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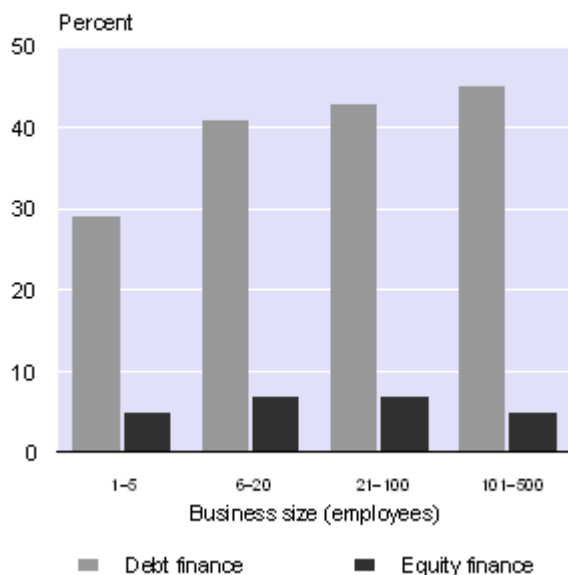
Business Finance Survey 2004

Highlights

- **Thirty-six percent of businesses sought finance** in the 12 months to August 2004.
- **This finance was more likely to be in the form of debt finance**, which was sought by 34 percent of businesses, than equity finance, sought by 6 percent.
- **Most requests resulted in finance being obtained.** Ninety percent of finance requests made by businesses resulted in either some or all of the amount sought being received.

Finance Requested by New Zealand Businesses

By business size
12 months to August 2004



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There is a companion Media Release published – [Business Finance Survey: 2004](#).

Commentary

Business Finance Survey

The Business Finance Survey was sponsored by the Ministry of Economic Development (MED). It is the first survey of its type to be conducted in New Zealand, and was developed by Statistics New Zealand in collaboration with MED.

The core objective of the Business Finance Survey is to provide information on the capital structure of businesses in New Zealand, the sources of finance they use and their recent financing experiences. A sample of businesses with between 1 and 500 employees in a wide selection of industries were surveyed. Survey participants were asked to include details of all requests for finance, whether fully approved, partially approved, declined or withdrawn.

This is the first release of Business Finance Survey data by Statistics New Zealand. A more detailed Business Finance Survey report will be published jointly by Statistics New Zealand and MED in June 2005.

Guide to interpreting the data

The following is a summary of the factors to consider when assessing Business Finance Survey results. A full technical description of the survey is contained in the Technical Notes.

Types of finance

For the Business Finance Survey, finance is defined as either of the following:

Debt finance: This includes any finance that the business must repay (for example overdrafts, credit cards, and convertible debt).

Equity finance: This includes additional investment from existing owners of the business, and any finance received in exchange for a share in the ownership of the business.

Limitations of the data

The results from this survey are subject to statistical error (sampling and non-sampling). Please refer to the Technical Notes for further details.

Given the nature of the data collected, there are additional non-statistical limitations on the level of accuracy that can be expected from the survey. New businesses or those which have recently begun operations are of particular interest for this survey, but most of these businesses do not yet have a full set of annual accounts. Also, many smaller businesses are not in possession of full and/or up to date accounts, and may or may not use external accountants. In addition, for businesses of any size or age, records may not be kept in the exact form required for the survey, and some estimation may be required in these cases.

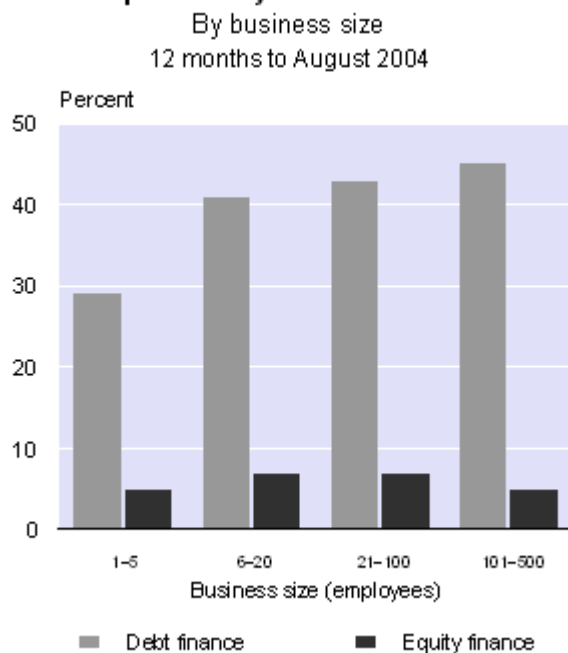
Finance requested

Results from the Business Finance Survey indicate that 36 percent of New Zealand businesses requested additional finance over the 12 month period to August 2004.

Businesses during this period were much more likely to seek additional debt financing (34 percent) than equity financing (6 percent).

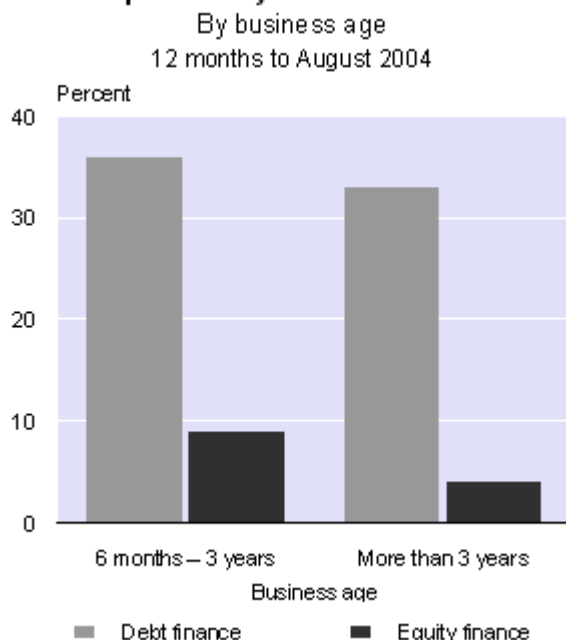
The proportion of businesses requesting debt finance was lower for small businesses. Only 29 percent of businesses with between 1 and 5 employees requested debt finance, whereas over 40 percent of larger businesses sought debt finance.

Finance Requested by New Zealand Businesses



Debt finance was also more commonly sought than equity finance by businesses of all ages. However, younger businesses (less than three years old) were more likely to seek equity finance (9 percent) than businesses over three years old (4 percent).

Finance Requested by New Zealand Businesses

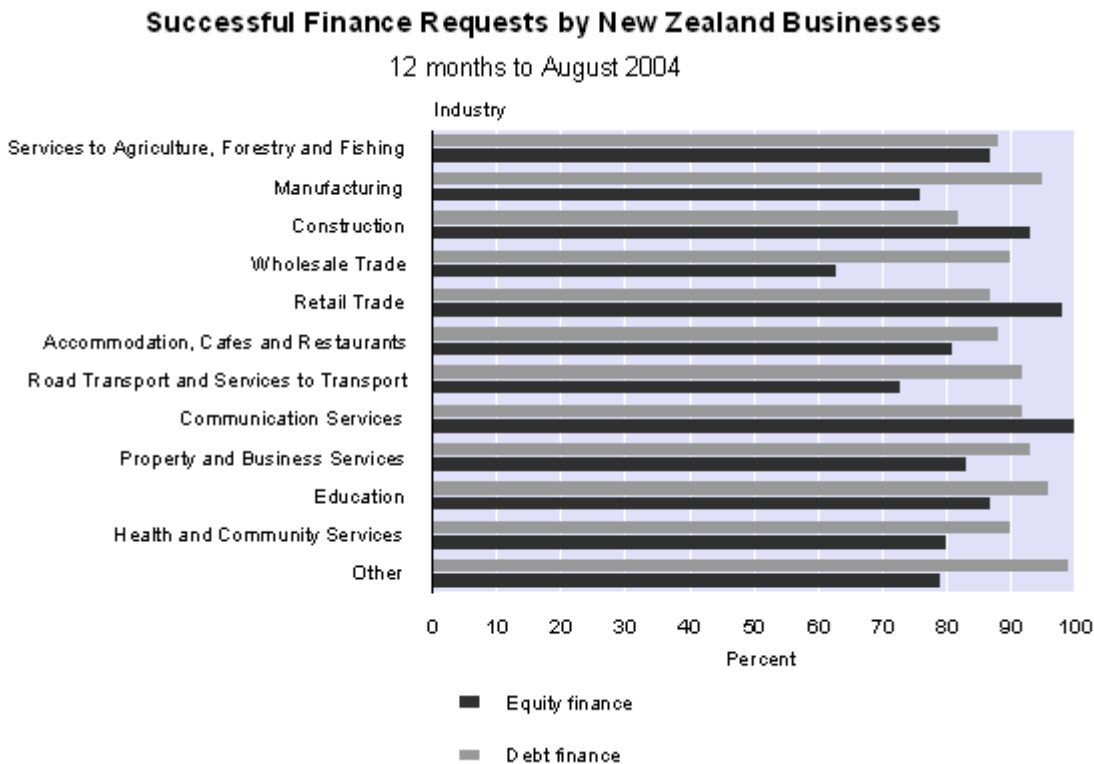


Debt and equity finance received

This survey focused on the characteristics of businesses' most recent financing requests within the 12 months to August 2004. The survey results indicate that the vast majority of finance requests made by New Zealand businesses result in finance being obtained. Ninety percent of finance requests made by businesses resulted in either some or all of the amount sought being received.

The proportions of successful requests were similar for both debt finance and equity finance requests, at 90 percent and 83 percent, respectively.

There was some variation in success rates across businesses in different industries surveyed. Success rates for debt finance requests were similar across all industries. However, requests for equity finance ranged from 63 percent in the wholesale trade industry, to 100 percent for the communication services industry.



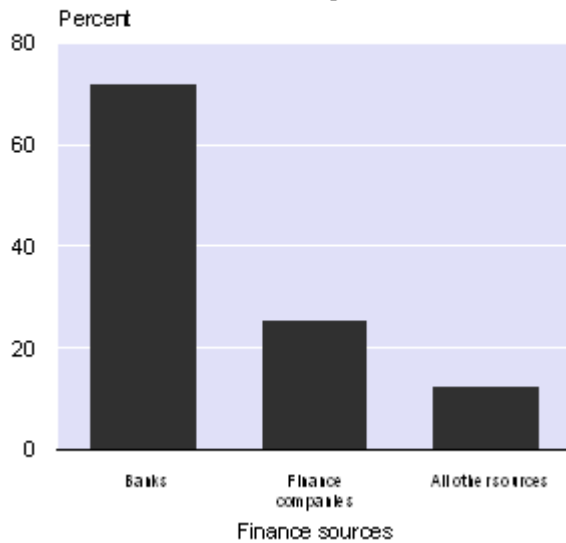
Sources of finance

There is a range of available sources for businesses to approach for additional finance. Such finance may be sought and received from one or more of these sources.

For businesses which received additional debt financing, the most common source was banks, which were a source of debt finance for 72 percent of businesses. Finance companies (including hire purchase or lending companies) were the next most common source and were used by 26 percent of businesses. All other sources of debt finance were much less common. These other sources include: trade creditors or suppliers; existing owners; friends and family of existing owners; other individuals; other businesses; and any other sources. Each of these was the source of debt finance received for less than 5 percent of businesses when viewed individually. When viewed as a group, they were the source of finance for only 12 percent of businesses.

Sources of Debt Finance Received by New Zealand Businesses

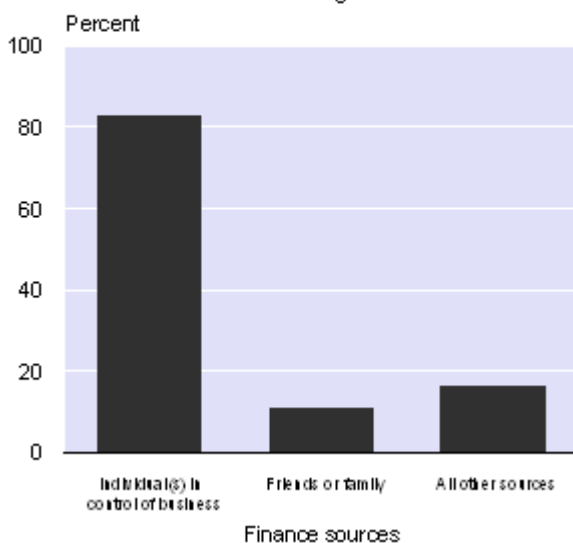
12 months to August 2004



A similar picture of dominance is evident with sources of equity finance. By far the most common source of additional equity finance received were individuals principally in control of the business, who were a source of equity finance for 83 percent of businesses. Friends or family of those individuals were the next most common source and were used by 11 percent of businesses. Other sources of equity finance were less common. These other sources include: employees; other individuals; parent companies; venture capital/private equity funds; other businesses; and any other sources. Each of these others was the source of equity received for less than 5 percent of businesses when viewed individually, although there was some variation in the prevalence of these other sources across businesses in different industries. When viewed as a group, these others were the source of finance for 17 percent of businesses.

Sources of Equity Received by New Zealand Businesses

12 months to August 2004



Total debt and equity

While the results for recent financing requests show that requests for debt finance were much more prevalent than those for equity finance, the ratio between these types of finance is different when the total dollar values of debt and equity are considered.

Survey results show that New Zealand businesses had \$36.1 billion in debt outstanding at the end of their last financial year. The amount of equity in New Zealand businesses over the corresponding period was \$30.6 billion. This represents a debt to equity ratio of 1.18.

These results are provisional and it is expected that finalised results will be published in the detailed Business Finance Survey report in June 2005.

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Technical notes

Survey background

The Business Finance Survey was sponsored by the Ministry of Research Economic Development (MED). It is the first survey of its type to be conducted in New Zealand, and was developed by Statistics New Zealand in collaboration with MED.

The core objective of the Business Finance Survey is to provide information on the capital structure of businesses in New Zealand, the sources of finance they use and their recent financing experiences. This will be used to help inform public policy decisions and help stakeholders (both public and private) to better comprehend the challenges and opportunities surrounding the provision of capital to New Zealand businesses.

The information will help government and other organisations develop a better understanding of the financing needs and practices of businesses in New Zealand. In particular, the results will:

- improve understanding of business financing needs, thus enabling better informed public debate
- give financing providers information that they need to gain a more comprehensive understanding of their clientele, thus better enabling them to design products and services that meet market needs; and
- facilitate the assessment of whether business financing needs are being addressed by the market, and help gauge the effectiveness of government policies and programmes.

Previous work on New Zealand's financial system and its constituent parts (eg banking, capital markets, venture capital) has almost exclusively focussed on the supply side of the market. While understanding supply-side issues is critical, it cannot provide a complete picture of the state of business financing because these studies do not highlight the relative importance of non-intermediated or "private" capital flows which, according to the international literature, are an important source for all but the largest of businesses.

Without comprehensive information on business financing in New Zealand, it is very difficult for policy makers to assess the need for, and likely impact of, existing and potential government initiatives. Public sector initiatives to promote access to finance are best justified if market imperfections exist and result in the private sector not providing capital to businesses on competitive terms. In the absence of market failure, government intervention may cause distortions such as non-viable businesses being subsidised at public expense.

It is therefore essential to collect high-quality data on business financing to determine the extent to which particular categories of businesses, if any, are systematically disadvantaged with respect to financing. Better demand-side information will facilitate more effective public policy by fostering the development of a widely accepted and empirically supported policy framework around the notion of capital market imperfections. Otherwise, anecdotally based perceptions of specific types of financial market "gaps" may inappropriately drive public policy.

Data collection

The Business Finance Survey was a postal survey, sent out in late August 2004. The survey form was directed to the 'Managing Director'.

Information collected included: whether the business had sought or received finance over the previous 12 months; and the instruments, sources and uses of that finance. Financial information was also collected for the business's last financial year, to enable the relationship between a business's current financial situation and its need for, or success in, attracting extra finance. A range of other individual and business characteristics were also examined to determine if non-financial factors also impact on a business's ability to attract finance.

Target population

The target population for the Business Finance Survey was live enterprise units on Statistics New Zealand's Business Frame at the population selection date which:

- were economically significant enterprises (those that have an annual GST turnover figure of greater than \$30,000)
- had between 1 and 500 employees inclusive
- had been operating for six months or more
- were not subsidiaries, more than 50 percent owned by another business
- were classified to Australian and New Zealand Standard Industrial Classification – NZ Version 1996 (ANZSIC96) codes listed as in scope in Table 1 below
- were private enterprises as defined by New Zealand Institutional Sector 1996 Classification (NZISC96) listed in Table 2 below
- were classified to New Zealand Standard Classification of Business Types (BT96) codes listed in Table 3 below.

The final estimated population size for the Business Finance Survey was 84,000 enterprises.

Table 1
ANZSIC96 Codes in Scope

In Scope	
ANZSIC96 Code	Description
A02	Services to Agriculture, Hunting and Trapping
A03	Forestry and Logging
A04	Commercial Fishing
C	Manufacturing
E	Construction
F & G	Wholesale Trade & Retail Trade
H	Accommodation, Cafes and Restaurants
I61 & I66	Road Transport & Services to Transport
J	Communication Services
L77 (excl. L773 & L771210)	Property Services (excl. Commercial Property & Non-financial Asset Investors)
L78 (excl. L784)	Business Services (excl. Legal and Accounting Services)
N	Education
O (excl. O862)	Health and Community Services (excl. Medical and Dental Services)

In Scope	
ANZSIC96 Code	Description
P91	Motion Picture, Radio and Television Services
P93 (excl. 9311, P9312 & P9321)	Sports and recreation Services (excl. Horse and Dog racing, Sports Grounds and Facilities & Lotteries)
Q95	Personal Services
Out of Scope	
A01	Agriculture
B	Mining and Quarrying
D	Electricity, Gas and Water Supply
I62, I63, I64, I65	Rail Transport, Water Transport, Air and Space Transport, Other Transport
I67	Storage
K	Finance and Insurance
L773 & L771210	Commercial Property & Non-financial Asset Investors
L784	Legal and Accounting Services
M	Government Administration and Defence
O862	Medical and Dental Services
P92	Libraries, Museums and the Arts
P9311, P9312 & P9321	Horse and Dog racing, Sports Grounds and Facilities & Lotteries
Q96 & Q97	Other Services & Private Households Employing Staff

Those industries listed as out of scope were excluded, either because adequate financial data is already available for the industry, or the industry is not relevant for policy purposes.

Table 2
NZISC96 Codes in Scope

NZISC96 Code	Description
1111	Private Corporate Producer Enterprises
1121	Private Non-Corporate Producer Enterprises

Table 3
BT96 Codes in Scope

BT96 Code	Description
01	Individual Proprietorship
02	Partnership
03	Registered Limited Liability Company (non Co-op)
04,05,13,20	Other (includes co-operative companies, joint ventures, trusts, estates & other)

Sample design

The sample design was stratified according to ANZSIC industry, age groups and employee size groups. This information was obtained using enterprise ANZSIC industry, business age and employee information from Statistics New Zealand's Business Frame.

The first level of stratification was into ANZSIC industry groupings. Within each of the ANZSIC groups, there is a further stratification by age and employee size group. The groups used in the sample design are listed in table 4 below:

Table 4
Groups Used in Sample Design

Industry	Age (Years)	Size (Employees)			
A02	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
A03	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
A04	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
C <i>knowledge intensive</i>	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
C	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
E	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
F & G	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
H571	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
H excl. H571	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
I61 & I66	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
J	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
L77	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
L78 <i>knowledge intensive</i>	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
L78	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
N	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
O86	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
O87	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
P91	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
P93	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				
Q95	>3	1 - <5	5 - <20	20 - <100	100 - 500
	0.5 - 3				

Measurement errors

The Business Finance Survey results are subject to measurement errors, including both non-sample and sample errors. These errors should be considered when analysing survey results.

Non-sample errors: Non-sampling errors include mistakes by respondents when completing questionnaires, variation in the respondents' interpretation of the questions asked, and errors made during the processing of the data. In addition, the survey applied imputation methodologies to cope with non-respondents. Statistics New Zealand adopts procedures to minimise these types of error, but they may still occur and are not quantifiable.

Given the nature of the data collected, there are additional non-statistical limitations on the level of accuracy that can be expected from the survey. New businesses or those which have recently begun operations are of particular interest for this survey, but most of these businesses do not yet have a full set of annual accounts. Also, many smaller businesses are not in possession of full and/or up to date accounts, and may or may not use external accountants. In addition, for businesses of any size or age, records may not be kept in the exact form required for the survey, and some estimation may be required in these cases.

Sample errors: The accuracy requirements were specified at the following levels:

- published industry by size breakdowns for the categorical questions
- overall for the numeric questions.
for: ANZSIC divisions; Rolling Mean Employment (RME) groupings; Age groupings

Final requirements were:

- for primary outputs by age, industry or size: 5 percent absolute sampling error for categoric questions
- for primary outputs by size and industry or age and industry: 10 percent absolute sampling error for categoric questions
- for key numeric questions (total debt and total operating revenue): the lowest relative sampling error possible with maximum post-out size of 6,000. Final maximum relative sample errors for numeric variables were:
 - 10 percent for total debt
 - 59 percent for total equity

Response rate

The target overall response rate from the survey was 80 percent for questionnaires returned. The survey achieved this overall rate of return, which represented 4,775 businesses.

Non-response and imputation

Unit and item non-responses

The unit non-response criteria were:

(a) the business did not return a form

(b) it returned a form but did not answer the key questions on debt and equity finance requests or current debt and equity

(c) it returned a form, answered the key questions, but did not answer 60 percent or more of the rest of the questions it was meant to answer (with regards to the routing).

These units were not imputed for, but were considered a complete non-response and had their weight adjusted within strata.

Units that did not reach the criteria for unit non-response, and did not respond to one or more questions were treated as partial non-responses and had missing variables imputed.

Imputation of item non-response – numeric variables

The numeric questions range from breakdowns of total equity and debt, to selling accounts receivable and value of assets.

Imputation cells and merging

Units were assigned to imputation cells for the calculation and assignment of imputation factors. Imputation cells were based on the design groups detailed in Table 4 above (which were determined by industry, RME, and age).

For each variable there was a minimum number and percentage of linked units within the imputation cell for the imputation method to run in that cell for that variable. This is to ensure the robustness of the imputation factor calculations. The minimum number of linked units was 10 and the minimum percentage of linked units was 60 percent.

If an imputation cell did not reach these criteria, it was merged before imputation, using the following merging rules:

- If there is insufficient response, merge the cell with the first merge preference.
- After the first merge, if there is still insufficient response (ie less than the required number or percentage of units linked) in the merged cell, merging continues with the next cell in the specified order.
- Merging continues until there is sufficient response (ie enough linked units in the merged cell) to calculate an imputation factor.
- Once sufficient response (ie enough linked units in the merged cell) is achieved during the merging process, the imputation factor is calculated from all of the linked units in the merged cell, but applied to non-respondents in the original (un-merged) imputation cell only.
- If there is still insufficient response once all the specified cells have been merged in order, the imputation factor is calculated across all linked units in the final merged cell (ie use the 'best available' imputation factor), and applied to non-respondents in the original (un-merged) imputation cell only.

Imputation of numeric variables

Weighted mean imputation was used to impute numeric variables. With this method, non-responding units were imputed with the weighted mean calculated from linked responding units within their imputation cell.

The weighted mean for the current period t is calculated as follows:

$$\bar{v} = \frac{\sum_i^I (v_i * fw_i)}{\sum_i^I fw_i}$$

where

I = number of ENTs linked for weighted mean imputation within the imputation cell.

v_i = value of linked ENT i

fw_i = final weight for linked ENT i

\bar{v} = weighted mean for the imputation

Imputation of component questions

The Business Finance Survey questionnaire included routing and questions with many components. For example, total debt has 10 different components of debt to give a value for. For such questions, due to linecode-specific unlinking, it was possible for the mean imputation factor for the total to not equal the sum of the mean imputation factors for the components. To preserve additivity, imputed components were scaled to add to the total.

Unlinking

Influential responses were unlinked from the imputation factor calculations for numeric variables. There were three kinds of unlinking:

- automatic exclusion due to non-response or special treatment – before imputation
- automatic unlinking due to influence, ie units with undesirable influence on imputation factor calculations were automatically detected and unlinked (with the ability for manual declining of this) – after special treatment.
- manual unlinking due to influence, ie additional units with undesirable influence on imputation factor calculations that were not automatically detected were unlinked – after special treatment.

Automatic exclusions

A unit was automatically excluded from the imputation factor calculations for the imputation if:

- it was a non-respondent, or
- it was specially treated.

Automatic unlinking by outlier detection

Automatic unlinking (ie by the outliers process) and manual unlinking could be done separately for each variable (linecode).

Checks were done for automatic unlinking candidates using standard interquartile range tests. All checks were done at the imputation cell level or merged imputation cell level. In all cases, the ratio z_i is the absolute percent change in the cell factor in the imputation cell or merged imputation cell if the unit is unlinked,

$$z_i = 100 \times \left(\frac{\text{abs}(\text{cell factor excluding unit} - \text{cell factor including unit})}{\text{cell factor including unit}} \right)$$

where the cell factor is the mean factor in the imputation cell or merged imputation cell.

The parameter k is used in the checks to determine the number of outliers identified.

Imputation of item non-response – categoric variables

Responses were imputed for categorical questions using nearest neighbour imputation. The nearest neighbour method involves finding a donor unit with the most similar set of responses to the unit that requires values to be imputed. The donor unit supplies responses for all variables requiring a response. If the donor unit does not respond to any of the variables requiring a response, then the next best donor unit would be used to supply the information. This is continued until all the variables have a response.

Example:

Unit	Variable 1	Variable 2	Variable 3	Variable 4	Variable 5	Variable 6	Variable 7	No. of matches
A	a	B	c	?	?	?	?	
B	a	B	c	a	C	?	?	3
C	a	B	d	d	C	d	a	2
D	a	B	c	a	B	e	?	3

Unit A does not respond to four variables. Units B and D have the greatest number of matches with unit A. Unit D is chosen as the first donor variable, as it can supply the greatest number of responses required (it supplies responses for variables 4, 5, and 6). Unit C is the donor for variable 7 as units D and B cannot supply a response.

Therefore, unit A would have the following responses:

Unit	Variable 1	Variable 2	Variable 3	Variable 4	Variable 5	Variable 6	Variable 7
A	a	B	c	a	B	e	a

The matching of responses for finding and imputing from the best donor was done within groups of questions, for groups of businesses, based on industry.

Definitions

The Business Finance Survey was designed to collect data in accordance with the following definitions and terminology:

ANZSIC: Australian and New Zealand Standard Industrial Classification System – NZ Version 1996.

Business Frame: A register of all businesses operating in New Zealand.

Collateral: Refers to property (eg buildings or equipment) used to secure the payment of a loan.

Debt finance: Includes any finance that the business must repay (eg overdrafts, credit cards, convertible debt etc). Requests which were fully approved, partially approved, withdrawn or declined were asked to be included.

Employees: The number of employees is defined by an enterprise's Rolling Mean Employment (RME) count. RME is a twelve-month moving average of the monthly Employment Count (EC) figure. The EC is obtained from taxation data.

Enterprise: A business or service entity operating in New Zealand. It can be a company, partnership, trust, estate, incorporated society, producer board, local or central government organisation, voluntary organisation or self-employed individual.

Equity finance: Includes additional investment from existing owners of the business and any finance received in exchange for a share in the ownership of the business. Requests which were fully approved, partially approved, withdrawn or declined were asked to be included.

Goods and Services Tax (GST): Respondents are asked to exclude GST if possible in the financial figures provided in the questionnaire. If they have not, Statistics New Zealand takes out GST to make all enterprises comparable.

Last financial year: For the purposes of this survey, this refers to the last financial year for which the business had results available as at August 2004, as indicated by the balance date for latest complete annual reports recorded by respondents on the questionnaire.

Paid in capital: Refers to investment in the business and includes such items as: paid up capital, share capital or capital introduced.

Total operating revenue (or income): Refers to gross income associated with core operating activities (for example, sale of goods or services), but does not include income which is one-off or extraordinary (for example, gain on the sale of a fixed asset).

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Next release ...

A full Business Finance Survey report will be released on 30 June 2005.

For information on the changing face of older New Zealanders,
visit www.stats.govt.nz/older-people

Tables

The following tables can be downloaded from the Statistics New Zealand website in Excel 97 format. If you do not have access to Excel 97 or higher, you may use the [Excel file viewer](#) to view, print and export the contents of the file.

List of tables

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5. Debt and equity for New Zealand businesses, last financial year