



EarlyIndicator[®]

Version 5.0

Overview

The EarlyIndicator Vision

A complete delinquency scoring system, second-to-none in performance.

- **Complete:** models provide coverage for all depths of delinquency and all segments of the portfolio
- **Delinquency:** models designed to score all loans due for one or more payments
- **Second-to-none in performance:** highly accurate, time-tested models

What is EarlyIndicator?

- EarlyIndicator is a delinquency scoring system designed to help you make decisions about how to most effectively use your delinquent loan management resources
- Uses your servicing system data to score loans due for one or more payments with each loan assigned one of two types of scores:
 - Collection (loans due for one payment)
 - Loss Mitigation (loans due for two or more payments, including loans in foreclosure)

What is EarlyIndicator (cont'd)?

- EarlyIndicator is scoring software that risk ranks delinquent loans from early collections to foreclosure
- Used to determine the likelihood of a loan becoming more seriously delinquent or continuing through to loss producing state
- Developed as a single solution to delinquency management; it can be used on all loans in a servicer's portfolio, not just Freddie Mac loans

Who Benefits from EarlyIndicator?

- **Borrower:** Help servicers assist homeowners to avoid foreclosure, if possible
- **Servicer:** Lower the cost of doing business by bringing greater efficiency to the delinquency management process
- **Freddie Mac/Other Investors:** Reduce credit losses through more effective delinquency management

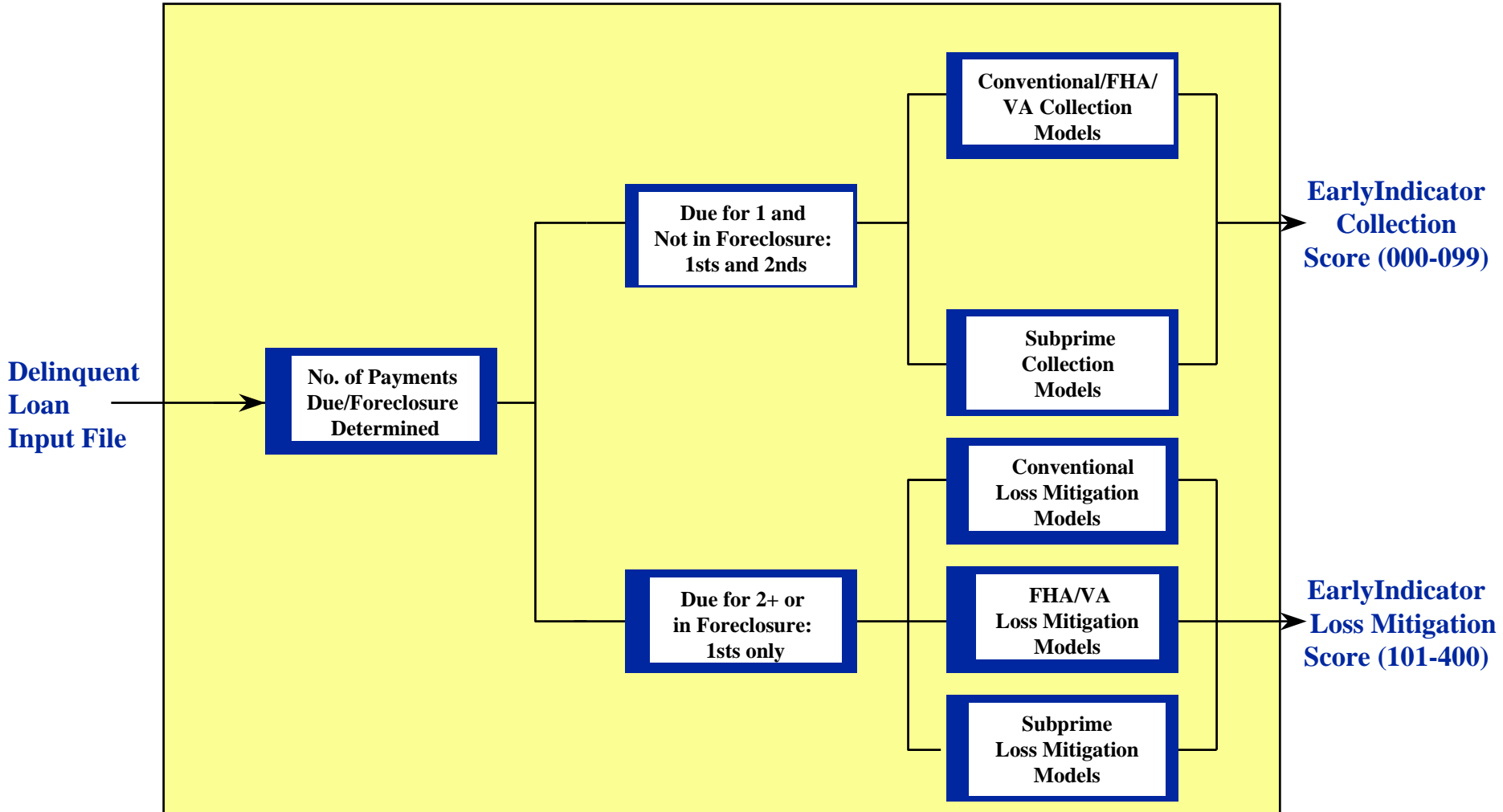
EarlyIndicator Has Become the Industry Standard

- Over 50% of the mortgages in the \$7.5 trillion mortgage market run through EarlyIndicator
- Seventeen of the top 20 servicers are EarlyIndicator licensees
- Twelve subprime servicers are now EarlyIndicator licensees

How Does EarlyIndicator Work?

- Servicers score their loans due for one or more payments on a monthly basis
- EarlyIndicator generates a score for each delinquent loan
 - **Collection score** for mortgages due for one payment
 - **Loss mitigation score** for mortgages due for two or more payments

EarlyIndicator 5.0 at a Glance



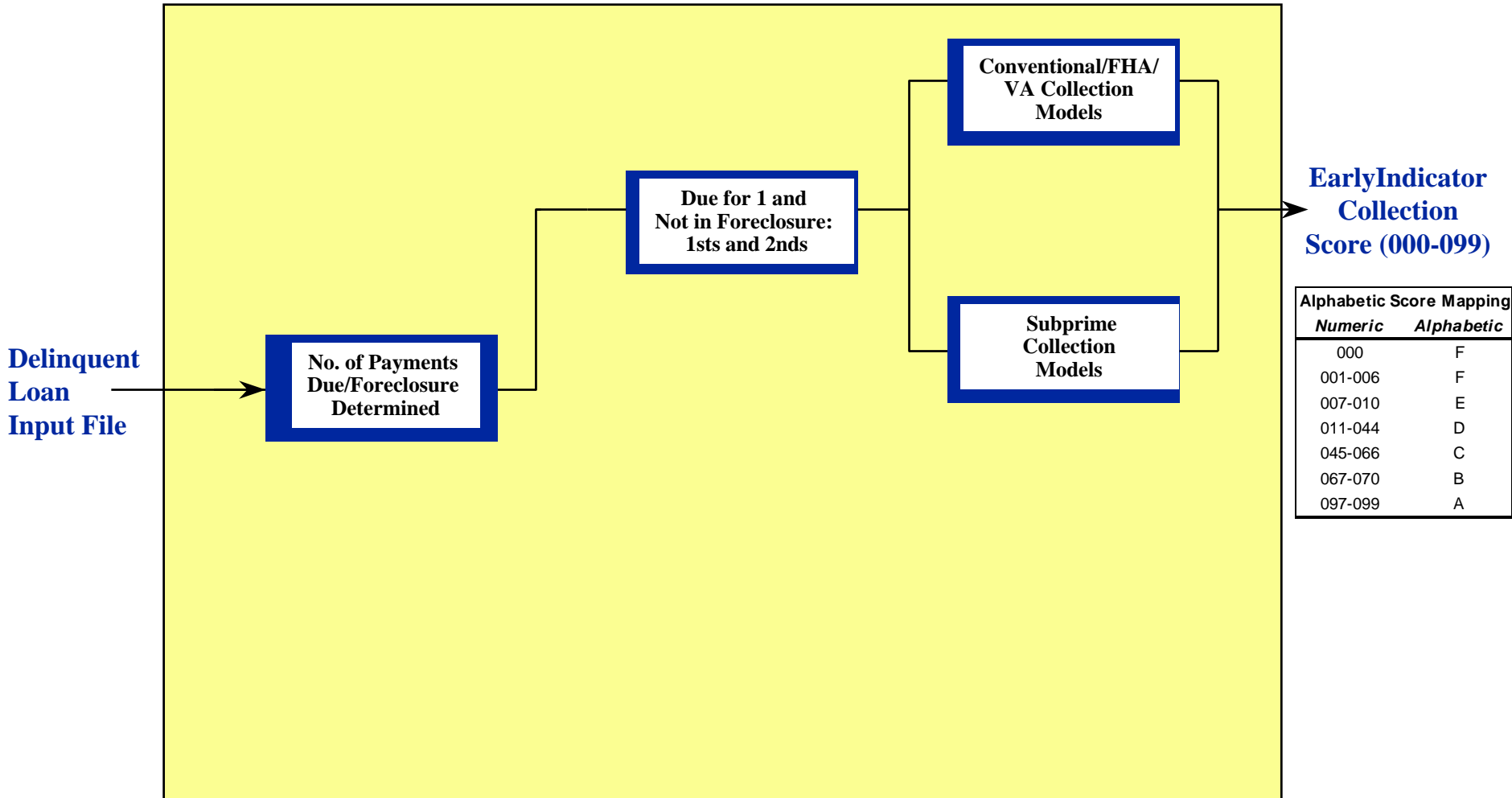
Features of EarlyIndicator 5.0

- New loss mitigation models that better capture risks associated with growing new business lines in the conventional market, including Alt A, A minus and manufactured housing
 - Ten new variables added to scorecards
 - Replaced county-level house price indexes with zip-level indexes
- Predictive power of collection models increased for conventional and government mortgages
- Two new fields of data added to EI Input file

Features of EarlyIndicator 5.0 (cont'd)

- Enhanced Graphical User Interface (GUI) providing
 - Increased control over processing files
 - Additional run-time information
 - Summary output screens
 - New Button Bar features
 - Link to EarlyIndicator Home Page on Freddie Mac website

EarlyIndicator Collection Scores






Month One of Delinquency: Collection Scores

- Generated for mortgages with one payment due
- Based on the payment behavior of borrowers
- Used to determine the appropriate day to call a borrower
- Used to determine the likelihood of a borrower owing two payments

Month One of Delinquency: Collection Scores (cont'd)

- Scores range from 000/F (higher risk of nonpayment) to 099/A (lower risk of nonpayment)
- Used to queue delinquent mortgages in an auto-dialer for call campaigns
- Produced on a monthly basis (typically between the 10th and 14th of the month)

Payment Patterns and Campaigns

Collection Score		Payment Patterns	When to Schedule Calls
Numeric	Alphabetic		
000	F	No payment history available.	Begin calling as soon as you score your mortgages - on or just after the late fee date. 
001 - 005	F	History of default; scores take into account severity and frequency of recent delinquency.	
006	F	Consistent history of making payments at month end; paid last month's payment after the last business day of the month.	Begin calling two to three business days after the late fee date, not before, because of established payment pattern. 
007 - 010	E	Consistent recent history, now breached, of making prompt payments.	
011 - 044	D	Consistent history of making payments at month end and recently paid by end of month.	Call these borrowers in numerical order after 000 - 010 calls.
045 - 066	C	Consistent history of payments after the late fee date and no recent defaults.	Call these borrowers last, beginning on the 25th of the month. Avoid calling earlier because of established payment pattern. 
067 - 070	B	Inconsistent payment record and no recent default.	
097 - 099	A	Consistent record of payment before month end and no seriously late payments.	

• Note that score range 071 to 096 is reserved for future use

Planning a Monthly Campaign

- Analyze each month's calendar for late charge day and date, month end day and date, holidays, etc.
- Create in advance the daily campaigns schedule, mapping scores to the calendar
- For conventional and government loans, begin the campaign close to the late fee assessment date and call loans in ascending numerical order
- For subprime loans, begin the campaign in the first week and call loans in ascending numerical order *except 007-010s*, where early pay habits suggest waiting until after the 10th

Planning a Monthly Campaign: Conventional and Government Loans

January 2004						
S	M	T	W	T	F	S
				1 New Year's Day	2	3
4	5	6	7	8	9	10
11	12 ←=====	13 Suggested Collection Scoring Dates	14 =====→	15	16* Scores of 000-003	17 Scores of 004-006 and recycle
18	19 Martin Luther King, Jr. Day Observed	20 Scores of 007-010 and recycle	21 Scores of 011-030 and recycle	22 Scores of 031-044 and recycle	23 Scores of 045-066 and recycle	24 Scores of 067-070 and recycle
25	26 Scores of 097-099 and recycle	27 Recycle and follow up	28 Recycle and follow up	29 Recycle and follow up	30 Recycle and follow up	31 Recycle and follow up

Recycle the calls made previously where the borrower was not contacted.

Follow up with borrowers who promised to make a payment by a certain date but did not.

* Late fee date

Call Management

- By calling borrowers in the sequence suggested on the calendars, you can avoid calling those borrowers who tend to pay at the same time every month
- Reducing the number of calls frees resources to improve the quality of the calls that are made
- Using the information content of the collection scores enables you to tailor your collection calls to specifically address—and possibly change—borrower behavior

Loans Unpaid/Calls Avoided

Example: Conventional Loans

EarlyIndicator Version 5.0 Collection Scores		Number of Loans Unpaid at the Beginning of								Number of Loans Unpaid by	Percentage of Loans Unpaid by
Numeric	Alphabetic	January 16	January 17	January 20	January 21	January 22	January 23	January 24	January 26	End of Month	End of Month
001 - 003	F	888	884	800	768	748	716	713	674	442	49.7
004 - 006	F	2,028	2,015	1,810	1,727	1,668	1,599	1,585	1,479	957	47.2
007 - 010	E	659	646	482	441	415	378	376	332	193	29.3
011 - 030	D	1,400	1,387	1,175	1,094	1,044	946	937	809	300	21.5
031 - 044	D	65	63	55	54	52	44	41	34	13	19.8
045 - 066	C	64	64	53	48	44	37	37	30	12	19.1
067 - 070	B	509	499	335	278	253	216	211	173	80	15.7
097 - 099	A	4,386	4,302	2,219	1,643	1,409	1,143	1,126	863	397	9.1
Total Unpaid Loans		10,000	9,860	6,929	6,054	5,633	5,078	5,026	4,393	2,395	23.9

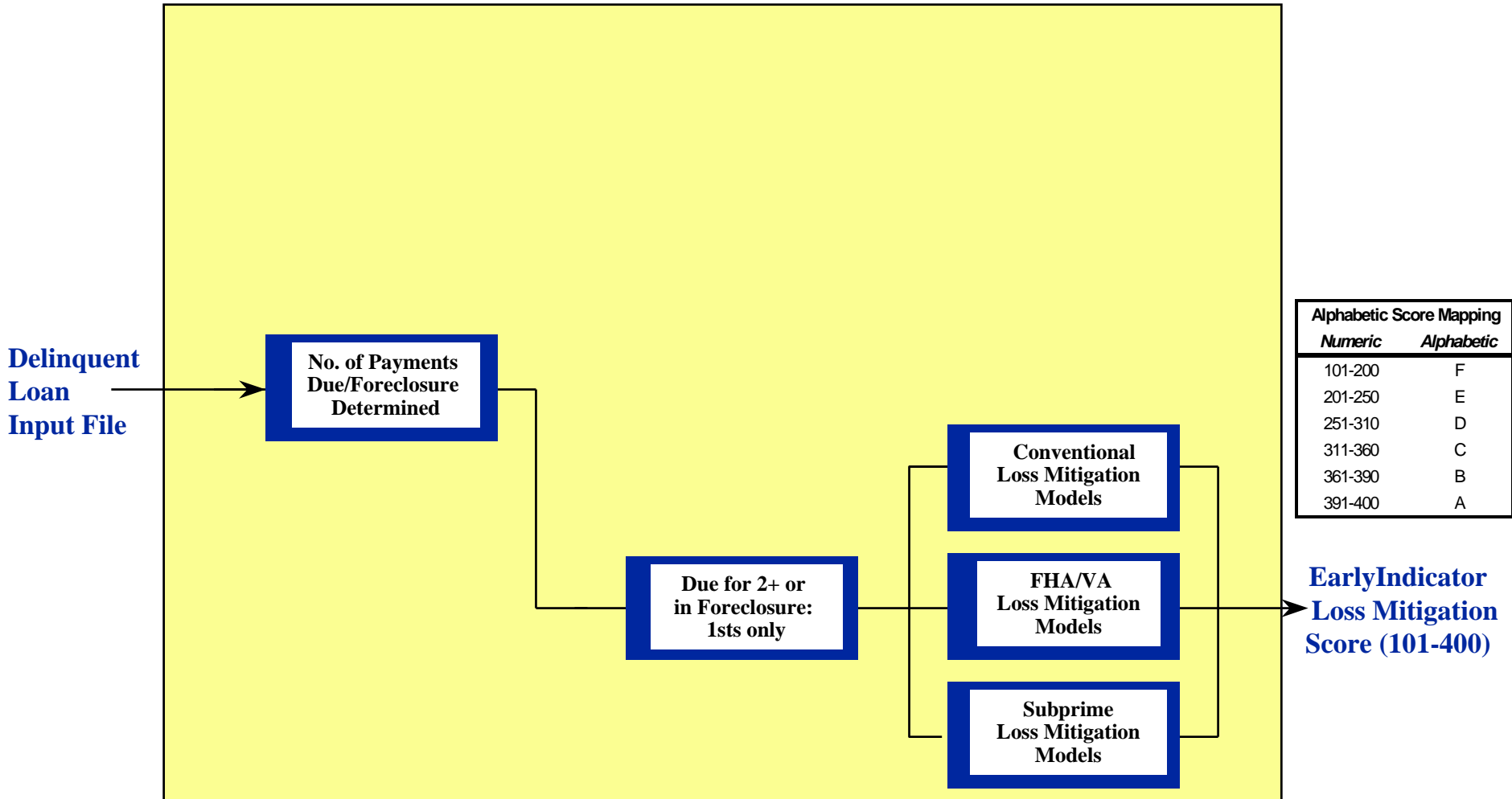
EarlyIndicator Version 5.0 Collection Scores		Number of Borrowers Paying that Do Not Need to be Called On								Number of Calls Avoided by
Numeric	Alphabetic	January 16	January 17	January 20	January 21	January 22	January 23	January 24	January 26	Score Range
001 - 003	F									-
004 - 006	F	13								13
007 - 010	E	13	164							177
011 - 030	D	13	212	81						306
031 - 044	D	2	7	1	2					13
045 - 066	C	-	12	4	4	7				27
067 - 070	B	11	164	57	25	38	5			299
097 - 099	A	84	2,082	576	234	266	17	263		3,523
Total Calls Avoided		137	2,642	719	266	310	22	263	-	4,358

 initiate call campaign on these loans on this day.

Benefits of Using Collection Scores

- Servicer outbound calls reduced by 30-50%; inbound calls reduced by 10-15%
- Precisely target loans based on specific payment-habit behavior
- Improve the quality of collection calls by understanding borrower's past payment behavior
- Detect high-risk loans earlier by recognizing good payment behavior, now breached
- Maintain good customer relations

EarlyIndicator Loss Mitigation Scores



Alphabetic Score Mapping	
<i>Numeric</i>	<i>Alphabetic</i>
101-200	F
201-250	E
251-310	D
311-360	C
361-390	B
391-400	A

Month Two of Delinquency and Beyond: Loss Mitigation Scores

- Generated for mortgages due for two or more payments (including loans in foreclosure)
- Used to determine the likelihood of a delinquent mortgage resulting in a loss—REO, short payoff, third party sale, chargeoff or deed-in-lieu of foreclosure
- Scores range from 101/F (higher risk of loss) to 400/A (lower risk of loss)

Month Two of Delinquency and Beyond: Loss Mitigation Scores (cont'd)

- Produced on a monthly basis (usually on the 2nd or 3rd of the month)
- Used to prioritize loss mitigation solicitation efforts
- Based on a borrower's estimated current loan-to-value ratio and a host of other factors

Understanding Loss Mitigation Scores

- Predictive factors for the loss mitigation models include
 - Mark-to-market LTV
 - Depth of delinquency
 - Payment history
 - Spread at origination (SATO)
 - Loan size (current unpaid principal balance)
 - Repay plan and previous loan modification flags
 - Local economic conditions
 - Other borrower, loan, and property characteristics
- These factors are weighted differently depending on the model being used to produce the score

Loss Mitigation Model Performance

Positive/Negative Odds Ratios for Conventional Loans

Score/Default Range			Scorecards by Depth of Delinquency				
<i>Numeric</i>	<i>Alphabetic</i>	<i>Probability of Default</i>	All Scorecards	Due for 2 Scorecard	Due for 3 Scorecard	Due for 4+ Scorecard	Foreclosure Scorecard
391 - 400	A	0-3%	76:1	80:1	43:1	23:1	25:1
361 - 390	B	3-13%	14:1	15:1	12:1	10:1	9:1
311 - 360	C	13-30%	4:1	6:1	4:1	4:1	3:1
251 - 310	D	30-50%	1:1	4:1	2:1	2:1	1:1
201 - 250	E	50-67%	1:2	3:1	1:1	1:1	1:2
101 - 200	F	67-100%	1:3	NA	1:1	1:2	1:4

Loss Mitigation Model Performance

Positive/Negative Odds Ratios for FHA/VA Loans

Score/Default Range			Scorecards by Depth of Delinquency				
<i>Numeric</i>	<i>Alphabetic</i>	<i>Probability of Default</i>	All Scorecards	Due for 2 Scorecard	Due for 3 Scorecard	Due for 4+ Scorecard	Foreclosure Scorecard
391 - 400	A	0-3%	70:1	74:1	61:1	30:1	NA
361 - 390	B	3-13%	12:1	12:1	13:1	11:1	10:1
311 - 360	C	13-30%	4:1	4:1	4:1	3:1	4:1
251 - 310	D	30-50%	2:1	2:1	2:1	2:1	2:1
201 - 250	E	50-67%	1:1	1:1	1:1	1:1	1:1
101 - 200	F	67-100%	1:6	NA	1:4	1:3	1:8

Loss Mitigation Model Performance

Positive/Negative Odds Ratios for Subprime Loans

Score/Default Range			Scorecards by Depth of Delinquency				
<i>Numeric</i>	<i>Alphabetic</i>	<i>Probability of Default</i>	All Scorecards	Due for 2 Scorecard	Due for 3 Scorecard	Due for 4+ Scorecard	Foreclosure Scorecard
391 - 400	A	0-3%	131:1	131:1	NA	NA	NA
361 - 390	B	3-13%	11:1	11:1	17:1	7:1	10:1
311 - 360	C	13-30%	4:1	4:1	4:1	3:1	5:1
251 - 310	D	30-50%	2:1	2:1	2:1	2:1	2:1
201 - 250	E	50-67%	1:1	1:1	1:1	1:1	1:1
101 - 200	F	67-100%	1:5	1:2	1:4	1:2	1:5

Benefits of Using Loss Mitigation Scores

- Target loans with the greatest risk of loss and avoid spending resources on loans with the lowest risk of loss
- Identify high risk loans sooner
- Help borrowers avoid foreclosure if possible
- Assist in minimizing the loss on loans that cannot be salvaged
- Assist in lowering loss mitigation operational costs

Conclusions

- With EarlyIndicator® Version 5.0, the vision of ***A complete delinquency scoring system second-to-none in performance*** is closer to being fully realized
- Data to develop powerful scoring models are found on a servicer's own data systems—and in the EarlyIndicator software
- For additional information please visit our website: <http://www.freddiemac.com/earlyindicator>