



>> consumer price index



Contents

- >> Welcome
- >> New CPI Weights
- >> Methodological changes esp Housing
- >> Moving to the revamped CPI

New CPI weights

Outline

- >> Why reweighting
- >> New classification
- >> 2000 and 2008 weights compared
- >> Sources to derive the weights
- >> Basket of goods and services

Why reweighting?

- >> International practice is to refresh the CPI weights at least every 5 years
- >> Weights represent the proportions of total consumption expenditure of households
- >> Reweighting ensures that CPI is based on pattern of recent household expenditure
- >> Weights are mainly based on the Income and Expenditure Survey (IES) of 2005/6 released in March 2008

Why reweighting?

>> IES showed that generally South Africans are better off since 2000

% change in mean real per cap income from IES 2000 to IES 2005/6

Income decile	1	2	3	4	5	6	7	8	9	10	Total
% change from IES 2000 to IES 2005/2006	79	41	36	31	29	26	28	25	26	37	33

New Classification

- >> Current CPI classification = International Trade Classification (ITC)
- >> New CPI classification = Classification of Individual Consumption by Purpose (COICOP)
- >> COICOP is international standard
- >> IES also classified according to COICOP
- >> Change in classification does not influence measured inflation

New CPI weights

ITC code	ITC Category	COICOP code	COICOP Category
01 02	Food Non-alcoholic beverages	01	Food and non-alcoholic beverages
03 04	Alcoholic beverages Cigarettes, cigars and tobacco	02	Alcoholic beverages and tobacco
05	Clothing and footwear	03	Clothing and footwear
06 07	Housing Fuel and power	04	Housing and utilities
08 09	Furniture and equipment Household operations	05	Household contents, equipment and maintenance
10	Medical care and health expenses	06	Health
11	Transport	07	Transport
12	Communication	08	Communication
13 14	Recreation and entertainment Reading matter	09	Recreation and culture
15	Education	10	Education
		11	Restaurants and hotels
16 17	Personal care Other	12	Miscellaneous goods and services

>> 2008 weights

COICOP category	Total country	Headline CPI	CPIX
Food and non-alcoholic beverages	18,28	14,98	17,86
Alcoholic beverages and tobacco	5,56	5,62	6,36
Clothing and footwear	4,42	3,89	4,68
Housing and utilities	21,04	23,20	11,79
Household contents, equipment and maintenance	6,14	5,62	6,67
Health	1,48	1,47	1,68
Transport	17,79	19,16	21,42
Communication	3,13	3,21	3,67
Recreation and culture	3,93	4,30	4,77
Education	2,15	2,33	2,49
Restaurants and Hotels	2,78	2,68	3,16
Miscellaneous	13,3	13,54	15,45

>> CPI total country weights: 2000 and 2008

COICOP category	2000 weights	2008 weights
Food and non-alcoholic beverages	26,6	18,28 (20,2 including restaurants)
Alcoholic beverages and tobacco	2,86	5,56
Clothing and footwear	3,87	4,42
Housing and utilities	22,7	21,04
Household contents, equipment and maintenance	7,69	6,14
Health	5,57	1,48
Transport	13,22	17,79
Communication	2,71	3,13
Recreation and culture	3,17	3,93
Education	3,22	2,15
Restaurants and Hotels	n/a	2,78 (0,87 excluding restaurants)
Miscellaneous	8,39	13,3

>> Differences between CPI weights and IES expenditure shares

COICOP category	IES shares	CPI 2008 weights
Food and non-alcoholic beverages	14,43	18,28
Alcoholic beverages and tobacco	1,15	5,56
Clothing and footwear	4,95	4,42
Housing	23,58	21,04
Household contents, equipment and maintenance	6,89	6,14
Health	1,66	1,48
Transport	19,92	17,79
Communication	3,51	3,13
Recreation and culture	4,60	3,93
Education	2,42	2,15
Restaurants and hotels	2,20	2,78
Miscellaneous	14,39	13,3

Under reporting of expenditure items captured by the diary

- >> Previous IES used recall method; Diary and recall used in 2005/06;
- >> Diary is best international practice but experience shows under reporting of diary items because of respondent fatigue
- >> Evidence also points to overestimation of expenditure in recall
- >> No quantification of extent of under reporting
- >> Diary only categories:
 - Food and non-alcoholic beverages;
 - Alcoholic beverages and tobacco;
 - Restaurants; and
 - Personal care

Additional data sources

- >> International good practice is to use additional data sources where expenditure survey under (or over) reports
- >> Adjustments only made to diary-only items
- >> IES results were compared with:
 - Private consumption expenditure of the GDP;
 - Stats SA sectoral surveys (e.g. retail, food & beverages, motor trade)
 - Industry sources
- >> Weights calculated on basis of actual Rand values

Food and non-alcoholic beverages

- >> Used food sales values from Large Sample Survey of Retail
- >> Adjusted for informal sector, time periods and sales to businesses
- >> Distribution of food within IES confirmed by sales data from major supermarket chains

R million	IES Expenditure	CPI Expenditure
Food and non-alcoholic beverages	100 971	143 402

Personal care

- >> No alternative dataset which is properly classified according to COICOP
- >> Assumption that these are purchased in same outlets as food and therefore same extent of under reporting
- >> Therefore adjusted by same proportion as food

R million	IES Expenditure	CPI Expenditure
Personal Care	8 666	12 306

Restaurants

- >> Used sales value from Stats SA's Food and beverages survey - adjusted to exclude business sales

R million	IES Expenditure	CPI Expenditure
Restaurants	9 633	15 007

Alcoholic beverages and tobacco

- >> International experience shows under reporting because of 'embarrassment' factor
- >> Used Excise taxes and volume data from producers

R million	IES Expenditure	CPI Expenditure
Alcoholic beverages and tobacco	8 065	43 597

Final CPI basket

- >> Basket of goods and services based on IES results
- >> September 2007: Draft basket for public discussion – now finalised
- >> Provincial baskets for first time
- >> Two criteria for inclusion:
 - What was total expenditure in group?
 - How widespread were purchases?

Final CPI basket

>> Some new products that will be included:

- Minibus taxi trips
- Restaurant and take away meals
- Hotel accommodation
- Funeral costs and insurance
- Tickets to sporting events
- CDs and DVDs

>> Some current basket products that will not be included:

- Caravans and boats
- Musical instruments
- Laundry services
- VHS recorders and cassettes

Products in baskets

Publication level	Products
Western Cape	392
Eastern Cape	365
Northern Cape	356
Free State	374
KwaZulu-Natal	370
North West	364
Gauteng	370
Mpumalanga	363
Limpopo	356
National	416

Questions

Methodological changes Focus on housing

Methodological improvements

- >> 2005-2006: collection of consumer products in field
- >> Current process reviewed all services in CPI
- >> Aim:
 - Comply with international standards
 - Ensure relevant and accurate data
 - Ensure efficient and practical collection methods
- >> Examples of small methodological changes:
 - University fees
 - Books, CDs, DVDs
- >> Large methodological changes in
 - Health (survey of doctors, dentists and hospitals vs NHRPL)
 - Housing

>> Housing and utilities: sub-categories

COICOP code	COICOP description
04.1	Actual rentals for housing
04.2	Owners' equivalent rent
04.3	Maintenance and repair
04.4	Water and other services
04.5	Electricity and other fuels

Conceptual issues

- >> Owners' equivalent rent = Costs of owner occupiers
= Imputed rental (IES)
- >> Why is owner occupied housing a special case?
 - asset
 - accommodation service
- >> Not linked to any specific payment
- >> Opportunity cost of a rental income
- >> Important because of high weight and variability due to location
- >> Adopted concept draws strongly on international precedent
- >> Revised methods for weights and pricing

Current practice

- >> Interest rates alone
 - Cost of debt, not housing
 - Not a good indicator of changes in cost of housing
 - No local variation
 - Not an accepted international approach

Weights

>> Three questions on housing in IES

1. Monthly mortgage payment

- Of which is interest?
- Of which is capital repayment?

2. How much would you pay to rent your house?

3. What is the value of the dwelling?

>> Questions 1 and 2 – not well answered

>> Average rental yield applied to question 3 gives most reliable results

>> Weight (total country) of housing costs in new basket

Group	Weight
Actual rentals for housing	3,20
Owners equivalent rent	11,25
Maintenance and repair	1,55
Water and other services	2,86
Electricity and other fuels	2,18
Total Housing	21,04

Approaches and data requirements

	Measures	Data required
Acquisitions	Changing cost of houses bought by household sector from other sectors	<ul style="list-style-type: none"> •New house prices •Depreciation •Value of housing stock
User cost	Estimated change in purchase price and sale price accounting for wear and tear etc	<ul style="list-style-type: none"> •House prices •Depreciation •Value of housing stock •Interest rates
Rental equivalence	Values the services yielded by the dwelling by corresponding rental value for same type of dwelling	<ul style="list-style-type: none"> •Rents of equivalent dwellings

>> Approaches employed in other countries

Country	Method
Australia	Acquisitions
Canada	User cost
China	User cost
Germany	Rental equivalence
Japan	Rental equivalence
Mexico	Rental equivalence
Netherlands	Rental equivalence
New Zealand	Acquisitions
Norway	Rental equivalence
Poland	Rental equivalence
Singapore	Rental equivalence
Sweden	User cost
United Kingdom	User cost
United States	Rental equivalence

South African CPI to use rental equivalence

Two criteria for decision

>> Data

- Regularly updated and reliable data for other approaches is not available

>> Composition of stock

- Structure of owner-occupied and rental sectors sufficiently similar
- Houses, townhouses and flats are available for rent and purchase

	Owned	Rented	Total
Percentage of total	77	23	100

Source: Census 2001

Summary of methods

Product group	Old method	New method
Actual rentals	Rode rental survey	Rode rental survey
Owners' equivalent rent	Interest rates on mortgage bonds	Rental equivalence
Maintenance and repair	Construction index (JBCC)	Hardware items
Water and other services	Collect water, sewerage and assessment rates from municipalities	Collect water, sewerage and assessment rates from municipalities
Electricity and other fuels	Collect electricity tariffs from suppliers; solid fuels from retailers	Collect electricity tariffs from suppliers; solid fuels from retailers

Implication for different indices

- >> **CPI:** Owners' equivalent rent replaces interest rates
- >> **CPIX:** No impact
Definition of CPIX will be excluding Owners' equivalent rent
- >> **Core CPI:** No impact
Definition of core CPI will exclude Owners' equivalent rent

Data source for owners' equivalent rent

Stats SA's rental survey

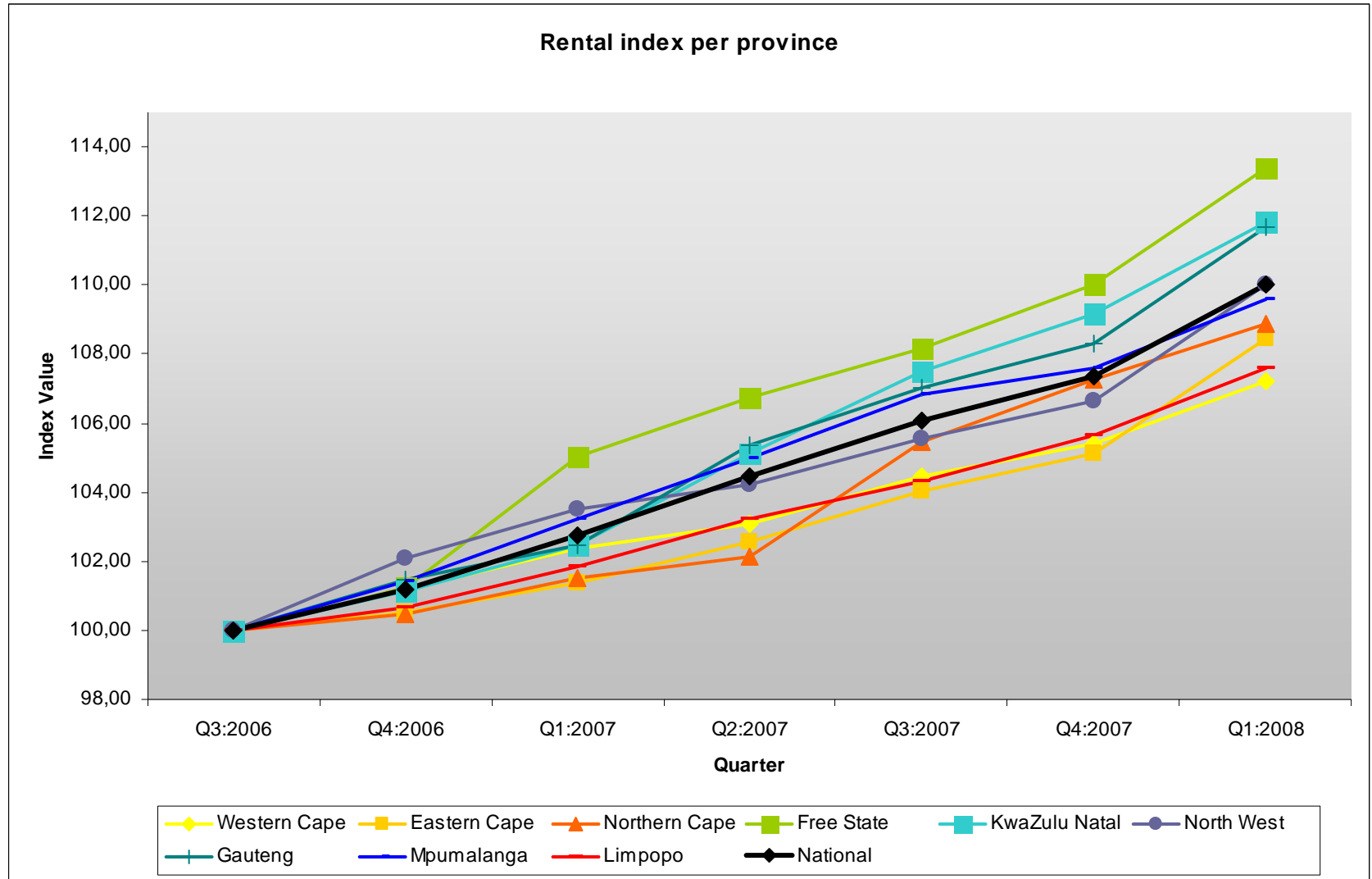
- >> Covers houses, townhouses and flats
- >> Data collected quarterly by fieldworkers
- >> Head office team of four to coordinate and assure quality
- >> Purposive sample of letting agents in all CPI collection areas
- >> Predetermined number of units to select per type geographically distributed
- >> Obtain actual rental of unit each quarter
- >> Percentage change of rental for each specific dwelling between consecutive quarters calculated and then averaged

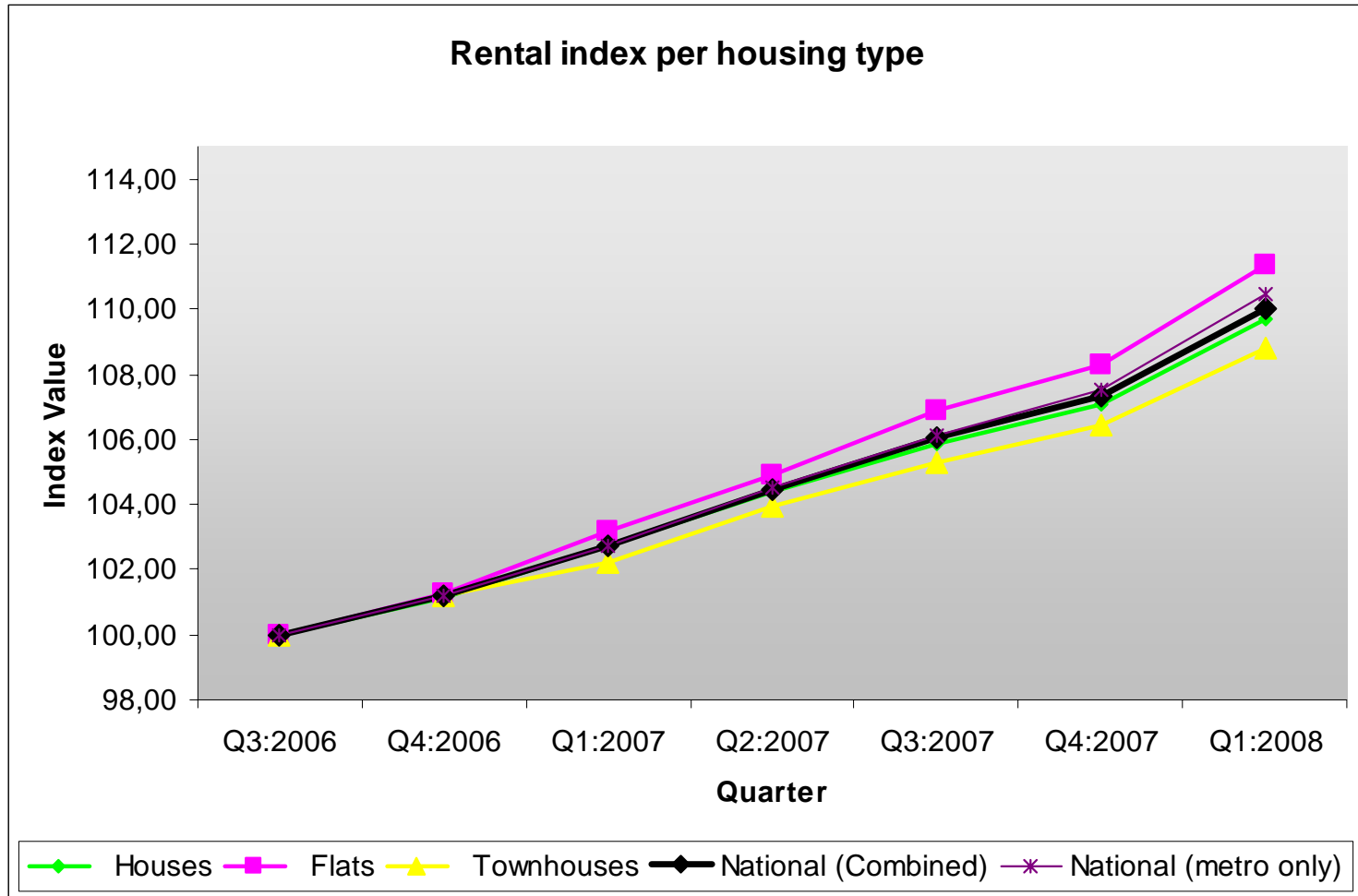
Sample size

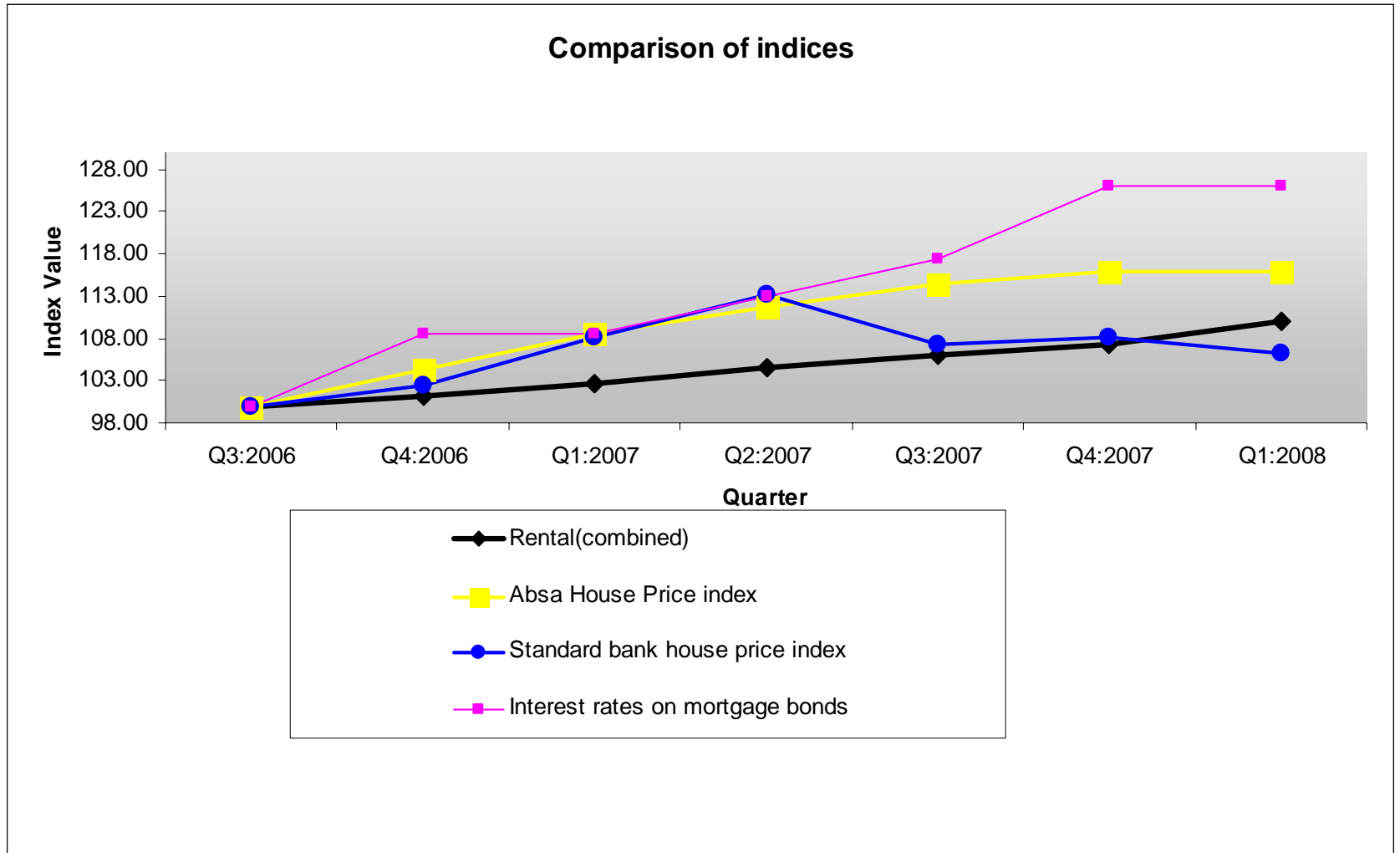
- >> Approximately 4500 units distributed equally between houses, flats and townhouses
- >> To be increased to between 8000 and 10 000
- >> Proportion of houses to be increased

Results

Quarter	Q3:2007/ Q3:2006	Q4:2007/ Q4:2006	Q1:2008/ Q1:2007
Rental (all areas)	6,06%	6,08%	7,12%
Rental (metro only)	6,12%	6,25%	7,52%







Questions

Moving to the revamped CPI: Introducing the 2009 CPI

>> Three main changes

1. New weights and new basket
2. Rebasing: 2008 = 100
3. Change in classification

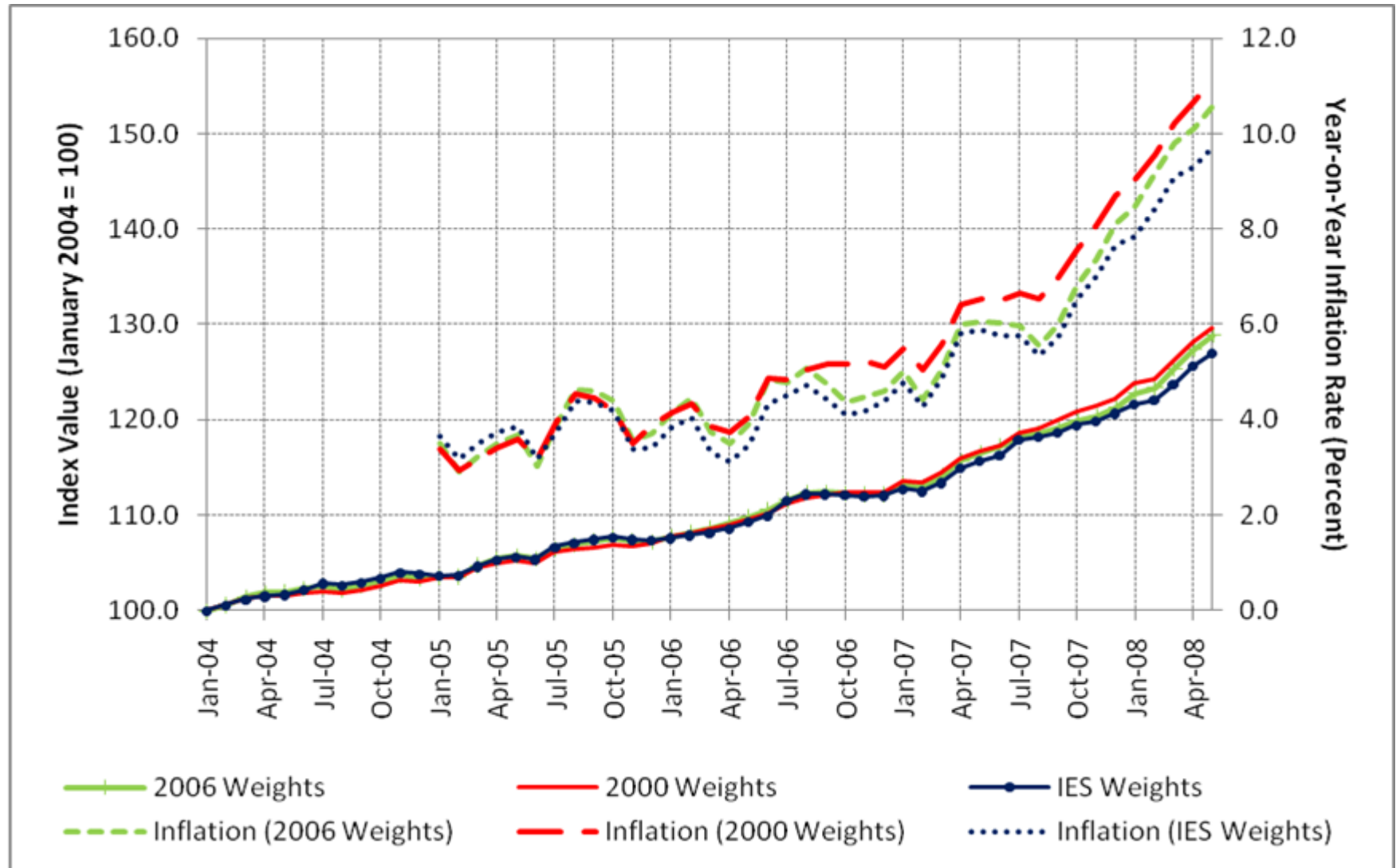
Impact of the new weights and new basket on measured inflation

- >> Substitution effect = consumers move to lower inflation products over time
- >> Income effect = As incomes rise, consumers shift to more expensive goods even if price increases may rise more rapidly than average inflation
- >> Increased weight for services and lower weight for food have downward effect on inflation numbers

Biggest impact of three changes on measured inflation

2009 CPI

>> consumer price index



Impact of the classification change on measured inflation

- >> Individual items simply move between categories
- >> May affect sub-component inflation but these balance each other
- >> No impact on headline aggregates

Impact of the rebasing on measured inflation

- >> Index levels set to 100 (average of 2008)
- >> Rates of change remain the same
- >> No impact on inflation measures

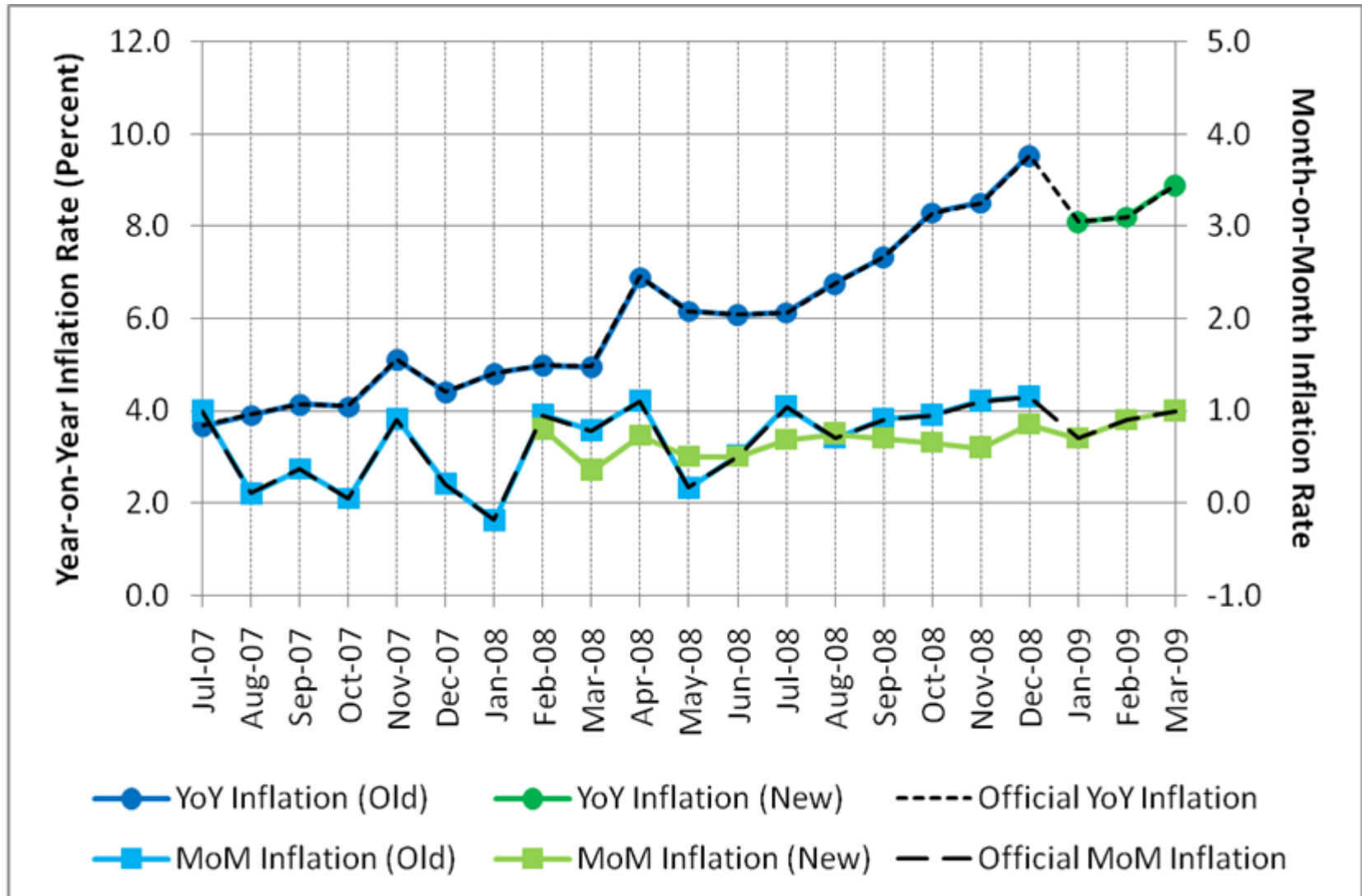
Method to link current series and 2009 series

- >> Objective is to provide the most accurate and reliable inflation rates at all times
- >> Prices on entire new basket are collected during 2008 in parallel with current basket
- >> Two sets of indices for 2008:
 - Official published set based on 2000 weights and basket – 'Set A'
 - Unofficial, unpublished set based on 2006 weights and basket – 'Set B'
- >> From January 2009, the inflation rates will be calculated on basis of 'Set B', and not 'Set A'
- >> This ensures that the inflation rates for 2009 are based on a like on like comparison

2009 CPI

>> consumer price index

Hypothetical figures



Method to link current series and 2009 series

- >> This is not a revision of the 2008 inflation rates
- >> A hybrid year on year index is not possible given the scale of the changes to the weights and basket (e.g. Restaurants and Hotels)

Time series information

- >> COICOP based timeseries data will be available between release of December 2008 CPI and January 2009 CPI
- >> Stats SA will calculate COICOP – based timeseries for at least one year
- >> Indices experiencing little change will be able to be calculated further back

Next steps

- >> October 2008: Release of Methods and sources manual
- >> November 2008: Finalisation of CPI release format
- >> February 2009: Release of COICOP-based timeseries data
- >> 25 February 2009: Release of January 2009 CPI

Questions