Supplemental Information of the Purpose of ASMB

The primary purpose of the ASMB is to provide a database to support empirical analyses of two important questions:

1. What factors explain or predict which borrowers will become delinquent on their mortgages?
2. Once a borrower becomes delinquent, what factors explain or predict whether the borrower will
   a. become current on the loan?
   b. decide they cannot afford the mortgage and sell the property or modify the mortgage?
   c. remain delinquent and enter into foreclosure?

Of particular interest with respect to the latter question is the role that housing counseling and mortgage servicer interaction play in determining the outcome. Understanding these issues is central to the mission of both the FHFA and the CFPB and in informing future rulemaking on mortgage servicers.

There is no existing database that provides the kind of information sought in the survey. Further, the survey design is tailored to precisely identify the appropriate sample by targeting delinquent and non-delinquent borrowers using administrative information which can accurately identify their status as of December 31, 2014. The gap between this date and the date of the survey is intended to allow for sufficient time to have elapsed for the borrowers to have determined their ultimate reaction to delinquency.

Each question in the survey is designed to address one or more of five different types of variables about which information is needed either to analyze the issues described above or to validate the survey responses:

1. <u>Validation variables</u>. Answers to these questions are needed to determine whether the survey reached the correct borrower and whether they are providing answers about the correct loan. Information solicited includes the loan and payment amount, the date of the mortgage, the type of loan, the number of borrowers and their relationship to the respondent, and the age and gender of the respondent. Administrative data is available on all of these items, which can be compared with the respondent's answers to make this determination.

2. <u>Control variables that reflect facts about the mortgage that are imperfectly known in the administrative data</u>. These questions elicit information about the mortgage that are not available or are imperfectly available from the administrative files. Information solicited includes items such as the purpose of the mortgage (home purchase or refinance), type of property, and how the borrower uses the property.

3. <u>Control variables that reflect facts about the consumers' economic circumstances</u>. These questions elicit information about the borrower's economic circumstances. They are a particularly important because the administrative data contains little information about borrowers other than age and gender. Information solicited includes a fairly standard set of demographic items, military status (needed because of particular interest in veterans), negative shocks (such as job loss, illness, divorce or separation), major unexpected expenses, and positive events such as a new job or marriage.

4. <u>Control or predictive variables that reflect consumer attitudes</u>. These questions elicit information about the borrower's attitude about his or her mortgage and circumstances. Research in the mortgage finance area suggests that borrower attitudes can explain a significant amount about outcomes. For example, borrowers who believe their house is worth more than the mortgage value tend to not become delinquent even in circumstances where objective data might indicate the borrower is wrong. Information solicited includes borrowers' views on the current and future value of their property, whether their current mortgage was a "good deal" or not, whether they view their neighborhood positively, and how knowledgeable they feel about the mortgage process.

5. <u>Outcome variable</u>. These questions elicit information necessary to determine the ultimate outcome arising from the borrower's delinquency. Little administrative information is available to determine how delinquent borrowers reacted to their delinquency. Information solicited includes measures borrowers took on their own (such as selling assets), intervention by the mortgage servicer (such as offering to modify the loan or provide housing counseling to the borrower), and selling the property or

refinancing the loan. The survey also seeks information on reasons why a good solution might not have been reached, such as the borrower being turned down for a refinance or not being offered access to a loan modification program.

The attached table shows how each proposed ASMB question fits into the above taxonomy. The table also indicates which questions might be viewed as sensitive and which overlap with the FHFA's quarterly National Survey of Mortgage Borrowers (control no. 2590-0012; this was renamed the "National Survey of Mortgage Origination" (NSMO) on May 9, 2016, and is referred to as such on the table below)s. It should be noted that the only items for which specific dollar amounts are solicited are (1) the value of the mortgage and mortgage payment, (2) the purchase price of the property, and (3) an estimate of the current property value. Focus group interactions suggest that these items are not viewed as overly sensitive by borrowers since the information is readily available from public records. Questions that overlap with the NSMO survey are used to benchmark borrowers solicited in the ASMB relative to new mortgage borrowers. The current version of the ASMB questionnaire (to which the question numbers pertain) is provided in a separate document.

	American Survey of Mortgage Borrowers				
Question Number	Variable Type	Is Question Sensitive?	Policy Purpose	Is Question also on National Survey of Mortgage Originations?
1	Validation variable	N	None	N
2	Validation variable	N	None	N
3	Validation Variable, Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	N	Evaluate whether future delinquency is predictable from origination information	Y
4	Validation variable	Y	Evaluate whether future delinquency is predictable from origination information	Y
5	Validation variable	Y	Evaluate whether future delinquency is predictable from origination information	Y
6	Validation variable, Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	Y	Evaluate whether future delinquency is predictable from origination information	Y
7	Validation variable	N	Evaluate whether future delinquency is predictable from origination information	Y
8	Validation variable	N	Evaluate whether future delinquency is predictable from origination information	N

9	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	N	Evaluate whether future delinquency is predictable from origination information	Y
10	Control or predictive variable that reflects consumer attitudes	N	Evaluate whether future delinquency is predictable from origination information	N
11	Control or predictive variable that reflects consumer attitudes	N	Evaluate whether future delinquency is predictable from origination information	Y
12	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	N	Determine if consumer has encountered problems with the sale of servicing/to inform future rulemaking on servicers	N
13	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	N	Determine if consumer has encountered problems with the sale of servicing/to inform future rulemaking on servicers	N
14	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	N	Determine if consumer has encountered problems with the sale of servicing/to inform future rulemaking on servicers	N
15	Outcome variable	N	Determine if consumer has encountered problems with the sale of servicing/to inform future rulemaking on servicers	N
16	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	N	Determine if consumer has encountered problems with the sale of servicing/to inform future rulemaking on servicers	N
17	Outcome variable	N	Determine if consumer has encountered problems with the sale of servicing/to inform future rulemaking on servicers	N
18	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	N	Evaluate whether future delinquency is predictable from origination information	Y
19	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	N	Evaluate whether future delinquency is predictable from origination information	Y

20	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	Y	Understand consumer behavior when they become delinquent, differentiate delinquent and non-delinquent borrowers	Y
21	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	Y	Understand consumer behavior when they become delinquent, differentiate delinquent and non-delinquent borrowers	Y
22	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data	N	Evaluate whether future delinquency is predictable from origination information	Y
23	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data, Outcome variable	N	None	Y
24	Validation variable	N	None	Y
25	Control or predictive variable that reflects consumer attitudes	N	Differentiate between delinquent and non-delinquent borrowers	Y
26	Control or predictive variable that reflects consumer attitudes	N	Differentiate between delinquent and non-delinquent borrowers	Y
27	Control or predictive variable that reflects consumer attitudes	N	Differentiate between delinquent and non-delinquent borrowers	Y
28	Outcome variable	Y	Differentiate between delinquent and non-delinquent borrowers	N
29	Outcome variable	Y	Differentiate between delinquent and non-delinquent borrowers	N
30	Outcome variable	Y	Understand consumer behavior when they become delinquent	N
31	Control variable that reflect facts about the consumers' economic circumstances	Y	Understand consumer behavior when they become delinquent	N
32	Control variable that reflect facts about the consumers' economic circumstances	Y	Understand consumer behavior when they become delinquent	N
33	Control variable that reflect facts about the	Y	Understand consumer behavior when they	N

	consumers' economic circumstances		become delinquent	
34	Control variable that reflect facts about the consumers' economic circumstances	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of counseling	Y
35	Control variable that reflect facts about the consumers' economic circumstances	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of counseling	Y
36	Control variable that reflect facts about the consumers' economic circumstances	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of counseling	Y
37	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of counseling	Y
38	Control variable that reflect facts about the consumers' economic circumstances	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of servicer interactions with distressed borrowers	N
39	Control variable that reflect facts about the consumers' economic circumstances	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of servicer interactions with distressed borrowers	N
40	Control variable that reflect facts about the consumers' economic circumstances	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of servicer interactions with distressed borrowers	N
41	Control variable that reflect facts about the consumers' economic circumstances	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of servicer interactions with	N

			distressed borrowers	
42	Control variable that reflect facts about the consumers' economic circumstances	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of servicer interactions with distressed borrowers	N
43	Control variable that reflect facts about the consumers' economic circumstances, Outcome variable	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of servicer interactions with distressed borrowers	N
44	Control variable that reflect facts about the consumers' economic circumstances, Outcome variable	Y	Understand consumer behavior when they become delinquent, To determine the effectiveness of servicer interactions with distressed borrowers	N
45	Control variable that reflect facts about the mortgage that are imperfectly known in administrative data, Outcome variable	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of servicer interactions with distressed borrowers	N
46	Control variable that reflect facts about the consumers' economic circumstances, Outcome variable	N	Understand consumer behavior when they become delinquent, To determine the effectiveness of servicer interactions with distressed borrowers	N
47	Control variable that reflect facts about the consumers' economic circumstances	Y	Understand consumer behavior when they become delinquent, To determine the effectiveness of servicer interactions with distressed borrowers	N
48	Control variable that reflect facts about the consumers' economic circumstances	Y	Understand consumer behavior when they become delinquent	N

49	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance	N
50	Control or predictive variable that reflects consumer attitudes	N	Understand consumer behavior when they become delinquent, differentiate between delinquent and non-delinquent borrowers, To determine why people who appear to be eligible for refinancing do not refinance	N
51	Control or predictive variable that reflects consumer attitudes	N	Understand consumer behavior when they become delinquent, differentiate between delinquent and non-delinquent borrowers, To determine why people who appear to be eligible for refinancing do not refinance	Y
52	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance	N
53	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance	N
54	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance	N
55	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible	N

			for refinancing do not refinance	
56	Control or predictive variable that reflects consumer attitudes, outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance	N
57	Validation variable	N		N
58	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance	N
59	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance	N
60	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance	N
61	Control variable that reflect facts about the consumers' economic circumstances, Control or predictive variable that reflects consumer attitudes	Y	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance	N
62	Control variable that reflect facts about the consumers' economic circumstances, Control or predictive variable that reflects consumer attitudes	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance	N
63	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible	N

			for refinancing do not refinance, To determine why consumers exit the mortgage market	
64	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance, To determine why consumers exit the mortgage market	N
65	Outcome variable	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance, To determine why consumers exit the mortgage market	N
66	Control or predictive variable that reflects consumer attitudes	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance, To determine why consumers exit the mortgage market	N
67	Control or predictive variable that reflects consumer attitudes	N	Understand consumer behavior when they become delinquent, To determine why people who appear to be eligible for refinancing do not refinance, To determine why consumers exit the mortgage market	N
68	Outcome variable	Y	Understand consumer behavior when they become delinquent	Y
69	Outcome variable	Y	Understand consumer behavior when they become delinquent	Y
70	Outcome variable	Y	Understand consumer behavior when they become delinquent	Y
71	Outcome variable	Y	Understand consumer behavior when they	Y

			become delinquent	
72	Outcome variable	Y	Understand consumer behavior when they become delinquent	Y
73	Outcome variable	Y	Understand consumer behavior when they become delinquent	Y
74	Outcome variable	Y	Understand consumer behavior when they become delinquent	Y
75	Outcome variable	Y	Understand consumer behavior when they become delinquent	Y
76	Outcome variable	N	Understand consumer behavior when they become delinquent	Y
77	Outcome variable	N	Understand consumer behavior when they become delinquent	Y
78	Outcome variable	Y	Understand consumer behavior when they become delinquent	Y
79	Outcome variable	N	Understand consumer behavior when they become delinquent	Y
80	Outcome variable	N	Understand consumer behavior when they become delinquent	Y
81	Outcome variable	N	Understand consumer behavior when they become delinquent	Y
82	Outcome variable	Y	Understand consumer behavior when they become delinquent	Y
83	Outcome variable	N	Differentiate between delinquent and non-delinquent borrowers	Y
84	Outcome variable	N	Differentiate between delinquent and non-delinquent borrowers	Y
85	Outcome variable	N	Differentiate between delinquent and non-delinquent borrowers	Y
86	Outcome variable	N	Differentiate between delinquent and non-delinquent borrowers	Y
87	Outcome variable	N	Understand consumer behavior when they become delinquent	Y
88	Outcome variable	Y	Understand consumer behavior when they	Y

			become delinquent	
89	Outcome variable	N	Understand consumer behavior when they become delinquent	Y
90	Outcome variable	Y	Differentiate between delinquent and non-delinquent borrowers	Y
91	Outcome variable	Y	Differentiate between delinquent and non-delinquent borrowers	Y
92	Outcome variable	Y	Differentiate between delinquent and non-delinquent borrowers	Y