



Institute of Actuaries of Australia

Can You Put a Price on Health? The Valuation of Health Insurers

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Presented to the Institute of Actuaries of Australia
2009 Biennial Convention, 19-22 April 2009
Sydney, New South Wales

*This paper has been prepared for the Institute of Actuaries of Australia's (Institute) 2009 Biennial Convention
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Abstract and Introduction

- Private health insurance is a significant class of risk insurance in Australia. Premium revenue for the year ending June 2008 was in the order of \$12 billion, with around \$500 million underwriting profit.
- For many years, private health insurance has operated in a largely mutual structure. Many participants (but not all) have been non-tax-paying entities generating at best break-even margins and arguably not in a commercial fashion (as that term has typically been used).
- There have been a number of historical transactions, some driven by regulatory activity/requirements (or following changes to regulations), and some through market entry and exits.
- More recently there have been a number of significant transactions that have materially impacted the industry structure. These include:
 - ▶ The demutualisation and stock exchange listing of nib, essentially crystallising the enterprise value and “selling” the business to policyholders
 - ▶ The demutualisation of MBF and sale to BUPA
 - ▶ The demutualisation of ahm and sale to Medibank Private, and
 - ▶ The demutualisation of MU and sale to HCF
- Over one third of individuals covered by private health insurance now have policies with a for-profit insurer.
- In this paper we:
 - ▶ Examine some of the prices paid
 - ▶ Examine the differing valuation methodologies that could be applied to private health insurers
 - ▶ Propose a method of business valuation that captures the key drivers of PHI value creation, and
 - ▶ Using that method explore the drivers of value for private health insurers

Keywords: *Health insurance, valuation, mergers and acquisitions*

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Executive Summary

Why value a private health insurer?

- A number of health insurer valuations have been produced in recent years as a result of M&A activity. Valuation is clearly a pre-requisite for any purchase or sale.
- Aside from M&A, company valuations help management to identify and focus on the key drivers of value in a business, and so are useful as a business management tool.

What techniques are used to value businesses?

- The techniques most commonly applied are:
 - ▶ Capitalisation of Earnings: This method values a company as a multiple of earnings. The method is also known as the price earnings ratio method.
 - ▶ Discounted Cashflow: Projected future cashflows are discounted at an appropriate rate to obtain the value of the business.
 - ▶ A combination of capitalisation of earnings and discounted cashflow methods.
- There are a range of other valuation techniques in the literature. Although we are not aware of these having been applied to private health insurers, there may be situations where these techniques could provide useful insights.
- The most appropriate method for a valuation will depend on factors such as the purpose of the valuation and the information available.
 - ▶ Our preferred valuation approach is to combine a discounted cashflow approach with a terminal value derived using capitalisation of earnings.
 - ▶ Discounted cashflow methods allow short to medium term cashflows to be modelled with greater precision than is possible with a multiple of earnings approach. This aspect of the modelling allows the effect of alternative scenarios to be investigated.
 - ▶ Beyond an initial few years it is hard to argue that cashflow modelling provides greater accuracy than multiples, as individual cashflow items become more difficult to predict. Therefore the discounted cashflow method is combined with a terminal value estimated using a capitalisation of earnings approach. The terminal value is discounted back to the valuation date.

What are the drivers of value in recent transactions?

- There have been a number of historical transactions, driven by a range of motives. The most recent wave of transactions has materially impacted the industry structure.
- Using a range of reasonable assumptions, we used our model to calculate the net margin assumption required to produce a valuation equal to the purchase price in recent transactions. For nib, we used a valuation of 85 cents per share for illustrative purposes. Table 1.1 summarises the results of these calculations.

Table 1.1 – Summary of Results

Transaction	Indicative Forecast Net Margin Implied By Purchase Price
ahm	4.75%
MBF Group	3.75%
Manchester Unity	4.25%
nib	2.75%

- Section 6 discusses the results in Table 1.1 in more detail, including possible reasons for the differences between value or price of transactions. One conclusion of our modelling is that, using a range of reasonable assumptions, it is possible to obtain valuations that are in line with the recent prices paid.
- The purchasers of these insurers will likely have adopted different assumptions to us. We suspect the purchasers to have assumed the acquired companies will increase policyholder numbers, and that investment returns would be at higher levels than are currently available.
- Focussing on the key drivers of value will be essential for any management team to achieve an outcome that reflects the amount paid in a transaction.

1 Initial Remarks

This paper includes comments on the valuation of private health insurers. We comment in particular on the four most recent transactions in the private health insurance industry, including one stock exchange listed insurer. As would be expected, we include the following important reliances and limitations:

- The contents of this paper should not be relied on, and do not constitute actuarial advice.
- The authors of this paper have been involved in some of the transactions described, but the paper is based entirely on publicly available information.

The purpose of the work is to identify the drivers of valuations of private health insurers. We use recent transactions as examples because of the level of public information available. The information available to us does not allow us to conclude whether the prices paid in these transactions represent good value for money.

2 Why Value a Private Health Insurance Company?

Valuations of health insurance companies are typically undertaken in the context of a transaction, such as a merger, acquisition or demutualisation. However, we suggest that there are a range of other possible applications for valuations.

2.1 Transactions

A reliable estimate of value is a pre-requisite to any merger or acquisition transaction. A demutualisation of a health insurer with distribution of value could be viewed as a special case of acquisition, noting that in some case the “purchasers” could be the members of the mutual. A valuation might consider an entire organisation, or be limited to certain subsidiaries or joint ventures.

Valuations will be required by:

- Purchasers, to assess potential bid targets and determine the size of any offer.
- Insurers that wish to be purchased, in order to assess the reasonableness of the offer.
- Other companies that may receive offers, whether or not they wish to be acquired. Having an assessment of value will allow a rapid and informed response to be made in the event of a bid being received.
- An independent expert may be required to prepare a valuation as part of the transaction.
- Other third parties may also need to prepare valuations, for example, a bank may prepare a valuation if it is asked to provide debt to finance a purchase.

2.2 Other Uses

Aside from mergers and acquisitions, company valuations are increasingly regarded as a valuable management tool for a business. Where a company is listed on the stock exchange, the potential share price impact will be a consideration in all key decisions. Company value may also be a useful metric for mutual organisations, where value creation is typically not one of the goals of management. Where a company is not listed on the stock exchange, the value would need to be an internal estimate rather than an observed market price.

Company valuation can be used by management as a decision making tool. A valuation model will allow management to identify the key drivers of value. Decisions can then be informed by their estimated impact on company value. For example, when considering two possible changes to product benefits, businesses can compare the estimated effects on company valuation. Traditional approaches might consider only the incremental effect of an action on profits or the number of policyholders in a single year. Valuation techniques consider a longer term perspective beyond a single year’s results. In a mutual environment, the effect of a planned action on insurer value would need to be considered in combination with the other objectives of the mutual.

The life insurance industry provides a particular example of the use of valuation models for purposes other than mergers and acquisitions. Embedded value modelling has become a widely accepted technique, with many companies reporting changes in embedded value to investors as part of the annual accounts. The embedded value calculation may be subject to independent

actuarial review to provide confidence to investors. Once a company has decided to report embedded value in this way, the valuation becomes a key reference point for business decisions.

In order to better align the interests of management and shareholders, listed companies often link remuneration to share prices through bonuses or share options. However, share price is sometimes argued to be a fairly blunt tool in incentivising managers, as some movements in share price will be independent of management. An innovative use of valuation models is as a staff remuneration tool. Such approaches may become increasingly common in other financial sectors, as the short-term nature of executive remuneration receives media and political attention. This type of reward metric is theoretically attractive where management are set a goal of increasing the value of a business. Potentially, a method of valuation could be established so that management are not rewarded or penalised for events outside their influence, such as changes in regulation or the tax treatment of health insurance, or the changing moods of international investment markets. However, there are significant practical difficulties in linking staff rewards to something as judgemental as valuation.

3 Valuation Techniques

3.1 Introduction

This section describes valuation techniques that could be applied to private health insurance companies. We have divided the techniques into two sections:

- Standard techniques – the techniques that are most commonly applied in practice for valuing insurance companies
- Alternative valuation methods – we describe other techniques used in valuations, including comment on ideas from other industries that may provide insights for private health insurers

The techniques described are listed in Table 3.1. The table also notes which techniques might be applied to health, general and life insurance companies, and those which are typically only used in other industries. The shading indicates the more common methods for each industry.

Table 3.1 – Valuation Techniques and Applications

Method	Insurance			Other Industries
	Health	General	Life	
Capitalisation of Earnings	✓	✓		✓
Discounted Cashflow	✓	✓		✓
Appraisal Value	✓	✓	✓	
Rules of Thumb	✓	✓	✓	✓
Peer Comparison	✓	✓	✓	✓
Run-off Value	✓	✓	✓	✓
Excess Profits Method				✓
Brand Strength Scoring				✓
Cost Based Valuation				✓

3.2 Standard Techniques

3.2.1 Capitalisation of Earnings

This method values a company as a multiple of earnings. The method is also known as the price earnings ratio method. The method is applied to an estimate of expected future sustainable earnings, rather than the reported earnings for the latest accounting year. Sustainable earnings are estimated by considering the effect of exceptional gains or losses and expected trends on historical results. In selecting the earnings multiple, factors to consider include growth prospects, future capital requirements, stability of profits and the riskiness of the company and industry.

Advantages of the method include:

- Easy to understand
- Easy to apply
- Widely used and accepted

Disadvantages of the method include:

- It can be difficult to determine the level of earnings to use:
 - ▶ Judgement is required to estimate the sustainable level of earnings.
 - ▶ The definition of earnings to be used also requires consideration. For example, for a health insurer, the treatment of income tax, investment income, and health-related activities needs to be considered.
- Determination of the appropriate multiple to use will also require judgement. Those judgements will be difficult when there are few market precedents, as is the case in private health insurance.
- The method does not explicitly allow for future capital requirements of businesses. This could be relevant if an insurer is being acquired with an expectation of rapid policyholder growth.
- The method cannot be used to value a loss-making business.

3.2.2 Discounted Cashflow

This method projects the future cashflows distributable to the owner of a business. The cashflows are discounted at an appropriate rate to obtain the value of the business. Valuation often consists of a combination of projected cashflows over the medium term combined with a terminal value at the end of the forecast period. Terminal value is generally calculated with a capitalisation of earnings approach.

Advantages of the method include:

- Widely accepted as a valuation method across many industries and asset classes.
- Allows drivers of value in the business to be explicitly identified and modelled.

Disadvantages of the method include:

- It may not be practical to estimate future cashflows for some businesses. However, it should be possible to model cashflows for a private health insurer under normal circumstances.
- Communicating results can be more difficult than for capitalisation of earnings, since there will be more assumptions to explain.
- Difficult to select discount rate to reflect the level of risk in the cashflows.
- The disadvantages of the capitalisation of earning method apply if that method is used to estimate a terminal value.

3.2.3 Appraisal Value

Capitalisation of earnings approaches are particularly unsuitable for life insurance since there is usually a substantial delay between writing business and the emergence of profit or loss. Life insurance companies are often valued using appraisal value techniques, and the approach is sometimes applied to general insurers. Appraisal value is essentially a specialised discounted cashflow approach which is calculated as follows:

Appraisal value =
Adjusted net asset value +
Value arising from business that has already been written +
Value arising from business expected to be written in future

Adjustments to net asset values are required where the balance sheet value differs from a realisable market valuation. Generally only the surplus of assets over regulatory capital requirements would be considered. In the context of life insurance, adjusted net asset value and the value arising from business that has already been written are together known as the embedded value of a business. Embedded values are widely reported by life insurance companies.

An insurer is normally worth more than its embedded value, since the embedded value does not include future business. However, the embedded value does consider the business than was written in the year prior to the valuation date. The value of future business can be estimated by projecting the value of current years sales, allowing for acquisition costs. This projection might be based on a growth multiple. The multiple would consider factors such as expected growth in policyholder numbers, anticipated increases in premiums and claim costs, and the general economic outlook.

This framework can also be applied to general and health insurance companies, although the relative significance of each of the components changes. The method would compare the expected cost of claims for business written to the provisions that have been established for those costs. For general insurance, renewals from existing policyholders are typically included as future business. Therefore, for a general insurance company the value arising from written business would be limited to any margins or deficiencies in the provisions. For a health insurer, the method can be used to explicitly capture the value expected to be generated by renewals of current policyholders, and the value of policyholders that are subsequently expected to be recruited.

As can be seen from the description above, appraisal value represents a valuation framework, rather than actually proposing a method to assess each of the required components. The required valuations are typically produced using discounted cashflow models, supplemented by capitalisation of earnings and traditional actuarial methods. Therefore the appraisal value method inherits the advantages and disadvantages of each method used. Particular difficulties will relate to deriving the assumptions underlying the cashflows and determining an appropriate discount rate.

3.3 Alternative Valuation Methods

3.3.1 Rules of Thumb

Capitalisation of earnings multiples are widely quoted in many different industries. By reference to stock exchange data, an approximate value could be quoted for, for example, a large undiversified business with stable profits.

Different valuation rules of thumb are quoted in different industries. For example, price per bed is a possible rule of thumb that could be applied to value a private hospital. Rules of thumb that are sometimes quoted for private health insurers include price (or value) per policyholder and net tangible assets per policyholder. For general insurance, valuations are sometimes based on multiples of premium or net assets.

3.3.2 Peer Comparison

This method is generally used as a check on the results of other methods, or for refining valuation assumptions. Statistics that are often compared for health insurance companies include:

- Capitalisation of earnings multiples implied by the valuation
- Implied value per policyholder
- Ratio of value to net tangible assets

Given the wide range of published information relating to health insurers, many other statistics could also be considered. For example, comparisons of the stability of net margins over time or the rate of increase in policyholder numbers can provide insights when considering differences in the valuation of two insurers.

Having produced a comparison, the valuer would need to determine whether the differences can be explained by features of the companies being considered. Alternatively the comparison may indicate that the valuation assumptions should be revised. Since many of the factors that could explain a difference in the statistics cannot be precisely determined there will be considerable judgement involved in determining whether this approach is acceptable.

3.3.3 Run-Off Values

A business can be valued by considering the amount of assets which could be readily extracted if the business was closed. For a health insurance company, this value might be taken approximately as the net assets of a company. This amount would be reduced to allow for the expenses involved in closing the business and realising the asset value.

In theory at least, this approach represents a lower bound on the results of the other valuation techniques. A viable business should be worth more than its net assets, since such a valuation does not allow for the existing customer base and brand value (known as the franchise value of the business). However, listed companies are sometimes observed to trade at less than the value of their net assets.

3.3.4 Excess Profits Method

A number of techniques have been devised for the valuation of licences, patents and other assets that are not readily marketable. Two of these methods are described here. The methods are not used to value whole companies. However, they are included as they present ideas about how the value of a brand may be quantified. It may be possible to apply these techniques in combination with other methods, or for particular purposes related to assessments of brand strength.

The excess profits method is a derivative of the capitalisation of earnings approach. There are three stages to the method:

- Estimate the level of sustainable earning for the business, as with the capitalisation of earnings approach.

- Estimate the amount of profit that is required to provide an acceptable return on the capital used in the business. In the case of a manufacturing business, the asset measure used is net tangible assets. In the case of health insurance, an appropriate asset measure might be the regulatory capital requirement, or some measure of economic capital.
- Consider the difference between the level of sustainable earnings, and the earnings that are required to provide an acceptable return on the capital. This difference, referred to as “excess profits”, can be considered as representing income derived from the intangible assets of the company (such as its brand).

The excess profits can be valued using a capitalisation of earning multiple. This value is then attributed to the brand. The method is shown in the table below:

Table 3.2 – Example of Excess Profits Method

Sustainable earnings	40	(1)
Capital required to generate earnings	300	(2)
Required return on assets (at 12%)	36	(3) = (2) * 12%
Excess Profits	4	(4) = (1) - (3)
Capitalisation multiple	10	(5)
Value of brand	40	(6) = (4) * (5)

In the example in Table 3.2, the maintainable earnings are \$40 million per year, and the insurer requires \$300 million of capital to generate the earnings. Supposing that 12% is considered an acceptable return on this capital, then annual profits of \$36 million (12% of \$300 million) are required. The excess profits of \$4 million are attributed to the value of the brand. Using a capitalisation factor of 10, the brand is valued at \$40 million.

Note that the method assumes that all of the excess profits can be attributable to the brand. It may be that excess profits are not unique to the brand but are available to all market participants, for example, due to a structural feature of the industry such as regulation or price control.

There are similarities between this method and the pricing considerations of a health insurer. A health insurer would need to set premiums so that the expected level of earnings is sufficient for the business to remain viable. However, a mutual would typically aim for premium levels that do not result in excess profits.

3.3.5 Brand Strength Scoring

This technique involves developing a method to score the relative strengths of different brands in the market. Assessment criteria might include market share and its changes over time, the advertising spend and other expenses required to maintain the market share, and perceived management ability. The assessment and weighting of these characteristics would inevitably be subjective. The scores implied by the method can be used as a basis for assessing the relative capitalisation of earnings multiples that may be appropriate for different insurers.

3.3.6 Cost Based Valuation

This method estimates the cost of building the target asset rather than purchasing. This would involve starting a health fund or, for companies that already have a presence in the market, growing an existing portfolio. Existing insurers may be able to consider the costs and results of previous recruitment campaigns. The cost of developing products, systems and distribution networks to match the target insurer would also have to be considered.

The results of this method provides a useful comparison to the results of other methods, as a tool for comparing the benefits of an acquisition strategy to organic growth. However, such a decision would depend on a wider range of factors. Timing may be a particularly important factor, since organic growth will be take time. For example, in a period of rapid industry consolidation companies may prefer making an acquisition over an organic growth strategy.

A cost based valuation approach may produce a very different result to the other methods. Value is based on the ability of a company to generate income, and this will not necessarily be reflected in the cost of creating an asset.

4 Summary of Recent Transactions

4.1 Introduction

This section considers some recent transactions in the private health insurance industry, under the following subheadings:

- Background – this section lists recent transactions and provides brief information.
- Valuations – we describe the publicly available valuations produced as part of these transactions
- Valuation Statistics – we summarise key statistics based on the prices paid in recent transactions

4.2 Background

Table 4.1 summarises recent transactions involving private health insurers.

Table 4.1 – Summary of Recent Transactions

Insurer	Transaction type	Purchaser	Year	Valuation (\$ millions)
ahm	Demutualisation and acquisition	Medibank	2008	367
Manchester Unity	Demutualisation and acquisition	HCF	2008	256
MBF Group	Demutualisation and acquisition	Bupa	2008	2,410
NIB	Demutualisation and listing	Policyholders	2007	440
Federation Health	Followed external intervention	Latrobe	2005	n/a
NRMA Health	Sale and purchase	MBF	2003	100
IOOF Health	Sale and purchase	nib	2003	15
AXA Asia Pacific Health	Sale and purchase	Bupa / Macquarie Bank	2002	595
Goldfields Medical Fund	Followed external intervention	HBF	2002	n/a
IOR Australia	Followed external intervention	HCF	2002	n/a

The valuations shown in Table 4.1 are the consideration paid, except for nib where it represents value based on a price of 85 cents per share. This value represents the pre-flotation facilitation price arranged by nib, as described further below. We note that:

- There have been a number of significant transactions in the last couple of years. The most significant transactions were:
 - ▶ The acquisition of MBF, Australia’s largest privately owned health insurer.
 - ▶ The listing of NIB, a first for an Australian health insurer.
- Prior to 2007 there had not been any significant transactions for a number of years.
 - ▶ Only one of the previous transactions was comparable in size to the more recent transactions. This transaction involved BUPA entering the Australian market.
 - ▶ Three of the transactions followed the appointment of external administrators to health insurers

There were a number of transactions prior to 2002 which make interesting case studies, for example, AXA Asia Pacific Health’s entry to the Australian market. However, this paper focuses on the four most recent transactions. As time passes the relevance of the earlier transactions becomes more limited. The recent examples are suitable case studies to analyse the drivers of

value in private health insurance because a considerable amount of information was disclosed publicly in the information memoranda. In addition, some of the historical transactions were driven primarily by regulatory intervention and therefore are unlikely to provide insights into the valuation of businesses that are going concerns.

4.2.1 ahm

ahm was founded in 1971 as the Local Government Employees Medical and Hospital Club. By 2008 ahm had 150,000 members and was the 8th largest private health insurer in Australia. During 2008, ahm received unsolicited approaches from two private health insurers. Medibank's offer of \$367 million was the highest of the two offers received, and was accepted.

Medibank Private (Medibank) was established in 1976 by the Commonwealth government. The Commonwealth government continues to own all of Medibank's issued share capital and appoints Medibank's board. Medibank is registered as a not-for-profit health insurance company, and is Australia's largest private health insurer.

The transaction was structured as a demutualisation and merger. Specifically, all the existing memberships of ahm were cancelled and Medibank became the only member of ahm. ahm then converted from a "not for profit" registered health insurer to a "for-profit" organisation. ahm also converted from a company limited by guarantee to a company limited by shares. Medibank subscribed for \$367 million of shares, and this money was distributed to the former members of ahm.

4.2.2 Manchester Unity

Manchester Unity's roots date back to the 1840s. The health business operated as a friendly society until 1985, when it became a registered health benefits organisation. In addition to health insurance, Manchester Unity also operated a financial services business based on friendly society benefit funds and a retirement aged care business. At the time of the merger the insurer had approximately 80,000 members. Manchester Unity invited offers for its business in 2008. Two companies undertook due diligence and HCF's offer of \$256 million was the highest received. The structure of the transaction as a demutualisation is essentially the same as the ahm transaction.

HCF is a not-for-profit health insurer. It was established in 1932 and is the third largest health insurer in Australia.

4.2.3 MBF

MBF was founded in 1946 by a group of doctors in New South Wales. In 2007 MBF had approximately 900,000 members across two registered health funds, MBF Australia and MBF Alliances. In August 2007, MBF announced its intention to demutualise and list on the Australian stock exchange. MBF subsequently received a merger proposal from BUPA. MBF determined that this proposal presented a superior option to listing, and so agreed to recommend the merger. The structure of the transaction as a demutualisation was the first of this nature and was essentially the basis of the ahm and Manchester Unity transactions.

BUPA was formed in the UK in 1947, and first branched out overseas in the 1970s. It now has operations in the UK, Spain, Australia, Ireland, Hong Kong, Malta and Saudi Arabia. BUPA

entered the Australian market in 2002 with its acquisition of AXA Asia Pacific Health. The businesses operate in Australia under the HBA and Mutual Community brands. BUPA is a company limited by guarantee (that is, it does not have shareholders). However, BUPA's Australian operations are registered as "for-profit" insurers. BUPA appears to be an example of a "mutual" organisation that has progressed beyond its "mutuality".

4.2.4 nib

nib was formed in 1953 by workers at BHP's Newcastle plant. At the time of demutualisation nib had approximately 320,000 members. Members received shares which were subsequently listed on the Australian stock exchange. nib offered members the chance to sell shares prior to the float through a commission-free facility. The pre-float facilitation price of 85 cents used in Table 4.1 is the price obtained in this facility. In the short time since nib listed its share price has ranged from less than 60 cents to more than 120 cents.

4.2.5 Federation Health

PHIAC appointed an administrator to Federation Health in 2004. The fund had less than 10,000 members, almost exclusively in Victoria. The fund was merged into Latrobe Health in 2004.

4.2.6 NRMA Health

SGIO Health was acquired by NRMA in 1998 as part of the purchase of SGIO. The business was a "for-profit" insurer and was subsequently rebranded as NRMA Health. The business was originally part of SGIC, a multi-line insurer owned by the South Australian government. Following the demutualisation of NRMA, IAG sold the health business to MBF in 2003.

4.2.7 IOOF Health

IOOF converted from "not for-profit" to a "for-profit" insurer in 2001, and was purchased by nib in 2003.

4.2.8 AXA Asia Pacific Health

AXA Asia Pacific Health represented the outcome of a sequence of mergers over many decades. AXA purchased National Mutual in 1998. National Mutual owned HBA and Mutual Community, which traced their roots back to the 1930s and were themselves the product of various corporate transactions. Despite its name, National Mutual's health businesses were "for-profit" insurers.

BUPA purchased AXA Asia Pacific Health in partnership with Macquarie Bank, but quickly acquired the bank's stake. Further detail about BUPA and its operations in Australia is given above under the MBF section above.

4.2.9 Goldfields Medical Fund

Goldfields was a small "not for-profit" health insurer serving regional Western Australia. The insurer expanded rapidly in the years following the introduction of Lifetime Health Cover, including attracting members outside its traditional area. Following an inspection, PHIAC appointed an administrator to Goldfields in 2001, and the business was acquired by HBF in 2002.

4.2.10 IOR Australia

PHIAC appointed an administrator to IOR Australia in July 2002, and approved HCF as the official merger partner in October 2002. IOR had just under 50,000 members, most of whom were in the Eastern states. The fund was merged into HCF in 2004.

4.3 Valuations Methods Applied

The information memoranda for the ahm, Manchester Unity and MBF transactions each contained valuations prepared by independent experts. nib's information memorandum did not contain a valuation by an independent expert as this transaction was a stock exchange listing rather than an acquisition. Table 4.2 summarises the valuation methods applied for each transaction.

Table 4.2 – Summary of Valuation Methods Applied

Company	ahm	Manchester Unity	MBF
Method Applied	Variant on capitalisation of earnings. Valuation equals capital held over the regulatory minimum plus a multiple of adjusted earnings.		
Cross-checks applied	Price to NTA, value per member		
Earnings Assumed	Net underwriting margin of 3.75% to 4.25%.		\$70 million to \$75 million of underwriting profits, equivalent to net margin of approximately 3.25%
Matters considered	Changes to MLS, nib's stated targets		Based on recent experience and adjusted for exceptional matters
Multiple Assumed	12 to 13		17 to 20
Independent Expert	Lonergan Edwards	Lonergan Edwards	Ernst & Young
Report Date	September 2008	October 2008	March 2008

Each transaction applied a variant of the capitalisation of earnings method. The valuation methodologies applied differ only on points of detail, typically reflecting the individual circumstances of each business. It is apparent from Table 4.2 that a much higher capitalisation multiple was selected for the MBF valuation than for other businesses. This is likely in part reflect the size of MBF relative to ahm and Manchester Unity, as large businesses tend to trade at higher capitalisation multiples. Buyer valuations will also reflect the strategic importance of a transaction, the willingness of the purchaser to reflect anticipated synergies in the purchase price, and the position of investment markets at the time the transactions were undertaken.

One variation that was required to the standard capitalisation of earning approach was to consider the treatment of surplus capital in the business. In each case, the independent experts assumed that all amounts above the regulatory minimum capital requirement should be fully reflected in the value. In effect, this assumes that a purchaser would be able to remove all capital from an insurer other than PHIAC's minimum capital requirement (MCR). An alternative approach assumes that an insurer would be required to maintain a buffer over the PHIAC MCR, and only capital surplus to this requirement could be removed. The independent expert in the ahm and Manchester Unity transactions considered this alternative as a reasonableness check on the calculations.

The valuations noted in Table 4.2 represent those valuations that are in the public domain. Both the buyer and seller and, in the case of ahm and MU, the unsuccessful bidders, would have

prepared valuations. Those valuations would have reflected the information available to each party and, for buyers, their plans for the business being acquired. Different methods would be appropriate in these circumstances. In particular, given more information there may have been more reliance on cashflow modelling.

4.4 Valuations Statistics

Table 4.3 summarises the value per policyholder implied by the prices paid in recent transactions. We have excluded transactions which arise due to regulatory intervention, as these are generally not reflective of normal commercial terms. We also show the value per policyholder amounts inflated to 2007/8 values. The inflation rate applied reflects the average change in private health insurance premium rates since 2002/3.

Table 4.3 – Price per Policyholder in Previous Transactions

Insurer	Year	Price (\$ m)	Value (\$/policyholder)		Policyholders (' 000s)
			Actual	2007/8 Values	
ahm	2008	367	2,450	2,450	150
Manchester Unity	2008	256	3,200	3,200	80
MBF Group	2008	2,410	2,600	2,600	920
NIB - low	2007	388	1,200	1,200	320
NIB - medium	2007	440	1,400	1,400	320
NIB - high	2007	621	1,900	1,900	320
NRMA Health	2003	100	1,000	1,350	95
IOOF Health	2003	15	1,400	1,900	11
AXA Asia Pacific Health	2002	595	1,300	1,900	450

The following data considerations should be noted:

- Amounts in Table 4.3 were obtained from a variety of sources, including information memoranda, PHIAC statistics and media reports. Amounts have been rounded for ease of reference.
- For nib, the low, medium and high valuations refer to share prices of 75c, 85c and 120c per share respectively. The 85c value represents the pre-flotation facilitation price arranged by nib. In the short time since nib listed its share price has ranged from less than 60 cents to more than 120 cents. The low and high valuations are indicative of nib's trading range since listing.
- Policyholder numbers for MBF Group refer to the total for the two insurers MBF Australia and MBF Alliances.

Table 4.3 shows that, in terms of price per policyholder, the 2008 transactions (ahm, Manchester Unity and MBF) appear much more expensive than the earlier transactions. The conclusion is unchanged even if we allow for the effect of inflation on the 2002/3 values. The price per policyholder for nib appears cheaper than for the other transactions, although the price differential depends on what level of share price is assumed for nib.

Price paid per policyholder is a frequently quoted valuation statistic. In considering whether the price paid for an insurer represents good value, the average price paid per policyholder can be compared to the present value of the profits that can be expected from that individual. One limitation of this metric is that direct comparison on price per policyholder does not allow for differences between businesses, for example, capital strength, brand strength, customer loyalty, product mix or rate of growth.

Net tangible assets (NTA) per policyholder is often quoted in conjunction with price per policyholder. Considering the two statistics together can indicate whether differences in price per policyholder might be attributed to differences in capital strength. NTA ratios do not explicitly consider PHIAC minimum capital requirements, and so are not risk sensitive. Table 4.4 considers another method to adjust for differences in financial strength, which is calculated as follows:

- Estimate the amount of regulatory capital, and hence the amount of surplus capital.
- Estimate the value of any non-health businesses.
- Subtract the estimated surplus capital and value of non-health businesses from the purchase price.
- Divide the revised purchase price by the number of policyholders

For the more recent transactions we used our valuation model and details from the information memoranda to estimate these amounts. Our valuation model is described in Section 5. For the older transactions we considered benchmark ratios of capital requirements as a proportion of premium income to consider whether the businesses had surplus capital when they were sold.

Table 4.4 – Price per Policyholder – Adjusted for Surplus Assets

Insurer	Year	Price (\$ millions)	Assumed Surplus Capital and Non-Health Assets (\$ millions)	Adjusted Value (\$/member)
ahm	2008	367	80	1,900
Manchester Unity	2008	256	100	2,000
MBF Group	2008	2,410	650	1,900
NIB - low	2007	388	180	650
NIB - medium	2007	440	180	800
NIB - high	2007	621	180	1,400
NRMA Health	2003	100	NA	1,350
IIOF Health	2003	15	NA	1,900
AXA Asia Pacific Health	2002	595	NA	1,900

We note that:

- As discussed above, we believe it is not appropriate to regard all capital in excess of PHIAC requirements as surplus since all insurers hold a capital buffer. We assumed that a capital adequacy multiple of 1.3 was an appropriate buffer (that is, holding a buffer of 30% of the sum of liabilities and the PHIAC minimum capital adequacy requirement). We estimated this requirement using our model, which is described further in section 5.
- The adjustments for non-health business were for MBF’s financial services business and Manchester Unity’s retirement, aged care and other businesses. The adjustments are based on valuations included in the information memoranda for these transactions.
- The adjusted values shown for the older transactions are the inflation adjusted values per member from Table 4.3. Benchmark ratios of capital requirements as a proportion of premium income do not suggest that NRMA Health, IOOF Health or AXA Asia Pacific Health had significant surplus capital relative to the size of the businesses at the time they were sold. We note that each of these companies were for-profit health insurers before the transactions. Unlike the mutual insurers, the for-profit businesses would have been able to distribute surplus assets through dividends or capital returns.

Deducting surplus capital and non-health assets, the balance of the price represents the value put on the ongoing business. A number of assumptions have been necessary to produce the estimates of value per member in Table 4.4. There are a range of other assumptions that could be regarded as reasonable in making the adjustments, and these would have produced different results. However, we suggest that the apparent differences in (unadjusted) value per member between the 2007/8 transactions and the 2002/3 transactions can be largely explained by

- Inflation in business values over time reflecting economic growth; and
- The significant capital surpluses recognised in the prices of the 2007/8 transactions.

5 A Preferred Valuation Method

5.1 Proposed Approach

Our preferred valuation approach is to combine a discounted cashflow approach with a terminal value derived using capitalisation of earnings. The reasons for this are:

- Discounted cashflow method allows short to medium term cashflows to be modelled with greater precision than is possible with a multiple of earnings approach. This aspect of the modelling allows the effect of alternative scenarios to be investigated.
- Beyond an initial few years it is hard to argue that cashflow modelling provides greater accuracy than price earnings multiples, as individual cashflow items become more difficult to predict. Therefore the discounted cashflow method is combined with a terminal value estimated using a capitalisation of earnings approach. The terminal value is discounted back to the valuation date.

As noted in Section 3.2.2, the combination of projected cashflows and a terminal value is a standard valuation approach. We believe that this method represents an appropriate method for valuing health insurers under a wide range of circumstances. However we note that there may be circumstances where other valuation methods are appropriate, for example, to reflect the individual circumstances of the business being valued or the data available to the valuer.

5.2 Our Model

5.2.1 Model Outline

We have constructed a model to value private health insurers using our preferred approach. We outline the main steps used in the model and describe some of the parameters used. We have deliberately provided only a high level description of the model, as we wish to focus on identifying the factors that drive valuations and use this to comment on recent transactions. The paper is not intended to cover the precise values that should be taken for each parameter. We acknowledge that there will be a range of reasonable values for each parameter. Many of the key parameters are worthy of papers in their own right, for example, the appropriate discount rate for valuing private health insurers.

The starting point for modelling was statistics at 30 June 2008 as published by PHIAC. This was supplemented by other publicly available information from annual reports and from information memoranda issued as part of each of the demutualisations.

We estimated profits for future years by projecting:

- Future premium income, allowing for assumed rate increases and changes in membership
- Future claims and expenses assuming that, on average, the same net margin is achieved in each future year
- Income on investments

For each future year, we calculated capital requirements by estimating the regulatory minimum requirement and then adding a margin. The addition of a margin reflects the practice of insurers holding a margin over the regulatory capital minimum. We assumed that any assets in excess of this margin would be paid out as dividends or a return of capital.

The value of the health insurer is estimated as the sum of the:

- Present value of these future dividends for the first ten years; plus
- A terminal value to reflect the value of the business beyond ten years; plus
- Adjustments where necessary to recognise the value of any non-health businesses

The terminal value was estimated using a capitalisation of earnings approach. We used a multiple of 12, which is in line with the range of multiples used in the ahm and Manchester Unity expert valuations.

5.2.2 Data Sources

Our valuation is limited to using publicly available information only. Key model inputs are obtained from the PHIAC Annual Report on the Operations of the Private Health Insurers as at 30 June 2008, supplemented by data such as fund annual reports and information memoranda issued as part of a demutualisation. These documents provide a great deal of information, but it was necessary to make a number of assumptions to support development of parameters for the valuation model. These assumptions are described in more detail in the following sections.

We noted in Section 2 that there a number of different reasons for valuing a private insurance company, and that the appropriate approach would depend in part on the reason for undertaking the valuation. Because we are reliant on publicly available data, our model most closely reflects the approach that might be taken by a potential buyer considering an unsolicited approach for a company. A health insurer or its advisors wishing to produce a valuation would have access to additional data, or may feel that an alternative basis is more appropriate. We include comments in the following sections on areas where an alternative basis may be more appropriate under some circumstances.

5.2.3 Inflation Assumptions

We projected future premium income using assumed rates of premium inflation and increases in membership. Our base model assumes 6% annual premium inflation plus policyholder growth (net of lapses) of 2% per annum. These assumptions are consistent with industry experience over recent years. We also considered scenarios where these assumptions are allowed to vary.

We assumed claims and expenses would inflate in such a way that, on average, the same net margin is obtained in each year. We note that it is reasonable to assume that expenses would inflate at a lower rate than benefit costs over the long term. However, we have assumed that under these circumstances private health insurers would effectively pass the benefit of this to policyholders through lower premium increases. An implicit assumption of our valuation approach is that the pricing process permits health insurers to achieve positive net margins, but that the possibility to grow net margins is limited by regulation and competition.

5.2.4 Other P&L Assumptions

We assumed a return of 5% per year on investments. This reflects a medium term view for a portfolio weighted towards defensive assets, reflecting the assets typically held by health insurers. We note that this level of returns may be difficult to achieve from defensive investments in the next couple of years.

Although health insurers typically weight their investment portfolios towards defensive assets, there is a degree of variation between entities. As at 30 June 2008, PHIAC statistics indicated that the proportions of equities held by health insurers varied between 0% and 40% of assets. The investment return assumption should reflect the assets that the purchaser intends to hold. This will depend on the investment risk appetite of the purchaser, and is related to the capital requirements of the business. We consider scenarios based on alternative investment assumptions and levels of capital to illustrate the sensitivity of value to these parameters.

We assumed that profits would be taxable at a rate of 30%. This is consistent with our modelling approach of considering a buyers perspective. Commercial acquisitions require private insurers to operate on a “for-profit” basis, which means insurers are not eligible for tax-free status. However, a mutual might reasonably value itself including the tax-free advantages, that is, as the present value of pre-tax cashflows. A true merger of mutuals might also not require a conversion from “not for profit” status.

5.2.5 Capital Surpluses

Valuation methods for private health insurers need to deal appropriately with any excess capital within the business. Excess capital is particularly important for health insurers, since a mutual may have accumulated significant reserves in the absence of a satisfactory method to distribute surplus.

Our model estimates the capital requirements for each insurer at the end of every model year. It is not possible to accurately derive the PHIAC capital adequacy reserve of a health insurer based on publicly available data. For example, health insurers do not disclose the amount of balance sheet assets that are inadmissible, or the margins that are being used in calculations. The capital adequacy reserve amount used in the model is therefore an estimate. However, we were able to review information that was disclosed by the insurers involved in the most recent transactions to ensure our estimates were reasonable.

All insurers, including private health insurers, hold more capital than is required by the minimum regulatory requirements. These additional amounts are sometimes referred to as a regulatory capital margin or a capital buffer. We assumed that insurers would hold a margin equal to 30% of the sum of liabilities plus the regulatory minimum capital requirement (that is, a capital adequacy multiple of 1.3¹). An insurer would want to carry out extensive analysis to decide on the level of regulatory capital margin to hold. The size of the margin would likely vary from company to company, reflecting such factors as the risk appetite, the availability of additional capital, size and stability of business and investment strategy. Our selected margin represents a risk-appetite neutral level of capitalisation, that is, it does not reflect the risk-appetite of the purchaser. Purchasers

¹ Refers to the ratio of total assets available to meet capital requirements to the sum of liabilities and the PHIAC minimum capital requirement. This format of capital adequacy ratio was used by PHIAC until recently, and remains the most widely quoted format for health insurers.

would want to form their own views on the appropriate level of surplus and may adjust the price accordingly. We consider scenarios based on alternative levels of capital to illustrate the sensitivity of value to this parameter.

5.2.6 Final Adjustments

Our model values a private health insurer based on projected cashflows relating to premiums, benefits, expenses, investment income and PHIAC capital requirements. Some health businesses derive income from other activities that would not be included in these cashflows. Examples include MBF's financial services business, and Manchester Unity's retirement, aged care and financial services business. It was therefore necessary to explicitly adjust our valuations to reflect these businesses. We did this by:

- Eliminating assets that related to other businesses, where these were included in the PHIAC balance sheets of the private health insurer. We estimated these amounts by considering the Information Memorandum for the transaction together with insurer annual reports.
- Adding the estimated value of these businesses to the result of our calculations. The estimated values were taken from the expert report in the information memorandum.

5.2.7 Control Premiums

We have seen valuations of health insurance companies that include explicit control premiums. It is argued that 100% ownership of a business is worth more than, say, 10 times the value of a 10% stake. Obtaining control of a business allows more certainty of achieving desired outcomes than owning a minority stake. We recognise that, to the extent that these have been found to exist in valuations, they are appropriate to include in sellers estimates. However, we have not included explicit control premiums in our buyer-side valuations; the estimates reflect the projected amounts of cash generated.

5.2.8 Sovereign Risk

We have not included a specific allowance in our model for sovereign risk. Private health insurers are exposed to a significant amount of sovereign risk. At the time of writing, the Commonwealth government is considering proposals from the National Health and Hospitals Reform Commission relating to (amongst other matters) Denticare and social insurance. If the government adopts changes in these areas, the actual cashflows for a private health insurer could vary significantly from those in a current valuation model. This could have a significant impact (positive or negative) on the value of an insurer.

A cashflow approach to modelling allows political risk scenarios to be considered explicitly. Alternatively analysts may apply judgemental to reduce the capitalisation multiples or adjust the discount rate to reflect an assessment of sovereign risk to private health insurers.

6 Drivers of Value in Health Insurance

6.1 Approach

We applied our model to the four most recent transactions, namely those involving ahm, Manchester Unity, MBF and nib. We base our observations on these insurers as valuation is a topical issue, due to the recent demutualisations. In addition, the amount of publicly available information is greater for these companies than for other insurers because of disclosures made during the demutualisation.

Our aim is not to value these businesses. The value of these businesses was established on demutualisation or listing, and nib is continuously revalued on the stock exchange. We have instead taken the transaction values (as shown in Table 4.1) as given, and attempted to estimate the drivers of those values. Specifically, we have investigated the model assumptions that are required to generate the purchase prices paid, or that support certain market valuations for nib.

When assessing value, a key feature of valuations is that they are based on company specific assumptions, not the application of industry averages. Our scenarios however apply the same assumptions to each insurer in order to identify the drivers of value. We are not suggesting that there is a single set of assumptions that can be used to value health insurers.

6.2 Historical Net Margins

Table 6.1 shows historical net margins for each of the four insurers, and for the private health insurance industry as a whole. The data is sourced from PHIAC's annual fund reports.

Table 6.1 – Historical Net Margins

Insurer	Net Margin - year ending 30 June							Average	
	2008	2007	2006	2005	2004	2003	2002	All	Last Five Years
ahm	3.2%	5.4%	16.6%	7.9%	10.4%	0.9%	-7.2%	5.3%	8.7%
Manchester Unity	5.1%	6.1%	4.4%	4.4%	2.6%	1.9%	3.3%	4.0%	4.5%
MBF Australia	0.5%	2.6%	4.3%	2.1%	2.8%	3.1%	1.6%	2.4%	2.5%
NIB	2.9%	3.1%	9.0%	1.7%	-2.5%	3.1%	8.5%	3.7%	2.9%
Whole Industry	4.2%	5.5%	5.2%	2.7%	1.8%	1.3%	0.0%	3.0%	3.9%

We note that the net margin data is for MBF Australia excluding MBF Alliances. The experience of MBF Australia is considered to be a more material indicator of the financial performance of the MBF Group.

Private health insurance is generally regarded as an industry with low, stable margins. Table 6.1 shows that there have been periods of exceptional industry performance. There have also been periods where individual fund performance has differed significantly from the industry average. Sources of potential industry variability include:

- Significant changes in government policy, for example, following the introduction of Lifetime Health Cover in 2001, or potentially following the recent changes to Medicare Levy Surcharge thresholds.
- Differences between actual and expected claims industry inflation, for example, due to changes in the Australian economy.

- Differences between actual and expected investment returns.

Sources of variability in net margin for individual insurers may be attributable to:

- Mispricing.
- Poor policy design resulting in adverse selection.
- Successfully attracting policyholders with better than average claims experience.
- Investment losses, which asset allocations are out of line with peers.

Based on the data in Table 6.1, we suggest that a net margin target of 3% to 5% would be a reasonable medium term assumption. This is consistent with the assumption that the pricing process permits health insurers to achieve positive net margins, but that the possibility to grow net margins is limited by regulation and competition.

6.3 Discount Rate

For various discount rates, Table 6.2 shows the net margin that results in a valuation equal to the price paid for the business.

We have produced these estimates by setting up our model to value each of the four insurers in turn, using the method and assumptions set out in section 5. We revised the net margin assumed in the model until the valuation equals the actual price paid (as shown in Table 4.1). This was repeated for each of the discount rates shown in the table below.

In each case, we have used the facility price valuation of \$440 million for nib. We note also that we are applying discount rates to net of tax cashflows.

Table 6.2 – Net Margin Implied by Various Discount Rates

Discount Rate (net of tax)	8%	10%	12%	14%
ahm	3.75%	4.75%	5.75%	6.75%
MBF Group	3.00%	3.75%	4.50%	5.50%
Manchester Unity	3.50%	4.25%	5.25%	6.00%
nib	2.00%	2.75%	3.25%	3.75%

Table 6.2 indicates that, if a 10% discount rate is used, a 4.75% net margin is required to value ahm at \$367 million (the purchase price). With the same discount rate, net margin assumptions of 3.75%, 4.25% and 2.75% are required to obtain the purchase (facility) prices for MBF, MU and nib respectively.

We note that in addition to purchasing the ongoing health insurance business, the purchaser acquires any assets that are surplus to the capital requirements of the business. Manchester Unity and MBF also owned non-insurance businesses. The higher the value of the surplus assets included in the business, the lower the net margin required on the insurance business to support the overall value. In section 4.4 we considered the effect of deducting surplus assets on price per policyholder statistics.

We note that the implied margin is lower for nib than for the other insurers. This could indicate the control premium described in section 5.2.7. The low implied margin for nib may reflect the current

state of the financial markets, that is, that company valuations have reduced overall since the ahm, MBF Group and Manchester Unity transactions. Another possibility is that, as the only listed private health insurer, nib is not well understood by the market. nib shares have traded in a wide range since listing, and it would be difficult to argue that the underlying profitability of the private health insurance industry has varied to the same extent.

In a highly regulated industry such as private health insurance, some would argue that it would not be possible to make above-average net margins in the medium or long term. However, the prices would also reflect the circumstances of the purchasers, for example, reflecting synergies that may be available, or providing increased diversification across a larger policyholder pool.

6.4 Growth Rates

Table 6.3 shows changes in the number of policyholders for the four insurers being considered, together with changes in total industry policyholder numbers. The data is sourced from PHIAC statistics.

Table 6.3 – Historical Growth Rates

Insurer	Growth Rate - year ending 30 June							Average	
	2008	2007	2006	2005	2004	2003	2002	All Years	Last Five Years
ahm	13.8%	13.6%	7.9%	0.5%	-4.0%	-4.4%	2.5%	4.3%	6.4%
Manchester Unity	-0.6%	12.5%	9.1%	4.5%	3.2%	5.0%	1.7%	5.1%	5.7%
MBF Australia	3.0%	-0.1%	1.0%	1.3%	-0.1%	-0.6%	0.7%	0.7%	1.0%
NIB	11.1%	8.8%	3.9%	4.2%	9.2%	9.2%	3.2%	7.1%	7.4%
Whole Industry	4.2%	4.2%	2.1%	0.8%	0.5%	0.5%	0.5%	1.8%	2.4%

Table 6.3 shows a wide variation between the rates of growth of individual insurers compared to each other and to the industry as a whole. In particular, ahm, Manchester Unity and nib have grown relative to other insurance companies over recent years. In valuing an insurer it is necessary to make judgements regarding future growth assumptions. The key judgement relates to the extent to which a target company is expected to grow faster than the overall industry, and over what period higher than average growth is expected to continue.

For various policyholder growth rates, Table 6.4 shows the net margin that results in a valuation equal to the price paid for the business. Growth rate refers to net growth (that is, new policyholders less lapses).

We have produced these estimates by setting up our model to value each of the four insurers in turn, using the method and assumptions set out in section 5. We used a discount rate of 10%. We revise the net margin assumed in the model until the valuation equals the actual price paid (as shown in Table 4.1). This was repeated for each of the growth rates shown in the table below.

In each case, we have used the facility price valuation of \$440 million for nib (85 cents per share). We note also that we are applying discount rates to net of tax cashflows.

Table 6.4 - Net Margin Implied by Various Growth Rates

Net Growth Rate	0%	2%	4%
ahm	5.25%	4.75%	4.25%
MBF Group	4.25%	3.75%	3.25%
Manchester Unity	5.00%	4.25%	3.75%
nib	3.00%	2.75%	2.25%

Higher growth rates initially reduce the amount of assets that are available for distribution, since additional funds are required to meet regulatory capital requirements. Assuming that the new business is profitable, business growth results produces higher dividends and so contributes to value. Therefore if a business is assumed to be able to grow profitably, a lower net margin is required to justify an initial purchase price.

We note that where no growth is assumed, the required net margins for ahm and Manchester Unity appear to be towards the high end of what might be regarded as a reasonable target for a private health insurer. The required net margin for MBF is also higher than has been achieved in recent years, although lower than for ahm and Manchester Unity. This indicates that, in deriving the prices, the purchasers may be assuming that a level of growth will continue. Alternatively, the purchasers may have made more aggressive assumptions in some other area of the valuation.

We note also that there is a link between policyholder growth rates and net margins. Assuming that premium rates are appropriate, growing the business by attracting new-to-PHI policyholders will improve profitability as new joiners will be within waiting periods. Conversely, lower growth rates could cause a deterioration in net margins as a lower proportion of the total membership will be prevented from claiming by waiting periods.

It may be that the purchasers assumed above average growth rates would continue when preparing their offers. This possibility is most apparent for ahm and Manchester Unity, since in the absence of a higher growth assumption these valuations appear to imply that higher net margins are anticipated. We note that ahm and Manchester Unity have tended to grow faster than the industry average in recent years (as shown in Table 6.3), and a seller would reasonably expect this to be reflected in any purchase price.

Where valuations depend on achieving sustained high growth in memberships, the success of the purchase will depend critically on achieving this goal. In achieving this goal, a particular challenge relates to the way in which an acquired business is integrated with the purchasers. Purchasers will be keen to extract synergies by merging activities that are common to their businesses, possibly including finance, administration and product design. In carrying out this integration, the purchaser should be careful not to impede the business units that have been important in producing policyholder growth.

6.5 Regulatory Capital Margin

In producing valuations we have assumed that insurers hold a 30% margin over minimum capital requirements. We note that the actual margin held would depend on the individual circumstances of the insurer. Larger insurers may choose to hold a lower margin; a larger insurer would expect more stable results than a smaller one. Table 6.5 shows the effect of varying the capital margin on the net margin implied by the purchase price.

Table 6.5 – Net Margin Implied by Various Capital Margins

Capital Margin	20%	30%	40%
ahm	4.50%	4.75%	5.00%
MBF Group	3.50%	3.75%	4.00%
Manchester Unity	4.00%	4.25%	4.50%
nib	2.50%	2.75%	2.75%

The implied net margin is less sensitive to capital margin than to discount rate. Selecting a lower capital margin allows a greater release of capital on purchasing an entity, and reduces the capital requirements of funding business growth. However, this effect is partially offset by lower future investment income.

6.6 Investment Return

We assumed a 5% return on investments in the above scenarios. Table 6.6 below considers the effect on the implied net margin of assuming higher or lower investment returns. We note that we are implicitly assuming that the insurer is able to maintain the net margin under the range of investment conditions considered.

Table 6.6 - Net Margin Implied by Various Investment Scenarios

Investment Return	3%	5%	7%
ahm	5.50%	4.75%	4.00%
MBF Group	4.50%	3.75%	3.00%
Manchester Unity	5.00%	4.25%	3.75%
nib	3.25%	2.75%	2.00%

6.7 Conclusion

In section 4 we noted that, in terms of price per policyholder, recent private health insurance transactions appeared more expensive than earlier ones. However, we suggested that the difference can be largely explained by inflation in business values over time reflecting economic growth, and the significant capital surpluses recognised in the prices of the 2007/8 transactions. The prices paid would also have reflected the views of buyers and sellers on the riskiness of private health insurance. The current market conditions would also have determined the price, that is, the number of buyers and sellers, and how keen they were to reach a deal.

Our modelling has indicated that, using a range of reasonable assumptions, it is possible to obtain valuations that are in line with the recent prices paid. However, we suspect the purchasers to have assumed the acquired companies will increase policyholder numbers, and that investment returns were assumed to return to higher levels than are currently available.

For a given risk tolerance, managers have limited ability to improve investment returns or reduce economic capital requirements. The level of policyholder growth in the private health insurance industry is also influenced by factors such as government policy on health care and PHI incentives, and so may be beyond the control of individual insurers. Insurers can try to grow more quickly than their peers. However, it can be difficult to achieve ambitious growth targets while maintaining net margins and carrying out post-merger integration.

We do not know the assumptions that the purchasers used to value ahm, Manchester Unity or MBF. It is more difficult still to understand how stockmarket investors determine whether or not to buy nib shares. However, focussing on the key drivers of value will be essential for any management team to achieve an outcome that reflects the amount paid in a transaction.