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Introducing the Credit Conditions Survey

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The market for credit plays an important role in New Zealand's economy. Changes in credit market conditions can influence economic growth, as well as the stability and efficiency of the financial system. The Reserve Bank monitors credit conditions in a number of ways, including through a six-monthly survey of banks. The survey, called the Credit Conditions Survey, asks banks to report on observed and expected changes in demand for and the availability of bank lending. The Reserve Bank has begun publishing key credit conditions indicators from the survey.

This article introduces the Credit Conditions Survey. It presents several key credit conditions indicators from the survey and shows how these relate to other indicators of credit availability. In general, the survey appears to produce meaningful indicators of changes in credit conditions. Survey responses also provide insights into future changes in the availability of credit.

1 Introduction

Credit markets help businesses and households fund productive investments, and allow consumers to smooth their consumption over their lives.

Credit market conditions – the availability of credit, and the willingness of households and businesses to use it – can have a profound impact on activity in the New Zealand economy. During the GFC, a sharp reduction in the availability of credit was a key channel through which disruptions in the financial system transmitted to the broader economy.

Conditions in credit markets are also important for the soundness and efficiency of the financial system. Loose lending standards mean that borrowers are more likely to become financially distressed during a downturn, potentially amplifying the downturn and increasing loan losses for banks. At the same time, very tight lending standards could indicate that loans are not being efficiently allocated to creditworthy borrowers.

It is therefore important for the Reserve Bank to monitor credit market conditions as part of its monetary policy and financial stability objectives. It is also useful for businesses and other potential borrowers to be aware of developments in credit markets to inform their investment and borrowing decisions.

The Reserve Bank monitors credit market developments in a number of ways, including by surveying banks on their assessments of changes in credit conditions. This survey, called the *Credit Conditions Survey* (CCS), asks banks to report on their observations and expectations of demand for lending and credit availability across sectors of the economy. Although the results of the survey are often discussed in the Reserve Bank's public reporting, they have not been routinely released publicly.

Following improvements to the survey in early 2018, the Reserve Bank has begun releasing selected credit conditions indicators from the survey. This article introduces the CCS data and explores how indicators from the survey have evolved since the GFC. It compares the indicators from the CCS against other measures of credit conditions and concludes that they are meaningful measures of credit conditions.

2   The Credit Conditions Survey

The CCS was introduced in mid-2009 to monitor bank lending markets during the latter part of the GFC. While the Reserve Bank had for a long time collected information about the amount of lending going to different sectors of the economy, that information revealed little about the underlying supply and demand drivers behind developments in lending markets.

Central banks often use qualitative surveys of credit conditions to help unpick these drivers.[1] Along with other indicators, the Reserve Bank's CCS is used to build a fulsome picture of lending market developments.[2]

The CCS is completed every six months by 12 New Zealand-registered banks. It asks participants a range of qualitative questions on changes in conditions in the bank lending market. The questions cover off two key elements of credit conditions:

- changes in *loan demand*: changes in the extent to which households and businesses are willing to borrow; and

- changes in *credit availability*: this captures a combination of the lending standards that borrowers must meet as well as the tightness of the terms and conditions of the loans (e.g. the margins banks are charging).

For most questions, the survey asks banks to provide separate responses for household lending (mortgages and consumer loans), SME business lending, corporate lending, commercial property lending, and agriculture lending. Within these sectors, there are also more detailed questions. For example, the survey asks banks about loan demand from dairy farms versus sheep and beef farms.

The main questions in the survey focus on observed and expected changes in loan demand and credit availability. Banks respond to these questions on a five-point scale. Additional questions seek further detail

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1   The Bank of England, the US Federal Reserve, the Bank of Japan and the European Central Bank all maintain qualitative surveys of credit conditions.

2   Other methods include monitoring data on the risk characteristics of new loans (such as loan-to-value or debt-to-income ratios); engaging with representatives of borrowers (such as business groups) and lenders (such as banks); and monitoring loan pricing.

on credit market developments, such as a general question on the factors driving changes in credit availability.[3] Most questions ask about changes over the past six months or expected changes over the next six months. These questions are supplemented by an additional question on credit availability relative to the last three years.[4]

The Reserve Bank produces aggregate indicators for each question by assigning responses a score from -100 to 100 and calculating a weighted average across banks. We loosely refer to these indicators as 'net percentage changes'. Positive scores indicate an increase in demand or credit availability, and negative scores indicate the opposite. In some cases, responses are aggregated across questions. Box A explains the process for aggregating responses.

From the March 2018 survey, the Reserve Bank revised the survey to improve data quality, to make the questions more relevant, and to reduce the overall burden on reporting banks. As a result, the magnitudes of the indicators may not be comparable before and after the change.

Box A

Calculating credit conditions indicators

The Reserve Bank produces aggregate indicators from the CCS. The first step in aggregation is assigning each possible response a score from -100 to 100. A positive score indicates increasing demand or increasing availability of credit and a negative score indicates the opposite. Table A1 provides an example based on the 5-point response scale used for most questions.

Table A1
A typical response scale in the CCS

	Tightened significantly	Tightened somewhat	Broadly unchanged	Eased somewhat	Eased significantly
Text:					
Score:	-100	-50	0	50	100

The next step is to take the average response score across all banks that responded to the question. Banks' responses are weighted by their market share for the relevant sector.[1]

In some cases, aggregation across questions is required. In this paper we often refer to CCS indicators for 'other businesses' where we have averaged the indicators for the non-agriculture business sectors: commercial property, SME business, and corporate business. For these averages, sectors' shares of total bank lending are used as weights.[2]

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3   Other questions include: lending policies and credit terms, changes in the proportion of loans being approved outside regular policy guidelines, and forecasts of system-wide credit growth.

4   https://rbnz.govt.nz/statistics/surveys/credit-conditions
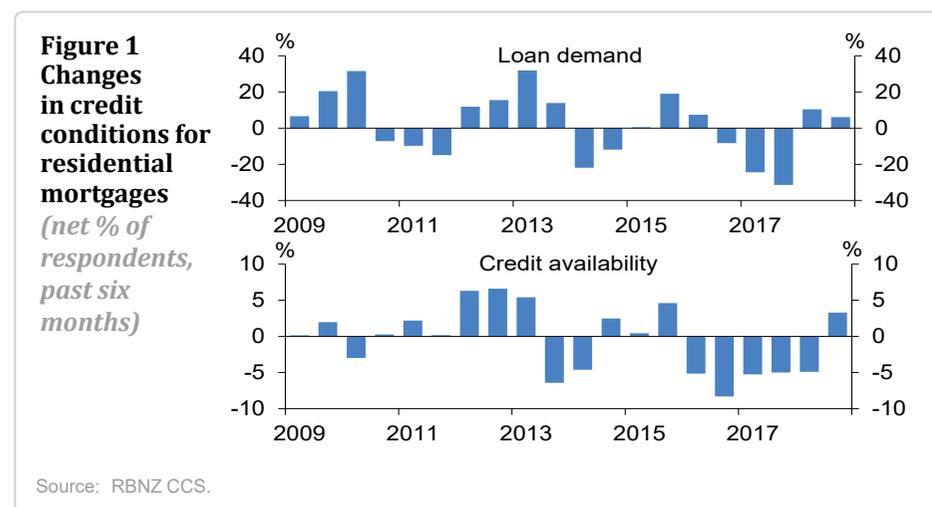
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1   Market share information is sourced from the RBNZ Bank Balance Sheet Survey. Where granular market share data are not available for a specific type of lending, the market share for the next-highest level disaggregation is used.

2   The same approach is used to calculate the agriculture loan demand indicator.

Making sense of the data

Information from the CCS has been one input into the Reserve Bank's assessment of risks to the financial system stemming from banks' mortgage lending. For mortgages, the indicators produced from the CCS are consistent with the broader narrative around the housing market and mortgage lending (figure 1).

After the GFC, demand for loans briefly picked up, but eased throughout 2011 as housing market activity softened. Loan demand again picked up in 2012 and 2013, coinciding with strong house sales, particularly in the Auckland market. The figure shows a gradual increase in credit availability in 2012 and early 2013, as banks become more willing to grant mortgages with high loan-to-value ratios (LVRs).[5] Credit availability then fell: first in late 2013, coinciding with the introduction of restrictions on high-LVR lending, and again in 2016, when LVR restrictions were tightened and banks began tightening their own serviceability standards.

Figure 1 Changes in credit conditions for residential mortgages *(net % of respondents, past six months)*

Loan demand

Credit availability

Source: RBNZ CCS.

5   See the discussion of high-LVR lending in the May 2013 *Financial Stability Report*.

Loan demand fell following both of these episodes, which indicates a tendency for borrowers to respond to tighter lending standards by not applying for loans in the first place.
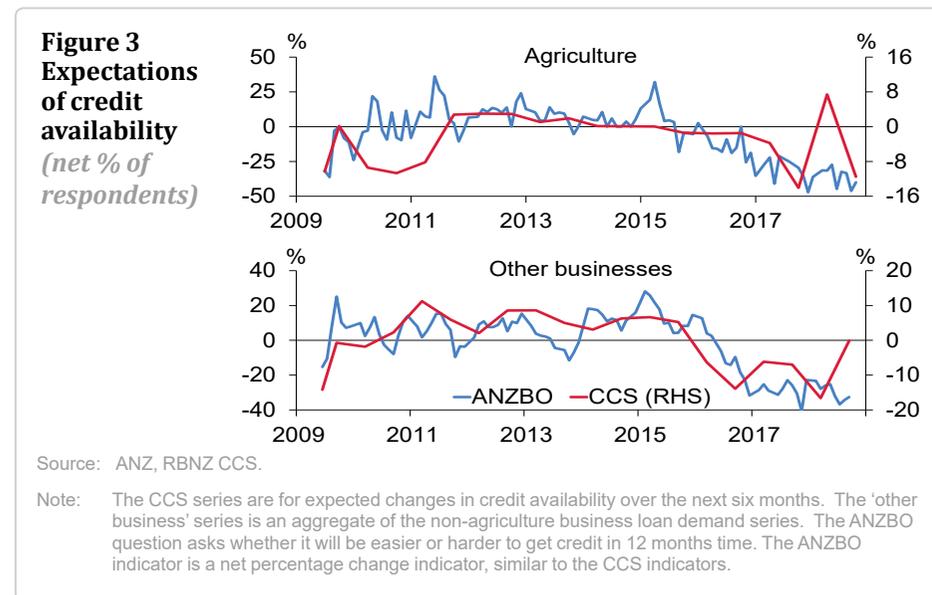
The CCS indicator based on banks' reported credit availability relative to the past three years adds more colour (figure 2). It allows us to look through fluctuations in the six-monthly indicator and provides a longer-term perspective on credit availability. For example, it tells us that household credit availability was relatively tight in 2009 and 2010, which is not apparent from the six-monthly indicators alone.

Figure 2 Mortgage credit availability relative to the previous three years *(net % of respondents)*
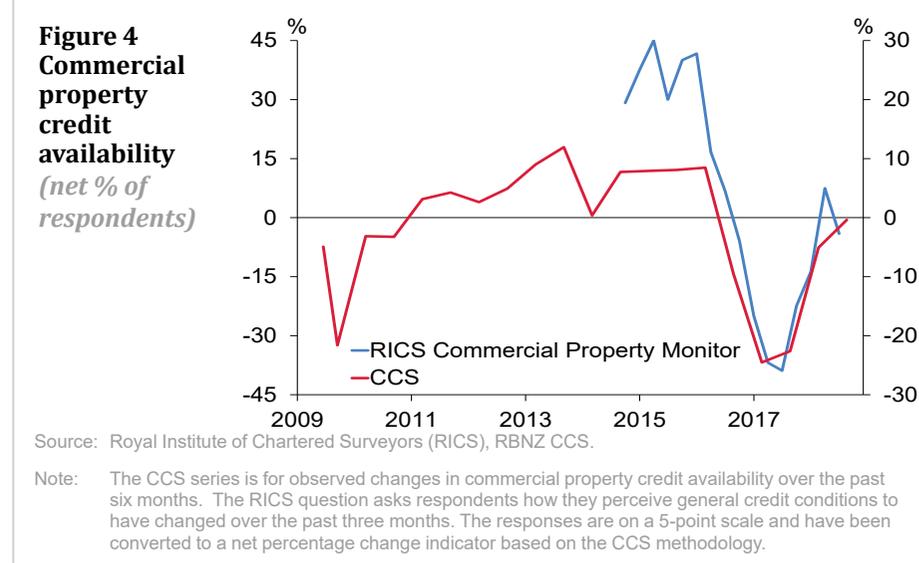
Source: RBNZ CCS.
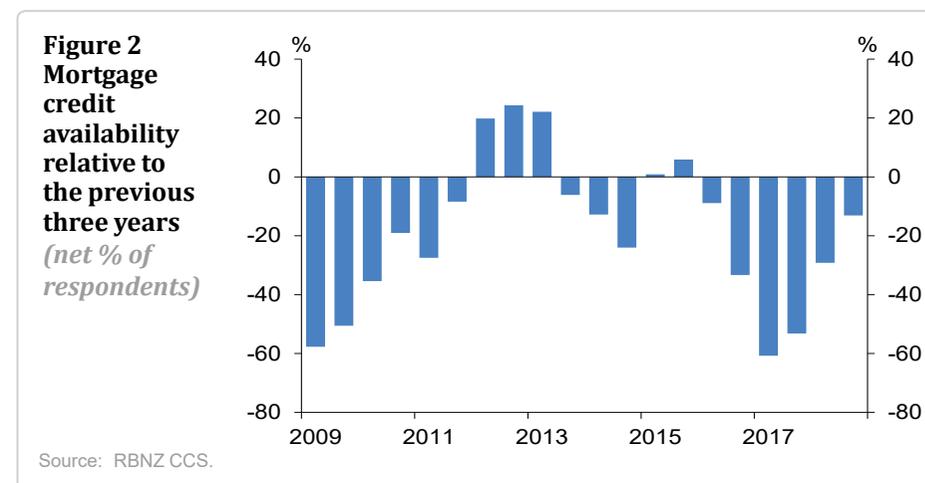
How well do the indicators match other measures of credit conditions?

Surveys of businesses and professionals provide another perspective on loan demand and credit availability. Take for example the ANZ Business Outlook (ANZBO), which asks firms whether they expect it to be easier or harder to get credit in 12 months' time. On average, firms' expectations of the ease of credit tend to match banks' expectations of changes in credit

availability over the next six months (figure 3). There are some periods where the indicators diverge, such as for the 'other business' sector in the most recent data, where banks expected credit availability to remain unchanged, while firms expected it to decrease.

Figure 3 Expectations of credit availability
(net % of respondents)

Source: ANZ, RBNZ CCS.

Note: The CCS series are for expected changes in credit availability over the next six months. The 'other business' series is an aggregate of the non-agriculture business loan demand series. The ANZBO question asks whether it will be easier or harder to get credit in 12 months time. The ANZBO indicator is a net percentage change indicator, similar to the CCS indicators.

Since the ANZBO asks firms only about their expectations for the future, we must look elsewhere to validate banks' *observed* changes in credit availability. One survey that can help with this is the Royal Institute of Chartered Surveyors (RICS) Commercial Property Monitor, which asks organisations in the commercial property industry how credit conditions have changed over the past three months. The RICS indicator lines up with banks' observed changes in credit availability for commercial property lending (figure 4). Both indicators show increasing credit availability in 2014 and 2015, and then a tightening in late 2016 and 2017 when banks increased their scrutiny of commercial property deals, particularly property development loans.

Figure 4 Commercial property credit availability
(net % of respondents)

Source: Royal Institute of Chartered Surveyors (RICS), RBNZ CCS.

Note: The CCS series is for observed changes in commercial property credit availability over the past six months. The RICS question asks respondents how they perceive general credit conditions to have changed over the past three months. The responses are on a 5-point scale and have been converted to a net percentage change indicator based on the CCS methodology.

For changes in credit availability over longer horizons, we can look to the Stats NZ Business Operations Survey (BOS), which asks firms that requested debt whether it was available on acceptable terms. This measure has been reasonably consistent with the medium-term credit availability indicator in the CCS. The medium-term indicator tends to be positive when the proportion of firms reporting that debt was available has increased relative to the three years prior and vice versa (figure 5).

For the agriculture sector, the two indicators diverge from mid-2015, around the time the recent dairy downturn began. Banks reported that credit availability was lower but agriculture firms were more likely to report that debt was available to them. Other insights from the CCS help to reconcile this difference. Banks also reported that they were approving more working capital loans to dairy farms outside of their regular lending policy guidelines. This suggests that, although banks' lending policies and credit terms were tighter, dairy farms were still able to borrow to get through the downturn.

**Figure 5
Medium-
term credit
availability**
*(net % of
respondents)*
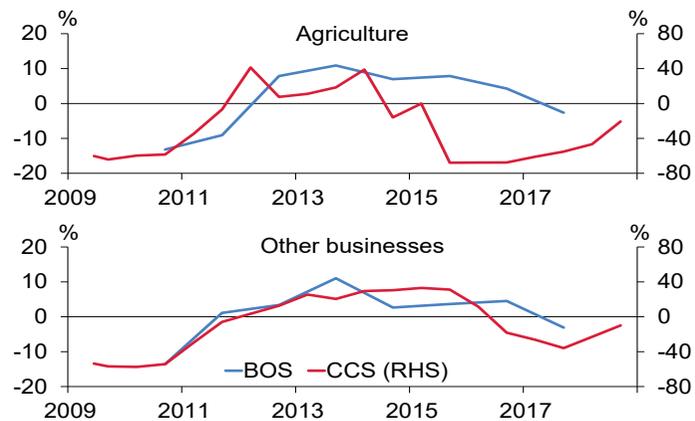
Source: Stats NZ, RBNZ CCS.

Note: The CCS indicator is for credit availability relative to the previous three years. The 'other business' series is an aggregate of the non-agriculture business loan demand series. The BOS indicator is the change in the proportion of firms that requested debt that also reported that debt was available to them on acceptable terms. The BOS data are annual.

Measures of credit availability also tend to be consistent with other insights the Reserve Bank gains through its supervisory relationship with banks. For example, hypothetical borrower exercises conducted by the Reserve Bank in 2014 and 2017 asked banks to report how much they would lend to a range of hypothetical mortgage borrowers. The results showed that banks were generally willing to lend less in 2017 compared to 2014, which is consistent with the tightening in credit availability banks reported in the CCS.[6]

Do they move as expected with other economic indicators?

We can also observe how much of what banks report in the CCS is consistent with outcomes in the economy, such as lending growth or business investment.

For mortgage lending, we find that rising loan demand and credit availability tends to coincide with increasing lending growth. This is illustrated in figure 6, in which each point represents a six-monthly survey observation for loan demand and credit availability. The green dots represent periods of increasing lending growth and tend to be associated with increasing loan demand and credit availability. The opposite is true for the red dots, which represent periods of declining lending growth. Applying a similar approach to agriculture and other business lending yields similar, but weaker, relationships. This is partly because agriculture

**Figure 6
Credit
conditions
and mortgage
lending
growth**
*(net % of
respondents,
past six
months)*
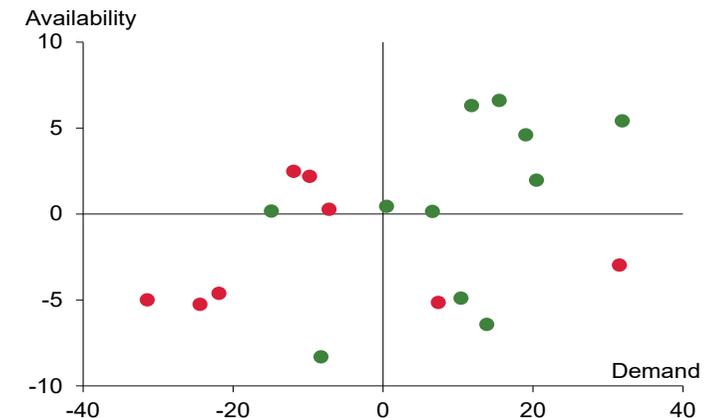
Source: RBNZ CCS, RBNZ *Bank Balance Sheet* (BBS).

Note: Green dots indicate periods where mortgage lending growth was higher than it was at the time of the previous survey, and red dots indicate periods when it was lower. Lending growth is defined as the growth rate in lending in the three months up to the end of the survey month.

6 See the November 2017 *Financial Stability Report, p. 10.*

and other business lending growth fluctuates significantly from month to month, which makes it harder to discern patterns in the data.

For businesses, we would expect changes in loan demand to correlate with changes in investment, since firms often fund investment using bank loans. This appears to be the case for firms' investment intentions. We find that when firms report in the ANZBO that they intend to increase investment, banks tend to report in the CCS that they expect loan demand to increase (and vice versa). This is particularly pronounced for the agriculture sector (figure 7).[7]

However, comparing reported *observed* changes in loan demand to actual business investment from the national accounts shows a much weaker relationship (figure 8). One possible reason for this is that not all investment is funded through bank loans: firms can also fund investment using retained profits, private loans, or by issuing debt or equity. Loans are also not just for investment, as demonstrated by the recent dairy downturn, where lending growth surged as dairy farms borrowed to cover operating losses, not because they were investing more.[8]

Figure 7
Business loan demand and investment intentions
(net % of respondents)
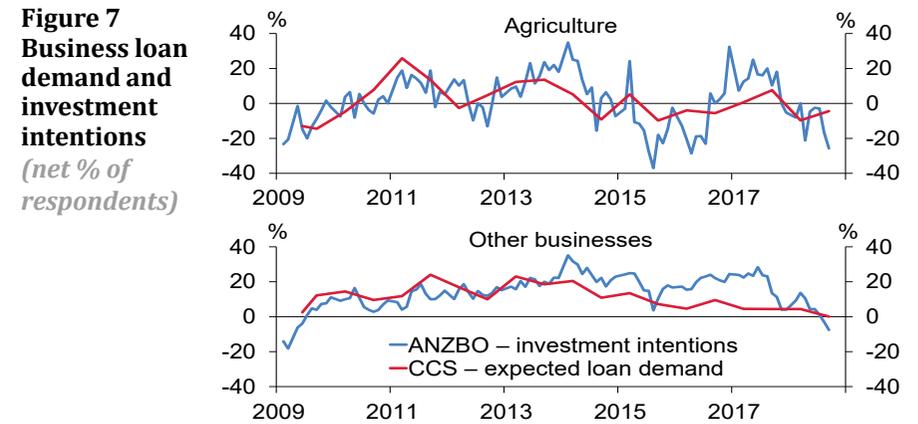
Source: ANZ, RBNZ CCS.

Note: The CCS series are for expected changes in loan demand over the next six months. The 'other business' series is an aggregate of the non-agriculture business loan demand series. The ANZBO question asks firms how they expect their investment in buildings, plant, and equipment will have changed in 12 months' time. The ANZBO indicator is a 'net percentage change' indicator, similar to the CCS indicators.

Figure 8
Business loan demand and investment
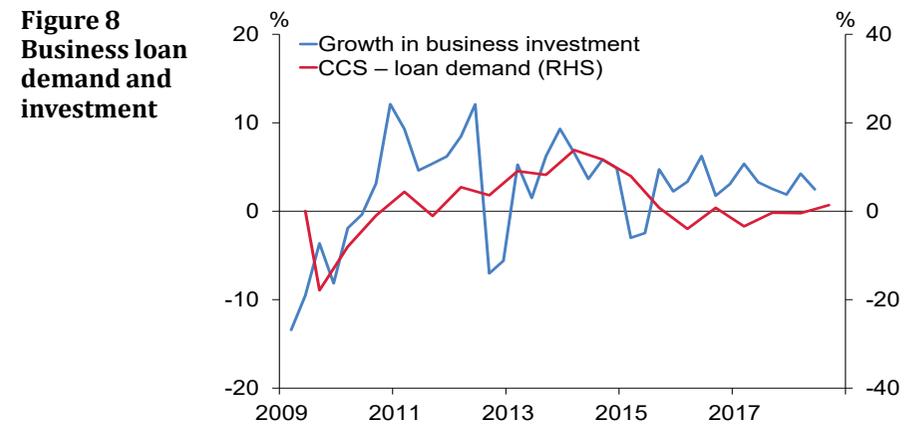
Source: ANZ, RBNZ CCS.

Note: The CCS series is for observed changes in loan demand over the past six months. This series is a 'net percentage change' indicator and is aggregated across all business sectors in the CCS. Business investment is the 6-month percentage change in quarterly real business investment (seasonally adjusted).

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7   Comparing the agriculture loan demand indicator from the CCS to the Rabobank Rural Confidence Survey shows similar correlation.

8   Another possible reason for this is that not all investment from a firm's perspective is counted as investment in the national accounts – for example purchases of land or existing buildings.

## Do they predict changes in credit conditions?

Since the *observed* changes that banks report in the CCS appear to be useful indicators of credit conditions in the economy, the *expected* changes banks also report may provide meaningful insights into the future. The predictive power of the key indicators is shown in figures 9 and 10, which plot the expected change indicators against the observed change indicators for the next period. The diagonal line indicates where 'perfect' predictions would fall.

Predictive power is stronger for credit availability than it is for loan demand, which is reflected by there being more points in the top right and bottom left quadrants of figure 10 than there are in figure 9. These quadrants represent periods where the directions of banks' expectations (on average) were consistent with their observations in the next period. This was the case 71 percent of the time for loan demand and 79 percent of the time for credit availability. One reason why banks would be able to predict credit availability better than loan demand is that they have much more control over credit availability; banks often report already having credit policy changes 'in the pipeline' in their comments that accompany the survey.

Drivers of changes in credit conditions

Since the March 2018 survey, the CCS has included a question on the factors driving credit availability. In September, banks indicated that a range of factors had contributed to increasing credit availability, most notably changes in competitive pressures (figure 11). On the other side, banks indicated that regulatory changes had reduced credit availability. The aggregates can mask variation across banks. For 'regulatory changes', some banks reported in March that easing LVR restrictions had increased credit availability, while other banks reported that
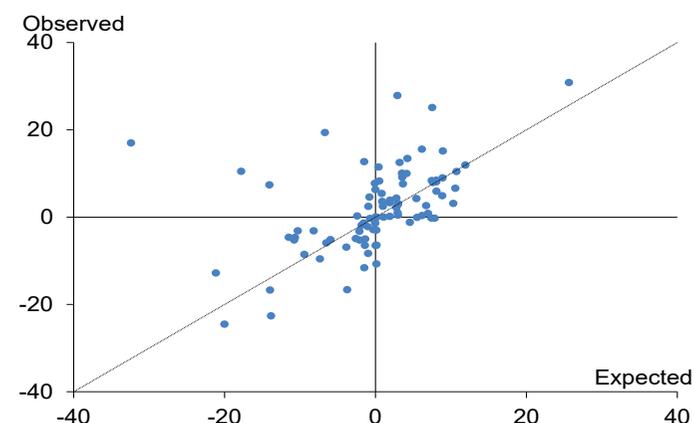
**Figure 9
Predictive
power – loan
demand**
*(net % of
respondents)*
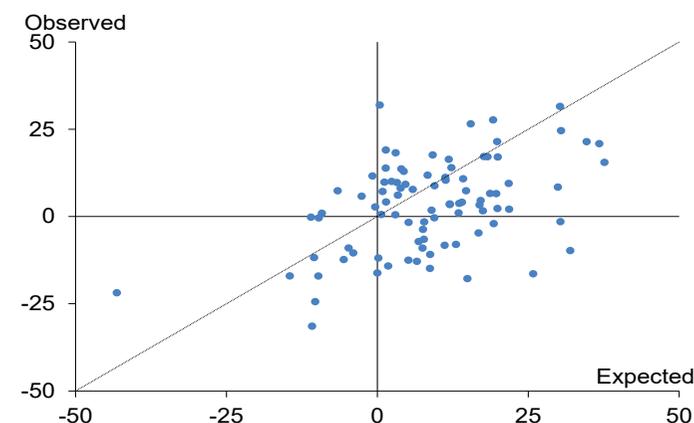
Source: RBNZ CCS.

Note: Each point compares expected loan demand for a sector over a six-month period with observed loan demand for the same sector and period, as reported in the subsequent survey.
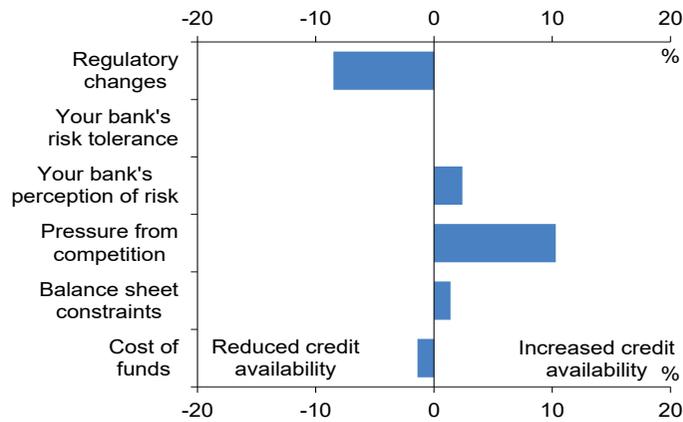
**Figure 10
Predictive
power – credit
availability**
*(net % of
respondents)*

Source: RBNZ CCS.

Note: Each point compares expected credit availability for a sector over a six-month period with observed credit availability for the same sector and period, as reported in the subsequent survey.

**Figure 11
Factors
affecting
credit
availability**
*(net % of
respondents)*

Source: RBNZ CCS.

Note: For each factor, banks respond on a five-point scale ranging from 'Contributed significantly to tightening' to 'Contributed significantly to easing'.

3 Conclusion

The CCS is one way the Reserve Bank gains insights into conditions in credit markets. This article concludes that the core indicators from the CCS are meaningful measures of credit conditions. They correlate with other survey measures to the extent we would expect them to and, where they do not, this can often be reconciled with a wider set of evidence. In addition, banks' expectations of future changes in credit conditions are predictive of what banks go on to report in subsequent surveys. Publication of key indicators from the Credit Conditions Survey will help inform public discussion of developments in credit markets.

Key indicators from the Credit Conditions Surveys are published in table C60: https://rbnz.govt.nz/statistics/c60-credit-conditions-survey

separate regulatory changes in New Zealand and abroad had reduced the availability of credit. Responses to these questions will help inform discussions of developments in credit conditions in the future.