

Reserve Bank
of New Zealand
Te Pūtea Matua

Tara-ā-Umanga Business Expectations Survey.

Consultation Paper

11 March 2024

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1. Have Your Say

We welcome your views on our plans to enhance our understanding of businesses' macroeconomic expectations. Expectations for inflation and other macroeconomic variables are used as a key information source by the Monetary Policy Committee (MPC) to inform appropriate settings for monetary policy.

About the consultation

We are investing in a Business Expectations Survey, Tara-ā-Umanga, to better understand the economic outlook held by key decision makers.

This will make a third Te Pūtea Matua Reserve Bank of New Zealand expectations survey, alongside our household survey, Tara-ā-Whare, and our longstanding Survey of Expectations, which focuses on the views of experts, such as professional forecasters, economists, and industry leaders.

Tara-ā-Umanga is an expansion in our knowledge about business expectations. There will be no immediate impact on the current Survey of Expectations. We are committed to maintaining the consistency of the long-running time series for professional forecasters.

Business expectations are critically important as they may affect investment, hiring, wage- and price-setting decisions. Our recent review of monetary policy identified several areas where better data could improve our understanding of the economy to support high quality monetary policy decision making. We recognise that a richer understanding of business expectations will improve our understanding of the present economic outlook held by key decision makers. After all, in most cases, businesses are the ones who set prices.

Our investment in an industry-wide survey will also provide evidence to support decision making across many aspects of our mandate, beyond monetary policy.

How we will use your feedback

After the consultation closes, we will consider the feedback received alongside the results from our pilot survey. These will be used to inform the final design of the new survey.

How to provide your feedback

You can provide a submission online: <https://consultations.rbnz.govt.nz/data-statistics-analytics/tara-umanga-business-expectations-survey/>

You can email your submission to statsunit@rbnz.govt.nz

Submissions will be public unless advised otherwise

Please let us know if you would not like your submission published on our website.

When you can have your say

You can have your say from Monday 11th March to Thursday 28th March 2024 at 5pm.

2. Introduction

The Business Expectations Survey, *Tara-ā-Umanga*¹, is an expansion of our knowledge about inflation and other macroeconomic expectations. This will make a third Reserve Bank expectations survey, alongside our household survey of expectations, *Tara-ā-Whare* – which we have run since 1995 and recently redeveloped in 2022 – and our longstanding Survey of Expectations – run quarterly since the third quarter of 1987 – which focuses on the views of experts, such as professional forecasters.

Enhanced data for monetary policy decision making

What people think will happen to inflation in the future is an important factor for achieving our monetary policy objective of low and stable inflation. Sound monetary policy, well informed by high quality data, is good for everyone in Aotearoa New Zealand by avoiding big swings in economic activity and supporting price stability.

Business expectations are critically important as they affect investment, hiring, wage- and price-setting decisions. Our long-running Survey of Expectations has been providing valuable views from a small but expert group of forecasters, economists, and industry leaders since 1987. Now we are looking to improve our surveying with a more comprehensive view from the wider business community, with a new survey of about 400 companies.

First-hand understanding of businesses' economic outlook

Survey responses are the only way to understand, first-hand, businesses' current economic outlook. Given the importance of expectations for monetary policy decisions, running our own survey provides us with complete control and certainty regarding the survey content, timing, and quality of results. We will use a representative probability sample drawn from a high-quality sampling frame (list of New Zealand businesses). This statistical approach allows us to make valid inferences about the entire population of businesses.

Valuing the commitment of our respondents

We value the views of all our survey participants and appreciate their time and commitment to help support the wider economy. The survey is designed to take less than 10 minutes to complete. Participation in the survey is voluntary.

Respondent information will be held securely, only used for statistical purposes, and always kept confidential. Any results will be published in aggregate form only – responses from a group, not individuals.

¹ Following re-development in 2022 the Reserve Bank's Household expectations survey was renamed to *Tara-ā-Whare - Household expectations survey*. The word "Tara" is derived from Pakitara, or the walls, and "Whare" means a house. *Tara-ā-Whare* is also used to describe going to door to door, to ask questions. Accordingly, the Business expectations survey will be called *Tara-ā-Umanga - Business expectations survey*. For clarity, the existing Survey of Expectations will be called *Tara-ā-Pūkenga - Expert Survey of expectations* in recognition of the current respondents' expertise as professional forecasters, economists, and industry leaders.

Summary of topics and consultation questions

Sample design: exclusions

Businesses with **fewer than 6 employees and primary industries will be excluded** from our target population in recognition of proportionate respondent burden and our focus on price-setters.

1. Do you agree with the proposed size and industry exclusions? If not, why not?

Sample design: stratification

Sample selection will be **stratified by business size** (number of employees) and **industry groups** (Manufacturing, Construction, Retail, Other) to ensure coverage across these domains of particular interest.

2. Do you agree with the proposed size and industry stratification groups? If not, why not?

Sample design: rotating panel

A 9-quarter **rotating panel design** will be used. Large and key businesses will be an ongoing panel, a proportion of smaller businesses will be rotated in and out of the sample each quarter.

3. Do you agree with the proposed rotating panel design? If not, why not?

Content: core questions

We propose six core questions are included every quarter covering business expectations of: prices, wages, growth, unemployment, the Official Cash Rate, and exchange rates.

4. Do you agree with the proposed core questions? If not, why not?

Content: occasional and rotating questions

Tara-ā-Umanga Business expectations survey is an opportunity for the Reserve Bank to directly survey businesses to gather evidence to support any aspect of our mandate. We have set out our initial thinking on criteria for including occasional and rotating questions to ensure these additional questions are not detrimental to the quality of the core questions.

5. Do you agree with our criteria for managing the inclusion of occasional and rotating questions? If not, why not?

General comments

6. Do you have any other suggestions you would like us to consider as part of the survey design?

Summary of design proposals

Topic	Feature	Proposal	Rationale
Sample design	Size exclusions	Exclude small businesses with fewer than 6 employees.	Common business survey practice, given very skewed size distribution and in recognition of proportionate respondent burden.
Sample design	Industry exclusions	Exclude primary industries.	Common practice for business expectation surveys, as industries are not generally 'price-setters'. ²
Sample design	Size strata	Three size groups: <ul style="list-style-type: none"> • Small: 6-19 employees • Medium: 20-99 employees • Large: 100+ employees 	Controls for an important business demographic.
Sample design	Industry strata	Four industry groups: <ul style="list-style-type: none"> • Manufacturing • Construction • Retail trade • Other industries 	Industries identified as key output strata. Minimum sample sizes will be specified for each design strata.
Sample design	Sample rotation	A 9-quarter rotating panel for sampled strata (large and key businesses will be an ongoing panel).	Balances precision and operational efficiency against respondent burden and potential for panel conditioning.
Content	Core questions	6 core questions, based on those asked in the current Survey of Expectations, covering: prices, wages, growth, unemployment, Official Cash Rate, and exchange rates.	Most important topics needed for monetary policy decision making.
Content	Occasional and rotating questions	Additional questions will be included on an occasional or rotating basis, subject to overall sample length.	Opportunity to gather better data to support any aspect of RBNZ mandate.

² Agricultural businesses tend to have prices set by global commodity markets.

3. Sample Design

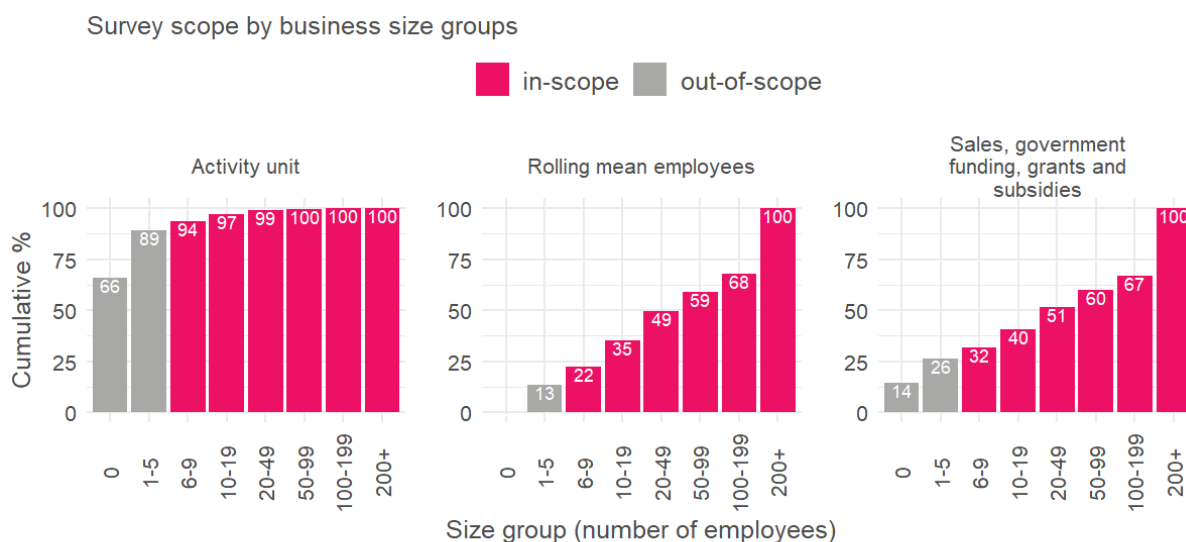
Target population (industry and size exclusions)

The target population for the survey will be all non-primary-industry businesses operating in New Zealand with 6 or more employees. The rationale for industry and size exclusions is outlined in the following sections.

Lower size cut-off

It is common practice to exclude very small businesses from business surveys (Smith, 2013). This is in recognition of proportionate respondent burden, and for efficient use of the survey sample. The skewed size distribution of New Zealand businesses is evident in Stats NZ’s Annual Enterprise Survey 2022 (figure 1). Nearly 90% of business have fewer than 6 employees, yet these only account for about 13% of total employed persons and 26% of total sales.

Figure 1: Business size exclusions



Source: Stats NZ, Annual enterprise survey 2022

It is proposed to **exclude businesses with fewer than 6 employees**. This criterion aligns the size criterion used for similar New Zealand business surveys: Stats NZ’s Business Operations Survey, which has included price and wage setting modules in 2010 and 2022, and Surveys of New Zealand business expectations run by scholars (Kumar, 2015; Coibion et al. 2018; Kumar and Wesselbaum, 2024).

Table 1 shows a comparison with other lower size thresholds considered: (i) fewer than 10 employees; (ii) fewer than 20 employees. Exclusion of businesses with fewer than 10 employees is relatively common international practice, but in the New Zealand context this would leave only a relatively small pool of businesses to sample from. The proposed threshold of fewer than 6

employees nearly doubles the number of eligible businesses from 33,000 to 57,000 compared with a threshold of fewer than 10 employees.³

Table 1: Excluding very small businesses: Sensitivity to threshold

Threshold	Businesses (units)		Employment		Sales	
	Excluded	Included	Excluded	Included	Excluded	Included
Fewer than 6 employees	469,000 (89%)	57,000 (11%)	257,000 (13%)	1,665,000 (87%)	\$196 billion (26%)	\$553 billion (74%)
Fewer than 10 employees	493,000 (94%)	33,000 (6%)	426,000 (22%)	1,496,000 (78%)	\$238 billion (32%)	\$511 billion (68%)
Fewer than 20 employees	512,000 (97%)	14,000 (3%)	678,000 (35%)	1,244,000 (65%)	\$303 billion (40%)	\$446 billion (60%)

Source: Annual Enterprise Survey 2022 (Stats NZ)⁴

Excluded industries

To use the sample most effectively consideration was given to industry coverage. Several leading surveys of business expectations exclude primary industries. Examples can be found in the UK, US, and Italy.⁵ It is proposed that we follow suit and exclude primary industries.⁶ Agriculture, forestry & fishing industry has the lowest proportion of businesses responsible for setting their own prices, for their main product, according to the Stats NZ Business Operations Survey 2022 (figure 2).

Surveys of New Zealand business expectations run by scholars (Kumar, 2015; Coibion et al. 2018); also excluded primary industries along with the New Zealand Institute of Economic Research's (NZIER, a consultancy) Quarterly Survey of Business Opinions.⁷ ANZ, a bank, run the Business Outlook Survey which does include primary industries, as the panel is largely comprised of their own customers. The sampling fraction, however, is less than the industries' employment share.⁸

³ The sampling fraction, before stratification assuming a 10% response rate and target sample size of 415, will be 12.6% or 7.3% for thresholds of fewer than 10 and 6 employees, respectively.

⁴ <https://www.stats.govt.nz/information-releases/annual-enterprise-survey-2022-financial-year-provisional/>

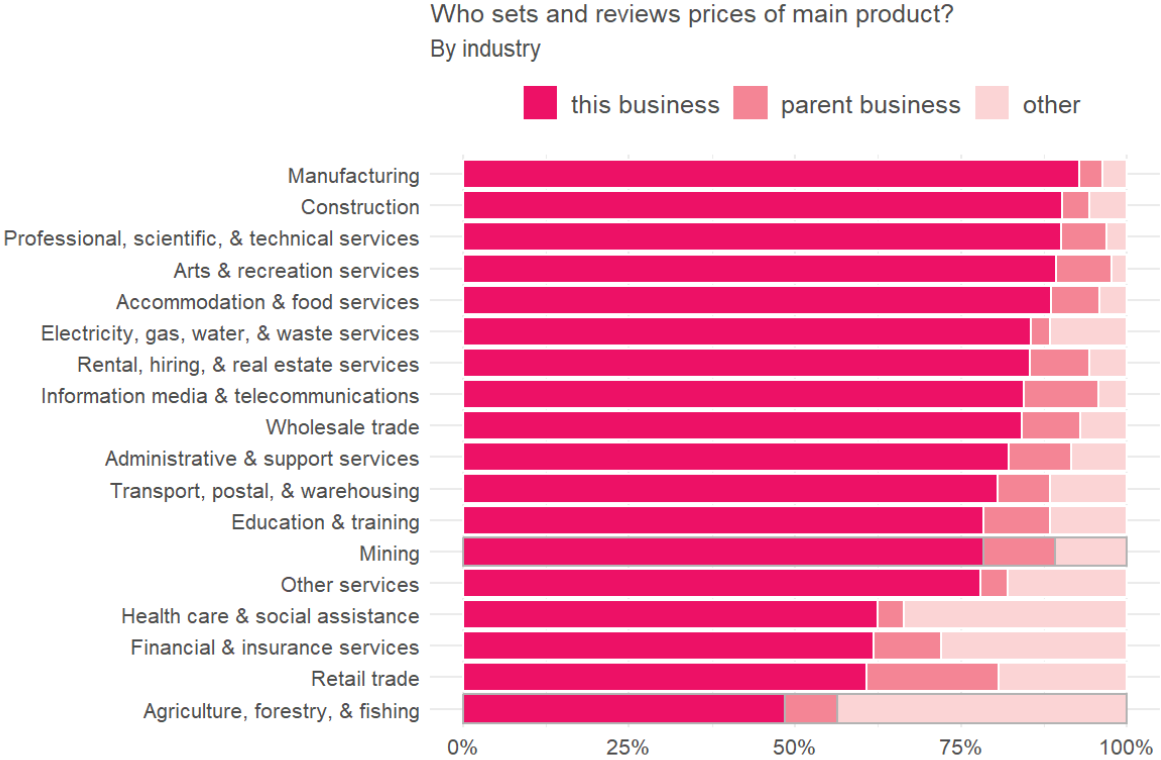
⁵ Bank of England Decision Maker Panel (UK): Bloom et al. (2017); Cleveland Fed Survey of Firms Inflation Expectations: <https://www.clevelandfed.org/indicators-and-data/survey-of-firms-inflation-expectations#background>; and Atlanta Fed Business Inflation expectations (US): <https://www.atlantafed.org/research/inflationproject/bie>; Banca d'Italia Survey on Inflation and Growth Expectations (Italy): https://www.bancaditalia.it/pubblicazioni/metodi-e-fonti-note/metodi-note-2022/IAI_methods_and_sources.pdf?language_id=1.

⁶ ANZSIC06 codes A – Agriculture, forestry, and fishing; and B – Mining.

⁷ <https://www.nzier.org.nz/about-member-publications#qsbo>

⁸ <https://www.anz.co.nz/about-us/economic-markets-research/business-outlook/>

Figure 2: Proportion of businesses responsible for setting their own prices



Primary industries, shown as bars with grey outline, are out-of-scope ANZSIC2006 codes A - Agriculture, forestry, and fishing, and B - Mining

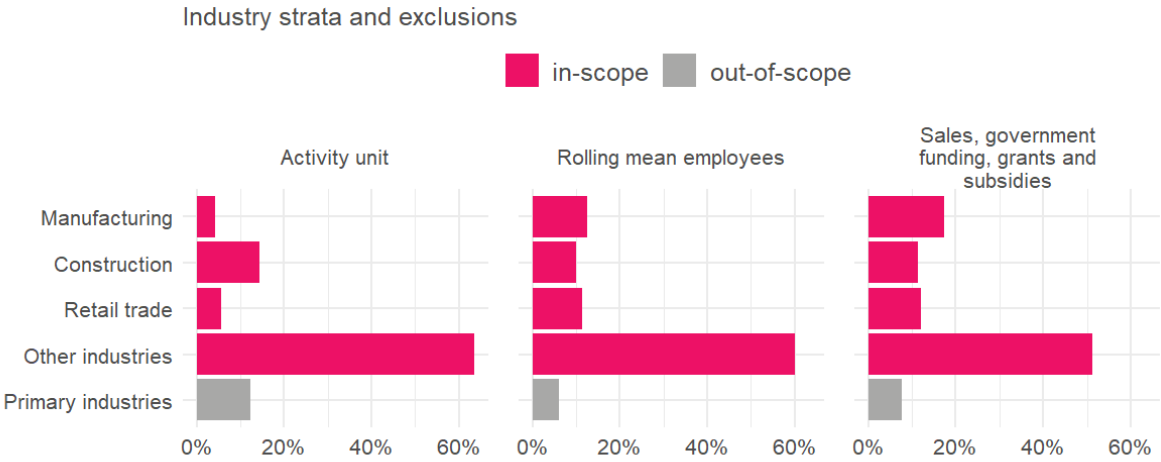
Source: Stats NZ, Business operations survey: 2022

It should be noted that a demerit to excluding primary industries is that the survey will be unable to report any statistical information about these industries. Primary industries’ share of the New Zealand economy is about 12% of businesses by activity unit, 8% of sales, and 6% of employees.

We considered excluding Financial Services to account for the overlap with the existing Survey of Expectations panel. Instead, it is proposed that we include these industries and exclude existing panel members only if they are selected twice. This will be a more targeted approach.

Public Administration industry was also considered for omission given some services do not occur at market prices. On the other hand, some services directly affect consumer prices. For example, local authority rates are a notable component of the Consumers Price Index (CPI).

Figure 3: Industry strata and exclusions



Primary industries (out-of-scope): ANZSIC2006 codes A - Agriculture, forestry, and fishing, and B - Mining
 Other industries: all in-scope excluding C- Manufacturing, E- Construction, and G Retail trade

Source: Stats NZ, Annual enterprise survey 2022

Sampling Frame

A fundamental aspect of conducting a representative sample survey is the sampling frame. That is, a list of units in the target population from which a randomised probability sample can be drawn. This randomisation allows us to make statistically valid inferences about the entire population. For example, estimates of the population mean or median of variables.

Coverage is of critical importance, as it allows us to make valid inferences. Businesses belonging to the target population that are omitted from the frame do not have a chance of selection so may bias statistical estimates. Over-coverage, in the form of duplicate or obsolete businesses, are also problematic when they cannot be identified by the survey process.

Demographic variables about businesses, such as their industry, number of employees and other size indicators, are also important for an efficient sample design. These ‘auxiliary variables’ also aid the construction of reliable estimates by domains of interest, such as industry group.

To operationalise the survey, we require contact details of an appropriate business representative to invite to complete the survey.

Stats NZ’s Statistical Business Register

Stats NZ’s Statistical Business Register has been assessed as the most suitable for this survey. Critical considerations include:

- comprehensive coverage of businesses, regularly maintained and updated.
- known business structure – we plan to survey at the “Kind-of-activity unit” level.
- ‘auxiliary’ variables that indicate the industry and size of business (number of employees)

Our primary collection mode will be a web questionnaire emailed to respondents. Sampled businesses selected to participate in the survey will be contacted by phone to bring them into the survey panel.

Alternative sources considered include ACC levy payers data and Companies Office data, but neither of these alternatives provide the comprehensive coverage, business structure, and range of auxiliary variables.

Stratification

The sample design for business surveys almost universally includes stratification where businesses are partitioned into non-overlapping stratum according to one or more characteristics. Sample selection is independent in each strata. This technique not only improves the efficiency of the sample design (greater precision for the same sample size), but also allows us to guarantee coverage, and set minimum sample sizes, for domains of particular interest, such as industry groups.

Size strata

Stratification by size is important since a small number of large businesses have a disproportionate impact on the whole economy (figure 1). Analysis of a 2013 New Zealand survey found business size (employment) was a significant predictor of inflation expectations (Coibion, et al. 2020).

The most common method to determine the strata boundaries for a continuous variable (number of employees for this survey) is the Dalenius-Hodges, cumulative root f_i rule (Dalenius & Hodges, 1959). Table 2 shows the suggested boundaries by employing this rule using published Annual Enterprise Survey 2022 groupings for 3 or 4 size strata. We propose to use three size strata.

Table 2: Size strata boundaries

3 Strata	4 Strata
6-19 employees	6-9 employees
20-99 employees	10-49 employees
100+ employees	50-99 employees
	100+ employees

Applying Dalenius-Hodges rule to Stats NZ's Annual Enterprise Survey 2022.

Industry strata

There are 19 top-level industries in the Australia New Zealand Standard Industrial Classification 2006 (ANZSIC06).⁹ Given the proposed sample size it will be necessary to group these industries for stratification to ensure sufficient sample size can be allocated to each stratum. A key consideration is the frequency of price changes (figure 4), and consideration of industries identified as key output strata. The following industry groups are proposed as design strata: Manufacturing;

⁹ <https://catalogue.data.govt.nz/dataset/industrial-classification-anzsic06>

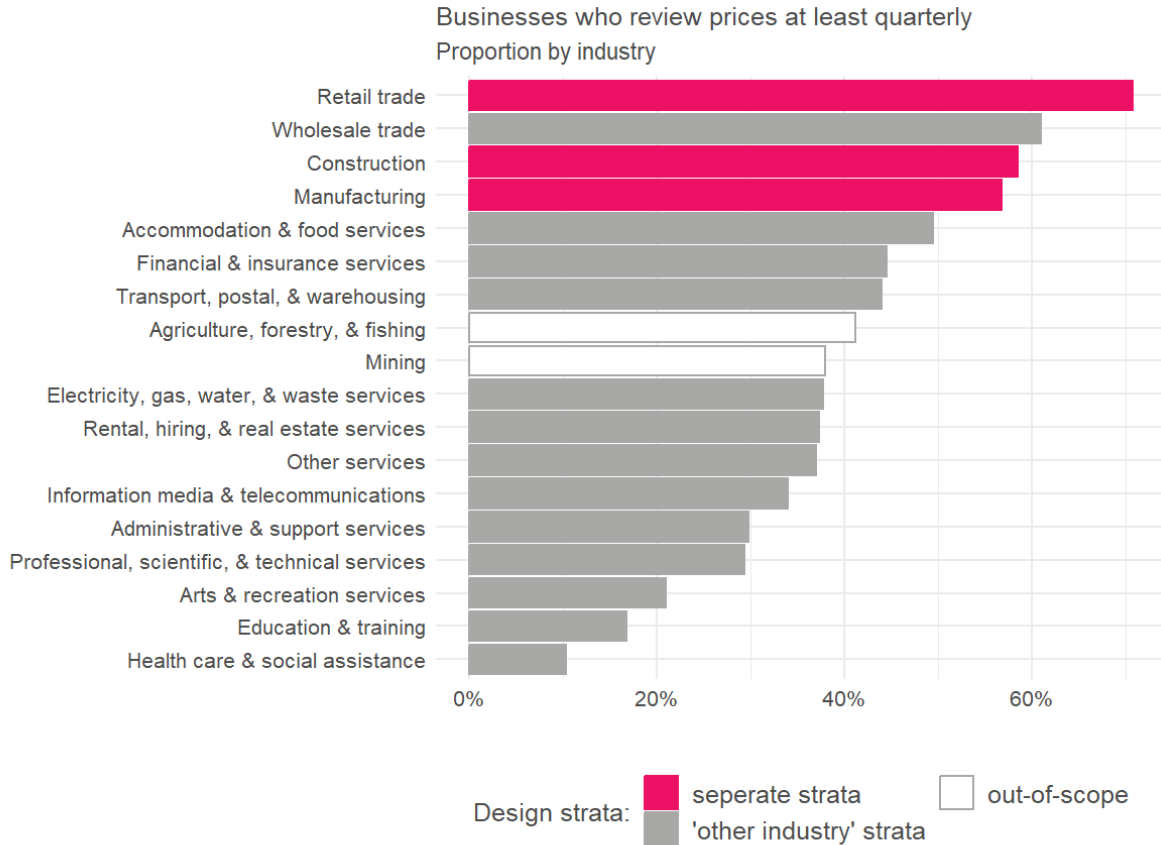
Construction; Retail trade; Other industries (see appendix table A1 for mapping to ANZSIC06 industries). Table 3 shows the population number of businesses operating in New Zealand in each of the proposed design strata.

Table 3: Proposed Design Strata: Population sizes

Industries	Manufacturing	Construction	Retail Trade	Other industries
By Size				
Large (100+ employees)	N ~ 327	N ~ 132	N ~ 336	N ~ 1,293
Medium (20-99 employees)	N ~ 1,593	N ~ 1,071	N ~ 987	N ~ 7,530
Small (6-19 employees)	N ~ 3,885	N ~ 6,567	N ~ 4,086	N ~ 24,381
Very small [not sampled] (fewer than 6 employees)	N ~ 16,560	N ~ 67,437	N ~ 23,547	N ~ 300,978

Source: Stats NZ, Annual Enterprise Survey 2022.

Figure 4: Frequency of price changes



Source: Stats NZ, Business operations survey: 2022

Sample allocation

Our proposed sample allocation, shown in table 4, is based on stratification by industry and employees. This is based on a conservative estimate of a 10% response rate. Our survey recruitment strategy will aim for a higher response rate. We plan to conduct a pilot survey to test our recruitment strategy and learn more about businesses' propensity to respond. A higher realised response rate will decrease the number of businesses that will need to be contacted to invite into the survey.

Table 4: Sample allocation (n=4,150, based on 10% response rate)

Industries	Manufacturing	Construction	Retail Trade	Other industries
By Size				
Large (100+ employees)	350*	150*	350*	600
Medium (20-99 employees)	250	250	250	600
Small (6-19 employees)	250	250	250	600

* Or population size, if lower.

Pilot sample

We plan to draw a sample of about 500 businesses for the pilot, expecting an achieved sample size of about 50-100 respondents (assuming a response rate of 10-20%). This will be a scaled down version of the proposed final stratification (table 5).

Table 5: Pilot sample selection (n=501)

Industries	Manufacturing	Construction	Retail Trade	Other industries
By Size				
Large (100+ employees)	36	36	36	59
Medium (20-99 employees)	36	36	36	59

Industries	Manufacturing	Construction	Retail Trade	Other industries
By				
Size				
Small (6-19 employees)	36	36	36	59

Rotating panel design

We have considered three options for sample rotation:

1. **Complete reselection** of businesses each quarter (independent 'cross-sectional' sample selection).
2. **Repeated surveying of the same businesses** over time (a 'panel' survey).
3. A **rotating panel design** where a proportion of businesses are rotated in and out of the sample each quarter.

Options for a repeating survey

Tara-ā-Umanga Business Expectations Survey is a quarterly survey, which means we need to decide how the survey will operate repeatedly over time. There will need to be a process to ensure that the sample is regularly updated to account for business births and deaths. Additionally, we have options on how to select ongoing businesses over time.

The survey design for the Survey of Expectations uses a panel approach, where the same respondents are repeatedly sampled over time. The panel is periodically refreshed to account for attrition due to long-term non-response. In contrast, our Household Expectations Survey, Tara-ā-Whare, uses a completely new (independent) sample each quarter.

Given their large contribution to the overall economy **large businesses**, and any others identified as **key respondents**, will be continuously sampled as a panel.

For the **small and medium sized sampled businesses**, it is proposed to use a **rotating panel design** where a small proportion of the sample is rotated in, and out, each quarter. Sampled businesses will be rotated out of the survey after 9-quarters. This aims to strike a balance between a full panel and full reselection each quarter for these smaller businesses, where respondent burden may be higher given the smaller scale of operations. Panel conditioning may also be a greater concern for smaller businesses, since they may be more likely to upskill or change behaviour in response to the survey. Further rationale for this design, along with consideration of feasible alternatives, are presented in the following sections (table 6 provides a summary).

Key considerations

Many business surveys use a rotating panel design (Steel and McLaren, 2008). The OECD report that almost all business opinion surveys, of which expectations surveys are a special case, are of a

panel design (OECD, 2013). Several leading surveys of business expectations are panel designs. Examples can be found in the UK, US, and Italy.¹⁰

The main consideration is to appropriately balance **respondent burden**, against statistical **precision of estimates of change**. Panel surveys offer the greatest precision but necessitate the highest concentration of respondent burden in selected businesses.

Additional considerations include risk of **panel conditioning**, where respondents change reporting behaviour in response to the survey (e.g. through greater economic awareness raised by participation); the added **costs** and complexity to **recruit new survey respondents**; and longitudinal analysis, which looks at changes over time for the same businesses, facilitated only by a panel survey design (Sharot, 1991).

Options analysis

The appropriate design choice should be guided by the principal purpose of the survey. The dominant target for sub-annual surveys is typically estimates of *change* in key metrics. This need is revealed by the frequent nature of the survey. If *levels* are the dominant target, why is the survey needed so frequently? This doesn't mean that we aren't also interested in the *level* of estimates as well. Given a dual target of estimates of *levels* and *changes*, but where *changes* are the dominant target, a rotating panel design is recommended.

A summary of alternatives considered is shown in Table 6.

Table 6: Summary of reselection alternatives (panel or periodic reselection)

Approach	Merits	Demerits
Panel design (same respondents over time)	Increases precision of estimates of change over time Aids longitudinal analysis of respondent-level changes	Concentrates respondent burden Risk of panel conditioning
Complete reselection each quarter	Spreads respondent burden No panel conditioning	Additional costs and complexity to recruit new respondents Increased sample volatility for estimates of change

Respondent burden

Overall 'respondent burden' (cost and effort required by survey respondents) will be broadly the same regardless of rotation options, as the sample size will be unchanged. However, in a panel

¹⁰ Bank of England Decision Maker Panel (UK): Bloom et al. (2017); Cleveland Fed Survey of Firms Inflation Expectations: <https://www.clevelandfed.org/indicators-and-data/survey-of-firms-inflation-expectations#background> ; and Atlanta Fed Business Inflation expectations (US): <https://www.atlantafed.org/research/inflationproject/bie> ; Banca d'Italia Survey on Inflation and Growth Expectations (Italy): https://www.bancaditalia.it/pubblicazioni/metodi-e-fonti-note/metodi-note-2022/IAI_methods_and_sources.pdf?language_id=1 .

survey the respondent burden is concentrated in the same businesses over time. Periodic reselection, or rotation, spreads the respondent burden across more businesses. This may provide a fairer distribution of burden (Haraldsen, et al 2013).

Precision of estimates

Estimates from a sample survey have a level of uncertainty due to the fact a sample has been used rather than a census. This uncertainty is known as the 'sampling error' or 'variance'. The variance of change (or difference) between two time periods, t_1 and t_2 is $\text{var}(t_2 - t_1) = \text{var}(t_1) + \text{var}(t_2) - 2\text{cov}(t_2, t_1)$, which means that the variance of change can be made smaller if we can increase the covariance between the estimates at the two time periods. This can be achieved by including the same businesses in the sample at the two time periods (Smith, 2013). The greater the overlap in samples between time periods, the smaller the variance of estimates of change (the higher the precision). With no overlap in sample, the statistical variance of estimates of change will be about twice the point-in-time variance.

Longitudinal analysis

It may be useful to analyse respondent-level changes over time. For example, the proportion of businesses changing expectations from period to period, as an indicator of the stickiness of expectations. This type of analysis can only be undertaken for businesses repeatedly sampled.

Panel conditioning

Panel conditioning occurs when participation in previous survey rounds affects how respondents answer questions in later rounds. In business surveys the information on panel conditioning is very sparse (Ptáčková and Smith, 2021). Binder (2019) found evidence of panel conditioning in the Federal Reserve Bank of New York Survey of Consumer Expectations. However, Altig et al (2020) found no statistically significant evidence of panel conditioning in the Survey of Business Uncertainty.

Costs to recruit new respondents

There may be additional costs required to entice new respondents to participate in the survey, compared with ongoing respondents who are familiar with the survey. For example, greater non-response follow up may be required, or additional effort needed to obtain contact information for the most appropriate person within a business to respond.

Variants of rotating panel design

In this section we consider some different specifications of a rotating panel design. Table 7 shows a summary of the variants considered.

The suggestion of a 9-quarter rotation is pragmatic. Having 9 rather than 8 quarters means that analysis of changes in reporting can be conducted at a firm level for changes over 1- and 2-years. Shorter or longer rotation lengths are, of course, possible.

Another option is to ask businesses to complete the survey less often than quarterly, in a *rotating pattern design* (Steel & McLaren, 2008). Using non-overlapping independent samples the survey can still be conducted on a quarterly basis. This strategy may guard against panel conditioning as Coibion et al (2020) reported an experiment on New Zealand businesses that found presenting

businesses with information about the Monetary Policy Committee’s inflation target strongly affected businesses inflation expectations for ‘uniformed’ businesses (who thought the inflation target was 4% or more), but that the effect was short lived and negligible after 6 months. A demerit of the *rotating pattern design* is that it would reduce or complicate the ability to include rotating questions for different quarters.

Table 7: Variants of rotating panel design: options analysis

Option	Description	Reason for dismissing
Shorter rotation length (e.g. 5-quarter rotation)	Decreases burden, and potential for panel conditioning	Limits ability to do longitudinal analysis and increases effort needed to recruit new respondents
Rotating pattern design	Each businesses is only asked once or twice per year (ie. a 6 or 12 month gap between surveys). Using non-overlapping independent samples the survey can still be conducted on a quarterly basis.	Estimates of quarter-on-quarter change will not benefit from sample error reduction, nor can proportion of businesses changing expectations be calculated on a quarterly basis. Complicates inclusion of rotating questions.

4. Questionnaire content

Core questions

We propose six core questions are included every quarter covering business expectations of: prices, wages, growth, unemployment, Official Cash Rate, and exchange rates. Table 8 shows the proposed core questions.

These questions have been drawn from the current questions asked in the Survey of Expectations. We have reviewed the wording to ensure consistency and to reduce technical jargon for a wider business audience.

Table 8: Core questions

Order and topic	Question	Definition box	Variation from Survey of Expectations
1 - Prices	<p>What annual % change do you expect in the Consumers Price Index (CPI) for the:</p> <p>Year to [Month Year] (one-year ahead)</p> <p>Year to [Month Year] (two-year ahead)</p> <p>Year to [Month Year] (five-year ahead)</p> <p>Year to [Month Year] (ten-year ahead)</p> <p>[A 'no opinion' option is given for each time horizon.]</p>	None	None
2 - Wages	<p>What annual % change do you expect for average hourly wage rates for the private sector for the:</p> <p>Year to [Month Year] (one-year ahead)</p> <p>Year to [Month Year] (two-year ahead)</p> <p>[A 'no opinion' option is given for each time horizon.]</p>	<p>Ordinary time, private sector, average hourly wage rates, as reported by Statistics New Zealand's Quarterly Employment Survey (QES)</p>	<p>Reference to QES and "ordinary time" moved to definitions.</p>

Order and topic	Question	Definition box	Variation from Survey of Expectations
3 - Growth	<p>What annual % change do you expect for real economic growth (GDP) for the:</p> <p>Year to [Month Year] (one-year ahead)</p> <p>Year to [Month Year] (two-year ahead)</p> <p>[A 'no opinion' option is given for each time horizon.]</p>	<p>Real production-based Gross Domestic Product (GDP), as reported by Statistics New Zealand</p>	<p>Simplified to "real economic growth (GDP)"; from "real production-based GDP".</p> <p>Consistent phraseology with CPI question.</p>
4 - Unemployment	<p>What unemployment rate do you expect in:</p> <p>[Month Year] (one-year ahead)</p> <p>[Month Year] (two-year ahead)</p> <p>[A 'no opinion' option is given for each time horizon.]</p>	<p>Unemployment rate, as reported by Statistics New Zealand's Household Labour Force Survey (HLFS)</p>	<p>Simplified to unemployment rate; from "official HLFS unemployment rate"</p>
5 - OCR	<p>What Official Cash Rate (OCR) do you expect at the end of:</p> <p>[Month Year] (end of current quarter)</p> <p>[Month Year] (one-year ahead)</p> <p>[Month Year] (ten-year ahead)</p> <p>[A 'no opinion' option is given for each time horizon.]</p>	<p>None</p>	<p>Average over 10-years omitted.</p> <p>Dropped "i.e. neutral OCR estimate" from "in 10 years' time" description</p>
6 – Exchange rate	<p>Relative to the US Dollar, what spot exchange rate do you expect for the NZ Dollar at the end of:</p>	<p>None</p>	<p>Omitted Australian Dollar expectations</p>

Order and topic	Question	Definition box	Variation from Survey of Expectations
	[Month Year] (6-months ahead)		
	[Month Year] (one-year ahead)		
	[A 'no opinion' option is given for each time horizon.]		

We will also include two context questions (table 9). A self-defined indicator for whether the business considers themselves an exporter will provide useful context for the exchange rate question. We will also test whether a numerical version of this question – asking respondents to estimate the proportion of their sales revenue from exports – is easier to answer. This question may be asked less often than quarterly.

Including a general comments box is not only survey best practice it will allow us to understand any additional comments or context for expectations from respondents.

Table 9: Context questions

Order and topic	Question	Variation from Survey of Expectations
7 - Exporter	Is a significant share of your sales revenue from exports? Yes/No	Addition. Useful context for the exchange rate question. Self-defined indicator for whether the business considers themselves an exporter.
8 - Comments	Please provide any additional comments on the survey or economic expectations.	Addition

Cognitive testing of core questions

The questions will undergo cognitive testing, in parallel with our pilot survey. Cognitive testing involves randomly subsampling and recruiting a small number of respondents to complete a simulated survey, where participants are additionally interviewed to gain insight into their understanding and responses to the survey questions. The feedback obtained can be used to make any necessary adjustments to ensure the effectiveness and clarity of survey questions.

Candidate questions for omission

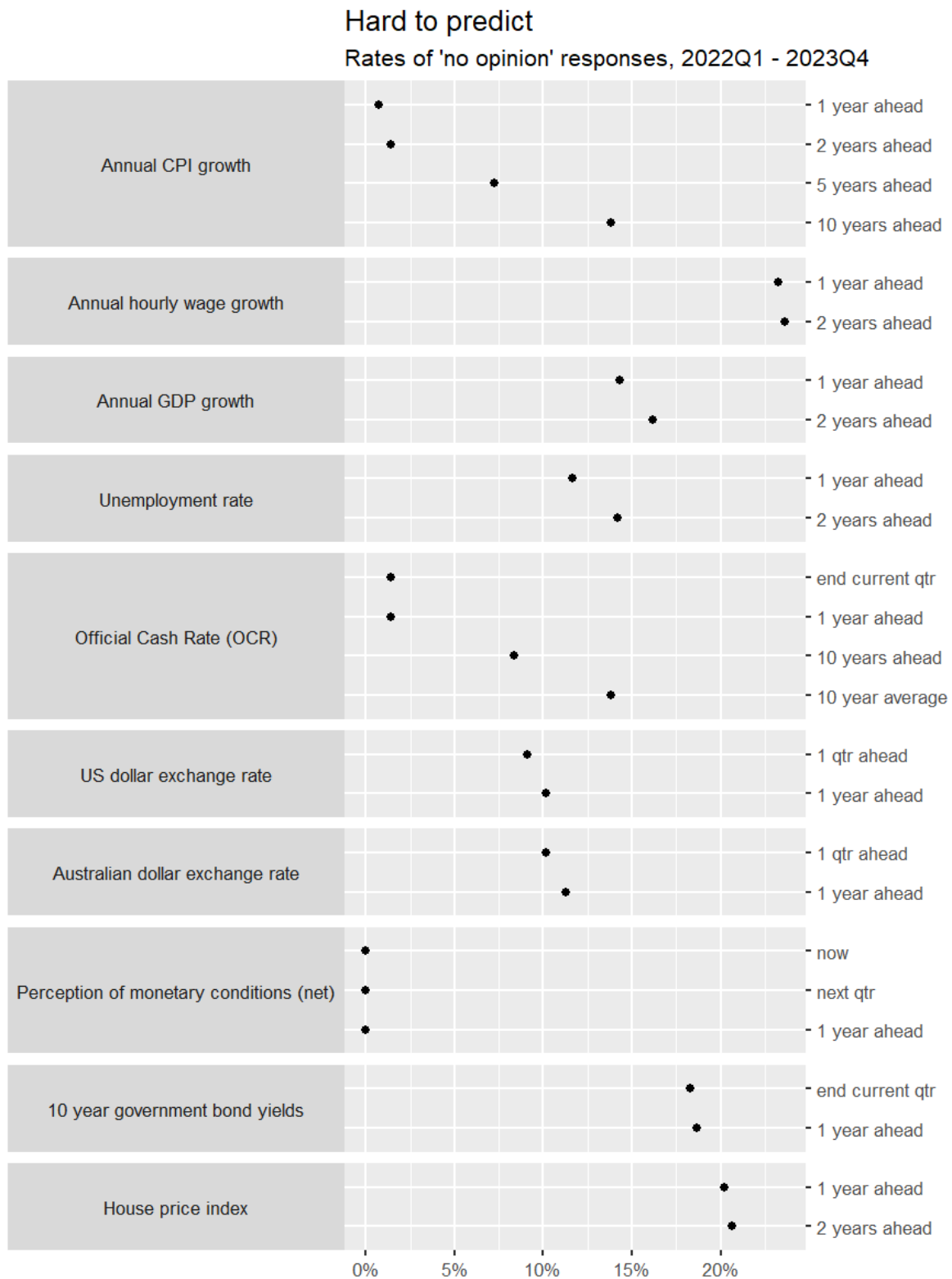
Several questions asked to current Survey of Expectations are considered as candidates for omission in Tara-ā-Umanga Business Expectations Survey (table 10). This is in recognition of lower specialised knowledge of the macroeconomy in a broader industry survey, and to create space for new questions discussed in the 'Occasional and rotating questions' section.

Table 10 – candidate questions for omission

Topic	Question	Rationale
Monetary conditions	<p>What is your perception of monetary conditions at the present moment:</p> <p>[Likert scale 1-7, Very tight – Neutral – Very relaxed; No opinion option]</p> <p>What expectation do you have for monetary conditions at the end of:</p> <p>[6-months ahead]</p> <p>[one-year ahead]</p>	<p>Likely to be hard to answer for many businesses. No common definition of “monetary conditions”.</p>
Government bond yields	<p>What do you expect the 10-year government bond market yield to be at the end of:</p> <p>[end of current quarter]</p> <p>[one-year ahead]</p>	<p>Likely to be hard to answer for many businesses. About 20% of current panel members report “no opinion” – see figure 5.</p> <p>Lower interest in general business expectations for this topic.</p>
House prices	<p>What is your expectation of the annual % change in the Quotable Value Quarterly House Price Index for the:</p> <p>[one-year ahead]</p> <p>[two-year ahead]</p>	<p>Likely to be hard to answer for many businesses. About 20% of current panel members report “no opinion” – see figure 5.</p> <p>Lower interest in general business expectations for this topic. Note: Households’ expectations for house prices are captured by RBNZ’s Tara-ā-Whare Household expectations survey.</p>
Time and date of completion	<p>Time and date of completion [Time box] [Date box]</p>	<p>Time and date stamp added automatically on completion of web questionnaire.</p>

We took into consideration the current rates of “no opinion” expressed in the Survey of Expectations (figure 5). About 1-in-5 current respondents report “no opinion” to questions on Government bond yields and house prices. We will also monitor rates of “no opinion” for questions on wages since this is an important question also with a high rate. It is hoped that clearer question wording (table 8) will improve the coverage of wage expectations.

Figure 5 - Rates of "no opinion": current respondents, 2022Q1 – 2023Q4



Occasional and rotating questions

Beyond better understanding inflation and other macroeconomic expectations, a key motivation for expanding the Survey of Expectations panel with an economy wide business survey, Tara-ā-Umanga, is an opportunity for the Reserve Bank to directly survey businesses to gather evidence to support any aspect of our mandate.

Some known examples of potential supplementary topics include:

- Perceptions of financial risk – to support our financial stability mandate.
- Access to finance – to support *Our Approach to Financial Inclusion*¹¹ and *Improving Māori Access to Capital*.¹²
- Cash and payment services – to support our *Future of money*¹³ programme.

Principles for inclusion of supplementary content

The process to select and test questions for addition will need to be carefully managed to ensure the additional questions are not detrimental to the quality of the core questions. For example, if too many questions, or those which are badly designed, are added this may affect overall response rates through respondent fatigue or a poor respondent experience.

To minimise respondent effort, and therefore maximise response rates, we are aiming for the survey to take about 6-7 minutes to complete. There will likely be a limit of about 1-2 minutes of questionnaire time for supplementary questions (based on an assumption that the core questions typically take 4-6 minutes).¹⁴

The number of potential questions may require rationing or phasing of the questions over time. We will likely need some form of application and decision-making process to effectively manage the allocation of survey time for supplementary questions.

Criteria for inclusion

Criteria for prioritisation of content may include the extent to which proposed questions would:

- Add significantly to the Reserve Bank's knowledge base – for example, if there is currently little or no existing evidence, or there is a strong case for updated or enhanced data.
- Address a key policy issue – the urgency of the requirement may also impact scheduling the question for inclusion.

Key practical and ethical considerations may include:

- Feasibility of proposed question(s). Are research questions well-formed, with strong and coherent concepts? Are most respondents likely to:
 - Understand the concept and question?
 - Know or can recall the answer?
 - Be generally willing to answer?

¹¹ <https://www.rbnz.govt.nz/hub/publications/financial-inclusion-report/2023/our-approach-to-financial-inclusion>

¹² <https://www.rbnz.govt.nz/have-your-say/improving-maori-access-to-capital>

¹³ <https://www.rbnz.govt.nz/money-and-cash/future-of-money>

¹⁴ The pilot survey will provide estimates of the typical time to complete the core survey questions.

- Consideration of sample size – e.g. not likely to be so rare in the population that unreliable results would be obtained.
- Consideration of respondent burden (e.g. cognitive effort, privacy, or sensitivity of data).
- Consideration of alternative data sources (e.g. administrative data, external data sources) – clear rationale of why these alternatives don't meet requirements.
- Planned analysis – how will the data be used?
- What is the desired frequency of collection? Annual data collection may be sufficient for many purposes. For example, where responses are likely to change infrequently overtime, or the data will be used infrequently for decision-making.

Question frequency

The proposed 9-quarter rotating panel design means that there is an opportunity to ask many questions less often than quarterly, where there is not a demonstrable need for high-frequency data. Such an approach will allow more questions to be asked per year for a given survey length.

It is likely that there will be three categories of frequency:

- Core questions – asked every quarter.
- Rotating questions – asked once per year, or once every 6 months.
- Occasional and ad hoc questions – asked less frequently or as a one-off.

Appendix

Glossary of key terms

ANZSIC06 – Australia New Zealand Standard Industrial Classification 2006.

Auxiliary variable – a business demographic variable used in the sample design.

Business – used synonymously with enterprise, establishment, firm. For convenience, we also (incorrectly) use the term for government and non-profit organisations.

Core questions – the most important questions that we will include every quarter.

Rotating panel design – sample design where a proportion of businesses are rotated in and out of the sample each quarter.

Sampling frame – a list of businesses to randomly sample from.

Stratified sampling – businesses are partitioned into non-overlapping stratum according to one or more characteristics. Sample selection is independent in each stratum.

Target population – all the businesses in-scope for the survey.

Industry design strata mapping to ANZSIC level 1

Table A1: Proposed industry strata

ANZSIC2006	Design strata group
A Agriculture, forestry, & fishing	Out-of-scope
B Mining	Out-of-scope
C Manufacturing	Manufacturing
D Electricity, gas, water, & waste services	Other industries
E Construction	Construction
F Wholesale trade	Other industries
G Retail trade	Retail Trade
H Accommodation & food services	Other industries
I Transport, postal, & warehousing	Other industries
J Information media & telecommunications	Other industries
K Financial & insurance services	Other industries
L Rental, hiring, & real estate services	Other industries
M Professional, scientific, & technical services	Other industries
N Administrative & support services	Other industries
O Public administration & safety	Other industries
P Education & training	Other industries
Q Health care & social assistance	Other industries
R Arts & recreation services	Other industries
S Other services	Other industries

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