

INTRODUCTION

1 The ABS reviewed its units model in 2000 in response to major taxation reforms which had implications for the availability and use of tax information in economic statistics. The review aimed to ensure that the definition of the new units model:

- met 1993 SNA and ABS national accounting requirements;
- produced homogeneous industry data at the two digit ANZSIC level;
- allowed for the appropriate treatment of ancillary units;
- allowed for the correct application of ABS classifications to units;
- reflected reporting structures used by units with statutory obligations (e.g. banks); and
- defined units suitable for activity (e.g. agriculture) and labour collections (a state-based unit).

2 The ABS released two information papers on these issues: *ABS Statistics and The New Tax System* (cat. no. 1358.0), released in April 2000, and *Improvements in ABS Economic Statistics [Arising from The New Tax System]* (cat. no. 1372.0), released in May 2002.

3 The ABS uses the Australian Business Register (ABR) as its primary source to identify new businesses and this information flows through to the ABS Business Register. The ABS Business Register is used primarily as a register or frame for the various business surveys run by the ABS.

4 Businesses are included on the ABR when they register with the Australian Tax Office for an Australian Business Number (ABN). The Commonwealth Government requires all government departments and agencies to make use of the ABR to reduce businesses' reporting load to government, and to use the ABN as the primary reference number for all dealings between government and business.

ABS UNITS MODEL

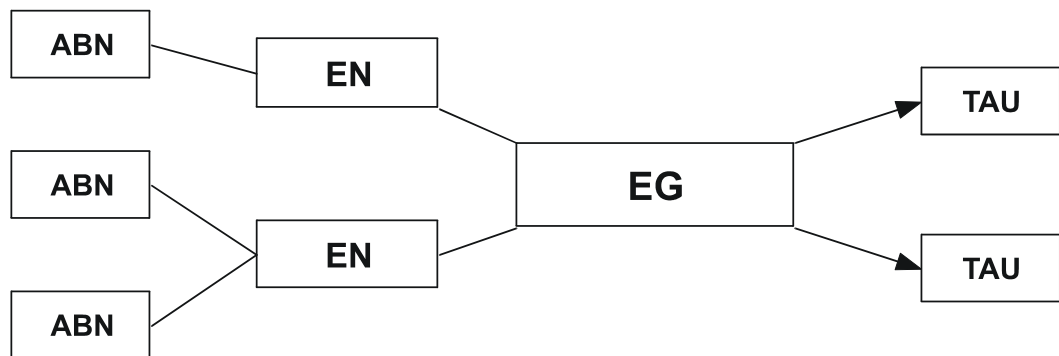
5 The units model used by the ABS in determining the structure of businesses is consistent with Australia's Corporations Law and with the definition of institutional units recommended by 1993 SNA. The model consists of the enterprise group (EG), one or more enterprises (ENs) and one or more type of activity units (TAUs). The EN is comprised of one or more legal entities (LEs). The EG, EN and LE are institutional units and the TAU is a producing unit.

6 ENs and TAUs, which are the main institutional and producing units used by the ABS to produce its statistical outputs, do not have a universal relationship with each other, e.g. one to one, one to many, many to one. A variety of relationships exist in some of the larger and more complex Australian enterprise groups. The ABS units model does not impose a particular type of relationship on these units for statistical purposes.

7 This is a limited departure from the 1993 SNA, which states that there is a hierarchical relationship between institutional and producing units. The 1993 SNA states that 'an institutional unit contains one or more entire establishments' and that 'an establishment belongs to one and only one institutional unit'. While many ENs consist of one or more TAUs, there are some cases where this does not occur. In these cases, the 1993 SNA statement is still true at the EG level, but not at the EN level.

8 Diagram 1 illustrates the nature of the relationships between the main unit types in the model. The LE is represented by the ABN in the diagram, as they are usually the same.

Diagram 1: ABS Units Model



Unit definitions

9 For statistical purposes, a *legal entity* is defined as a unit covering all the operations in Australia of an entity which possesses some or all of the rights and obligations of individual persons or corporations, or which behaves as such in respect of those matters of concern for economic statistics. Examples of legal entities include companies, partnerships, trusts, sole (business) proprietorships, government departments and statutory authorities. Legal entities are institutional units.

10 The *enterprise group* is an institutional unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the *Corporations Legislation Amendment Act 1991*). These may be legal entities, such as trusts and partnerships, as well as companies. Majority ownership is not required for control to be exercised.

11 The *enterprise* is an institutional unit comprising a single legal entity, or a grouping of legal entities, within an enterprise group, classifiable to the same institutional subsector, as per the Standard Institutional Sector Classification of Australia (SISCA). In general, an enterprise will equate to a single entity, except where groupings of entities align with legal reporting units suitable for ABS purposes e.g. units regulated by the Australian Prudential Regulatory Authority (APRA). Separate entities can be grouped for statistical reporting purposes to form a single enterprise provided they are in the same SISCA subsector and conform to all data collection requirements.

Type of activity unit

12 The *type of activity unit* is a producing unit comprising one or more business entities, sub-entities or branches of a business entity that can report production and employment activities via a minimum set of data items. The activity of the unit should be as homogeneous as possible. If accounts sufficient to approximate Industry Value Added (IVA) are available at the ANZSIC Subdivision level, a TAU will be formed. Where a business cannot supply adequate data to form a TAU for an individual ANZSIC Subdivision, a TAU will be formed which contains activity in two or more ANZSIC Subdivisions.

13 In its simplest form, the TAU relates to a business' ABN. However, in the case of complex and varied business structures, it may be inappropriate for the TAU to be created to refer to the ABN.

14 Ideally, all TAUs are constructed so that two digit ANZSIC homogeneity is observed. This ensures that good quality industry estimates can be calculated by the ABS at that level. However, not all businesses are able to supply a complete set of accounts for every ANZSIC Subdivision in which they have activity.

- Type of activity unit continued* **15** Only a small number of data items are required to be available on a quarterly basis. The data items are total capital expenditure, income from the sale of goods and services, wages and salaries, total inventories and total purchases and selected expenses. Where not all of these data items are available from business accounts, a TAU can still be formed if careful estimates can be provided.
- Unit splitting* **16** Where businesses cannot provide the necessary data for separate activities, and if separate activities are being carried out at a significant level (in relation to the known/estimated activity of those industries), the TAU may be a candidate for unit splitting.
- 17** If it is decided to split the TAU for statistical purposes, two or more new TAUs are formed as the *statistical units* and the former TAU becomes the *reporting unit* i.e. data will be reported by the former TAU for its multiple activities and the ABS will apportion it to the new split TAUs for statistical outputs. The estimates for the split units will be produced using benchmarks determined at the time of splitting.
- TAU State unit* **18** TAUs are not created based on any geographic criteria. However, it is necessary to create special state and territory units for some TAUs in order to accommodate state estimates in labour and some other statistics. This unit is referred to as the TAU State. The TAU State is not stored as a specific unit on the ABS Business Register. Rather, information which allows the TAU State unit to be formed is stored.
- Ancillary units* **19** A business unit's productive activity is described as ancillary when its sole function is to provide common types of services for intermediate consumption within the same enterprise group. These are typically services likely to be needed in most enterprise groups, whatever their principal activities e.g. transportation, purchasing, sales and marketing, various financial or business services, personnel, computing and communications, security, maintenance and cleaning.
- 20** The 1993 SNA treatment of ancillary units is that they should be classified to the subdivision of the units they serve i.e. receive a 'reflected' industry code. The ABS does not currently apply the recommended 1993 SNA treatment to ancillary TAUs, as the treatment cannot be applied to all units on the ABS Business Register.
- Agricultural units* **21** Location or farm information is important for the compilation of statistics on agricultural activity. Agricultural units are placed in the ABS Business Register if they have more than one farm. The necessary location information is stored on the ABS Business Register against the unit with the agricultural activity. When an agriculture frame is created, the location information is used to create 'farm units' for selection in agricultural surveys. In these cases, the TAU will have more than one 'farm unit' associated with it.
- Classification of units* **22** ANZSIC codes are reflected from the TAU level to the ENs within a group, and to the EG, but are generally not used in any statistical sense above the TAU level. A high degree of caution needs to be exercised in analysing EN and EG related data classified by ANZSIC. This is because the higher level units do not always correspond to an aggregation of one or more producing units, and because the set of activities performed are often too heterogeneous to assign to a single industry, however broadly defined.
- Statistical collections* **23** The ABS uses the TAU unit as its producing unit to collect industry and some other economic statistics. The unit used is sometimes simply referred to as the TAU/ABN unit. For some activity and labour collections, the ABS uses sub-TAU units e.g. farm units, TAU State units.

INTRODUCTION

1 Statistics NZ reviewed its units model in 1994 as part of a major project to redevelop its business register system. Then called the Business Directory, the register was renamed the Business Frame (BF) when a new units model was implemented in 1996.

2 The review aimed to ensure that the definition of units being applied was in line with international standards and practice. Statistics NZ endeavoured to align its model, as far as possible, with the main units recommended in ISIC Rev. 3.

NZ BUSINESS FRAME (BF)

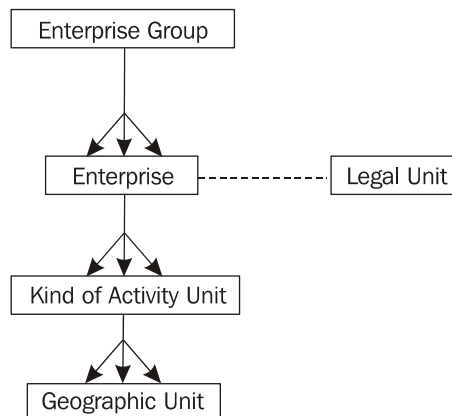
3 The BF is a database of New Zealand businesses and their structures used primarily as a register or frame for the various business surveys run by Statistics NZ. It facilitates the integration of business tax data with survey data by linking the BF enterprise unit and the administrative tax unit. The BF is maintained using tax data, frame maintenance surveys, survey feedback, profiling initiatives and other sources e.g. Companies Office, media etc.

NZ UNITS MODEL

4 The units model used by Statistics NZ is hierarchical and comprises three main units: the Enterprise (ENT), the Kind of Activity Unit (KAU) and the Geographic Unit (GEO). In addition, the Enterprise Group (groups of enterprises under common ownership) is identified on the BF. Statistics NZ concluded that it needed three main units, one each to cater for each of the three broad types of data required, namely financial, production and location statistics. Financial statistics are more readily available from upper level (institutional) units, while production and location statistics are more readily available from lower level (producing) units.

Diagram 1 illustrates the nature of the relationships between these unit types.

Diagram 1: NZ Units Model



UNIT DEFINITIONS

5 The enterprise group is the family of institutional units (legal entities or equivalent) controlled or managed by one of them with more than 50 percent ownership (either directly or through a chain of ownership) of each other member of the family. It is used to compile investment/financing data for the Balance of Payments. It is also used to understand financial flows within groups, for producing ownership control statistics and for confidentiality vetting of published statistical outputs.

UNIT DEFINITIONS *continued*

6 The enterprise group is not kept on the BF in the form of a statistical unit as such, but can be derived from the BF using the ownership links between enterprises and can be viewed in screen graphic and report formats as a family of units.

7 The enterprise is an institutional unit and generally corresponds to legal entities such as companies, partnerships, trusts, estates, incorporated societies and sole proprietorships. Some are identified by other characteristics, such as common objectives or an organisational structure e.g. government departments, local authorities, churches, voluntary organisations.

KIND OF ACTIVITY UNIT

8 The kind of activity unit is an institutional unit, or part of an institutional unit, which engages in one, or predominantly one, kind of economic activity, without being restricted to a geographic area. Value added statistics must be able to be produced for a KAU, or be able to be readily or meaningfully imputed. Statistics NZ has developed a working definition of the kind of activity (KAU):

A KAU, in practice, is a subdivision of an enterprise consisting of a set of one or more geographic units, at one or more places, for which a single set of accounting records is available from the owners, allowing operating surplus to be meaningfully compiled. It is an objective that the KAU should be as industrially homogeneous as possible, but the accounting set is not broken to achieve this, except in very significant cases after consultation with interested internal parties. Autonomy of decision making with respect to production levels, and buying and selling, should also be considered in structuring and profiling.

9 KAUs normally need to be able to supply a minimum set of data. To recognise more than one KAU in an enterprise, there must be separate profit and loss accounts for each unit; value added of at least \$NZ500,000 for each unit (or at least 20 full-time equivalent persons engaged, if value added data is not available); no vertical integration between each unit; and more than one industrial activity.

10 The geographic unit is a KAU, or part of a KAU. It is normally an unbroken physical area/site on, or from which, one, or predominantly one, kind of economic activity takes place on a permanent basis. Employment data must be able to be produced for a geographic unit.

11 The BF system has a function to inhibit or override the KAU's derived ANZSIC in circumstances where the use of value added gives a different result to the use of employment size measures, or where the unit is 'teetering on the boundary' between two codes and it cannot be determined whether a long-term change is occurring. This mechanism is used only for large businesses where the impact on statistical series of any change is likely to be significant, particularly if the business is a major contributor to an industry.

ANCILLARY UNITS

12 Statistics NZ follows the principles laid down in ISIC Rev. 3, in that where ancillary activities are identified for a geographic unit they are classified to their own activity as well as to the activity of their parent unit. The geographic unit can be coded to both a primary and ancillary ANZSIC.

13 There is no survey instrument in Statistics NZ which is specifically designed to identify ancillary units. They are generally identified and coded in response to the specific needs of economic surveys. The process is infrequently used and undertaken for very significant units only.

INTRODUCTION

1 The 2006 edition of the ANZSIC reflects a substantial review of all facets of the classification. The first edition of the classification was released in 1993 and there have been significant changes in the Australian and New Zealand economies in that period. Consequently, it is not surprising that the classification has undergone a substantial degree of change. There has been extensive consultation with users in both countries to ensure that the 2006 edition meets their current and emerging needs.

INDUSTRY CATEGORIES

2 There have been increases in the number of industry categories at each level of the classification as a result of the review. Table 1 compares the number of industry categories at each level of the hierarchy in the 1993 and 2006 editions. It also provides some summary statistics for Australia and New Zealand, using Australian value added data for 1999–2000 (*Australian System of National Accounts*, cat. no. 5204.0, Nov. 2003) and New Zealand full time equivalent employees for 2003 (New Zealand Business Demographic Statistics, as at February 2003).

TABLE 1: INDUSTRY CATEGORIES ANZSIC 1993 AND 2006

| <i>Category</i> | <i>ANZSIC 1993</i> | <i>ANZSIC 2006</i> | <i>Difference</i> | <i>Percentage change</i> |
|--------------------------------------------------|------------------------|------------------------|-------------------|------------------------------|
| ANZSIC | | | | |
| Number of categories | | | | |
| Divisions | 17 | 19 | 2 | 12 |
| Subdivisions | 53 | 86 | 33 | 62 |
| Groups | 158 | 214 | 56 | 35 |
| Classes | 465 | 506 | 41 | 9 |
| Total | 693 | 825 | 132 | 19 |
| Australia | | | | |
| Average value added (\$m) | | | | |
| Divisions | 30 885 | 27 634 | -3 251 | -11 |
| Subdivisions | 9 907 | 6 105 | -3 802 | -38 |
| Groups | 3 323 | 2 453 | -870 | -26 |
| Classes | 1 129 | 1 038 | -91 | -8 |
| New Zealand | | | | |
| Average number of full time equivalent employees | | | | |
| Divisions | 89 835 | 80 379 | -9 456 | -11 |
| Subdivisions | 28 815 | 17 758 | -11 057 | -38 |
| Groups | 9 666 | 7 136 | -2 529 | -26 |
| Classes | 3 284 | 3 018 | -266 | -8 |

3 The largest percentage increases in the number of categories occurred at the ANZSIC subdivision and group levels (increases of 62 and 35 percent respectively). Changes at each level of the classification, and the major reasons for them are discussed in more detail in the following sections of this appendix.

4 The summary statistics show how the additional categories in ANZSIC 2006 reduce the average size of aggregate statistics classified by industry, where the two classifications are applied at a common point in time.

ANZSIC DIVISIONS

5 ANZSIC 2006 includes 19 divisions, compared with 17 in ANZSIC 1993. The large and diverse Property and Business Services Division in ANZSIC 1993, together with some other services, has been rearranged into three new divisions: Rental, Hiring and Real Estate Services; Professional, Scientific and Technical Services; and Administrative and Support Services; resulting in the net gain of two divisions in ANZSIC 2006.

6 ANZSIC 2006 Division J Information Media and Telecommunications has been introduced, effectively replacing ANZSIC 1993 Division J Communication Services. The new division brings together classes from a number of ANZSIC 1993 divisions.

7 The new Information Media and Telecommunications Division groups units mainly engaged in the creation and storing of information products for dissemination purposes; transmitting information products using analogue and digital signals; and providing transmission and storage services for information products. These have been rapidly growing sectors of the Australian and New Zealand economies since the last review. In addition, both sets of changes better align ANZSIC 2006 with the division structures proposed for ISIC Rev. 4.

8 Apart from the changes required as a result of the new division structure, several divisions were renamed to better reflect their composition or the terminology in current usage.

ANZSIC SUBDIVISIONS

9 ANZSIC 2006 includes 86 subdivisions, compared with 53 in ANZSIC 1993, the largest percentage increase in the number of categories for any level of the classification. This was the result of a number of factors including:

- improving the international comparability of the classification at this level;
- identifying groupings of economic activities with significantly different production functions; and
- promoting some more economically significant industries to this level of the classification.

10 Individual decisions to create subdivisions took into account all of these factors and were variously influenced by them. To improve international comparability, ANZSIC 2006 was aligned, as far as possible, at the subdivision level with the proposed ISIC Rev. 4.

11 Formation of the following subdivisions was particularly influenced by considerations of international comparability:

- Subdivision 12: Beverage and Tobacco Product Manufacturing;
- Subdivision 44: Accommodation;
- Subdivision 55: Motion Picture and Sound Recording Activities;
- Subdivision 58: Telecommunications Services;
- Subdivision 60: Library and Other Information Services; and
- Subdivision 70: Computer Systems Design and Related Services.

12 Formation of the following subdivisions was particularly influenced by better identifying groupings of economic activities with significantly different production functions:

- Subdivision 02: Aquaculture;
- Subdivision 15: Pulp, Paper and Converted Paper Product Manufacturing;
- Subdivision 26: Electricity Supply;
- Subdivision 27: Gas Supply; and
- Subdivision 94: Repair and Maintenance.

ANZSIC SUBDIVISIONS

continued

13 Formation of the following subdivisions was particularly influenced by promoting some of the more economically significant industries to this level of the classification:

- Subdivision 11: Food Product Manufacturing;
- Subdivision 45: Food and Beverage Services;
- Subdivision 77: Public Order, Safety and Regulatory Services; and
- Subdivision 80: Preschool and School Education.

ANZSIC GROUPS

14 The number of groups increased substantially, from 158 in ANZSIC 1993 to 214 in ANZSIC 2006. The major factors behind this increase were:

- flow on effects from the large increase in the number of ANZSIC subdivisions;
- formation of ANZSIC groups better aligned with the ISIC;
- more homogeneous groupings of production functions; and
- recognising some new groups with relatively high levels of economic significance.

15 Examples where international comparability was improved by the formation of groups include:

- Group 541: Newspaper, Periodical, Book and Directory Publishing;
- Group 542: Software Publishing; and
- Group 697: Veterinary Services.

16 Examples where different production functions led to the formation of groups include:

- Group 112: Seafood Processing;
- Group 121: Beverage Manufacturing;
- Group 261: Electricity Generation; and
- Group 262: Electricity Transmission.

17 Examples of groups formed due to their relatively high levels of significance include:

- Group 372: Pharmaceutical and Toiletry Goods Wholesaling;
- Group 722: Travel Agency Services; and
- Group 852: Pathology and Diagnostic Imaging Services.

ANZSIC CLASSES

18 The principles for the formation of classes in the 2006 edition of the ANZSIC are set out in Chapter 2. All of the principles were important contributors to the changes made at the ANZSIC class level between the 1993 and 2006 editions. ANZSIC 2006 comprises 506 classes, compared with 465 in ANZSIC 1993.

19 Many individual classes in ANZSIC 1993 have been affected by change of some type. In some cases, two or more ANZSIC 1993 classes have been merged to form one class and others have been broken up into more detailed classes.

20 The composition of many classes has been affected by the formation of different groupings of activities, particularly due to the more rigorous application of production function homogeneity e.g. the new treatment of repair and maintenance activities.

21 It is difficult to summarise the relative contribution of the various principles to these many changes of varying degrees of significance. Particular principles had more impact in some parts of the classification than others and all of the principles were considered in making decisions on individual ANZSIC 2006 classes.

CORRESPONDENCES

22 Chapter 10 provides correspondences (concordances) between ANZSIC 1993 and ANZSIC 2006, and between ANZSIC 2006 and ANZSIC 1993, at the class level. These correspondences indicate how each class in each edition of the ANZSIC relates to the classes in the other edition i.e. class in one edition is comprised of one or more whole or part classes from the other edition.

CORRESPONDENCES *continued*

23 For example, ANZSIC 1993 Class 2122 Ice Cream Manufacturing is directly equivalent to ANZSIC 2006 Class 1132 Ice Cream Manufacturing. There has been no change in the primary activity composition of the class between the two editions and there is therefore a 1:1 correspondence between the two classes.

24 As another example, ANZSIC 1993 Class 5730 Cafes and Restaurants has been split into two classes and a primary activity has been moved to a class in another division. ANZSIC 2006 Classes 4511 Cafes and Restaurants and 4513 Catering Services were previously part of ANZSIC 1993 Class 5730. In addition, theatre restaurants have been moved from this class to ANZSIC 2006 Class 9001 Performing Arts Operation. ANZSIC 1993 Class 5730 therefore corresponds to ANZSIC 2006 Classes 4511 and 4513, and part of ANZSIC 2006 Class 9001, a 1:many relationship (1:m).

25 In the correspondence tables the relationship described above is shown as follows.

| <i>ANZSIC 1993 Class</i> | <i>ANZSIC 2006 Class</i> |
|----------------------------|----------------------------------|
| 5730 Cafes and Restaurants | 4511 Cafes and Restaurants |
| | 4513 Catering Services |
| | 9001 p Performing Arts Operation |

26 The correspondences do not indicate how the actual composition of activities of individual classes has changed between the two editions or how significant those changes are.

CLASS RELATIONSHIPS

27 By examining the nature of the class level correspondences, it is possible to broadly summarise the relationships between the classes in the two editions. Table 2 summarises the nature of the relationships between the classes in ANZSIC 1993 and ANZSIC 2006 i.e. whether the contents of the class remained the same (1:1), the class was merged with other whole or part classes (m:1), or the class was broken up into two or more whole or part classes (1:m). The figures are provided for each ANZSIC 1993 division.

CLASS RELATIONSHIPS

continued

TABLE 2: CLASS RELATIONSHIPS – ANZSIC 1993 TO ANZSIC 2006

| ANZSIC 1993 Division | RELATIONSHIP OF ANZSIC 1993 CLASSES TO ANZSIC 2006 CLASSES | | | |
|-----------------------------------------|------------------------------------------------------------|-----|-----|-------|
| | 1:1 | m:1 | 1:m | Total |
| A Agriculture, Forestry and Fishing | 22 | 3 | 13 | 38 |
| B Mining | 13 | 6 | — | 19 |
| C Manufacturing | 72 | 24 | 57 | 153 |
| D Electricity, Gas and Water Supply | 3 | — | 1 | 4 |
| E Construction | 17 | — | 4 | 21 |
| F Wholesale Trade | 13 | 6 | 22 | 41 |
| G Retail Trade | 12 | — | 26 | 38 |
| H Accommodation, Cafes and Restaurants | 2 | — | 2 | 4 |
| I Transport and Storage | 10 | 5 | 12 | 27 |
| J Communication Services | 2 | — | 1 | 3 |
| K Finance and Insurance | 11 | 2 | 2 | 15 |
| L Property and Business Services | 21 | — | 10 | 31 |
| M Government Administration and Defence | 3 | — | 3 | 6 |
| N Education | 7 | — | 1 | 8 |
| O Health and Community Services | 12 | — | 6 | 18 |
| P Cultural and Recreational Services | 12 | — | 9 | 21 |
| Q Personal and Other Services | 14 | — | 4 | 18 |
| Total | 246 | 46 | 173 | 465 |
| Percentage of all classes | 53 | 10 | 37 | 100 |

— nil or rounded to zero (including null cells)

28 The table shows that 37 percent of ANZSIC 1993 classes were subdivided and apportioned to two or more ANZSIC 2006 classes. The most significant structural changes at the class level, proportionately, occurred in Division F Wholesale Trade; Division G Retail Trade and Division P Cultural and Recreational Services. However, there was structural change across most of the classification.

29 Merging of classes occurred where:

- the previously defined industry had fallen below or near the economic significance limit;
- there was limited user interest in the grouping; and/or
- the degree of homogeneity of the individual classes was deficient because of significant secondary activities of units belonging to the other classes.

ANZSIC 1993 CLASS CHANGE TABLES

30 Class change tables have been prepared showing how each ANZSIC 1993 class was affected by the review and showing where ANZSIC 1993 primary activities are classified in ANZSIC 2006. They indicate whether the ANZSIC 1993 class has been split, merged, changed title, moved divisions etc. The ANZSIC 2006 class includes information about activities moved into or out of the class.

31 These tables are available free of charge from the ABS web site <www.abs.gov.au> and from the Statistics NZ web site <www.stats.govt.nz>.

COPING WITH THE IMPACT ON TIME SERIES DATA

32 With the implementation of a substantial revision of a major classification, many users prefer to have historical time series, compiled according to the previous edition of the classification, presented according to the new edition of the classification. The historical series cannot be recompiled on the new basis, rather any breaks in continuity between the old and the new observations are eliminated by quantifying the magnitude of the break and backcasting the series on the new basis.

33 A number of statistical methods can be applied to represent historical time series data. The size of particular breaks in series will differ for the same classification change depending on the data items involved e.g. the size of a particular break may differ, for example, for series on profits, employment or capital expenditure.

COPING WITH THE IMPACT ON
TIME SERIES DATA *continued*

34 Both the ABS and Statistics NZ will release information explaining, for each series, how the impact of the move to ANZSIC 2006 will be handled, prior to the publication of the series on an ANZSIC 2006 basis.