	0.075	$65,000	23.2%	0.868
02919	JOHNSTON	0.792	39	1.64	0.698	67	2.83	0.698	5.90	0.509	$55,000	22.0%	0.774
02920	CRANSTON	0.792	43	4.67	0.774	72	7.82	0.774	5.89	0.453	$51,500	20.0%	0.679
02921	CRANSTON	0.415	3	0.21	0.264	10	0.70	0.264	4.94	0.208	$87,500	22.5%	0.925

Notes:

(1) Only includes ZIPs codes with sufficient data.

(2) Town names are based on USPS standard town names assigned to the ZIP codes. Some, though not many, ZIP codes may cross town limits and therefore cover multiple towns.

(3) Reflect status as of Dec. 2008. The dataset from LPS Applied Analytics covers approximately 78% of the mortgages in RI.   Therefore, it is possible that the actual numbers of REOs and delinquencies are slightly higher than these estimates, which are based on the dataset from LPS Applied Analytics.

(4) The calculation includes properties became REO since 2005, covering properties currently still on the market and the ones already have been purchased.

(5) Median home sales price decline calculated based on transaction records from the Warren Group. It is the difference between the median home sales price for the period of Jan 2005-June 2006 and the period of July 2007- Oct. 2008. ZIP codes with fewer than 15 transactions in either period are eliminated from the calculation as a small transaction volume could severely skew the median sales price.