



## NATIONAL BANK BUSINESS OUTLOOK SURVEY BACKGROUND PAPER

*The National Bank Business Outlook Survey has established itself as an important statistical time series in New Zealand. Not only is it the longest running monthly survey of business opinions but it is also a reliable and timely indicator of New Zealand's economic outlook.*

*This background paper describes the objective and purpose of the Business Outlook survey, gives a detailed description of the indices, the data set, the surveys many uses, and its forecasting ability.*

### Objective and History

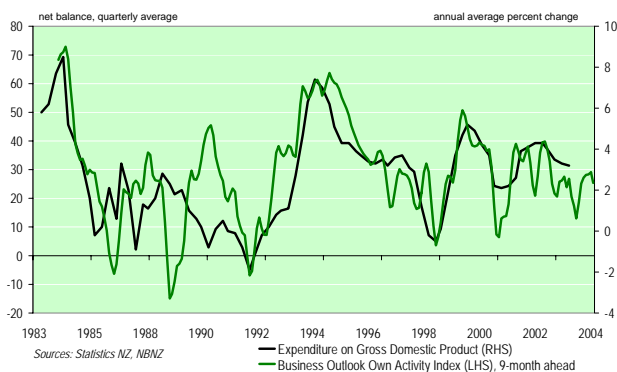
The *Business Outlook* is designed to provide a snapshot of business opinions regarding the expected future state of their business and the New Zealand economy overall. The survey provides useful coincident information on the economy and is timelier than official statistics.

The concept of the *Business Outlook* was formed in 1983 by National Bank's then-current Chief Economist Don Abel. The concept was originally based on an overseas opinion survey. The first survey results – titled "Business Survey" – were published in the December 1983 edition of The National Bank *Economic Review*. In April 1984 the survey was renamed "Business Outlook", and became a separate publication. The *Business Outlook* was born.

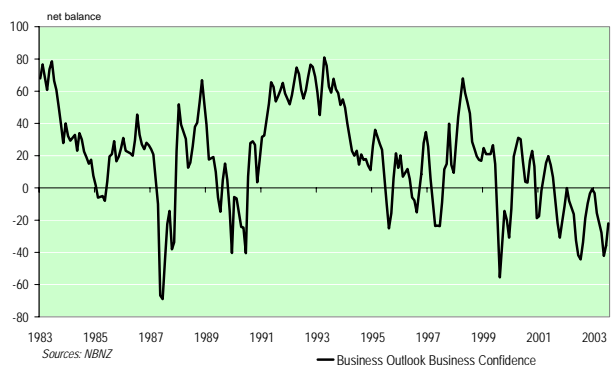
The survey today remains true to its original form, but it has widened in scope. In the beginning, National Bank branches obtained views of local businesses and reported them back to the Economics team. The original survey asked just one question (relating to inflation). Today, consenting businesses affiliated with National Bank fill in a short questionnaire, which is then compiled by National Bank Economics. Today, although just one page in length, the survey produces 15 major and over 700 minor indices. It is New Zealand's longest standing monthly business survey.

The *Business Outlook* is aimed at all business sectors and at all business sizes, since together this better represents the New Zealand economy (which is made up of many small and medium-sized firms) than large corporations alone. By surveying the entire spectrum of businesses types and sizes, not only can National Bank better serve its clients, but both market analysts and businesses people can garner a variety of information about business views at different points of the business cycle.

**Figure 1: Economy wide output and business activity outlook index**



**Figure 2: Business confidence index**



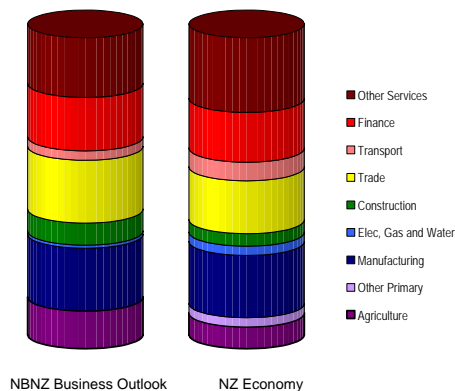


## Description and Uses

The *Business Outlook* is a sample survey. That is; only a proportion of the economy is used to represent the economy as a whole. Many official statistics are calculated in a similar manner; therefore – from a theoretical viewpoint – the survey process is not unusual.

The *Business Outlook* is a monthly survey with around 700 respondents.<sup>1</sup> Each firm self-selects its business sector, region of residence, and firm size.<sup>2</sup> And despite the survey's apparent paucity, the sampling is stratified and collectively exhaustive. Thus, it is less variable and more reliable than a random population sample. Figures 3 and 4 illustrate how encompassing this self-sampling is.

**Figure 3: *Business Outlook* sectoral breakdown**



**Figure 4: *Business Outlook* regional breakdown**



The survey itself asks a variety of questions. For example:<sup>3</sup>

- a firm's confidence in future business conditions in 12 month's time;
- a firm's view of where activity in their own firm is heading a year hence;
- a firm's opinion surrounding the expected future movement in unemployment and employment, interest rates, investment in property, plant and equipment, and profits in a year's time;
- a firm's expectation of their product's price(s) in 3 months time; and
- the expected level of annual inflation in 12 month's time.

For the sectors that apply, the survey asks:

- in which direction a firm anticipates their export volumes will move and the expected change in livestock investment in 12 month's time;
- in which direction a firm expects their utilisation of capacity to move in 12 month's time; and
- for an indication of the expected change in residential and non-residential building activity in 12 months time.

Although the survey itself is qualitative in nature, the reported statistic for each question is a single net balance number. That is, for each question the respondent is asked to indicate 'improved' or 'increased', 'deteriorated' or 'decreased', or 'remain the same'. The responses are then converted into a net balance statistic via the calculation:

$$\text{net balance (\%)} = \left( \frac{i - d}{i + d + rts} \right) 100$$

where  $i$  is the number of 'improved' responses;  
 $d$  is the number of 'deteriorated' responses; and  
 $rts$  is the number of 'remain the same' responses.

<sup>1</sup> The survey is not taken in the January month. The number of responses varies between 600 and 900 per month.

<sup>2</sup> Typical sector breakdowns can be found in Appendix 1.

<sup>3</sup> The survey questionnaire can be found in Appendix 3.



### Forecasting with the *Business Outlook*

The use of the net balance statistic is a good predictor of the future business situation, even though the survey asks for conditions twelve months hence. However, current events can sway the 'business conditions' responses at some points in time. Consequently, the Business Conditions index gives a good feel for current GDP, as well as supplying information on future economic growth. Therefore, the recommended approach in the use of business surveys is to extract common themes and not to place too much weight on a single result.

The Own Activity Outlook series is a statistically significant predictor of growth in the economy, as illustrated in Table 1. The series also tends to be less volatile than the headline confidence figure (see Figures 1 and 2). Other notable series used for forecasting include the Investment Intentions index (an explanatory variable of future gross fixed capital formation), while the Expected Prices series is watched closely by New Zealand's monetary authorities. Indeed, the Reserve Bank and Treasury use many of the *Business Outlook* series in their respective forecasting systems as indicators of the state of the economy.

Table 1 illustrates that when forecasting over an out-of-sample four quarter horizon, *Business Outlook* indicators reduces the root mean square errors (RMSE). In other words, the National Bank series improves each original forecast and consistently outperforms the forecast estimates when compared to a naïve model.

**Table 1: Forecasting performance - RMSE**

Explanatory variable	Naïve model	<i>Business Outlook</i> indicator	Naïve model RMSE	Model with lagged <i>Business Outlook</i> indicator RMSE
GDP growth	AR(1)	Activity Outlook Index	0.017	0.011
Business Investment <sup>4</sup>	AR(1)	Investment Intentions	0.076	0.054
Inflation	AR(1)	Pricing Intentions	0.009	0.006

<sup>4</sup> Total gross fixed capital formation excluding residential property investment but not excluding government investment. Data is for 1989:4 to 2004:1. Out-of-sample forecasts four quarters ahead.

Although the net balance statistic is a value-enhancing measure in which to forecast the economy and its sectors, it can be argued that the use of the 'increased' and 'decreased' responses is theoretically more appropriate to capture all the information contained (albeit more data intensive). In particular, this argument is often attributed to the Expected Prices series – as prices tend to be downwards sticky.<sup>4</sup> However, in New Zealand's case there is very little asymmetry in expectations for price movements.<sup>4</sup> Therefore, the use of the net balance statistic instead of the 'increased' and 'decreased' responses is a reliable time-effective indicator.

### Conclusion

The monthly National Bank *Business Outlook* survey contains a great deal of information that can be used to assess the state of the economy. Some people are sceptical of survey results because they lack confidence that the business community will answer honestly – yet our respondents take the exercise very seriously. Not only do they take the time to respond to the survey; many of them often provide detailed explanations of why they have the views they have. Moreover, most official statistics released by Statistics New Zealand are also surveys themselves, since they are typically inferred from samples of firms and households, rather than calculated from a full census.

The *Business Outlook* provides numerous series in which to analyse the economy. The forecasting ability of some of the more prominent series is reliable and significant, which is consistent with the objectives of the *Business Outlook*: to provide a timely snapshot of future state of the New Zealand economy.

<sup>4</sup> See Kelvin Balcombe and C. J. McDermott. 'Testing asymmetric price stickiness using NZ business opinions data', *Applied Economics Letters*, forthcoming, for a discussion of the lack of asymmetry in price expectations in New Zealand.



Appendix 1: Details of the Business Outlook categories

Sector Categories	Individual Sectors			Regional Councils	Firm sizes <sup>5</sup>
<i>Agriculture</i>	Agriculture	<i>Construction</i>	Construction	Northland	Micro (0-5 employees)
<i>Manufacturing</i>	Food Manufacturing	<i>Retail Services</i>	Trade	Auckland	Small (6-20)
	Textiles		Transport	Waikato	Medium (21-50)
	Wood		Finance	Bay of Plenty	Large (50+)
	Paper	<i>Other</i>	Personal Services	Gisborne	Total excluding farms
	Chemicals		Communication	Hawke's Bay	
	Minerals		Other Services	Manawatu-Wanganui	
	Metal Industries		Electricity, Gas	Nelson-Malborough	
	Other Manufacturing		Mining	West Coast	
			Forestry	Canterbury	
			Fishing	Otago	
		Southland			

Appendix 2: How to become a respondent

Respondent's Name:.....

Company:.....

E-mail:.....

(Please print clearly)

Sectoral Description:.....

Region:.....

Number of Employees (Please circle): 0-5 6-20 21-50 51+

If you wish to become a respondent to the Business Outlook, please fill in the form above and send to National Bank Economics, PO Box 540, Wellington.

<sup>5</sup> These definitions differ slightly to those used by Statistics New Zealand. Statistics New Zealand defines business sizes as the number of full-time equivalent employees (FTEs).



Appendix 3: Examples of the survey questions:

A: Hardcopy Version



Business Outlook QUESTIONNAIRE

(please tick appropriate box)

A. With regard to the New Zealand Economy

- Do you believe that General Business Conditions in 12 months time will have:
What do you think the annual Inflation Rate (as measured by the Consumer Price Index) will be in 12 months time?
How do you expect the following economic indicators to have changed in 12 months time?

IMPROVED REMAIN THE SAME DETERIORATED

Input boxes for 'Improved', 'Remain the same', and 'Deteriorated' responses.

Input box for Inflation Rate percentage.

INCREASED REMAIN THE SAME DECREASED

Input boxes for 'Increased', 'Remain the same', and 'Decreased' responses for unemployment and interest rates.

B. With regard to Your Business, how do you expect the following variables to have changed in 12 months time?

- Real Business Activity (i.e. volume, Not \$ revenue)
Real Profits (i.e. inflation adjusted profits)
Employment
Price of your good/service (in three months time)
Investment in buildings, plant, equipment

INCREASED REMAIN THE SAME DECREASED

Input boxes for 'Increased', 'Remain the same', and 'Decreased' responses for business variables.

If applicable:

- Real Exports (i.e. volume, Not \$ revenue)
Capacity Utilisation (i.e. operating rate of existing capital equipment in three months time, ignoring seasonal factors)
Investment in Livestock
If your business is involved in Construction how do you expect your Volume (Not \$ value) of activity to have changed for:
- Residential building
- Non-residential construction

Input boxes for 'Increased', 'Remain the same', and 'Decreased' responses for applicable business variables.

Thank you for completing this questionnaire

THE NATIONAL BANK OF NEW ZEALAND LIMITED



B: Internet Version

**Business Outlook Questionnaire**

### Supplemental Questions

How many **employees** do you have?

5 or less       Between 6 and 20  
 Between 21 and 50       51 or more

What is the **most important** problem facing your firm?

Low turnover       Regulation & Paper work  
 Lack of skilled employees       Total tax burden  
 Cashflow/Debtors       Competition from other business  
 Premises/Rent/Rates       Internal Management difficulties  
 High rates of pay       Access to finance  
 Shortage of supplies       Interest rates  
 Exchange rate       Inflation  
 Other (please specify)

EASIER      REMAIN THE SAME      HARDER

Will it be **easier or harder** to get **credit** in New Zealand in **12 months time**?  
           

**Business Outlook Questionnaire**

### Your Business

With regard to **Your Business** how do you expect the following variables to have changed in **12 months time**?

	INCREASED	REMAIN THE SAME	DECREASED
<b>Real Business Activity</b> (i.e. volume, <b>Not</b> \$ revenue)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Real Profits</b> (i.e. inflation adjusted profits)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Employment</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Price of your good/service</b> (in three months time)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Investments in buildings, plant, equipment</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Business Outlook Questionnaire**

### Your Business, continued

With regard to **Your Business** how do you expect the following variables to have changed in **12 months time**?

If applicable:

	INCREASED	REMAIN THE SAME	DECREASED
<b>Real Exports</b> (i.e. volume, <b>Not</b> \$ revenue)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Capacity Utilisation</b> (i.e. operating rate of existing capital equipment in <b>three months time</b> (ignoring seasonal factors))	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Investment in Livestock	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If your business is involved in **Construction** how do you expect your Volume (Not \$ value) of activity to have changed for:

- Residential building	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Non-residential building	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Business Outlook Questionnaire**

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 High rates of pay       Access to finance  
 Shortage of supplies       Interest rates  
 Exchange rate       Inflation  
 Other (please specify)

EASIER      REMAIN THE SAME      HARDER

Will it be **easier or harder** to get **credit** in New Zealand in **12 months time**?  
           

Each quarter, survey respondents are given a supplementary questionnaire to fill in. This questionnaire is used to produce the quarterly National Bank *Small Business Monitor*.