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The Predictive Power of the Senior Loan Officer Survey: Do Lending Officers Know Anything Special?

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Abstract: The answer to this question is yes, but not that much about banks. Every quarter the Federal Reserve System surveys a panel of senior loan officers at major banks across the nation. The results of this survey have been found in previous studies to provide useful information in predicting gross domestic product. This paper extends that work, finding that sector-specific survey results are relevant for predicting real activity in those sectors but, strangely, that the informative power of the survey results only marginally extend to various measures of performance in the banking sector.

JEL classification: E32, G29

Key words: lending officer survey, informational advantage

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1. Introduction.

Every quarter the Federal Reserve publishes its Senior Loan Officer Opinion Survey on Bank Lending Practices.[1] Senior Loan Officers are asked about lending conditions in US credit markets. Many of the questions are descriptive and idiosyncratic, but some are quantifiable and systematic and these answers have been compiled into time series. About 60 large banks that together account for more than half of the dollar amount of loans made by banks in the US are asked. (Also, about 17 large foreign banks are also asked, but their responses are not a part of the compiled time series.)

Senior Loan Officers in banks throughout the nation occupy a unique place the in economy and consequently it may be that as a group, they have some insights into the economy that may be particularly useful in understanding aspects of economic activity. The point of this paper is to ask whether that is actually true: do the responses contained in the survey have information in them beyond what is otherwise available. Do the senior loan officers know anything special?

The survey began in 1966. While the survey contains a large number of questions, only one has been asked since the beginning of the survey in such a way as to provide a useful time series of responses. Previous work has shown the results of this survey worthwhile for predicting real economic activity. Beginning in 1990 the survey

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[1] http://www.federalreserve.gov/boarddocs/surveys

began systematically and consistently inquiring about lending conditions in some specific markets, and it now produces twelve useful time series.

The purpose of this paper is to ask whether the useful information contained in their responses is due to the unique position of the survey participants in the economy which gives them an inside view of bank behavior and thus influences the rest of the economy, or whether the bank lending officers are just a well informed group of people that do not otherwise have any information peculiar to them. In other words, are the banks lending officers any different from any other well informed group of people?

2. The Survey

The survey began in the mid 1960s and included a question asking about the change in willingness of the lending officers to make consumer loans – more, much more, less, much less, or about the same. While this is a good catch-all question regarding changes in the economic outlook, it does not provide any insight into specific market conditions. An increased willingness to lend may be the result of a better pool of loan applicants due to overall increased loan demand, or it could reflect a decrease in demand where the weaker applicants are dropping out, or it could even be a sign that lenders believe that economic growth will support the making of more marginal loans than would have been profitable before. Or any combination or permutation of the three. Five possible answers were allowed: much less, less, the same, more and much more, and those answers were tabulated in a diffusion index.

In addition to the willingness to lend question, a number of ad hoc queries were asked that called for open-ended answers. It is intuitively appealing that the Fed would

like to systematically question the banking industry's lending officers about various matters of mutual interest. This continues to the present. Absent any other source of news, the Senior Loan Officer Survey provides a good source of ad hoc information about the economy.

Through the history of the survey several attempts have been made to systematically build a set of time series diffusion indices that would be more useful in identifying specific changes to lending market conditions. The try in the early 1990s took hold and the survey added some market-specific condition questions that could provide a rough form of supply/demand identification: Is there an increase in demand? Are you tightening lending standards? Are you increasing spreads over deposit rates? There is now a long enough time series to address the information content of these more specific banking-related question results.

Schreft and Owens (1991) provide an excellent history of the survey and discuss many of its shortcomings in detail. First, although the survey has been conducted since the mid 1960s the questions have changed so that there is a limited consistent time series prior to the early 1990s. Lown, Morgan and Rohatgi (2000) examine the usefulness of the diffusion time series and find evidence that the commercial credit lending standards diffusion index, after controlling for other explanatory variables, is useful in predicting loan growth, GDP growth and various measures of business activity. They also put the commercial lending standards diffusion index into a VAR and find that in response to a credit standard tightening shock, GDP growth, the Federal Funds rate and loan growth rates all significantly decline within two quarters and, while Fed Funds and GDP thereafter quickly recover, the effect lasts an extended period of time in lending.

The contribution of this paper is to extend this work in an important dimension: whether other market-condition questions in the Loan Officer Survey are useful in predicting the actions of the banking system? It may be, consistent with previous research, that the more ambiguous part of the Senior Loan Officers survey provides useful short-term predictive information. That result, however, might be found by surveying any similarly well-informed group of agents. The point of surveying Senior Loan Officers, presumably, is because it provides some insight into actions in the banking sector. That is, the Senior Loan Officers are involved in some process (the banking sector) that influences the macro variable and thus the members of the panel surveyed occupy some unique position in the economy. If the Senior Loan Officer survey does not inform predictions of banking sector activity, but does inform predictions of macro variables, then we might conclude that the panel is a group of well informed people that are not otherwise particularly special place other than their unique place in the banking industry.

3. The Data.

The longest running of the survey questions is the net percentage of respondents indicating more willingness to make consumer installment loans. This series begins in the third quarter of 1966. The question is the most unspecific of those in the data set and is really asking for a judgment about the near future prospect for the economy. Presumably a net increase in the lenders willingness to extend loans to consumers indicates some increased confidence in the immediate outlook for the economy. In the tables of results, it is denoted with the mnemonic "Willing Cons Inst."

Questions regarding Commercial and Industrial loans became standardized in the second quarter of 1990. The answers to the survey questions are tabulated as the net percentage of domestic banks reporting tightening standards for Commercial and Industrial loans, and the net percentage of domestic banks reporting increased spreads of loan rates over the bank's cost of funds. Both of these questions are broken down between conditions for "small" firms seeking loans and "large and medium" firms seeking loans. The questions are not so much a matter of subjective feeling, but rather are measures of what marginal changes the banks are actually making on the supply side of the lending market. The mnemonics for the four series in the tables of results are "LM C&I tight," "Small C&I tight," "LM C&I spread" and "Small C&I spread," respectively.

In the fourth quarter of 1991 a series was added summarizing the net percentage of respondents reporting stronger demand for Commercial and Industrial loans, again divided by firm size. This was intended to capture something about how the responding lending officers view marginal changes on the demand side of the Commercial and Industrial market. The series are denoted "LM C&I Demand up" and "Small C&I Demand up," respectively.

Also added in the fourth quarter of 1991 were two series on the net percentage of respondents reporting increased demand for consumer loans, divided between residential mortgages and consumer loans. This gave the survey some indication of how lending officers saw marginal changes in the demand for loans from consumers. The mnemonics "Mort Demand up" and "Cons Loans demand." This followed the adding, in 1990:3, a series on the net percentage of respondents reporting tightening mortgage standards (denoted "Mort tight").

Finally, in the beginning of 1996 two more series were added: The net percentage of respondents reporting tightening standards for consumer loans broken down between Credit Cards and other consumer loans. This made the consumer lending portion of the survey loosely equivalent to the Commercial and Industrial portion of the survey. The series are labeled "CCard tight" and "Other Cons Loans tight" in the tables of results.

These twelve series constitute the set of survey results tested in this paper. The data set used in this paper ends in the third quart of 2005. The series are taken from the Board of Governors web site.

Table 1 provides a list of the questions, mnemonics, series start date, sample mean and range characteristics.

Not surprisingly, the answers are frequently biased. Figure 1 depicts the time series for the question asking whether credit standards are tightening for consumer loans. Taken at face value, it would appear that throughout practically the entire sample period, banks have been ever increasingly stringent in their credit card issuing standards. There are two possible explanations for this result. It could be that the banks that are answering the survey are all trying to exit the consumer lending business. Or it could be that the respondents do not feel comfortable telling their regulator, however informally, that they are aggressively marketing credit cards, regardless of their actual practice. A priori it is hard to believe that the overall banking industry has been systematically increasing consumer credit card standards since the early 1990s. Other credit standards series have similar characteristics.

4. The Results

The strategy employed is very straightforward. A battery of standard causation tests are run of the general form

$$Y_t = \alpha + \beta(\text{survey result})_{t-1} + \gamma(X)_{t-1} + \varepsilon$$

where Y will take on a number of dependent variables that characterize overall economic activity or some measure of bank lending, the survey result is the diffusion index value of the relevant question, and X is a vector of control variables, in this case consisting of lagged Y and a measure of changes in the shape of the yield curve as measured by the three month – ten year treasury security rate spread.[2]

Nine dependent variables used: growth in real GDP, growth in real private investment, growth in real GDP less private investment, growth in bank Commercial and Industrial loans, growth in real residential investment, growth in bank real estate loans, growth in real PCEs, growth in bank consumer loans, and growth in bank revolving consumer debt. These series are taken from the FREDII database.[3]

The battery of tests produced nine sets of tables. Each set of tables contains two parts. In the first part the twelve survey questions are used as a lagged explanatory along with a lagged dependent variable. The second set adds the control of the lagged spread. It is these two sets of regressions that typify the sorts of questions that the survey would be used for: does this quarter's survey result help predict next quarter's activity, and does this quarter's survey result help predict next quarter's activity after some simple control variables are included?

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[2] The change in the one quarter ahead Blue Chip forecast was also used in place of the yield spread as a control for market expectations. There was no material difference between the two market expectation proxies. The Blue Chip specific regression results are available upon request.
[3] http://research.stlouisfed.org/fred2/

The results reported here are robust to the inclusion of a second lagged quarter of RHS variables, and do not materially change if only contemporaneous data is used. That is, the battery of tests included the case where all variables are contemporaneous, the case of a one quarter lag for the RHS and the case of two quarterly lags. The one period lag case is reported because it is quire representative of the other results and the most useful in practice. The inclusion of another quarter's lag do not change the findings reported here. For the sake of completeness the test was also run with the elimination of lags; these produced somewhat statistically weaker results and it is difficult to think this specification as being operationally useful. These additional sets of results are available upon request.

Table 2 replicates and extends the standard question asked by the existing literature: does the survey add anything to predicting GDP? The long-running willingness to make consumer installment loans (Winning Cons Inst) question is clearly and consistently providing significant information in predicting changes in real GDP. The shorter series questions of tightening lending standards and of increasing the lending spreads are often not significant, but when they are in the case of C&I lending they are of theoretically correct sign.

Table 3 repeats the process of table 2, but with the dependent variable being growth in private investment instead of growth in GDP. Here it is clear that the lending officers know something significant. In the first four specifications, regardless of the way the question of C&I lending conditions is asked, the results are statistically significant in their marginal predictive usefulness and of correct sign, consistent with the

finding of Lown, et al. The willingness to make consumer loans series also remains significant.

The results of table 4 are intended to indicate whether the usefulness of the survey in predicting GDP is simply a byproduct of the survey being so informative in predicting the private investment component. The dependant variable is growth in GDP without private investment. Thus the test asks if the survey's ability to predict GDP extends beyond the simple prediction of one of its components. The answer seems to be no. Aside from the willingness to make consumer loans index, the other survey variables lose their marginal predictive power for growth in non-investment GDP. This result suggests that the forward looking prospect nature of the "willingness" question is good at capturing the "feeling" of the overall economy, apart from investment.

Table 5 examines whether the survey variables actually predict something about the activity of banks. The dependent variable is the percentage growth in the banking sectors aggregate Commercial and Industrial loan portfolio. As in the case of table 2, the lending officers are consistently significantly able to add information to the prediction of bank Commercial and Industrial loan activity when asked about specific market conditions.

Overall, Tables 3 – 5 suggest that there is notable explanatory power in the C& I series that is specific to real investments. That is, the Senior Lending Officers know something significantly informative about near-term real investment.

Tables 6 and 7 look at real estate. The survey is quite specific in asking if banks are tightening mortgage standards or if mortgage demand seems to be increasing.

In Table 6, interestingly, the Senior Loan Officer's opinions regarding mortgage demand consistently adds to predictions of real residential activity -- an increase in reported demand portends an increased in residential activity -- while their view of the changing tightness of mortgage standards is not significant.   Moreover, the willingness to make consumer loans series does at least as good a job of predicting real residential activity, although this isn't surprising given the general forward-looking nature of the question. That tightening mortgage standards does not inform real residential activity is noteworthy.

Table 7 clouds the issue further. It examines whether the survey adds information in predicting the change in bank real estate loans. The "tightness" question does not provide significant information, consistent with the lack of significance in predicting real residential activity. The "demand" question continues to be statistically significant, but now with the wrong sign. It is tempting to explain this away by noting changes in mortgage market structures over the sample period, or simply a small sample. Nonetheless, the result over the last decade-and-a-half is that the sign is significant and wrong. That is, as lending officers see a pick up in the demand for mortgages, the next quarter sees a relative reduction in bank's real estate lending.

Table 8 addresses whether any of the survey results aid in predicting real personal consumption expenditures, in particular the questions regarding consumer lending conditions. They do not except for, again, the willingness to make consumer loans result which is consistently significant and in some specifications, the mortgage related questions are, too. It is surprising that the survey results directed specifically at consumer

lending market conditions never significantly foreshadow changes in personal consumption expenditures.

Tables 9 and 10 then go on to address whether the survey results are useful in predicting changes in bank lending to consumers. The dependant variable in Table 9 is growth in consumer loans, and in table 10 it is growth in revolving consumer debt. Table 9 suggests that Loan Officers perceptions of consumer loan demand is significantly useful for explaining growth in consumer debt, the table 10 suggests that result does not extend to revolving debt. And again, not surprisingly, the willingness to make consumer loans series is significant for consumer loans, while no survey variable is significant in explaining revolving credit growth in any of the specifications.

5. Conclusion

It is quite clear that Senior Loan Officers are in touch with changes in the overall pace of economic activity. This study reaffirms the notion that innovations in the longest of the diffusion indices – the willingness to make consumer loans -- deserve attention. The "willingness" of Senior Lending Officers to make consumer loans offers insight well beyond consumption movements and hence changes in GDP – it does as well as the other survey answers in predicting the specific components that those other questions are specifically designed to address. In particular, those other sector specific lending condition questions are rather disappointing when it comes to predicting changes in bank's actual portfolios.

Unlike the C&I market questions, where answers are met with statistically significant changes in lending and real activity, it is only the change in demand questions

that predict changes in lending for consumer loans or real estate. The reported specific changes that would reflect the bank's supply side of those markets do not appear to reflect any actual consequence in those specific markets.

Overall then, this work suggests that senior bank lending officers are quite well informed about the economic world outside of the banking industry, and the somewhat ambiguous forward looking conditions question does quite well as an all purpose explanatory variable. Except for the specific case of business loans, their inside information of specific changes in conditions in the banking industry markets is far less evident.

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Figure 1

Net Percentage of Domestic Respondents Tightening Standards for Consumer Loans
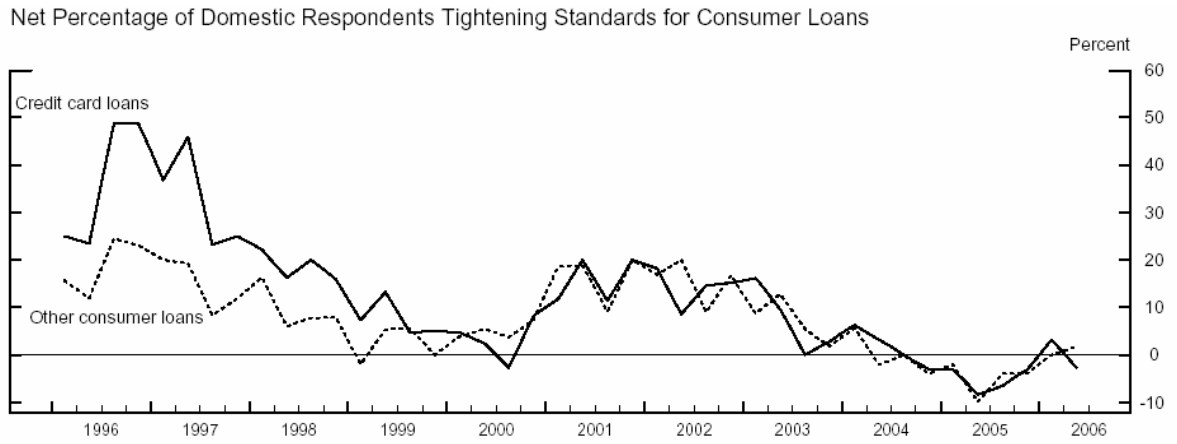
Table 1
A Summary of the Survey

Question	Mnemonic	Start Date	Mean	Range
Willingness to make Consumer Installment Loans	Willing Cons Inst	66:3	-1	63 -79
Tightening Standards for C&I Loans to Large and Medium Firms	LM C&I Tight	90:2	20.1	52.6 -24.1
Tightening Standards for C&I Loans to Small Firms	Small C&I Tight	90:2	20.75	52.6 -24.1
Demand Up for C&I Loans from Large and Medium Firms	LM C&I Demand Up	91:4	5.6	45.5 -70.2
Demand Up for C&I Loans from Small Firms	Small C&I Demand Up	91:4	4.9	38.9 -48.2
Increasing the Spread for C&I Loans to Large and Medium Firms	LM C&I Spread	90:2	-17.5	59 -70.4
Increasing the Spread for C&I Loans to Small Firms	Small C&I Spread	90:2	-15.25	41.8 -54.7
Tightening Mortgage Lending Standards	Mort Tight	90:3	4.4	32.7 -15.5
Demand for Mortgage Lending Up	Mort Demand Up	91:4	12.9	63.5 -76.8
Tightening Standards for Credit Cards	CCard Tight	96:1	9.3	48.9 -8.3
Tightening Standards for Other Consumer Lending	Other Cons Loans Tight	96:1	5.9	24.5 -9.8
Increase in Demand for Consumer Loans	Cons Loan Demand	91:4	-9.2	37.5 -35.8

Table 2
Dependent Variable: Growth in GDP

Note for all Tables: Cells associated with estimated coefficients contain the estimate and standard error, both rounded to four decimals. * indicates significance at 5% and ** indicates significance at 1%.

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0077** .0008	.0076** .0013	.0074** .0013	.0074** .0013	.0058** .0011	.0057** .0011	.0058** .0013	.0068** .0013	.0061** .0017	.0069** .0020	.0070** .0013	.0049** .0008
Survey Variable$_{t-1}$	-.0001** .0000	-.0001** .0000	.0000 .0000	.0000 .0000	-.0000* .0000	-.0001* .0000	-.0000 .0000	.0000 .0000	.0000 .0000	-.0000 .0001	.0000 .0000	.0002** .0000
GDP growth$_{t-1}$	.0888 .1280	.0861 .1328	.0975 .1422	.0677 .1436	.2064 .1291	.2074 .1345	.2576 .1432	.1622 .1363	.1762 .1652	.1887 .1684	.1488 .1387	.0932 .0775
Adj R^2	.27	.25	.02	.04	.17	.15	.09	-.00	.00	-.01	-.00	.21

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0078** .0016	.0076** .0017	.0068** .0016	.0068** .0016	.0052** .0015	.0050** .0015	.0053** .0017	.0066** .0017	.0058** .0022	.0066** .0023	.0069** .0017	.0045** .0010
Survey Variable$_{t-1}$	-.0001** .0000	-.0001** .0000	.0000 .0000	.0001 .0000	-.0000* .0000	-.0000* .0000	-.0001 .0001	.0000 .0000	.0001 .0001	-.0000 .0001	.0000 .0000	.0001** .0000
GDP growth$_{t-1}$	.0882 .1292	.0859 .1340	.0861 .1442	.0594 .1454	.2027 .1302	.1939 .1360	.2516 .1448	.1611 .1377	.1767 .1674	.1887 .1707	.1490 .1400	.0965 .0778
Spread$_{t-1}$	-.0001 .0005	-.0000 .0005	.0003 .0006	.0003 .0006	.0003 .0005	.0004 .0006	.0003 .0005	.0001 .0006	.0002 .0008	.0002 .0008	.0001 .0006	.0003 .0005
Adj R^2	.26	.24	.01	.03	.16	.15	.08	-.02	-.02	-.04	-.02	.21

Table 3
Dependent Variable: Growth in Real Private Investment

Note for all Tables: Cells associated with estimated coefficients contain the estimate and standard error, both rounded to four decimals. * indicates significance at 5% and ** indicates significance at 1%.

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0148** .0026	.0144** .0026	.0110** .0029	.0109** .0027	.0075** .0022	.0074** .0022	.0060* .0026	.0077** .0026	.0020 .0033	.0039 .0040	.0076 .0026	.0019 .0017
Survey Variable$_{t-1}$	-.0005** .0001	-.0006** .0001	.0002* .0001	.0003* .0001	-.0001** .0001	-.0003* .0001	-.0001 .0003	.0000 .0001	.0002 .0001	.0000 .0003	-.0000 .0001	.0004** .0001
I growth$_{t-1}$	.1528 .1238	.1476 .1269	.2977 .1497	.2269 .1565	.3929 .1209	3906** .1244	.5754** .1341	.5039** .1185	.6700** .1218	.6782** .1319	.5168 .1264	.3744** .0718
Adj R^2	.55	.55	.29	.31	.43	.43	.34	.23	.45	.42	.23	.36

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0160** .0042	.0153** .0041	.0077 .0039	.0081* .0039	.0054 .0036	.0041 .0035	.0034 .0041	.0060 .0041	-.0004 .0048	.0020 .0052	.0050 .0044	-.0019 .0022
Survey Variable$_{t-1}$	-.0005** .0001	-.0006** .0001	.0002* .0001	.0003* .0001	-.0002** .0001	-.0003** .0001	-.0001 .0003	.0000 .0001	.0002 .0001	.0000 .0003	-.0001 .0001	.0003** .0001
I growth$_{t-1}$	.1435 .1272	.1412 .1303	.2732 .1505	2150 1568	.3950** .1214	3788** .1244	5752** .1345	.5063** .1194	.6865** .1252	.6916** .1351	.5313** .1284	.3911** .0708
Spread$_{t-1}$	-.0005 .0014	-.0004 .0014	.0019 .0016	.0015 .0015	.0011 .0015	.0018 .0015	.0013 .0016	.0009 .0016	.0012 .0019	.0011 .0019	.0013 .0017	.0032* .0013
Adj R^2	.54	.53	.30	.31	.43	.43	.34	.22	.44	.41	.22	.38

Table 4
Dependent Variable: Growth in (GDP less Real Private Investment)

Note for all Tables: Cells associated with estimated coefficients contain the estimate and standard error, both rounded to four decimals. * indicates significance at 5% and ** indicates significance at 1%.

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0078** .0011	.0078** .0011	.0085** .0011	.0085** .0011	.0071 .0010	.0071** .0010	.0075** .0011	.0085** .0011	.0091** .0015	.0093** .0016	.0086** .0011	.0063** .0008
Survey Variable$_{t-1}$	-.0000* .0000	-.0000 .0000	-.0000 .0000	.0000 .0000	-.0000 .0000	-.0000 .0000	-.0001 .0000	.0000 .0000	.0000 .0000	.0001 .0000	.0000 .0000	.0001** .0000
GDP less I growth$_{t-1}$	-.1249 .1294	-.1310 .1311	-.2163 .1351	-.2168 .1354	-.0978 .1308	-.0980 .1328	-.1213 .1365	-.2218 .1352	.3495 .1578	-.3262* .1581	-.2212 .1352	-.0950 .0785
Adj R^2	.04	.03	.01	.01	.00	-.01	-.00	.02	.09	.06	.02	.12

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0074** .0015	.0074** .0015	.0081** .0015	.0080** .0015	.0065** .0014	.0064** .0014	.0069** .0014	.0081** .0014	.0083** .0018	.0087** .0018	.0082** .0015	.0063** .0010
Survey Variable$_{t-1}$	-.0000 .0000	-.0001 .0000	-.0000 0000	.0000 .0000	-.0000 0000	-.0000 .0000	-.0001 .0001	.0000 .0000	.0001 .0001	.0000 .0000	.0000 .0000	.0001** .0000
GDP less I growth$_{t-1}$	-.1286 .1308	-.1351 .1325	-.2231 .1370	-.2248 .1373	-.1074 .1323	-.1127 .1345	-.1338 .1386	-.2275 .1369	-.3646 .1597	-.3370* .1603	-.2258 .1369	-.0954 .0788
Spread$_{t-1}$	.0002 .0005	.0002 .0005	.0002 .0005	.0002 .0005	.0004 .0005	.0004 .0006	.0004 .0005	.0002 .0005	.0005 .0007	.0004 .0007	.0002 .0005	-.0001 .0004
Adj R^2	.02	.02	-.00	-.00	-.01	-.01	-.01	-.00	.07	.05	-.00	.12

Table 5
Dependent Variable: Growth in C&I Loans
Note for all Tables: Cells associated with estimated coefficients contain the estimate and standard error, both rounded to four decimals. * indicates significance at 5% and ** indicates significance at 1%.

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0044** .0013	.0041** .0013	.0042** .0014	.0025 .0013	.0022 .0012	.0023 .0011	.0024 .0014	.0026 .0015	.0017 .0027	.0042 .0030	.0017 .0014	.0034* .0017
Survey Variable$_{t-1}$	-.0003** .0001	-.0003** .0001	.0002** .0001	.0003** .0001	-.0002** .0000	-.0003** .0001	-.0004* .0002	.0001 .0000	-.0000 .0001	-.0003 .0002	.0002 .0001	.0001* .0001
C&I Loan growth$_{t-1}$	.7325** .0635	.7394** .0637	.5877** .0937	.6395** .0823	.6892** .0701	.6446** .0712	.7944** .0723	.8036** .0783	.8477** .0937	.8171** .0954	.8746** .0713	.6994** .0157
Adj R^2	.80	.80	.79	.78	.80	.81	.75	.73	.68	.70	.73	.49

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0090* .0041	.0073 .0040	.0042 .0041	.0027 .0038	.0042 .0037	.0028 .0033	-.0018 .0037	-.0026 .0038	-.0044 .0052	-.0018 .0055	-.0025 .0038	.0042 .0026
Survey Variable$_{t-1}$	-.0003** .0001	-.0004** .0001	.0002** .0001	.0003** .0001	-.0002** .0000	-.0003** .0001	-.0003 .0002	-.0001 .0000	-.0000 .0001	-.0002 .0002	.0001 .0001	.0002* .0001
C&I Loan growth$_{t-1}$	.6386** .1018	.6740** .0997	.5871** .1365	.6360** .1208	.6411** .1093	.6326** .1027	.8742** .0968	.8972** .1004	.9698** .1280	.9331** .1310	.9447** .0910	.6840** .0678
Spread$_{t-1}$	-.0019 .0016	-.0013 .0015	-.0000 .0016	-.0001 .0016	-.0009 .0015	-.0002 .0014	.0018 .0015	.0022 .0015	.0031 .0022	.0029 .0022	.0019 .0016	-.0005 .0012
Adj R^2	.80	.80	.77	.78	.79	.80	.75	.73	.69	.70	.74	.48

Table 6
Dependent Variable: Growth in Real Residential Investment

Note for all Tables: Cells associated with estimated coefficients contain the estimate and standard error, both rounded to four decimals. * indicates significance at 5% and ** indicates significance at 1%.

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0072* .0031	.0072* .0031	.0089** .0029	.0092** .0030	.0057* .0028	.0057* .0028	.0056 .0058	.0116** .0029	.0089* .0042	.0073 .0043	.0073* .0030	-.0050 .0035
Survey Variable$_{t-1}$	-.0001 .0001	-.0002 .0002	-.0001 .0001	-.0001 .0001	.0000 .0000	.0000 .0001	.0006 .0003	.0002** .0001	-.0000 .0001	.0001 .0003	-.0003 .0001	.0010** .0002
Real Res growth$_{t-1}$	.4979** .1137	.4941** .1159	.3750** .1258	.3879** .1267	.5532** .1083	.5544** .1086	.5655** .1123	.1168 .1441	.3649* .1580	.3808* .1583	.4798** .1338	.2718** .0782
Adj R^2	.31	.31	.14	.13	.30	.30	.28	.26	.09	.09	.17	.38

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0050 .0054	.0048 .0054	.0086 .0046	.0085 .0047	.0032 .0052	.0033 .0052	.0049 .0050	.0096* .1143	.0066 .0051	.0056 .0050	.0045 .0047	-.0150** .0044
Survey Variable$_{t-1}$	-.0001 .0001	-.0002 .0001	-.0001 .0001	-.0001 .0001	.0000 .0001	.0000 .0001	.0006 .0004	.0002** .0001	-.0000 .0002	.0000 .0003	-.0003* .0002	.0007** .0002
Real Res growth$_{t-1}$	.4810** .1190	.4756** .1214	.3702** .1361	.3771** .1374	.5317** .1152	.5315** .1171	.5587** .1211	.0842 .1535	.3203 .1688	.3336 .1720	.4496** .1396	.2690** .0755
Spread$_{t-1}$	.0013 .0025	.0013 .0024	.0002 .0022	.0005 .0022	.0014 .0025	.0014 .0025	.0004 .0024	.0013 .0020	.0018 .0022	.0017 .0023	.0017 .0022	.0087** .0025
Adj R^2	.30	.30	.13	.12	.29	.29	.27	.24	.08	.08	.17	.42

Table 7
Dependent Variable: Growth in Real Estate Loans

Note for all Tables: Cells associated with estimated coefficients contain the estimate and standard error, both rounded to four decimals. * indicates significance at 5% and ** indicates significance at 1%.

Survey Variable:	LM C&I tight	S C&I tight	LM C&I Demand up	S C&I Demand up	LM C&I spread	S C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0118** .0029	.0117** .0029	.0129** .0031	.0132** .0032	.0114** .0029	.0113** .0029	.0117** .0030	.0160** .0031	.0232** .0058	.0231** .0056	.0140** .0032	.0071** .0017
Survey Variable$_{t-1}$	-.0001 .0001	-.0001 .0001	-.0000 .0001	-.0000 .0001	-.0000 .0000	-.0001 .0001	-.0001 .0002	-.0002** .0001	-.0002 .0002	-.0004 .0003	-.0002 .0001	.0002** .0001
Real Estate Loan growth$_{t-1}$	.4513** .1179	.4536** .1180	.4133** .1257	.4076** .1260	.4496** .1185	.4468** .1178	.4440** .1204	.2962* .1215	.2166 .1664	.2381 .1615	.3594** .1278	.6585** .0568
Adj R^2	.18	.18	.14	.15	.17	.18	.17	.28	.07	.08	.18	.50

Survey Variable:	LM C&I tight	S C&I tight	LM C&I Demand up	S C&I Demand up	LM C&I spread	S C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0132** .0044	.0130** .0044	.0135** .0046	.0139** .0047	.0122** .0043	.0119** .0043	.0124** .0044	.0152** .0042	.0205** .0064	.0203** .0060	.0130** .0044	.0079** .0020
Survey Variable$_{t-1}$	-.0001 .0001	-.0001 .0001	-.0000 .0001	-.0000 .0001	-.0000 .0000	-.0001 .0001	-.0001 .0002	-.0002** .0001	-.0002 .0002	-.0005 .0003	-.0002 .0001	.0002** .0000
Real Estate Loans growth$_{t-1}$	.4449** .1198	.4476** .1199	.4108** .1277	.4047** .1281	.4455** .1206	.4439** .1199	.4406** .1223	.2982* .1229	.1878 .1688	.1952 .1636	.3604** .1290	.6487** .0583
Spread$_{t-1}$	-.0006 .0015	-.0006 .0015	-.0003 .0016	-.0003 .0016	-.0004 .0015	-.0003 .0015	-.0003 .0015	.0004 .0014	.0021 .0021	.0026 .0021	.0005 .0016	-.0005 .0007
Adj R^2	.17	.17	.13	.13	.16	.17	.16	.26	.08	.10	.16	.50

Table 8
Dependent Variable: Growth in Real PCEs

Note for all Tables: Cells associated with estimated coefficients contain the estimate and standard error, both rounded to four decimals. * indicates significance at 5% and ** indicates significance at 1%.

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0081** .0013	.0081** .0013	.0100** .0013	.0098** .0013	.0069** .0012	.0071** .0012	.0079** .0014	.0098** .0013	.0081** .0019	.0101** .0020	.0097** .0013	.0066** .0008
Survey Variable$_{t-1}$	-.0001* .0000	-.0001* .0000	.0000 .0000	.0000 .0000	-.0000 .0000	-.0001* .0000	-.0002 .0001	.0000 .0000	.0000 .0000	-.0001 .0001	.0000 .0000	.0001** .0000
PCE growth$_{t-1}$	.0950 .1286	.0898 .1303	-.0963 .1307	-.0901 .1314	.1604 .1303	.1282 .1300	.0744 .1440	-.0766 .1305	.1055 .1687	.0353 .1692	-.0625 .1300	.0210 .0835
Adj R^2	.12	.11	.00	-.01	.05	.08	.06	-.02	-.04	.01	-.02	.18

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0096** .0018	.0095** .0018	.0110** .0016	.0110** .0016	.0076** .0017	.0076** .0016	.0087** .0018	.0113** .0016	.0098** .0024	.0115** .0024	.0114** .0017	.0054** .0009
Survey Variable$_{t-1}$	-.0001** .0000	-.0001** .0000	.0000 .0000	.0000 .0000	-.0000 .0000	-.0001 .0000	-.0002 .0001	.0000 .0000	.0000 .0000	-.0001 .0001	.0000 .0000	.0001** .0000
PCE growth$_{t-1}$	.0679 .1302	.0633 .1321	-.1131 .1318	-.0003 .1324	.1517 .1319	.1245 .1313	.0647 .1456	-.1117 .1316	.0590 .1738	-.0048 .1732	-.0970 .1307	.0292 .0821
Spread$_{t-1}$	-.0006 .0005	.0006 .0005	-.0005 .0005	-.0005 .0005	-.0003 .0006	-.0002 .0005	-.0003 .0005	-.0007 .0004	-.0007 .0006	-.0006 .0006	-.0007 .0004	.0010* .0004
Adj R^2	.12	.11	.00	-.00	.04	.06	.05	.00	-.04	.02	-.01	.21

Table 9
Dependent Variable: Growth in Consumer Loans

Note for all Tables: Cells associated with estimated coefficients contain the estimate and standard error, both rounded to four decimals. * indicates significance at 5% and ** indicates significance at 1%.

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0065** .0024	.0065** .0023	.0070** .0025	.0069** .0025	.0056* .0022	.0054* .0022	.0074** .0023	.0076** .0027	.0154** .0042	.0121* .0044	.0075** .0023	.0039** .0013
Survey Variable$_{t-1}$	-.0001 .0001	-.0002 .0001	.0000 .0000	.0000 .0000	-.0001 .0000	-.0001 .0000	-.0007* .0001	-.0000 .0000	-.0005* .0001	-.0005 .0003	.0004** .0001	.0002** .0000
Consumer Loan growth$_{t-1}$	.4906** .1129	.4919** .1113	.4617** .1222	.4623** .1219	.4657** .1140	.4889** .1124	.3897** .1196	.4271** .1339	.1347 .1576	.2119 .1620	.4341** .1107	.6387** .0557
Adj R^2	.27	.27	.20	.20	.28	.27	.32	.20	.16	.06	.33	..57

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0019 .0041	.0021 .0040	.0012 .0041	.0013 .0041	.0008 .0037	-.0000 .0038	.0017 .0038	.0019 .0040	.0087 .0052	.0055 .0052	.0047 .0039	.0022 .0017
Survey Variable$_{t-1}$	-.0001 .0001	-.0001 .0001	.0001 .0001	.0000 .0001	-.0001 .0001	-.0001 .0001	-.0007** .0002	-.0001 .0001	-.0005* .0001	-.0006 .0003	.0003** .0001	.0002** .0000
Consumer Loan growth$_{t-1}$	.4807** .1122	.4808** .0017	.4261** .1214	.4321** .1210	.4461** .1131	.4652** .1114	.3624** .1179	.3728** .1339	.0530 .1560	.1126 .1606	.4245** .1115	.6599** .0558
Spread$_{t-1}$	.0024 .0017	.0023 .0017	.0032 .0018	.0031 .0018	.0026 .0017	.0029 .0017	.0031 .0016	.0034 .0018	.0046* .0022	.0052* .0024	.0015 .0017	.0013 .0008
Adj R^2	.27	.28	.23	.26	.30	.29	.35	.24	.23	.15	.32	.57

Table 10
Dependent Variable: Growth in Revolving Consumer Debt

Note for all Tables: Cells associated with estimated coefficients contain the estimate and standard error, both rounded to four decimals. * indicates significance at 5% and ** indicates significance at 1%.

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0070** .0025	.0069** .0024	.0071** .0028	.0064* .0024	.0072** .0024	.0066** .0024	.0069** .0026	.0065* .0025	.0081** .0029	.0088** .0030	.0062* .0025	.0357** .0086
Survey Variable$_{t-1}$	-.0001 .0001	-.0001 .0001	.0001 .0001	.0001 .0001	-.0001 .0000	-.0001 .0001	-.0002 .0002	-.0001 .0004	.0001 .0001	.0001 .0002	.0001 .0001	.0003 .0003
Rev Cons Debt growth$_{t-1}$	.6828** .0926	.6856** .0926	.6507** .1007	.6692** .1021	.6412** .0954	.6673** .0942	.6656** .0949	.6656** .0949	.3148* .1560	.3491* .1510	.6978** .0977	.1213 .0819
Adj R^2	.48	.48	.53	.52	.49	.48	.47	.52	.13	.10	.51	.01

Survey Variable:	LM C&I tight	Small C&I tight	LM C&I Demand up	Small C&I Demand up	LM C&I spread	Small C&I spread	Mort tight	Mort Demand up	CCard tight	Other Cons loans tight	Cons Loans demand	Willing Cons Inst
C	.0082 .0041	.0079 .0041	.0059 .0039	.0057 .0040	.0082* .0040	.0067 .0039	.0068 .0040	.0055 .0039	.0192** .0048	.0200** .0049	.0071 .0044	.0415** .0113
Survey Variable$_{t-1}$	-.0001 .0001	-.0001 .0001	.0001 .0001	.0001 .0001	-.0001 .0000	-.0001 .0001	-.0001 .0002	-.0001 .0000	.0002 .0001	.0002 .0002	.0001 .0001	.0005 .0004
Rev Cons Debt growth$_{t-1}$	.6716** .0985	.6761** .0984	.6613** .1047	.6757** .1073	.6303** .1019	.6661** .0995	.6660** .1000	.7025** .1012	.0386 .1708	.0373 .1770	.6864** .1076	.1165 .0823
Spread$_{t-1}$	-.0005 .0013	-.0004 .0013	.0005 .0013	.0003 .0013	-.0004 .0013	-.0001 .0013	.0000 .0013	.0005 .0013	-.0045 .0016	-.0049** .0017	-.0004 .0014	-.0047 .0059
Adj R^2	.47	.47	.53	.51	.48	.47	.46	.52	.27	.25	.51	.01