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## **Editorial**

**In this number of the National Economic Review, Craig Shepherd presents an analysis of the population shift, the changing age profile of Australian cities and the consequences for infrastructure planning and housing costs. The report is the result of a brief from the Council of Capital City Lord Mayors which is committed to addressing contemporary strategic debates and initiatives on capital city issues in both a national and international context, promoting the role of capital city local government and making known to all levels of government issues of strategic importance to capital cities.**

**In approaching the study three distinct populations were identified. There is the daytime population of those who work or study in the capital region, the resident population comprising people whose permanent address is in the capital region and a transient population that includes tourists and business and conference visitors. The study primarily concerns the resident population of the capital regions for which two trends are conspicuous – the first is that the resident population of the capital regions is increasing, a reversal of the trend for most of the 12<sup>th</sup> century, and secondly it is resisting the national trend towards an ageing population.**

**However, the implications for these trends, when considering infrastructure planning and housing costs, must be assessed in the content of growth in both the commuter and transient populations. To provide the necessary picture of the economic and social forces that will drive Australian cities in the next 20 or 30 years, additional broader social and economic forces are considered that have emerged over the past 20 years. These are identified and include the under-utilisation of the CBD in the past for residential use, the enormous productivity growth in white collar occupations and tertiary education as an important exporter. The study shows how each of the factors identified concentrates the competitive advantage of the city regions over other areas within metropolitan systems.**

**Peter Brain writes on the Australian economy and describes alternative scenarios.**





## **Population change and infrastructure planning: Capital cities “Driving national growth – issues and challenges”**

*Craig Shepherd, NIEIR*

### **Abstract**

The Council of Capital City Lord Mayors (CCCLM) is committed to reading contemporary strategic debates and initiatives on capital city issues in both national and international settings, promoting the importance of the role of capital city local government, and advocating at all levels of government on issues of strategic importance to capital cities.

The paper provides an analysis of the “population shift, the changing age profile of the cities and the resulting implications for infrastructure planning and housing costs” drawing on the data and analysis underpinning the State of the Regions reports.

In interpreting the brief provided it is important the three populations can be identified.

- The daytime population: people who work or study in the capital region or otherwise visit it. Some of these people live in the capital region. Those who do not may be referred to as the commuter population.
- The resident population: people whose permanent residence is in the capital region.
- A transient population, including tourists and business and conference visitors. Resident students are also in this category, in so far as they are not permanent residents. However, their courses commonly last for several years, and in this sense they are more than mere transients.

The primary concern of this essay is with the resident population of the capital regions.

Two trends stand out.

- The resident population of the capital regions is increasing. This reverses the trend of most of the 20<sup>th</sup> century.
- The capital regions are resisting the national trend towards an ageing population.

The implications of these trends for infrastructure planning and housing costs can only be assessed in the context of growth in both the commuter and transient populations. To provide a relevant picture of the economic and social forces which will drive Australian capital cities over the next 20 to 30 years it is useful to highlight an additional number of broader economic and social drivers which have emerged over the past 20 years. Each of these has provided an advantage to the capital city region, and the backbone of their growth.

The drivers that appear to be the most important over the past 20 years have been:

- under-utilisation of the CBD in the past for residential and lifestyle uses;
- enormous productivity growth in white collar occupations, accompanied by strong employment growth in the “business services” sector of the economy;
- the ever growing link between the nature of industry and services provided within capital city regions and emergence of the knowledge economy;
- tertiary education as a significant exporter and its associated short term residents demand;
- real income growth becoming almost solely the domain of the high skilled; and
- the importance of “creativity”, the trend whereby businesses now actively seek out locations where high skilled people live

Each of the drivers has had the effect of concentrating the competitive advantages that the city regions have over other areas within metropolitan systems.

## Population growth trends

Population growth in our capital city regions is one of the most important trends identified. Population growth has transformed many areas of our cities from industrial uses to vibrant residential zones.

The strength of the growth can be seen in Table 1.

<b>Table 1 Population growth</b>					
Capital city region	1991	1996	2001	Growth, 1991 to 2001 (%)	Growth, 1996 to 2001 (%)
Sydney	388,923	422,143	452,365	1.52	1.39
Melbourne	255,990	271,503	290,150	1.26	1.34
Brisbane	769,087	824,489	896,649	1.55	1.69
Adelaide	88,567	90,038	90,690	0.24	0.14
Perth	159,086	162,299	168,023	0.55	0.70
Hobart	140,638	140,883	141,043	0.03	0.02
Darwin	69,639	70,635	71,558	0.27	0.26
ACT	288,586	308,251	319,317	1.02	0.71
<b>Total</b>	<b>2,160,516</b>	<b>2,290,241</b>	<b>2,429,795</b>	<b>1.18</b>	<b>1.19</b>
Remaining Australia	15,122,414	16,017,361	16,959,374	1.15	1.15

Table 1 shows that:

- almost 260,000 additional residents in our city regions in the period 1991 to 2001;
- average growth 1991 to 2001 of 1.18 per cent per annum in excess of the remaining areas of Australia growing at 1.15 per cent per annum, despite the scarcity of land; and
- Adelaide and Hobart have not tended to keep pace with the population growth witnessed in other cities.

Underpinning growth has been considerable supply of housing stock. The growth in the population of the capital city regions is only an indirect influence on the infrastructure requirements of the regions. The reduction in the average household size, in turn, has led to a significantly higher level of growth in the number of households.

In Table 2 the enormous growth in the number of households in the regions is clearly shown.

- Consider a region such as Hobart which despite almost no population growth (0.02 per cent) has witnessed a considerable increase in the number of households (1.08 per cent).

- The role of the Docklands development and the apartment market in Melbourne is clear with the strongest growth in households of 2.56 per cent between 1991 and 2001.

**Table 2 Growth in the number of households by region**

Capital city region	Growth, 1991 to 2001 (%)
Sydney	1.84
Melbourne	2.56
Brisbane	1.92
Adelaide	1.33
Perth	1.70
Hobart	1.08
Darwin	1.84
ACT	1.83
<b>Total</b>	<b>1.89</b>
Remaining Australia	1.70

The recent growth in population within our capital city regions could simply be seen as a function of the under-utilisation of the housing potential the regions possessed. If such a scenario was true we would expect that given a surge such growth would moderate as supply is constrained, prices rise and a new equilibrium is achieved.

Alternatively, if the growth is related to a fundamental change in tastes and values this is likely to reduce the effective constraints which traditional prices or supply impediments would provide. One piece of evidence as to whether the trend has been supply or taste led can be seen in the age distribution statistics. Should the age distribution of the new arrivals to the capital city regions differ considerably from the general population, then we could infer a taste change is evident. It is the contention of the NIEIR research that it is a fundamental shift towards a permanently younger, high skilled and more mobile population.

“Leading regions establish competitive advantage through their capabilities. They are vehicles for resource mobilization that can almost instantaneously bring together the resources required to launch new businesses and turn innovations into successful products. For

these reasons, the nexus of competitive advantage shifts to those regions that can generate, retain, and attract the best talent. This is particularly so since knowledge workers are extremely mobile and the distribution of talent is highly skewed." (State of the Regions 2003 / Florida, "Rise of the Creative Class")

The following set of graphs highlights the changes in the age distribution within our capital city regions. At an Australia wide level we know that the proportion of people aged over 55 is rising. This is related to the "bubble" of the baby-boomers moving through the population along with general increases in life expectancy, and a fall in the number of children born.

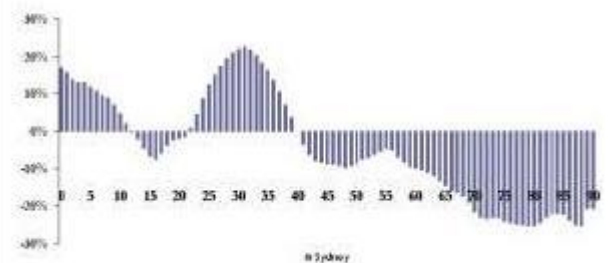
The graphs show, for each age group portrayed on the X-axis, the relative growth in the share of the population of the region as compared to the Australian average. For instance:

- if, for age group 35 years, the region has a value of 0 per cent, it means that the share of its population which is 35 has increased or decreased by the same amount as the Australian average; and
- if the region has a score of 10 per cent for those aged 35, the region has increased its share of 35 year olds by 10 per cent more than the Australian average, and vice-versa for a score of -10 per cent.

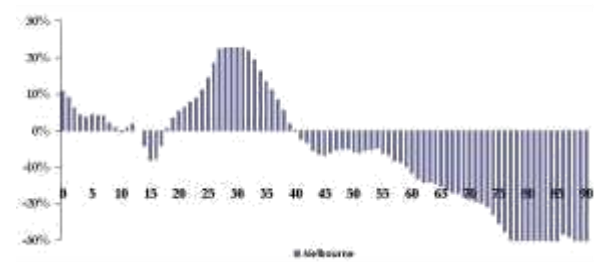
The first city region analysed in the set of graphs below is Sydney. The clear trend is the increase in the youth and working age population between 20 and 40 at the expense of older age groups. In addition we are beginning to see evidence that the influx of youth back into the cities over the past decade is resulting in an increase in the level of children in the communities.

At current trends, Sydney will retain its current age structure over the next 25 years; it will have approximately the same share of residents over 65 as it currently does despite the rest of Australia almost doubling their share of over 65's. By reducing the level of aging (principally by exporting older people to coastal areas) the intensity of activity is increased, and the cities competitive advantage is reinforced. This is a departure from previous generations when older people stayed put.

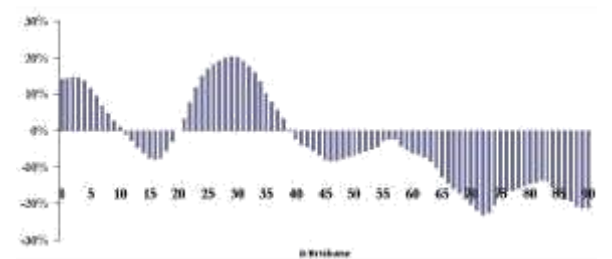
**Figure 1: Relative growth by age group versus Australian average, 1991 to 2001 – Sydney**



**Figure 2: Relative growth by age group versus Australian average, 1991 to 2001 – Melbourne**



**Figure 3: Relative growth by age group versus Australian average, 1991 to 2001 – Brisbane**



From an infrastructure point of view, the age distribution changes suggest that little attention needs to be given to health and community infrastructure related to aging. Far more attention is required to avoid future barriers to entry for younger people moving to the area. So long as those living in the Sydney capital city region remain employment focused, it is likely incomes generated will be sufficient to maintain a moderate supply of housing opportunities. The intensity of the churning of skilled people into such a population is likely to mean that the income premium required for living in Sydney will remain high.

The trends in Melbourne are equally striking with a significant skew towards the working age population. The anticipated growth in the Docklands and Southbank areas suggest that Melbourne will be able to maintain similar trends in the future. The strong supply of future housing stock over the medium to long term in Melbourne is a significant advantage.

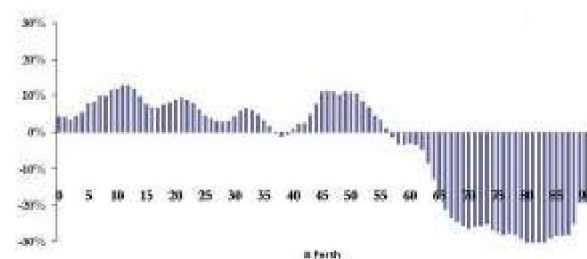
Brisbane has a very similar trend, with the dominance of the youth ages beginning slightly earlier, presumably related to the lifestyle advantages provided in Brisbane.

In Perth the relationship between the youth and older age groups is repeated with some small differences. The suburbs included in the Perth capital city region include some which have been attractive to young high skilled couples for the past 15 years. As a result the excessive concentration of 20 to 35 years olds growth does not occur. Instead, the fundamental driver of lifestyle, access to high skilled employment and the quality of life has produced a flatter profile of an equally young population. We would expect that the Sydney and Melbourne profiles of the next ten years' changes would move towards that of Perth.

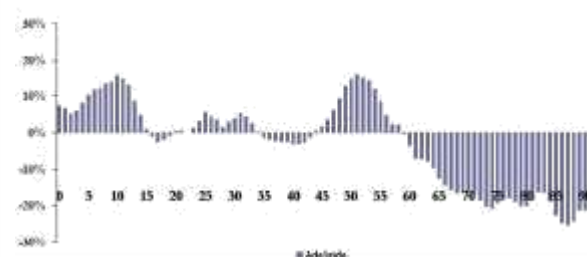
In Adelaide there has not been a high degree of attraction in the youth (18 to 35) cohort, although the movement of elderly people to other areas of Adelaide and South Australia is clear in Figure 5.

The relatively flat population growth which Hobart has experienced in the past 10 years has had an impact on the changes in the age distribution with few major difference from national average detected. This indicates that whilst there have undoubtedly been pockets of activity in Hobart which match closely trends witnessed in other capital cities they are not yet dominant.

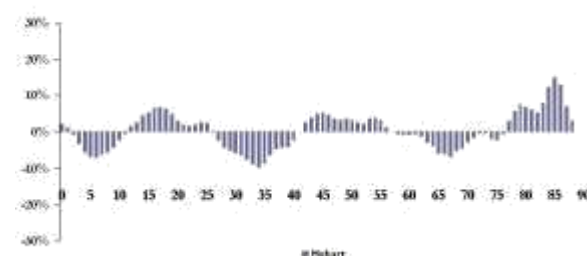
**Figure 4: Relative growth by age group versus Australian average, 1991 to 2001 – Perth**



**Figure 5: Relative growth by age group versus Australian average, 1991 to 2001 – Adelaide**



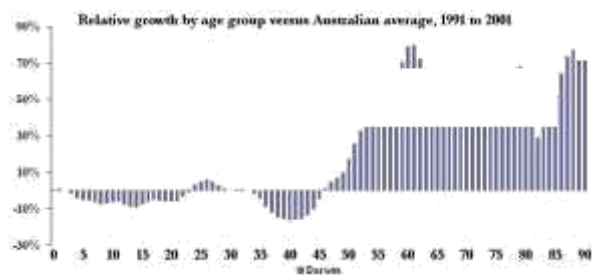
**Figure 6: Relative growth by age group versus Australian average, 1991 to 2001 – Hobart**



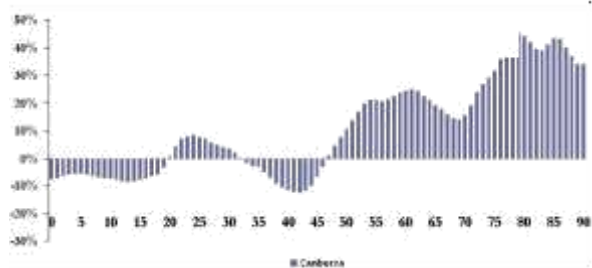
Darwin and Canberra clearly have age distribution movements that differ from other regions, but for very different reasons. Until recently people left Darwin when they retired but now they are more likely to stay.

Canberra presents the paradox of the non-creative high skilled region with great infrastructure. The impetus to age *in situ* in Canberra is significant for a generation of people who originally sought mass employment in government in the 60's to 80's. Infrastructure, health and access are good, the cost of housing is not excessive and the capacity to liquidate significant capital gains has been limited when compared to the Melbourne and Sydney experience.

**Figure 7: Relative growth by age group versus Australian average, 1991 to 2001 – Darwin**



**Figure 8: Relative growth by age group versus Australian average, 1991 to 2001 – Canberra**



Without significant new employment opportunities for youth, and without the diversity of lifestyle supplied in other capital cities, the critical mass of youth / knowledge and innovation is harder to foster. In the future the population will age and require continual increases in the level of services provided.

The youthful population trends witnessed in this section are directly linked to the knowledge economy and its relationships with capital city regions. The link between these age patterns and employment have been implied, the following table on labour utilisation clearly shows that the capital city regions do have a higher level of employment amongst residents. The Table assumes population 18 to 65 have 37.5 hours to work each week and uses Census 2001 estimates of total hours worked. In part this is a function of preferences of residents but also the nature of the employment opportunities provided.

**Table 3 Labour utilisation**

Capital city region	Hours worked	Available hours	Labour utilisation rate (%)
Sydney	8,352,108	13,038,000	64.1
Melbourne	5,462,093	8,574,975	63.7
Brisbane	14,722,614	23,588,588	62.4
Adelaide	1,474,245	2,367,075	62.3
Perth	2,669,075	4,474,838	59.6
Hobart	1,900,468	3,524,400	53.9
Darwin	1,205,471	1,946,250	61.9
ACT	5,516,759	8,561,363	64.4
Remaining metro regions	155,419,880	265,182,038	58.6

To investigate the role and extent of the knowledge economy within the broad range of activity, which occurs in the capital city regions, the following section analyses the industry structure.

## The role of the capital city regions in the Australian economy

The role of the capital city regions in the Australian economy is best assessed from their distinctive structure of production. By the criterion of value added by industry, the capital regions specialise in the following:

- not surprisingly, government administration and defence contribute well above the national average proportion of output, particularly in the smaller capitals. They are overwhelmingly important in Canberra, where they contribute a third of total value added;
- by contrast, finance and insurance dominate the structure of output in the two large capitals. While present, they are not particularly strongly represented in the small capitals; and
- communication services are strongly present in all capital regions except the ACT and Hobart.

Table 4 shows the relative share of industry output for each city and industry; a score of 100 for construction indicates a national average share of production for that industry for the city.

The importance of communication services is far from incidental, since both government administration and finance depend on information.

Other industries that contribute an above average share of output in most capital regions include the following:

- accommodation, cafes and restaurants serve the transient and commuter populations, not to speak of the residents themselves;

- property and business services tend to overlap with finance and insurance, and indeed with government; and
- culture and recreational services reflect the concentration of all-of-state cultural facilities in the capital regions.

Once, such a concentration would have been looked upon as just another industry. And it is true to say that if this is all a region has, then such a region would have limited prospects for growth. For the capital city region however the addition of the range of cultural entertainment and recreational services has become a crucial driving force for future growth. The decision of future businesses and employees used by those people with access to high skilled employment on where to locate, are based on the “creativity” characteristics of an area. Positive characteristics include acceptance of social and sexual diversity, bohemian and alternative lifestyles, and multiculturalism. When mixed with a preference for a vibrant street culture, music scene, nightlife and open spaces cities thrive. Each of our capital city regions has invested heavily in the successful implementation of these outcomes.

When NIEIR investigated the “creativity” potential of the regions in the State of the Regions report 2002, we found that many of Australia’s capital cities are well placed for growth based on strong values of diversity and tolerance.

**Table 4** Relative share of industry output for each city and industry

Industry	Relative share of activity by industry type							
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra
Agriculture	1	1	8	1	4	38	41	5
Mining	2	7	14	21	107	4	68	2
Manufacturing	37	70	106	34	24	90	29	19
Electricity, Gas & Water	86	100	108	106	252	373	84	124
Construction	50	50	86	64	76	76	94	112
Wholesale Trade	73	77	122	54	45	63	83	45
Retail Trade	49	54	103	86	68	116	128	87
Accom, Cafes & Rest.	118	93	105	152	125	125	143	101
Transport & Storage	101	108	148	50	63	80	148	55
Communication	213	252	147	221	200	108	184	80
Finance and Insurance	326	265	107	230	184	111	74	71
Property & Business Services	158	133	94	114	132	59	102	102
Government & Administration	124	104	139	215	177	261	273	675
Education	67	72	98	127	90	123	148	143
Health	59	87	104	182	177	176	129	107
Recreation	172	162	93	174	120	116	195	139
Personal services	88	87	122	162	137	139	119	141

Apart from agriculture and mining, four industries are under-represented in the capital regions. They all comprise activities that have left the city centres in favour of broad acre suburban locations. They are:

- manufacturing ;
- wholesale and retail trade;
- construction; and
- transport and storage.

This is not to deny that these industries are present in capital cities. There is still specialist manufacturing, but the exit of most manufacturing to the suburbs (or overseas) has released substantial areas of capital region property for conversion to residential use. There is still construction, but capital region activity tends to be assembly, with the building components prepared on suburban sites. Except for Darwin, where both the port and the airport are within the capital region, transport and storage have, in general, moved to more spacious facilities in the outer suburbs. There is still wholesale and retail trade, but of a different kind to that in the suburbs. Not for the capital regions the windowless shopping mall set in an expansive car park. Capital region retailing is boutique, and closely related to the capital regions’ cultural, recreational, accommodation and restaurant industries. It looks outward onto the streets.

Indeed, looking outward is fundamental to the economic, social and political role of the capital regions. Looking outward, without fear, is the fundamental attitude required in the core business of the capital regions. This business, both economic and social, is the circulation and application of knowledge. Thus:

- Government administration requires the gathering of a wide variety of knowledge and its application both to policy development and to administrative and judicial decision-making;
- finance and insurance requires the gathering of a wide variety of knowledge and its application to business decisions;
- the communications industry exists for the gathering and dissemination of knowledge;
- cultural and recreational services, education and the research aspects of the health services are all engaged in knowledge creation, re-organisation and dissemination; and

- accommodation and restaurants underpin the patterns of travel and personal contact which are central to the circulation of knowledge.

In turn, the circulation and application of knowledge is fundamental to prosperity, not only of the capital regions but of the national economy. The knowledge networks formed in the capital regions underlie the innovations that are necessary to keep ahead of the competition in a cutthroat world. These innovations are not only developments in products and marketing, but innovation in finance and government. As against the rest of the world, an important Australian advantage is the co-location of finance, business and state government in the capital regions, encouraging joint institutional innovation.

For these reasons the rest of Australia is to a large extent relying on the capital cities for our future growth. The knowledge economy can only thrive within a supportive planning and policy framework. Whilst the growth is inherently innovative and difficult to forecast there have been linkages between infrastructure and population trends that have underpinned recent success.

## **The knowledge economy**

What is it about the capital regions which encourages the circulation of knowledge? It is, in a word, proximity. The capital regions collect, at high density, a diverse mixture of open door businesses and institutions. This raises two questions:

- keeping the doors open despite threats to security; and
- maintaining proximity despite financial incentives to dispersion.

Both of these relate to infrastructure, which must encourage proximity and high density while maintaining security. In addition, the capital cities are themselves cultural artifacts and their design must reflect their status as centres of knowledge.

In the 12<sup>th</sup> century, the larger capital regions relied heavily on commuters to perform their work. Commuters are still important, and it is important to get them into and out of the capital regions without sacrificing the qualities of the region. But what of the trends in resident population noted above?

The increase in capital region resident populations can be interpreted as a demand to be immersed in the

knowledge network full time, not just during working hours. The effect on the knowledge network, the *raison d'être* of the capital regions, is wholly favourable; the buzz of ideas grows exponentially. The cost is that of high density living. In capital regions houses with gardens are relatively scarce and costly. Residential development takes the form of flats and units.

The demand for full immersion in the knowledge network coupled with willingness to forgo living space tends to be a young people's demand; hence the attraction of capital regions to young people. Many young people arrive in the capital regions first as students. Students are important in maintaining the connections of the capital regions internationally, and with the country regions of their own state. Maintaining ease of entry to the capital regions for students, and for that matter to young people more generally who wish to try their luck in the big city, emphasises the importance of low cost accommodation. Low costs, in this instance, have to be met by sacrifice of private space: student accommodation can be satisfactory even if the rooms are small. Australian capital regions have so far met this demand, but there is no guarantee that it will always be met – the great universities of London are now losing students due to the high cost of accommodation in that city.

A further question concerns circulation requirements. Much of the addition to capital region dwelling stock has been achieved by redevelopment of former manufacturing or wholesale premises, or former transport industry land such as ports and rail yards. In all these cases, road space formerly used by commercial vehicles has been released for the use of the new residents. However, it is not a simple transition.

Because of the requirements of high density, not to speak of maintaining the outward orientation of businesses and other institutions, the primary mode of circulation in capital regions is on foot. Conversion of areas where the street pattern was adapted to commercial vehicles into areas primarily designed for pedestrian circulation requires redesign, including provision of complementary public transport. It also requires careful thought as to the role of the private car. Too restrictive an attitude can stifle the demand of people with much to contribute to the capital regions; on the other hand, too permissive an attitude can destroy pedestrian amenity and security and, by withdrawing land for use as roads and car parks, threaten the virtue of proximity.

## **Affordability**

As a key driver for the development in the knowledge economy it is clear that strong housing densities and a range of housing type solutions need to be provided. Accommodating the diversity of needs requires the focus to never move from the following objectives:

1. maintaining access to housing for the student population. The capacity of cities to capture the success and innovative capacity of the student population when entering the workforce is not to be underestimated. This is especially the case for overseas students wishing to access opportunities in Australia;
2. maintaining housing solutions relevant to the income expectations of the resident population. There is a danger if housing is oriented towards high wealth derived from unearned income, and related less to the earnings of resident workers, the employment intensity of the capital city will fall. Such a fall removes vibrancy, the exciting 24/7 nature of capital cities and redistributes competitive advantage to other areas within cities and the nation. As such the housing stock needs to remain broadly focused, consistent with the population trends outlined in this paper; and
3. affordability will be accentuated by noting points 1 and 2 but can be augmented through clear planning which provides strong supply expectations for the market, limiting the potential for over-inflated capital growth. Over inflated capital growth will only stifle many of the drivers of diversity, population dynamism and “creativity” which drive city prosperity.

## **Challenges for capital city regions in the future**

The trends analysed in this paper have highlighted the way in which the capital city regions face different tensions related to population and aging. The nature of industry, the knowledge economy and the recent population and aging dynamics suggest that capital city regions could strengthen their role as the youngest, most highly skilled and creative communities in Australia.



NIEIR is confident that the capital cities role will be strengthened, and that such strength is vital to the prosperity of all Australians. The implementation challenges for policy makers include the following questions.

- Can the industry structure of the capital city regions remain so clearly differentiated from the remainder of the metropolitan economy, thereby providing continued competitive advantages?
- Can capital city regions lay claim to the largest share of health services when they are the youngest regions with the least aging pressure?
- Can capital city regions ensure that the churning of population which has created a youth oriented high creativity economy be maintained?
- If population growth is limited by supply or political pressures, would restricted growth change the nature of capital city advantage?

## **Appendix 1: Capital city region definitions**

The Council of Capital City Lord Mayors comprises the Lord Mayors of each of the six state capitals, plus the Lord Mayor of Darwin and the ACT Minister for Urban Services. The primary criterion for membership is, therefore, governmental capital city status. However, capital cities are much more than seats of government. In particular, they include the Central Business District of each of Australia's metropolitan areas.

In some metropolitan areas, the boundaries of the Capital City are drawn closely around the CBD and the centre of government. In others, notably Brisbane, Darwin and the ACT, the boundaries include a large proportion of the total metropolitan area. In the former case, centre-of-government and CBD functions are likely to have spread from the Capital City to neighboring local government areas, while in the latter the legal Central City will include areas which are not closely related to the CBD or to government administration. For the purpose of this essay, NIEIR has compromised.

- Where the capital city comprises a high proportion of the total metropolitan area, the capital region is defined as the same as the capital city (ACT, Darwin, Brisbane).

- Where the Capital City has tight boundaries, the capital region comprises the Capital City plus adjacent inner urban local government areas closely related to the centre of government and the CBD.

The following local government areas (LGA) are included in the definitions of the regions used in this report.

### ***Sydney:***

Mosman, North Sydney, Randwick, Sydney, South Sydney, Waverley, Willoughby.

### ***Melbourne:***

Melbourne, Yarra, Port Phillip, Stonnington.

### ***Brisbane:***

Brisbane

### ***Adelaide:***

Adelaide, Norwood - Payneham - St Peters, Unley, Walkerville

### ***Perth:***

Perth, Cambridge, Cottesloe, Nedlands, South Perth, Subiaco, Victoria Park, Vincent

### ***Hobart:***

Clarence, Glenorchy, Hobart

### ***Darwin:***

Darwin

### ***Canberra:***

Unincorporated ACT

## **Appendix 2: Explanation of capital city region based profiles**

This section provides an explanation and exposition into the indicators presented in the regional summaries. Each indicator is described, data sources referenced and the ideas behind each discussed. Every indicator is expressed in different terms and in general is presented in a format that makes regional comparisons easy. Most measures are accompanied with a rank, which is a rank out of the 64 *State of the Region* regions, with 1 being the best.

### **Population and labour force**

**Population:** Residential population by region for 1998 and 2001 are taken from the ABS estimated resident population (ERP) series. The 2003 population was derived from the household growth for 2001-02 and constrained to 2003 state population growth. The 2003 household total was derived by increasing the 2002 household total by the number of dwelling approvals.

**Households:** The number of Households per region uses the ABS Census for 1998 and 2001. From the 2001 levels, which are known, new residential building approvals data is used to grow the stock of houses in a region. This data is provided by the ABS and reported quarterly. If however, the new building approvals data is added to the stock in 2002 an over estimation will occur. This is because of the demolition of old houses. Therefore, NIEIR uses estimated demolition rates to ensure no double counting occurs.

**Workforce:** This is a measure of the labour force adjusted for the movement of people from the workforce to Disability Support Pensions (DSP). The labour force estimates are produced by the Department of Employment, Education and Training (DEET). The information is contained in the Small Area Labour Markets publication that is produced quarterly. The labour force is defined as the yearly average level for 1998 and 2001 and 2003. The average DEET figure is added to the excess movement to disability support pensions. Excess movement is defined as any growth in excess of the rate of growth in the general population. It therefore assumes that there is a natural level of people (expressed as a per cent of the population) who need to

access the DSP. The DSP data is ascertained from the Department of Social Security (Centrelink). The rationale for adding in people who move from unemployment benefits to disability support is to measure the real labour force. If a person is receiving unemployment benefits, they are counted as part of the labour force, however when people move from unemployment benefits to the DSP they are excluded. This impacts on the unemployment rate which is defined as the number of unemployed divided by the labour force.

**Employment:** This is a NIEIR measure of employment. It is the adjusted labour force as defined above, minus the estimated NIEIR unemployment level.

**Unemployment:** This is a NIEIR measure of unemployment. It is derived using Centrelink data. It includes all people receiving Newstart allowance, Mature Age Allowance, excess growth in DSP (i.e. at a level greater than population growth), Youth allowance as a non student and an estimate of students on youth allowance who are unemployed and undertaking compulsory training etc. This latter measure is based on demographic trends and microsimulation.

**Structural unemployment :** This is a measure of the level of long term unemployed as a percentage of the population aged 18 to 65 years old. It includes all those classified as long-term unemployed, those receiving disability support pensions, 50 per cent of people from a non-English speaking background receiving Newstart allowance, 50 per cent of people receiving single parents benefits and all people receiving the mature age allowance. This measure excludes people on Newstart allowance short term and anyone receiving youth allowance. It therefore assumes that none of the youth are structurally unemployed.

**DEET unemployment:** This is the unemployment rate produced by the Department of Employment, Education and Training (DEET). The information is contained in the Small Area Labour Markets publication. It contains estimates of employment, labour force participation, unemployment and the unemployment rate by Statistical Local Areas (SLAs).

### **Flow of funds**

The flow of funds analysis undertaken by NIEIR is a detailed attempt to capture the wealth building forces at work in the regional economy. The measures

concentrate on the ways in which money is sourced and applied by the households in a region. In general, a region will benefit from a number of flows into the household from wages and salaries, net farm and business income, social security benefits, interest and dividends and from property income. Balancing this inflow will be the income tax, Medicare and levies paid to the Federal Government, GST paid on consumption and interest paid on monies owed by the household sector. The amount that remains is available for consumption by the household sector.

The flow of funds methodology has a number of important advantages in regional benchmarking. Because the net flow is the effective position of the household sector in terms of consumption, changes in any of the components will necessarily be able to be measured in terms of the total impact on the consumption position of the household sector as a whole. One of the biggest problems that actively updated benchmarks related to the household have is the change that occurs between the Census collection periods. By breaking down the components of the flows of funds into measures that can be readily updated through time enables changes to be estimated on a more regular basis. A good example of this change is the impact of the GST. In the tables presented, the effects of the introduction of the GST can be seen in terms of the net position of the household sector.

Because the net flow of funds is unambiguous in its interpretations the relative ranking of a region to another has particular clarity. In the table presented for each region the rank of the region in terms of flow of funds is given for each of the years 1999, 2001 and 2003. In addition, a ranking of the growth in the net flow of funds between 2003 and 1999 is provided. The individual components and their derivation are presented in the following sections. All per capita amounts are derived using ABS population estimates for 1999, 2001 and NIEIR's provisional estimates for 2003.

## **Wages, salaries and farm income**

The calculation of the 2003 flow of funds data was restricted this year due to the inexplicably late release of the Taxation Statistics for 2000-01. As such, the 2003 figures must be calculated in a similar manner to the 2002 values without the addition of new relative income growth information to help estimate wage and salaries income. The following dot points outline the

calculation of the non-farm components of wages and salaries income.

- Estimates of income from the 1999-00 taxation statistics are used.
- Recent growth in income from taxation records provides a trend in the income per person that can be expected in the region. This measure is required due to the very large difference in wage growth at the regional level.
- The growth in employment at the local area level is subsequently combined with the income per employee growth and the base levels of income from taxation statistics to produce updates of income at the regional level.
- State and national account control totals are then used to balance wages and income growth.

As with all information collected from taxation statistics, the data is converted from postcode definitions to ABS regions using the 2001 Postcode to Statistical Local Area concordance provided by the ABS.

In 2004 we had the benefit of directly estimating farm income using rainfall data as a proxy for the impact of the drought on regional incomes. The change in rainfall from long-term average is used as a basis for allocating farm income on a regional basis. Farm income cannot be derived using the declared taxable income from primary production as a guide. Due to problems of declaration and substantial carried forward farm losses this is not a completely accurate guide to total income. As such, the estimate is based on the most recent measure of gross agricultural output, which is subsequently converted to a realised income measure consistent with national accounts. Most importantly differences between the relative income generating capacity of various agricultural activities are accounted for. Subsequently varying the incomes derived by our estimate of the impact of the drought provided more relevant distribution of incomes for 2003.

Due to the lack of data availability for such a key series, the 2001 and 2003 estimates are presented at the regional level without including the 2002 values as reported last year.

**Income tax:** This total income tax paid is the net tax paid after deductions and rebates. It includes the Medicare levy as well as the additional Medicare levy for high income taxpayers. The 1999 and 2001 figure is based on reported taxation statistics. The 2003 figure

has been adjusted by state control totals, and using estimates of income created earlier.

**Benefits:** This figure is an estimate of the total amount of benefits received at the local level. The mount includes all benefits and allowances received from Centrelink and an indicative assessment of the contribution of Community Development Employment Program income in remote areas. Figures for all years are based on recipient data. This measure does not include the income derived from Department of Veterans Affairs (DVA) benefits. This amount is not included in the accounts.

**Business income:** The business income for a region is effectively based on the value of the businesses that operate in the region and the relative performance of the economy as a whole. Unfortunately the net business income as reported in Taxation Statistics does not adequately capture the total impact of business income. NIEIR utilised small area micro-simulation of the value of unincorporated businesses based on realised cash flows. Using state control totals and the estimated value of business assets the destination of business income can be adequately measured. The changes in business income reflect both the evolution of business values through time as well as the macro-economic trends captured in economy wide reported values of business income.

**Interest and dividends:** The value of interest and dividends received is derived from Taxation Statistics. Once again, due to the lack such material this year, the changes in this value from 2001 to 2003 can only be derived from State Accounts control totals and previous trends in the distribution of dividends within each state.

**Interest paid:** The amount of interest paid by the household sector is a function of the stock of debt, the nature of the debt and interest rates applied. In order to keep abreast of the impacts that the rising level of household debt in the late 1990s NIEIR developed a Household Debt Model which estimates the impact of debt at the local level. One of the measures derived from such modelling is the amount of interest that is paid by the household sector on debt. The debts incurred in running unincorporated businesses are not included, but rather used in the net business income estimates presented in the table. The debt included covers housing, personal finance and credit card debt. These model estimates are balanced to state and national control totals automatically. The relatively large increase in the amount of interest paid across the

period 1998 to 2003 reflects the continued strong growth in household debt throughout the same period.

**Net property income:** Net property income is derived from Taxation Statistics, and balance to state control totals. This small measure cannot be updated at the local levels and hence NIEIR relies on state trends to derive the 2003 estimates.

**GST:** In order to determine the amount of GST paid by a particular community an estimate of the amount of expenditure undertaken is required. NIEIR uses our recently released 2001 estimate of household spending called SpendInfo. SpendInfo provides detailed expenditure estimates for over 400 items at the local area level. Using growth in households and recent trends in retail sales and national accounts consumption at the state level, 2003 estimates are derived. Using these expenditure estimates and details of GST excluded goods estimates of the total GST paid are derived. These amounts are balanced to state control totals.

**Net flow of funds:** Adding up all of the inflows and subtracting the outflows determines the net flow of funds to a region. Specifically:

$$\begin{aligned}\text{Net Flow} &= \text{Wages} + \text{Benefits} + \text{Business} \\ &\text{Income} + \text{Interest \& Dividends} + \text{Property} \\ &\text{Income} - \text{Income Tax} - \text{Interest Paid} - \text{GST}\end{aligned}$$

**Social Benefits as a per cent of net flow of funds:** as described above benefits are payments by Centrelink including Community Development Employment Programs (accessed mainly by indigenous communities) and exclude payments from the Department of Veterans Affairs. These are expressed as a percent of the net flow of funds. Net flow of funds was developed elsewhere. Regions with a high score have a high dependency on social security income.

## **The gross output and value added industry data by LGA**

The basic building block for the gross output and value added data by industry is the journey to work data from the Census. The 2001 Census was the first Census that developed both resident and journey to work employment across all regions. Previously journey to work employment estimates were limited to metropolitan regions.

The main State \$ million constraints come from:

- the Australian Bureau of Statistics (ABS) mining and manufacturing 4-digit ANZSIC industry production data;
- the State Accounts (for all sectors); and
- agricultural production by Local Government Area was available for 2001.

The base year (1997) detailed output to employment and value added ratios, across all 4-digit industries, is the 1,100 sector detail underlying the ABS's input-output tables.

It would be a relatively straightforward task to obtain industry output estimates if one assumed that the State average was the same for all LGAs. This is clearly implausible. NIEIR's methodology was to obtain a “productivity differential” between industries across LGAs by any weighted average income differentials calculated from resident industries' earnings and mapped to industry by using journey to work patterns.

The results of applying these differentials were then scaled to equal State totals by 4-digit ANZSIC industry.

All value added and wage estimates by industry were benchmarked to equal State Account industry aggregates. This meant that the sum of a GRP across LGAs automatically equalled the gross State product at factor cost in the State Accounts.

The previous 1996 industry/LGA estimates were adjusted to the 2001 methodology by estimating journey to work patterns in 1996 for those LGAs where journey to work patterns were not available in 1996. Once this was done a continuous series from 1991 to 2001 was created.

## **Migration table definitions**

### ***Age distribution***

Using ERP data for 1996 the proportion of the population less than 25, between 25 and 54 and 55 and over is determined. The total population is also presented. The average age is produced by taking the product of the number of people in each age group and the mid-point age for each group divided total by the total population in the region. The same analysis is done using 2001 ERP data.

Population forecasts by age have been produced for 2011 and 2021 for each local government area and aggregated up to the *State of the Regions* (SOR) regions. Using this data a forecast of the proportion of the population less than 25, between 25 and 54 years and 55 years and older is made. This also allows a forecast average age to be made.

### ***Where current population came from since 1996, by region or State (map)***

The dark highlighted region is the SOR region in the state within which it is located. All the remaining segments are the other SOR regions in the state. The number in each represents the number of people who since 1996 have left that region to live in the highlighted SOR region. On each side of the map the other states that make up Australia are presented as well as the number that migrated from there since 1996. The symbol on the left hand corner represents the rest of the world or the number of people that have immigrated to the SOR region from an overseas origin.

### ***Where the current population was in 1996***

With reference to the SOR region as the current place of residence the table illustrates where the current population was located in 1996 as a proportion. The data is obtained from 2001 Census by usual residence.

The table is disaggregated into three different age cohorts. The categories include those less than 25 years, 25 to 54 years and those 55 and older. The total category refers to all age groups.

The ‘location in 1996’ has been split into six groups. The following is a brief description of each.

**Not yet born** – includes the proportion of the population who are less than 5 years of age.

**Same address** – the proportion of the population who lived in the same address in 1996.

**Same LGA or ‘local move’** – the proportion of the population that have either not moved outside of the municipality or have moved locally. For the metropolitan region a local move is considered to be 10 kilometres or less

and is considered to be 50 kilometres or less for a regional area.

**Other Australia** – the proportion of the population who in 1996 either did not live in the same address, did not move within the same LGA nor moved locally but is known to have come from another Australian address.

**Overseas** – the proportion of the population who were living overseas in 1996.

**Not stated** – includes those people who did not write down where they lived in 1996.

All proportions are calculated as the total number of persons in the age group/location divided by the total number of persons in the age group and then multiplied by 100.

### ***Sources of net population change since 1996***

With reference to the SOR region as the current place of residence the table illustrates the sources of net population change since 1996. Migration data is obtained from 2001 Census by usual residence and is expressed as a proportion of 2001 estimated resident population (ERP) data.

The table is disaggregated into three different age cohorts. The categories include those less than 25 years, 25 to 54 years and those 55 and older. The total category refers to all age groups. Number per year is the total net level change in the source of each net population change.

The source of net population change is split into four groups which when summed equals to an overall growth rate. All four groups are expressed as an annualised percentage of 2001 ERP population and include:

**New population under 5 years** – This includes all those persons in the population under the age of 5.

**Net change from internal migration** – This includes the net change in persons moving into the region from another Australian address against those leaving the regions to another Australian address. This does not include those in the population under 5 years.

**Net change from death and overseas migration** – This is derived by taking the total net change in each age group (growth) and subtracting the net change from the population under 5, the net change from internal migration and net change from age progression. What remains is the net change resulting from overseas migration and death or from changes in levels of address not stated.

**Age progression** – This includes the net change in persons within an age bracket resulting from persons moving from one age bracket to the next. For example, in the 0 to 24 years age bracket there will be a net loss in the population as a result of people who were age between 20 and 24 in 1996 moving to the 25 to 54 year bracket by 2001.

The overall growth rate takes the net change in the population in each age group and expresses it as a percentage of the 2001 ERP population for that age group. To transform it into an annualised growth figure since 1996 all percentages are divided by 5.

### ***Aged characteristics***

#### **Percentage of people employed, 55 to 64 years –**

2001 Census employment data for 55 to 64 year olds over the total population of 55 to 64 year olds and multiplied by 100. The data has been further disaggregated into male and female groups. National averages are determined by taking the number of employed people aged 55 to 64 years nationally, dividing it by the national population of 55 to 64 year olds and multiplying by 100.

**ABS Census unemployment** – 2001 Census unemployment estimate for 55 to 64 year olds divided by 55 to 64 year old labour force, multiplied by 100. This is again disaggregated into separate statistics for male and females. National averages are determined by taking 2001 Census national unemployment data for 55 to 64 year olds over the total national labour force of 55 to 64 year olds, multiplied by 100.

**Single person households, percentage of all households (55 to 74 years)** – percentage of all Census occupied dwellings occupied by a lone person aged 55 to 74 years.

**Single person households, percentage of all households (over 74 years)** – percentage of all Census

occupied dwellings occupied by a lone person aged over 74 years.

**Tenure type, percentage where household head 55+ (fully owned)** – 2001 Census data for those occupied dwellings where the head is 55+ and fully owns the home of residence over the total number of tenure types for households where the head is 55+, multiplied by 100. National percentages are determined the same way except all occupied dwelling in Australia are used.

**Tenure type, percentage where household head 55+ (being purchased)** – 2001 Census data for those occupied dwellings where the head is 55+ and is still purchasing the home of residence over the total number of tenure types for households where the head is 55+, multiplied by 100.

**Tenure type, percentage where household head 55+ (private rental)** – 2001 Census data for those occupied dwellings where the head is 55+ and is renting the home in the private rental market over the total number of occupied dwellings where the head is 55+, multiplied by 100. National percentages are determined the same way except national numbers are used.

**Tenure type, percentage where household head 55+ (public rental)** – 2001 Census data for those occupied dwellings where the head is 55+ and is renting the home of residence from a public authority over the total number of tenure types where the head is 55+, multiplied by 100. National percentages are determined the same way except national numbers are used.

**Tenure type, percentage where household head 55+ (Other)** – 2001 Census data for those occupied dwellings where the head is aged 55+ and their tenure recorded as either not stated or as other tenure over the total number of tenure types for households where the head is 55+, multiplied by 100. National percentages are determined the same way except national numbers are used.

**Ratio of pop 70 + to population 55+** – Is the ratio of 2001 ERP data for the population older than 70 over the population older than 55. National percentages are calculated the same way except that national numbers are used.

## Global Sydney

### POPULATION / LABOUR FORCE

	1998		2001		2003		% point change
	1998 level	percentage	2001 level	percentage	2003 level	percentage	1998-2003
Population	437,497		458,434		464,773		
No. households	198,091		206,548		210,826		
Workforce	247,216	56.5	242,047	52.8	249,032	53.6	-2.9
Employment	230,703		232,617		240,266		
Unemployment	16,512	6.7	9,430	3.9	8,765	3.5	-3.2
DEWRSB U/E	11,447	4.6	8,867	3.7	12,766	5.1	0.5
Structural U/E, % population <sup>1</sup>	23,726	8.4	22,071	7.8	19,836	6.2	-2.2

Note 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level	1999 per	2001 level	2001 per	2003 level	2003 per	% p.a. growth
	(\$m)	capita (\$)	(\$m)	capita (\$)	(\$m)	capita (\$)	1998-2003
Wages/salaries	10,405	23,557	11,948	26,412	14,463	31,118	7.2
Taxes paid	3,164	7,164	3,272	7,232	4,047	8,708	5.0
GST paid	540	1,222	859	1,899	1,176	2,530	-
Benefits	625	1,415	634	1,401	669	1,439	0.4
Business income	1,459	3,304	1,628	3,599	2,178	4,686	9.1
Interest/dividends	897	2,031	1,000	2,210	996	2,143	1.3
Interest paid	707	1,600	1,013	2,240	946	2,036	6.2
Net property income	448	1,014	522	1,153	479	1,031	0.4
Net flow of funds	9,423	21,334	10,587	23,404	12,615	27,143	6.2
Rank		2		2		2	

### AGE DISTRIBUTION

	Proportion of population			Total population	Average age
	Less than 25	25 to 54 years	55+ years		
1996	0.29	0.51	0.21	422,127	37.2
2001	0.27	0.52	0.21	461,622	37.4
2011	0.25	0.53	0.22	527,321	39.2
2021	0.25	0.49	0.26	577,319	41.6
Change 2001 to 2021	-0.02	-0.03	0.05	115,697	4.2



#### WHERE CURRENT POPULATION CAME FROM SINCE 1996, BY REGION OR STATE

Origin	People	Origin	People
NSW Central West	1,283	Sydney Outer South West	1,029
NSW Far and North West	902	Sydney Outer West	1,724
NSW Hunter	2,898	Sydney Mid West	8,949
NSW Illawarra	2,254	Sydney South	4,357
NSW Murrumbidgee	737	NSW	532
NSW Murray	592	VIC	5,405
NSW Mid North Coast	1,447	QLD	6,894
NSW North	1,005	SA	2,351
NSW Richmond-Tweed	1,059	WA	2,632
NSW South-East	872	TAS	767
NSW Central Coast	1,588	NT	474
Global Sydney – other	13,428	ACT	2,973
Sydney Inner West	5,520	Other Territories	17
Sydney Outer North	14,036	Overseas	54,090

#### WHERE THE CURRENT POPULATION WERE IN 1996

Location in 1996, of 2001 Census usual residence, proportion						
Age in 2001	Not yet born	Same address	Same LGA or ‘local move’	Other Australia	Overseas	Not stated
0 to 24 years	17.5	27.1	12.2	18.3	13.8	11.0
25 to 54 years		29.6	22.7	21.7	15.8	10.1
55+ years		67.2	12.1	6.8	2.3	11.5
<b>Total</b>	<b>4.8</b>	<b>36.7</b>	<b>17.6</b>	<b>17.7</b>	<b>12.5</b>	<b>10.7</b>

#### SOURCES OF NET POPULATION CHANGE SINCE 1996

Percentage of 2001, estimated resident population (ERP)						
Age in 2001	New population under 5 years	Net change from internal migration	Net change from death and overseas migration	Age progression	Growth	
0 to 24 years	3.49	1.62	2.88	-7.20	0.78	
25 to 54 years		-0.44	0.77	1.86	2.19	
55+ years		-0.94	-2.18	4.84	1.72	
<b>Total</b>	<b>0.95</b>	<b>0.02</b>	<b>0.74</b>		<b>1.71</b>	
Number per year	4,407	95	3,397		7,899	

## PROFILE OF REGIONAL PRODUCTION

Industry	Output 2001 \$ million		Real growth % p.a.	Share of Australia, 2001
	1991	2001		
A Agriculture, forestry & fishing	12	21	5.2	0.1
B Mining	679	116	-16.2	0.2
C Manufacturing	8,221	8,301	0.1	3.5
D Electricity, gas & water supply	3,265	2,084	-4.4	8.2
E Construction	2,226	3,158	3.6	4.8
F Wholesale trade	4,204	4,444	0.6	7.0
G Retail trade	2,300	2,859	2.2	4.7
H Accommodation, cafes & restaurants	2,001	3,566	5.9	11.3
I Transport and storage	5,464	5,724	0.5	9.7
J Communication services	2,648	5,981	8.5	20.4
K Finance and insurance	11,915	20,675	5.7	31.2
L Property and business services	16,666	36,974	8.3	15.1
M Govt administration & defence	5,518	6,578	1.8	11.9
N Education	1,568	2,111	3.0	6.4
O Health and community services	2,490	3,189	2.5	5.6
P Cultural & recreational services	2,270	4,181	6.3	16.5
Q Personal and other services	1,719	2,129	2.2	8.4
<b>Total</b>	<b>73,168</b>	<b>112,092</b>	<b>4.4</b>	<b>9.6</b>
Gross regional product (GRP)	40,399	62,465	4.5	5.3

## AGED CHARACTERISTICS

		2001	National average
Percentage of people employed, 55 to 64 years	Male	58.3	56.1
	Female	44.1	35.8
ABS Census unemployment, % of population	Male	5.3	6.9
	Female	2.7	3.8
Single person households, % of all households	55 to 74 years	63.2	57.1
	Aged 75+	36.8	25.2
Tenure type, percentage where household head 55+	Fully owned	60.1	70.8
	Being purchased	6.1	9.2
	Private rental	10.9	8.2
	Public rental	9.1	4.3
	Other	13.9	7.5
Ratio of pop 70+ to population 55+		0.44	0.41

## Melbourne Inner

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2003 level	2003 percentage	% point change 1998-2003
Population	281,873		305,694		299,763		
No. households	125,868		140,288		150,615		
Workforce	169,206	59.9	163,474	53.7	176,661	58.9	-1.0
Employment	147,051		151,600		165,927		
Unemployment	22,156	13.1	11,874	7.3	10,734	6.0	-7.1
DEET U/E	10,927	6.5	8,808	5.3	8,620	4.8	-1.7
Structural U/E, % population <sup>1</sup>	24,790	12.2	19,129	8.6	19,213	8.9	-3.3

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2003 level (\$m)	2003 per capita (\$)	% p.a. growth 1998-2003
Wages/salaries	6,260	22,437	7,315	25,211	9,416	31,411	8.8
Taxes paid	1,815	6,504	1,899	6,546	2,500	8,339	6.4
GST paid	330	1,181	545	1,878	832	2,776	–
Benefits	536	1,920	516	1,778	543	1,811	-1.5
Business income	1,051	3,767	1,160	3,997	1,659	5,533	10.1
Interest/dividends	515	1,845	616	2,124	648	2,163	4.1
Interest paid	411	1,473	565	1,946	504	1,680	3.3
Net property income	266	954	319	1,098	309	1,029	1.9
Net flow of funds	6,073	21,765	6,916	23,837	8,739	29,153	7.6
Rank		1		1		1	

### AGE DISTRIBUTION

	Proportion of population			Total population	Average age
	Less than 25	25 to 54 years	55+ years		
1996	0.29	0.51	0.20	271,502	36.7
2001	0.28	0.52	0.19	294,854	36.5
2011	0.25	0.55	0.20	AOR	37.1
2021	0.27	0.48	0.24	AOR	40.1
Change 2001 to 2021	-0.01	-0.04	0.05	AOR	3.6

Note: AOR = Available on request.

## WHERE CURRENT POPULATION CAME FROM SINCE 1996, BY REGION OR STATE

Origin	People	Origin	People
Melbourne East	16,913	VIC Central Highlands	1,190
VIC Gippsland	2,066	NSW	6,996
VIC Barwon	2,104	VIC	
VIC Goulburn	1,436	QLD	4,493
VIC Loddon	1,455	SA	2,556
VIC Mallee-Wimmera	1,019	WA	2,674
Melbourne North	7,908	TAS	1,639
VIC Ovens-Hume	688	NT	367
Melbourne South	8,475	ACT	1,251
Melbourne West	5,137	Other Territories	3
VIC West	759	Overseas	29,870
Melbourne Westport	4,839		

## WHERE THE CURRENT POPULATION WERE IN 1996

Age in 2001	Location in 1996, of 2001 Census usual residence, proportion					
	Not yet born	Same address	Same LGA or 'local move'	Other Australia	Overseas	Not Stated
0 to 24 years	15.7	23.4	10.6	25.5	15.1	9.8
25 to 54 years		29.2	23.2	27.5	11.3	8.8
55 + years		65.7	11.9	9.1	2.0	11.3
<b>Total</b>	<b>4.5</b>	<b>34.6</b>	<b>17.4</b>	<b>23.4</b>	<b>10.6</b>	<b>9.6</b>

## SOURCES OF NET POPULATION CHANGE SINCE 1996

Age in 2001	Percentage of 2001, estimated resident population (ERP)				
	New population under 5 years	Net change from internal migration	Net change from death and overseas migration	Age progression	Growth
0 to 24 years	3.10	2.65	3.06	-7.91	0.89
25 to 54 years		-0.18	-0.16	2.46	2.13
55 + years		-0.61	-3.10	4.83	1.12
<b>Total</b>	<b>0.87</b>	<b>0.54</b>	<b>0.18</b>		<b>1.58</b>
Number per year	2,570	1,581	519		4,670

## PROFILE OF REGIONAL PRODUCTION

Industry		Output 2001 \$ million		Real growth, % p.a.	Share of Australia, 2001
		1991	2001		
A	Agriculture, forestry & fishing	22	44	7.0	0.1
B	Mining	429	298	-3.6	0.6
C	Manufacturing	9,574	12,643	2.8	5.3
D	Electricity, gas & water supply	1,868	1,927	0.3	7.6
E	Construction	1,684	2,504	4.0	3.8
F	Wholesale trade	3,910	3,747	-0.4	5.9
G	Retail trade	1,988	2,465	2.2	4.1
H	Accomm., cafes & restaurants	1,166	2,239	6.7	7.1
I	Transport and storage	5,027	4,868	-0.3	8.2
J	Communication services	2,456	5,625	8.6	19.2
K	Finance and insurance	6,031	13,423	8.3	20.2
L	Property and business services	11,241	24,708	8.2	10.1
M	Govt administration & defence	5,435	4,398	-2.1	7.9
N	Education	1,438	1,801	2.3	5.5
O	Health and community services	3,128	3,750	1.8	6.6
P	Cultural & recreational services	1,216	3,121	9.9	12.3
Q	Personal and other services	1,297	1,683	2.6	6.7
<b>Total</b>		<b>57,912</b>	<b>89,245</b>	<b>4.4</b>	<b>7.6</b>
Gross regional product (GRP)		30,820	47,337	4.4	4.0

## AGED CHARACTERISTICS

		2001	National average
Percentage of people employed, 55 to 64 years	Male	56.4	56.1
	Female	42.3	35.8
ABS Census unemployment, % of labour force	Male	5.9	6.9
	Female	4.0	3.8
Single person households, % of all households	55 to 74 years	66.1	57.1
	Aged 75+	38.6	25.2
Tenure type, percentage where household head 55+	Fully owned	57.5	70.8
	Being purchased	6.6	9.2
	Private rental	12.4	8.2
	Public rental	10.0	4.3
	Other	13.6	7.5
Ratio of pop 70+ to population 55+		0.43	0.41

## Brisbane City

### POPULATION / LABOUR FORCE

	1998		2001		2003		% point change
	1998 level	percentage	2001 level	percentage	2003 level	percentage	1998-2003
Population	852,967		899,604		937,016		
No. households	329,094		353,283		369,559		
Workforce	463,017	54.6	482,935	53.7	503,726	53.8	-0.8
Employment	424,465	–	442,329	–	469,967	–	
Unemployment	38,552	8.3	40,606	8.4	33,759	6.7	-1.6
DEET U/E	31,138	6.8	31,556	6.6	31,184	6.3	-0.5
Structural U/E, % population <sup>1</sup>	45,133	9.0	49,266	10.0	49,624	8.2	-0.8

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level	1999 per	2001 level	2001 per	2003 level	2003 per	% p.a. growth
	(\$m)	capita (\$)	(\$m)	capita (\$)	(\$m)	capita (\$)	1998-2003
Wages/salaries	14,115	15,967	15,794	17,614	18,338	19,570	5.2
Taxes paid	3,691	4,176	3,860	4,305	4,612	4,922	4.2
GST paid	809	916	1,226	1,367	1,507	1,608	–
Benefits	1,576	1,783	1,696	1,891	1,788	1,908	1.7
Business income	2,094	2,368	2,201	2,454	2,869	3,062	6.6
Interest/dividends	689	779	763	850	792	845	2.0
Interest paid	1,034	1,170	1,368	1,526	1,207	1,288	2.4
Net property income	252	285	286	319	273	291	0.5
Net flow of funds	13,191	14,922	14,284	15,931	16,733	17,858	4.6
Rank		14		15		14	

### AGE DISTRIBUTION

	Proportion of population			Total population	Average age
	Less than 25	25 to 54 years	55+ years		
1996	0.35	0.44	0.20	824,487	35.8
2001	0.34	0.45	0.21	898,480	36.5
2011	0.32	0.45	0.22	AOR	37.1
2021	0.31	0.43	0.25	AOR	38.7
Change 2001 to 2021	-0.03	-0.02	0.04	AOR	2.2

Note: AOR = Available on request.

#### WHERE CURRENT POPULATION CAME FROM SINCE 1996, BY REGION OR STATE

Origin	People	Origin	People
QLD Pastoral	1,577	Brisbane North	17,218
QLD Agricultural SW	6,997	NSW	25,492
QLD Far North	5,324	VIC	10,218
QLD Fitzroy	5,740	QLD	1,995
QLD Mackay	3,490	SA	3,728
QLD North West	1,120	WA	3,565
QLD North	5,170	TAS	2,025
QLD Wide Bay-Burnett	7,241	NT	2,345
QLD West Moreton	8,679	ACT	3,083
QLD Gold Coast	28,982	Other Territories	24
QLD Sunshine Coast	6,958	Overseas	49,792

#### WHERE THE CURRENT POPULATION WERE IN 1996

Age in 2001	Location in 1996, of 2001 Census usual residence, proportion					
	Not yet born	Same address	Same LGA or 'local move'	Other Australia	Overseas	Not Stated
0 to 24 years	18.0	31.7	20.0	19.9	6.5	3.9
25 to 54 years		38.7	29.6	19.7	7.1	4.9
55 + years		73.0	13.7	6.8	1.5	5.0
<b>Total</b>	<b>6.2</b>	<b>43.5</b>	<b>23.0</b>	<b>17.1</b>	<b>5.7</b>	<b>4.6</b>

#### SOURCES OF NET POPULATION CHANGE SINCE 1996

Age in 2001	Percentage of 2001, estimated resident population (ERP)				
	New population under 5 years	Net change from internal migration	Net change from death and overseas migration	Age progression	Growth
0 to 24 years	3.59	1.92	0.73	-5.40	0.85
25 to 54 years		0.61	-0.34	1.75	2.01
55 + years		-0.46	-2.38	5.00	2.16
<b>Total</b>	<b>1.22</b>	<b>0.83</b>	<b>-0.40</b>		<b>1.65</b>
Number per year	10,963	7,460	-3,624		14,799

## PROFILE OF REGIONAL PRODUCTION

Industry	Output 2001 \$ million		Real growth % p.a.	Share of Australia, 2001
	1991	2001		
A Agriculture, forestry & fishing	79	209	10.2	0.5
B Mining	505	480	-0.5	0.9
C Manufacturing	13,307	15,708	1.7	6.6
D Electricity, gas & water supply	1,270	1,719	3.1	6.8
E Construction	2,595	3,520	3.1	5.4
F Wholesale trade	4,034	4,882	1.9	7.7
G Retail trade	2,966	3,898	2.8	6.5
H Accommodation, cafes & restaurants	1,067	2,069	6.8	6.6
I Transport and storage	3,711	5,501	4.0	9.3
J Communication services	1,457	2,704	6.4	9.2
K Finance and insurance	2,574	4,456	5.6	6.7
L Property and business services	7,890	14,446	6.2	5.9
M Government administration & defence	2,856	4,845	5.4	8.7
N Education	1,323	2,031	4.4	6.2
O Health and community services	2,600	3,700	3.6	6.5
P Cultural & recreational services	718	1,475	7.5	5.8
Q Personal and other services	883	1,940	8.2	7.7
<b>Total</b>	<b>49,836</b>	<b>73,584</b>	<b>4.0</b>	<b>6.3</b>
Gross regional product (GRP)	23,746	36,246	4.3	3.1

## AGED CHARACTERISTICS

		2001	National average
Percentage of people employed, 55 to 64 years	Male	61.9	56.1
	Female	42.2	35.8
ABS Census unemployment, % of labour force	Male	6.4	6.9
	Female	3.1	3.8
Single person households, % of all households	55 to 74 years	58	57.1
	Aged 75+	27.8	25.2
Tenure type, percentage where household head 55+	Fully owned	71.0	70.8
	Being purchased	9.5	9.2
	Private rental	9.2	8.2
	Public rental	4.5	4.3
	Other	5.9	7.5
Ratio of pop 70+ to population 55+		0.43	0.41



## Adelaide Central

### POPULATION / LABOUR FORCE

	1998		2001		2003		% point change
	1998 level	percentage	2001 level	percentage	2003 level	percentage	1998-2003
Population	90,947		92,544		91,203		
No. households	39,562		40,942		42,480		
Workforce	48,981	53.9	50,078	54.1	50,354	55.2	1.3
Employment	44,375		45,834		46,444		
Unemployment	4,605	9.4	4,244	8.5	3,910	7.8	-1.6
DEWRSB U/E	3,984	8.1	3,243	6.5	2,985	6.0	-2.1
Structural U/E, % population <sup>1</sup>	5,866	10.5	5,991	11.2	5,674	9.7	-0.8

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level	1999 per	2001 level	2001 per	2003 level	2003 per	% p.a. growth
	(\$m)	capita (\$)	(\$m)	capita (\$)	(\$m)	capita (\$)	1998-2003
Wages/salaries	1,554	17,279	1,772	19,537	2,078	22,785	7.2
Taxes paid	470	5,227	506	5,576	608	6,670	6.3
GST paid	98	1,086	147	1,625	194	2,123	-
Benefits	189	2,104	197	2,174	205	2,252	1.7
Business income	223	2,479	238	2,620	330	3,615	9.9
Interest/dividends	151	1,677	173	1,911	189	2,073	5.5
Interest paid	101	1,125	137	1,511	149	1,637	9.8
Net property income	51	569	58	641	58	635	2.8
Net flow of funds	1,499	16,670	1,648	18,172	1,909	20,929	5.9
Rank		11		11		10	

### AGE DISTRIBUTION

	Proportion of population			Total population	Average age
	Less than 25	25 to 54 years	55+ years		
1996	0.30	0.44	0.26	90,038	39.3
2001	0.29	0.45	0.26	91,093	40.1
2011	0.26	0.43	0.31	95,140	42.4
2021	0.25	0.40	0.35	99,740	44.3
Change 2001 to 2021	-0.04	-0.05	0.09	8,647	4.2

## WHERE CURRENT POPULATION CAME FROM SINCE 1996, BY REGION OR STATE

Origin	People	Origin	People
Adelaide Central – Other	8,216	QLD	826
SA Eyre and Yorke	1,388	SA	222
SA Murraylands	601	WA	442
Adelaide Plains	4,789	TAS	258
SA South East	534	NT	412
Adelaide Outer	4,321	ACT	266
NSW	1,424	Other Territories	6
VIC	1,457	Overseas	3,990

## WHERE THE CURRENT POPULATION WERE IN 1996

Age in 2001	Location in 1996, of 2001 Census usual residence, proportion					
	Same LGA or			Other Australia	Overseas	Not Stated
	Not yet born	Same address	'local move'			
0 to 24 years	16.3	32.3	14.1	26.7	6.3	4.3
25 to 54 years		41.3	23.0	24.8	5.6	5.2
55 + years		70.4	12.4	9.7	0.9	6.6
<b>Total</b>	<b>4.7</b>	<b>46.4</b>	<b>17.6</b>	<b>21.4</b>	<b>4.6</b>	<b>5.3</b>

## SOURCES OF NET POPULATION CHANGE SINCE 1996

Age in 2001	Percentage of 2001, estimated resident population (ERP)				
	New population under 5 years	Net change from internal migration	Net change from death and overseas migration	Age progression	Growth
0 to 24 years	3.14	2.59	0.49	-7.19	-0.96
25 to 54 years		-0.79	-0.88	2.32	0.66
55 + years		0.33	-3.39	3.86	0.80
<b>Total</b>	<b>0.90</b>	<b>0.48</b>	<b>-1.15</b>		<b>0.23</b>
Number per year	822	436	-1,047		211

## PROFILE OF REGIONAL PRODUCTION

Industry		Output 2001 \$ million		Real growth, % p.a.	Share of Australia, 2001
		1991	2001		
A	Agriculture, forestry & fishing	9	8	-0.2	0.0
B	Mining	306	169	-5.8	0.3
C	Manufacturing	1,336	1,242	-0.7	0.5
D	Electricity, gas & water supply	139	412	11.5	1.6
E	Construction	593	645	0.8	1.0
F	Wholesale trade	701	526	-2.8	0.8
G	Retail trade	694	798	1.4	1.3
H	Accomm., cafes & restaurants	457	737	4.9	2.3
I	Transport and storage	381	455	1.8	0.8
J	Communication services	558	995	5.9	3.4
K	Finance and insurance	1,986	2,348	1.7	3.5
L	Property and business services	2,456	4,300	5.8	1.8
M	Govt administration & defence	1,589	1,840	1.5	3.3
N	Education	596	645	0.8	2.0
O	Health and community services	1,265	1,587	2.3	2.8
P	Cultural & recreational services	498	679	3.2	2.7
Q	Personal and other services	492	632	2.5	2.5
<b>Total</b>		<b>14,056</b>	<b>18,019</b>	<b>2.5</b>	<b>1.5</b>
Gross regional product (GRP)		8,149	10,465	2.5	0.9

## AGED CHARACTERISTICS

		2001	National average
Percentage of people employed, 55 to 64 years	Male	59.8	56.1
	Female	43.2	35.8
ABS Census unemployment, % of labour force	Male	4.2	6.9
	Female	3.2	3.8
Single person households, % of all households	55 to 74 years	67.7	57.1
	Aged 75+	37.6	25.2
Tenure type, percentage where household head 55+	Fully owned	67.3	70.8
	Being purchased	6.7	9.2
	Private rental	9.5	8.2
	Public rental	5.5	4.3
	Other	11.0	7.5
Ratio of pop 70+ to population 55+		0.52	0.41

## Perth Central

### POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 percentage	2003 level	2003 percentage	% point change 1998-2003
Population	164,926		168,304		171,850		
No. households	73,365		77,533		78,703		
Workforce	91,760	55.6	92,581	55.0	93,116	54.2	-1.4
Employment	85,125		85,882		87,094		
Unemployment	6,634	7.2	6,700	7.2	6,022	6.5	-0.7
DEWRSB U/E	5,550	6.0	5,517	6.0	5,121	5.5	-0.5
Structural U/E, % population <sup>1</sup>	8,835	8.6	9,730	9.8	8,789	8.0	-0.6

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2003 level (\$m)	2003 per capita (\$)	% p.a. growth 1998-2003
Wages/salaries	3,045	18,388	3,533	21,024	4,264	24,810	7.8
Taxes paid	919	5,546	994	5,919	1,284	7,471	7.7
GST paid	166	1,000	258	1,535	326	1,900	-
Benefits	291	1,755	304	1,809	322	1,876	1.7
Business income	797	4,814	865	5,150	1,099	6,394	7.4
Interest/dividends	246	1,488	284	1,691	307	1,789	4.7
Interest paid	242	1,458	330	1,966	335	1,952	7.6
Net property income	125	755	140	836	139	806	1.7
Net flow of funds	3,179	19,194	3,544	21,091	4,185	24,354	6.1
Rank		5		6		5	

### AGE DISTRIBUTION

	Proportion of population			Total population	Average age
	Less than 25	25 to 54 years	55 + years		
1996	0.32	0.44	0.23	162,305	37.9
2001	0.31	0.45	0.23	168,506	38.2
2011	0.28	0.47	0.25	192,765	39.8
2021	0.28	0.44	0.28	214,783	41.5
Change 2001 to 2021	-0.03	-0.01	0.05	46,277	3.3

#### WHERE CURRENT POPULATION CAME FROM SINCE 1996, BY REGION OR STATE

Origin	People	Origin	People
WA Pilbara-Kimberley	1,007	QLD	1,527
WA Gascoyne-Goldfields	1,814	SA	850
WA Wheatbelt-Great Southern	2,118	WA	325
WA Peel-South West	2,251	TAS	386
Perth Central – Other	8,558	NT	410
Perth Outer North	6,082	ACT	347
Perth Outer South	9,758	Other Territories	23
NSW	2,194	Overseas	14,407
VIC	2,095		

#### WHERE THE CURRENT POPULATION WERE IN 1996

Age in 2001	Location in 1996, of 2001 Census usual residence, proportion					
	Not yet born	Same address	Same LGA or 'local move'	Other Australia	Overseas	Not Stated
0 to 24 years	15.6	28.0	13.9	25.4	11.5	5.6
25 to 54 years		34.4	20.7	27.7	11.0	6.2
55 + years		68.5	10.8	10.1	1.7	8.9
<b>Total</b>	<b>5.0</b>	<b>40.3</b>	<b>16.3</b>	<b>22.9</b>	<b>9.0</b>	<b>6.6</b>

#### SOURCES OF NET POPULATION CHANGE SINCE 1996

Age in 2001	Percentage of 2001, estimated resident population (ERP)				
	New population under 5 years	Net change from internal migration	Net change from death and overseas migration	Age progression	Growth
0 to 24 years	3.10	2.26	1.52	-6.69	0.18
25 to 54 years		-0.59	-0.65	2.41	1.17
55 + years		-0.27	-3.41	4.32	0.64
<b>Total</b>	<b>0.97</b>	<b>0.38</b>	<b>-0.61</b>		<b>0.74</b>
Number per year	1,634	636	-1,029		1,240

## PROFILE OF REGIONAL PRODUCTION

Industry		Output 2001 \$ million		Real growth, % p.a.	Share of Australia, 2001
		1991	2001		
A	Agriculture, forestry & fishing	38	40	0.5	0.1
B	Mining	1,590	1,416	-1.2	2.7
C	Manufacturing	2,432	1,416	-5.3	0.6
D	Electricity, gas & water supply	842	1,596	6.6	6.3
E	Construction	1,471	1,240	-1.7	1.9
F	Wholesale trade	1,294	721	-5.7	1.1
G	Retail trade	996	1,024	0.3	1.7
H	Accomm., cafes & restaurants	735	986	3.0	3.1
I	Transport and storage	1,180	937	-2.3	1.6
J	Communication services	1,052	1,468	3.4	5.0
K	Finance and insurance	1,553	3,057	7.0	4.6
L	Property and business services	4,134	8,085	6.9	3.3
M	Govt administration & defence	2,314	2,452	0.6	4.4
N	Education	845	740	-1.3	2.2
O	Health and community services	1,946	2,508	2.6	4.4
P	Cultural & recreational services	562	758	3.0	3.0
Q	Personal and other services	652	865	2.9	3.4
<b>Total</b>		<b>23,637</b>	<b>29,310</b>	<b>2.2</b>	<b>2.5</b>
Gross regional product (GRP)		13,455	17,254	2.5	1.5

## AGED CHARACTERISTICS

		2001	National average
Percentage of people employed, 55 to 64 years	Male	62.6	56.1
	Female	46.2	35.8
ABS Census unemployment, % of labour force	Male	5.2	6.9
	Female	2.4	3.8
Single person households, % of all households	55 to 74 years	65.7	57.1
	Aged 75+	37.1	25.2
Tenure type, percentage where household head 55+	Fully owned	64.6	70.8
	Being purchased	7.1	9.2
	Private rental	11.4	8.2
	Public rental	5.4	4.3
	Other	11.4	7.5
Ratio of pop 70+ to population 55+		0.50	0.41

## Hobart Region

### POPULATION / LABOUR FORCE

	1998		2001		2003		% point change
	1998 level	percentage	2001 level	percentage	2003 level	percentage	1998-2003
Population	139,777		138,360		141,425		
No. households	55,983		56,710		59,830		
Workforce	72,910	52.2	69,742	50.4	69,192	48.9	-3.3
Employment	57,966		59,165		59,324		
Unemployment	14,944	20.5	10,576	15.2	9,868	14.3	-6.2
DEWRSB U/E	5,539	7.6	6,189	8.9	5,332	8.1	0.5
Structural U/E, % population <sup>1</sup>	15,915	20.8	14,024	18.4	12,547	14.5	-6.3

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level	1999 per	2001 level	2001 per	2003 level	2003 per	% p.a. growth
	(\$m)	capita (\$)	(\$m)	capita (\$)	(\$m)	capita (\$)	1998-2003
Wages/salaries	1,829	13,026	1,866	13,228	2,243	15,857	5.0
Taxes paid	473	3,372	464	3,286	593	4,190	5.6
GST paid	133	948	178	1,261	208	1,472	-
Benefits	349	2,487	333	2,361	348	2,463	-0.2
Business income	260	1,855	270	1,913	336	2,379	6.4
Interest/dividends	91	650	96	683	98	691	1.5
Interest paid	143	1,021	182	1,288	192	1,360	7.4
Net property income	33	234	37	259	34	240	0.6
Net flow of funds	1,813	12,911	1,778	12,608	2,066	14,608	3.1
Rank		34		45		28	

### AGE DISTRIBUTION

	Proportion of population			Total population	Average age
	Less than 25	25 to 54 years	55+ years		
1996	0.35	0.42	0.23	140,881	36.6
2001	0.33	0.42	0.25	141,445	37.9
2011	0.32	0.39	0.29	148,944	40.2
2021	0.31	0.36	0.33	150,022	41.9
Change 2001 to 2021	-0.02	-0.06	0.08	8,577	4.0

#### WHERE CURRENT POPULATION CAME FROM SINCE 1996, BY REGION OR STATE

Origin	People	Origin	People
TAS Hobart-South	8,203	WA	685
TAS North West	1,986	TAS	294
TAS North	2,095	NT	162
NSW	1,781	ACT	280
VIC	1,782	Other Territories	0
QLD	1,469	Overseas	2,503
SA	519		

#### WHERE THE CURRENT POPULATION WERE IN 1996

Age in 2001	Location in 1996, of 2001 Census usual residence, proportion					
	Same LGA or			Other Australia	Overseas	Not Stated
	Not yet born	Same address	'local move'			
0 to 24 years	17.6	38.3	18.5	19.8	2.1	3.7
25 to 54 years		49.1	23.1	21.3	2.3	4.2
55 + years		75.4	10.9	8.7	0.6	4.4
<b>Total</b>	<b>5.9</b>	<b>52.0</b>	<b>18.6</b>	<b>17.7</b>	<b>1.8</b>	<b>4.1</b>

#### SOURCES OF NET POPULATION CHANGE SINCE 1996

Age in 2001	Percentage of 2001, estimated resident population (ERP)				
	New population under 5 years	Net change from internal migration	Net change from death and overseas migration	Age progression	Growth
0 to 24 years	3.54	0.28	-0.06	-4.82	-1.07
25 to 54 years		-0.65	-0.42	1.18	0.12
55 + years		0.04	-2.96	4.48	1.56
<b>Total</b>	<b>1.18</b>	<b>-0.17</b>	<b>-0.93</b>		<b>0.08</b>
Number per year	1,667	-241	-1,313		113



## PROFILE OF REGIONAL PRODUCTION

Industry		Output 2001 \$ million		Real growth, % p.a.	Share of Australia, 2001
		1991	2001		
A	Agriculture, forestry & fishing	68	110	4.9	0.3
B	Mining	80	17	-14.5	0.0
C	Manufacturing	1,744	1,536	-1.3	0.6
D	Electricity, gas & water supply	461	679	4.0	2.7
E	Construction	370	357	-0.3	0.5
F	Wholesale trade	394	289	-3.1	0.5
G	Retail trade	470	503	0.7	0.8
H	Accomm., cafes & restaurants	199	283	3.6	0.9
I	Transport and storage	316	338	0.7	0.6
J	Communication services	176	227	2.6	0.8
K	Finance and insurance	315	527	5.3	0.8
L	Property and business services	889	1,040	1.6	0.4
M	Govt administration & defence	806	1,042	2.6	1.9
N	Education	252	293	1.5	0.9
O	Health and community services	474	719	4.2	1.3
P	Cultural & recreational services	152	211	3.3	0.8
Q	Personal and other services	200	253	2.4	1.0
<b>Total</b>		<b>7,366</b>	<b>8,423</b>	<b>1.4</b>	<b>0.7</b>
Gross regional product (GRP)		3,843	4,657	1.9	0.4

## AGED CHARACTERISTICS

		2001	National average
Percentage of people employed, 55 to 64 years	Male	50.6	56.1
	Female	35.8	35.8
ABS Census unemployment, % of labour force	Male	8.3	6.9
	Female	3.7	3.8
Single person households, % of all households	55 to 74 years	62.2	57.1
	Aged 75+	32.0	25.2
Tenure type, percentage where household head 55+	Fully owned	72.0	70.8
	Being purchased	9.7	9.2
	Private rental	6.4	8.2
	Public rental	6.0	4.3
	Other	5.9	7.5
Ratio of pop 70+ to population 55+		0.45	0.41

## Darwin

### POPULATION / LABOUR FORCE

	1998		2001		2003		% point change
	1998 level	percentage	2001 level	percentage	2003 level	percentage	1998-2003
Population	69,301		69,385		67,957		
No. households	25,676		26,581		27,787		
Workforce	39,605	57.1	41,979	60.5	45,064	66.3	9.2
Employment	35,221		37,885		41,467		
Unemployment	4,384	11.1	4,094	9.8	3,597	8.0	-3.1
DEWRSB U/E	1,681	4.2	1,301	3.1	1,398	3.1	-1.1
Structural U/E, % population <sup>1</sup>	4,844	11.0	5,203	11.0	4,576	10.0	-1.0

Note: 1. Population aged 18–65 years.

### FLOW OF FUNDS

	1999 level	1999 per	2001 level	2001 per	2003 level	2003 per	% p.a. growth
	(\$m)	capita (\$)	(\$m)	capita (\$)	(\$m)	capita (\$)	1998-2003
Wages/salaries	1,505	21,292	1,689	24,576	1,931	28,417	7.5
Taxes paid	290	4,107	271	3,941	399	5,873	9.4
GST paid	68	959	105	1,532	119	1,745	-
Benefits	103	1,463	107	1,552	110	1,625	2.7
Business income	153	2,162	161	2,338	208	3,066	9.1
Interest/dividends	34	488	40	579	45	661	7.9
Interest paid	73	1,035	101	1,468	112	1,643	12.3
Net property income	2	22	1	14	1	15	-9.2
Net flow of funds	1,366	19,326	1,520	22,120	1,667	24,524	6.1%
Rank		4		4		4	

### AGE DISTRIBUTION

	Proportion of population			Total population	Average age
	Less than 25	25 to 54 years	55+ years		
1996	0.40	0.51	0.09	68,891	30.2
2001	0.36	0.51	0.13	69,698	31.1
2011	0.33	0.46	0.22	67,705	36.9
2021	0.29	0.43	0.28	57,802	40.1
Change 2001 to 2021	-0.07	-0.08	0.15	(11,896)	9.0

#### WHERE CURRENT POPULATION CAME FROM SINCE 1996, BY REGION OR STATE

Origin	People	Origin	People
Darwin – Other	1,549	WA	1,808
NT Lingiari	2,370	TAS	344
NSW	2,516	NT	388
VIC	2,009	ACT	486
QLD	3,131	Other Territories	6
SA	1,992	Overseas	2,553

#### WHERE THE CURRENT POPULATION WERE IN 1996

Location in 1996, of 2001 Census usual residence, proportion						
Age in 2001	Same LGA or					
	Not yet born	Same address	'local move'	Other Australia	Overseas	Not Stated
0 to 24 years	19.7	30.0	15.0	23.6	3.5	8.1
25 to 54 years		35.8	20.0	29.6	4.8	9.9
55 + years		64.8	13.3	11.0	1.9	9.0
<b>Total</b>	<b>7.3</b>	<b>37.2</b>	<b>17.3</b>	<b>25.1</b>	<b>4.0</b>	<b>9.1</b>

#### SOURCES OF NET POPULATION CHANGE SINCE 1996

Percentage of 2001, estimated resident population (ERP)					
Age in 2001	New population	Net change from	Net change from death	Age progression	Growth
	under 5 years	internal migration	and overseas migration		
0 to 24 years	3.85	-0.56	0	-5.16	-1.60
25 to 54 years		-1.49	0	1.50	0.11
55 + years		-2.38	-0	8.71	5.97
<b>Total</b>	<b>1.40</b>	<b>-1.27</b>	<b>0</b>		<b>0.23</b>
Number per year	974	-882	69		161

## PROFILE OF REGIONAL PRODUCTION

		Output 2001 \$ million		Real growth, % p.a.	Share of Australia, 2001
Industry		1991	2001		
A	Agriculture, forestry & fishing	59	46	-2.3	0.1
B	Mining	221	32	-17.5	0.1
C	Manufacturing	506	315	-4.6	0.1
D	Electricity, gas & water supply	148	101	-3.8	0.4
E	Construction	403	228	-5.5	0.3
F	Wholesale trade	296	245	-1.9	0.4
G	Retail trade	349	340	-0.3	0.6
H	Accomm., cafes & restaurants	148	216	3.9	0.7
I	Transport and storage	295	430	3.9	0.7
J	Communication services	149	279	6.4	1.0
K	Finance and insurance	158	252	4.8	0.4
L	Property and business services	599	1,116	6.4	0.5
M	Govt administration & defence	623	537	-1.5	1.0
N	Education	167	203	1.9	0.6
O	Health and community services	275	367	2.9	0.6
P	Cultural & recreational services	158	235	4.1	0.9
Q	Personal and other services	62	108	5.8	0.4
Total		4,615	5,051	0.9	0.4
Gross regional product (GRP)		2,575	2,912	1.2	0.2

## AGED CHARACTERISTICS

		2001	National average
Percentage of people employed, 55 to 64 years	Male	55.8	56.1
	Female	45.4	35.8
ABS Census unemployment, % of labour force	Male	6.6	6.9
	Female	2.4	3.8
Single person households, % of all households	55 to 74 years	53.1	57.1
	Aged 75+	31.7	25.2
Tenure type, percentage where household head 55+	Fully owned	45.0	70.8
	Being purchased	18.8	9.2
	Private rental	13.3	8.2
	Public rental	12.5	4.3
	Other	10.4	7.5
Ratio of pop 70+ to population 55+		0.22	0.41

# ACT

## POPULATION / LABOUR FORCE

	1998 level	1998 percentage	2001 level	2001 Percentage	2003 level	2003 Percentage	% point change 1998-2003
Population	308,947		314,171		323,672		
No. households	116,413		122,589		126,675		
Workforce	171,586	55.6	178,298	56.9	182,799	56.5	0.9
Employment	157,447		168,561		173,987		
Unemployment	14,138	8.2	9,737	5.5	8,812	4.8	-3.4
DEET U/E	10,742	6.3	8,501	4.8	7,688	4.3	-2.0
Structural U/E, % population <sup>1</sup>	15,287	7.6	13,114	6.4	13,316	6.3	-1.3

Note: 1. Population aged 18–65 years.

## FLOW OF FUNDS

	1999 level (\$m)	1999 per capita (\$)	2001 level (\$m)	2001 per capita (\$)	2003 level (\$m)	2003 per capita (\$)	% p.a. growth 1998-2003
Wages/salaries	7,459	21,716	8,286	25,949	8,656	26,742	5.3
Taxes paid	1,658	4,829	1,599	5,008	1,965	6,071	5.9
GST paid	324	942	503	1,574	596	1,840	–
Benefits	406	1,183	403	1,263	423	1,308	2.5
Business income	511	1,488	546	1,708	633	1,956	7.1
Interest/dividends	197	573	215	675	226	700	5.1
Interest paid	443	1,290	580	1,816	478	1,477	3.5
Net property income	49	144	55	173	53	165	3.5
Net flow of funds	6,198	18,044	6,824	21,370	6,953	21,483	4.5
Rank		6		5		8	

## AGE DISTRIBUTION

	Proportion of population			Total population	Average age
	Less than 25	25 to 54 years	55+ years		
1996	0.39	0.47	0.14	308,251	32.3
2001	0.36	0.47	0.17	321,680	33.8
2011	0.31	0.45	0.24	AOR	37.3
2021	0.27	0.43	0.30	AOR	40.4
Change 2001 to 2021	-0.09	-0.04	0.13	AOR	6.6

Note: AOR = Available on request.

#### WHERE CURRENT POPULATION CAME FROM SINCE 1996, BY REGION OR STATE

Origin	People	Origin	People
NSW	25,504	TAS	1,119
VIC	5,404	NT	1,158
QLD	6,062	Other Territories	63
SA	2,351	Overseas	12,327
WA	1,971		

#### WHERE THE CURRENT POPULATION WERE IN 1996

Age in 2001	Location in 1996, of 2001 Census usual residence, proportion					
	Same LGA or					Not Stated
	Not yet born	Same address	'local move'	Other Australia	Overseas	
0 to 24 years	17.8	38.4	21.6	15.0	3.9	3.4
25 to 54 years		45.0	29.8	16.0	5.0	4.1
55 + years		73.7	14.0	7.0	1.4	3.9
<b>Total</b>	<b>6.6</b>	<b>47.5</b>	<b>24.1</b>	<b>14.1</b>	<b>4.0</b>	<b>3.8</b>

#### SOURCES OF NET POPULATION CHANGE SINCE 1996

Age in 2001	Percentage of 2001, estimated resident population (ERP)				
	New population under 5 years	Net change from internal migration	Net change from death and overseas migration	Age progression	Growth
0 to 24 years	3.60	0.40	0.15	-4.86	-0.71
25 to 54 years		-0.45	-0.22	1.50	0.83
55 + years		-0.51	-1.62	6.30	4.17
<b>Total</b>	<b>1.31</b>	<b>-0.15</b>	<b>-0.33</b>		<b>0.83</b>
Number per year	4,217	-486	-1,045		2,686

## PROFILE OF REGIONAL PRODUCTION

Industry		Output 2001 \$ million		Real growth, % p.a.	Share of Australia, 2001
		1991	2001		
A	Agriculture, forestry & fishing	49	38	-2.7	0.1
B	Mining	192	23	-19.2	0.0
C	Manufacturing	1289	846	-4.1	0.4
D	Electricity, gas & water supply	248	604	9.3	2.4
E	Construction	975	1419	3.8	2.2
F	Wholesale trade	527	550	0.4	0.9
G	Retail trade	780	1018	2.7	1.7
H	Accomm., cafes & restaurants	340	612	6.1	1.9
I	Transport and storage	449	622	3.3	1.1
J	Communication services	324	454	3.4	1.5
K	Finance and insurance	425	908	7.9	1.4
L	Property and business services	2830	4830	5.5	2.0
M	Govt administration & defence	5251	7229	3.2	13.0
N	Education	710	913	2.6	2.8
O	Health and community services	612	1165	6.7	2.1
P	Cultural & recreational services	482	682	3.5	2.7
Q	Personal and other services	404	688	5.5	2.7
<b>Total</b>		<b>15,886</b>	<b>22,601</b>	<b>3.6</b>	<b>1.9</b>
Gross regional product (GRP)		9,044	13,276	3.9	1.1

## AGED CHARACTERISTICS

		2001	National average
Percentage of people employed, 55 to 64 years	Male	62.7	56.1
	Female	47.4	35.8
ABS Census unemployment, % of labour force	Male	4.3	6.9
	Female	2.9	3.8
Single person households, % of all households	55 to 74 years	56.5	57.1
	Aged 75+	25.9	25.2
Tenure type, percentage where household head 55+	Fully owned	67.4	70.8
	Being purchased	13.5	9.2
	Private rental	4.8	8.2
	Public rental	9.1	4.3
	Other	5.2	7.5
Ratio of pop 70+ to population 55+		0.35	0.41

## **Economic overview**

*Peter Brain, Executive Director, NIEIR*

### **Abstract**

**Peter Brain assesses the Australian economy and describes alternative scenarios.**

**Although the GDP growth for 2003-04 was 3.6 per cent, this represented a relatively poor performance.**

The GDP growth rate of 3.6 per cent for 2003-04 was the same as earlier projections. However, it represented a relatively poor performance. The reason for this assessment is due to the fact that over 2003-04 the Australian farm sector recovered from the drought. Farm product in 2003-04 grew by 27 per cent, adding 0.7 per cent to GDP growth. However, non-farm GDP grew by 3 per cent for 2003-04 despite a 5.6 per cent private consumption growth which represents the highest rate of growth for a number of years. Moreover, the growth rate of all the private investment components was 6 per cent or greater.

The reason for the relatively poor GDP growth outcome is, firstly, the poor performance of exports and, secondly, the growth in imports. There is a lag between farm production recovery and exports so the growth in exports resulting from the farm recovery will occur in 2004-05.

In 2003-04 imports grew by 13.1 per cent, only slightly below the growth in 2002-03. This represents a growth in import penetration across a wide range of sectors, including clothing, textiles, motor vehicles, chemicals and machinery. Imports represent one quarter of GDP. Hence, a 13.1 per cent import growth rate means that the growth in imports over 2003-04 reduce GDP by 2.5 per cent from what would otherwise have been the case if imports had growth in line with GDP.

Over the last two years in particular, the growth in imports has been a major negative factor in determining Australia's growth performance.

**Australia's exports performance has also been poor but will recover over the next three years.**

In the few years since 1999-00, the value of Australia's non-resource based exports has been flat. That is, no change has occurred. This is despite the value of trade in the Asia-Pacific region for non-resource based products growing between 30 and 40 per cent over the past four years.

In 2004-05 exports of goods and services are expected to grow by 5.1 per cent, in part due to the recovery of the farm sector. Exports will also recover over the next two to three years because of the coming on-line of major resource projects that were commenced in 2002 or 2003. The most important of these will be the fourth liquefied natural gas (LNG) train on the North West Shelf. In 2006 the Darwin LNG train will come on-line.

**Both the United States and Australian dollars will devalue over the next five years relative to our trading partners.**

Exports may well recover, but without a substantial devaluation of the Australian dollar, import growth will continue to outstrip the growth of exports. With the upswing in the world interest rate cycle now occurring, the continuation of the current growth in imports would lead to an Australian current account deficit of around 7 per cent of GDP. To hold the current account deficit at the 5 per cent level, which is the projection to 2008-09, it is necessary for the Australian dollar to devalue,



in weighted average terms of around 15 per cent over the 2006 to 2009 period. This is built into the projection.

It can be seen from Table 1 that the United States/Australian exchange rate stays relatively unchanged over the projection period. The projection also allows for the outcome that the United States dollar devalues 20 per cent against the Euro, yen and yuan over the projection period. Because Australia maintains parity with the United States dollar, it follows that there is an equivalent devaluation of the Australian dollar against these currencies. The appreciation of the yuan against the United States dollar is also assumed to trigger the appreciation of other Asian currencies against the United States dollar.

It is the devaluation of the Australian dollar that leads to a more subdued growth rate for imports over 2008 and 2009.

### **The recent evidence is that the downside phase of the dwelling cycle has commenced.**

It has long been NIEIR's contention that the down-phase of the current dwelling cycle would only commence when significant growth in established house prices ceased. By the June quarter 2004, established house prices had stabilised with a fall in established house prices in Sydney offset by more moderate price growth elsewhere. Moreover, the trend in approvals and the financing of dwellings for new construction all point to falls in dwelling construction over the next two years. Over the next two years the cumulative decline in housing construction is projected to be 18 per cent.

### **The borrow and spend behaviour of households is now reaching its peak. Household balance sheet constraints will be a negative factor for growth for the foreseeable future.**

The ending of the established house price boom will also lead to a curtailment of a key driver of recent Australian economic growth, namely household borrowing to support consumption expenditure.

The growth in established house prices since 1996 resulted in the ratio of household net worth (the value of the housing stock plus financial assets less financial liabilities) increasing from 6 to 7.8 by June 2005 (Figure 2). From Figure 4, this allowed households to borrow to fund a borrowing gap which has reached 15 per cent of disposable income by June quarter 2004. The borrowing gap represents the difference between consumption expenditure and discretionary income. Discretionary income is significantly smaller than household income in the national accounts because it includes superannuation contributions and superannuation interest, which represents income that is not available for current consumption.

From Figure 3, by the June quarter 2004 the build up in debt to fund the borrowing gap (as well as the high level of housing investment) drove the household debt to net disposable income ratio to 163 per cent. In the June quarter 2002 the rate stood at 137 per cent.

From Figure 1, the household debt service ratio now stands at 25 per cent of disposable income, the highest on the historical record.

The combined impact of stable (or falling) house prices, high debt service and debt-income ratios will, at the most optimistic, force households to hold the borrowing gap at around 15 per cent of income. This will force consumption expenditure to grow in line with household disposable income, which in turn will reduce the rate of growth of private consumption expenditure to between 2 and 3 per cent over the medium term.

### **Even with modest consumption growth, the debt-income/debt-service ratio will continue to rise. A recession is likely at some point before 2010.**

If the borrowing gap is held at 15 per cent, the debt-income ratio will still increase by around 7 percentage points per year. By 2009, given the projection in Table 1, the debt to income ratio will reach 200 per cent. If households decide to stabilise their debt-income ratio then the household savings ratio will have to rise to 6 to 8 per cent. Household consumption would most likely fall and the economy would experience a recession, probably a severe recession.

However, given the forecast methodology outlined above, this aspect has been translated into a lower trend rate of growth rather than a recession and this aspect makes the low case projection of more interest than the high case projection.

## **Fiscal stimulus will support the household sector in the short term.**

The position in the short term is not as bleak as the borrowing gap would suggest because of the strong fiscal stimulus being given to the economy. The May 2004 Federal Budget and the election promises of October 2004 will give a stimulus of around 1 per cent per annum to household income over the next two to three years. This will probably be enough to partially offset the constraints of the household debt-service ratio. Beyond 2007, if a severe recession is to be avoided, further significant fiscal stimulus will be required. That is, as the growth in household debt slows, public sector new borrowings will have to increase significantly.

## **The alternative scenarios**

The problem for Australia is that Australia is not the only economy with households with large amounts of illusionary wealth created by housing price bubbles. The same is true in North America, the United Kingdom and some Western European economies. An economy that is an indicator, in terms of a low scenario over the medium term, is the Netherlands. The Netherlands was a fast growing economy over the second half of the 1990s, in part driven by rapid increases in borrowings funding a house prices-wealth creation consumption boom. In 2001, house prices stabilised due to tightening monetary policy. In 2003 the economy was in recession with private consumption falling by 1.5 per cent, the largest fall since World War II.

For the Netherlands the catalyst was tightening European monetary policy over 2000. For Australia the likely trigger for a low scenario is also most likely to be an external shock such as illustrated in Table 2. There are a number of potential shocks with good probabilities of occurring over the next two to five years. They are listed in the Table.

The reason why a transition path from the base to low scenario is likely to be associated with an external catalyst is that there are two factors that would allow policy authorities to keep the economy on the base scenario trajectory despite increasing constraints in growth. These are:

- strong public sector balance sheets which would allow fiscal policy to be expansionary for a decade or more; and
- the potential for Australian nominal interest rates to be lowered by between 1 and 2 percentage points.

This cushion would allow the base scenario to be achieved if the world economy remained supportive.

Unfortunately, because of vulnerable households in a number of major economies, any negative shock to the world economy is likely to trigger the ushering in of a long period of low growth for Australia, in particular, and many parts of the developed world in general. In short, the low scenario, at least to 2012 or thereabouts, does not have a low probability of outcome.

The high scenario assumes the most optimistic outcomes for the world political economy.

## **Australian energy trade, 2004-10**

ABARE and NIEIR analysis and estimates of Australian energy trade trends are presented below. Over the period there continues to be an energy trade surplus with projected increases in net oil imports being more than offset by coal, natural gas and uranium export increases.

In 2004-05 the trade surplus, at a projected \$7.4 billion (NIEIR/ABARE), will be about \$2 billion higher than in 2003-04 due to higher thermal coal exports (tonnes, prices) and higher LNG exports.

**Table 1 Major economic aggregates: financial year averages (annual per cent rate of change)**

	1998- 99	1999- 00	2000- 01	2001- 02	2002- 03	2003- 04	2004- 05	2005- 06	2006- 07	2007- 08	2008- 09
<b>International</b>											
G7 real GDP	2.3	3.4	2.4	0.2	1.9	3.1	3.3	2.6	2.0	2.5	2.2
Trade partners real GDP	1.4	5.6	3.7	1.6	3.6	4.9	5.0	4.2	3.7	4.4	4.3
G7 CPI	1.0	1.5	2.0	1.1	1.5	1.5	1.8	1.8	1.7	1.9	2.0
Trade partners CPI	6.0	2.1	2.7	3.1	2.9	2.8	2.9	3.0	3.0	3.3	3.3
<b>GDP and components</b>											
Private consumption expenditure	4.8	4.1	2.9	3.3	3.8	5.6	4.1	2.8	2.8	2.6	3.5
Non-dwelling construction	13.2	-8.6	-18.4	12.3	32.0	12.0	5.8	5.4	2.1	-0.2	6.3
Equipment	1.0	11.1	6.1	6.1	16.7	6.0	9.6	5.4	5.3	5.5	5.3
Housing	7.6	14.4	-20.8	19.2	15.4	7.7	-6.3	-10.5	4.3	8.5	6.9
Public consumption expenditure	4.0	2.9	2.0	2.1	4.4	3.3	4.2	3.5	4.2	4.5	3.6
Public investment expenditure	3.9	7.6	-11.9	0.9	6.4	5.3	6.1	3.3	3.7	4.1	-0.9
Stocks and other (% points)	-1.3	0.6	-0.2	-0.4	0.1	-0.7	1.0	-0.1	-0.3	-0.2	0.4
Exports	2.0	9.6	7.3	-1.1	-0.5	0.9	5.1	6.6	4.8	4.3	2.3
Imports	4.8	12.9	-1.3	2.2	13.5	13.1	5.1	3.7	4.1	4.3	4.4
GDP	5.3	3.8	2.0	3.9	3.1	3.6	3.0	2.9	3.1	3.1	3.5
Farm GDP	13.7	9.9	-0.8	4.6	-25.2	26.8	-1.9	-2.3	4.9	5.4	0.0
Non-farm GDP	5.0	3.6	2.1	3.9	4.1	3.0	3.2	3.0	3.1	3.0	3.5
<b>Dwelling sector</b>											
Commencements			-34.1	45.3	3.4	-0.8	-13.3	-7.9	16.3	-5.1	0.4
<b>Labour market</b>											
Employment	2.0	2.1	2.1	1.2	2.5	1.8	1.9	1.8	1.8	1.7	2.4
Unemployment rate	7.4	6.6	6.4	6.8	6.2	5.8	5.6	5.6	5.6	5.7	5.7
Population	1.1	1.2	1.4	1.2	1.2	1.3	1.2	1.2	1.2	1.2	1.1
<b>Wages and prices</b>											
Average weekly earnings	3.5	2.9	4.8	5.3	5.3	5.6	4.2	3.9	4.2	4.7	4.8
CPI	1.3	2.4	6.0	2.9	3.1	2.4	2.6	2.5	3.2	3.3	3.1
Real household disposable income	4.4	3.9	4.6	1.9	1.3	5.1	3.6	2.4	1.8	2.3	3.5
<b>Finance</b>											
90 day bill rate (%)	4.9	5.6	5.8	4.6	4.8	5.3	5.4	5.1	5.0	5.1	5.5
10-year bond yields	5.4	6.5	5.8	5.9	5.3	5.7	5.8	5.6	5.8	5.9	6.1
\$US/\$A	0.63	0.63	0.54	0.52	0.58	0.71	0.73	0.74	0.72	0.70	0.71
<b>External sector</b>											
Current account balance (\$billion)	-33.6	-32.6	-18.0	-20.6	-40.3	-47.4	-45.7	-46.2	-48.2	-50.2	-55.5
Current account balance (% of GDP)	-5.5	-5.1	-2.6	-2.8	-5.2	-5.7	-5.2	-5.0	-4.9	-4.8	-4.9

**Table 2 The alternative scenarios: potential drivers**

Low scenario	High scenario
<ol style="list-style-type: none"> <li>1. Terrorist strike against oil supply infrastructure in the Middle East. Oil price spikes to US\$70 and above. World growth falls to zero 2005-2007.</li> <li>2. Sharp devaluation of US dollar. Capital flight. US dollar devalues 40 per cent. Inflationary pressures in United States forces interest rates up to 8 per cent. Severe United States recession followed by a decade of slow growth.</li> <li>3. Slow growth in developed world results in protectionist measures against China/India. Environmental and economic problems, drying up of capital inflow from low Chinese growth after Beijing Olympics. China becomes isolated and military tensions in North Asia return to 1960 levels.</li> <li>4. The rise in world interest rates and slower world growth results in Australia's current account deficit rising to 8 per cent of GDP. Australian interest rates are raised to reduce domestic demand. Consumption expenditure falls 5 per cent over two years. Capital flight from Australia devalues currency by 40 per cent in trade weighted terms. Inflation of prices critical in demand expansion measures for some time. Governments are slow to adopt expansionary fiscal policies.</li> </ol>	<ol style="list-style-type: none"> <li>1. Iraq stabilises and political solutions reached in Middle East between Jews and Israelis. Terrorism reduced to minimum levels. Oil price returns to US\$15 to US\$25 range.</li> <li>2. Euro Asia adopts expansionary monetary policies. Current high savings ratios allows the borrow and spend dynamic to drive above average European growth rates for 10 to 15 years.</li> <li>3. European growth takes pressure off United States balance of payments. Reformist United States government from 2008 raises taxes and stabilises the fiscal situation.</li> <li>4. China continues to open up and changes from a commercial economy to a market economy. Political transition to a basic democratic framework. World trade expands at 6 to 9 per cent a year resulting in a rapid convergence of living standards between India/China and the developed economies.</li> </ol>

**Table 3 Australian energy trade trends**  
(A\$ billion nominal)

Commodity	2004-05	2010
Coal (thermal) <sup>1</sup>	6.3	7.5
Natural gas (LNG) <sup>2</sup>	3.5	5.1
Uranium <sup>3</sup>	0.5	0.6
Oil (crude and products) <sup>4</sup>	-2.9	-5.0
<b>Total</b>	<b>7.4</b>	<b>8.2</b>

- Notes: 1. 2004 average price = \$50/t.  
 2. 2004 exports = 8 Mt; 2010 exports = 20 Mt.  
 3. Contract prices (A\$/lb U<sub>3</sub>O<sub>8</sub>) rising by 20 per cent, 2003-10.  
 4. 2004; 80 per cent net self sufficiency at A\$60/b. 2010; 65 per cent net self sufficiency at A\$50/b.

**Figure 1: Household debt service ratio**  
- per cent of net disposable income

Figure 2: Net household worth to income

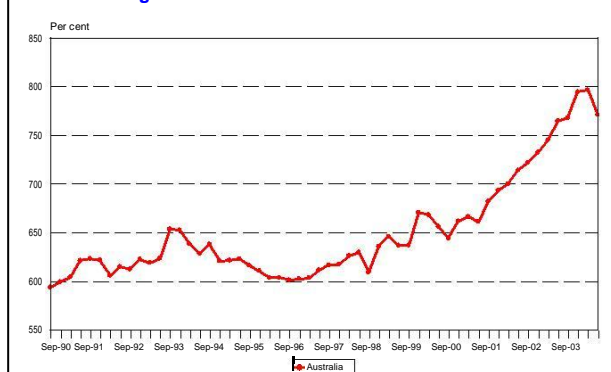


Figure 4: Private consumption borrowing gap - Per cent of net disposable income

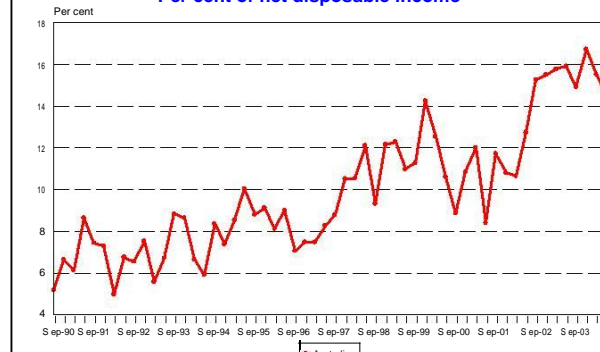
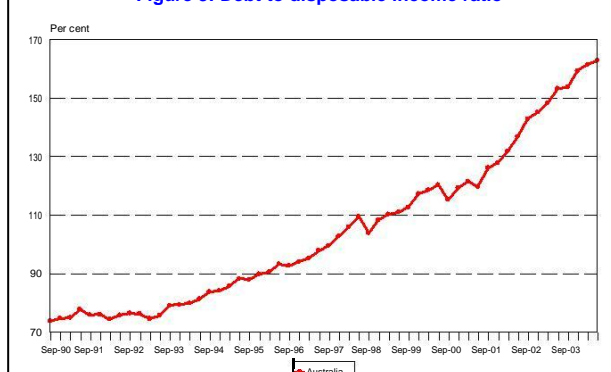


Figure 3: Debt to disposable income ratio





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