

Information Paper

Introduction of the 16th Series Australian Consumer Price Index

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
APRA	Australian Prudential Regulation Authority
COICOP	Classification of Individual Consumption according to Purpose
CPI	Consumer Price Index
CPICC	Consumer Price Index Commodity Classification
DEEWR	Department of Education, Employment and Workplace Relations
FISIM	Financial Intermediation Services Indirectly Measured
GFC	Global Financial Crisis
GFCF	Gross Fixed Capital Formation
HELP	Higher Education Loan Program
HES	Household Expenditure Survey
HFCE	Household Final Consumption Expenditure
n.e.c.	not elsewhere classified
OOH	Owner-occupied Housing

The purpose of this Information Paper is to describe the changes that will be made to the Consumer Price Index (CPI) as a result of the introduction of the 16th series. The first CPI publication on the basis of the 16th series will be in respect of the September quarter 2011, which is due to be released on 26 October 2011.

Australia has produced indexes of retail price inflation going back as far as 1901. Prior to the introduction of the CPI in 1960, there were five series of retail price indexes compiled by the (then) Commonwealth Bureau of Census and Statistics. Since 1960, when the CPI was first compiled, the Australian Bureau of Statistics (ABS) has maintained a program of periodic reviews of the CPI to ensure that it continues to remain relevant and accurate. The main objective of these reviews is to update the household expenditure information used to set the item weights in the CPI but they also provide an opportunity to reassess the scope and coverage of the index.

The issues considered in the review of the 16th series CPI were set out in the *Information Paper: Issues to be considered during the 16th Series Australian Consumer Price Index Review, Australia, December 2009* (cat. no. 6468.0) released on 15 December 2009. Following the release of the paper, there was extensive public consultation. A CPI Review Advisory Group was established, which represented a broad cross–section of CPI users, to provide advice to the ABS. The outcomes of the 16th series review were released in the *Information Paper: Outcome of the 16th Series Australian Consumer Price Index Review, Australia, December 2010* (cat. no. 6469.0).

This information paper provides an overview of the changes to the CPI that will be introduced with the 16th series from the September quarter 2011. It describes the household expenditure data used to calculate the weights in the CPI. The paper also presents the updated weighting patterns, details of the changes to the commodity classification of the index, some background on the major shifts in weights between the 15th and 16th series, and a more detailed explanation regarding the 'Financial services' index in the 16th series Consumer Price Index.

A mock–up of the revised format of the September quarter 2011 issue of *Consumer Price Index, Australia* (cat. no. 6401.0) which will be released on 26 October 2011, is reproduced as Appendix 5 (available to download on the ABS website $< \underline{www.abs.gov.au} >$), to provide users with advance notice of the changes that will be incorporated. Revised formats of the CPI tables including Series IDs are available as data cubes included with the release of this paper on the ABS website $< \underline{www.abs.gov.au} >$.

The ABS will release an updated *Guide to the Consumer Price Index: 16th Series* (cat. no. 6440.0) in conjunction with the release of the 16th series CPI on 26 October 2011. A detailed description of CPI concepts, the data used in compiling it and the methodology underlying the CPI can be found in *Australian Consumer Price Index: Concepts, Sources and Methods, 2009* (cat. no. 6461.0) which will be updated over the next few months to reflect the changes made during the 16th series review. The updated version is expected to be released on 7 December 2011.

Readers requiring further information should contact:

Consumer Price Index Section Australian Bureau of Statistics PO Box 10 BELCONNEN ACT 2616 Telephone: 02 6252 6654 Fax: 02 6252 7060 Email: prices.statistics@abs.gov.au

Brian Pink Australian Statistician

1.1 The Australian Bureau of Statistics (ABS) first compiled the CPI in 1960 with series extending back to the September quarter 1948. Prior to introducing the CPI, the ABS and its predecessor agency, the Commonwealth Bureau of Census and Statistics, produced a number of discrete retail price indexes, each constructed with fixed quantity weights but spanning different lengths of time from 1901 to 1960 – see *Australian Consumer Price Index: Concepts, Sources and Methods, 2009* (cat. no. 6461.0) for more detail. The introduction of the CPI heralded a different approach to constructing price indexes. Rather than compiling a set of discrete fixed–weighted indexes, the objective became to produce a series of short–term fixed–weighted indexes that were to be regularly linked together to provide a single continuous measure of price change. This strategy was adopted to ensure that, at any point in time, the weighting patterns and item coverage of the CPI were relevant to user requirements and reflected contemporary economic conditions as well as possible. As a result, the ABS has maintained a program of periodic reviews of the CPI to ensure that it continues to meet community needs.

1.2 The most important objective of these reviews is to update the CPI weighting patterns, which represent the average Australian household expenditure on goods and services. When analysing a new set of CPI weights compared with the previous set, it is important to note that the weights are relative to each other rather than being absolute. As a result, the weight of a product could fall, for example, even though the expenditure per household on the product has increased because the increase is less than the average increase for all products. Products in the CPI include both goods and services purchased by households.

1.3 The ABS classifies CPI reviews as either 'major' or 'minor' depending on the issues being considered during a particular review. In general, a minor review is restricted mainly to updating the weighting patterns in the CPI. As well as updating the weights, a major review involves examining the structure and purpose of the CPI, its underlying classification and its commodity coverage.

1.4 The 16th series CPI review was a major review and considered issues such as the principal purpose of the CPI, compilation frequency and an evaluation of the deposit and loans facilities index. For a detailed account of the issues which were considered during this review, refer to *Information Paper: Issues to be considered during the 16th Series Australian Consumer Price Index Review, Australia, December 2009* (cat. no. 6468.0).

1.5 The outcomes of the 16th series review were released in December 2010 and presented in the *Information Paper: Outcome of the 16th Series Australian Consumer Price Index Review, Australia, December 2010* (cat. no. 6469.0).

1.6 Some of the major decisions that emerged from the 16th series review were:

- The principal purpose of the CPI is household inflation measurement and the acquisitions approach will remain the conceptual basis for compiling the CPI. Consistent with maintaining this conceptual basis, the price of owner–occupied housing (OOH) will continue to be measured as the change in the price of gross fixed capital formation (GFCF) of houses, net of land. A weighting pattern representative of all private households in the eight capital cities will continue to be used.
- The ABS will change its measurement of financial services in the CPI to ensure that this component of the CPI is of high quality. The deposit and loan facilities (indirect charges) will be removed from the headline CPI from the September quarter 2011 until such time that methods and data sources are sufficiently robust for reintroduction to the CPI. The deposit and loan facilities index will comprise direct fees and charges only and will be renamed 'Deposit and loan facilities (direct charges)'. A new analytical series, comprising the 'All groups CPI including deposit and loan facilities (indirect charges)' will be published in the quarterly CPI publication from the September quarter 2011 issue.

- The ABS will publish a range of additional analytical measures of inflation from the September quarter 2011 including 'All groups CPI, excluding food and energy' and 'All groups CPI, seasonally adjusted'.
- The review also noted that there was significant demand for a monthly CPI and a four yearly Household Expenditure Survey (HES). However, additional funding will be required to meet the costs involved in these changes. With current resources, the ABS will continue to publish a quarterly CPI released on the fourth Wednesday after the end of the reference period, and the HES will remain on a six yearly frequency.

1.7 This information paper provides details of the new CPI commodity classification and weighting pattern. A mock-up of the revised format of the September quarter 2011 issue of *Consumer Price Index, Australia* (cat. no. 6401.0) which will be released on 26 October 2011, is reproduced as Appendix 5 (available to download on the ABS website <<u>www.abs.gov.au</u>>), to provide users with advance notice of the changes that will be incorporated.

1.8 *A Guide to the Consumer Price Index: 16th Series* (cat. no. 6440.0) and *Consumer Price Index: Correspondence with Household Expenditure Classification* (cat. no. 6446.0.55.001) will also be released on 26 October 2011.

1.9 Associated with this Information paper are two data cubes available on the ABS web site: *Consumer Price Index: 16th Series Weighting Pattern,* (cat. no. 6471.0) which contains the 16th series weights and points contribution as well as the 16th series average weekly expenditures; and *Analytical Living Cost Indexes and Pensioner Beneficiary Living Cost Index: 16th series Weighting Patterns, 2011* (cat. no. 6472.0) which contains the 16th series weights and average weekly expenditure for the four types of household: employee, age pensioner, other government transfer recipient and self–funded retiree. It also contains the 16th series weights and average weekly expenditure for the Pensioner and Beneficiary Living Cost Index, which combines the age pensioner and other government transfer recipient households.

Summary

2.1 The 16th series CPI includes a number of updates which will be incorporated from the September quarter 2011. The 16th series CPI will be linked to previous CPI series providing a continuous measure of price change since 1948. The All groups CPI will not be revised as a result of the updates. The key changes for the 16th series CPI are:

- the CPI commodity classification (CPICC) used to categorise the goods and services in the CPI will be updated to ensure it reflects contemporary wording and groupings. To enable greater international comparability, the classification will be aligned with the United Nations Classification of Individual Consumption according to Purpose (COICOP) where possible. There will be considerable re-naming and some re-ordering of the items in the classification. The coverage of household expenditure will remain largely the same as the 15th series CPI, with two exceptions:
 - the indirectly measured component of the 'Deposit and loan facilities' index will be removed from the headline CPI with direct fees and charges remaining;
 - the 'Motor vehicles' expenditure class will incorporate new cars, transfer of used cars to the household sector (from business or government) and the service fee for the transfer of second hand cars. This is a change from the 15th series which only included the purchase of new cars.
- new household expenditure weights will be derived from the 2009–10 Household Expenditure Survey (HES) and other data sources;
- an additional number of analytical measures of inflation will be produced:
 - All groups CPI, seasonally adjusted, weighted average of eight capital cities;
 - Expenditure class level price indexes seasonally adjusted, weighted average of eight capital cities;
 - All groups CPI including deposit and loan facilities (indirect charges); and
 - All groups CPI excluding food and energy.
- the analytical measures of trend inflation, the Trimmed mean and Weighted median, will be revised and calculated using the standard ABS seasonal adjustment methodology.

The 16th series commodity classification

2.2 The introduction of the 16th series has provided the opportunity to review and update the CPI commodity classification used to categorise the goods and services acquired by households. The new 16th series commodity classification and changes from the 15th series are shown in Appendix 1. Tables showing correspondences between the 15th and 16th series commodity classification can be found in *Consumer Price Index: Commodity Classification, Australia, 16th series, 2011* (cat. no. 6401.0.55.004) which was released on 4 July, 2011. In reviewing the classification, issues considered included user needs, consumer behaviour and international comparability. Items with relatively low weight such as 'Men's outerwear' and 'Men's underwear, nightwear and socks' have been combined into 'Garments for men'. To enable greater international comparability of price inflation, a review was undertaken to align where possible the CPI commodity classification (CPICC) with the United Nations Classification of Individual Consumption according to Purpose (COICOP).

2.3 As a result of the review, there has been considerable re–naming and some re–ordering of the items in the classification. Where changes to the CPI classification are indicated, they are one of the following types described below.

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CHAPTER 2: KEY CHANGES IN THE 16TH SERIES CPI

New series

2.4 Some new series will be formed from splitting and/or combining existing series (e.g. the 15th series expenditure classes 'Pork' and 'Bacon and ham' will be combined into the 16th series expenditure class 'Pork'). Where a new series is created from a combination of two or more previously published series, a back series will be calculated as far back as possible, based on available data.

2.5 For the new expenditure class 'Deposit and loan facilities (direct charges)' the ABS does not have back data and the series will begin with an index reference period of June quarter 2011 = 100.0

Series continuing, minor compositional change

2.6 Some series will have a small change to composition such as the removal of a small component (e.g. the 'stationery' component of the 15th series expenditure class 'Audio, visual and media services' will move to the 16th series expenditure class 'Newspapers, magazines and stationery'). A back series will be calculated as far back as possible, based on available data.

Series continuing, name change or move in the classification order

2.7 Some series will be renamed and/or moved in the 16th series classification. The 15th series expenditure class 'Tea, coffee and food drinks' has no composition changes but has been renamed 'Coffee, tea and cocoa' in the 16th series. The 15th series expenditure class 'House purchase' has been renamed 'New dwelling purchase by owner–occupiers' in the 16th series. The series will be linked to the 15th series equivalent.

Discontinued series

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2.8 Some series will no longer be available in the 16th series. The 15th series expenditure class 'Deposit and loan facilities' will be discontinued but partly replaced by a new expenditure class 'Deposit and loan facilities (direct charges)' which will begin with an index reference period of June quarter 2011 = 100.0.

The 16th series analytical series

2.9 Analytical series weights will be updated to reflect the 16th series expenditure patterns. A description of the analytical series will be included in the Explanatory notes of the September quarter 2011 issue of *Consumer Price Index, Australia* (cat. no. 6401.0) and is also included in the mock–up of the revised format of the publication (see Appendix 5, available to download on the ABS website <<u>www.abs.gov.au</u>>).

2.10 An additional number of analytical measures of inflation will be produced:

- All groups CPI, seasonally adjusted, weighted average of eight capital cities;
- Expenditure class level price indexes seasonally adjusted, weighted average of eight capital cities;
- All groups CPI including deposit and loan facilities (indirect charges) with a time series back to the September quarter 2005; and
- All groups CPI excluding food and energy with a time series back to the September quarter 1989.

2.11 The ABS will be improving the seasonal adjustment of the underlying trend indexes (the Trimmed mean and Weighted median) from the September quarter 2011 by adjusting for seasonality in the prices of a wider range of goods and services than had previously occurred. A new index, 'All groups CPI, seasonally adjusted' as well as the seasonally adjusted expenditure classes will be available from the September quarter 2011. For more information on seasonal adjustment please refer to *Information Paper: Seasonal adjustment of Consumer Price Indexes, 2011*, (cat. no. 6401.0.55.003).

CHAPTER 2: KEY CHANGES IN THE 16TH SERIES CPI

2.12 The Tradable and Non–tradable series classification was reviewed and updated for the 16th series using data from the National Accounts Input–Output Tables 2006–07. There were five changes of classification:

- 'Cakes and biscuits' and 'Jams, honey and spreads' were reclassified from non-tradable to tradable;
- 'Waters, soft drinks and juices', 'Newspapers, magazines and stationery' and 'Pets and related products' were reclassified from tradable to non-tradable.

2.13 The series will be renamed 'International Trade Exposure, Tradables and Non–tradables'. The updated classification will be available in Appendix 1 of the September quarter 2011 issue of *Consumer Price Index, Australia* (cat. no. 6401.0) and is included in the mock–up of the revised format of the publication in Appendix 5 (available to download on the ABS website <<u>www.abs.gov.au</u>>).

2.14 The Special series and Analytical series will be combined in one table (Table 8 – Analytical series, weighted average of eight capital cities) of *Consumer Price Index: Australia* (cat. no. 6401.0). As a result, there will be changes to some other table numbers, for example, the International comparisons series will be available in Tables 9 and 10 – see Contents (page iii) for details.

Changes to the measurement of financial services

2.15 The 'Deposit and loan facilities' index in the CPI measures changes in the price of banking services provided to households and was implemented as part of the 15th series CPI in 2005. Volatility in the index during the global financial crisis (GFC) prompted concerns from users about the behaviour of the index, which led to a reassessment of the 'Deposit and loan facilities' index during the 16th series CPI review. The review concluded that while, conceptually, both direct and indirect fees for deposit and loan facilities should be included in the CPI, the GFC demonstrated that the methodology used in the Australian CPI and more widely in the National Accounts of many countries, to calculate indirect fees needed further refinement. 'Deposit and loan facilities (indirect charges)' will be re–introduced into the headline CPI when the ABS is satisfied that the methodology and source data are sufficiently robust to produce high quality estimates. This will include consideration of international efforts to improve measurement.

2.16 The measurement of financial services in the CPI will therefore change in the 16th series CPI, commencing from the September quarter 2011. This is to ensure that this component of the CPI is transparent and reliably measured. The changes are as follows:

- the indirectly measured component of the 'Deposit and loan facilities' index will be removed from the headline CPI;
- the 'Deposit and loan facilities' index will comprise direct fees and charges only and will be renamed 'Deposit and loan facilities (direct charges)'; and
- a new analytical series, comprising the 'All groups CPI including deposit and loan facilities (indirect charges)' will be published quarterly from the commencement of the 16th series CPI.

Deposit and loan facilities (direct charges)

2.17 'Deposit and loan facilities (direct charges)' will contain a range of financial transactions used by households including fees for internet transactions, charges for using Automatic Teller Machines (ATMs), credit card fees and overdraft charges. Each month the price, terms and conditions for a representative range of banking products (e.g. home loan, etc.) will be obtained. The exception is establishment fees on home loans, which will be calculated by deriving an average price from loan approval counts and total revenue. In the case of percentage fees, such as foreign currency conversion fees, these will be applied to a sample of real average transaction dollar amounts. This sample of transactions, moved forward by the four–quarter moving average of the CPI, will be updated on an annual basis. Detailed information on the 'Financial services' index in the 16th series CPI is contained in Appendix 4.

Deposit and loan facilities (indirect charges)

2.18 The methodology for measuring the price of indirect charges will be refined for the analytical series, informed by international developments. The ABS has made some improvements to the measurement of this index:

- The weights of the sample of individual banking products priced in the 'Deposit and loan facilities (indirect charges)' index have been updated. Low level weight updating (below expenditure class level) is common practice in the CPI. This will improve the accuracy and reduce the volatility of the series.
- Research by the ABS has found that an accurate index can only be assured if the data are disaggregated to the finest level of detail. Consequently the ABS has worked with the data providers to obtain the high quality, detailed data necessary to measure indirect fees robustly. This work is ongoing. Currently the data provided contains disaggregation ranging from around 150 to around 600 banking products per institution. Regular negotiations are taking place to maintain the quality, detail and consistency of the data. Detailed information on the 'Financial services' index in the 16th series CPI is contained in Appendix 4.

CHAPTER 3: 16TH SERIES EXPENDITURE WEIGHTS

3.1 The CPI weights reflect the relative expenditures of the CPI population group as a whole and not those of any particular type or size of household. The weights reflect average expenditure of households and not the expenditure of an 'average household'. The household average weekly expenditure and corresponding 16th series CPI relative weights for the CPI groups are shown in Table 1.

Table 1: 16th series CPI, average weekly expenditure and weights, June quarter 2011, weighted average of eight capital cities.

CPI group	Average weekly expenditure	CPI weight
0.1 5.000	(2009–10 guantities, June	or r roight
	quarter 2011 prices) (a)	
		0/
	\$	%
All groups CPI	1371.30	100.0
Food and non-alcoholic beverages	230.87	16.8
Alcohol and tobacco	96.87	7.1
Clothing and footwear	54.58	4.0
Housing	305.75	22.3
Furnishings, household equipment and services	124.79	9.1
Health	72.56	5.3
Transport	158.39	11.6
Communication	41.81	3.0
Recreation and culture	172.30	12.6
Education	43.67	3.2
Insurance and financial services	69.71	5.1

(a) Derived from 2009-10 ABS Household Expenditure Survey and other sources.

Note: Any discrepancies between totals and sums of components in this table are due to rounding.

3.2 The 16th series weights and household average weekly expenditure by group, sub–group and expenditure class as at June quarter 2011 are shown in Appendix 2 and in the data cube: *Consumer Price Index: 16th Series Weighting Pattern, 2011* (cat. no. 6471.0)

3.3 Total household expenditure in the CPI basket increased 29.6% from \$1058.12 in 2003–04 (at June quarter 2005 prices) to \$1371.30 in 2009–10 (at June quarter 2011 prices). The CPI increased 20.1% over the same period. Table 2 below summarises the changes in expenditure by group.

CPI group	15th series Average weekly	16th series Average weekly	Percentage
	expenditure (2003–04	expenditure(2009–10	change
	quantities, June quarter 2005	quantities, June quarter 2011	
	prices)(a) \$	prices)(a) \$	%
All groups CPI	1058.12	1371.30	29.6
Food and non-alcoholic beverages	163.36	230.87	41.3
Alcohol and tobacco	71.86	96.87	34.8
Clothing and footwear	41.42	54.58	31.8
Housing	206.66	305.75	47.9
Furnishings, household equipment and services	101.67	124.79	22.7
Health	49.74	72.56	45.9
Transport (b)	138.70	158.39	14.2
Communication	35.06	41.81	19.3
Recreation and culture	122.25	172.30	40.9
Education	28.93	43.67	51.0
Insurance and financial services (c)	98.47	69.71	-29.2

Table 2: Average Weekly Expenditure, between 15th and 16th series CPI.

(a) Derived from ABS Household Expenditure Survey and other sources

(b) 16th series includes new cars, transfer from non-household sector and dealer service fee. The 15th series only included new cars.

(c) Deposit and loan facilities (indirect charges) has been removed in the 16th series.

Note: Any discrepancies between totals and sums of components in this table are due to rounding.

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Changes in weighting patterns

3.4 Appendix 3 contains a comparison between the weights for the 15th series CPI (at June quarter 2005) as published and the 16th series CPI (at June quarter 2011). Before analysing the changes to the CPI weighting pattern over time, a number of points should be noted. These include the changes in the commodity classification shown in Appendix 1 and the additional issues discussed below.

Quantities underlying the weights are fixed

3.5 Although the weights are expressed in terms of expenditure shares, it is not the expenditure shares (where expenditure is given by the product of quantity and price) that are held constant (or fixed) from period to period. What are held constant are the quantities of products underpinning these expenditures. Weights are presented in expenditure terms because it is not possible to present quantity weights in a comparable way. The relative expenditure shares of items will change over time in response to changes in relative prices. The weights in the 16th series CPI generally relate to expenditures in 2009–10, revalued using price movements in the CPI, to June quarter 2011 (the 'link' quarter) prices to maintain fixed '2009–10 quantities'. See Chapter 4: Price Index Theory in *Concepts, Sources and Methods, Australia, 2009* (cat. no. 6461.0) for more information.

Weights are relative

3.6 The weight of an expenditure class in any particular CPI series depends on how expenditure on that class compares to total expenditure (i.e. expenditure shares), rather than the absolute expenditure. If the increase in expenditure on a particular expenditure class in the reference period is greater than the increase in total expenditure between two series, the weight of that expenditure class will increase. For example, between the 15th and 16th series, the expenditure share on 'Restaurant meals' increased from 2.00% to 2.81%. Conversely, if the increase in expenditure on a particular expenditure class will decrease. For example, between total expenditure between two series, the weight of that expenditure class will decrease. For example, in total expenditure between two series, the weight of that expenditure class will decrease. For example, in the 16th series the expenditure share on 'Furniture' increased by less than the increase in overall expenditures. As a result, the weight of Furniture fell from 1.96% in the 15th series to 1.63% in the 16th series.

Changes to coverage

3.7 Changes in the coverage of the CPI basket will also affect weighting patterns. The weight of the 'Insurance and financial services' group has decreased, primarily as a result of the removal of the 'Deposit and loan facilities (indirect charges)' from the CPI basket.

3.8 There has also been a small coverage change for 'Motor vehicles'. In the 16th series CPI the weight for 'Motor vehicles' will incorporate new cars, transfer of used cars to the household sector (from business or government) and the service fee for the transfer of second hand cars. This is a change from the 15th series CPI which only included the purchase of new cars. As a consequence, the data source for 'Motor vehicles' in the 16th series will be the National Accounts household final consumption expenditure (HFCE) data. In the 15th series, HES data was used to derive the weight for 'Motor vehicles'.

Changes in weights between the 15th and 16th series

3.9 The changes in CPI weights between the 15th and 16th series can be broken down into price and volume effects. The volume change captures both quality and quantity changes between the reference years 2003–04 and 2009–10. The volume changes were calculated by removing the price change (corresponding price index measure) between the two periods. Expenditures in 2009–10, price updated to June 2011 prices were compared to 2003–04 expenditures price updated to June 2011 prices. The corresponding CPI price movements were mostly used as the measure of price change. An analysis of expenditure classes with relatively large changes to their weights between the 15th and 16th series is provided below.

Examples of expenditure classes with large increases in weight

3.10 'Rents' weight increased from 5.22% to 6.71%. Average weekly expenditure on Rents increased 67% from \$55.18 in 2003–04 (at June quarter 2005 prices) to \$92.01 in 2009–10 (at June quarter 2011 prices). The increase was due to both a price and volume increase. The volume increase was driven by increases in the size and quality of dwellings as well as a small increase in the proportion of people renting.

3.11 'New dwelling purchase by owner–occupiers' weight increased from 7.87% to 8.67%. Average weekly expenditure on New dwelling purchase by owner–occupiers increased 43% from \$83.33 in 2003–04 (at June quarter 2005 prices) to \$118.86 in 2009–10 (at June quarter 2011 prices). The increase was due to both a price and volume increase. The volume increase was driven by additional new residential construction driven by population growth in the capital cities and an increase in the average size and quality of new dwellings.

3.12 'Restaurant meals' weight increased from 2.00% to 2.81%. Average weekly expenditure on Restaurant meals increased 82% from \$21.20 in 2003–04 (at June quarter 2005 prices) to \$38.55 in 2009–10 (at June quarter 2011 prices).

3.13 'Fruit' weight increased from 0.95% to 1.60%. Average weekly expenditure on Fruit increased 117% from \$10.10 in 2003–04 (at June quarter 2005 prices) to \$21.97 in 2009–10 (at June quarter 2011 prices). The increase was primarily due to price rises for bananas in the March quarter 2011 and the June quarter 2011 following crop damage caused by cyclone Yasi. The relative weight of the fruit component will fall when the price of bananas returns to levels prior to cyclone Yasi.

Examples of expenditure classes with large decreases in weight

3.14 'Deposit and loan facilities' weight decreased from 4.47% to 0.76%. This is mostly due to a coverage change. The indirect charges component was removed and now only the direct charges are measured in the 16th series CPI. A more detailed explanation of the changes to Financial services in the CPI can be found in Appendix 4.

3.15 'Motor vehicles' weight decreased from 4.90% to 3.25%. Average weekly expenditure on Motor vehicles decreased from \$51.87 in 2003–04 (at June quarter 2005 prices) to \$44.56 in 2009–10 (at June quarter 2011 prices).

3.16 'Carpets and other floor coverings' weight decreased from 0.78% to 0.28%. This is partly due to a coverage change. In the 15th series CPI 'Floor and window coverings' were in the same expenditure class but in the 16th series CPI, window coverings has been moved to 'Household textiles'.

3.17 'Audio, visual and computing media and services' weight decreased from 1.38% to 0.98%. This is partly due to a coverage change. In the 15th series CPI, stationery was included in this expenditure class but in the 16th series CPI, stationery has been moved to 'Newspapers, books and stationery'.

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3.18 'Furniture' weight decreased from 1.96% to 1.63%. Average weekly expenditure on Furniture increased from \$20.72 in 2003–04 (at June quarter 2005 prices) to \$22.42 in 2009–10 (at June quarter 2011 prices). However, the increase in expenditure (8.2%) was less than the increase in the All groups CPI (20.1%) and therefore its relative importance diminished.

CHAPTER 4: DESCRIPTION OF THE 16TH SERIES WEIGHTING PATTERN: SOURCES AND METHODS

Description of the 16th series weighting pattern: sources and methods

4.1 A comprehensive description of the CPI methodology is outlined in *Australian Consumer Price Index: Concepts, Sources and Methods, 2009* (cat. no. 6461.0). This will be updated to reflect the changes in the 16th series CPI and is scheduled for release on 7 December 2011.

4.2 The 16th series CPI, consistent with the 13th, 14th and 15th series, has been designed as a general measure of price inflation for the household sector as a whole. The CPI measures changes in the price of a fixed basket of goods and services acquired by consumers in metropolitan private households.

4.3 In determining the composition of the CPI basket (and item weights), the objective is to reflect the contemporary experiences of households. The starting point for compiling the weights for the 16th series CPI was the results of the ABS 2009–10 Household Expenditure Survey (HES). The HES obtained information on the spending habits of Australian households throughout 2009–10.

HES data

4.4 The 2009–10 HES was a sample of 9,774 households. Data was collected using a diary of personal expenditures in which usual residents aged 15 years and over record their expenditure over a two week period. An interview questionnaire also collected information on household characteristics, expenditures common to all household members (e.g. health service payments) and irregular or infrequent expenditures. The recall period for the irregular or infrequent expenditures varied: for 3 months including furniture and house repairs; last payment including general rates, electricity and health services; and the last 12 months including motor vehicle purchase, motor vehicle repair and maintenance, education, insurance, overseas holiday travel, house alterations and additions.

4.5 The 2009–10 HES was collected under the current Australian Standard Geographical Classification (ASGC). The next HES is scheduled to be undertaken in 2015–16 using the new Australian Statistical Geography Standard (ASGS) with inclusion in the CPI from the September quarter 2017.

4.6 The detailed HES expenditure items are classified according to the ABS Household Expenditure Classification (HEC). A correspondence exists between the CPI and HEC. Most HEC codes have a direct correspondence to one CPI expenditure class. Where a one-to-one correspondence could not be established due to the broad nature of a HEC code or insufficient information being provided by households, splits were determined either on a prorate basis, using industry data or subjectively across appropriate expenditure classes. In most cases where splits were required, the expenditures involved were relatively small. The CPI to HEC correspondence will be published as a data cube in *Consumer Price Index: Correspondence with Household Expenditure Classification, Australia* (cat. no. 6446.0.55.001) on 26 October 2011.

4.7 The CPI to HEC correspondence was applied to the HES data to derive household average weekly expenditure for 2009–10 at the expenditure class level. The average weekly expenditure was used to analyse both the 2009–10 expenditure and the changes since the 2003–04 HES.

4.8 Although the HES provides a comprehensive coverage of household expenditure, various adjustments were required to be made to the HES average weekly expenditure for use as the CPI weights. In most cases the adjustments to expenditure were made without compensating adjustments to other expenditure in the CPI basket. The implication is that changes in such expenditure were assumed to have come from, or gone into savings.

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CHAPTER 4: DESCRIPTION OF THE 16TH SERIES WEIGHTING PATTERN: SOURCES AND METHODS

Adjustments to HES data

Under-reporting of alcohol and tobacco expenditures in the HES

4.9 Historically, HES expenditure on alcohol and tobacco was under-reported when compared to information from other sources. As a result, HES estimates are adjusted for under-reporting based on factors derived at the national level using National Accounts HFCE data. These national factors were applied to the HES expenditure estimates for each capital city. The 2009-10 HES has estimated expenditure for alcohol at a little over half and tobacco at a little under half of the respective national accounts estimates. This was a very similar sized adjustment that was used for the 15th series CPI.

4.10 As households do not always separately identify alcohol and meal expenditures when reporting expenditure on restaurant meals in the HES, a small adjustment was made using the proportion of reported meal expenditure that was alcohol, estimated from an analysis of HES unit records. Meal expenditure was then reduced by the proportion of reported meal expenditure that was alcohol and the difference included in expenditure on alcohol. This adjustment did not impact overall household expenditure.

Audio, visual and computing equipment

4.11 The 2009–10 HES data provided the latest information on household expenditure on audio, visual and computing equipment which was then price updated to the June quarter 2011, as described in paragraph 3.9 above. However, for audio, visual and computing equipment this approach may lead to underestimation of the weight in the CPI due to the relatively high volume growth in the quality (size and features) of these high technology goods compared to other products in the CPI. Therefore, a volume increase of around 15% was calculated from the National Accounts HFCE components between 2009-10 and June quarter 2011.

Insurance

4.12 For the purpose of measuring household price inflation, the weight for general insurance in the CPI should reflect the cost of the service provided by insurers (gross premium less claims) rather than the value of gross premiums paid. However, as it was only possible for the HES to collect the gross premiums, the HES gross premiums were adjusted by the proportion of the gross premium that represents the insurance service. This proportion was derived using information collected by the Australian Prudential Regulation Authority (APRA) and from insurance companies. Expenditures funded by claims were added back to the appropriate items by calculating the ratio of claims payments relative to premiums, using APRA and insurance company data and applying the ratio to the HES gross premiums.

Salary sacrifice

4.13 Salary sacrifice is an arrangement between an employee and employer whereby part of the employee's pre-tax cash salary is traded for non-cash benefits. Conceptually, these arrangements should be captured in both gross wages and salaries, and household expenditure. In the 2009-10 HES, the salary sacrifice question module was expanded to collect more detailed information on motor vehicles purchased via a salary sacrifice arrangement. In addition, respondents were instructed to exclude expenditure on motor vehicles and related items for those motor vehicles purchased through salary sacrifice from the motor vehicle question modules within the household questionnaire, to ensure no double counting.

CHAPTER 4: DESCRIPTION OF THE 16TH SERIES WEIGHTING PATTERN: SOURCES AND METHODS -----

4.14 The items that have been adjusted for salary sacrifice are motor vehicles and computers. Salary sacrifice expenditure on child care was not included as it was regarded as insignificant. To ensure the expenditure on motor vehicles includes all motor vehicles purchases (i.e. including via salary sacrifice) some adjustment is needed to the relevant HES items. Therefore salary sacrifice amounts reported against vehicles were allocated to motor vehicle purchases, registration, insurance, motor vehicle repair and servicing, and automotive fuel.

Outlier adjustments

4.15 The HES data was compared across capital cities and over time to validate the 16th series expenditure at the expenditure class level. The HES expenditure in 2003-04 was revalued to 2009-10 dollars to derive the volume changes between the two HES reference years and compared to the 2009-10 HES.

4.16 A small number of unit record adjustments were made in the smaller capital cities where HES sample sizes are smaller and, in general, the standard errors are larger. The outlier adjustment used was winsorisation, which involves replacing an unrepresentative expenditure by the next largest estimate. Where unit record outliers could not be identified, differences were further investigated. A small number of volume changes could not be validated, resulting in adjustments using either alternative volume data or subjective judgement based on market intelligence.

Expenditure not sourced from HES

New dwelling purchase by owner-occupiers

4.17 New dwelling purchase by owner-occupiers in the CPI includes the cost of 'net additions of household sector dwellings' as a measure of owner-occupier housing costs which includes new homes (excluding land) and major improvements. Sales of houses that take place between households (generally established dwellings) are excluded so that the weights relate only to net additions to the housing stock arising from household purchases from other sectors (i.e. from businesses such as builders and developers).

4.18 The net expenditure on new dwelling purchase by owner-occupiers house acquisition was estimated by applying the average value of private dwelling completions by State for 2009–10 published in Building Activity, Australia (cat. no. 8752.0) to the net change in the number of owner-occupier households. The net additions are calculated by using data from Household and Family Projections, Australia (cat. no. 3236.0) to move forward the Census 2006 capital city counts of owner-occupied households. In line with standard practice relating to the inclusion of subsidies in the CPI, subsidies paid to first-home buyers as part of the Commonwealth government's 'First Home Owners Scheme' and 'First Home Owners Boost' were treated as negative expenditure and subtracted from the new dwelling purchase by owner-occupiers house acquisition expenditure.

4.19 Expenditure on other items that are included in new dwelling purchase by owner-occupiers are 'Alterations and additions' and 'Installed appliances'. This expenditure was obtained from the 2009-10 HES and added to the estimate for house acquisition to provide the total expenditure on new dwelling purchase by owner-occupiers.

Motor vehicles

4.20 The data source for Motor vehicles changed for the 16th series CPI. The weight for motor vehicles was derived from the National Accounts HFCE data. This was done to accommodate a coverage change. In the 16th series CPI the weight for motor vehicles will include new cars, transfer of used cars to the household sector (from business or government) and the service fee from the transfer of second hand cars. In the 15th series CPI, only new cars were included and the weight was derived from the 2003-04 HES data.

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CHAPTER 4: DESCRIPTION OF THE 16TH SERIES WEIGHTING PATTERN: SOURCES AND METHODS

Higher Education Loan Program (HELP)

4.21 The HES higher education item includes HELP payments made by households up front plus any HELP repayments made through the taxation system during the reference period. This measure is not consistent with the concept of an acquisitions based CPI, where expenditures should reflect the cost to households of the education service acquired during the reference period. The CPI scope includes the actual payments made during the period (upfront payment) plus fees for education services acquired during the period but deferred to be paid at a later date.

4.22 To align the household expenditure on tertiary education fees, in the CPI, HELP expenditures were calculated using data from the Department of Education, Employment and Workplace Relations (DEEWR) on the total upfront and deferred fees and the number of HELP paying university students.

Financial services

4.23 Expenditure on financial services cannot be sourced from the HES as it was either not directly observable or the HES did not capture the transactions in sufficient volumes or detail. The financial services sub-group includes two expenditure classes: Deposit and loan facilities (direct charges) and Other financial services. Detailed information on Financial services in the 16th series CPI is contained in Appendix 4.

Deposit and loan facilities (direct charges)

4.24 Expenditure on Deposit and loan facilities (direct charges) was determined through the use of administrative data sets (obtained from financial institutions and government reporting agencies) of financial institution fees and charges for Australian households (detailed information on Financial services in the 16th series CPI is contained in Appendix 4).

Other financial services

4.25 Other financial services include real estate agent services, legal and conveyancing services, stockbroking services and taxes on property transfers.

4.26 Expenditure on real estate agent services was derived from property transaction data over the period 2009–10 and unpublished ABS survey data on real estate agent fees.

4.27 Expenditure on legal and conveyancing services was derived from the National Accounts ownership transfer costs. This represents a change from the 15th series which used ABS income data from Legal Practices, Australia, 2001–02 (cat. no. 8667.0).

4.28 National Accounts HFCE data was used to derive an estimate of expenditure on stockbroking services.

4.29 Expenditure on taxes on property transfers was compiled using data supplied by the State and Territory Revenue Offices.

4.30 The ABS will investigate methodologies for other significant financial services that are currently not covered in the CPI (e.g. superannuation charges) and introduce them into the CPI when the ABS is satisfied that the methodology and data are sufficiently robust to produce high quality estimates.

APPENDIX 1: CHANGES BETWEEN THE 15TH AND 16TH SERIES CPI COMMODITY CLASSIFICATION

16th SERIES CPI COMMODITY CLASSIFICATION

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	Group		Туре
	Sub–group		of
	Expenditure class	Correspondence with 15th series	change
1	FOOD AND NON-ALCOHOLIC BEVERAGES	Previously Food	(a)
1.1	Bread and cereal products	Previously 1.2	(a)
1.1.1	Bread	Previously 1.2.1	(a)
1.1.2	Cakes and biscuits	Previously 1.2.2	(a)
1.1.3	Breakfast cereals	Previously 1.2.3	(a)
1.1.4	Other cereal products	Previously 1.2.4	(a)
1.2	Meat and seafoods	Previously 1.3	(a)
1.2.1	Beef and veal	Previously 1.3.1	(a)
1.2.2	Pork	New, combination of 1.3.3 (Pork) and 1.3.5 (Bacon and ham)	(C)
1.2.3	Lamb and goat	Previously 1.3.2 (Lamb and mutton)	(a)
1.2.4	Poultry	Previously 1.3.4	(a)
1.2.5	Other meats	Previously 1.3.6 (Other fresh and processed meat)	(a)
1.2.6	Fish and other seafood	Previously 1.3.7	(a)
1.2.0	Dairy and related products	Previously 1.1	(a)
1.3.1	Milk	Previously 1.1.1	(a) (a)
1.3.1	Cheese	Previously 1.1.2	(a) (a)
1.3.2	Ice cream and other dairy products	•	(a) (a)
1.3.3		Previously 1.1.3	(a)
1.4	Fruit and vegetables Fruit	No change	
		No change	
1.4.2	Vegetables	No change	(a)
1.5	Food products n.e.c.	New, combination of part 1.7 (Other food) and	(c)
4 - 4	E e e	1.5.2 (Snacks and confectionery)	(-)
1.5.1	Eggs	Previously 1.7.1	(a)
1.5.2	Jams, honey and spreads	Previously 1.7.2 (Jams, honey and sandwich spreads)	(a)
1.5.3	Food additives and condiments	Previously 1.7.4B	(a)
1.5.4	Oils and fats	Previously 1.7.5 (Fats and oils)	(a)
1.5.5	Snacks and confectionery	Previously 1.5.2	(a)
1.5.6	Other food products n.e.c.	Previously 1.7.6 (Food n.e.c.)	(a)
1.6	Non–alcoholic beverages	New, combination of 1.7.3 (Tea, coffee and food drinks) and 1.5.1 (Soft drinks, waters and juices)	(c)
1.6.1	Coffee, tea and cocoa	Previously 1.7.3 (Tea, coffee and food drinks)	(a)
1.6.2	Waters, soft drinks and juices	Previously 1.5.1 (Soft drinks, waters and juices)	(a)
1.7	Meals out and take away foods	Previously 1.6	(a)
1.7.1	Restaurant meals	Previously 1.6.1	(a)
1.7.2	Take away and fast foods	Previously 1.6.2	(a)
2	ALCOHOL AND TOBACCO	No obando	
2 2.1		No change Provinuely Alexandria drinka	(2)
2.1	Alcoholic beverages	Previously Alcoholic drinks	(a)
2.1.1	Spirits	Previously 2.1.3	(a)
2.1.2	Wine	No change	(a)
2.1.3	Beer	Previously 2.1.1	(a)
2.2	Tobacco Tobacco	No change	
		No change	
3	CLOTHING AND FOOTWEAR	No change	
3.1	Garments	New, combination of 3.1 (Men's clothing), 3.2 (Women's	(c)
0.1	aamonto	clothing) and 3.3 (Children's and infants' clothing)	(0)
3.1.1	Garments for men	New, combination of 3.1.1 (Men's outerwear) and 3.1.2	(c)
5.1.1	daments for men	(Men's underwear, nightwear and socks)	(0)
3.1.2	Garments for women	New, combination of 3.2.1 (Women's outerwear) and 3.2.2	(c)
5.1.2	daments for women	(Women's underwear, nightwear and hosiery)	(0)
3.1.3	Garments for infants and children	Previously 3.3 (Children's and infants' clothing)	(a)
	Footwear		(a)
3.2 3.2.1		Previously 3.4 Previously 3.4.1 (Men's footwear)	(a)
	Footwear for men		(a)
3.2.2 3.2.3	Footwear for women	Previously 3.4.2 (Women's footwear) Previously 3.4.3 (Children's footwear)	(a)
	Footwear for infants and children		(a)
3.3 3.3.1	Accessories and clothing services	Previously 3.5 Proviously 3.5	(a)
	Accessories	Previously 3.5.1	(a)
3.3.2	Cleaning, repair and hire of clothing	Previously 3.5.2 (Clothing services and shoe repair)	(a)
	and footwear		

Footnotes

(a) Series continuing, name change and/or move of series in the classification order. Same base of index as previously.

(b) Series continuing, minor compositional change.

(c) New series, backcast with components from 15th series. Base of index: 1989–90 = 100.0.

(d) New series, base of index: June quarter 2011 = 100.0 as no backcast data available.

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APPENDIX 1: CHANGES BETWEEN THE 15TH AND 16TH SERIES CPI COMMODITY CLASSIFICATION

16th SERIES CPI COMMODITY CLASSIFICATION continued

	Group		Туре
	Sub–group		01
	Expenditure class	Correspondence with 15th series	change
4	HOUSING	No change	
4.1	Rents	No change	
4.1.1	Rents	No change	
4.2	New dwelling purchase by owner– occupiers	New sub-group	(c)
4.2.1	New dwelling purchase by owner- occupiers	Previously 4.3.1 (House purchase)	(a)
4.3	Other housing	New, combination of 4.3.3 (House repairs and maintenance) and 4.3.2 (Property rates and charges)	(c)
4.3.1	Maintenance and repair of the dwelling	Previously 4.3.3 (House repairs and maintenance)	(a)
4.3.2	Property rates and charges	No change	
4.4	Utilities	Previously 4.2	(a)
4.4.1	Water and sewerage	Previously 4.2.3	(a)
4.4.2	Electricity	Previously 4.2.1	(a)
4.4.3	Gas and other household fuels	Previously 4.2.2	(a)
5	FURNISHINGS, HOUSEHOLD EQUIPMENT AND SERVICES	Previously Household contents and services	(a)
5.1	Furniture and furnishings	No change	
5.1.1	Furniture	No change	
5.1.2	Carpets and other floor coverings	New, part 5.1.2 (Floor and window coverings)	(c)
5.2	Household textiles	New sub–group	(c)
5.2.1	Household textiles	New, combination of 5.1.3 (Towels and linen) and part 5.1.2 (Floor and window coverings)	(c)
5.3	Household appliances, utensils and tools	Previously 5.2	(a)
5.3.1	Major household appliances	Previously 5.2.1	(a)
5.3.2	Small electric household appliances	Previously 5.2.2	(a)
5.3.3	Glassware, tableware and household utensils	Previously 5.2.3	(a)
5.3.4	Tools and equipment for house and garden	Previously 5.2.4 (Tools)	(a)
5.4	Non-durable household products	Previously 5.3 (Household supplies)	(a)
5.4.1	Cleaning and maintenance products	Previously 5.3.1 (Household cleaning agents)	(a)
5.4.2	Personal care products	Previously 5.3.2 (Toiletries and personal care products)	(a)
5.4.3	Other non-durable household products	Previously 5.3.3 (Other household supplies)	(a)
5.5	Domestic and household services	Previously 5.4 (Household services)	(a)
5.5.1	Child care	Previously 5.4.1	(a)
5.5.2	Hairdressing and personal grooming services	Previously 5.4.2 (Hairdressing and personal care services)	(a)
5.5.3	Other household services	Previously 5.4.3	(a)
6	HEALTH	No change	
6.1	Medical products, appliances and equipment	New, combination of 6.2 (Pharmaceuticals) and part 6.1.2 (Optical services)	(c)
6.1.1	Pharmaceutical products	Part 6.2 (Pharmaceuticals)	(b)
6.1.2	Therapeutic appliances and equipment	New, combination of part 6.2 (Pharmaceuticals) and part 6.1.2 (Optical services)	(c)
6.2	Medical, dental and hospital services	Previously 6.1 (Health services)	(a)
6.2.1	Medical and hospital services	New, combination of 6.1.1 (Hospital and medical services) and part 6.1.2 (Optical services)	(c)
6.2.2	Dental services	Previously 6.1.3	(a)

Footnotes

(a) Series continuing, name change and/or move of series in the classification order. Same base of index as previously.

(b) Series continuing, minor compositional change.

(c) New series, backcast with components from 15th series. Base of index: 1989-90 = 100.0.

(d) New series, base of index: June quarter 2011 = 100.0 as no backcast data available.

APPENDIX 1: CHANGES BETWEEN THE 15TH AND 16TH SERIES CPI COMMODITY CLASSIFICATION

16th SERIES CPI COMMODITY CLASSIFICATION continued

	Group		Туре
	Sub–group		of
	Expenditure class	Correspondence with 15th series	change
7	TRANSPORT	Previously Transportation	(a)
7.1	Private motoring	No change	
7.1.1	Motor vehicles	No change	
7.1.2	Spare parts and accessories for motor vehicles	Previously 7.1.4 (Motor vehicle parts and accessories)	(a)
7.1.3	Automotive fuel	Previously 7.1.2	(a)
7.1.4	Maintenance and repair of motor vehicles	Previously 7.1.3 (Motor vehicle repair and servicing)	(a)
7.1.5	Other services in respect of motor vehicles	Previously Other motoring charges	(a)
7.2	Urban transport fares	No change	
7.2.1	Urban transport fares	No change	
	•	ite energe	
8	COMMUNICATION	No change	
8.1	Communication	No change	
8.1.1	Postal services	Previously Postal	(a)
8.1.2	Telecommunication equipment	Previously Telecommunication	(a)
	and services	-	
-			
9	RECREATION AND CULTURE	Previously Recreation	(a)
9.1	Audio, visual and computing equipment and services	Previously Audio, visual and computing	(a)
9.1.1	Audio, visual and computing equipment	No change	
9.1.2	Audio, visual and computing media and services	Part 9.1.2 (Audio, visual and computing media and services)	(b)
9.2	Newspapers, books and stationery	New, combination of 9.2 (Books, newspapers and magazines) and part 9.1.2 (Audio, visual and computing media and services)	(c)
9.2.1	Books	No change	
9.2.2	Newspapers, magazines and stationery	New, combination of 9.2.2 (Newspapers and magazines) and part 9.1.2 (Audio, visual and computing media and services)	(c)
9.3	Holiday travel and accommodation	Previously 9.4	(a)
9.3.1	Domestic holiday travel and accommodation	Previously 9.4.1	(a)
9.3.2	International holiday travel and	Previously 9.4.2 (Overseas holiday travel and accommodation)	(a)
9.4	accommodation	Providually 0.2 (Sport and other represention)	(0)
9.4 9.4.1	Other recreation, sport and culture Equipment for sports, camping	Previously 9.3 (Sport and other recreation) Previously 9.3.1 (Sports and recreational equipment)	(a) (a)
	and open-air recreation		
9.4.2	Games, toys and hobbies	Previously 9.3.2 (Toys, games and hobbies)	(a)
9.4.3	Pets and related products	Previously 9.3.4 (Pets, pet foods and supplies)	(a)
9.4.4	Veterinary and other services for pets	Previously 9.3.5 (Pet services including veterinary)	(a)
9.4.5	Sports participation	Previously 9.3.3	(a)
9.4.6	Other recreational, sporting and cultural services	Previously 9.3.6 (Other recreational activities)	(a)
10	EDUCATION	No change	
10.1	Education	No change	
10.1		No change	
10.1.1	1 2	No change	
10.1.2		No change	
		···	
11	INSURANCE AND FINANCIAL SERVICES	Previously Financial and insurance services	(a)
11.1	Insurance	Previously 11.2 (Insurance services)	(a)
11.1.1		Previously 11.2.1 (Insurance services)	(a)
11.2	Financial services	New, combination of part 11.1.1 (Deposit and loan facilities)	(d)
		and 11.1.2 (Other financial services)	
11.2.1	Deposit and loan facilities (direct charges)	New, part 11.1.1 (Deposit and loan facilities)	(d)
11.2.2	Other financial services	Previously 11.1.2	(a)
Footno	-AS		

Footnotes

(a) Series continuing, name change and/or move of series in the classification order. Same base of index as previously.

(b) Series continuing, minor compositional change.

(c) New series, backcast with components from 15th series. Base of index: 1989-90 = 100.0.

(d) New series, base of index: June quarter 2011 = 100.0 as no backcast data available.

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APPENDIX 2: 16TH SERIES CPI, AVERAGE WEEKLY EXPENDITURE AND WEIGHTS

16th SERIES CPI, AVERAGE WEEKLY EXPENDITURE AND WEIGHTS, JUNE QUARTER 2011, WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES (a)

Group	Average we			Percent	tage contrib	oution to	
Group	0	ed average	0	the All groups CPI in June			
Sub-group	capital ci	ities in June	-		quart	er 2011	
Expenditure class			2011		•		
			\$			%	
FOOD AND NON-ALCOHOLIC BEVERAGES	230 87			16 84			
Bread and cereal products	200101	23.41		10101	1.71		
Bread			7.95			0.58	
Cakes and biscuits			10.17			0.74	
Breakfast cereals			2.41			0.18	
Other cereal products			2.88			0.21	
Meat and seafoods		31.43			2.29		
Beef and veal			5.35			0.39	
Pork			4.98			0.36	
Lamb and goat			3.55			0.26	
Poultry			6.77			0.49	
Other meats			5.22			0.38	
Fish and other seafood			5.57			0.41	
Dairy and related products		15.72			1.15		
Milk			5.81			0.42	
Cheese			4.63			0.34	
Ice cream and other dairy products			5.29			0.39	
Fruit and vegetables		40.39			2.95		
Fruit			21.97			1.60	
Vegetables			18.42			1.34	
Other food		29.77			2.17		
Eggs			1.48			0.11	
Jams, honey and spreads			1.98			0.14	
Food additives and condiments			4.18			0.30	
Oils and fats			2.38			0.17	
Snacks and confectionery			13.34			0.97	
Other food products n.e.c.			6.42			0.47	
Non–alcoholic beverages		15.63			1.14		
Coffee, tea and cocoa			3.76			0.27	
Waters, soft drinks and juices			11.87			0.87	
Meals out and take away foods		74.51			5.43		
Restaurant meals			38.55			2.81	
Take away and fast foods			35.97			2.62	
ALCOHOL AND TOBACCO	96.87			7.06			
Alcoholic beverages	90.07	65.11		7.00	4.75		
Spirits		05.11	12.44		4.75	0.91	
Wine			22.44			1.64	
Beer			30.19			2.20	
Tobacco		31.77	30.19		2.32	2.20	
Tobacco		31.77	31.77		2.32	2.32	
CLOTHING AND FOOTWEAR	54.58			3.98			
Garments		34.52			2.52		
Garments for men			10.21			0.74	
Garments for women			20.09			1.47	
Garments for infants and children			4.21			0.31	
Footwear		8.32			0.61		
Footwear for men			1.93			0.14	
Footwear for women			4.67			0.34	
Footwear for infants and children			1.72			0.13	
Accessories and clothing services		11.74			0.86		
Accessories			10.11			0.74	
Cleaning, repair and hire of clothing and							
footwear			1.63			0.12	

Footnotes

(a) Any discrepancies between totals and sums of components in this Appendix are due to rounding.

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16th SERIES CPI, AVERAGE WEEKLY EXPENDITURE AND WEIGHTS, JUNE QUARTER 2011, WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES (a) *continued*

Group Sub–group Expenditure class	Sub-groupcapital cities in June quarterExpenditure class2011			ht Percentage contributer the All groups CPI ter quarter		
	005 75		\$			%
HOUSING Rents	305.75	92.01		22.30	6.71	
Rents			92.01			6.71
New dwelling purchase by owner-occupiers		118.8			8.67	
New dwelling purchase by owner–occupiers		45.43	118.86		3.31	8.67
Other housing Maintenance and repair of the dwelling		45.45	28.10		3.31	2.05
Property rates and charges			17.33			1.26
Utilities		49.45			3.61	
Water and sewerage			12.31			0.90
Electricity Gas and other household fuels			27.31 9.83			1.99 0.72
			3.00			0.72
FURNISHINGS, HOUSEHOLD EQUIPMENT AND						
SERVICES Furniture and furnishings	124.79	26.23		9.10	1.91	
Furniture		20.25	22.42		1.51	1.63
Carpets and other floor coverings			3.81			0.28
Household textiles		8.42			0.61	
Household textiles		40.57	8.42		4.40	0.61
Household appliances, utensils and tools Major household appliances		19.57	6.85		1.43	0.50
Small electric household appliances			3.25			0.24
Glassware, tableware and household						
utensils			5.87			0.43
Tools and equipment for house and garden		20.49	3.60		2.96	0.26
Non–durable household goods Cleaning and maintenance products		39.18	3.98		2.86	0.29
Personal care products			15.15			1.11
Other non-durable household products			20.04			1.46
Domestic and household services		31.39	a		2.29	
Child care Hairdressing and personal grooming			9.47			0.69
services			12.39			0.90
Other household services			9.52			0.69
HEALTH Medical products, appliances and equipment	72.56	18.08		5.29	1.32	
Pharmaceutical products		10.00	16.09		1.52	1.17
Therapeutic appliances and equipment			1.99			0.14
Medical, dental and hospital services		54.47			3.97	
Medical and hospital services			46.85			3.42
Dental services			7.62			0.56
TRANSPORT	158.39			11.55		
Private motoring		148.25	44 50		10.81	o o -
Motor vehicles Spare parts and accessories for motor			44.56			3.25
vehicles			13.61			0.99
Automotive fuel			48.67			3.55
Maintenance and repair of motor vehicles			22.90			1.67
Other services in respect of motor vehicles		10 4 4	18.52		0.74	1.35
Urban transport fares Urban transport fares		10.14	10.14		0.74	0.74
COMMUNICATION	41.81			3.05		
Communication Postal services		41.81	1.69		3.05	0.12
Telecommunication equipment and services			40.12			2.93

Footnotes

(a) Any discrepancies between totals and sums of components in this Appendix are due to rounding.

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APPENDIX 2: 16TH SERIES CPI, AVERAGE WEEKLY EXPENDITURE AND WEIGHTS

16th SERIES CPI, AVERAGE WEEKLY EXPENDITURE AND WEIGHTS, JUNE QUARTER 2011, WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES (a) *continued*

Group Sub-group Expenditure class	the Weig	veekly exper hted averag cities in Jur	e of eight		ntage contril II groups CP quar	
			\$			%
RECREATION AND CULTURE	172.30			12.56		
Audio, visual and computing equipment and						
services		34.76	04.00		2.53	4 = 0
Audio, visual and computing equipment Audio, visual and computing media and			21.33			1.56
services			13.43			0.98
Newspapers, books and stationery		14.75			1.08	
Books			5.42			0.40
Newspapers, magazines and stationery			9.33		4 70	0.68
Holiday travel and accommodation		65.26	33.83		4.76	2.47
Domestic holiday travel and accommodation International holiday travel and			33.03			2.47
accommodation			31.42			2.29
Other recreation, sport and culture		57.54	51.42		4.20	2.25
Equipment for sports, camping and open-air		07.04			4.20	
recreation			8.34			0.61
Games, toys and hobbies			10.73			0.78
Pets and related products			5.17			0.38
Veterinary and other services for pets			5.47			0.40
Sports participation			12.89			0.94
Other recreational, sporting and cultural						
services			14.94			1.09
EDUCATION	43.67			3.18		
Education		43.67			3.18	
Preschool and primary education			7.18			0.52
Secondary education			17.24			1.26
Tertiary education			19.25			1.40
INSURANCE AND FINANCIAL SERVICES	69.71			5.08		
Insurance		19.25			1.40	
Insurance			19.25			1.40
Financial services		50.46			3.68	_
Deposit and loan facilities (direct charges)			10.37			0.76
Other financial services			40.09			2.92
ALL GROUPS	1371.30	1371.30	1371.30	100.0	100.0	100.0

Footnotes

(a) Any discrepancies between totals and sums of components in this Appendix are due to rounding.

APPENDIX 3: COMPARISON OF THE 15TH AND 16TH SERIES WEIGHTING PATTERN

COMPARISON BETWEEN THE 15th AND 16th SERIES CPI WEIGHTS, WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES (a)

		15th ser	ies		161	h series
Group		contribution to t		Percentage co		
Sub–group	All groups C	PI in June quar	ter	All groups CP	l in June	quarter
Expenditure class		-	05	, 8. cape ei		2011
		20	%			2011 %
FOOD AND NON–ALCOHOLIC BEVERAGES Bread and cereal products	15.44	1.72		16.84	1.71	
Bread			.63		1.71	0.58
Cakes and biscuits			.00			0.50
Breakfast cereals			.20			0.18
Other cereal products			.18			0.10
Meat and seafoods		2.42	. 10		2.29	0.21
Beef and veal			.50		2.20	0.39
Pork			.36			0.36
Lamb and goat			.26			0.26
Poultry			.48			0.20
Other meats			.38			0.38
Fish and other seafood			.41			0.30
Dairy and related products		1.19			1.15	0.41
Milk			.55		1.15	0.42
Cheese			.32			0.42
Ice cream and other dairy products			.32			0.34
Fruit and vegetables		2.11	.51		2.95	0.59
Fruit			.95		2.95	1.60
Vegetables			.95 .15			1.34
Other food		2.30	.15		2.17	1.54
			.10		2.17	0.11
Eggs			.10			0.11
Jams, honey and spreads Food additives and condiments			.15 .27			0.14
Oils and fats			. <i>21</i> .19			0.30
			.19			0.17
Snacks and confectionery			.05 .54			0.97
Other food products n.e.c.		1.15	.04		1.14	0.47
Non-alcoholic beverages			.24		1.14	0.27
Coffee, tea and cocoa Waters, soft drinks and juices			.24 .91			0.27
		4.56	.91		5.43	0.07
Meals out and take away foods Restaurant meals			.00		5.45	2.04
Take away and fast foods			.00 .56			2.81 2.62
						2.02
ALCOHOL AND TOBACCO	6.79			7.06		
Alcoholic beverages		4.38			4.75	
Spirits			.87			0.91
Wine		1	.57			1.64
Beer			.93			2.20
Tobacco		2.41			2.32	
Tobacco		2	.41			2.32
CLOTHING AND FOOTWEAR	3.91			3.98		
Garments	0.01	2.56		0.00	2.52	
Garments for men			.75			0.74
Garments for women			.41			1.47
Garments for infants and children			.40			0.31
Footwear		0.64			0.61	0.01
Footwear for men			.18			0.14
Footwear for women			.34			0.34
Footwear for infants and children			.12			0.13
Accessories and clothing services		0.72	· · -		0.86	0.10
Accessories			.56			0.74
Cleaning, repair and hire of clothing and		Ũ				.
footwear		0	.16			0.12
		0				0.12

Footnotes

(a) Any discrepancies between totals and sums of components in this Appendix are due to rounding.

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APPENDIX 3: COMPARISON OF THE 15TH AND 16TH SERIES WEIGHTING PATTERN

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COMPARISON BETWEEN THE 15th AND 16th SERIES CPI WEIGHTS, WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES (a) *continued*

		15tl	h series		16th	series
Group		e contributio			e contributior	
Sub–group	All groups	S CPI in June	quarter	All groups	CPI in June	quarter
Expenditure class			2005 %	0.1		2011 %
HOUSING	19.53			22.30		
Rents		5.22			6.71	
Rents			5.22			6.71
New dwelling purchase by owner-occupiers		7.87	7.87		8.67	8.6
New dwelling purchase by owner–occupiers Other housing		3.34	1.01		3.31	0.0
Maintenance and repair of the dwelling		5.54	2.18		5.51	2.05
Property rates and charges			1.16			1.26
Utilities		3.10			3.61	
Water and sewerage			0.77			0.90
Electricity			1.63			1.99
Gas and other household fuels			0.70			0.72
URNISHINGS, HOUSEHOLD EQUIPMENT AND						
ERVICES	9.61			9.10		
Furniture and furnishings		2.74			1.91	
Furniture			1.96			1.63
Carpets and other floor coverings		0.00	0.78		0.04	0.28
Household textiles Household textiles		0.39	0.39		0.61	0.61
Household appliances, utensils and tools		1.76	0.59		1.43	0.01
Major household appliances		1.70	0.67		1.40	0.50
Small electric household appliances			0.27			0.24
Glassware, tableware and household utensils			0.47			0.43
Tools and equipment for house and garden			0.35			0.26
Non–durable household goods		2.91			2.86	
Cleaning and maintenance products			0.33			0.29
Personal care products			1.18			1.11
Other non-durable household products		4.04	1.40		0.00	1.4
Domestic and household services Child care		1.81	0.45		2.29	0.69
Hairdressing and personal grooming services			0.45			0.09
Other household services			0.60			0.69
IEALTH	4.70			5.29		
Medical products, appliances and equipment		1.26			1.32	
Pharmaceutical products			1.14			1.17
Therapeutic appliances and equipment			0.12			0.14
Medical, dental and hospital services		3.44	0 77		3.97	0.40
Medical and hospital services Dental services			2.77 0.67			3.42 0.56
Dental services						
RANSPORT	13.11			11.55		
Private motoring		12.38			10.81	
Motor vehicles			4.90			3.25
Spare parts and accessories for motor			0.00			0.00
vehicles Automotive fuel			0.68 3.78			0.99
Maintenance and repair of motor vehicles			3.78 1.99			3.55 1.67
Other services in respect of motor vehicles			1.99			1.35
Urban transport fares		0.73	1.02		0.74	1.00
Urban transport fares			0.73			0.74
OMMUNICATION	3.31			3.05		
Communication		3.31			3.05	
Postal services			0.11			0.12
Telecommunication equipment and services			3.20			2.93

Footnotes

(a) Any discrepancies between totals and sums of components in this Appendix are due to rounding.

APPENDIX 3: COMPARISON OF THE 15TH AND 16TH SERIES WEIGHTING PATTERN

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COMPARISON BETWEEN THE 15th AND 16th SERIES CPI WEIGHTS, WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES (a) *continued*

	15th series		16th series		6th series	
Group	Percentage contribution to the All groups CPI in June quarter			Percentage contribution to the All groups CPI in June quarter		
Sub–group						
Expenditure class	υ.		2005	0.		. 2011
			%			%
RECREATION AND CULTURE	11.55			12.56		
Audio, visual and computing equipment and						
services		2.92			2.53	
Audio, visual and computing equipment Audio, visual and computing media and			1.53			1.56
services			1.38			0.98
Newspapers, books and stationery		0.85			1.08	0.00
Books			0.44			0.40
Newspapers, magazines and stationery			0.41			0.68
Holiday travel and accommodation		4.06			4.76	
Domestic holiday travel and accommodation International holiday travel and			2.27			2.47
accommodation			1.79			2.29
Other recreation, sport and culture Equipment for sports, camping and open-air		3.72			4.20	
recreation			0.55			0.61
Games, toys and hobbies			0.51			0.78
Pets and related products			0.40			0.38
Veterinary and other services for pets			0.44			0.40
Sports participation			0.73			0.94
Other recreational, sporting and cultural						
services			1.09			1.09
EDUCATION	2.73	0 70		3.18		
Education		2.73	0.50		3.18	0.50
Preschool and primary education			0.53 0.94			0.52 1.26
Secondary education Tertiary education			1.26			1.20
,						
INSURANCE AND FINANCIAL SERVICES	9.31	. = 0		5.08		
Insurance		1.50	4 50		1.40	4 40
Insurance Financial convisco		7.81	1.50		2 60	1.40
Financial services Deposit and loan facilities (direct charges) (b)		1.01	4.47		3.68	0.76
Other financial services			3.34			2.92
ALL GROUPS	100.00	100.00	100.00	100.00	100.00	100.00

Footnotes

(a) Any discrepancies between totals and sums of components in this Appendix are due to rounding.

(b) 15th series CPI also includes indirect charges.

Introduction

1 The purpose of this appendix is to outline the changes to be implemented in the measurement of financial services as part of the 16th series Australian Consumer Price Index (CPI). The appendix also discusses research directions and future developments in the measurement of financial services.

2 The decision to introduce a price index for financial services into the Australian CPI was an outcome of the 13th series review of the Australian CPI conducted in 1997. Consistent with the objective of the CPI as a measure of price inflation for the household sector as a whole, it was agreed the CPI should cover all those services acquired by households in relation to the acquisition, holding and disposal of financial and real assets. The index should measure the price change for some of the most significant financial services acquired by households — deposit and loan facilities provided by financial institutions and services associated with the acquisition and disposal of real estate and equities (shares).

3 Financial services were introduced into the 15th series Australian CPI in the September quarter 2005 issue following developmental work described in the *Information Paper: Experimental Price Indexes for Financial Services, 1998 to 2003* (cat. no. 6413.0), which was released in July 2004. The experimental series was published quarterly in *Experimental Price Indexes for Financial Services* (cat. no. 6413.0.55.001) up until June quarter 2005.

4 The ABS is the only national statistical agency that has constructed such a comprehensive measure of price change for financial services. Financial services price indexes were published for two components: 'Deposit and loan facilities' and 'Other financial services'.

- 'Deposit and loan facilities' included indirect charges recouped by intermediaries (prices derived from interest rate margins) and direct charges levied for services including withdrawals, maintenance of accounts and arranging loans.
- 'Other financial services' were restricted to services provided by stockbrokers and real estate agents, legal and conveyancing fees and taxes levied on relevant transactions.

5 Volatility in the Deposit and loans facilities index during the Global Financial Crisis (GFC) prompted concerns from users about the quality, interpretability and transparency of the index. There was strong stakeholder support for a detailed reassessment of the Deposit and loan facilities index. These concerns led to significant analysis of the indirect charges component of the Deposit and loans facilities in close consultation with end users and data providers as part of the 16th series review of the Australian CPI. The review endorsed the original 1997 decision that conceptually both direct and indirect charges for Deposit and loan facilities should be included in the CPI. However, the GFC has demonstrated that the internationally recognised methodology employed by the ABS to calculate the indirect charges component of the CPI was not sufficiently robust to produce an acceptable estimate of price change under all economic circumstances. It also became apparent that, if the index is to deliver accurate results in all economic conditions, very detailed and accurate data are required from reporting financial institutions. To avoid the risk that the inclusion of a less than robust component would undermine public confidence in the CPI as a whole the decision was made to remove the indirectly measured component of the Deposit and loan facilities index and loan facilities index from the headline CPI from the commencement of the 16th series CPI in the September quarter 2011, until the measurement shortcomings can be fully remedied.

6 Further information is contained in *Information Paper: Outcome of the 16th Series Australian Consumer Price Index Review, Australia, December 2010*(cat. no. 6469.0).

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Deposit and loan facilities in the CPI

Background

7 The Deposit and loan facilities index in the 15th series CPI measured changes in the price of banking services provided to households. Households pay for these banking services in two ways, directly and indirectly. Charges are paid for items including regular monthly fees, transaction fees such as automated teller machine (ATM) access fees, and the arrangement or cessation of products such as loans. These are termed direct charges. Banks also earn income by lending funds at a higher rate of interest than they pay on deposits. The difference can be described as 'interest rate margins' which are termed indirect charges. These are referred to in economic accounts and statistical literature as financial intermediation services indirectly measured (FISIM).

8 The ABS believes that conceptually both indirect charges and direct charges should be included in the headline CPI as they are real payments for services consumed by households. Financial institutions often substitute between direct and indirect forms of charging. Therefore a comprehensive measure of price change for deposit and loan facilities should include both the direct and indirect components. This conceptual view was widely supported by users in submissions and consultations as part of the 16th series review of the Australian CPI undertaken in 2010. Nonetheless there were key concerns around the predictability, interpretability, data quality and lack of international methodological consensus of the indirect fee measure (such as the treatment of default risk and term risk). The financial market volatility of the GFC, characterised by sudden movements in market and policy interest rates, heightened these concerns to the point that the quality of this component of the measure of financial services in the CPI was brought into question.

9 Following extensive stakeholder consultation the ABS has decided that the measurement of financial services in the CPI will change in the 16th series CPI, commencing from the September quarter 2011. The changes are as follows:

- the indirectly measured component of the Deposit and loan facilities index will be removed from the headline CPI; and
- the Deposit and loan facilities index will comprise direct fees and charges only and will be renamed 'Deposit and loan facilities (direct charges)';

10 The 16th series CPI expenditure class 'Deposit and loan facilities (direct charges)' will begin with an index reference period of June quarter 2011 = 100.0 and measure the change in prices of direct charges only. Whilst the deposit and loan methodology is not considered sufficiently robust to include in the headline All groups CPI, the ABS will continue to publish a separate quarterly analytical series 'All groups CPI including Deposit and loan facilities (indirect charges)', from the commencement of the 16th series CPI. This is designed to provide some insight into the impact of indirect financial services changes on inflation.

Direct charges - Index reference period expenditure weights

11 Along with the decision to publish 'Deposit and loan facilities (direct charges)', the ABS reviewed the methodologies for calculating the expenditure weight and price movements for this direct charge component. Expenditure on financial services could not be determined from the ABS Household Expenditure Survey (HES) as it was either not directly observed or the HES did not capture the transactions in sufficient volumes or detail.

12 As such, expenditure on Deposit and loan facilities (direct charges) in the 16th series CPI is determined through the use of administrative data sets (obtained from financial institutions and government reporting agencies) of financial institution fees and charges for Australian households. The capital city level estimates are imputed by reference to data from the HES and revalued to the index reference period (June quarter 2011).

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Direct charges – Price change

13 The pricing schedules that determine the amounts payable as explicit fees are generally not linear in nature and tend to incorporate some form of step function. In other words, rather than setting a single price per transaction, it is often the case that fees for certain types of transactions are only incurred after some threshold is breached (e.g. after say four transactions in a month or when account balances fall below some level). Furthermore, financial institutions often bundle products together, with the price paid for particular banking products (such as home loans, credit cards and transaction accounts) depending on the bundling arrangements.

14 To measure the price change faced by households in the 15th series CPI, the ABS selected a sample of customer accounts which represented consumer behaviour and applied the fee schedule for the relevant banking products in the period. However, it has not been possible to update the sample of customer accounts as frequently as new products are introduced, leading to the sample becoming out of date.

15 To ensure the measurement of fees is relevant, the ABS is changing the measurement of price change as part of the 16th series CPI. The measurement of fees and charges is changing from the sample of customer accounts approach to a direct collection of a sample of fees and charges on banking products and services from financial institutions. The exception is establishment fees on home loans, which continue to be calculated from the average establishment fee charged on new accounts each month.

16 The fee collection includes charges for ATM transactions, annual fees, foreign currency conversion fees, account keeping fees, exception fees, loan servicing fees, package fees and others. Each month the price, terms and conditions for each banking product are observed. The sampled fees are grouped by type of product or service (eg. credit cards, housing loans) and an appropriate weight is applied to ensure representative derivation of price change for each product group. The product groups are then aggregated to provide a measure of average price change representing all direct fees and charges levied on consumers for banking products and services. In the case of fees levied as a percentage of a value, such as foreign currency conversion fees, the percentage fee is applied to a sample of dollar values representing real average transactions. To preserve the quantities underpinning the values of the account transactions in the index reference period, the transactions used to derive the dollar values of the fees are indexed each period using a four–quarter moving average of the All groups CPI. This is consistent with the fixed basket approach to the CPI.

17 The sample of fees and charges are updated annually to reflect any changes in consumer behaviour and financial institution fee regimes. The direct collection of fees and charges on a sample of popular banking products and services is consistent with methods employed by other national statistical organisations.

18 For each selected institution, the individual fees are combined using a Ratio of Average Prices (RAP) within a product type. Expenditure data described in the section above is then used to aggregate up to the published level. See chapter 4 in *Consumer Price Index: Concepts, Sources and Methods, 2009* (cat. no. 6461.0) for more information on calculation methods.

Indirect charges - Index reference period expenditure weights

19 The expenditure weight for Deposit and loan facilities (indirect charges), which is included in the analytical series, 'All groups CPI including Deposit and loan facilities (indirect charges)' is estimated from the dollar margins on each product provided by financial institutions. Information on calculating reference rates, product yields and dollar margins is included below in the section on measuring price change.

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20 For all those products identified as being consumer products (as distinct from those used by businesses), the total receipts from households are combined to derive the total household margin by institution. These margins for each sampled institution are then applied to aggregate balances for all deposit taking institutions (sourced from APRA) to derive a national estimate. The capital city level estimates are imputed by reference to data from the HES and revalued to the index reference period (June quarter 2011).

Indirect charges - Price change

21 The methodology to calculate the indirect banking service charge in the analytical series 'All groups CPI including Deposit and loan facilities (indirect charges)' is broadly consistent with the approach used in the 15th series CPI. Improvements in the price calculation process for the 16th series CPI include sourcing a comprehensive dataset of consumer banking products from selected financial institutions and increasing product level detail. Annual re-weighting of banking products is introduced to ensure the relevance of the sample is maintained. The following sections describe these improvements in further detail.

22 The ABS obtains average monthly balances and interest flows data from selected financial institutions for each of their consumer products to calculate the indirect banking service charge. A separate reference rate of interest is calculated for each institution as the mid–point of weighted average borrowing and lending rates. The reference rate represents a 'service free rate' and is used as a means of partitioning the value of the financial intermediation service between borrowers and lenders. It is important to recognise that this mid–point reference rate is not intended to approximate a financial institution's cost of funds.

23 For each institution, the sampled consumer banking products are assigned to major product categories. The product yield for each product is determined by dividing the annualised interest by the average product balance. The interest margin for consumer products is calculated from the difference between the product yield and the reference rate. For deposit accounts the interest margin is the reference rate less the product yield, for loan accounts it is the product yield less the reference rate.

24 Because percentages (such as margin rates) are not prices, the latest period margin rates are applied to some monetary amount in order to compute the current period prices (the dollar value of the margins). Index reference period balances on the sample of products are used for this purpose to derive the dollar value of the margins. To preserve the quantities underpinning the values of the account balances in the index reference period, the balances used to derive the dollar values of the margins are indexed each quarter using a four–quarter moving average of the All groups CPI. This is consistent with the fixed basket approach to the CPI.

25 The indirect component of the Deposit and loan facilities index is calculated by aggregating the dollar margins from the individual products and product groups, giving a weighted total margin paid for both deposit and loans. The price index is constructed by comparing the change over time in these total margins. It is important to note that prices on any single product are affected by changes in both the yield on that product, and the institution specific reference rate. Disaggregation of the balances (stocks) and interest (flows) to the individual product level improves the accuracy of the product categorisation and the robustness of the final aggregation of the index.

26 To minimise the effect of any short–term accounting anomalies, such as posting effects and adjustments of various types, the ABS constructs three–month moving averages of the monthly balances and interest flows and derives the required product yields, reference rates and margin rates from the smoothed data. In addition, data is provided by the sampled financial institutions on a one month lag basis.

Developments in the measurement of Deposit and Ioan facilities (indirect charges)

27 A major focus of the 16th series review of the Australian CPI was a research effort into issues surrounding the measurement of the indirect charges component of the Deposit and Ioan facilities index in the 15th series CPI. The review recommended the Deposit and Ioan facilities index comprising direct and indirect charges be re–introduced into the headline CPI when the ABS is satisfied that the methodology and data are sufficiently robust to produce reliable estimates, regardless of prevailing economic conditions. The ABS aims to reintroduce the FISIM (indirect charges) series within the CPI in time for the introduction of the 17th series CPI. This section outlines the work underway to achieve this.

28 The ABS approached the investigation from a 'whole of economic statistics' perspective within the framework of the 2008 System of National Accounts. The ABS was not alone among national statistical organisations in confronting issues on the measurement of price and volume for FISIM in economic statistics during times of heightened financial market volatility such as the GFC. The international statistical community has focused efforts on arriving at a consensus on the conceptual scope of a financial intermediation service, and the best methodological practice for measuring price and volume components.

29 Movements in the indirect charges were found to be highly sensitive to the level of detail in the data available and the ABS is working closely with financial institutions to ensure comprehensive coverage and a suitable level of disaggregation of the individual banking products. The improved quality of the data allows the average monthly balances and interest flows of products to be reviewed and disaggregated into lower level product categories – for example deposit products split out into term deposits, at–call savings, retirement accounts and current transaction accounts. Regular consultations have taken place to maintain the quality, detail and consistency of the data.

30 Research has also validated the pragmatic ABS approach to constructing a reference rate as the average of aggregated deposit and loan yields, as opposed to using an exogenous inter–bank lending rate (as recommended in the 2008 SNA) – such as the 90 day bank bill swap rate. The use of an internal mid–point reference rate insulated the deposit and loan facilities indirect charges index in part from some of the sudden movements in policy and market rates that characterised the global financial crisis. In the absence of an international consensus on the best approach to the determination of a reference rate, the ABS is continuing with the pragmatic choice of a mid–point reference rate methodology – as the average of aggregated deposit and loan yields.

31 For the analytical series 'All groups CPI including Deposit and loan facilities (indirect charges)', the ABS is annually reweighting the dollar margins on products to maintain the relevance of the weighting structure at the lower levels of the index. Annual reweighting reduces the volatility of the series by mitigating the impact of large price changes on products that approach the reference rate. Regular reweighting also ensures the relevance is maintained by capturing changing consumer preferences and the introduction of new product groups such as online savings accounts.

32 As indirect charges are not directly observable, the methodology and results are not always well understood by users and often difficult to predict. For this reason, the ABS is committing to improving the transparency and predictability of the index, and is assessing the feasibility of releasing lower level weighting information and a description of the results for the major product groups.

33 The practical improvements to the deposit and loan facilities indirect charges index highlighted above are expected to improve the reliability of the index and reduce its volatility. Nonetheless some of the fundamental issues identified in the major 16th series review of the Australian CPI as sources of high volatility in the index will remain unresolved and are the subject of debate in the international statistical community. The key issues remain;

- The pragmatic choice of a mid-point reference rate methodology provides a practical allocation of household expenditure on deposit and loan services. However, this does not align with the asymmetry in the Australian domestic banking market where approximately half of financial institutions' loans are funded by domestic deposits and the remainder by wholesale borrowings. If yield increases on loan products are attributed to increases in these wholesale funding costs, which are not captured by the ABS reference rate model, a price increase in the indirect charges will be inappropriately reported. For these reasons, the ABS is exploring alternative reference rate choices in the context of international discussion on best practice.
- Term risk with fixed rate products is a complex area to measure and is the cause of a significant proportion of the excessive volatility in the index, especially when the product yield is close to or crosses the reference rate. Indexes calculated for these products are highly volatile in times of interest rate changes. In Australia, variable rate products influence movements in the reference rate. Effective yields on fixed rate products move much more slowly than the reference rate. As the interest rate margin is calculated from the difference between the product yield and the reference rate, this induces a high level of price volatility on fixed rate products.

34 The ABS will remain involved in international statistical debates on the resolution of these issues in the context of FISIM throughout economic accounts and statistics. Dealing with the volatility of fixed rate products and the cost of funds faced by banks, would involve a major change to the current methodology, and by extension, the source data needed to implement the revised methodology. As such it would be premature for the ABS reach a conclusion prior to consensus in the international statistical community.

35 The ABS will continue to be actively involved in this debate, primarily through the Intersecretariat Working Group on National Accounts (ISWGNA), where a task force was formed to clarify and investigate the measurement of FISIM in late 2010. The terms of reference for this task force centre on;

- 1. How the composition of the services that FISIM covers particularly risk management and liquidity transformation affects the selection of the reference rate and the price and volume breakdown of FISIM,
- 2. The financial instrument and unit scope of FISIM, and
- 3. The connection between the recommendations on implementation of FISIM and the definition of income. (UN Statistics Division, 2010)

36 The resolution of the conceptual and methodological debate on term risk would result in a robust measurement of the observed price movement of fixed rate products. There have been research efforts by statistical agencies, academics and international organisations into these difficulties, for example Schreyer (2009) and Diewert (2011) noted that the measurement of banking sector outputs and inputs raises many significant methodological problems. As well as stability and predictability, different assumptions lead to a lack of comparability between economies.

37 Although the work of this task force is ongoing, progress is being made on the conceptual and methodological issues and the ABS is actively contributing to resolving the issues identified. The ABS will continue to work with the international statistical community and data providers to resolve outstanding issues and reach a solution consistent across the range of macro–economic statistics, which includes calculation of price change in indirect charges (FISIM).

Other financial services in the CPI

Background

38 The Other financial services index was introduced into the 15th series CPI in 2005. Other financial services covers the cost of those services acquired by households in selling or buying major assets such as real estate and equities (shares) and any government charges on property transfers. Other financial services in the 15th series CPI consisted of four components; taxes on property transfers (stamp duty), stockbroking services, legal and conveyancing services, and real estate agent services.

39 The scope and structure of Other financial services in the 16th series CPI remains unchanged from the 15th series CPI. The inclusion of superannuation and life insurance service charges are being considered. Further research on this measure is required and will therefore continue to be excluded in the 16th series CPI.

Other financial services - Index reference period expenditure weights

40 The index reference period expenditure weights for the Other financial services components are sourced from administrative datasets.

41 The expenditure weight for the taxes on property transfers (stamp duty) measure is derived from the publication *Taxation Revenue, Australia 2009–10* (cat. no. 5506.0). This annual publication contains statistics of taxation revenue collected by all levels of government in Australia, and is the same data source as used to derive the expenditure weight in the 15th series CPI. The expenditure weight for stockbroking services is obtained from the same data source as used in the 15th series CPI, the National Accounts Household Final Consumption Expenditure (HFCE) on stockbroking services by state for 2009–10 in current dollars. The expenditure weight for legal and conveyancing services is derived from the National Accounts ownership transfer costs. This represents a change from the 15th series CPI which used ABS income data from *Legal Practices, Australia, 2001–02* (cat. no. 8667.0).

42 Expenditure weights for real estate agent services in the 16th series CPI are derived from a calculation using property transaction data over the period 2009–10 and ABS survey data on house sales and modelled real estate agent commissions. This is a departure from the 15th series CPI where data on property sales commissions on residential properties from *Real Estate Services, Australia, 2002–03* (cat. no. 8663.0) was used. The survey on Real estate services has not been run since 2002–03.

Other financial services - Price change

43 Data used in the pricing of Other financial services are collected from a range of providers and administrative datasets described in *Consumer Price Index: Concepts, Sources and Methods, 2009* (cat. no. 6461.0).

44 The measurement of real estate agent commission fees is not directly observed each period as the service provided varies from property to property and agents typically quote their fees as some percentage of the sale price of the property. In common with other items, where charges are determined as a 'margin', this needs to be converted to a 'dollar' price. If the percentage margin is known, the agents' price for any given transaction is computed by multiplying the sale price of the property by the percentage margin. The ABS conducts a quarterly survey of real estate agents in each capital city. For each transaction, the agent reports the sale price of the property and the total dollar amount of commission charged by the agent. The ABS uses ordinary least squares regression techniques to estimate a relationship between property values and commission rates.

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45 The functional form used to fit the survey data and estimate this relationship is updated for the 16th series CPI to include location of a property sale as an explanatory variable. The sample of property sale transactions is updated biannually, and from the 16th series CPI includes residential units as well as detached houses. The index reference period sample prices are indexed using a four term moving average of the CPI to keep the quantity of service fixed. For the CPI, the quantity refers to a transaction value of investing in real estate and is measured in terms of forgone consumption.

Previous functional form used in the 15th series CPI modelled the commission rate as a function of the inverse of the sale price of a house only;

$$Commission_{t} = \beta_{0} + \frac{\beta_{1}}{sale_price_{t}} + \frac{\beta_{2}}{(sale_price_{t})^{2}}$$

The refined functional form used in the 16th series CPI includes a location specific variable to account for different geographical areas affecting commission rates;

$$Commission_{t} = \sum_{i=1}^{N} d_{i}\beta_{0i} + \frac{\beta_{1}}{sale_price_{t}}$$

where;

Commission	is the commission rate	
sale_price	is the sale price of the property	
β_0	is a constant	
eta_{0_i}	is a constant for each location area (i = 1,2,3,)	
β_1 and β_2	are slope parameters to be estimated	
d_i	represents each location area (i = 1,2,3,)	
t	is the time period (quarter)	

46 The calculation of price change for the other components of Other financial services is unchanged in the 16th series CPI. Stockbroking fees and legal and conveyancing fees are currently not priced directly but are imputed by the movement in Real estate fees, though development of a price index for each component is in the future CPI work program.

Superannuation and life insurance services

47 Financial services provided in relation to superannuation and life insurance products are within the conceptual scope of a Consumer Price Index produced on an acquisitions basis. In accordance with the outcome of the 16th series review of the Australian CPI in December 2010, the ABS is researching the development of a superannuation and life insurance services index. Methodologies and data sources are being investigated for both the expenditure weight and price measurement of Superannuation and life insurance services in the CPI.

48 The complexity of the charging arrangements for services provided by life insurance offices and superannuation funds, and the industry itself, makes it difficult to create a robust and representative price measure. Superannuation contributions and life insurance premiums have three components: a savings component for the insurance/superannuation itself, an explicit service charge payable to the enterprise for arranging the insurance/superannuation and an implicit service charge payable to the enterprise for arranging the insurance/superannuation. The implicit service charge payable for facilitating life insurance and superannuation is an integral part of the gross premium and contribution, but in practice is difficult to separate and measure.

49 The ABS aims to introduce the superannuation and life insurance price series initially as an experimental series to allow examination of the behaviour and effect of the series on the headline CPI. The ABS would need to be satisfied that the methodology and data are sufficiently robust to produce high quality estimates over a sufficiently long time series and different economic conditions. The ABS will consult widely with key stakeholders and users of the CPI before reaching any such decision. The development of price indexes for superannuation and life insurance indexes will be assessed in the context of the overall CPI forward work program.

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POST Client Services, ABS, GPO Box 796, Sydney NSW 2001

FAX 1300 135 211

EMAIL client.services@abs.gov.au

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