

The viability of residential aged care providers

And the potential impact from Productivity
Commission recommendations on changes
to the aged care system

ACAA and ACSA

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Contents

Glossary	i
Executive Summary	i
1 The challenge of funding aged care	8
1.1 Unmet demand for aged care	8
1.2 Productivity Commission recommendations	10
1.3 Prudential regulation of accommodation bonds	15
2 The weighted average cost of capital	18
2.1 What is a WACC?	18
2.2 The cost of equity (K_e)	19
2.3 The cost of debt (K_d)	25
2.4 Capital structure	26
2.5 Estimating the WACC	26
3 Financial viability of residential aged care providers.....	29
3.1 Methodology.....	29
3.2 Current viability (pre-reform)	30
3.3 Response to recommendations	39
3.4 Scenario analysis	42
3.5 Sensitivity analysis	43
4 Potential impacts on aged care providers	45
4.1 Recommendations expected to impact providers.....	45
4.2 Access to financial capital	46
4.3 Competitive impacts from removing bed licence restrictions.....	51
4.4 Potential impact on operations	53
4.5 Community care.....	57
5 Conclusions and recommendations.....	63
References.....	66
Appendix A : Modelling	71
Limitation of our work.....	74

Charts

Chart 1.1 : Proportion of the Australian population in older age groups	8
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Tables

Table 1.1 : Elapsed time between ACAT approval and entry into formal aged care, 2008-09	9
Table 2.1 : Estimates of historical market risk premiums in Australia	21
Table 2.2 : Estimated equity betas	23
Table 2.3 : Required return on equity for residential aged care providers	25
Table 2.4 : Parameters used in the WACC calculation (for-profit providers).....	27
Table 2.5 : Parameters used in the WACC calculation (not-for-profit providers).....	27
Table 3.1 : Historical caps on the accommodation charge and supplement	31
Table 3.2 : Distribution of average bond size found within the ACAA survey	32
Table 3.3 : Parameters for average revenue.....	34
Table 3.4 : Lowest construction and fit-out costs	36
Table 3.5 : Average cost of constructing a new high care facility, 2009	37
Table 3.6 : Cost of building, ACAA survey	37
Table 3.7 : Assumed cost of accommodation	38
Table 3.8 : Estimated NPV and IRR under the current policy regime	39
Table 3.9 : Estimated daily charges for metropolitan and regional areas, 2011	43
Table 3.10 : Summary of daily accommodation charges	44
Table 4.1 : Distribution of average bond values collected by providers 2007-08.....	54
Table A.1 : Revenue and expenditure streams high care, current system	71
Table A.2 : Revenue and expenditure streams low care, current system	72
Table A.3 : Revenue and expenditure streams with recommendations, 50% bonds	73

Glossary

ABS	Australian Bureau of Statistics
ACAR	Aged Care Approval Round
ACAT	Aged Care Assessment Team
AIHW	Australian Institute of Health and Welfare
ANAO	Australian National Audit Office
APCS	Annual Prudential Compliance Statement
CACP	Community Aged Care Package
CALD	culturally and linguistically diverse Australians
CAPM	Capital Asset Pricing Model
CDC	consumer directed care
CHA	Catholic Health Australia
CPI	consumer price index
DOHA	Department of Health and Ageing (Australian Government)
EACH	Extended Aged Care at Home
EACH-D	Extended Aged Care at Home Dementia
EMRP	equity market risk premium
ES	extra service
HACC	Home and Community Care
IRR	internal rate of return
LVR	loan to valuation ratio
PC	Productivity Commission
PV	present value
RBA	Reserve Bank of Australia
WACC	weighted average cost of capital

Executive Summary

The aged care system is experiencing rapid growth in demand due to demographic ageing, increases in income and expectations, and increasing prevalence of chronic disease. The industry is struggling to respond to these demand pressures, due to a lack of funding and tight regulations (Access Economics 2010a). In particular, there is evidence that the aged care industry is unsustainable, already exhibiting signs of a shortfall in investment in high care (Access Economics 2009a).

The Productivity Commission recently released a set of recommendations that aim to address issues facing the aged care system. The recommendations present a broad shift in the approach to aged care provision, seeking to reduce regulation and take greater advantage of market mechanisms in determining the allocation of resources.

The draft Productivity Commission report (Draft Report) outlines some of the potential impact of recommendations on stakeholders (residents, providers, government, employees) at a high level — in terms of the principles behind the recommendations. However, the actual impact will depend on the details of implementation, which are largely unexplored in the Draft Report. Moreover the impact will not be uniform across each type of stakeholder — some will be better off while others may be worse off.

Deloitte Access Economics was commissioned by the Aged Care Association of Australia and Aged and Community Services Australia to examine the impact of the Productivity Commission recommendations on aged care providers.

Our findings

Our findings are based on several data sources, including publicly available information, a survey of aged care providers, interviews with aged care providers and financial institutions, and internal data and modelling.

The first element of our scope was to forecast and model the draft funding changes, including supported and non supported accommodation payments, to assess future financial sustainability. Essential to this task was the determination of a benchmark average cost of providing accommodation for supported residents, initially proposed in the Draft Report as a ‘two-bed room with shared bathroom,’ and associated regional cost variations. A Capital Asset Pricing Model-Weighted Average Cost of Capital (CAPM-WACC) was used to estimate the cost per bed day of providing low and high care accommodation.

The estimated WACC

In general, a residential aged care provider attracts investment from two sources – equity and debt. The weighted average cost of capital (WACC) represents the average rate of return a residential aged care provider must pay to satisfy its equity owners and creditors. A different WACC was calculated for high and low care beds and for for-profit and not-for-profit providers (given different tax treatment for interest payments between the two types of providers).

- For-profit providers receive a tax break on their debt interest payments. The WACC for high care beds was estimated to be 8.6% based on the assumption that debt financing is obtained from the market. Low care beds can be financed using accommodation bonds, which are essentially a source of interest free debt. The cost of this debt was priced at the risk free rate because it is backed by the government. The resulting WACC was estimated to be 7.7%. The WACC for a facility with a mix of high and low care beds was estimated to be 8.2% (see Table 2.4).
- Not-for-profit providers do not benefit from the tax shield on debt, which results in a higher WACC for these types of providers. The WACC for high care beds was estimated to be 10.5% and for a low care bed is 9.1%. The WACC for a facility with a mix of high and low care beds was estimated to be 9.8% (see Table 2.5).

Across all providers, the WACC for low care is 8.6% and for high care is 9.8%.

For reasons outlined in Section 2.5, the estimated WACCs are lower than that often applied in practice by market participants. Based on Deloitte Access Economics' discussions with market participants (providers, financial institutions and valuation experts), the rates of return typically being demanded for investment in the aged care sector in Australia are around 12%, for mature assets. For greenfield development, rate may be above 20% due to additional sources of risk. Hence sensitivity analysis on the WACC was conducted at 12% and 15%.

Financial viability of providers currently and under the Productivity Commission recommendations

To analyse financial viability under current policy settings, revenue was modelled with accommodation payments capped at \$30.55 per bed day, annual growth in accommodation charges of 2.5% based on consumer price inflation (CPI), occupancy rates at 92.4%, an average bond value of \$233,000 and 20% supported residents (among other revenue assumptions – see Table 3.3). An average building cost of \$198,000 and land cost of \$12,563 was modelled, together with maintenance costs increasing over 25 years.

With an assumed building life of 25 years, the internal rate of return (IRR) in high care was estimated to 2.4%, suggesting high care is not viable relative to its estimated WACC of 9.8%. The daily high care charge required to breakeven (i.e. provide a net present value (NPV) of zero over a 25 year horizon) was estimated to be \$64.62. The average low care accommodation bond required to breakeven over the same horizon was estimated to be \$238,240.

- In low care, the IRR was estimated to be 8.4%, which is also lower than the return required of 8.6%. Investments in low care beds would therefore not proceed for a building life of 25 years.
- A sensitivity analysis was conducted to change the assumed building life to 20 years and 30 years. Results suggested that a low care bed has an IRR of 9.0% at 30 years but an IRR of 7.2% at 20 years (i.e. less than the estimated WACC, which suggests investment in low care beds that last for 20 years are not viable but would be for beds that last for 30 years). A high care bed was found to have an IRR below 9.8% regardless of the assumed building life, which was estimated to be 0.6% for 20 years and 3.4% for 30 years.

Provider viability was also modelled based on a scenario where Productivity Commission draft report recommendations were adopted. This included removing the distinction between low care and high care beds, and removing bond retention from the revenue stream on a low care bed. **The WACC for low care providers changed from 8.6% to 9.2%, reflecting the shift from accommodation bonds to commercial debt, and from 9.8% to 9.2% for high care providers, reflecting the opposite shift.**

Table i summarises estimated daily accommodation charges if the distinction between low care and high care beds were removed, along with bond retention from the revenue stream. All estimates are based on a 25 year horizon. ‘Base case’ estimates assumed that 50% of residents pay bonds and the other 50% pay periodic payments. Scenario analysis’ were undertaken to determine the impact if all accommodation revenue was derived from periodic payments, and the impact if all accommodation revenue was derived from bonds.

The daily charge required to breakeven in the base case (50% of people using the bond option) was estimated to be \$61.37. Assuming all accommodation revenue was derived from periodic payments, the breakeven periodic payment was estimated to be \$64.42. Assuming all accommodation revenue was derived from bonds the equivalent breakeven periodic payment was estimated to be \$58.20.

Table i: Summary of estimated daily accommodation charges under alternative scenarios

	No accommodation bonds	50% accommodation bonds (base case)	100% accommodation bonds
Baseline	\$64.42	\$61.37	\$58.20
Scenario			
Two-bed room	\$54.93	\$52.17 ^(a)	\$49.47
Metropolitan	\$73.69	\$69.99	\$66.37
Regional	\$59.04	\$56.07	\$53.16
Sensitivity			
12% WACC	—	\$76.60	—
15% WACC	—	\$94.35	—
Cost of building \$250,000	\$80.62	\$76.57	\$72.61
Excluding the value of land ^(b)		\$57.86	

Note: (a) In a one-bed room non-supported residents would pay \$67.74 to cross-subsidise 20% supported residents, or \$71.09 to cross-subsidise 40% supported residents. (b) This refers to excluding the cost of land in determining the cost of accommodation for the base case scenario only.

Source: Deloitte Access Economics’ calculations.

The equivalent average bond required to breakeven under the base case was estimated to be \$361,689. The large increase in the bond amount compared to the required bond amount to break even under current policy (i.e. \$238,240) is due to the removal of a provider’s capacity to retain part of the bond principal under the Productivity Commission recommendations. Consequently, more income must be earned from interest.

Assuming all accommodation revenue was derived from accommodation bonds, the equivalent breakeven average bond was estimated to be \$344,428. As this is higher than the average bond currently provided, future residents wishing to provide bonds may not be able to afford a bond of this size. This would reduce the stock of bonds.

Larger bonds are required on average when fewer bonds are supplied to a provider because the benefit of reducing interest payments is shared between those providing a bond and those paying periodically. In order to encourage the use of bonds, providers should be able to distribute the interest cost savings to those electing to pay an accommodation bond.

Other potential impacts of the Productivity Commission recommendations on providers

If Productivity Commission recommendations were implemented, there may be large **impacts on access to financial capital**. Bonds are typically used to pay back 'bridging finance' when undergoing construction of new facilities. In this way, commercial debt is sourced from financial market institutions (e.g. banks) for the construction period, and then paid back as residents enter the new residential aged care facility and provide bonds. Using bonds to reduce commercial debt provides advantages to providers as there is a shorter period of debt repayment compared to funding construction finance through other means, such as periodic payments, and there is a lower required rate of return paid on bond debt relative to commercial debt.

However, the extent and direction of a change in total bond values from the recommendations is unclear, since the provider and consumer drivers work against each other.

- Providers prefer bonds, to reduce their cost of capital and to achieve organisational goals, so demand for bonds will increase as providers seek to extend them to high care.
- Residents currently use bonds to reduce their assessable assets in the pension asset test, but it is unclear from the Productivity Commission draft report what the treatment of income would be from the Australian Pensioners Bond fund and how it would affect the daily fee, income tested fee and the pension entitlement.
- The creation of a government-backed Aged Care Equity Release scheme may increase the supply of accommodation bonds by increasing access to housing wealth. However, this will crucially depend on the incentive to place this housing wealth in the Australian Pensioners Bond Fund versus accommodation bonds.

The modelling showed the equivalent bond is higher than the current average bond, which suggests the supply of bonds may fall. If people switch from bonds to accommodation payments, there will be a shift away from up-front lump-sum funding to a cash flow model, requiring providers to adjust their business model accordingly.

If there is a reduction in the average level of bonds, this will need to be funded by commercial debt or additional equity investments (more expensive again than commercial debt).

A key risk factor for some providers is the inability to raise commercial debt to cover any shortfall in bonds. There is some concern among financial institutions that a large proportion of aged care providers will not meet lending criteria with substantially reduced access to accommodation bonds, because of worsened liquidity and costs, and increased

risk from restructuring. Greater risk is associated with the following historical provider characteristics:

- lower use of and track record experience with commercial debt finance over extended periods;
- higher reliance on bonds;
- greater variability in bond earnings;
- lower or relatively variable occupancy rates;
- smaller scale providers;
- relatively low rates of bond uplift¹;
- relatively low earnings compared to occupancy and bed types;
- less skilled or experienced facility management;
- being in an early cycle building or refurbishment phase;
- less access to (non-bond) cash reserves;
- relatively large portfolios of older stock compared to other facilities in the same area; and/or
- stock that does not meet consumer preferences (e.g. rooms that house more than one person or do not have an ensuite).

Financial institutions expressed a view that not-for-profit providers and low care providers tend to display more of these characteristics than for-profit or high care providers, although it is difficult to generalise outside the lending criteria.

Ultimately, the impact from a dilution in bonds on individual residential aged care providers would depend on their reliance on bonds, the size of the gap in funding, and the capacity to access alternative sources of finance, such as equity and debt capital. Even if access to alternative capital is forthcoming, large bond holders will face a proportionally greater increase in financing costs as the required rate of return is higher compared to bonds. The increase in financing costs will reduce the competitiveness of these providers compared to those with a smaller reliance on bonds.

If bonds represent the cost of supply (as suggested by the Productivity Commission), providers are expected to experience a reduction in future bond uplift. This will compress a facility's valuation if reliant on bonds, and may reduce a loan to valuation ratio below an acceptable threshold, putting some providers in breach of their debt contract.

Productivity Commission recommendations are also expected to lead to a more competitive environment in the delivery of residential aged care services. This may attract investment from non traditional players. For example, retirement village owners may integrate into the low care market, thereby offering the potential for 'ageing in place' across a longer time period. Alternatively, private hospital operators may diversify into the high care area. Industry consolidation may result.

¹ There is uplift in the value of bonds if the new resident pays a bond larger than that held by the previous resident.

Providers could mitigate against these risks by addressing individual risk factors to the extent possible, or by changing their business model more radically. For example, low care providers could reinvent themselves and diversify into community based care, provide more respite care places, or develop transitional care capacity.

Due to the potential increased risk to current residential aged care providers from Productivity Commission recommendations, there is a need for transition arrangements to ensure the sector is not cataclysmically disrupted. Transition arrangements could include:

- gradual phasing in of the changes, for example 10-15 years;
- grandfathering existing low-care only providers to bonds-only; and
- support mechanisms to providers to assist with transition (e.g. reduced supported accommodation quotas for smaller providers).

Recommendations

Recommendation 1: Clarity should be provided in Draft Recommendation 6.4 of the Productivity Commission draft report to enunciate that it is only the subsidised element of the accommodation payments and charges that should reflect the cost of supply, while abolition of the caps is designed to enable demand side factors to operate in determining prices above the cost of supply, with the difference being resident copayments.

Recommendation 2: The definition of the cost of supply should include the cost to finance commercial debt and equity (i.e. the WACC) and the cost of land. Cost of supply should not be based on a two-bed room but, rather, on a 'typical' new construction.

Recommendation 3: Reflecting factors such as geography, income and wealth, 'quality' of facilities and rooms, and resident preferences, there could be a range of (market) bed and bond rates published by a facility which reflect the interaction of the cost of supply with the different demand elements. Additionally, providers could schedule a decrease in the real value of the accommodation charge over time as the facility ages.

Recommendation 4: A formulaic approach to determine equivalence between accommodation bond amounts and periodic payments should be avoided. Residents will have alternative appetites for periodic payments versus accommodation bonds, and these should be reflected in alternative market prices.

Recommendation 5: The contribution of the Australian government to the cost of care for supported residents should cover the full costs of care and provision for the potential need to step in and help support the cost of aged care accommodation for these low-middle income residents. Given there are additional challenges in the delivery of care to special needs groups such as the homeless and people with poor mental health, these should be more specifically recognised in contributions made by the government to the cost of care for these types of residents.

Recommendation 6: The Productivity Commission needs to address transition arrangements flowing from its recommendations – such as gradual phasing in, grandfathering, or support mechanisms to providers to assist with restructuring or with diversifying into community care, respite care or transitional care. To minimise structural

change costs, transition should be implemented progressively and in partnership with the industry to avoid unintended incentives and consequences.

Recommendation 7: The Productivity Commission should ensure recommendations avoid providing any competitive advantage in attracting lump sum payments for the Australian Pensioners Bond fund. It should also clearly outline the treatment of income derived from the proposed Australian Pensioners Bond fund as it relates to pension entitlements and the income test for the daily care fee and income tested fee.

Recommendation 8: Any aged care reform process should recognise and build upon the positive features of the lump sum bond income stream as they offer benefits to residential aged care providers and residents.

Deloitte Access Economics

1 The challenge of funding aged care

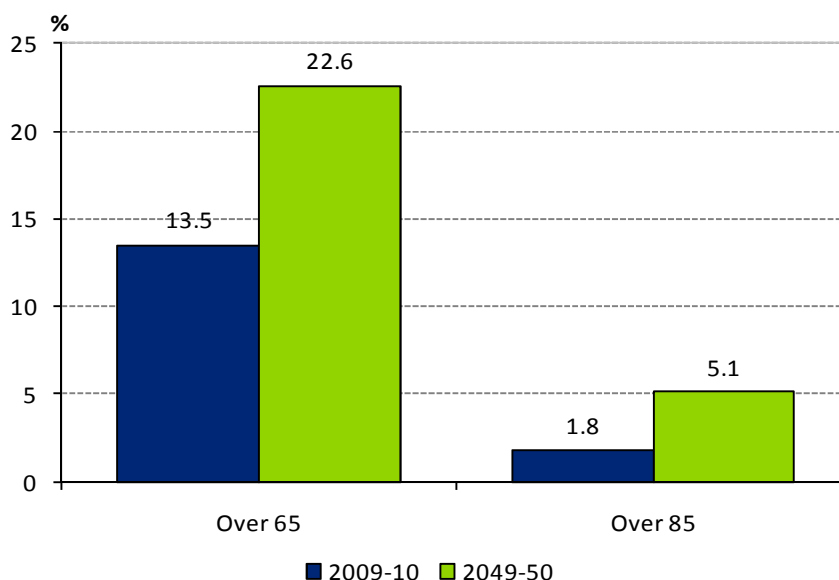
This chapter presents a brief overview of the issues currently facing the aged care system, and an outline of those Productivity Commission recommendations which are expected to have the greatest impact on residential aged care facility providers. It also outlines expected changes to the prudential regulation of bonds from a review currently being undertaken by the Department of Health and Ageing (DoHA).

1.1 Unmet demand for aged care

Demand for aged care services is projected to grow rapidly as a result of demographic ageing, increases in income and expectations and increasing prevalence of chronic disease. Not only will more aged care be required but demand for quality, choice and specialised services, such as dementia care or care that meets the needs of culturally and linguistically diverse Australians (CALD) is expected to rise.

The ageing of the population will significantly increase the need for aged care places in the future. The proportion of the population aged over 65 is expected to increase from 13.5% in 2010 to 22.6% by 2050, while the proportion of the population aged over 85 is expected to increase from 1.8% to 5.1% (Treasury 2010) as illustrated in Chart 1.1.

Chart 1.1: Proportion of the Australian population in older age groups



Source: Treasury (2010).

This demographic shift will place a considerable burden on the Australian Government's ability to finance aged care. While today there are five people of working age to support each older person, by 2050 there will only be 2.7 working age people to support each older person (Treasury 2010). The Australian Treasury (2010) estimated that aged care expenditure would grow from 0.8% of GDP in 2009-10 to 1.8% of GDP by 2049-50. This

latter figure was revised up to 1.9% assuming that the Productivity Commission’s proposed reforms were adopted (PC 2011).

Other factors that have contributed to increased demand for care are summarised below.

- **Increasing longevity:** recent increases in longevity have been associated with the prolonging of illness duration as well as additional years of healthy life. This has contributed to the higher prevalence of chronic disease and more complex co-morbidities to manage.
- **Dementia:** neurodegenerative diseases such as dementia have been increasing in prevalence. People with dementia require a large amount of specialised care to manage their complex and challenging needs.
- **Greater wealth:** the baby boomer generation will enter aged care with more wealth (generated through superannuation and house price increases) and higher expectations than any generation before. They will have the numbers to influence policy and the ability to finance the quality and quantity of aged care they demand.

In order to meet the expected increase in demand, the aged care system will need to expand. Essential to this expansion is investment in capital. However, there is growing concern that the necessary investment in capital is not occurring. Access Economics (2009a) found, based on the cost of construction and current government subsidy structure, that the rate of return on an aged care bed used for high care was too low to encourage investment in high care. In the most recent Aged Care Approval Round (ACAR), only 5,643 of the 8,140 proposed residential aged care places were allocated (PC 2011).

The rigidity of current aged care allocation ratios also make it very difficult for providers to respond to increased demand within the regions. Although occupancy rates for residential aged care have fallen slightly in recent years from 93.8% in 2007-08 to 92.4% in 2008-09 (DoHA 2010a), waiting lists indicate there is often a mismatch between demand and supply in particular regions. Waiting lists for all types of aged care are shown in Table 1.1. More than 40% of people entering residential care in a high care place wait for more than a month following an Aged Care Assessment Team (ACAT) assessment, while less than 40% of people enter the Community Aged Care Package (CACP) program within a month of ACAT approval.

Table 1.1: Elapsed time between ACAT approval and entry into formal aged care, 2008-09

	CACP	EACH	EACH-D	Residential care	
				Low	High
	%	%	%	%	%
2 days or less	4.7	6.1	6.6	3.9	10.2
3-7 days	6.5	6.1	8.5	6.5	16.1
8 days to <1 month	27.4	21.0	30.5	20.6	30.0
1 month to < 3 months	32.5	28.4	32.0	30.4	24.9
3 months to < 9 months	24.3	30.7	20.2	30.5	15.5
≥ 9 months	4.6	7.7	2.2	8.1	3.3
Median days	45	62	35	63	23

Note: Elapsed time must be interpreted with caution as some people may receive ACAT approval but choose not to access formal aged care services.

Source: SCRGSP (2010) and Deloitte Access Economics calculations.

Submissions to the Productivity Commission’s inquiry highlighted that there were significant differences in waiting periods across regions with some residents having to wait up to a year for a community or residential care place (PC 2011).

1.2 Productivity Commission recommendations

The Productivity Commission recently released a series of recommendations that aim to address the funding issues facing the aged care system. The aim of these recommendations was to create a more sustainable, efficient and equitable aged care system that is adaptable to future needs. The recommendations include a substantial reduction in regulation in the sector, creating a fundamental shift away from the traditional approach of centrally planning aged care towards a more market based approach.

Recommendations made regarding the provision of residential care accommodation include:

- removing supply restrictions on aged care places;
- removing caps on high care accommodation charges;
- setting accommodation bonds that are equivalent to periodic accommodation payments, which should reflect the actual costs of providing aged care accommodation;
- introducing an Australian Pensioner’s Bond fund and/or an Aged Care Equity Release scheme;
- ensuring the Australian Government’s contribution towards supported residents reflects the average cost of providing a two-bed room with shared bathroom; and
- maintaining an adequate proportion of supported places.

The rationale provided by the Productivity Commission for each of these recommendations is discussed in greater detail below.

1.2.1 Removing supply constraints

The supply of aged care places, for both community and residential care, is currently restricted through a licensing system. The Australian Government determines the number, type and location of new aged care places. Each year, the licences for new residential care beds and community care packages are allocated through a tendering process called the Aged Care Approval Round (ACAR). Once allocated, the provider has two years to make the place/package operational.

Regulating the type and location of aged care places has resulted in a mismatch between supply and demand. There are some regions that do not have sufficient places to meet their needs while other regions are in surplus. Moreover, the division between community care and residential care places provided to a region may not align with the division preferred by consumers (PC 2011).

The following recommendation has been made by the Productivity Commission:

“The Australian Government should remove regulatory restrictions on the number of community care packages and residential bed licences over a five-

year period. It should also remove the distinction between residential high care and low care places.” (Draft Recommendation 6.3)

The abolition of the ACAR should encourage competition in the aged care industry. Increased competition will benefit consumers by expanding choice and providing a strong incentive for providers to meet the needs of the community, in terms of quality, quantity and type of care (PC 2011). In addition to facing increased competition, providers may be impacted through impairment of the value of their bed licences, which may affect their ability to borrow (PC 2011).

Removing the distinction between high and low care places may help facilitate ‘ageing in place’. Moreover, a system for setting charges that is consistent between high care and low should reduce the need for cross subsidisation, since low care and extra service (ES) places (where bonds are permitted) currently typically cross-subsidise high care non-ES places (where bonds are not permitted, so exposure to the daily charge caps is most severe).

1.2.2 Removing caps on high care accommodation charges

The accommodation component for a high care residential bed is currently financed through a capped accommodation charge — the Australian Government pays this in part or in full for supported residents. An upfront investment must be made by the provider and the cost recouped over the life of the facility through the revenue generated by this charge. Therefore to encourage investment in high care residential accommodation, the accommodation charge must be sufficiently high to generate the return required by capital investors.

PC (2011) noted that the current accommodation charge is too low for long term viability. A number of options were considered to resolve the inadequate funding of high level care. One option was to increase the maximum accommodation charge. However, PC (2011) noted that it is often difficult to measure average building costs across different regions and that a better option would be to remove the cap on high care accommodation costs entirely. This would help address the concerns that it is inequitable for persons in older facilities with multiple beds per room to pay the same amount for high care as those in newer facilities with a single bed room.

The Productivity Commission has therefore recommended that the cap on accommodation charge be removed, allowing providers to charge a market determined rate for accommodation for those who are able to pay (non-government supported residents). This is expected to encourage investment in new facilities and upgrades (PC 2011).

1.2.3 Changes to accommodation bonds

Accommodation bonds are essentially an interest free loan to aged care providers, which are used to cover the upfront cost of capital. When a resident leaves the facility, the loan is effectively rolled over as the next resident contributes their bond. The size of the bond is limited only by the residents’ ability to pay — residents should not be left with less than \$39,000 in assets as a result of paying an accommodation bond. The provider is able to deduct a retention amount from the bond over the first five years of residence, with the balance returned upon exiting the facility. Currently, accommodation bonds can only be collected on low care residential beds or extra service high care places.

PC (2011) criticised the accommodation bond system for being inequitable and noted that people paying large accommodation bonds were receiving the same accommodation as those paying no bond at all. Those in facilities that offer a mix of care services, there is some cross-subsidisation towards inadequately funded high care places. The Productivity Commission recommendation is set out below:

“The Australian Government should remove regulatory restrictions on accommodation payments, including the cap on accommodation charges in high care. It should also abolish the charging of retention amounts on accommodation bonds. The Government should require that those entering residential care have the option of paying for their accommodation costs either as:

- a periodic payment for the duration of their stay*
- a lump sum (an accommodation bond held for the duration of their stay).*
- or some combination of the above.*

To ensure that accommodation payments reflect the cost of supply, and are equally attractive to care recipients and providers, the Australian Government should require that providers offer an accommodation bond that is equivalent to, but no more than, the relevant periodic accommodation charge. Accommodation charges and their bond equivalents should be published by the residential aged care facility.” (Draft Recommendation 6.4)

One critical issue surrounding the Productivity Commission’s recommendations is defining the ‘cost of supply’. The general consensus is that the Productivity Commission draft report is not clear on this topic. Some suggested definitions of the ‘cost of supply’ may include:

- the original cost of constructing a room;
- an inflation adjusted cost of constructing a room; or
- the replacement cost of a room.

There is also a question about how the cost of supply relates to the value of accommodation. In the real estate market there is no requirement to offer a house based on the cost of supply, so it is unclear why cost-based pricing should be used within the aged care market for accommodation. Basing bonds on the cost of supply could lead to its own inequities among residents within the same facility if the cost of supply is equal but the value of the room to residents is different (e.g. pricing a room that has ocean views equally with the exact same room at the back of a facility could be considered inequitable). Moreover, removing caps on accommodation charges and payments is designed to enable the demand side of the market to operate, which is contrary to this supply-side approach. It is important that the implication is recognised that resident copayments bridge the gap between the Australian Government cost of supply contribution and the market price.

1.2.4 Introducing an Australian Pensioners Bond fund or Aged Care Equity Release scheme

A key problem in the aged care industry is a lack of funding. To reduce the increasing burden on the tax payer the Productivity Commission has recommended a move towards a system that is more reliant on co-contributions. In Australia, many older people do in fact have the wealth to contribute to the cost of their aged care. However, this wealth cannot be readily accessed in the form of income because it is in the form of the equity that they hold in their primary residence.

The Productivity Commission has recommended that:

“The Australian Government should establish an Australian Pensioners Bond scheme to allow age pensioners to purchase a bond from the Government on the sale of their primary residence.” (Draft Recommendation 6.6)

“The Australian Government should establish a government-backed Aged Care Equity Release scheme which would enable individuals to draw down on the equity in their home to contribute to the costs of their aged care and support.” (Draft Recommendation 7.1)

The Australian Pensioners Bond fund would allow those moving into aged care to invest funds from the sale of their home in a government bond scheme. The value of the bonds would then be indexed to consumer price inflation (CPI). Care recipients would be allowed to use the bond to cover periodic accommodation payments and other expenses associated with aged care.

Another option suggested by the Productivity Commission is a government-backed Aged Care Equity Release scheme, which would allow residents to withdraw equity from their primary residence, similar to a reverse mortgage. This scheme was proposed to help residents fund their care co-contribution and accommodation without selling their primary residence. This may create a greater opportunity for providers to access housing wealth for accommodation bonds, and complements the removal of restrictions on accommodation bonds for high care residents.

1.2.5 Setting a viable government accommodation supplement

In order to fully meet the capital costs of providing high care places, the Productivity Commission recommended that the government accommodation supplement be adjusted to reflect the average cost of providing accommodation based on a two-bed room with a shared bathroom. In the short term, an independent body could be set up to determine the average price of providing such accommodation based on regional building costs. The Productivity Commission’s recommendation is set out below:

“The Australian Government’s contribution for the approved basic standard of residential care accommodation for supported residents should reflect the average cost of providing such accommodation and should be set:

- on the basis of a two-bed room with shared bathroom*

*• on a regional basis where there are significant regional cost variations.”
(Draft Recommendation 6.7)*

Deputy Commissioner Mike Woods commented recently that the Productivity Commission was unlikely to include this in its final set of recommendations, although he did not indicate an alternative cost setting mechanism (Curtis and Noone 2011).

1.2.6 Maintaining an adequate proportion of supported places

Once supply restrictions are removed there may be a tendency to provide more aged care accommodation in relatively affluent areas and reduce the supply available in more disadvantaged areas, if the government subsidy for supported residents is lower than the market rate in the area. To prevent providers excluding residents of limited means, the Productivity Commission recommended that providers should continue to be required to provide a suitable proportion of supported places on a regional basis.² They further recommended that this obligation be tradeable, which would allow providers with spare capacity or those who are more efficient in providing supported accommodation to obtain more supported residents.³

The Productivity Commission also suggested that after an initial period the Australian government could consider a competitive tendering process for supported places (PC 2011). Instead of the government supplement being set by the government or an independent regulator it would be based on whichever provider was willing to provide suitable accommodation at the lowest cost. However, such a scheme would only be viable in regions where there was significant competition among providers. The Productivity Commission’s recommendations in relation to supported residents are set out below:

“To ensure sufficient provision of the approved basic standard of residential aged care accommodation for those with limited financial means, providers should continue to be obliged to make available a proportion of their accommodation to supported residents. The Australian Government should set the level of the obligation on a regional basis. This would not apply to existing providers who are currently not obliged to make accommodation available to supported residents.

Over the first five years, the obligation would be tradable between providers in the same region. After five years, the Australian Government should consider the introduction of a competitive tendering arrangement to cover the ongoing provision of accommodation to supported residents.” (Draft Recommendation 6.5)

² Although all facilities must meet minimum ratios for supported residents these differ across regions. In New South Wales, the minimum proportion of supported residents ranges from 16% in Northern Sydney to 29.8% in Western Sydney, with minimum ratios for most regions being around 20% (DoHA, 2011g).

³ Currently, the subsidy for supported residents contains an incentive for providers to provide more than 40% of places to supported residents. If the proportion of supported residents is below 40%, the subsidy to the providers is reduced by 25% (PC 2011).

1.3 Prudential regulation of accommodation bonds

The Department of Health and Ageing has recently released a consultation paper discussing potential reforms regarding the use of accommodation bonds by accommodation providers (DoHA 2011h). Currently, the *Aged Care Act 1997* requires that bonds be used for purposes related to the provision of aged care. The income derived from accommodation bonds must be used either to:

- meet capital works costs relating to residential care;
- retire debt relating to residential care; or
- to improve the quality and range of aged care services (where no capital expenditure is reasonably necessary to comply with the certification principles or in meeting accreditation requirements).

In practice, accommodation bonds have not always been used for these purposes. Some providers have used them for non-aged care purposes and in some cases they have been used to meet general operating expenses (DoHA 2011h). A recent ANAO Report (2010) highlighted the need for greater surveillance of how accommodation bonds are used. In their recent consultation paper DoHA (2011h) has proposed that the principal associated with accommodation bonds only be able to be used for the following purposes.

- Costs associated with capital investment, including:
 - purchase or construction of new facilities and refurbishment of existing facilities (based on the existing definition of capital works costs in s 70.3 of the *Aged Care Act 1997* i.e. cost of acquiring land, buildings and furniture and fittings); and
 - retirement of debt associated with the above costs.
- Loans to related parties
 - can be made for a permitted use;
 - cannot be made to individuals;
 - must be on a commercial basis that is arm's length;
 - to be disclosed in Annual Prudential Compliance Statement (APCS) (consideration is also being given to requiring reporting of assets funded by bonds that are mortgaged).
- Making financial investments:
 - investment of bonds in financial products (as defined in the Corporations Act) to be permitted; and
 - investment in products other than deposit-like accounts with authorised deposit-taking institutions (or near cash equivalents) must meet additional requirements contained in the proposed new Governance Standard; and
 - refunding bonds and associated retirement of debt.

Under the proposed changes, providers would only be able to use accommodation bonds (the principal) to cover operating expenses in limited circumstances and any such use of accommodation bonds would have to be reported to DoHA.

1.3.1 Refunding accommodation bonds

Under section 57.21 of the *Aged Care Act 1997* if a care recipient passes away, the balance of the accommodation bond (see Section 3.2.1) must be refunded within 14 days of the provider being given the probate of the will or letters of administration from the estate. If a care recipient chooses to enter another service to receive residential care the accommodation bond must be refunded:

- if more than 14 days notice was given – on the day on which the approved provider ceased providing care to that person; or
- if less than 14 days notice was given – within 14 days after notice was given; or
- if the care recipient did not notify the approved provider – 14 days after the day on which the approved provider ceased providing care.

Approved providers must pay interest on the accommodation bond balance for the period after which a care recipient leaves the care service until the accommodation bond is fully refunded. For payments within the statutory time limit, providers pay a base interest rate of 5%. If providers do not repay the accommodation bond within the statutory timeframe, they must pay the maximum permissible interest rate, currently 8.92% on outstanding accommodation bond balances after this timeframe (DoHA 2011f). The requirement that accommodation bonds be refunded within 14 days to avoid the imposition of the maximum permissible interest rates is relatively stringent and means that providers must maintain sufficient liquidity to refund outstanding balances at short notice.

The ANAO Report (2010) noted that based on aged care provider reports, 95% – 99% of providers complied with liquidity, record-keeping and disclosure requirements for accommodation bonds. Overall, the ANAO Report (2010) noted that 87% of providers refunded bonds within the statutory timeframe. Where a provider is unable to refund a bond, the bond is guaranteed by the Australian Government under the *Aged Care (Bond Security) Act 2006*. The Australian Government has had to refund accommodation bonds to residents on five occasions, requiring a total outlay of \$24.5 million for around 150 bonds (DoHA, 2010b).

1.3.2 New reporting requirements

The consultation paper released by DoHA (2011h) also proposed some changes to aged care providers' reporting requirements in response to gaps identified in the ANAO Report (2010). The proposed changes require approved providers to:

- disclose information to the Department on how accommodation bonds are used through their Annual Prudential Compliance Statement (APCS);
- disclose to care recipients, or potential care recipients, how accommodation bonds may be used, including whether they will be invested in financial products other than deposit-taking facilities and significant failures to comply with the permitted uses of accommodation bonds;
- attest in the APCS to their compliance with the proposed Governance Standard; and
- submit to the Department information relevant to accommodation bond balances on a periodic basis for a period of up to 12 months, if there are reasonable grounds for believing that an approved provider is or may be unable to refund accommodation

balances, is using bonds for non-permitted purposes or is at risk of experiencing financial difficulties.

More specifically, the Department has proposed that in their annual APCS, providers will need to reconcile annual movements in bond liabilities, movements of accommodation bonds available for use and provide information concerning loans to related parties including the nature of their relationship to the approved provider, the amount of the loan and the terms of repayment (DoHA 2011h).

2 The weighted average cost of capital

Investment in residential aged care will only be worthwhile if the return on investment is greater than the required rate of return for providers over the long term. If this condition does not hold, then residential aged care providers do not receive a return commensurate with industry risk, and would therefore be better off investing in markets that do. To the extent that providers shift out of the residential aged care market, this would create problems in accessing appropriate care for elderly Australians.

The industry required return on investment can be measured using the weighted average cost of capital (WACC). If the internal rate of return (IRR) (estimated in Chapter 3) is greater than the WACC, then the industry is deemed to be financially sustainable, and new investment to meet future residential aged care demand is likely.

This chapter describes the methodology and assumptions used to estimate the WACC. It presents the calculations and data used to estimate the cost of equity and debt, and the data used to estimate market risk as represented by the equity beta.

2.1 What is a WACC?

In general, a residential aged care provider attracts investment from two sources. These include:

- providers of equity funding, typically through direct funding to an unlisted organisation (as opposed to buying shares on the stock market); and
- providers of debt funding, typically through financial institutions such as banks.

The WACC represents the average rate a residential aged care provider is required to pay to satisfy its equity owners and creditors.

As the risks attached to each form of funding are different, so too is the required return. Calculating the WACC allows for this differential in risk by averaging the cost of debt and equity, weighted by the proportion of debt and equity used. The WACC can be calculated using the following formula:

$$WACC = \frac{E}{V} K_e + \frac{D}{V} K_d (1 - t_c) \quad (1)$$

The components of the formula are:

- K_e = cost of equity capital
- K_d = cost of debt
- t_c = corporate tax rate
- E/V = proportion of enterprise funded by equity

D/V = proportion of enterprise funded by debt

Adjusting the cost of debt (K_d) by the corporate tax rate (t_c) reflects the tax deductibility of interest payments on debt funding. In this study it has been assumed the corporate tax rate is 30%, which is in line with the current Australian corporate tax rate. However, not-for-profit providers do not pay tax and as such do not have this advantage. Consequently, they have a higher cost of commercial debt than a for-profit because the for-profit provider can tax deduct the interest payments. However, not-for-profits have a tax advantage on the cashflow side, being subject to a lower tax rate on profit than for-profit providers.

2.2 The cost of equity (K_e)

The cost of equity is the rate of return required to be paid to obtain capital from equity investors. As the risk of the residential aged care industry changes, so will the cost of equity. The higher the perceived risk of the industry, the higher the return required to be paid, and therefore the higher the cost of equity.

It is problematic to estimate an exact cost of equity for residential aged care providers because returns are generally unobservable discretionary dividends and capital gains. This is in contrast to debt where the revenue stream is consistent and interest rates are directly observed.

An accepted method for estimating the cost of equity is to use the Capital Asset Pricing Model (CAPM). Although this model is based on a set of assumptions about investor preferences and the functioning of asset markets, empirical studies have found that the CAPM provides reasonable estimates of the true required rate of return to investors over the long run (Jagannathan and McGrattan 1995, Ang and Chen 2007).

The cost of equity reflects the opportunity cost of investment (i.e. the rate of return that could be received by investing elsewhere given the level of risk). The cost of equity therefore represents the minimum rate of return required to be paid on the equity financed portion of a residential aged care provider's total capital. The cost of equity under the CAPM can be calculated using the following formula:

$$K_e = R_f + \beta (R_m - R_f) + \alpha \quad (2)$$

The components of the formula are:

- K_e = required return on equity
- R_f = the risk free rate of return
- R_m = the expected return on the market portfolio
- β = beta, the systematic risk of a stock
- α = industry specific risk premium

Each component in the above equation is discussed below.

2.2.1 Risk free return (R_f)

The risk free rate of return is the rate of return required to compensate an investor for the time value of money and inflation over the investment period. It is based on the notion that the risk of the investment is zero, including the risk of default.

As there is no asset that is truly risk free, the return on long term Australian Government bonds is generally used to represent the risk free rate. This is because the likelihood of the Australian Government defaulting on its loans is extremely low compared to other types of debt products (e.g. commercial bonds).

The bond rate used to represent the risk free rate should be based on the return associated with a bond that has the same timeframe as the investment project. Although a residential aged care facility typically has an assumed lifecycle of 25 to 40 years, there are no Australian Government bonds on issue that have a similar timeframe.

To represent the risk free rate in calculating the cost of equity, the implied zero coupon yield on a 10 year Australian Government bond was used. To smooth out intraday price variance, a five day average price of 5.65% was calculated as at 31 March 2011 (ThomsonReuters 2011).

2.2.2 Equity market risk premium ($R_m - R_f$)

The equity market risk premium (EMRP) is the excess return an equity investor must receive to compensate for the uncertainty associated with investing in a more risky asset. As the future equity market risk premium is not directly readily observable, historical returns for the Australian equity market were used as a proxy for expected returns.

However, historical returns may diverge from expected returns formed by the investor at the time of investment. They do not take into account potential structural changes to the market, such as information and technology changes, an increase in market sophistication or changes in economic policy. This problem can be reduced by choosing a shorter time frame, however, this may also result in an incorrect estimation of returns if there have been extreme return observations such as those experienced as a result of the global financial crisis.

The historical equity market risk premium for Australia has typically ranged between 5.5% and 7.5%. Table 2.1 shows the changes in the market risk premium estimate according to the period of estimation and the study undertaken.

For the purpose of this study an equity market risk premium ($R_m - R_f$) of 6% has been used. This rate is consistent with the benchmark used in Australian investment, accounting and regulatory practice.

Table 2.1: Estimates of historical market risk premiums in Australia

Source	Period of estimation	Market risk premium estimate
Gray & Officer (2005)	1885 – 2004	7.2%
Hathaway (2005, quoted in Gray & Officer)	1875 – 2005	7.0%
Hathaway (2005, quoted in Gray & Officer)	1960 – 2005	5.6%
Hancock (2005, quoted in Gray & Officer)	1974 – 2003	5.6%
Hancock (2005, quoted in Gray & Officer)	1883 – 2004	6.6%
Dimson et al (2003)	1900 – 2002	6.0%
Damodaran (1999)	1970 – 1996	7.0%
Centre for Research in Finance at the AGSM	1974 - 2006	4.9%
Morningstar	1974 – 2006	6.9%
Credit Suisse/London Business School (for Australia)	1900 – 2010	6.7%
Ibbotson Associates and the Yale School of Management	n/a	6.0% (arithmetically) 4.0% (geometrically)

Source: As listed in the table.

2.2.3 The equity beta (β_E)

The equity beta measures the extent to which the return on equity within a specific industry is correlated to broader market returns. A beta of 1.0 indicates that an equity investor can expect to earn the market return (i.e. the risk free rate plus the EMRP) from this investment. A beta of greater than one indicates the industry related risk is great than the market average, while a beta of less than one indicates the industry risk is less than the market average.

The equity beta will primarily be affected by three factors, including:

- **the degree of operating leverage** — the higher the fixed cost base relative to variable cost base the greater the exposure to economic cycles and therefore the higher the systematic risk exposure;
- **the degree of financial leverage** — the greater the proportion of debt relative to equity, the greater the systematic risk and therefore the return required by investors; and
- **correlation of revenues and cash flows to economic cycles** — companies that are more exposed to economic cycles (such as retailers), will generally have higher levels of systematic risk (i.e. higher betas) relative to companies that are less exposed to economic cycles (such as regulated utilities).

The equity beta is estimated using the correlation between the returns on equity and the returns from an index that is representative of the market portfolio. Information on equity returns is only available for publically listed companies. For companies where equity is privately held or not-for-profit, betas are typically estimated for comparable listed companies.

The residential aged care industry in Australia has a relatively high proportion of not-for-profit and government providers, and none of the for-profit providers are publicly listed. This makes estimation of an equity beta based on observable equity returns problematic.

Instead, the equity beta for residential aged care providers was estimated by identifying a set of listed companies that share similar characteristics to aged care providers in terms of customer base, supply side risks, regulatory conditions and other drivers of values. For this study, companies were chosen from the following sectors:

- residential care in markets outside of Australia;
- retirement villages in Australia or New Zealand;
- allied health providers in Australia or New Zealand; and
- hospital operators in Australia or New Zealand.

Companies and their equity betas are presented in Table 2.2. From the betas, an unlevered beta (also referred to as an asset beta) for residential aged care providers was estimated to be 0.56. This unlevered beta was then regearred and adjusted based on an assumed gearing level of 60% (this implies a debt to equity ratio for the aged care industry of 60:40). This gearing level was chosen based on the average ratio of total liabilities to net assets for aged care providers who submitted general purpose financial reports to DoHA in 2008-09 (DoHA 2011j). This results in a levered equity beta estimate for residential aged care providers of 1.10.⁴

⁴ The adjusted beta is calculated based on the application of Marshal Blume's formula, which attempts to take account of mean reversion theory. The debt beta is assumed to be zero in line with typical practice among valuation practitioners in Australia.

Table 2.2: Estimated equity betas

Company	Description of operations	Gearing	Unlevered β_E
Residential care			
Southern Cross Healthcare (UK)	Provider of care homes and offers specialty care services. It provides healthcare services for people with physical or learning difficulties. It also offers a range of care services including nursing, residential and dementia care.	17%	1.26
Caretech Holdings (UK)	Provides a range of specialist care and housing support services for people with learning and physical disabilities.	38%	0.23
Retirement Villages			
Aevum (Australia)	Owns and operates retirement villages around Australia, targeted at the resident funded sector of retirement living industry.	73%	0.36 ^a
Forest Place Group (Australia)	Owns and operates retirement villages. The company's retirement villages provide independent living units and serviced apartments.	64%	n/m ^b
Eureka Group (Australia)	Property asset manager of senior accommodation with over 50 village communities across Australia	77%	0.94
FKP Property Group (Australia)	Australian property and investment group involved in ownership, development and asset management of diversified property. FKP has significant exposure to retirement villages, ownership and operations.	64%	1.04
ING Real Estate Community Living Group (Australia)	Real estate investment trust that owns, manages and develops a diversified portfolio of senior's housing communities. The Fund has investments located predominantly throughout Australia and the United States.	87%	0.43
Metlifecare (New Zealand)	Own and manage retirement lifestyle villages in New Zealand spanning the full continuum of care from independent villas and apartments through to serviced apartments, rest homes and hospitals.	70%	n/m ²
Ryman Healthcare (New Zealand)	Own, develop and operate lifestyle retirement villages. Currently the portfolio comprises 22 villages with both retirement villages and aged care facilities. The company is targeting growth of 450 units per annum.	13%	0.86

Company	Description	Gearing	Unlevered β_E
Allied health operators			
Primary Healthcare (Australia)	Service provider to a wide range of health care professionals who provide care to patients, and operates licensed and accredited day surgery facilities, specialist eye clinics and automated pathology laboratories.	36%	0.54
Sonic Healthcare (Australia)	Medical diagnostics company providing laboratory and radiology services to medical practitioners, hospitals, community health services, and their collective patients.	27%	0.30
Abano Healthcare (New Zealand)	Active investor in and operator of healthcare and medical services businesses primarily located in New Zealand and Australia. Provision of services in Audiology, Dental, Diagnostics and Rehabilitation.	29%	0.64
Hospital operators			
Pulse Health (Australia)	Integrated health services provider with operations encompassing private hospitals, day surgeries and community home care, and recruitment agencies	66%	0.53
Ramsay Healthcare (Australia)	Global hospital group operating 116 hospitals and day surgery facilities across Australia, the United Kingdom, France and Indonesia.	34%	0.27
Healthscope (Australia)	Second largest private hospital provider, operating 43 private hospitals. Pathology business with facilities in Australia, New Zealand, Singapore and Malaysia. Healthscope also has a growing medical centres division with over 45 clinics and a diagnostic imaging division centred in major hospitals.	35%	0.21 ¹
Wakefield Health (New Zealand)	Develops, owns and operates private hospital facilities. Wakefield also leases space on its hospital campuses to specialists for consulting rooms and to other independent providers of services .	9%	0.19
Average		46%	0.56

Notes: Gearing is calculated as debt to enterprise value and has been calculated based on the average of the last 4 years (calculated at half yearly intervals). Betas are calculated with reference to the relevant local market index based on monthly returns over a 4 year period

(a) The company has been acquired in the last year and as such our calculation of their beta is up to the date of their acquisition.

(b) The company exhibits low liquidity in the trading of their shares and as such we consider their calculated beta as not meaningful.

Source: ThomsonReuters (2011), Deloitte Access Economics calculations.

2.2.4 Specific risk premium (α)

A specific risk premium has been used to adjust the cost of equity for industry specific factors. Differences in risk factors relating to the residential aged care industry relative to those companies identified in Table 2.2 include:

- **Regulatory risk:** Residential aged care is heavily regulated — the Australian Government regulates the quantity of beds that can be offered, the location of beds, the quality of accommodation and the prices that can be charged. This alters the capital and operating costs, cash flow and risk of residential facilities. Although the

provision of subsidies lowers market risk and return, and thus the cost of capital in the short term, there is long term regulatory risk.

- **Funding risk:** government funding comprises the bulk of the aged care revenue. There is a risk that inflationary pressures, particularly in terms of nursing wages, may not be recovered through government contributions or resident fees, leaving the aged care operator exposed to downside risk on operating margins.

In light of the risk factors presented above, and the usual practice used by Deloitte in valuing aged care providers, an industry specific risk premium of 1% has been used.⁵

2.2.5 Cost of equity capital

The cost of equity was calculated using the CAPM (equation 2) and the parameter values discussed in Sections 2.2.1 to 2.2.4. With a risk free rate of return (R_f) of 5.65%, an equity beta (β_E) of 1.10 and market risk premium of 6%, the required return on equity for for-profit providers was estimated to be 13.2%. Adjusting for the different tax treatment of not-for-profit providers (which also slightly alters the levered equity beta), the required return on equity for not-for-profit providers was estimated to be 14.3%. The parameters used to undertake these calculations are summarised in Table 2.3.

Table 2.3: Required return on equity for residential aged care providers

Parameter	Ownership type	
	For-profit	Not-for-profit
Risk free rate of return (R_f)	5.65%	5.65%
Equity market risk premium ($R_m - R_f$)	6.0%	6.0%
Equity beta (β_E)	1.10	1.27
Specific risk premium (α)	1.0%	1.0%
Post tax cost of equity	13.2%	14.3%

Source: Deloitte Access Economics' calculations.

2.3 The cost of debt (K_d)

Debt may be raised by residential aged care providers in a number of ways. Access to debt financing is determined through a variety of factors including the size and term of the loan required, the credit rating of the aged care provider and the state of financial markets.

For an investment such as an aged care facility, the provider will typically raise debt either through the corporate bond market or directly from a financial institution. In the case of the former, the cost of debt will be a premium over the CGS yield, reflecting the provider's credit rating. In the case of the latter, a premium over the bank bill rate will determine the cost of debt.

Hogan (2004) notes that companies operating in the aged care sector typically have "a high credit rating for bond issues". The Fitch ratings agency gave an average credit rating for US

⁵ Hogan (2004) applied a specific risk premium of 0.7%, but this was applied to the WACC rather than the cost of equity. No information was provided on the factors influencing this estimate.

aged care companies, as at December 2008, of A-.⁶ It is conservatively assumed that in the Australian market, which is smaller and less-developed, it is appropriate to ascribe an average rating of BBB to the aged care sector. This has been confirmed by Deloitte Access Economics' discussions with various funders to the aged care sector in Australia.

At the peak of the global financial crisis credit spreads widened substantially with BBB spreads widening to 300 to 320 basis points over Australian Government bonds. While credit spreads have narrowed since their peak, spreads have not returned to pre-crisis levels and are unlikely to return to such levels over the short to medium term. The spread of five year BBB rated corporate bonds over five year CGS yield was 230 basis points as at 31 March 2011. Using the expected yield for CGS of 5.65% (as discussed in Section 2.2.1), the cost of debt was calculated as 7.95%.

It is useful to compare the estimated cost of debt to real world examples of required rates of return on debt associated with recent bond issuances undertaken by Australian health care providers. Three examples are listed below.

- Primary Healthcare raised \$152 million in unsecured bonds at a yield of 8.93% in September 2010 with a term of five years.
- Healthscope raised \$200 million in unsecured bonds at a yield of 11.25% in December 2010 with a term of 5.5 years.
- Australian Unity is undertaking a listed note issue at a current yield of 8.55%. The notes are unsecured and have been assigned a BBB+ credit rating by Australian Ratings.

All three of the above debt raisings were more junior ranking debt than the debt being considered in this analysis. Consequently, it is expected that required rates of return would be slightly higher than the required rate of return for aged care providers.

2.4 Capital structure

As noted above, the debt to equity ratio of 60:40 was chosen based on the average ratio of total liabilities to net assets for aged care providers who submitted general purpose financial reports to DoHA in 2008-09 (DoHA 2011j).

A survey of aged care providers by Bentleys (2011) noted that accommodation bonds account for 30.3% of total finance in the aged care industry. This implies that approximately half of the liabilities held by aged care providers are in the form of accommodation bonds with the remainder being in commercial debt.

2.5 Estimating the WACC

The WACC was calculated using equation 1 presented in Section 2.1 and the parameters presented in Section 2.2 and Section 2.3. Three different WACCs are calculated in Table 2.4, one for high care beds, one for low care beds and one reflecting a mixture of high and

⁶ The Fitch bond credit rating assesses the credit worthiness of corporate debt issues. Comparison of the Fitch ratings (which range from AAA prime to D in default for long term bonds) with those of Moody's and Standard & Poor's are provided at http://en.wikipedia.org/wiki/Bond_credit_rating. AA is high grade, A- is upper medium grade and BBB is lower medium grade in the Fitch scale.

low care beds. The WACC for high care beds was based on the assumption that debt financing is obtained solely from the market, at the rate calculated in Section 2.3, resulting in a WACC of 8.6%.

Low care beds can be financed using accommodation bonds, which are essentially a source of interest free, risk-free (because it is backed by the government) debt. The cost of this debt has been priced at the risk free rate. Although no return is actually provided on accommodation bonds, it is assumed that the foregone compensation for the time value of money and inflation is effectively a payment for services. The resulting WACC is 7.7%.

Finally, we calculate the WACC for a typical aged care provider to construct a mix of high and low care beds (assuming a 50:50 mix of bonds and commercial debt based on the results of the Bentleys 2011 survey). The resulting WACC is 8.2%.

Table 2.4: Parameters used in the WACC calculation (for-profit providers)

Parameter	High care	Low care	Mix of high and low care beds
Cost of equity capital	13.2%	13.2%	13.2%
Cost of debt capital	7.95%	5.65%	6.80% ^(a)
Debt to enterprise value ^(b)	60.0%	60.0%	60.0%
Corporate tax	30.0%	30.0%	30.0%
Nominal post-tax WACC (for-profit providers)	8.6%	7.7%	8.2%

Note: (a) This reflects a 50:50 mix of accommodation bonds and commercial debt. (b) Enterprise value equals the sum of debt and equity.

Source: Deloitte Access Economics' calculations.

A WACC for not-for-profit providers, who would not benefit from the tax shield on interest payments, is set out in Table 2.5. The WACC for a high care bed is 10.5%, while the WACC for a low care bed is calculated to be 9.1%, and the weighted average for a mix is 9.8%.

Table 2.5: Parameters used in the WACC calculation (not-for-profit providers)

Parameter	High care	Low care	Mix of high and low care beds
Cost of equity capital	14.3%	14.3%	14.3%
Cost of debt capital	7.95%	5.65%	6.80% ^(a)
Debt to enterprise value	60.0%	60.0%	60.0%
Tax	0.0%	0.0%	0.0%
Nominal post-tax WACC (not-for-profit providers)	10.5%	9.1%	9.8%

Note: (a) This reflects a 50:50 mix of accommodation bonds and commercial debt. (b) Enterprise value equals the sum of debt and equity.

Source: Deloitte Access Economics' calculations.

The WACC for both for-profit and not for-profit providers is lower than that often applied in practice by market participants. Based on Deloitte Access Economics' discussions with

market participants, the rates of returns typically being demanded for investment in the aged care sector in Australia are around 12%. There may be a number of reasons for this divergence, including:

- uncertainty surrounding funding in the aged care sector particularly in terms of the high operating leverage in the sector and the high levels of nursing cost inflation;
- concerns over the burden of compliance with government regulation and the uncertainty created by government intervention in the market; and
- concerns over certainty in political policy on a long-term basis.

Another reason for the divergence is that the WACC has been calculated based on mature assets. When evaluating new development opportunities, creditors may demand higher rates of return. Currently, the rates of return demanded for capital being used to undertake development activity are between 15-18% for brownfield development,⁷ and more than 20% for greenfield development.⁸

A number of factors influence the demand for a higher rate of return for greenfield development. One primary factor is the greater uncertainty surrounding the future profitability of a new facility compared with an established, successful facility. The main uncertainties related to development are:

- **Construction cost risk** — the risk that the construction cost may be greater than originally estimated;
- **Construction timing risk** — the risk that the time involved with construction may be greater than originally estimated and as a result the time period to the generation of profits/cash flows may be delayed;
- **Occupancy risk** — the risk that once constructed the facility may not attract sufficient residents and therefore revenues (and profits/cash flows) may be lower than estimated; and
- **Operating cost risk** — the risk that the operating costs (in particular nursing costs) may be higher than estimated.

Finally, subsequent to the global financial crisis, financial institutions have also imposed stricter lending criteria. Construction relating to the aged care sector is regarded as property development, which is inherently riskier than aged/health care operations and this may have increased the required rate of return.

For these reasons, sensitivity analysis on the WACC was conducted at 12% and 15%.

⁷ Brownfield development refers to activity at existing facilities such as large scale refurbishments or the building of additional beds.

⁸ Greenfield development refers to building beds at a location that does not currently have an aged care facility. Given the 'unproven' nature of the operations, this is viewed as being higher risk and therefore demands higher returns.

3 Financial viability of residential aged care providers

This chapter presents the results of the CAPM-WACC modelling for which the WACC was estimated in Chapter 2. The model allows examination of the cost, revenue and return from providing a low and high care bed under different policies. It aims to provide an approximate representation of the industry, which assists in highlighting the potential impact of the recommendations.

The first section models the aged care industry under the current system. The assumptions underlying the model are largely drawn from a literature search. However, this is supplemented using data obtained from a survey conducted by the Aged Care Association of Australia. Data was collected on a range of financial information, including the cost of building. Unfortunately, due to the short-time frame available to field the survey only four responses were received.

The second section examines an appropriate daily charge, and equivalent accommodation bond, under the Productivity Commission recommendations. The final section examines variations in the cost per bed day based on geographical location, type of room, inclusion of land and the sensitivity of the estimate to variations in the WACC.

3.1 Methodology

The industry was defined as sustainable or financially viable if it was found to be able to attract new capital investments. Without capital investment the industry will not be able to meet future demand.

Investment in capital will only be worthwhile if the return it generates covers the cost of capital demanded by the investor. The cost of capital would typically reflect the risks associated with the investment. A benchmark for this cost is the weighted average cost of capital (WACC). If the internal rate of return (IRR) on new capital investment (the return required to break-even) is greater than the WACC, then investment will be made in the industry.

To analysis sustainability, a net present value (NPV) approach was used. NPV measures the increase in wealth expected with various cost and revenue estimates, and is calculated by discounting the revenue flows expected in future periods at the cost of capital (i.e. WACC) and then subtracting any current outlay (i.e. costs). If the NPV is positive, then an investment is considered economically beneficial. If the NPV is zero then an investment breaks even, while if negative the investment would generate a loss.

$$NPV = P_0 + \sum_{t=1}^T \frac{CF_t}{(1 + WACC)^t} + \frac{P_T}{(1 + WACC)^T}$$

where:

P_0 is the initial outlay for the investment;

CF_t is the after tax earnings before interest, depreciation and amortisation at time t ;

P_T is the terminal value of the asset;

WACC is the weighted average cost of capital.

An alternative evaluation method is to compare the internal rate of return (IRR) with the WACC. The IRR is the interest rate at which the net present value of costs equals the net present value of the benefits of the investment. If the IRR is greater than the WACC, then the project is economically beneficial because it generates a return greater than the cost of investment.

When considering whether an investment is viable, independent of any other project, both methods yield the same result.⁹ However, both metrics are presented for reference.

3.2 Current viability (pre-reform)

This section examines the viability of investment in aged care under the current aged care system. High care and low care were modelled separately under the assumption that there is no cross-subsidisation and they have alternate revenue and cost streams.

The revenue stream was based on income from accommodation charges and accommodation bonds. Costs included the cost of land, building and maintenance.¹⁰ The cost of personal care (such as food, laundry and cleaning) and health care costs are assumed to be wholly funded through other revenue streams.

3.2.1 Revenue

Under the current aged care system, residents are required to make separate payments towards the cost of their accommodation, their daily living expenses and the cost of their care, although in many cases some or all of these costs are paid by the Australian government. The amount a residential facility can charge for accommodation differs depending on whether the resident is in high care, low care or high care extra service accommodation.

High care facilities receive an accommodation payment to cover their cost of accommodation. It is either paid by the resident (accommodation charge) or the Australian Government (accommodation supplement) or a combination of both, with the share determined by a means test. The accommodation charge and supplement, in its current form, was introduced in March 2008. The maximum level remained constant at \$26.88 from March 2008 until September 2010. Historical caps on the accommodation charge and supplement is shown in Table 3.1. This schedule was determined at the time of

⁹ When comparing mutually exclusive projects the NPV and IRR may not give the same ranking. NPV is based on an assumed discount rate while the IRR calculates a discount rate, which will be affected by the timing of cashflows and the size of the project. Consequently the IRR cannot be compared in terms of relative size. The NPV, with the desired discount rate, should be used to determine the project with the greatest return.

¹⁰ Although the daily fee is defined as a fee to be used towards, among other things accommodation costs (DoHA 2011), it is assumed that this income is for non-capital costs of providing accommodation such as gardening or utilities.

introduction, with future increases to be indexed to the consumer price index (CPI) in March and September each year (DoHA 2008). For the purpose of the modelling, it was assumed that caps on the accommodation charge and supplement will increase by 2.5% per annum based on the inflation target set by the Reserve Bank of Australia (RBA).

Table 3.1: Historical caps on the accommodation charge and supplement

Period	\$ per day
20/3/08 to 19/9/10	26.88
20/9/10 to 19/3/11	28.72
20/3/11 to 19/9/11	30.55
20/9/11 to 19/3/12	32.38

Source: DoHA (2008).

Low care and extra service high care residents currently have the option of providing an accommodation bond or paying a periodic payment set at a rate that is equivalent to the accommodation bond.¹¹ The accommodation bond is an upfront lump sum payment, which is returned to the resident, or their estate, when they leave the residential care facility minus a monthly retention fee over the first five years.

Although there is an option to pay by periodic payment, the majority of residents choose to provide a lump-sum payment. In 2009-10, 89.6% of accommodation bonds were paid by lump sum with the remainder being paid either by periodic payments or a combination of a lump sum and periodic payment (DoHA 2010). Many people release the equity held in their home in order to pay for aged care. Accommodation bonds, unlike other investments or cash holdings, do not affect a resident's eligibility for the aged care pension (DoHA 2011c). However, the value of the primary home and any rental income derived from it are exempt from the means-test for the age pension if used to make periodic payments (DoHA 2011c).

Aged care providers receive an accommodation supplement from the government to cover the cost of the accommodation provided to those deemed unable to pay ('supported residents'). The size of the accommodation supplement varies depending on the proportion of supported residents. Facilities with more than 40% supported residents receive the full accommodation supplement of \$30.55 per day while those with a smaller proportion of supported residents receive a 25% discount on this amount (PC 2011). Supported residents are those with assets worth less than 2.25 times the maximum annual single basic age pension, which from 20 March 2011 was \$39,000 (DoHA 2011b).

At 30 June 2010, 17% of residents were 'concessional' residents (i.e., fully subsidised), 2% were 'assisted' (i.e., partially subsidised), and 18% were 'supported' where it cannot be determined whether the resident was fully or partially subsidised (DoHA 2010).

In the model it was assumed 20% of residents are fully subsidised, given that PC (2011) recommended a minimum of 20% of supported residents in each facility. Over 2009-10, residential aged care providers received \$515.4 million in accommodation supplements (DoHA 2010). On average, this represents \$3,097 per person in a residential care facility (noting that not everyone is subsidised). In the model it was assumed that the proportion

¹¹ The periodic payment is based on bond retentions and an interest charge for forgone interest. The size of this payment is negotiated between the resident and the provider.

of supported residents is the same for high and low care, meaning that the average annual subsidy provided for a high and low care bed is \$3,097.

The size of an accommodation bond is only limited by the person’s ability to pay and is negotiated between the provider and the resident. The only requirement in setting the bond size is that the resident must be left with at least 2.25 times the maximum of the single aged pension (DoHA 2011b).

Providers are able to deduct an annual retention amount from the bond for the first five years of residence provided that the resident is left with at least \$39,000. From 1 July 2010 the maximum retention amount became \$307.50 per month (\$3,690 for the 12 months) for bonds over \$36,900 (DoHA 2011i). For bonds less than \$19,080 the maximum retention amount is \$1,908 per annum while for bonds between \$19,080 and \$36,900 the maximum retention rate is 10% of the bond value (DoHA 2011i). Maximum retention amounts are indexed annually in line with the March quarter All Groups CPI as provided for under section 23.72 of the *User Rights Principles 1997*.

On moving from low care into high care, residents can elect to rollover their accommodation bond and pay no accommodation charge or to have the bond fully refunded and pay the accommodation charge (DoHA 2011c). One advantage of rolling over the bond is that it is not counted towards the assets test for the aged pension. An average bond of \$233,000 was assumed in the model based on PC (2011). This is higher than the average bond held by those providers surveyed for this study by the ACAA, noting the sample is small. The distribution of their bonds is shown in Table 3.2.

Table 3.2: Distribution of average bond size found within the ACAA survey

Facility	1	2	3	4
	Low care	Low care	High care	Mix
	\$	\$	\$	\$
Mean	126,384	56,000	57,317	243,118
Median	117,876	36,000	47,162	250,000
Max	250,000	106,000	111,938	500,000
Min	28,000	26,000	13,520	17,000
Mean bond (all residents)(a)	72,671	3,818	3,316	77,798

Note: All four providers are not for profit. (a) Mean bond including residents who did not pay a bond.

Source: ACAA Survey analysed by Deloitte Access Economics.

The total value of accommodation bonds obtained by approved providers has doubled from \$4.3 billion in 2004-05 to \$9.1 billion in 2008-09 (PC 2011). Including volume increases, the stock of accommodation bonds has grown at an average annualised rate of 20.6% per year. Average accommodation bonds for new residents have risen rapidly from around \$58,000 in 1997-98 to almost \$233,000 in 2009-10 (PC 2011). This is an average annualised growth rate of 12.3% (albeit from a low base). As accommodation bonds are generally financed by residents selling their homes, which account for 90% of the wealth of the median household aged over 75 (RBA 2009), the growth of house prices is likely to be a strong predictor of the growth in accommodation bonds. House prices have grown on average

7.7% per year over the period June 1986 to June 2005 (ABS 2011).¹² This is different from the rate of growth that has been observed in bonds, likely due to:

- the longer time horizon for house price growth;
- the exclusion of the most recent house price data; and
- growth in the average bond since 1997-98 would reflect that over time providers have had greater reason to encourage bonds due to the increasing shortfall of other sources of capital income. At some point the rate of growth would level out because there would be no further capacity to increase the proportion of persons providing bonds.

It was assumed that the annual growth in bonds paid by new residents is 7.7%.

There is little market data available on the average return on accommodation bonds. The maximum permissible interest rate that can be applied to determine what the equivalent periodic payment for an accommodation bond is 8.92% (DoHA 2011c).¹³ Most aged care providers (who make their periodic payment calculations publicly available) apply interest rates which are close to or equal to the maximum permissible interest rate when converting lump sum bonds into periodic payments. Aegis noted that a maximum permissible interest of 8.8% is equivalent to an interest rate of 7.0% and a 2.5% building write off component (Aegis 2011).¹⁴

A number of aged care providers interviewed for this study indicated that funds from accommodation bonds were typically used to pay down commercial debt, with the remainder (including that generated from bond uplift) typically be placed in a term deposit. Paying down commercial debt saves the provider 7.95% in interest repayments (based on the cost of debt calculated in Section 2.3).¹⁵ After taking into account tax deductions on interest expenses, the interest saving rate is 7.1%. This benefit to the resident is included in the model as a revenue stream. For the proportion placed in a term deposit, the return is estimated to be 7.15%, currently the highest rate of return on a five year term deposit.¹⁶

Occupancy rates for aged care are currently 92.4% (DoHA 2010a), which means that on average only 92.4% of the accommodation supplement or an equivalent \$28.23 per day is received for each aged care place. It is difficult to estimate occupancy rates for high and low care, because many residents initially assessed as low care may remain in the same room once they require high care. Indeed, the number of high care residents in June 2010 was 113,803 (DoHA 2010a), which exceeds the number of operational high care places, as

¹² The ABS slightly altered the methodology for calculating established house prices in 2005, so more recent ABS data is not strictly comparable to the older date. However, if the data calculated under the old methodology (1986 to 2005) is combined with the more recent data (2002 to 2010), the average growth in house prices between 1986 and 2010 was 7.78%, similar to that for the period 1986-2005.

¹³ *User Rights Principles 1997* (Cth) section 23.62(3).

¹⁴ This building write off is tax deductible so assuming the provider is paying a 30% corporate tax rate, the after tax cost of depreciation becomes 1.75%.

¹⁵ The provider needs to generate 5.65% return on accommodation bond debt for the resident. This return should be considered as a revenue stream for the resident. By avoiding commercial debt, an additional 2.3% in the required return to investors is saved.

¹⁶ Information on interest rates for term deposits obtained from Rate City, <http://www.ratecity.com.au/term-deposits>, accessed 06 April 2011.

just under half of the 179,749 operational residential aged care places are allocated to high care (DoHA 2010a).

At present, around 14% of women and 7% of men stay in residential aged care for between five and eight years, while only 5% of women and 2% of men enter residential aged care for eight years or more (PC 2011). Resident turnover was 0.32 in 2008, meaning that around one third of permanent places were newly occupied during the year. Around 89% of the turnover was attributable to mortality. Of those who died, 36% had been at the facility for less than a year (AIHW, 2009). It was therefore assumed the average retention rate on the stock of bonds is 100% and each year one third of a facility's stock of bonds is replaced by new bonds. This allowed the model to capture expected bond uplift in the future.

Table 3.3 presents the assumptions used in deriving the average revenue stream per resident in high and low care.

Table 3.3: Parameters for average revenue

Parameter	High care	Low care
Maximum accommodation charge ^(a)	\$31.47	\$31.47
Annual growth in accommodation charge	2.5%	2.5%
Average bond	—	\$233,000
Annual retention amount on bond	—	\$3,690
Annual growth in new bonds	—	7.7%
Interest saved on bonds	—	7.1%
Occupancy rate	92.4%	92.4%
Turnover	32%	32%
Supported residents	20%	20%
Average Accommodation Supplement per resident	n/a ^(b)	\$3,097

Note: (a) This is the average rate over a year from March 2011 to March 2012. (b) Although high care providers receive the Accommodation Supplement, the modelling only requires information on the revenue received per resident, which is independent of concessional status.

Source: Deloitte Access Economics' calculations.

3.2.2 Cost of accommodation

The cost of accommodation comprises the cost of land, the cost of building and maintenance, and the cost of finance. However, in previous studies, the cost of land has been excluded in determining the cost of accommodation (Gray 2001; Hogan 2004; PricewaterhouseCoopers 2007). This has been based on the argument that land is not consumed in the same way as a building, as the former is an appreciating asset while the latter is a depreciating asset. It has been argued that the cost of land is covered by the increase in the real price of land, and therefore land costs should not be passed on to residents.

There is no denying that land contributes to the cost of accommodation. Providers must purchase land through a competitive process with other potential users of the land (e.g. property developers). If the provider already holds the land, the cost of land is represented by opportunity cost (i.e., if it were not being used for accommodation, the land could be used for other purposes or sold).

From a theoretical basis, a model that includes the cost of land in determining the cost of accommodation should also include the expected return on land. However, financial markets are not perfect. Industry sources suggest financial institutions do not recognise the increase in the value of land when estimating the value of a provider. For example, financial institutions are more inclined to consider provider earnings and management capabilities when evaluating whether to provide commercial debt to a provider (see Section 4.2).

The little weight given to the value of land by financial institutions means any increase in the value of land held by a provider is not readily accessible. Furthermore, most providers offer accommodation in perpetuity, and therefore the capacity to realise any increase in land value through the sale of land is limited. This means any expected return on land to the provider is minimal, even though the value of land may increase. On this basis, the cost of land was modelled in the base case, and any expected increase in the value of land has been excluded. However, a variant is included in Section 3.5.3 to examine the impact of excluding land.

The cost of building an aged care bed within the model was based on the current cost of construction. Data on this is limited and estimates vary considerably due to differences in methodology, jurisdictional variation and quality and size of the facility. There is variability in the scale of the aged care facility (i.e. number of beds), geographical locations, differences in quality (e.g. space, privacy, fittings and internal common facilities) and site-specific factors such as topography, car-parking, air-conditioning, legislation and certification and so on. The variety of definitions and data sources used in government reviews and industry reports has resulted in wide ranging estimated costs.

Hogan (2004) estimated a capital cost of between \$74,000 and \$85,000 per place was required to establish a residential care service. This consisted of between \$60,000 and \$65,000 for building, \$5,000 and \$7,500 for fittings, \$3,815 and \$6,910 in working capital and \$4,800 and \$5,200 in professional fees. The cost of land and site-specific costs were excluded in the estimations. In the report, however, average cost of land was estimated to be \$8,300 per place, and it varied significantly across locations.

This estimate was consistent with a previous major government review, *Two Year Review of Aged Care Reforms*, conducted by Professor Len Gray in 2001, with the average cost (of \$68,500) to build new places estimated in 1998-99 based on a RAC facility lifetime of 30 years (Gray 2001). This estimate was based on a number of sources (including Rawlinsons (2002-2008)) and excluded many items such as cost of land, furniture, fittings, connections to services, landscaping, roads, parking, paths, balconies, sloping sites, adverse ground conditions, architects and other consultants' fees, legal fees, interest and fees of authorities. The estimate also did not account for changes in building standards (i.e. certification, a minimal average of 1.5 residents per room for new facilities, fire, occupational health and safety and accreditation (Diocese of Maitland-Newcastle, Media Release, 16th July 2001).

In 2007, the Aged Care Industry Council commissioned a report from PricewaterhouseCoopers (2007) which found that capital needs for the high care RAC sector contrasted greatly with the results of Hogan's report. In the PricewaterhouseCoopers report, the average building cost for a high care bed was found to be \$192,500, excluding

land cost and external works¹⁷. This was based on specifications¹⁸ comparable to Hogan’s report. Catholic Health Australia (CHA, 2008) found a comparable cost of \$180,000 to build a new high care facility, which it estimated was a conservative minimum rather than a true average.

A survey conducted by Grant Thornton (2009) found comparable results to the PricewaterhouseCoopers report. Table 3.4 shows the lowest construction and fit-out costs (excluding land) by jurisdiction. Personal communication with Grant Thornton confirmed these estimates were based lowest cost operators who have standard design models and a long term relationship with a builder.¹⁹

Table 3.4: Lowest construction and fit-out costs

State	Costs per bed
New South Wales	\$165,000
South Australia	\$170,000
Queensland	\$185,000
Victoria	\$145,000
Western Australia	\$164,000
Tasmania	\$138,000

Source: Grant Thornton (2009).

Access Economics (2009a) combined this data with actual costs obtained from Hanna Newman Associates Pty Ltd²⁰. The data was based on providers that had constructed high care facilities between 2003 and 2009 for which Hanna Newman had adequate data for a total cost estimate. The 15 facilities were distributed in both metropolitan and regional areas in ACT (two facilities) and NSW (13 facilities).²¹ The average number of residents per room ranged from 1 to 1.28 and, in all facilities, minimum standards for certification were satisfied (DoHA 2006). The facilities were described by Hanna Newman as being of a standard that reflects current industry construction norms. They differed in relation to a number of characteristics, such as:

- the number of bedrooms and ensuites;
- car spaces;
- quality of finish;
- laundry area;
- kitchen;
- common areas; and

¹⁷ The figure would be \$215,800 if land cost of \$8,300 (from Hogan’s report) and cost of external works of \$15,000 were included.

¹⁸ The exact specifications were not known.

¹⁹ Grant Thornton did not provide any information on industry average costs.

²⁰ Hanna Newman Associates Pty Ltd provides cost and project management services to the building and construction industry, with clients including local government, architectural/engineering firms, not-for-profit organisations, aged care providers, churches, clubs, banks and financial institutions, individuals and developers, see <http://www.hannanewman.com.au/index.html>.

²¹ It should be mentioned that the Hanna Newman data did not include facilities in remote locations, which may involve higher than average costs. For this reason, the Australian Government has an annual capital funding program (of around \$40 million per year), which targets remote as well as rural and special needs facilities.

- special factors such as rock excavation, slope of land and filled/unstable ground.

Table 3.5 shows average cost by cost component in 2009. Cost per resident was calculated by dividing each cost component by the number of residents (proxied by the number of beds while accounting for occupancy rates). The average cost for all components was estimated to be \$19.0 million or around \$213,000 per resident (with an average of 89.5 residents per facility).

Table 3.5: Average cost of constructing a new high care facility, 2009

Components	Cost	Cost per resident
	\$ (000s)	\$ (000s)
Building works	13,918	156
Site works and services	2,098	23
Authority fees/contributions	225	3
Professional fees	1,558	17
Furnishing, fittings and equipments	1,226	14
Total	19,026	213

Note: Costs exclude interest and setup/commissioning costs. Total costs may not tally precisely due to rounding.
Source: Hanna Newman Associates (2009).

Data collected using the ACAA survey showed costs of building ranging from \$119,000 to \$146,842 for low care facilities and a single value for high care of \$195,000 (Table 3.6). Adding these values to the Hanna Newman data yields an average cost of building of \$198,000.

Table 3.6: Cost of building, ACAA survey

Characteristic	Facility 1	Facility 2	Facility 3	Facility 4
Type of care				
Low care	\$119,000	\$142,000	n/a	\$146,842
High care	n/a	n/a	\$195,000	\$146,842
Type of room				
Single-bed room	100%	35%	100%	100%
Two-bed room	-	65%	-	-

Note: All four providers are not-for-profit.
Source: ACAA Survey analysed by Deloitte Access Economics.

Industry estimates are consistent with the data collected by Hanna Newman and the ACAA, if not higher. A submission to the Productivity Commission Inquiry by Aevum (2010) suggested a cost of between \$180,000 and \$250,000 for a single-bed room. PC (2011) cited industry estimates ranging between \$200,000 and \$250,000 to construct a residential aged care bed. Blue Care (2010) cited a cost of \$250,000 per bed in metropolitan Brisbane. These estimates were supported through Deloitte Access Economics' consultation with aged care providers. It was therefore assumed that the cost of building an aged care bed is \$198,000, for both high and low care, with sensitivity analysis at \$250,000. The value of the building at the end of the horizon is assumed to be zero.

Little data was available on maintenance expenditure over the life of an aged care facility. Building depreciation is usually recorded at 2.5%. ACAA collected data on maintenance,

although only one respondent provided information. This respondent reported maintenance expenditure of 3% per annum, although it was unclear what this estimate included. Blue Care (2010) proposed a maintenance schedule following advice by Napier Blakely.²² Their maintenance schedule was based on a proportion of building costs of 1% after 5 years, 2% at ten years, 4% at 15 years, 6% at 20 years and 9% at 25 years. This maintenance schedule was adopted within the model.

The cost of land was based on the Australian average of \$8,300 reported in Hogan (2004). This cost was inflated using the annual growth rate in house prices of 6.1% (obtained from the Real Estate Institute of Australia). The average land cost in 2011 was estimated to be \$12,563. Anecdotally, land costs may range from \$25,000 to \$35,000 per bed suggesting this Hogan-based estimate is conservative.

Table 3.7 presents the assumptions used in deriving the average expenditure stream per resident in high and low care. The profit status of a provider affects the rate of tax paid. A weighted average tax rate was calculated for the industry based on the proportion of beds by profit and not-for-profit providers. At 30 June 2010, 35% of operational residential care places were provided by for-profit providers (DoHA 2010a). A tax rate of 30% was applied to for profit providers and a zero tax rate was applied to not-for-profit providers (see Section 2.5).

Table 3.7: Assumed cost of accommodation

Parameter	Low care	High care
Cost of building a bed (excl land)	\$198,000	\$198,000
Cost of land	\$12,563	\$12,563
Maintenance (% of building cost)		
At 5 years	1%	1%
At 10 years	2%	2%
At 15 years	4%	4%
At 20 years	6%	6%
At 25 years	9%	9%
% providers for profit	35%	35%
Tax rate ^(a)	10.5%	10.5%

Note: (a) The tax rate is the weighted average rate for a for profit and not-for-profit provider (weighted by proportion of providers), under the assumption that the tax rates are 30% and 0% respectively.

Source: Deloitte Access Economics' calculations.

3.2.3 NPV and IRR

The NPV and IRR were calculated as described in Section 3.1. The life span is an important variable for evaluating the investment, and Hanna Newman advised that 25 years is the industry norm in calculations. Time periods of 20, 25 and 30 years were considered in this report, with 25 years as the base case.

The present value (PV) of estimated future cashflows was estimated using the WACC over the time periods 20, 25 and 30 years. The WACC for high care was 9.8% and for low care

²² Napier & Blakeley is an independent property, development and infrastructure consultancy.

8.6% — the average of the for-profit and not-for-profit WACC weighted by proportion of beds (35% provided by for-profit). The results are shown in Table 3.8.

Table 3.8: Estimated NPV and IRR under the current policy regime

	20 years	25 years	30 years
High care			
WACC (discount rate)	9.8%	9.8%	9.8%
PV of after tax earnings	\$91,486	\$98,322	\$102,216
NPV	-\$119,076	-\$112,241	-\$108,347
IRR	0.6%	2.4%	3.4%
Low care			
WACC (discount rate)	8.6%	8.6%	8.6%
PV of after tax earnings	\$187,891	\$207,088	\$220,254
NPV	-\$22,672	-\$3,475	\$9,691
IRR	7.2%	8.4%	9.0%

Source: Deloitte Access Economics calculations.

The PV of after tax earnings over 25 years of a \$210,563 investment in a high care aged care bed is \$98,322 (see Table A.1 for calculation details). This is less than the cost of investment, indicating that it would not be worthwhile making the investment. **The IRR is only 2.4% in high care, compared to the WACC of 9.8%.**

The PV of after tax earnings over 25 years for a low care bed is \$207,088 making the NPV again less than zero (see Table A.2 for more details on the calculation). **The IRR is 8.4%, which is lower than the return required of 8.6%.** An investment in a low care bed would therefore not proceed.

A high care bed has an IRR below the 9.8% WACC regardless of the time horizon employed (0.6% over 20 years and 3.4% over 30 years). However, whereas a low care bed has an IRR for 20 years less than the 8.6% WACC (estimated at 7.2%), it has an IRR higher than the WACC for 30 years (estimated at 9.0%).

The daily high care charge that would be required to breakeven (provide a NPV of zero) over a 25 year horizon was estimated to be \$64.62. The average accommodation bond required to breakeven over the same horizon was estimated to be \$238,240.²³

3.3 Response to recommendations

The Productivity Commission’s recommendations were included in the model in four ways as outlined below.

1. Retention income drawn from accommodation bonds was removed from the revenue stream on a low care bed.

²³ This is the average accommodation bond required in the first period to generate enough interest to make the NPV of investment in the facility zero, given the assumptions on retention, proportion of supported residents, interest rate earned on bonds, turnover and growth rate in bonds provided by new residents.

2. The distinction between low care and high care beds was removed and it was assumed that 50% of residents provide an accommodation bond (with a sensitivity test around 0% and 100%), resulting in all beds following the revenue and cost structure of a high care bed.
3. Growth in the value of new accommodation bonds aligns with inflation rather than house price growth.
4. The WACC for low care providers was changed from 8.6% to 9.2%, reflecting the shift from accommodation bonds to commercial debt finance and from 9.8% to 9.2% for high care providers, reflecting the shift towards accommodation bonds rather than commercial debt finance.

3.3.1 What should be charged?

Determining the rate that should be charged depends on the proportion of people electing to pay by accommodation bond versus periodic payment as this affects the WACC. The more people who provide an accommodation bond the lower the WACC and therefore the lower the accommodation payment/accommodation bond. In the base case we assume that 50% of people take up the bond option, with sensitivity analysis at 0% and 100%.

Under the recommendations the price charged to residents should reflect the cost of supply, although a definition of the cost of supply has not been provided. For modelling purposes, the cost of supply was based on the cost of building and maintenance, to be recovered in full over 25 years.

The daily charge required to breakeven in the base case (50% of people using the bond option) is \$61.37 (see Table A.3 for details of the calculation). If nobody provided a bond, the breakeven periodic payment would be \$64.62 and if everyone provided a bond the breakeven payment would be \$58.20.

These estimates were based on the average cost of providing accommodation for a new facility, rather than the historical average cost of supply, which would be insufficient incentive to invest in new facilities. However, a charge or government subsidy based on this cost would be too high for those with an existing facility, which will be older and would have been cheaper to construct. Moreover, in a market with greater price transparency and more choice, residents would not be willing to pay the same rate for a new and old facility.

It is not clear how this issue would be addressed under the recommendations. One option would be to have several different rates of subsidies to reflect varying costs based on particular characteristics of facilities such as age or location. Additionally, when calculating the daily charge providers should schedule a decrease in the real value of the daily subsidy over time.

3.3.2 Indexation

The calculation in Section 3.3.1 is based on the assumption that the charge should be indexed to consumer price inflation, which is reflective of current practice. However, over time the accommodation charge has failed to grow fast enough to keep pace with increasing costs of construction. Although the charge will be sufficient for existing facilities

to generate the required return, it will not be sufficient to induce construction of new facilities.

If the accommodation charge were indexed to the cost of construction, it should continue to be high enough to generate the required earnings in the future to encourage investment. Construction costs have grown at annualised average rate of 3.9% over the years 1997 to 2010 (ABS 2011). From 2003 to 2007 growth in construction costs picked up to 6.8%. However, this growth has slowed since the financial crisis. If the accommodation charge was indexed to construction price inflation, **at an average rate of 3.9% and assuming an unchanged WACC, the daily rate in 2011 under the Productivity Commission's recommendations would mean that the break-even daily charge for a 25 year horizon would be \$54.77 in the base case (50% bond finance).**

An advantage of CPI indexation is that the CPI is relatively stable over time as a result of inflation targeting. It therefore provides certainty on the growth in payments. However, construction cost growth can vary over time and the long run average may not be constant. Indexing to construction costs could increase the WACC because there is a risk that returns will not be realised if construction price inflation is lower (or higher) than expected. While in the industry as a whole, providers who are constructing new facilities would be able to offset this by changing their charging schedule for new projects, those with only existing facilities would make a loss. On an individual project basis, the project would yield a lower than expected return.

3.3.3 Conversion of a daily charge to an equivalent bond

In the model, the periodic payment is converted to an equivalent bond using the same WACC used to calculate the periodic payment. Given the assumptions on the growth in the size of bond holdings each year and the average length of time a bond is held, a bond that generated a revenue stream that resulted in a NPV of zero was derived. This bond is equivalent to the periodic payment because it provides the same NPV. The calculation implicitly takes into account that the periodic payment is indexed annually while bonds are held on average for three years through the revenue structure. It also takes into account the savings on commercial debt interest by including this in the revenue stream of the bond.

The bond required to breakeven is \$361,689 in the base case. If it was assumed that everybody chose to provide a bond rather than a periodic payment the bond required to break-even over a 25 year horizon would be \$344,428. Given that this is higher than the average bond currently provided (\$233,000), at least half of those currently providing bonds may not be able to afford a bond of this size.

Larger bonds are required when fewer bonds are contributed under this method of conversion because the benefit of reducing interest payments is being shared (in the model) between those providing a bond and those paying periodically. In order to encourage use of bonds, providers should be able to distribute this benefit to those electing to pay an accommodation bond rather than a periodic payment.

3.4 Scenario analysis

There are many characteristics of a facility that would impact the cost of supply. This section examines the impact of two of these: room size and geographical location. The impact of basing the cost of supply is particularly important to examine because the recommendations suggest the government subsidy be based on this sized room. This scenario examines the impact on providers with single bed rooms when 20% of beds are provided to supported residents at this two-bed cost of supply rate. The impact of regional versus metropolitan was also examined.

3.4.1 Adequacy of a subsidy based on a two-bed room

The Productivity Commission's recommendations proposed that a government accommodation subsidy be based on the cost of supply of a two-bed room. Limited data were available on the cost of building a two-bed room. The ACAA consulted with several architects, who estimated that a two-bed room is around 85% of the cost of a one-bed room. **Imputing this into the model yields a breakeven daily charge of \$52.17 assuming a 25 year lifespan.**

Many aged care facilities are single bed rooms. If a provider had 20% supported residents at this rate, it would need to charge other residents a daily fee of \$67.74 in order to break-even. Consequently, non-supported residents would pay an additional \$3.11 per day to subsidise supported residents. If 40% of residents were supported, the daily charge for other residents would be \$71.09, meaning each resident provides \$6.46 per day to cross-subsidise supported residents.

Basing a subsidy on a two bed room will effectively redistribute income among residents by placing a tax on some and providing a subsidy for others. Alternatively the government could raise general tax revenue and pay this subsidy to remove cross subsidisation between residents. It is not clear from an efficiency perspective which method of taxation would be preferred. This would depend on the elasticity of demand for residential aged care and, for example, the elasticity of labour supply.

3.4.2 Metropolitan vs regional providers

The cost of building in a metropolitan versus regional area was determined using Hanna Newman and ACAA data. In metropolitan areas, the cost was estimated to be \$227,500 while in regional areas it was estimated to be \$179,800. The value of land was held constant at \$12,563, as it represents the average cost of land across all regions.

Under these assumptions, the daily accommodation charge in a regional area was estimated to be \$56.07 for a 25 year horizon. In a metropolitan area it was estimated to be \$69.99 (see Table 3.9).

If no bonds were collected in a regional area, the equivalent daily charge was estimated to be \$59.04. If only bonds were collected, the equivalent daily charge was estimated to be \$53.17. In a metropolitan area, the daily charge was estimated to be \$73.69 if no bonds were collected and \$66.37 if only bonds were collected.

Table 3.9: Estimated daily charges for metropolitan and regional areas, 2011

Payment method	Metropolitan	Regional
	\$	\$
No bonds, 100% periodic payment	73.69	59.04
50% bonds, 50% periodic payment	69.99	56.07
100% bonds, no periodic payment	66.37	53.17

Note: Assumes an asset lifecycle of 25 years.
Source: Deloitte Access Economics calculations.

The size of the average bond is lower in regional areas due to lower house values. For example, the average bond in a major city was \$207,806 in 2007-08. In an inner regional area the average bond was \$151,915 and in an outer regional area \$130,141. Remote and very remote areas had average bonds of \$102,543 and \$86,107 respectively (DoHA 2008a).

3.5 Sensitivity analysis

A sensitivity analysis was conducted to examine the impact of varying key assumptions associated with the previous calculations. These included:

- a higher WACC;
- a higher cost of building; and
- excluding the cost of land.

Each of these is further discussed below.

3.5.1 A higher WACC

As outlined in Section 2.5, the WACC for both for-profit and not for-profit providers is lower than that often applied in practice by market participants.

Therefore a sensitivity analysis on the base case was conducted for the breakeven point using a WACC of 12% and a WACC of 15%. **In the case of 12%, the breakeven rate increased to \$76.60 per bed day for a 25 year horizon. With a WACC of 15%, the breakeven rate would be \$94.35 for a 25 year horizon.**

3.5.2 A higher cost of building

A range of estimates for the cost of building were presented in Section 3.2.2 based on survey data. As the assumed value of the cost of building could be considered at the low end of industry estimates, a sensitivity analysis was conducted using an estimated cost of \$250,000. **Based on this cost of building, the breakeven daily charge was estimated to be \$76.57 in 2011 based on a 25 year horizon.** The breakeven daily charge was estimated to range from \$72.61 to \$80.62 with 100% and zero bond finance respectively.

3.5.3 Excluding the cost of land

The cost of land cost was included in the base case scenario to estimate the cost of accommodation. However, as outlined in Section 3.2.2, previous estimates of the cost of

accommodation have excluded the cost of land. Therefore a scenario was undertaken that excludes the cost of land in estimating the cost of accommodation.

Removing the cost of land, the total cost of accommodation was estimated to be \$198,000. **Under this assumption, the breakeven rate for a 25 year horizon decreased to \$57.86 per bed day.**

3.5.4 Summary

Table 3.10 summarises the estimates of the daily accommodation charges calculated in Sections 3.3, 3.4, and 3.5. All estimates are based on a 25 year horizon.

Table 3.10: Summary of daily accommodation charges

	No accommodation bonds	50% accommodation bonds (base case)	100% accommodation bonds
Baseline	\$64.42	\$61.37	\$58.20
Scenario			
Two-bed room	\$54.93	\$52.17 ^(a)	\$49.47
Metropolitan	\$73.69	\$69.99	\$66.37
Regional	\$59.04	\$56.07	\$53.16
Sensitivity			
12% WACC	—	\$76.60	—
15% WACC	—	\$94.35	—
Cost of building \$250,000	\$80.62	\$76.57	\$72.61
Excluding the value of land ^(b)		\$57.86	

Note: (a) In a one-bed room non-supported residents would pay \$67.74 to cross-subsidise 20% supported residents, or \$71.09 to cross-subsidise 40% supported residents. (b) This refers to excluding the cost of land in determining the cost of accommodation for the base case scenario only.

Source: Deloitte Access Economics' calculations.

4 Potential impacts on aged care providers

Recommendations made by the Productivity Commission aim to improve access, choice, fairness and sustainability within the aged care system. This is in direct response to recognised weaknesses and future challenges facing the system.

Outcomes for residential aged care providers will crucially depend on resident and provider behavioural responses. This chapter presents some of the risks facing residential aged care providers from changes that may occur if recommendations are implemented. The analysis has been based on interviews with current residential aged care providers and financial institutions that lend to providers.

4.1 Recommendations expected to impact providers

Productivity Commission recommendations that will significantly impact residential aged care providers include changes to the current funding regime and the removal of restrictions on residential bed licences. In summary, these recommendations state that:

- individuals should contribute to the cost of their personal care according to their capacity to pay, but should not be exposed to catastrophic costs of care;
- regulatory restrictions on the number of community care packages and residential bed licenses should be removed over a five year period;
- regulatory restrictions on accommodation payments, including the cap on accommodation charges in high care, should be removed;
- charging retention amounts on accommodation bonds should be abolished;
- residents should have the option of paying for their accommodation costs either as:
 - a periodic payment for the duration of their stay;
 - a lump sum (an accommodation bond held for the duration of their stay); or
 - a combination of the above.
- residential aged care providers should be required to offer an accommodation bond that is equivalent to the relevant periodic accommodation charge, which should be published by the residential aged care facility.
- regulatory restrictions on supplying additional services in all residential aged care facilities should be removed; and
- extra service (ES) bed licenses should no longer be issued and the distinction between ordinary and extra service bed licenses should be removed.

The potential impacts on residential aged care providers are further discussed below. These have been grouped into three broad categories, including access to financial capital, impacts on competition, and potential changes to aged care provider operations

4.2 Access to financial capital

Financial capital within the residential aged care facility industry comprises approximately 40% equity capital and 60% debt capital (see Section 2.4). However, there is large variability in the debt to equity ratio across providers, with some without commercial debt (typically not-for-profits), and some with small bond holdings.

A large proportion of debt capital is funded through accommodation bonds. Bonds are typically used to pay back 'bridging finance' for construction of new facilities. Commercial debt is sourced from financial market institutions (e.g. banks) for the construction period, and then paid back as bonds are sourced from residents entering the new residential aged care facility.

Using bonds to reduce commercial debt provides several advantages to the residential aged care provider. Two of these include:

- a shorter period of debt repayment compared to funding construction finance through other means, such as periodic payments; and
- a lower required rate of return to be paid on debt.²⁴

Advantages derived from accommodation bonds reduce the cost of debt financing. Interviews conducted with providers as part of this study suggest lump sum bonds have been essential in providing better quality aged care accommodation and the massive increase in the value of building work completed in the last decade. For example, between 2001-02 and 2007-08 there was a total increase in building work of approximately 102%, with an increase in the stock of bonds of around 110.7%.²⁵ If there were a large dilution of bonds, this may put at risk the further investment required in residential aged care facilities to meet expected demand from high care residents.

On the consumer side, the low-middle income high care resident's willingness and ability to provide accommodation bonds is limited by the factors listed in Section 4.4. However, the willingness of less disadvantaged high care residents to pay accommodation bonds is demonstrated within the current market as bonds are already being paid by extra service high care residents.

²⁴ Although interest is not paid to residents for the use of their bond principal, the provider is still required to provide a return to the resident through allowing the use of its accommodation facilities. However, the required rate of return paid to financial institutions will be higher than the required rate of return paid to residents (i.e. allowing the use of accommodation facilities). The former must consider the risk of the provider while the latter must only consider the risk of Australian Government default (as bonds are covered by the Accommodation Bond Guarantee Scheme).

²⁵ This was sourced from information supplied by the DoHA Aging Consultative Committee.

Productivity Commission recommendations are expected to change the average value of bonds held by providers. This is likely to occur through three channels, including:

- removing restrictions on accommodation bonds for high care;
- the push towards accommodation bonds and accommodation charges that represent the cost of supply; and
- requiring an accommodation bond and accommodation charge to be equivalent, and therefore equally attractive to residents.

The extent and direction of a potential change in bond values is unclear, since the provider and consumer drivers work against each other.

On the provider side, interviews with aged care providers suggest providers will benefit from the ability to charge accommodation bonds to high care residents. However, requiring bonds and accommodation payments to represent the cost of supply may reduce the number of bonds, at least in some parts of the country. This is because recently built accommodation has generally been built to high care specifications, although filled by low care residents, to enable ageing in place. Although the value of homes in capital cities would cover the average cost of supply in a residential care facility, some people may not be able to afford this type of accommodation if they live in an area with relatively low housing prices (e.g. rural and remote regions), cannot access the government-baked Aged Care Equity Release scheme, or do not have wealth invested in a family home.

If people switch from bonds to accommodation payments, there will be a shift away from an upfront lump-sum funding to a cash flow model, requiring providers to adjust their business model accordingly. This may reduce the capacity of providers to fund commercial debt, and could therefore reduce access to debt and investment opportunities.

Traditionally, the use of bonds has been beneficial for providers and residents. Providers use bonds to reduce their cost of capital and to achieve organisational objectives, such as providing access to care for lower wealth unsupported residents without the capacity to pay. Residents use bonds to reduce their assessable assets in the pension asset test, allowing them to maintain their pension income and receive discounts on their daily living charge.

Under the Productivity Commission's recommendations the demand for bonds will increase, as providers will see them as a cheaper alternative to commercial debt for high care as well as low care. The supply of bonds may change, although it is unclear whether residents will supply more or less bonds (see box below). If a majority of residents choose the accommodation payment, this will shift the provider to a (more expensive) cash flow model of care.

Will residents supply more or fewer accommodation bonds?

It is unclear whether recommendations made by the Productivity Commission will induce people to switch to an accommodation charge over bonds. If the two payments are equivalent in terms of cost to the resident, some factors that will impact the choice between the two accommodation payment options include:

- the required bond amount relative to assets held by potential residents (typically determined by the value of a person's home);
 - this will crucially depend on the 'cost of supply', with differences depending on whether the resident is low, middle or high income (recall Section 4.4);
- the potential to access housing wealth, dependent on:
 - the resident's capacity to sell the family home; and
 - access to the government-backed Aged Care Equity Release scheme proposed by the Productivity Commission, which will increase the supply of bonds by increasing access to housing wealth with a partner remaining in the house;
- the expected length of time within the residential aged care facility;
- level of income earned by the resident compared to the accommodation charge; and
- treatment of income from the Australian Pensioners Bond towards the income test for the daily care fee and income tested fee, and the impact on pension entitlement;
 - this is currently unclear within the Productivity Commission draft report.

A reduction in the average bond amount held by providers will leave a gap in funding to pay off bonds and to fund maintenance and construction. Providers will need to find additional equity or commercial debt to cover this gap in order to remain viable.

Accessing commercial debt for some residential aged care providers may not be easy, especially if they do not have a track record of sourcing commercial debt, or have a business model or management practices that are more risky due to substantial historical reliance on bond finance. Discussions with financial institutions currently lending to residential aged care providers suggest a number of factors are considered when deciding on providing debt, including:

- quantitative lending parameters, such as interest coverage ratio and loan-to-value ratio;
- earnings excluding benefits from bonds, and the variability in earnings;
- earnings compared to occupancy and bed types;
- occupancy rate of the residential aged care facility;
- scale of the operation, with larger organisations generally more attractive due to benefits from scale;

- bond value uplift²⁶ achieved in the past, and the expected bond value uplift over the medium term;
- age of stock relative to other facilities within the area; and
- management, including the composition of the team, how long they have been operating aged care facilities, and the type of support network available.

There is some concern among financial institutions that a large proportion of aged care providers will not meet lending criteria without access to (or with substantially reduced access to) accommodation bonds. This is because a proportion of bond principals are held as cash assets, to which the provider can access to pay off commercial debt. Furthermore, accommodation bonds provide more certainty over the future source of income. This access to liquid assets, and greater certainty over income, reduces the risk of providers defaulting on their loans, with lenders more likely to supply commercial debt.

Other financial institutions are not concerned with a shift away from bonds to accommodation payments, so long as providers can extract surplus cash flow from accommodation payments to pay off their commercial debt. Consequently, **it is crucial that the definition of the cost of supply includes the cost to finance commercial debt and equity, otherwise income from accommodation payments will fall short of the required cash flow to service debt, leading to a reduced capacity to invest.**

In general, some types of providers will find it easier to access commercial debt than others. Financial institutions have suggested **for-profit providers** are more comfortable with debt financing for construction, operational costs, and accommodation refurbishment. They are likely to have greater access to commercial debt in a new residential aged care environment as they are already meeting the key parameters used to determine the viability of funding.

In contrast, **not-for-profits** are traditionally less likely to use commercial debt to fund operational costs. They are more inclined to seek commercial debt for construction of new facilities, with the debt paid off quickly as new residents enter the facility and pay bonds. For this reason many not-for-profits have low levels of experience with sourcing commercial debt, and therefore may find it more difficult to access commercial debt to cover any funding shortfall from reduced average bond amounts.

Access to commercial debt will also be more difficult for providers who are in an early cycle building phase, where there has not been enough time to increase the bank balance through income.

²⁶ Bond value uplift refers to the change in the amount of accommodation bonds held when an existing resident leaves a facility and is replaced by a new resident. If the new resident pays an accommodation bond which is larger than that held by the previous resident there will be an uplift in the value of accommodation bonds.

The assumption that providers will extract increasingly large bonds in the future (bond uplift) may no longer hold under a bond arrangement that represents the cost of supply. A reduction in bond value uplift would gradually compress the facility's valuation, and may reduce a loan to valuation ratio (LVR) below an acceptable threshold. This would mean some current residential aged care facilities could breach their debt contracts, if the value of bonds falls significantly.

Even those providers who can access debt relatively easily will be impacted by a reduced average bond value. This is because their debt reduction program on construction will be longer, all else equal, and therefore impose an additional financing cost onto the provider. The extent to which the additional cost impacts profit will depend on the capacity of the provider to shift the cost onto the resident, either through a higher accommodation charge or bond (given the cost of supply also includes the cost of financing construction).

The potential impact of a reduction in the average value of bonds

The potential impact on providers from any change to the average value of bonds will come down to any resultant gap in funding and the capacity to access commercial debt. In turn, this will depend on the expected cash flow from accommodation payments and the extent to which providers are perceived to be risky (i.e. whether they meet lending criteria and can demonstrate a capable management team).

It is problematic to generalise a broad impact on providers from a reduction in the average value of bonds. This is because there is great variability in mission statements, business models, the capacity to meet lending criteria, and the local competitive environment faced by providers. Consequently impacts will be at an individual provider level.

Some providers will have a competitive advantage. These are providers with relatively new residential care facilities who do not require debt in the short term. They will therefore have the capacity to attract new residents and the time to build up reserves through accommodation payments before major maintenance, refurbishment or new construction is needed.

Other providers already have access to large cash reserves built over long periods of time. Their demand for commercial debt in the short term will be low if they can cover bond repayments. Therefore these types of providers may have enough time to accumulate further cash assets through accommodation payments before large amounts of capital are required.

Some providers will have a competitive disadvantage. This is particularly the case for providers with relatively **old accommodation stock** with a **need for significant debt funding** in the short term and **no track record of commercial debt**. Other providers will find it difficult to meet lending criteria for commercial debt because their business model may be considered a **high risk for the lender (e.g. substantial historical reliance on bonds)**.

Financial institutions also suggested that **providers with low care accommodation** may find it difficult to access commercial debt because they are considered more risky. This is

because some of these providers are not properly equipped to enable people to age in place. These types of providers are expected to be faced with increasing capital costs as more people demand low care places where they can eventually transition into high care, and competition increases to offer such services.

The potential impact on providers from any change to the average value of bonds will come down to any resultant gap in funding and the capacity to access commercial debt or other sources of finance. This will depend primarily on the willingness of financial institutions to lend funds in a new residential aged care environment and their capacity to adjust lending practices to accommodate changing market structures.

4.3 Competitive impacts from removing bed licence restrictions

Recommendations to remove restrictions on residential bed licences over a five year period is expected to open up the aged care market to greater market forces, thereby increasing competition. This has the potential to introduce greater flexibility into the supply of aged care services, and could allow providers to directly respond to changing aged care preferences within the region where they operate.

Coupled with relaxed caps on pricing, greater competition has the potential to increase technical and allocative efficiencies within the residential aged care market, and could promote further long term investment in the delivery of services through reducing some of the risk that is currently associated with government dictated allocations.

However, the use of a market mechanism in the residential aged care industry could also lead to non-optimal resource allocation. The industry has special characteristics which fall short of the optimal competitive preconditions for a well functioning competitive market. Such characteristics can lead to market failure.

- Information asymmetries may exist between providers and potential residents. People may not comprehend what constitutes quality care despite being provided with greater access to information, thereby limiting competitive outcomes.
- Barriers to entry in some regions may create market power for providers. These may be generated by local planning restrictions, whereby although a residential aged care provider may want to enter a local market within a particular location they are stopped because local council approval is not forthcoming.
- Moreover, externalities associated with aged care cannot be easily priced in the market (e.g. health outcomes of older Australians).

Government regulation may still be required to mitigate these potential issues.

Overall, greater competition is likely to increase efficiency in the delivery of residential aged care beds. The process towards greater efficiency will inevitably produce winners and losers, with less efficient aged care providers reducing their market share and with some likely market consolidation towards some providers. The question is **‘What provider**

characteristics are likely to enhance/reduce competitiveness and therefore the probability of survival within a more competitive market?’

According to financial institutions, **providers who do not have a demonstrated management practice in a competitive environment** are unlikely to receive funding for Greenfield investment, which will reduce their capacity to upgrade their facilities and react to changing preferences.

There is a perception that risk introduced through recommendations to increase competition within the residential aged care market is greater for low care providers compared to high care providers. This is because:

- low care providers experience greater changes in the composition of residents and therefore greater variability in income;
- low care providers are more exposed to any changes in the value of bonds; and
- there are more substitute products for low care, such as informal care and community care.

To ameliorate some of these risks, **low care providers may need to reinvent themselves**. For example, if recommendations were to lead the aged care market towards a more community based care model, residential aged care providers may find opportunity in providing more respite care. In addition, more transitional care is likely to be required as the direction of current health care reforms points towards utilising non-hospital care for elderly patients transitioning to returning home.

One competitive disadvantage under a more competitive environment is to own residential aged care **facilities that do not meet future residential aged care preferences**. For example, providers that receive an average bond amount but offer less than average accommodation (e.g. rooms that house more than one person) may see a reduction in demand as new facilities with single person rooms are built. Thus **providers with big portfolios of old stock may be disadvantaged** under the proposed changes, especially if they have little in the way of bonds.

A restriction of debt to some providers will also reduce their ability to invest in new construction. This does not mean total investment in residential aged care facilities will be reduced, as those providers who find borrowing relatively easily may undertake new construction activities. An increased reliance on long term debt, and variability in access to debt (as determined by those factors impacting the decision to lend) will therefore introduce a competitive advantage for some providers to the detriment of others. This could lead to consolidation of the industry.

The **new market environment could attract investment from non traditional players**, especially if changes lead to a greater rate of return and allows providers to respond to consumer preferences. Current aged care providers may find it hard to compete as they face the cost of adjusting to a new aged care market, whereas new players can avoid this cost.

For example, **the removal of supply side constraints on bed licenses introduces scope for retirement village owners to integrate into the low care market**, thereby offering the potential for 'ageing in place' across a longer time period. Alternatively, **private hospital operators** may start to invest in constructing and operating high care places.

Finally, as bed licenses are currently tradable, and there are restrictions on the supply of bed licenses, some providers have included licenses as an asset on their balance sheet. Although licences that are acquired through ACAR should be carried on the balance sheet at zero value, if a licence was acquired on the secondary market these can be carried on the balance sheet at purchase price.

Removing bed licence restrictions will reduce the value of bed licenses traded on the secondary market to zero, and consequently the **value of assets for providers who have purchased bed licences on the secondary market will be reduced**. This is expected to **reduce the capacity of some aged care providers to source commercial debt**, thereby placing them at a disadvantage in adjusting to a more competitive market environment.

4.4 Potential impact on operations

There is large variation in residential aged care operations throughout the industry. To some extent, this is determined by the level of accommodation bonds that can be sourced to generate an income stream, or to reduce the cost of debt financing. For example, not-for-profit providers tend to receive more income from bonds compared to for-profit providers, even though the average value of bonds paid by new residents is higher for the latter. Average bond value is also determined by the mix of resident types, with low care extra service residents paying the largest bond value, and standard high care residents paying the lowest (through bond rollover). There is also large variation in average bond values depending on where the facility is located, with bond values negatively correlated to facility location remoteness (see Table 4.1).

The Productivity Commission has noted that some providers who offer both low care or extra service high care accommodation, and high care accommodation cross subsidise high care residents who pay an accommodation charge through accommodation bonds (bonds are not capped but accommodation charges are capped) (PC 2011). Given bond values are variable within providers, cross subsidisation also occurs across bond payers, with residents supplying high value bonds (relative to the average) cross subsidising residents supplying low value bonds.

By no means is cross subsidisation ubiquitous. For cross subsidisation to occur, providers must be able to source high value bonds from some of their residents. This generally occurs in capital cities as residents have higher housing wealth on average.

Table 4.1: Distribution of average bond values collected by providers 2007-08

	Bond value
By resident type	\$
Low care – standard	181,240
Low care – extra service	255,873
High care –standard (bond rollover)	136,458
High care – extra service	244,547
Low and high care – extra service	246,755
By ownership status	
Not-for-profit	177,545
For-profit	215,531
By geography type	
Major cities	207,806
Inner regional	151,915
Outer regional	130,141
Remote	102,543
Very remote	86,107

Source: DoHA (2008a).

Some providers are not able to cross subsidise using bonds because they do not receive bonds. For example, providers who primarily deliver high care do not have access to accommodation bonds unless they provide extra services. Furthermore, providers who accommodate socially disadvantaged / special needs residents cannot cross subsidise because they do not receive bonds, instead having to rely on government supplements.

Cross subsidisation does generate advantages for providers and some residents. It can enable a smoother response to changing costs from a changing mix of residents. For example, a provider that experiences a shift towards low care needs will experience an immediate change to ACFI funding, yet the transition to a labour composition that better reflects care needs takes more time. Arguably, cross subsidisation allows providers to continue operating within a market containing under-funding for care from the government and inadequate indexation of subsidies over the years.

For those providers where their operational mandate is to provide care to those in need (e.g. some not-for-profits), cross subsidisation from high value bonds allows providers to reduce the bond burden on those less able to pay. Through this type of cross subsidisation, providers implicitly distribute wealth from the better to less well off, much in the same vein as Australia's progressive income tax system.

The use of bond principals is not legally restricted through prudential regulation requirements set out under the *Aged Care Act 1997* (the Act) and the User Rights Principles. The requirement of the Australian Government to refund around 150 bonds with a total value of \$24.5 million since the Accommodation Bond Guarantee Scheme was introduced in 2006 (DoHA 2010b) has necessitated an Australian Government review to enhance prudential regulation of accommodation bonds. The likely outcome is that the bond principal can only be used for:

- funding costs associated with capital investment, including purchase or construction of new facilities and refurbishment of existing facilities;
- loans to related parties made on a commercial basis (excluding loans to individuals);
- making financial investments in financial products; and
- refunding bonds and associated retirement of debt (DoHA 2011h).

The review of the prudential regulation of accommodation bonds is not expected to restrict the use of bond income for cross subsidisation purposes. However, the capacity for residential aged care providers to continue cross subsidising less wealthy residents and care costs will be substantially reduced if accommodation bonds represent the cost of supply rather than also reflecting market value and the level of assets accessible by the resident. The latter is generally a function of housing wealth.

Removing the capacity to tap into the value of accommodation bonds beyond the cost of supply would reduce the capacity of some providers to access high value bonds, and therefore reduce the ability to cross subsidise. Although there should be less need to cross-subsidise in a more market-based system, this may lead to particular consequences for residents, providers and the Australian Government, driven by a change in the relative prices for accommodation and care. These potential impacts are described below.

The care recipient (resident)

- Accommodation prices will be more transparent, and therefore enable people to better compare price versus quality across alternative providers.
- Residents who would have otherwise been cross subsidised for their accommodation (i.e. those who pay less than the average accommodation bond within a facility) will face an increased cost for accommodation, either through an increased periodic payment or increased bond amount.
 - This is likely to reduce demand for residential aged care and increase demand for community care and informal care for this lower income group.
- Residents who would have otherwise cross subsidised through high value bonds will face a decreased cost for accommodation, either through a decreased periodic payment or decreased bond amount.
 - This will increase demand for residential aged care and reduce demand for community care and informal care for this higher income group.
- People who are not supported but cannot afford the average accommodation bond amount (e.g. people with assets above the minimum asset limit of \$39,000 but below the average accommodation bond amount) may find it difficult to access residential aged care. This may lead to a 'middle class' gap in access to appropriate residential aged care services.
 - This will increase the demand for community care and informal care for this middle income group.
- Residents already paying an income tested fee lower than the maximum will face an increased fee in those facilities that subsidise daily living expenses through cross subsidisation.

- This will increase the demand for community care and informal care for this low-middle income group.
- Where people choose community care options instead of potentially more appropriate residential care options, there may be subsequent negative health and social outcomes.

The provider

- Providers will face greater scrutiny in relation to accommodation prices versus facility offerings, given potential residents are better informed.
 - Providers currently offering a relatively lower standard of accommodation but able to charge higher value bonds (e.g. in areas with high housing wealth such as capital cities) will face a significant adjustment.
- Flexibility in revenue allocation across the business will be reduced. This will require some providers to develop a new business model and pricing structure for accommodation and care.
 - Operational risk will increase for these providers, potentially reducing access to capital finance.
- Capacity to offer accommodation to unsupported residents with low assets will be reduced.
- Capacity to redistribute income from the most wealthy to the least wealthy will be reduced.
- There will be an incentive to reduce the level of care if income from bonds was used to pay for care.
 - This may be offset under the Productivity Commission's recommendation to ensure most residents contribute to their cost of care.

The Australian Government

- The price charged for care by providers cross subsidising care will increase. This will have two impacts on the government;
 - greater demand for care subsidies, thereby potentially impacting government expenditure on care; and
 - increase in expenditure risk if the government becomes responsible for funding the total cost of care over a stop-loss²⁷ (as recommended by the Productivity Commission).
- The Government may be required to offer additional accommodation support for 'middle class' residents who are unattractive to aged care providers (i.e. residents who are not supported but cannot afford the average accommodation bond or periodic payment).
 - This will increase expenditure risk.
- The impact on cost to the government will be exacerbated by expected increases in the future cost of care.

²⁷ The stop-loss mechanism proposed by the PC (2011) is one in which individuals would be responsible for making care co-contributions up to a certain amount (the PC modelled a stop-loss limit of \$60,000), after which no further care co-contributions would be required from them. Once the stop-loss limit is reached the government would be responsible for paying all remaining care costs.

4.5 Community care

Community care refers to formal care services which are provided in a care recipient's home. Community care is often supplemented by informal care provided by a friend or relative. A number of government programs provide formal care to people living in the community. The main programs include:

- Home and Community Care (HACC) provides transport, nursing, home maintenance, counselling and personal care and a range of other services to older people and younger people with disabilities;
- the Community Aged Care Package (CACP) targets older people living at home with care needs equivalent to low level residential care;
- the Extended Aged Care at Home (EACH) package targets older people living at home with care needs equivalent to high level residential care; and
- the Extended Aged Care at Home Dementia (EACH-D) package adapts the EACH package for those with dementia (DoHA 2009).

The HACC program is currently funded through a mix of Australian and jurisdictional government funding, while CACP, EACH and EACH-D are funded wholly by the Australian Government. However, the Australian Government is set to take on funding responsibility for HACC services delivered to people aged 65 years and over, which the Productivity Commission indicates is required for their proposed recommendations to be more effective.

The demand for formal care, whether in the form of residential or community care, is likely to increase significantly in the future as the availability of informal care declines (as a proportion of care service offerings) due to smaller family sizes and changing social attitudes towards informal care (Access Economics, 2009b).

The decline in the availability of informal care coupled with the fact that the baby boomer generation is accustomed to more choice and quality, and has substantially higher wealth, means that the demand for alternative types of formal care will significantly increase in the future.

How much of this increase will be met through community care compared to residential care remains unclear. Consumer preferences suggest strong demand for increased community care. McCallum (2003) found that almost 60% of Australians aged 70 years or over would prefer to receive formal care in their own home in the event that they are unable to care for themselves, whereas only 28% would prefer to receive residential care – the remainder preferring to receive informal care from family and friends.

Although high levels of care can be provided at home, the expected increase in dementia prevalence and expected decrease in the proportion of people providing informal care means the demand for residential care will continue to expand. Nevertheless, given that only 23% of aged care places are presently allocated to community care there is likely to be a shortfall of community care places in the future.

4.5.1 Consumer directed care

The Productivity Commission has made a set of recommendations to encourage the adoption of consumer directed care (CDC) to give care recipients greater choice and control over the care they receive. Recommendations that are expected to directly impact community care include:

- progressive relaxation and eventual removal of supply-side limits on community care packages;
- using a comprehensive aged care means test to determine the level of co-contributions to care for community care services, but simplifying access to small levels of care;
- establishing an Australian Seniors Gateway Agency to improve the provision of information, assessment and care coordination to older Australians;
- replacing the current system of discrete care packages with a single integrated, and flexible system of care provision;
- ensuring the government approve a range of care services to people on an entitlement basis and based on assessed need. People should be given an option to choose an approved provider or providers; and
- government funding of an expanded system of aged care consumer advocacy services.

CDC is a framework for providing more choice over care providers for those in need. The objective is to allow recipients to determine when and how their care is delivered, the particular care they need and who their preferred provider will be. Two primary consumer-directed care models include:

- Direct Payments – People with a disability are guaranteed the right to an individual allocation based on a needs assessment. Funding can only be used to employ support workers in some areas but may be used for social participation activities or to purchase goods and equipment in other areas (Riddell et al 2006).
- Individual Budgets – Individual Budgets were introduced because of the low uptake of Direct Payments and follow the model of integrated care. Each individual's allocation is determined by self-assessment of need and a plan approved by the local authority. Funds can be used for social activities and purchasing equipment, and support workers can be recruited from family, friends and neighbours.

The Productivity Commission does not recommend either of these models be adopted (PC 2011). Instead, it recommends an entitlement to a bundle of care (community or residential) based on assessed need. Under the Productivity Commission approach, the consumer is able to select the provider to deliver services, with the consumer having greater input into what and how care is delivered.

CDC could potentially increase quality and choice in the Australian aged care system. Competition can generate incentives for providers to be more responsive to preferences, thereby generating more choice in the types of services offered, and promoting greater efficiency.

However, international experience suggests there are some issues surrounding a move towards a CDC model through direct payments and individual budget models. Although unlikely to be experienced under the current Productivity Commission recommendations,

they should be recognised when further refining a CDC framework and considering the evolution of CDC in Australia. Some of these include:

- recipients face potentially higher search costs associated with evaluating different providers and care packages;
- if cash entitlements are adopted, these may be used for non care expenses, or else there is the cost of monitoring use;
- some people will face difficulties in managing a care budget;
- it could be difficult for recipients or their carer to undertake the administrative tasks involved in hiring and firing service providers;
- some people, particularly disadvantaged groups, may not be aware of what kind of care they require, which may lead to inappropriate care and poor health outcomes; and
- there may be excessive pricing of CDC services in a region that has little competition and barriers to entry, for example in rural or remote areas.

In Australia, CDC is already used in the disability and child care sectors and has been trialed for aged care provision in Victoria (VGDHS 2004) and NSW (DADHC 2007). In both trials, aged care recipients found that direct payment schemes (as described earlier in this section) were better at meeting their care needs.

Recently the Australian Government announced plans to fund a trial of 1,200 consumer directed aged care places in Australia (DoHA 2010c). Providers will offer consumers the choice of CDC packages within Australian Government funded packaged care programs of CACPs, EACH and EACH-D. People requiring care will be given individual budgets based on a needs assessment and these budgets will be administered on their behalf by an approved provider for an agreed percentage of the allocated budget. The care recipient will have the same level of entitlements as those specified under the individual packaged care programs but will hold greater responsibility for the delivery of services. Rather than being passive, the role of the care recipient is to:

- develop a care plan and budget for the year;
- choose their service providers;
- determine any specific training that may be required for workers delivering services;
- manage delivery problems with providers;
- nominate a representative person for care management; and
- allocate funds to providers for case management and general administration in the delivery of care (DoHA 2010c).

The role of the care recipient is therefore one of management, where the provider is responsible for informing the care recipient of formal care services available and ensuring requested care is delivered, through developing a care plan in consultation with the care recipient, administering the budget, case management, engaging workers, providing specific training, and undertaking reviews of care delivery (DoHA 2010c).

It seems that under Productivity Commission recommendations the Australian Seniors Gateway Agency will undertake most of this role by providing information, assessment, care coordination and carer referral services (PC 2011), with case management being provided by a provider of choice. This will help care recipients make a more informed, and better, choice.

As the aged care system evolves under Productivity Commission recommendations, CDC models may offer a range of options for the consumer from involvement in planning their care through individual budgets held by service providers to cash options. However key consumer groups, such as COTA and Alzheimer's Australia, insist that although the option of involvement or partnership in care planning should be the base model, consumers must be given choices about the level of their involvement in their care. In cases where there is a need for greater flexibility, such as respite or community care for those from CALD or Indigenous communities, a CDC model that includes a cash option may be needed.

4.5.2 Impact of CDC on providers

The UK experience with CDC provides a useful case study of the potential impacts of CDC models in Australia if the management and delivery of community care were to progress beyond Productivity Commission recommendations.

In 2000 the UK gave care recipients the option of receiving direct payments and organising the delivery of care services themselves instead of a local authority directly providing community care services. However, the uptake of direct payments by older people in the UK has been remarkably low, with only 3% choosing to receive direct payments (Commission for Social Care Inspection 2008).

The UK is now moving towards a system of personal budgets whereby people can elect to receive direct payments or have a care services account managed by their local authority, aged care provider or a trustee. Care recipients can also elect to receive some direct payments with the remainder being placed in a managed account (Age UK 2010). These changes to the UK model are more in line with what is being advocated for CDC in Australia in the short to medium term.

While UK providers have largely been in favour of a shift towards CDC because it provides care recipients with greater choice over the services they receive (Glendinning et al 2008), a number of changes from a shift towards CDC were noted by providers. Those changes relevant to the Productivity Commission inquiry include:

- administrative costs increased due to the increased need for invoicing, upgrading IT systems and chasing up non payments due to individual billing (Glendinning et al 2008), thereby placing a large burden on small providers (Baxter et al 2008);
- the cost of meeting local government regulations fell as more care recipients moved towards direct payments;
- care recipients were more likely to use direct payments to request additional services such as cleaning, short notice care, gardening and trips to the shopping centre, which allowed providers to expand the type of services they offer.

In practice, providers did not face a high level of competition from other providers as a result of a move towards CDC, although they did face greater competition from self-employed carers. Overall, the limited uptake of direct payments has meant that CDC has had a minor impact on UK providers (Baxter et al 2008).

Nevertheless, the UK experience suggests a move towards CDC can increase cost that can be particularly burdensome for small providers. If CDC options are considered, providers may need to develop strategies that discourage staff from making private contracts with clients.²⁸ Providers seeking to make the most of CDC need to capitalise on the expected broader range of services requested by care recipients by expanding their range of services offered.

4.5.3 Potential impact on providers

A number of submissions noted long waiting lists for community care places in some regions (PC 2011). The progressive relaxation and eventual removal of supply-side limits on community care packages is expected to reduce waiting lists and increase the number of community care recipients overall. It may also create new markets for community care services, such as expansion at the high-care end of the spectrum to accommodate those with higher care needs (e.g. those with dementia) who prefer to receive care at home.

Removing supply-side limits is also likely to increase competition, with new providers entering the market. Competition may come from existing residential care providers that are looking to increase their service appeal and reach into aged care delivery. Retirement village operators may also enter the community care market to enhance service offerings to their residents. It is also possible that partnerships between existing providers develop. For example a residential care provider or retirement village operator may seek to manage the capital/property arrangements and contract care provision from other organisations. Providers that are inefficient at providing community care services, or offer services that do not meet the needs of care recipients, will struggle to be competitive and may therefore exit the industry.

A move towards a consistent care co-contribution scheme across both community and residential care will also impact providers. Under Productivity Commission recommendations, aged care means testing would be applied to all care recipients to determine their contributions to care costs in community and residential care (PC 2011). The Productivity Commission has recommended this testing be undertaken by Centrelink through the proposed Australian Seniors Gateway Agency.

Improving equity across the payment regime for residential and community care is an important principle. However, it should be recognised that differences in individual circumstances and in the cost of care delivery in alternative settings could result in inequitable outcomes. For example, some care recipients who reside in areas where care is relatively expensive will face greater costs for the same level of care than those residing in areas where care is relatively cheap. Thus people with the same means could be contributing different amounts for the same level of care.

The proposed changes to accommodation bonds are also likely to affect the decision to enter community care. By equalising payments to reflect the cost of supply across residents, some people with low care needs will experience an increase in price, while others will experience a decrease, compared to the counterfactual of no change.

²⁸ From a social perspective, this outcome may not be sub-optimal and should be evaluated.

Given high care residents are currently pay a lower amount for accommodation than the cost of supply (as evident through the low returns to high care places), high care residents may experience an increase in price for accommodation under Productivity Commission recommendations. Consequently, demand for high level residential care may decrease, with a commensurate increase in the demand for high level community care.

The integrated funding model for community care recommended by the Productivity Commission will also represent a major shift from discrete packaged funding. This will be a significant change for community care providers (while acknowledging that some HACC services such as transport, meals and social support may continue to be block funded). An appropriate transition process and period is required to promote successful implementation with minimal disruption to service continuity.

Although Productivity Commission recommendations will impact the split between residential and community care to some degree, ultimately broader trends such as consumer preferences, demographic changes, increases in dementia prevalence (which is likely to lead to increased need for high care in both community and residential settings) and the willingness of governments to fund aged care services will have a larger impact on the demand for community and residential care.

5 Conclusions and recommendations

The CAPM-WACC model constructed in Chapters 2 and 3 found that the post-tax:

- cost of equity was 13.2% for for-profit and 14.3% for not-for-profit providers;
- cost of debt was 7.95% for all high care and 5.65% for all low care providers;
- nominal WACC was 8.6% for high care and 7.7% for low care for-profit providers, and was 10.5% and 9.1% for not-for-profit high and low care providers respectively;
- nominal WACC was 8.6% for low care and 9.8% for high care across all providers.

If the Productivity Commission's recommendations are included in the model, the WACC for low care providers increases from 8.6% to 9.2%, reflecting the shift from accommodation bonds to commercial debt finance, while for high care providers the WACC falls from 9.8% to 9.2% for high care providers, reflecting the shift towards accommodation bonds rather than commercial debt finance.

The Productivity Commission's recommendations could make high care facilities viable again, by increasing Government subsidies for supported places to reflect the cost of supply, and by removing price caps so that the market can competitively determine the price of unsupported places. However, clarity is required in relation to the Productivity Commission recommendation and, in addition, there is the need to specify a definition of the cost of supply. Moreover, basing the cost of supply on a two-bed room does not reflect the facility mix currently or going forward.

- **Recommendation 1:** Clarity should be provided in Draft Recommendation 6.4 of the Productivity Commission draft report to enunciate that it is only the subsidised element of the accommodation payments and charges that should reflect the cost of supply, while abolition of the caps is designed to enable demand side factors to operate in determining prices above the cost of supply, with the difference being resident copayments.
- **Recommendation 2:** The definition of the cost of supply should include the cost to finance commercial debt and equity (i.e. the WACC) and the cost of land. Cost of supply should not be based on a two-bed room but, rather, on a 'typical' new construction.

Then a number of factors would influence the market value of any individual bond or periodic payment – including geography, income and wealth, 'quality' of facility/room (age, beds/room, fitout, view etc), and resident preferences.

- **Recommendation 3:** Reflecting factors such as geography, income and wealth, 'quality' of facilities and rooms, and resident preferences, there could be a range of (market) bed and bond rates published by a facility which reflect the interaction of the cost of supply with the different demand elements. Additionally, providers could schedule a decrease in the real value of the daily accommodation charge over time as the facility ages.

There is uncertainty about the equivalence of periodic payments and accommodation bonds since it is not known the proportion of people who will elect bonds relative to periodic payments, and this reduces the WACC at which the two are converted.

- **Recommendation 4:** Any decision to require accommodation bonds to be equivalent to periodic payments must ensure that the costs of debt financing when moving to a cash flow model is fully captured in determining the equivalent amount. In addition, a formulaic approach to determine equivalence should be avoided, as residents will have alternative appetites for periodic payments versus accommodation bonds, and these should be reflected in alternative market prices.

Given the cost of care may no longer be cross subsidised by income earned from accommodation bonds, the price for care is expected to rise. Some paying co-contributions to their cost of care may face an increased cost of care as a result of the removal of cross subsidisation. Residents who are not supported but cannot afford the average accommodation bond amount (e.g. people with assets above the minimum assets limit of \$39,000 currently but below the average accommodation bond) may find it difficult to access residential aged care under the recommendations. This may lead to a 'middle class' gap in access to appropriate residential aged care services.

- **Recommendation 5:** The contribution of the Australian government to the cost of care for supported residents should cover the full costs of care and provision for the potential need to step in and help support the cost of aged care accommodation for these low-middle income residents. Given there are additional challenges in the delivery of care to special needs groups such as the homeless and people with poor mental health, these should be more specifically recognised in contributions made by the government to the cost of care for these people.

What happens to the overall amount and value of bonds is unknown, but will depend in part on the income and entitlement impacts of the Pensioner Bond Scheme, the attractiveness of the Aged Care Equity Release scheme, the average value of bonds, and the scope to differentially price them. The equivalent bond under the recommendations is higher than the average bond currently, suggesting that the stock of bonds may fall, and providers (particularly) may have to adjust to a more expensive cash flow model. This generates substantial risk for exposed providers – notably low care, small scale and not-for-profit providers.

Competition from non-traditional players is also likely to increase as barriers to entry are removed. While providers can mitigate against this risk to some extent, by changing their business models or diversifying, there is a need for more discussion in the Productivity Commission draft report in relation to these impacts and transition arrangement to ensure the sector is not cataclysmically disrupted.

- **Recommendation 6:** The Productivity Commission needs to address transition arrangements flowing from its recommendations – such as gradual phasing in, grandfathering, or support mechanisms to providers to assist with restructuring or with diversifying into community care, respite care or transitional care. To minimise structural change costs, transition should be implemented progressively and in partnership with the industry to avoid unintended incentives and consequences.

Establishment of an Australian Pensioners Bond fund is expected to have a negative impact on the supply of accommodation bonds to providers, and will therefore increase the

possibility of bond dilution under Productivity Commission recommendations. Given the negative impact bond dilution would have on investment (through an increase in the cost of capital), any competitive advantage in attracting lump sum payments for the Australian Pensioners Bond fund should be avoided. However, the potential impact on the supply of lump sum payments to providers will crucially depend on the treatment of income derived from the Australian Pensioners Bond fund as it relates to pension entitlements and the income test for the daily care fee and income tested fee. Currently this is unclear within the Productivity Commission draft report.

- **Recommendation 7:** The Productivity Commission should ensure recommendations avoid providing any competitive advantage in attracting lump sum payments for the Australian Pensioners Bond fund. It should also clearly outline the treatment of income derived from the proposed Australian Pensioners Bond as it relates to pension entitlements and the income test for the daily care fee and income tested fee.

Given the possibility of a dilution in the bond market arising from a move towards daily accommodation payments, this major issue should be addressed as part of proposed changes to the aged care industry. Access to bond lump sum income streams have been a key part of the growth of aged care infrastructure in Australia, as they offer benefits to residential aged care providers and residents. A move away from a strong lump sum stream will compress a facilities valuation, and may reduce a loan to valuation ratio below an acceptable threshold, putting some providers in breach of their debt contract.

- **Recommendation 8:** Any aged care reform process should recognise and build upon the positive features of the lump sum bond income stream.

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Appendix A: Modelling

Table A.1: Revenue and expenditure streams high care, current system

Year	Revenue	Expenditure	After tax earnings ^(b)	
	Accommodation charges ^(a)	Maintenance & building	Actual	Discounted ^(c)
	\$	\$	\$	\$ period 0
0	—	(\$210,563)	—	—
1	10,614		9,499	8,649
2	10,879		9,737	8,072
3	11,151		9,980	7,533
4	11,430		10,230	7,030
5	11,715	(2,240)	8,480	5,306
6	12,008		10,747	6,123
7	12,308		11,016	5,715
8	12,616		11,292	5,333
9	12,932		11,574	4,977
10	13,255	(5,069)	7,326	2,869
11	13,586		12,160	4,335
12	13,926		12,464	4,046
13	14,274		12,775	3,776
14	14,631		13,095	3,524
15	14,997	(11,471)	3,156	773
16	15,372		13,758	3,069
17	15,756		14,102	2,864
18	16,150		14,454	2,673
19	16,554		14,815	2,495
20	16,967	(19,467)	-2,237	-343
21	17,392		15,565	2,173
22	17,826		15,955	2,028
23	18,272		16,353	1,892
24	18,729		16,762	1,766
25	19,197		17,181	1,648

Notes: (a) The accommodation charge for high care is calculated based on an average of \$31.47 per day in the first year, which is \$11,487 per year (based on 365 days). At 92.4% occupancy the average annual amount received in accommodation charges per bed is \$10,614 in the first year. This increases each year by 2.5%, to reflect inflation. (b) Calculated using a tax rate of 10.5%, as described in Section 3.2.2. (c) Discounted at a rate of 9.83% (using rounded rate).

Source: Deloitte Access Economics calculations.

Table A.2: Revenue and expenditure streams low care, current system

Year	Revenue			Expenditure	After tax earnings ^(d)	
	Accommodation charges ^(a)	Interest on bonds ^(b)	Retention ^(c)	Maintenance & building	Actual	Discounted ^(e)
	\$	\$	\$	\$	\$	\$ period 0
0	—	—	—	(\$210,563)	—	—
1	2,862	12,255	2,683		17,218	15,855
2	2,933	12,569	2,750		17,656	14,972
3	3,006	12,892	2,819		18,106	14,138
4	3,082	13,223	2,890		18,567	13,351
5	3,159	13,562	2,962	(2,240)	17,035	11,280
6	3,238	13,910	3,036		19,525	11,905
7	3,319	14,267	3,112		20,023	11,242
8	3,402	14,634	3,190		20,533	10,616
9	3,487	15,009	3,269		21,056	10,025
10	3,574	15,394	3,351	(5,069)	17,055	7,477
11	3,663	15,790	3,435		22,142	8,939
12	3,755	16,195	3,521		22,706	8,441
13	3,849	16,611	3,609		23,285	7,971
14	3,945	17,037	3,699		23,878	7,527
15	4,043	17,474	3,791	(11,471)	14,220	4,128
16	4,144	17,923	3,886		25,110	6,712
17	4,248	18,383	3,983		25,750	6,338
18	4,354	18,854	4,083		26,406	5,985
19	4,463	19,338	4,185		27,079	5,652
20	4,575	19,835	4,290	(19,467)	10,346	1,989
21	4,689	20,344	4,397		28,476	5,040
22	4,806	20,866	4,507		29,201	4,759
23	4,926	21,402	4,619		29,945	4,494
24	5,050	21,951	4,735		30,708	4,244
25	5,176	22,514	4,853		31,490	4,008

Notes: (a) The accommodation charge is based on an average annual subsidy of \$3,097 per resident. At 92.4% occupancy the average annual amount received in accommodation charges per bed is 2,862 in the first year. This increases each year by 2.5%, to reflect inflation. (b) Calculated assuming 80% of residents provide the average accommodation bond of \$233,000. The provider saves 7.95% interest (7/1% after tax) on the bond and each year the value of their stock of bonds grows by 2.6% (7.7% growth in the size of new bonds and 1/3 of bonds replaced by new bonds each year). This revenue stream is earned on 92.4% of beds. (c) Assuming a retention rate of \$3,630 per bond (80% of residents pay bonds, 92.4% occupancy). (d) Calculated using a tax rate of 10.5%, as described in Section 3.2.2. (e) Discounted at a rate of 8.60%, discounted using rounded discount rate.

Source: Deloitte Access Economics calculations.

Table A.3: Revenue and expenditure streams with recommendations, 50% bonds

Year	Revenue		Expenditure	After tax earnings ^(a)	
	Periodic Payment	Interest on Bond	Maintenance & building	Actual ^(b)	Discounted ^(c)
	\$	\$	\$	\$	\$ period 0
0	—	—	(\$210,563)		
1	20,699	23,779		19,904	18,225
2	21,216	23,977		20,224	16,956
3	21,747	24,177		20,551	15,776
4	22,290	24,379		20,884	14,680
5	22,848	24,582	(2,240)	19,220	12,370
6	23,419	24,787		21,572	12,713
7	24,004	24,993		21,926	11,832
8	24,604	25,201		22,288	11,012
9	25,220	25,411		22,657	10,250
10	25,850	25,623	(5,069)	18,497	7,662
11	26,496	25,837		23,419	8,883
12	27,159	26,052		23,812	8,270
13	27,838	26,269		24,213	7,700
14	28,534	26,488		24,622	7,169
15	29,247	26,709	(11,471)	14,774	3,939
16	29,978	26,931		25,467	6,217
17	30,728	27,156		25,903	5,790
18	31,496	27,382		26,348	5,393
19	32,283	27,610		26,802	5,023
20	33,090	27,840	(19,467)	9,844	1,689
21	33,918	28,072		27,740	4,359
22	34,765	28,306		28,225	4,061
23	35,635	28,542		28,719	3,783
24	36,525	28,780		29,224	3,525
25	37,439	29,020		29,740	3,285

Notes: (a) Calculated using a tax rate of 10.5%, as described in Section 3.2.2. (b) Revenue stream weighted 50:50 periodic payment and interest on accommodation bonds. (c) Discounted at a rate of 9.2% (using rounded rate).

Source: Deloitte Access Economics calculations.

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