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**HMI Submission:
Interventions to address regulatory gaps
within healthcare financing in the South
African private sector**

25 January 2018

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1. Background

The Health Market Inquiry (HMI) has requested submissions and participation in a seminar to be held on 1 February 2018 on the healthcare financing regulatory framework in the South African private health sector. This report is the submission of Insight Actuaries & Consultants (Insight) on behalf of Netcare.

2. Introduction

The HMI released a report for comment dated 1 December 2017 titled "Call for Submissions and participation in Seminar, *A discussion of the need for and impact of selected interventions to address regulatory gaps within healthcare financing, with the aim of strengthening competition.*" This discussion document outlines various views expressed by market stakeholders that have been received by the HMI, and within three sections presents questions the HMI is requesting feedback on. This report outlines our response to some assertions in the HMI discussion document and presents answers to some of the questions raised.

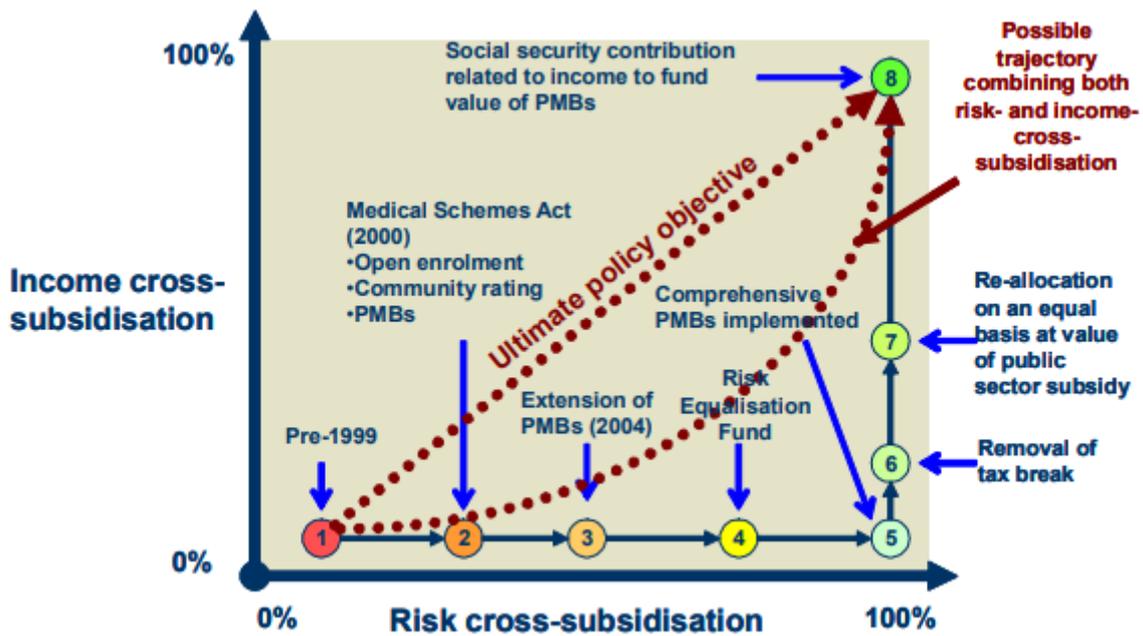
3. Brief history

Much of the history and background relating to medical scheme regulatory reform are already familiar to the HMI and will not be repeated here, save to emphasise certain key points. Medical scheme regulations as they stand now are incomplete in terms of the intended reforms planned and initiated with the Medical Schemes Act of 1998, implemented in 2000¹. The MSA was the beginning of the reintroduction of social solidarity principles into medical scheme design and oversight with the initial emphasis on open enrolment, prescribed minimum benefits and community rating. The regulatory pathway to follow was clearly laid out in policy documents and included a Risk Equalisation Fund and mandatory membership. The intended pathway is perhaps best summarised by the following diagram from Ministerial Task Team on SHI, July 2005:

¹ A useful summary of the reforms can be found here, by Professor Heather McLeod, with references: <http://ipasa.co.za/Downloads/Policy%20and%20Reports%20-%20General%20Health/NHI/background%201940%20to%202008/IMSA%20NHI%20in%20South%20Africa%201940%20to%202008%20vF1%2024%20October%202009.pdf>



Figure 1: Policy flow in Medical Schemes to achieve Mandatory Health Insurance system, Ministerial Task Team on SHI, July 2005, amended)



Leading up to 2007, the industry had proceeded to step 3. Post 2007 this SHI reform pathway was displaced in favour of National Health Insurance, and no progress has been made on re-balancing the regulatory structure of schemes, leaving schemes in a regulatory limbo.

The current environment permits a wide range of anti-selective and moral hazard member behaviours. Personal anecdotes abound as to the way these behaviours manifest including joining a scheme only to cover the cost and risks associated with birth, joining a scheme only when older, joining a scheme only when treatment is needed and waiting out the waiting periods. Anecdotes suggest the environment permits such behaviours – the questions that then remain are what is the extent of such behaviour, and what is the overall impact.



4. Anti-selection in relation to medical scheme membership

The synopsis presented in the HMI report relating to anti-selection in relation to medical scheme membership identifies a number of the key issues. To answer some of the questions raised in paragraph 20 of the HMI discussion document we highlight the following points:

- The demographic profile of medical scheme members is different to the general population, including when income earners above the tax threshold are considered.

Figure 2: % of the population, of medical scheme members and those earning above the tax threshold by age, IES StatSA

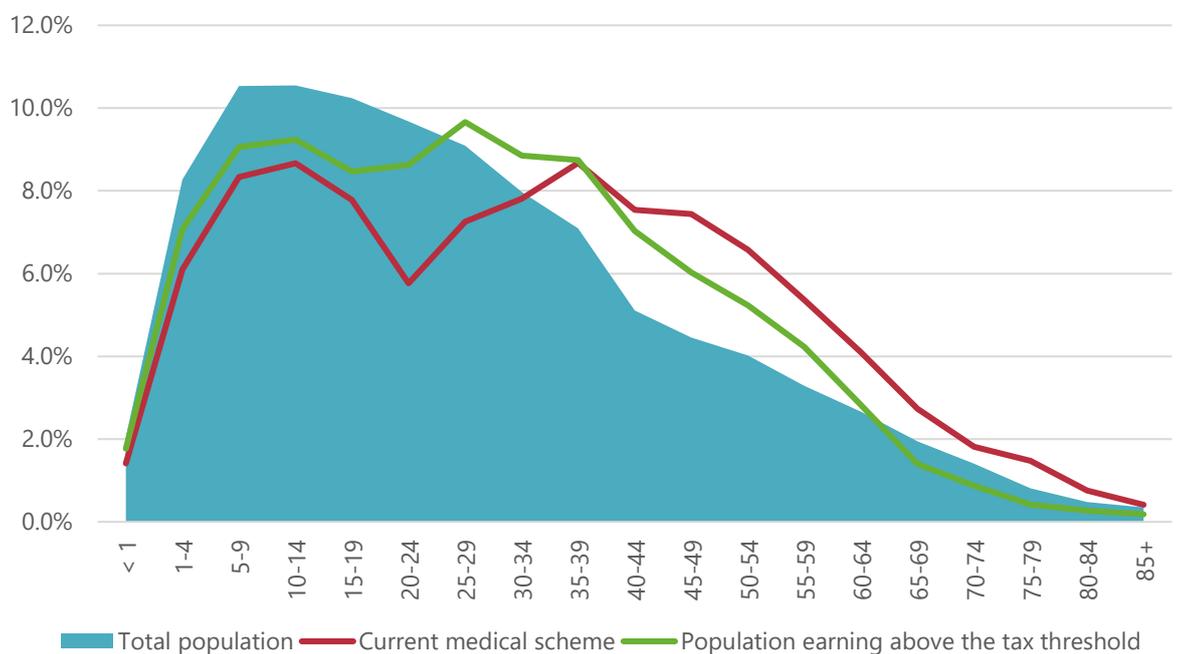
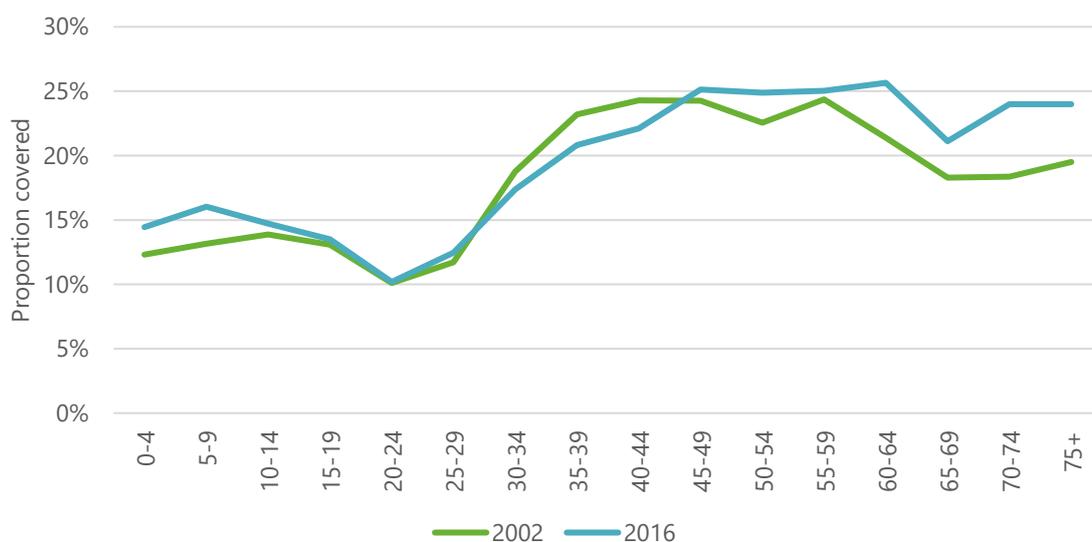


Figure 3: Proportion of beneficiaries by age, all schemes. CMS data



Figure 4: Proportion of medical scheme covered lives by age group, GHS 2002, 2016



The effect of the change in age distribution of scheme members has been quantified by a number of stakeholders. Our estimates show the cost as 1.3% per annum, before any changes to burden of disease are taken into account. Adding burden of disease bring the figure to 1.9%². These results are directionally consistent with the findings in the claims attribution report released by the HMI. The change in shape over time indicates the selection is not a once off effect and continues to worsen. The dip in coverage between 15 and 30 is not the only cause for concern. Higher membership at older ages suggests members join when they are more likely to need care. It is

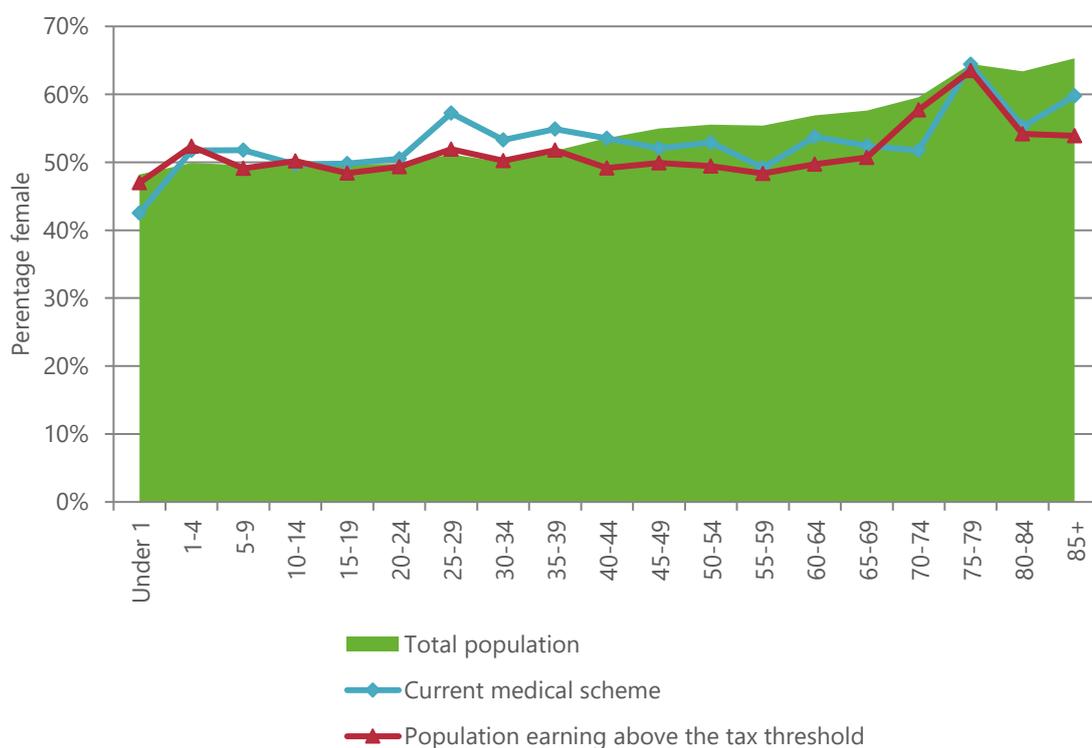
² Expert report of Barry Childs, prepared for the Competition Commission’s HMI, 2014



evident that while the dip in coverage is consistent between 15 and 30, a higher proportion of children, and older members are covered in 2016 compared to 2002.

- Maternity is another example that illustrates the presence of anti-selection. “The adverse selection is clear as prospective mothers become take up membership to ensure costs for birth and associated child expenses (including the risk of significant neonatal costs) are covered in the private sector. The adverse selective behaviour leads to a difference in the age and risk profile of medical scheme beneficiaries compared to the population, and those earning above the tax threshold”³.

Figure 5: Proportion of the total population, those above the tax threshold, and medical scheme beneficiaries by age, GHS 2011

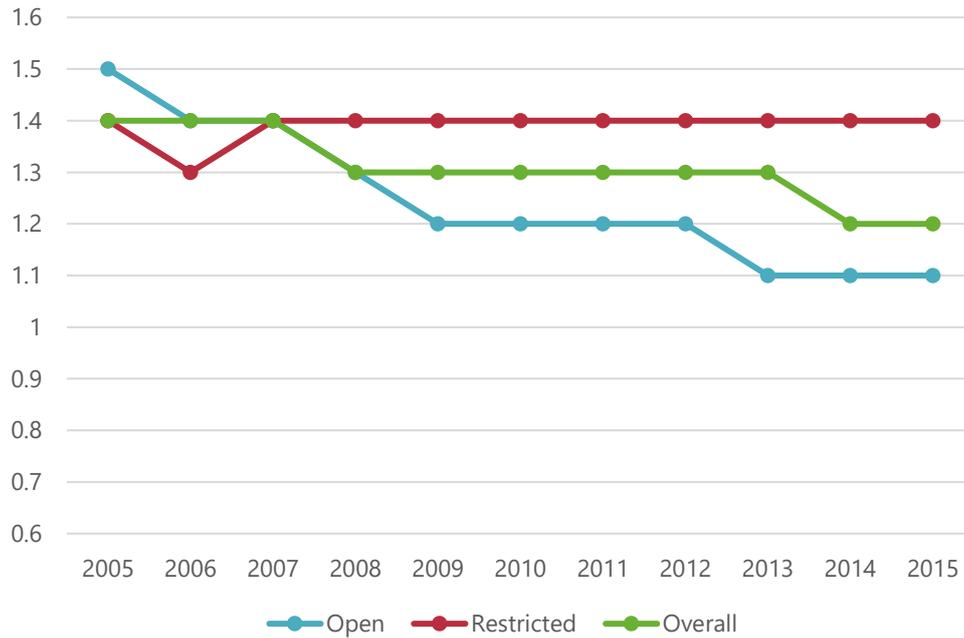


- CMS reports have shown a steady increase in the rate of chronic disease prevalence, including those with multiple chronic diseases, as well as a persistent difference in the chronic prevalence between open and restricted schemes.
- CMS data shows a long term decreasing trend in family size, which is not reflected in overall population statistics. This illustrates another form of anti-selection risk where those most in need of medical care in a family are registered as dependants on a medical scheme, rather than the whole family. This observation is most apparent on open schemes.

³ Export report of Barry Childs to the Competition Commissions HMI, 2014



Figure 6: Average number of dependants by year, by scheme type, CMS data



- The primary driver of medical scheme membership remains income level.

Figure 7: % population on medical schemes, and overall % of population, by annual HH income, IES 2015

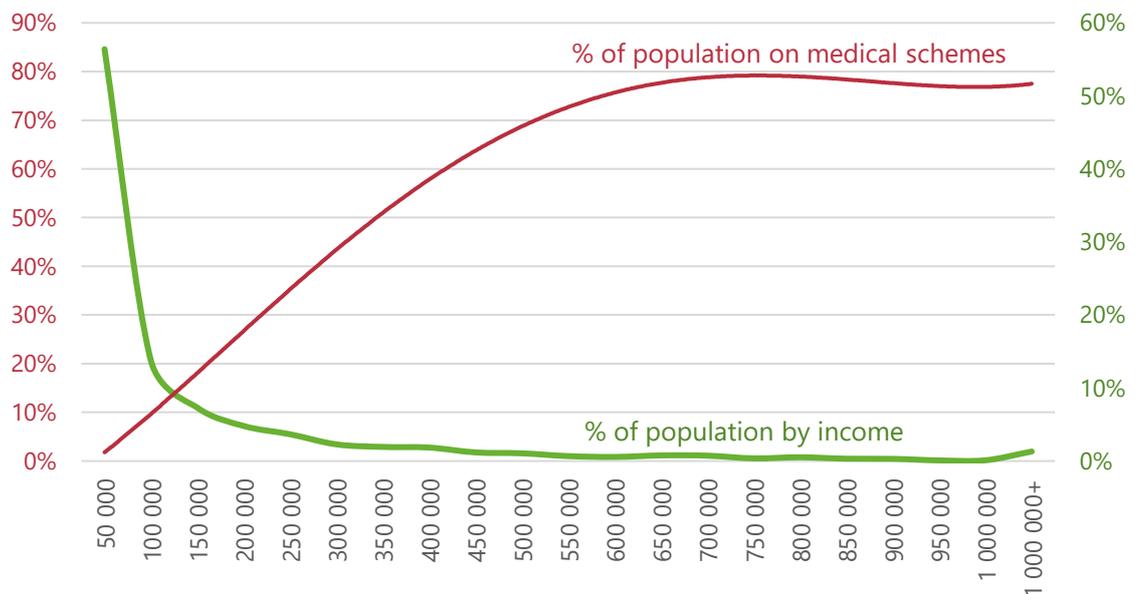
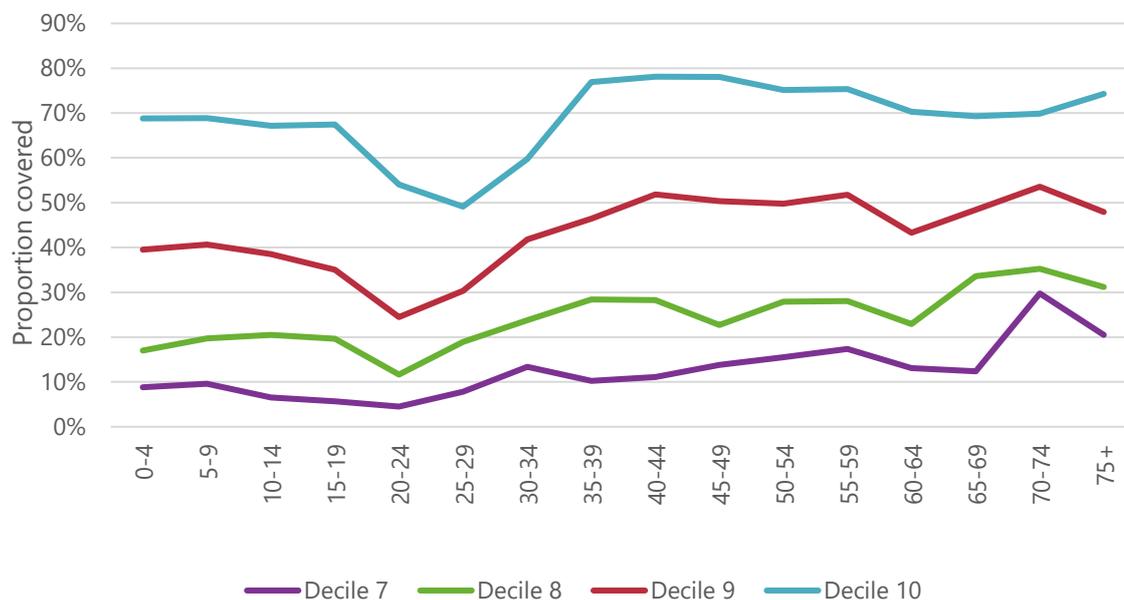


Figure 8: Proportion of citizens covered on medical schemes, by age, by income decile, Living Conditions Survey, 2014/2015



The proportion of lives covered for income deciles 1 to 6 is well below 10% across age groups. 85% of medical scheme members are from income deciles 8, 9 and 10. The dip in coverage between 20 and 40 is consistent across income groups. Controlling for income and race the dip in scheme take-up remains, as does higher take up at older ages. This suggests the phenomenon is not purely income related, but driven by some selection effect.

- Restricted and open schemes operate in the same environment, are often administered by a common administrator. Restricted schemes have fewer members on average than open schemes. Despite this, restricted scheme contributions have increased slower than open schemes by roughly 1.8% per annum over an extended period (2000 to 2016), including the period before GEMS (the difference was 3.1% per annum between 2000 and 2006).

Table 1: comparative annual average increases between 2000 and 2016, CMS annual reports

	Average Annual GCI Increase pbpa (2000 - 2016)	Average Annual GCI Increase pbpa (2000 - 2006)	Average Annual GCI Increase pbpa (2007 - 2016)
All open schemes	9.8%	11.4%	8.9%
All restricted schemes	8.0%	8.3%	7.9%
Open schemes excluding DHMS	9.8%	10.8%	9.2%
Restricted schemes Excluding GEMS	8.0%	8.3%	7.8%



The HMI has also asked for the efficacy of current levels of underwriting in discouraging late joiners – this information would have to be supplied by medical schemes as Netcare does not have direct access to information to analyse this question. Publicly available information suggests that underwriting is not completely effective at discouraging late joiners as illustrated in figure 1 in the HMI discussion document.

As to the question raised “*what mechanisms can be introduced to limit anti-selection (particularly keeping in mind the overall country objective of moving towards a NHI)?*” there are two options to consider. Mandatory membership would certainly solve the problem of overall anti selection into the medical scheme’s environment. This could only happen above a certain income level. We suggest the PMBs would also have to be reviewed due to the floor price they place on cover (R680 per beneficiary per month, in 2016 terms⁴) This may be possible based on the current health insurance exemption mechanism being undertaken by the Council for Medical Schemes, in lieu of the planned development guidelines for so called *low cost benefit options*⁵. We also suggest that such an initiative would only be possible with mandated income cross subsidies. The dynamics between income and risk cross subsidies are discussed later in this report, but at an overall population level it is difficult to envisage a mandatory contribution structure that does not simultaneously include mandated income cross subsidy. This would address the concern raised by the HMI regarding the effect on low income earners. The precise nature and extent of such income cross subsidies would require significant analysis and impact study.

South Africa receives some criticism for its high share of overall health spend being attributed to ‘voluntary private health insurance’. Under the drive towards Universal Health Coverage this is seen as a negative component of overall health spend⁶. However, countries where health insurance cover is mandatory are acclaimed.

Estimates of the impact of mandatory cover are between a 15% and 20% drop in the cost of care and an increase in cover of between 5 million and 6.2 million citizens, depending on the income level used to determine mandatory membership⁷. The overall impact on healthcare costs and contributions would depend on a range of factors such as the which benefit options are selected.

Chief among the current criticisms of mandatory membership is that it would at least delay and at worst encumber the NHI development which is now Government policy. This is not a criticism as to the effects of mandatory membership but rather a policy preference. We are unaware of any work that suggesting that mandatory membership would not decrease the cost of medical scheme cover.

The second option available to lessen the impact of anti-selection, is to increase schemes’ ability to underwrite. Currently permitted underwriting rules and penalties for late joiners are limited. The extent to which these controls have been effective in controlling anti-selective and late joining behaviour is not directly known. We can only see the overall change in the industry’s risk profile, and compare it those who are not

⁴ CMS 2016 report

⁵ Circulars 17 and 39 of 2017 from the CMS, and the accompanying framework for exemption published by the CMS

⁶ http://www.compcom.co.za/wp-content/uploads/2016/06/presentation-_WHOOECD_final_feb17.16-1.pdf

⁷ The role of risk equalization in moving from voluntary private health insurance to mandatory coverage: the experience in South Africa, Heather Mcleod and Pieter Grobler, 2009. Note that the reduction in costs referred to was quantified on PMBs



members. As suggested by these analyses, underwriting and late joiner penalise have not been completely effective in preventing anti-selection. Any changes to underwriting allowances or penalties would have to be weighed against the principles of open enrolment and solidarity. The overall effect is difficult to estimate as it would be the net effect of lowering costs through expanded underwriting restrictions, which may attract new members as value for money improves in the system overall. Those most in need of care might be dissuaded from joining at all if underwriting allowances are too strict which compromises solidarity. We would suggest the HMI consider the effect of the underwriting free period in the industry, circa 2003 which could attract more people into the environment (at a cost), after which a more stringent set of underwriting rules would apply.

On balance, mandatory membership is the clearest technically viable solution, but it is admittedly not politically practical to pursue at present.

5. Risk pooling across medical schemes

In this section in the HMI discussion document matters pertaining to competition between schemes and intra scheme option dynamics are discussed. We respond to each issue separately below.

Inter scheme dynamics

Risk pooling across schemes is largely a function of size and risk profile.

Below a certain minimum size, risk pools are susceptible to shocks from large claims, or an unpredicted large accumulation of claims. Claims experience is generally more volatile, and emerging trends are slower to appear. Small schemes often cannot do much in terms of detailed analysis with only their data, but often make use of the scale of a multiparty administrator to provide insights into industry trends. Despite this, many small schemes operate in the long term on a sustainable basis, with average or lower than average contribution increases over time. Volatility is managed through generally higher solvency levels which cushion small schemes against large claim shocks.

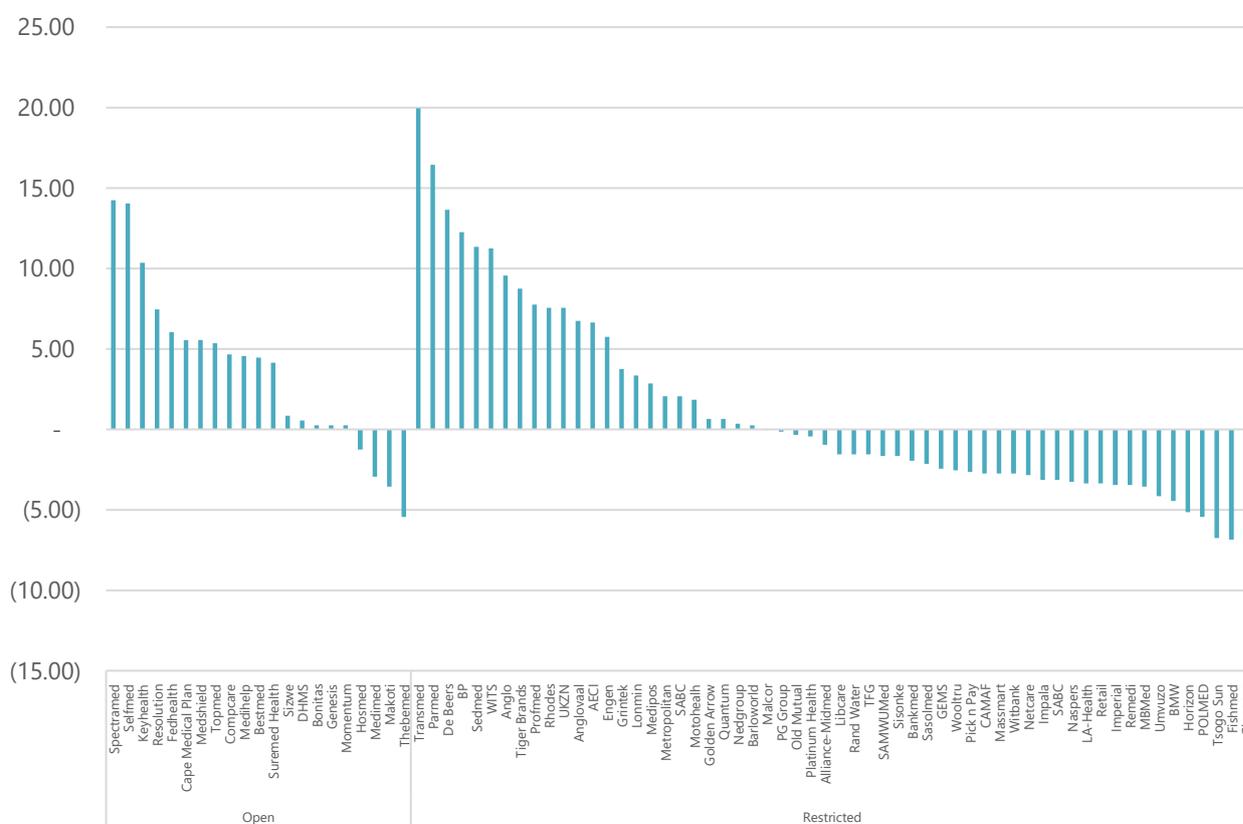
Risk profile differences between schemes represent a quantifiable difference in healthcare costs between schemes. Claims are closely related to age, gender and chronicity. To the extent that schemes have different demographic profiles, all else equal, their overall claims per beneficiary will be different. There are indeed wide variations in risk profile between schemes, which are an underlying driver of the differences in claims costs between schemes. This has an effect on competition. Open schemes compete with each other for business. Restricted schemes do not compete with each other for business. Open schemes compete with restricted schemes to the extent that members of restricted schemes and employer sponsors of restricted schemes are mindful of open scheme alternatives available to them. This has, in part, driven consolidation of restricted schemes into the open scheme market over the long term. Once a restricted scheme's membership risk profile deteriorates past an attractive open scheme (say based on employee demographic trends), all else equal, it would make sense to amalgamate said restricted scheme into the open scheme. Schemes with favourable risk profiles, all else equal, will have lower contributions than those with less



favourable risk profiles which will affect their relative marketability and competition between them. Thus, the ability to attract and retain a favourable risk profile brings with it an improved competitive position. The ability of schemes to offer attractive loyalty and wellness programs and other related products to the benefit of their members affects the ability of the scheme to attract and retain a favourable risk profile.

The solution mooted for this problem of risk selection is some form of risk equalisation, or virtual pooling, at least across a common set of benefits. The intention being to neutralise the effect of differences in risk profile between schemes. Significant work was done leading up to 2007 on the rationale and technicalities of such a risk equalisation system which are not necessary to repeat here, save to say that nothing is in place in the current market to alleviate the effect of differences in risk profile between schemes.

Figure 9: Difference in average age by scheme, versus the market overall, 2016, CMS data



This comparison of ages reflects the shape of the Risk Equalisation Fund (REF) work related to net inflows and outflows by scheme, based on the REF grids and algorithms. It illustrates the degree of difference between scheme risk profiles in the market. A schemes net contribution or receipt to such a fund is a function of its risk profile, and size. Quoting professor Heather McLeod on of the principle drivers of the work behind the REF while acting as an advisor to the CMS: *"South Africa is unusual in having open enrolment and community rating without risk equalisation. This was not a policy oversight, but a question of timing, and the South African Department of Health considers that the environment is now ready for the introduction of a Risk Equalisation Fund (REF)."* (2005, emphasis added).



The REF has also fallen out of favour as a necessary reform in light of the focus on NHI. No other mechanism has been considered to solve the problem of risk profile differences between schemes. Internationally, some form of aggregated risk equalisation, is the mechanism used to solve the problem. In terms of the time to implement such a system, the CMS ran a shadow REF process for some years pre 2007, including data submissions, calculations of net REF returns per scheme, data validation etc. In general, the process was well received by the industry, despite early teething problems. There is a wealth of publicly available documentation on the process available on the CMS website. Post 2007 effort on the initiative dwindled quickly despite the insights gained to the industry's performance.

The CMS may well have estimates on the costs of administering such a system, although we know of no public reporting on the issue.

One of the pitfalls of risk equalisation that considers only risk profile is that *income* is ignored. An unexpected problem that arose in the REF work and analysis was the outcome that generally 'low income options and schemes' would be net contributors. Lower income options and schemes tend to have better risk profiles than higher cost benefit options and schemes. Considering things at an industry level, restricted schemes generally have better risk profiles than open schemes. A purely risk based equalisation mechanism would result in restricted schemes being net contributors, and consequently requiring higher contributions. This is related at least in part to the presence of anti-selection in open schemes discussed above. A risk equalisation mechanism would spread this risk over the whole market, not just open schemes.

We suggest that if risk equalisation mechanisms are considered, that this should be in conjunction with income cross subsidy mechanisms to ensure solidarity is maintained or improved in the medical scheme environment. Equalising for income and risk would remove these elements from medical scheme competition. We would not suggest a risk equalisation mechanism include allowances for price and contract differences – these represent competitive differences in the cost of delivery and should permeate through to the consumers benefit..

A Risk equalisation mechanism, if appropriately designed, would have no effect on the NHI per se, other than the usual retort that any regulatory reform capacity that is not directly related to NHI presents an opportunity cost on the current reform pathway.

Intra scheme dynamics

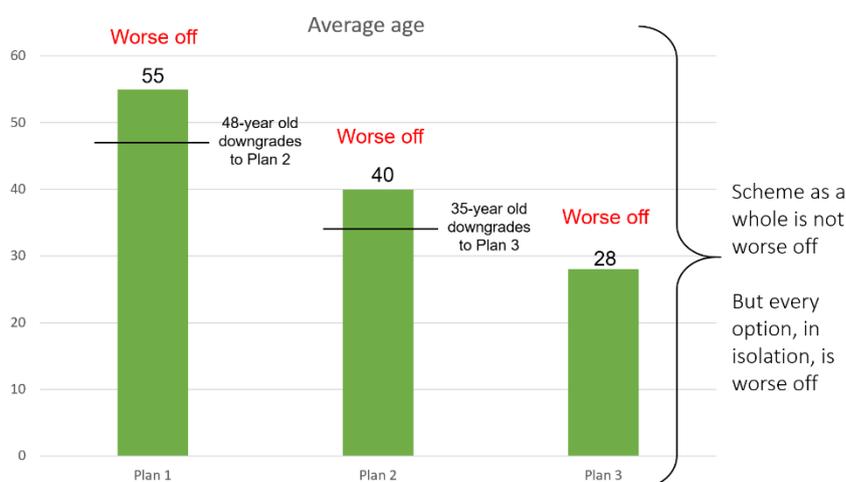
Membership movements within schemes, and financial performance of options within schemes arise from a complex set of interactions. Members choose options based on their income level, schemes or benefit options available to them through their employer or via the open market, and their health coverage needs. Employers with a restricted scheme typically make that scheme the compulsory scheme for employees, unless proof of membership on a partner's scheme can be demonstrated. Some go so far as to assign different options to different groups of employees. The strictness of these rules varies by employer. Some employers allow a choice of medical schemes.

In general, there is wide latitude for members to move between options within a scheme. Some schemes concerned with anti-selective member movements only allow upgrades once a year (that is, when a member wishes to move to a benefit option offering richer benefits). This helps prevent members belonging to a



scheme on the cheapest option until some or other care is needed and then 'buying-up'. Scheme's cannot however do more than limit this choice to once a year. Scheme's manage the complexity of option selection via benefit design, pricing, and in some cases the use of income bands. As the HMI discussion document points out, Section 33 (specifically 33(2)(b)) of the MSA requires each benefit option on a scheme to be self-sustaining. This is typically taken to mean each option should break even on an operating surplus basis, although the interpretation has attracted some debate at the healthcare committee of the Actuarial Society recently. This artificially fragments scheme risk pools further and exacerbates option risk selection behaviour. If each benefit option is seen as a distinct risk pool then fragmentation would be severe. However, scheme contributions go into one bank account, claims are paid from that same bank account, schemes are registered as once entity, and scheme solvency is determined at a scheme level, not a benefit option level, and so it is clear that risk pools should be managed at a scheme level, not a benefit option level. Despite this, a number of scheme have options that make underwriting losses on an ongoing basis. The CMS permits these options to continue on this basis based on motivations by the scheme. These motivations typically show the scheme would be worse off should it adjust contributions so as to allow each option to at least break even. The rationale for these motivations relate to member claims experience and option anti-selection. At the heart of the matter are two core principles of solidarity, being (1) risk cross subsidy and (2) income cross subsidy. If loss making options, receiving either income or risk cross subsidies from other benefit options, were made to be self-sustaining through a contribution increase – those with lower incomes, and higher health needs would pay more for cover.

Each scheme has its own particular option pricing and surplus or loss-making dynamics to consider, but a frequent observation is that benefit options at the low-end, and high-end make losses, while the 'middle' benefit options make surpluses that support the scheme. We note this is not true in all cases. Where this does occur, the observation can be interpreted as the lower end benefit options attract an income cross subsidy and the higher end benefit options attracting a risk cross subsidy. The balances are difficult to maintain and the resulting option movement dynamics receive significant risk management focus each year for schemes. Buydown can be an expensive behaviour for schemes to manage and must be compensated for in annual contribution increase. For illustration, consider the following simplified case:



In such an illustrative scheme with three options, and members buying down. Overall the scheme risk profile will remain the same, but the risk profile of each option deteriorates. Since we know claims are based on risk profile contributions need to be increased to compensate.

At an industry level the effect is impossible to split out from the rates of lapse and new membership by option. However the effect is the same. If new members joining a scheme tend to join lower benefit options



than they might have in years past, the 'buydown effect' is the same. According to work undertaken by ITAP (the Industry Technical Advisory Panel, working with the CMS) overall buydown behaviour is responsible for contribution increases of 1.8% per annum over the period 2012 to 2015 (2.5% for open schemes and 0.9% for restricted schemes)⁸. There is evidence to suggest that member behaviour immediately post an option change indicates anti-selective activity⁹.

In the short term, both upgrades and downgrades serve to impact negatively on loss ratios. Rational and informed consumers that select aggressively against a scheme could cause significant damage, but some degree of inertia or apathy prevents this from happening. Schemes have no protection against option selection within the scheme, other than limiting upgrades to once a year. Downgrades are predominantly driven by affordability more than pure anti-selection, while upgrades seem predominantly driven by the occurrence of a health event¹⁰.

To illustrate the trend of benefit option mix changes, using CMS data by option from 2008, we have assigned each open scheme option to a price quartile. The cheapest options containing 25% of members were classified as quartile 1, and so on. Each benefit option retains its starting quartile classification over the period of analysis.

The figure below illustrates the proportion of beneficiaries in each quartile in each year. The starting figures in 2008 are not precisely 25% each because the quartiles are based on members not beneficiaries (i.e. differences in average family size between options is reflected). There has been a steady shift from more expensive options (quartiles 3 and 4) to cheaper options (quartiles 1 and 2). By 2015, 37% of beneficiaries were located in the lowest-cost quartile.

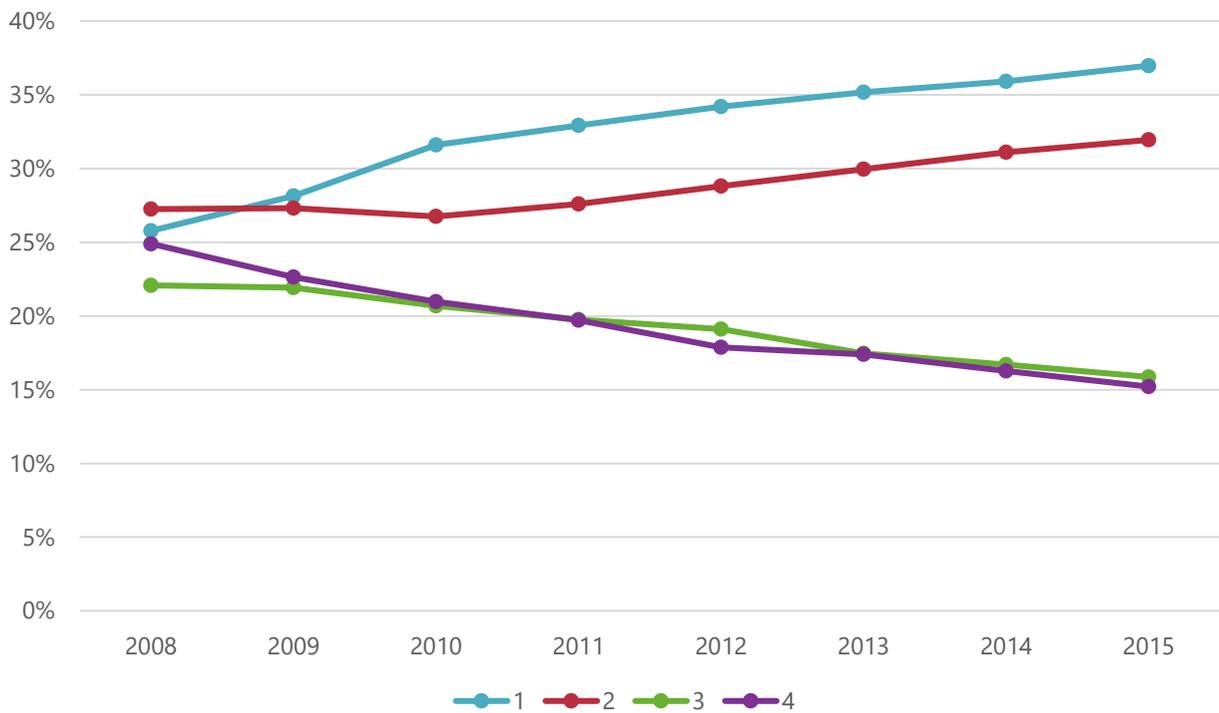
⁸ Presentations by Christoff Raath on ITAP figures, <http://www.actuarialsociety.org.za/download/itap-inflation-measurement-2/?wpdmdl=4762>

⁹ Presentation by Christoff Raath, <http://www.actuarialsociety.org.za/download/option-selection-dynamics-christoff-raath/?wpdmdl=4799>

¹⁰ Presentation by Christoff Raath, <http://www.actuarialsociety.org.za/download/option-selection-dynamics-christoff-raath/?wpdmdl=4799>



Figure 10: Proportion of beneficiaries in each contribution quartile (where 1 is the cheapest and 4 the most expensive)

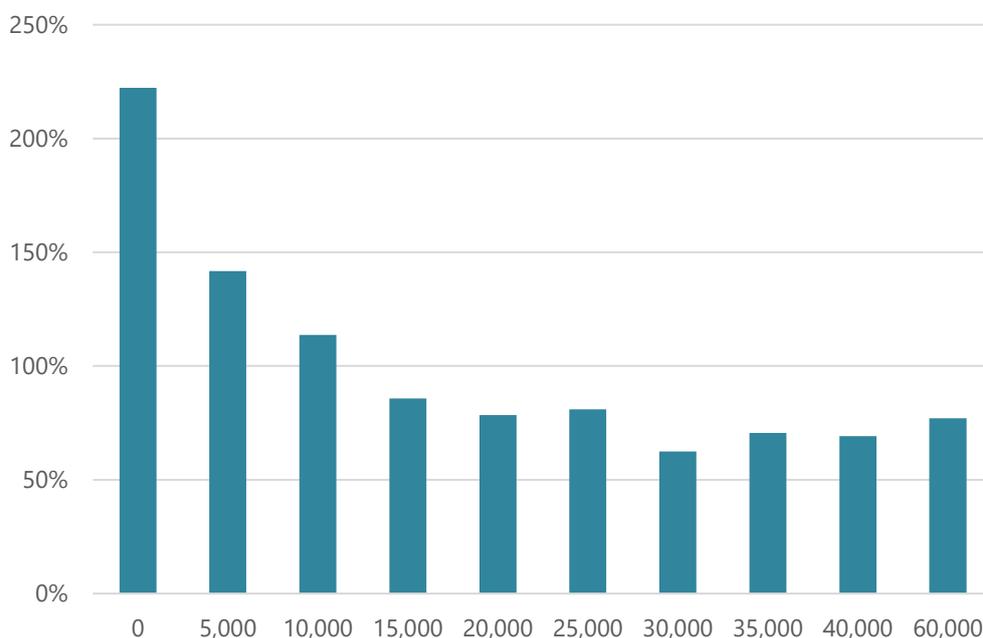


The mechanism of income and risk cross subsidies is typically managed better in the restricted scheme environment where there are fewer options by scheme and most benefit options are income banded. Open medical schemes tend to only use income banded contributions on their low-end options. Income is more easily verified within an employer setting as payroll information is accessible. For open schemes, income verification is a more administratively intense task.

Income banding within options is a more direct example of income cross subsidy, and plays a role in keeping contributions affordable for members with lower incomes. Data collected from schemes with options that have income banding was collected for analysis and an industry presentation and showed a clear pattern of direct income cross subsidy within these options.



Figure 11: Loss ratio by grouped income band, 24 schemes, 40 options, 3 million beneficiaries, overall loss ratio 93%¹¹



To emphasise a point raised earlier, considering only risk profile differences and risk based cross subsidies, without also considering income differences and cross subsidies misses an important part of the overall solidarity framework. Both aspects play a role in managing risk pools in a sustainable way, and we suggest the HMI ensure income cross subsidies achieve the proper attention in any upcoming analysis or reporting.

Some stakeholders have suggested allowing underwriting to be applied to option movements, to minimise anti-selective option movements within schemes.

¹¹Presentation by Barry Childs,
<http://www.bhfglobal.com/downloads/conferences/presentations/2017/Monday/barry-childs-presentation.pdf>



6. (In)comparability of benefit options

This section of the HMI discussion document deals with information asymmetries and the issues faced by consumers when making choices between schemes, and benefit options. We agree that such decisions are not necessarily straight forward, and could be made simpler, but suggest caution in trying to oversimplify the inherent complexity presented by the healthcare and healthcare funding system. We suggest consideration of the following points in response to some of the questions raised by the HMI:

- Members rarely choose between the full range of open medical scheme and options. A large majority are guided by their employer's decision which dictates or limits choices significantly. Members joining schemes without employer involvement would benefit the most from intermediated assistance or other interventions with regard to comparative information on the scheme and option benefits, contributions, etc. There is no comprehensive public information on the split between members of open schemes by virtue of employer association or individual choice.
- Competition between open schemes is fierce, but uneven, at least in part due to differences in scheme risk profiles as mentioned above. We have observed the extent to which competing schemes consider their market position, comparative benefits and contributions, range and mix of options and differentiated services when considering annual product changes in their efforts to attract and retain members.
- Intermediaries compare schemes and options as part of their service to members and employers to assist in simplifying choices. Should intermediaries be functioning sub-optimally in this role, we would suggest the HMI consider expanded guidelines for intermediary conduct and responsibility. We are not aware of any notable study done on the efficacy of intermediaries in the medical scheme environment.
- The cited CMS Circular 8 of 2006 attracted much interest at the time, and might provide a viable benefit option structure for schemes subject to certain caveats. The HMI is referred to the comments received from the Actuarial Society at the time which cited various risks associated with the suggested changes. Chief among these was the potential adverse impact on low income earners. Note however that this circular was published pre 2007 while SHI, REF and mandatory membership were still part of the policy trajectory.
- We suggest paragraph 37's statement "The HMI recognises that the large number of benefit options may be a result of medical schemes wishing to remain operational in an environment prone to anti-selection and with risk pooling failures" is too broad a generalisation. However, we agree that interventions that improve medical scheme competition on value would be good for consumers.
- Consolidating risk pools through having fewer schemes and fewer options, barriers to entry and exit from the scheme market, would simplify choices for consumers, but may not improve competition. Limiting the number of options would limit the number of 'price points' at which members can purchase healthcare, which may also have effect on benefit option choices.
- Standardisation of option structures should be traded off against the scope for innovation in product design. Sometimes new products need to be tested in a market which may require allowance for new options. Some simplification, or standardisation of the way in which scheme options are presented could improve members' ability to make informed choices. A more comprehensive classification of options by the CMS would help intermediaries and other advisors when comparing benefit options.
- Regarding Medical Savings Accounts, we suggest that the risks associated are not related to moral hazard so much as the risk of limiting cross subsidies. While it is true in traditional actuarial wisdom that



frequent, low cost, predictable events are not strictly speaking insurable¹², this ignores the issue that member who are in ill health will require more healthcare resources, including out of hospital care. Savings accounts do not permit risk cross subsidy for such members from healthier members.

¹² This is the underlying rationale for savings accounts and members managing their own discretionary health spend

