

An tÚdarás Árachas Sláinte
The Health Insurance Authority

Report on Incorporating Diagnosis Related Groups into the Risk Equalisation Scheme

29 August 2014

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1. Summary

1.1. Background to this paper

The current Risk Equalisation Scheme (RES) 2013-2015 in Ireland provides credits in respect of insured persons based on age, gender and level of cover, combined with a utilisation credit based on overnight stays in hospital accommodation (as a proxy for health status). When the 2013-2015 scheme was introduced, the Minister for Health committed to implementing a more refined health status measure to equalise risk in respect of the higher costs of insuring less healthy patients of all ages.

It is widely recognised that in a community rated market without robust RES, insurers with lower risk profiles will tend to be more profitable, all else being equal. As a result, in the absence of a robust RES, insurers will be incentivised to do the following:

- design products so that they are not attractive to older and less healthy customers (risk selection) and
- to segment their customer base by age / health status so that older and less healthy people pay more for insurance (market segmentation).

On the other hand both consumers and efficient insurers would benefit from a properly functioning competitive market with a robust risk equalisation system.

The current Irish risk equalisation system includes significant credits based on the age and gender of insured person as well a less significant level of credits based on hospital utilisation. The Authority considers that, unless a risk equalisation system allows for risk factors other than age and gender, insurers will select and segment risk in accordance with underlying health status with significant negative consequences for less healthy people. Also, if risk factors other than age and gender are not included in a risk equalisation, insurers of less healthy individuals will be at a competitive disadvantage.

A review of international practice indicates that it is the norm for risk equalisation / loss compensation systems to include risk factors other than age and gender. These other risk factors include address, employment status, welfare status, disability status, maternity, diagnostic cost groups, pharmaceutical cost groups, disability status, high cost claims and expenditure.

In 2014 the Department of Health and the Health Insurance Authority (the "Authority") commenced work on the development of a more refined health status measure using Diagnosis Related Groups (DRGs) to be implemented in a timely and phased manner. A key requirement of the reform is more comprehensive and sophisticated data collection and analysis, which is also required in the context of 'Money Follows the Patient' and Universal Health Insurance (UHI). To assist with this work the Authority committed to submitting this detailed report on the topic to the Department of Health.

As set out in the White Paper on UHI issued in April 2014, the Government plans to establish mandatory financial reporting requirements across the public and private hospitals so as to support robust and accurate mapping of health system funding flows. This includes expanding the use of the Hospital Inpatient Enquiry (HIPE) system to encompass full coverage of all public and private hospital treatment. These reforms will support the implementation of a DRG-based health status measure on a phased basis between 2016 and 2018 under the RES.

Overall, the policy objective is to introduce the use health status measures into the RES on a phased basis over 3-5 years. In terms of timelines, the intention is that establishing the necessary data collection and analysis systems by 2016 will facilitate the application of shadow pricing in 2017 in order to determine appropriate DRG-based credits. This will allow for implementation of a DRG-based refined health status measure under the RES from 2019.

From 2016, payment of the Hospital Bed Utilisation Credit (HBUC) will be conditional on the provision of a patient's associated DRG for each corresponding episode of care. This will facilitate the necessary data collection and analysis before replacing the HBUC with credits linked to the varying costs of different DRGs.

The proposed inclusion of DRGs will help to strengthen the RES in respect of the existing private health insurance market. Risk equalisation is an essential mechanism to support community rated health insurance markets with multiple insurers, whether voluntary, as with the current private health insurance regime or mandatory, as will be the case under UHI. In either scenario risk equalisation reduces the impact of differences in the risk profiles of insurers to mitigate the adverse effects of risk selection and market segmentation.

The inclusion of DRG data will also help pave the way for the use of DRG data in a UHI context as the underlying principles will still hold true. Therefore while this report has been written in the context of the current RES in respect of the existing private health insurance market, we have also included some commentary on its applicability and the additional requirements necessary for UHI.

This report builds on previous reports compiled by the Authority including the December 2010 report to then Minister for Health and Children on Risk Equalisation in the Irish Private Health Insurance Market. In drafting this report we have referred to a number of Department of Health (DOH) documents, correspondence between the DOH, the Authority and the private health insurers, and a number of publicly available documents which we have referenced in Appendix 2. For simplicity we have not referenced these documents throughout this report.

1.2. Overview of our approach

The objective of the full implementation of a DRG-based health status measure is to enhance the risk equalisation system by enhancing support for less healthy people of all ages. With that objective in mind, the Authority has focussed on the practical issues arising if the DRG-based health status measure were to use the ICD10 Australian Refined Diagnosis-Related Group (AR DRG) coding system as currently used within Irish public hospitals. Consideration needs to be given to the expected changes required to meet the requirements of the proposed scheme (from the Authority's, private health insurers', and public and private hospitals' perspective) and also to international experience. Thus in performing our analysis the Authority has given due consideration to:

- The RES currently used in Ireland as compared with RES systems in place in other countries where DRGs are used;
- A benchmarking or gap analysis between the Irish and international regimes outlining the relative strengths and weaknesses of each regime and how the systems have transitioned over time including the implementation/ transition issues identified;
- Previous consultations and analyses relating to using Diagnoses Related Groups in risk equalisation.
- The responses from private health insurers on the consultation on the inclusion of health status measures in the RES; and

- Provision of a range of options for enhancing the health status element of the RES (in the short and longer term), including a recommendation on the way forward.

All options are assessed, having regard to:

1. The principal objective of the Health Insurance Acts, namely Community Rating;
2. Current policy relating to Risk Equalisation which continues to have regard to the aims of:
 - a. Avoiding overcompensation of any net beneficiary;
 - b. Maintaining the sustainability of the health insurance market; and
 - c. Having fair and open competition in the health insurance market.

Health status measures considered should be objective, measurable and proportionate. A key criterion considered was practicality, including the likely availability of (and cost associated with collecting) the required data within the relevant timescales. The report considers options for extending the health status measure in RES in the pre and post UHI environment.

In order to implement a DRG based RES, granular data is required in respect of each diagnosis in respect of each insured life. This data allows analysis of costs and occurrence in respect of each DRG. Once this data is available it can be used to frame the RES design, where implementation decisions need to be made in terms of the number of DRG groupings to include, how to promote claims cost efficiency, the level of payments to be made relative to the DRG cost, and being fair and equitable while considering the key stakeholders' views. We have therefore outlined our report as follows:

- Section 2 looks at the current RES system, Government PHI policy measures and the views of the key stakeholders;
- Section 3 explains what DRGs are, why they are important and the considerations around collecting DRG data and defining DRG costing rates;
- Section 4 considers international experience, the implementation challenges faced internationally around DRG data and applying it to a RES, and the lessons that can be learned ahead of enhancing the Irish RES;
- Section 5 considers how the Irish RES would work including how to group DRGs, and set payment rates;
- Section 6 benchmarks the proposed scheme against the current Irish and Dutch schemes; and
- Section 7 considers the implementation challenges in terms of final design and timeline.

1.3. Recommendations

It is the view of the Authority that the following approach be adopted to implement a DRG based health status measure into the existing RES:

- All public and private hospitals would code hospital data under the system overseen by the Healthcare Pricing Office ("HPO"). The HPO would provide systems, train coders and review returns received from the hospitals. This would be a legal requirement.
- While insurers may well have audit systems for ensuring the accurate coding, the role of the HPO in providing systems, training coders and reviewing returns will be a crucial part of the infrastructure with the aim of ensuring consistent and accurate coding across the hospital network.
- Hospitals would include the DRG data on the claims submitted to insurers. This data would be consistent with the data submitted to the HPO. This would be a legal requirement.
- Where a hospital changes the code or other relevant information included in a return to the HPO, the hospital would be legally obliged to inform the insurer of the change in code. Likewise,

where a hospital changes the code or other relevant information included in an insurance claim, the hospital would be legally obliged to inform the HPO of the change in code.

- Every 6 months, the Authority receives data on insured lives and individual claims paid broken down by inter alia all DRGs in addition to current returns.
- The Authority evaluates and analyses returns received and recommends levels of credit to be paid in a future policy year in respect of each hospital episode. The credit would vary with reference to a limited number of groupings of DRGs. The purpose of grouping the DRGs is for transparency and administrative efficiency, recognising that where a number of DRGs would receive a similar credit (if there were no grouping) it would be more efficient and transparent to allocate the same credit.
- The proposed system would be based on ICD10-AR DRG coding system, which is currently used in the Irish public system and which has the advantage of allowing for day-case information.
- DRG credits would be set at such a level so that insurers do not make excessive profits for carrying out procedures but instead would be incentivised to promote efficiency. Accordingly the potential variation of costs within DRGs would be recognised in setting the credits. Additionally alternative treatments may exist which could result in lower costs than hospitalisation. A medical expert review would be undertaken to determine where there are suitable alternatives to hospitalisation and regard would be had to such reviews in setting the level of DRG credit (if any) that would apply
- Based on the considerations outlined above it is the recommendation of the Authority that a system whereby the credits payable in respect of each occurrence of a DRG would be calculated prospectively and that the credit would be payable in respect of each occurrence of the DRG in the policy year (subject to rules around multiple admissions etc discussed later). Such a scheme would provide certainty to insurers on their RES payments in respect of each DRG episode (i.e. individual insurers would not be impacted by the experience of others). Specifically, the Risk Equalisation Fund would pay a set DRG credit in respect of each qualifying discharge included in a return from an insurer.
- Apart from the inclusion of DRG based credits (in lieu of the HBUC) the legislation governing the calculation of credits and stamp duty would remain unchanged;
- The financial position of the RE Fund will be significantly more difficult to manage post DRG implementation as the actual experience may differ significantly from projections due to changes in coding practice/ medical treatment, time lags in terms of receipt of DRG data etc. This is likely to mean that any annual surpluses or deficits within the fund will be larger than under the current HBUC regime. The current approach adopted for dealing with surpluses and deficits is to use that as the starting point for determining the following year's credits. We propose that this continues to be the case, although allowance would be made for potential timing issues in terms of receipt of data;
- It is noted that while the Dutch model uses age/gender as a risk adjustment factor in the RES, age related factors are not used to determine DRG related risk adjustments. It is the view of the Authority that a similar approach would be used in the Irish DRG based scheme;
- Using a DRG based approach could incentivise up-coding of claims, however we note that the HPO has procedures aimed at addressing this.
- DRGs impact on incentives for hospitals/insurers around patient treatments. To avoid incentives for gaming by discharge / readmission, rules should be incorporated around payment from the RES in respect of readmissions within short time frames and around setting a limit on the number or amount of DRG payments to be made in respect of any individual within a given year.

2. Irish System

2.1. The current Private Health Insurance Regulatory System

The Irish private health insurance regulatory system is based on the key principles of community rating, open enrolment, lifetime cover and minimum benefit regulation and aims to ensure that private health insurance does not cost more for those who need it most. The system is unfunded, meaning that there is no fund built up over the lifetime of an insured person to cover their expected claims cost. Instead, the total premium contributed by all insured people is used to cover the total cost of claims and expenses in that year.

It is in this context that the concept of community rating and the principal objective of the legislation must be understood. Under community rating, everybody is charged the same premium for a particular plan, irrespective of age, gender and the current or likely future state of their health. The only exceptions to this rule relates to children less than 18 years of age, students in full time education and members of group schemes. Community rating therefore means that the level of risk that a particular consumer poses to an insurer does not directly affect the premium paid.

Open enrolment and lifetime cover means that, except in limited circumstances specified in legislation, health insurers must accept all applicants for health insurance and all consumers are guaranteed the right to renew their policies regardless of their age or health status. An exception to these provisions is that they do not apply to certain "Restricted Membership Undertakings". These undertakings mainly provide health insurance to certain vocational groups and their families and account for c. 4% of the health insurance market.

Under the current Minimum Benefit Regulations, all insurance products that provide cover for inpatient hospital treatment must provide a certain minimum level of benefits. It is considered necessary to regulate the minimum level of benefits in order to support community rating and because of the complex and specialist nature of private health insurance products.

2.2. Risk Profile Differences between Insurers

Data returned to the Authority shows that large differences exist in the risk profiles of different insurers, whereby VHI Healthcare insures a larger proportion of older lives relative to the other insurers. In particular, at 1 July 2014, Vhi Healthcare's proportion of insured lives over the age of 65 is almost double that of the other insurers.

Analyses of the risk profile differences of the different insurers are summarised in Appendix 3.

2.3. The Aims of Risk Equalisation in Ireland

Risk equalisation is a process that aims to equitably neutralise differences in insurers' claims costs that arise due to variations in the underlying risk profile or health status of their members. Where it applies, risk equalisation involves transfer payments between health insurers to spread some of the claims costs of high risk members amongst all the private health insurers in the market in proportion to their market share. Risk equalisation is a common mechanism in countries with community rated health insurance systems. Risk equalisation is an essential component for maintaining market stability for the following reasons:

- Risk equalisation is an essential feature of a health insurance market where health insurers are required to operate on a community rating/open enrolment basis. Risk equalisation protects the

insured population and the stability of the health insurance market as a whole. It provides a disincentive for insurers to cherry pick younger, healthier lives;

- Without risk equalisation, each health insurer would have a strong incentive to “cherry pick” low risk individuals (preferred risk selection) and to market segment their portfolio of risks (group older and less healthy people in products that are more expensive than those bought by younger, healthier people) in order to be able to charge a lower community rate (or to take a higher profit margin) than its competitors. Even with compulsory open enrolment, health insurers can achieve these effects by selective marketing techniques, targeting group occupational schemes, benefit design, or selective quality of service;
- If competing health insurers have a strong incentive to select preferred risks, it would be expected that per capita claims costs would spiral for those insurers who are relatively unsuccessful at preferred risk selection. This, in a community rating environment, would lead to significant market instability and the lack of public confidence, and ultimately downsizing of the markets;
- Preferred risk selection would not enhance the efficiency of the market. There would be no net benefit to the market as a whole, if insurers were to spend heavily on attracting younger lives and discouraging older lives. The cost of insuring older lives would simply shift from one insurer to another. It would be more beneficial to the market (and to the general business environment in the long run) if investment was directed toward activities that fundamentally reduce the cost of claims and improve service;
- Risk equalisation does not prevent insurers from gaining competitive advantage. Many potential sources of competitive advantage are completely unaffected by risk equalisation. Therefore risk equalisation is compatible with a competitive market.

2.4. How Risk Equalisation Works in Ireland

Risk Equalisation Scheme Overview

The current RES involves insurers receiving higher premiums for insuring members of less healthy groups of the population. Credits equal to the amount of the additional premium are payable in respect of the members of less healthy groups, so that all adults are charged the same net amount for a particular level of cover. In this way all adults with that level of cover pay the same net amount but insurers receive higher gross premiums in respect of insuring members of less healthy groups to partly compensate for the higher level of claims.

The Risk Equalisation Credits are funded by a Community Rating Levy (or Stamp Duty) payable by insurers for each person that they insure. The core principles of how the RES operates are as follows:

- Risk Equalisation Credits are paid from a fund operated by the Authority;
- Risk Equalisation Credits payable in respect of premiums vary on the basis of age, gender, and level of cover;
- Risk Equalisation Credits are also payable in respect of claims, with a fixed amount payable from the Risk Equalisation Fund for each night an insured person spends in private hospital accommodation. This reduces the cost to the insurer of insuring less healthy individuals;
- The Community Rating Levy payable varies between children and adults and between two levels of cover;
- The Risk Equalisation Credits and the Community Rating Levy are administered by the health insurance companies and the Risk Equalisation Fund;

- The Community Rating Levy payments for policies commencing or renewing in a given year are paid by insurers to the Revenue Commissioners who in turn transfer the money to the Risk Equalisation Fund. Risk Equalisation Credits are paid out of the Fund to the insurers by the Authority;
- Any surpluses or deficits in the Fund are carried forward and allowed for in setting future rates of the Community Rating Levy.

The amounts of the Risk Equalisation Credits are specified in the Health Insurance Acts. The process around determining Risk Equalisation Credits is as follows:

- The Authority evaluates and analyses claims, population and other data included in returns from insurers every 6 months;
- Once a year the Authority issues a report to the Minister on its evaluation and analysis of these returns, if requested to do so by the Minister. This report includes recommendations on the rates of the Risk Equalisation Credits and the Community Rating Levy. The recommendations have regard to the principal objective of sharing costs of health services across the insured community, the aim of avoiding overcompensation, the aim of maintaining the sustainability of the health insurance market and the aim of having fair and open competition;
- If the Minister proposes to change the Risk Equalisation Credits he does so by proposing amendments to the Health Insurance Acts, where the amounts of the credits are specified;
- The Minister may make recommendations to the Minister for Finance on the rates of the Community Rating levy, which are provided for in the Stamp Duties Consolidation Acts;
- The rates of the Risk Equalisation Credits and the Community Rating Levy become law if enacted by the Oireachtas.

Level of Cover

Under the Health Insurance (Amendment) Act 2012, the Authority determines which types of health insurance contract are Non-Advanced Contracts to which the lower levels of Risk Equalisation Credits and Community Rating Levy apply. The definition of a Non-Advanced Contract was determined following consultation with the insurers and requires that the contract provides for not more than 66 per cent of the full cost for hospital charges in a private hospital or not more than the prescribed minimum payments under the Minimum Benefit Regulations, whichever is greater.

There were 37 non-advanced and 260 advanced products being marketed at 31 December 2013. The proportion of each insurer's population split by Non-Advanced/Advanced level of cover at 31 December 2013 is shown in Table 2.1 below:

Table 2.1

Insurer	Non-Advanced	Advanced
Aviva Health		
GloHealth		
Laya Healthcare		
VHI Healthcare		
Market	6%	94%

2014 Risk Equalisation Credits / Community Rating Levy

Table 2.2 outlines the credits that apply for health insurance policies that are renewed or entered into on or after 1 March 2014:

Table 2.2

Age Bands	Hospital bed utilisation credits from 1 March 2014	Age / gender / level of cover credits from 1 March 2014			
		Non advanced		Advanced	
		Men	Women	Men	Women
59 and under	€60	€0	€0	€0	€0
60-64	€60	€250	€200	€450	€325
65-69	€60	€575	€400	€1,150	€775
70-74	€60	€925	€625	€1,850	€1,200
75-79	€60	€1,200	€950	€2,500	€1,925
80-84	€60	€1,575	€1,150	€3,200	€2,250
85 and above	€60	€1,975	€1,325	€4,000	€2,725

Table 2.3 outlines the stamp duties that apply for health insurance policies that are renewed or entered into on or after 1 March 2014:

Table 2.3

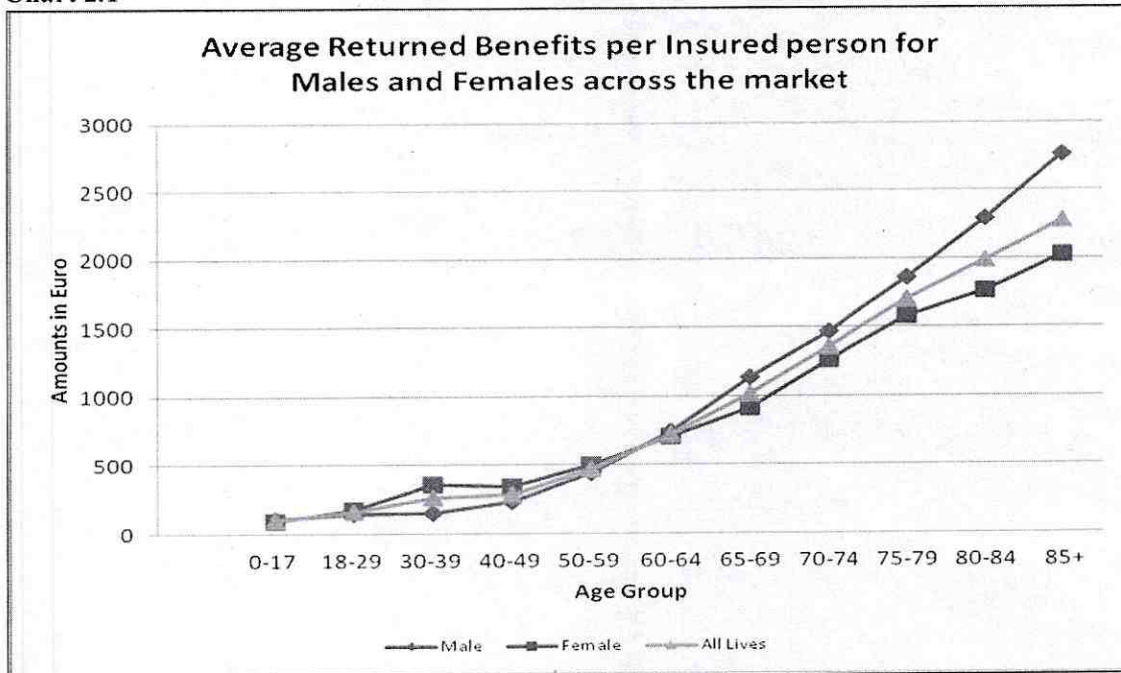
Age Bands	Stamp duties from 1 March 2014 to 28 February 2015	
	Non-advanced	Advanced
17 and under	€100	€135
18 and over	€290	€399

2.5. Why the Risk Equalisation Scheme needs to be enhanced

Impact of not having a robust Risk Equalisation Scheme

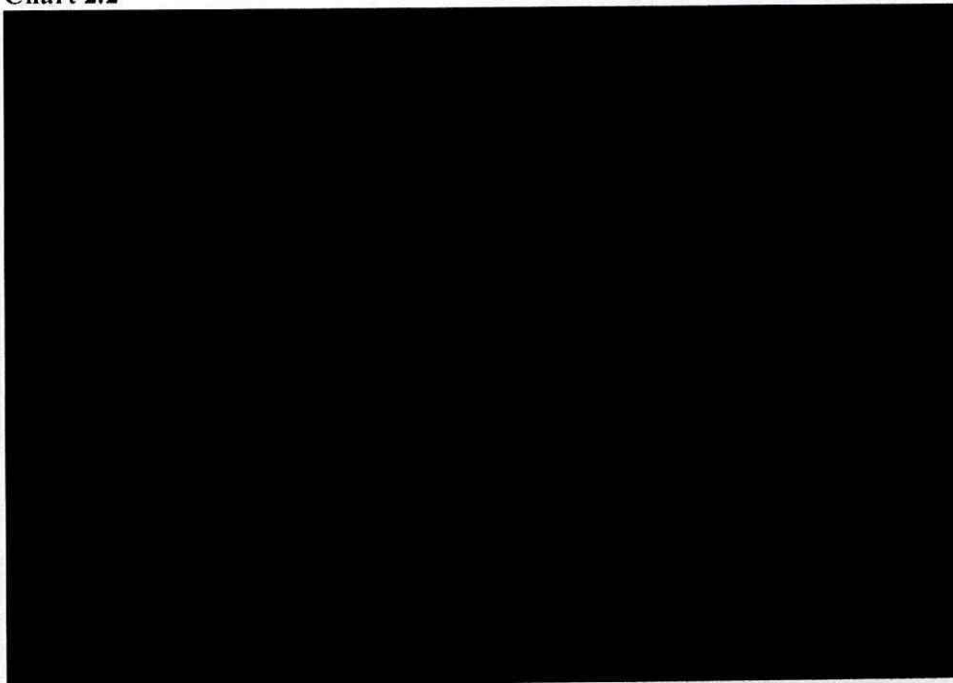
In a community rated market without a robust RES, older and unhealthy consumers tend to be extremely unprofitable on average. Chart 2.1 illustrates how market claims increase with the age of the insured person.

Chart 2.1



In the absence of a robust RES to support community rating, the above chart shows that younger and healthier customers will be profitable while older and less healthy customers will be unprofitable. Also, while insurers that meet the needs of healthier consumers would be expected to benefit from the profitable custom of healthier consumers, insurers that attract less healthy consumers would be penalised by incurring claim costs that are higher than the community rated premium. Chart 2.2 illustrates how market claims differ by age of the insured person amongst the four private health insurers.

Chart 2.2



As a result, in the absence of a robust RES, insurers will be incentivised to design products so that they are not attractive to older and less healthy consumers. This selection can have adverse effects in terms of solidarity and fails to provide incentives for efficiency in providing good quality care for high-risk individuals.

On the other hand, both consumers and efficient insurers would benefit from a properly functioning competitive market. Consumers would benefit from price and reasonable levels of product competition. Insurers that design, sell and administer products in a cost effective manner that are attractive to the market would be profitable.

Further details are provided in Appendix 4 on how the market has evolved since the establishment of the Authority, and the impact this has had on consumers, the market and the benefits and products offered to customers.

The Need to Include Diagnosis Related Groups in the Risk Equalisation System

The Authority considers that, unless a risk equalisation system allows for risk factors other than age and gender, insurers will select and segment risk in accordance with underlying health status with significant negative consequences for less healthy people. Also, if risk factors other than age and gender are not included in a risk equalisation, insurers of less healthy individuals will be at a competitive disadvantage.

A review of international practice indicates that it is the norm for risk equalisation / loss compensation systems to include risk factors other than age and gender. These other risk factors include address, employment status, welfare status, disability status, maternity, diagnostic cost groups, pharmaceutical cost groups, disability status, high cost claims and expenditure.

Some of these factors should / can only be introduced in the context of a universal system. For example, the in current Irish system, there is no comprehensive source of data on prescriptions for insured persons linked that could be used to identify the insurer / policy. This would be necessary to include pharmaceutical cost groups in a risk equalisation system. While such factors could not currently be included in risk equalisation, they could be added as the system evolves to a universal health insurance system.

However, it is possible to collect data on hospital claims, which account for more 90% of claims in the Irish private health insurance market. The data can be used to classify the claim by Diagnosis Related Group. Paying risk equalisation credits that vary in accordance with diagnosis related group would ensure that variation in health status is better recognised and addressed in the Irish risk equalisation system. Diagnosis Related Groups are discussed in more detail in Section 3.

2.6. Governmental PHI Policy Measures

Measures leading up to 2014

The Government announced on 27 May 2010 that it had decided to implement a new robust RES to support the core policy of community rating in the private health insurance market. Following the Government decision, the Minister wrote to the Authority on 8 June 2010 and asked it to carry out a consultation process regarding a new comprehensive RES to take effect in 2013 and

transitional arrangements to apply in 2012 and to report to the Minister. The Minister stated the following:

"In setting out on this consultation, it is important to make clear to the Authority that the Government has decided that the new risk equalisation scheme should be comprehensive and cover as much as possible in terms of the levels and indicators of risk which can and should, where practicable, be taken into account. While not wishing to prejudge the outcome of the consultation, the Government has decided that the key elements of age, gender and health status must form part of any proposals on the new risk equalisation scheme, and that as much as possible of this should be included in the transitional arrangements to be put in place in advance of the introduction of the risk equalisation scheme.

Accordingly, I would wish to hear from the Authority, following the consultations, your views on what range of measures can be taken to allow for health status to be effectively incorporated into the new arrangements for the transitional scheme, for the risk equalisation scheme and your considered views on the mechanisms and any other observations on both schemes".

On 21 June 2010, the Authority published its Consultation Paper on Risk Equalisation in the Irish Private Health Insurance market. The Consultation Paper set out the policy context for the RES and stated the objective of the system (i.e. "to support to the core principle of community rating"). The Paper also identified and analysed a number of options for the RES and requested submissions that had regard to the principles of Necessity, Proportionality, Effectiveness, Accountability, Consistency and Transparency. The Consultation Paper was advertised in the national press and interested parties were invited to make submissions on the questions and other matters addressed in the Consultation Paper.

In August and September 2010, the Authority received 15 submissions to the process. In December 2010 the Authority issued a report to the Minister which considered the costs, benefits and impacts of various different options for risk equalisation, having regard to the submissions received.

In 2013 the Consultative Forum on Health Insurance was established to look at options to effect real cost reduction in the private health insurance market. In December 2013 Phase I of the report was published and contained a number of recommendations relating to admission and discharge procedures and processes aimed at reducing waste and abuse in the industry. Work on Phase II of the report which will deal further with the factors driving costs in health insurance will be published shortly.

Proposed Measures in 2014

In April 2014, the Minister for Health wrote to insurers outlining a number of policy measures that he felt would support the sustainability and competitiveness of the Private Health Insurance market. The first of these measures, namely Lifetime Community Rating (i.e. late entry loading) will become effective in 2015. Discounts for young adults are proposed to be introduced in 2015. The remaining proposal is to implement a more refined health status measure to equalise risk in respect of higher costs of insuring less healthy lives of all ages. In this context the Department of Health and the Authority have commenced work on a more refined health status measure using DRGs to be implemented in a timely and phased manner.

A key requirement of this reform will be more comprehensive and sophisticated data collection and analysis, which is also required in the context of Money Follows the Patient and UHI. As set out in

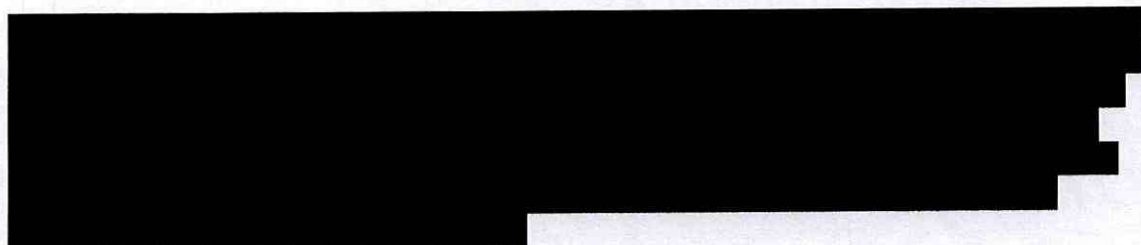
the White Paper on UHI, the Government plans to establish mandatory financial reporting requirements across the public and private sectors so as to support robust and accurate mapping of health system funding flows. This includes expanding the use of the HIPE system to encompass full coverage of all public and private hospital treatment. These reforms will support the implementation of a DRG based health status measure on a phased basis between 2016 and 2018 under the RES.

To allow for the phased introduction of a DRG based health status measure, the Government intends that from 2016, payment of the HBUC to insurers will be conditional on the provision of a patient's associated DRG for each corresponding episode of care. The required data is currently available from the public hospitals but not from private hospitals who we recommend should be compelled to do so by legislation. This will facilitate the necessary data collection and analysis before replacing the HBUC with credits linked to the varying costs of different DRGs. The full implementation of a DRG based health status measure will target the support more accurately in respect of the less healthy insured members and ensure the increased effectiveness of the RES for all ages. The policy objective is that as health status is enhanced under the RES on a phased basis over 3-5 years, the scheme's effectiveness will be improved.

Establishing the necessary data collection and analysis systems by 2016 will facilitate the application of a shadow system in 2017 in order to determine appropriate DRG based credits. This will allow for implementation of a DRG based refined health status measure under the RES from 2018.

2.7. Insurer's Views on Proposed Inclusion of DRGs

The Authority wrote to insurers in May 2013 regarding the development of health status measures in the RES, noting that the topic would be included as an agenda item in the 7 August 2013 Health Insurance Consultative Forum in order to facilitate a preliminary discussion, and that insurers would then be asked to make written submissions on how the RES should be further developed.



Why DRGs are important

Initially DRGs were introduced to better assist with budgeting. DRGs are necessary as a means to introduce consistency and accountability into the healthcare system, promote efficiency gains through the power of benchmarking and support financial managers, i.e. insurers/hospitals, ensure optimal utilisation of limited resources. Thus, in the context of the Irish private health insurance market, DRGs should help create transparency that enables a better level of comparison between insurers' and hospitals' efficiency.

DRGs were introduced in other international health systems primarily for three reasons:

- To introduce and increase transparency and enable management of resources;
- As a payment mechanism, i.e. payers contract providers based on DRG volume and quality; and
- To create incentives for more cost-efficient and/or better quality.

Through combining clinical and financial data, DRGs link treatment and cost information. In the context of the Irish private health insurance market, DRGs should help create transparency enabling a better level of comparison between insurers' and hospitals' efficiency. This transparency can in turn help manage and drive down the cost across DRGs over time. According to the White Paper on UHI, UHI will require the integration of the public and private healthcare systems. Whilst the Department of Health's 'Money Follows the Patient' Paper focuses fundamentally on the introduction of case-based funding for public patients it also acknowledges the need to introduce a consistent regime of case-based charges for private patients and the implications of different policy proposals in that regard. The collection and use of DRG data will help support such proposals.

3.2. DRG Data Considerations

Consistency and validity of data returns

For a RES, it is necessary to ensure that the data received by the Authority from the insurers is consistent so each insurer needs to make returns based on the same classification system. In addition a robust validation system is required for the returns. The current data returns require an independent accountant's report certifying that the returns are in accordance with the regulations in all material respects, the material assumptions are appropriate, consistently applied and adequately disclosed and that the returns are in accordance with the underlying books and records.

Due to the potential for different judgments to be made in relation to the classification of DRGs, and the potential for up-coding of claims in order to achieve a more favourable outcome, it will be necessary to have a more detailed audit of returns applying in respect of data returns to the Authority than currently, which will result in additional costs. Experienced resources should be used to add value by producing some analytical reports to provide insight into cases at each insurer (and potentially each hospital) and to provide some basic statistics on volumes and utilisation which could be used to identify systemic instances of potential up-coding. The role of the Healthcare Pricing Office in training staff, providing systems and reviewing returns is also crucial in this context.

It might be possible to define DRG Categories by reference to the severity index produced by the HSE. However, this approach assumes that the relative severity (or cost differences) of DRGs is similar between private and public hospitals, which may not be the case, e.g. potentially more elective procedures in private hospitals. Instead it will be necessary to receive returns from

insurers that are broken down by age / gender and all DRGs. The Authority would then use this data to establish a severity index for insured persons (which would also be informed by the severity index produced by the HSE) and this index would be used to define which DRGs fall into which DRG Category. Because costs of DRGs vary by age and over time, some medical conditions could be in different DRG categories for different ages and the categorisation of DRGs would change over time. It will be a much more significant task for the Authority to audit and use the increased data, which will increase in line with the number of categories chosen or by the number of DRGs.

Data available from insurers / private hospitals / public hospitals

Internationally there are different classification tools in place to capture diagnosis and procedures. The World Health Organisation's International Classification of Diseases (ICD) is the most commonly used system to capture diagnostic codes. ICD has been updated ever since it originated and most health systems currently use ICD-10 coding. Some jurisdictions have made changes to the ICD coding principles to cater for their health systems' specific needs. An example is ICD-10-AR, being the Australian Modification, or ICD-10-GM, the German Modification.

The data required to introduce a DRG coded system may not initially be available for all insurers in the market. The data would need to be at a sufficiently granular level to enable the system to operate effectively, and would need to be captured consistently across the market to ensure equity with the scheme. Without such consistency there is a risk that insurers could provide more cost intensive DRG data in order to gain additional benefits from the scheme. Such consistency risks should be mitigated through the use of clear guidelines on coding practices, the use of appropriately trained staff, and thorough auditing of data. These needs would be met by expanding the role of the Healthcare Pricing Office ("HPO") to cover private hospitals and by linking the returns that hospitals submit to the HPO to the returns that are submitted to insurers so that they are consistent (returns submitted to an insurer would, of course, relate only to claims covered by that insurer).

The proposed system should be based on ICD10-AR system, which is currently used in the Irish public system and which has the advantage of allowing for day-case information. Such a system is not currently used within Irish private hospitals, and therefore insurers (who do not currently capture equivalent DRG information) would need to code for claims received from these hospitals. To facilitate this we recommend private hospitals are compelled to do so by legislation.

Coding Considerations

The relevance and integrity of the information that is derived from a DRG system is fundamentally dependent on the quality and reliability of the input data. This, in turn, is highly reliant on the knowledge, understanding and commitment of the clinicians and data capturers who translate a single patient's experience into meaningful and quantifiable information.

It will be necessary to clearly define a number of terms within the minimum data and gain acceptance of those definitions. For example, even the definition of the "principal diagnosis", a fundamental concept for DRGs, can vary and any of the following might be recorded by clinicians:

- The diagnosis treated by the last clinician to treat the patient (typically the doctor responsible for the patients discharge);
- The diagnosis on admission;
- The diagnosis determined to be the reason for admission after study; and

- The diagnosis requiring the most resources to treat.

International experience demonstrates that DRG allocation can vary considerably, depending upon which of these alternatives the clinician uses as the principle diagnosis and that there is frequently a disconnect between what doctors believe is important to document and what is required for accurate DRG allocation. The use of specialist coders should help address some of these issues. However, we note that each case of DRG coding takes approximately 15 minutes to complete and consequently there are considerable backlogs in the completion of such information.

Extent of data required

Sufficient data, both in terms of volume and granularity, will need to be collected in advance of the implementation of DRGs in the RES. The Authority considers that this data will need to be collected prospectively in order to provide the most reliable data set. This is because adequate sources of retrospective or historic data may not exist and any missing or incomplete data would introduce bias to the results. In addition, inconsistent coding practices may have existed historically and the validity of retrospective data is virtually impossible to verify.

There are also differences between the extent of data currently captured by the various stakeholders, i.e. public / private hospitals and the insurers. Consideration will need to be given to the extent of data required to enable the final DRG calculations to be made for the purposes of the RES calculations. Early engagement with the stakeholders is essential.

Ahead of the introduction of DRGs into the RES, all DRG information (both clinical and financial) from insurers will need to be collated into one database, maintained by the Authority, that can be used in future for calculating DRG levels. The data needs to be sufficiently granular in order to give an informed view as to that the DRG weights should be. For example there will be outliers in terms of number of cases treated or outliers in the costing information which will need to be adjusted for.

Data collection costs

Collecting appropriate DRG data and developing appropriate IT systems is likely to be costly and generate extra costs for insurers and hospitals. Such costs include modifications to existing data recording and claims systems and processes so that relevant DRG data is captured and also recruitment of specialist staff who can code the DRG information appropriately. The hospitals should be required through legislation, to provide DRG data for claims to be settled by the insurers. The Authority estimates that the additional administration costs of introducing DRGs into the RES would be of the order of €20m. This assumes a requirement of approximately 200 additional staff at an estimated total cost (salary, pension, PRSI, overheads etc.) of €100,000 per person (e.g. 100 additional coders in private hospitals and 100 additional staff for the management and training of coders, the audit of DRG results, insurers capturing DRG detail and submitting data to the Authority, the Authority setting credits and paying credits to insurers etc). As the total claims paid in 2013 were €1,800m the additional costs amount to approximately 1% of total claims costs.

3.3. Defining DRG Rates

The current data available on the HIPE system is in respect of public hospitals. This data therefore represents a different cohort of society to those currently with private health insurance cover for the following reasons:

- Procedures undertaken in private hospitals for patients with private health insurance are more likely to be elective;
- There are likely to be other differences that will result in differences in health status such as:

- The level of income of those with private health insurance is likely to be higher than those without and therefore in theory policyholders with private health insurance should be healthier;
- While the number of patients with private health insurance has declined in recent years, policyholders in poor health are less likely to lapse their cover and rely on the public system;
- The insured population has a different age profile to the uninsured population
- There are different cost considerations for patients who opt for enhanced accommodation in hospitals. Additionally the charges placed on insurers for treatment in public hospitals may not reflect the actual cost incurred by the hospital.

Consequently the underlying DRG rates derived from the current HIPE data are likely to differ in amount to those with private health insurance. Therefore ahead of the implementation of a DRG based RES the collection of appropriate data from the private hospitals and private health insurers will be necessary to ensure the DRG rates are appropriately calculated. There are a number of other considerations that also need to be borne in mind when determining DRG rates, namely:

- An effective DRG based system should help promote innovation and incentivise delivery of care in a cost effective way, by encouraging negotiation between insurers and providers on costs. DRG rates should be set at a level which will encourage hospitals and insurers to become efficient in order to maximise their profitability;
- DRG rates should be reflective of the cost of insuring the underlying risks in order to reduce the incentive for insurers to target preferred risk groups (as is currently the case where insurers actively target younger healthier members) and for hospitals to provide inadequate levels of treatment. Continuous refinement of DRG systems and high quality cost accounting data are essential for optimising DRG-based hospital payment systems and for assuring that payment rates are sufficiently related to the costs of care. However in order to avoid significant impacts or behavioural changes that are unintended the introduction of DRGs should be gradual;
- Medical and general price inflation and technological advances can impact on DRG rates. The use of retrospective or prospective (or combination) approaches can have an impact on the approach used to allow for these factors in the DRG rates;
- DRGs coding currently relies on the use of specialist coders. Each case of DRG coding takes approximately 15 minutes to complete and consequently there may be considerable backlogs in the completion of such information. Such backlogs could have an impact on the effectiveness of the scheme as DRG data that is used is out of date.

4. International Risk Equalisation Schemes

4.1. Country Specific Analysis

As part of its work, the Authority performed a review of international practice of RESs. This review of international systems shows it is the norm in other jurisdictions to include measures of health status other than age, gender and resource usage in a risk equalisation / loss compensation system. These additional risk factors can be categorised under three main headings:

- Underlying risk factors;
- Diagnosis related risk factors; and
- Resource usage factors.

Underlying risk factors are factors for which there is an objective classification method over which the insurer has no or limited effective means of controlling or interpreting but which is expected to be correlated to the claims cost of an individual. Examples are age, gender, disability status, address, occupation status, occupation, welfare support, mortality, living alone and maternity.

Diagnosis related factors relate to medical conditions that are medically certified or are being investigated in an insured life which might be expected to be correlated to the claims cost of an individual. Examples might be specific conditions or groups of conditions.

Resource usage factors are factors that are directly related to the claims experience of insurers. Examples are expenditure incurred and hospital bed utilisation.

Additionally risk equalisation can be carried out on a prospective or retrospective basis or a combination of both. Under a prospective approach the risk profile of a group of individuals during or at the end of one year is used to predict the next year's claims expenditures. Under a retrospective approach actual risk experience during a year is compared with the actual expenditure for the same year. We have set out in Table 4.1 below the key features of prospective and retrospective payment methods.

Table 4.1

	Prospective	Retrospective
Advance knowledge of RES payments for insurers	An argument for preferring prospective models is that insurers may prefer to know the amount of RES payments they will receive so as to accurately help them set premiums. Insurers will have more predictable revenues at the beginning of each period and will know its RES position at the end of each year.	Uncertainty around financial risk equalisation transfers which presents difficulties in calculating the appropriate premiums. This is particularly relevant in voluntary health insurance markets where consumers base their decision not only on which insurer to choose but in the first instance on whether to insure at all, by referring to the affordability/level of premiums. Insurers RES payments for each year is partially dependant on other insurers claims experience.
Chronic versus acute and associated incentives	Prospective models attach relatively more weight to information related to chronic conditions that persist over time, providing insurers with more incentives for effective preventative care.	Retrospective models attach more weight to information that signals the presence of acute problems which may lead to an incentive to over-diagnose clinical conditions rather than engage in preventative treatment. The moral hazard problem is potentially quite important for the many health conditions for which treatment of prevention activities are discretionary.
Adverse selection	To the extent that a given diagnosis is being used as a risk factor in the RES, a retrospective framework protects health plans against adverse selection by individuals with a diagnosis that results in high costs in the year in which the diagnosis is made	

Based on the considerations outlined above it is the recommendation of the Authority that a prospective based RES payment scheme be put into operation. Such a scheme would incentivise preventative care and provide certainty to insurers on their RES payments (i.e. individual insurers would not be impacted by the experience of others). Further details of the proposed scheme are outlined in Section 5.

In Appendix 6 we have included a comparison of the RESs used in Belgium, Germany, Israel, and the Netherlands. These countries were chosen for comparison as they currently incorporate DRGs into their RESs.

4.2. Implementation Issues Arising Internationally

As set out in the White Paper on UHI, the Government plans to establish mandatory financial reporting requirements across the public and private hospitals so as to support robust and accurate mapping of health system funding flows. This includes expanding the use of the HIPE system to encompass full coverage of all public and private hospital treatment. These reforms will support the implementation of a DRG-based health status measure on a phased basis between 2016 and 2018 under the RES.

Given insurers' central role in terms of negotiating with hospitals on price and volume, any changes to credits provided to insurers from the RES on the basis of DRG data received is likely to in turn affect negotiations with hospitals on claim payments.

In Appendix 7 we have outlined a case study which looks at the Dutch healthcare system in more detail including details of how the system has evolved, the issues and challenges it has faced and the learning points for Ireland. In Appendix 8 we consider some of the implementation issues and mitigating solutions arising from the use of DRGs internationally in addition to the use of DRGs specifically in the context of the Irish RES given the intention to expand the use of DRGs across the Irish healthcare system in the short term.

Based on our studies it can be seen that both the intended and unintended consequences of DRGs are deeply intertwined and related to the fact that payment in these systems is independent of the cost of care provided to a specific patient. Given the observed international experience the key recommendations for Ireland with respect to the existing private health insurance market are:

- The implementation of DRGs is not a straightforward process and a number of key decisions need to be made in terms of design and speed of implementation;
- A more effective RES which reduces the relative profitability differences of different policyholders would help to address risk selection and segmentation issues whereby insurers would be more likely to focus on cost efficiencies than marketing techniques;
- Patient classification systems differ in the number of groups they define: most systems contain between 650 and 2,300 groups. However when it comes to incorporating diagnosis based cost groups into RES, a much smaller number of groups are typically included e.g. 13 Diagnosis-based cost groups (DKGs) are reflected in the Dutch RES albeit in addition to other risk factors such as 20 Pharmacy based cost groups. There are currently 698 DRGs used in Ireland. These should be grouped into a manageable number of DRGs by cost, e.g. 10 at outset, bearing in mind the desire to achieve a high level of effectiveness;
- While the Dutch model uses age as a risk adjustment factor in the Dutch RES, age related factors are not used to determine DRG related risk adjustments. A similar approach could be used in the Irish DRG based scheme. However DRGs can vary with age and consideration could be given to simple age splits for some DRGs if risk selection by the insurers was to occur;

- Changes to the RES can result in significant financial impact on premiums and the financial position of insurers. Unless the changes are made on a phased basis there is a risk that premium levels for insurers with lower risk profiles may prove insufficient to meet the demands of the RES payments. Similarly if insurers believe that a quick implementation is likely, there is a risk that premium rates would increase significantly over a short period of time to meet these payments until such point as the market reaches a natural equilibrium. A staged implementation over a number of years should be adopted to allow for practical market adjustments. A balance between the desire for high levels of effectiveness and low levels of market instability is required;
- Using a DRG based approach could incentivise up-coding of claims, however we note that the existing HIPE procedures should adequately protect against this occurring. Robust auditing standards, clear coding guidelines and regular recalculation of DRG weights and monetary conversion factors reduces the ability of hospitals/insurers to benefit from up-coding;
- DRGs act to incentivise hospitals/insurers to treat a greater number of patients and to minimise the number of bed nights and procedures per patient. The impact of under treating patients may potentially result in an increased level of readmissions resulting in an increased level of DRG payments. Rules could be incorporated around payment from the RES in respect of readmissions within short time frames or around setting a limit on the number or amount of DRG payments to be made in respect of any individual within a given year. In practice this could be difficult to administer.

A further comparison of the Dutch and proposed Irish scheme is outlined in Appendix 9.

5. Outline of proposed new Risk Equalisation Scheme

5.1. Existing Risk Equalisation Scheme

As outlined in Section 2.4 the current RES involves insurers receiving higher premiums for insuring members of less healthy groups of the population. Credits equal to the amount of the additional premium are payable in respect of the members of less healthy groups, so that all adults are charged the same net amount for a particular level of cover. In this way all adults with that level of cover pay the same net amount but insurers receive higher gross premiums in respect of insuring members of less healthy groups to partly compensate for the higher level of claims.

Insurers provide data to the Authority every 6 months on the age /gender/product/ profile of their membership. Details of claims paid in the period are also provided broken down also between public hospitals, private hospitals and consultants. Data on the level of hospital utilisation is also provided broken down by age, gender, product type and between in-patient and day patient.

This information is used to project the cost of credits in respect of age, gender and level of cover. The overall cost of credits in turn is used to determine the level of stamp duty insurers are required to pay (based on the level of cover) in order to fund these credits.

The approach adopted by the Minister in setting age related credits for advanced cover contracts for renewals from 31 March 2014 was to ensure that the net claims cost for any age group would not exceed 133% of the average claims cost (net of credits and stamp duty), weighted by market age/ gender distribution. In calculating the credits, the claims cost was based on contracts that provided cover for semi private rooms (but not private rooms) in most private hospitals. The age related credits for non advanced cover contracts were set at approximately 50% of the age related credits for advanced cover contracts. The level of HBUC was set as €60 for each night spent as a private patient in a hospital. The stamp duties were set so that the stamp duty for non advanced contracts was approximately 75% of the stamp duty for advanced cover contracts.

5.2. Proposed Risk Equalisation Scheme

For such a system, rather than receiving data on hospital utilisation broken down by age and gender, the Authority would receive data on diagnoses broken down by age and gender.

This diagnosis data would be used to determine the DRG based credits (in lieu of the HBUC which in 2013 represented circa 15% of the total Risk Equalisation Credits) and consequently the credits in respect of age, gender and level of cover. As is currently the case the overall level of credits in turn would be used to determine the level of stamp duty insurers would be required to pay (based on the level of cover) in order to fund these credits. Apart from the inclusion of DRG based credits (in lieu of the HBUC) the methodology used to calculate the overall credits and stamp duty would remain unchanged. The approach to determining the DRG payment rates are set out in Section 5.4 below.

Given the nature of the calculation the quantum of the RES payments are likely to change. This is because the HBUC is based on a predetermined rate of €60 per bed per inpatient night and the DRG based credits will be based on actual (or a proxy to) costs incurred. This is likely to mean that in the long term the cost of the DRG based credits will exceed the HBUC cost and consequently the credits in respect of age, gender and level of cover will be reduced. A sudden change to the system could have significant and unpredictable consequences. Accordingly, the Authority recommends that DRG based credits be phased in and the HBUC be phased out over time.

Additionally the financial position of the RES Fund will be significantly more difficult to manage post DRG implementation as the actual experience may differ significantly from projections due to changes in coding practice/ medical treatment, time lags in terms of receipt of DRG data etc. This is likely to mean that any annual surpluses or deficits within the fund will be larger than under the current HBUC regime. The current approach adopted for dealing with surpluses and deficits is to use that as the starting point for determining the following year's credits. We propose that this continues to be the case, although allowance should be made for potential timing issues in terms of receipt of data.

In other countries strategic decisions are made on the proportion of the risk equalisation pool to be distributed based on age/gender credits and based on DRG credits. In the Netherlands, for example, circa 19% of the total risk equalisation pool is distributed based on costs associated with chronic disease whereas Germany, for example, 50% of the risk equalisation pool is distributed on "morbidity-RSA" (future treatment costs of 80 specific diagnoses with varying levels of severity) and the remainder on age, gender and disability benefits. Similar considerations might be made in Ireland.

5.3. DRG Groupings to be included in the RES

The current RES is relatively simple and transparent in terms of the credits in respect of insured persons based on age, gender and level of cover, combined with a utilisation credit based on overnight stays in hospital accommodation (as a proxy for health status). The implementation of a DRG based system will introduce increased complexity to the system both in terms of reduced transparency and increased data requirements, which will need to be collected in advance of the implementation of DRGs in the RES.

The full implementation of a DRG based health status measure should ensure the increased effectiveness of the RES for all ages and target more accurately risk equalisation payments in respect of the less healthy insured members. However, there are currently 698 DRGs included in the HIPE data. If a DRG system were to allow for all of these for males / females at all ages then this would result in approximately 140,000 DRG credits (or data cells) for inclusion in the system. There are a number of valid reasons for not using such a granular scheme:

- It would prove extremely challenging both administratively and from a communication perspective for all stakeholders;
- While more data cells should lead to a more effective system this is not always the case. For example while the Dutch system is regarded as one of the most sophisticated DRG systems globally it is not without its problems and the number of DRGs have reduced significantly in recent years, from c. 30,000 in 2012 to c. 3,000 now as certain members of society were not seen to be adequately compensated under the system; and
- Given the size of the insured population, an extremely large number of data cells is likely to mean that each of the data cells would probably lack credibility due to lack of data in each cell. Therefore there are inevitably compromises to be made in terms of ensuring the RES system operates at a sufficiently high effectiveness level and the number of data cells required for that to happen in practice.

We note that while the Dutch model uses age/gender as a risk adjustment factor in the RES, age related factors are not used to determine DRG related risk adjustments. It is the view of the Authority that a similar approach should be used in the Irish DRG based scheme.

The Authority is therefore of the view that the grouping of DRG by cost should be performed in respect of the RES. Grouping DRG by similar costing and using the average DRG cost within each group would increase the level of data in each DRG group which would help add credibility to the

data used. It would also help to simplify the administration of the system. We therefore recommend a system which uses 10 groupings initially say although the exact amount of groupings would be determined once the DRG data was available to the Authority. A small number of groupings would be relatively straightforward to administer and explain to key stakeholders while maintaining a sufficiently high level of effectiveness. This would also enable DRGs to move between categories as cost changed over time. The exact groupings (or bands) would be determined using data collected in 2016. Such an approach to groupings could be refined to improve the effectiveness of the scheme over time if required but would be easier to implement initially.

5.4. Determining the DRG Payments

In determining the levels of DRG credits payable from the risk equalisation fund it will be necessary to avoid inappropriate incentives (for example towards hospitalisation or certain treatments). Accordingly, the credits applicable will need to take account of not only an analysis of the data received by the Health Insurance Authority but also medical expert and health economics advice relating to issues such as:

- Are there more efficient treatment alternatives (including outside of hospital)?
- Are there technological developments / drugs coming off patent that will impact on the costs.

The aim should be that the DRG payment is less than the most efficient cost of treating the DRG and in cases where alternatives to hospitalisation exist, no DRG credit should be payable.

5.5. Operation of the Risk Equalisation Fund

RE Fund Cashflows

The payments to and from the existing RE Fund operate as follows:

- Insurers currently provide monthly RES claims from the Fund the Authority which detail:
 - Total RES claims made in the month split by age, gender, level of cover, premium frequency and policy commencement date.;
 - The monthly claims also include details in respect of the number of bed nights paid by month of hospitalisation and policy commencement date.;
 - The level of payments made is dependent on the policy commencement date.

Insurers make quarterly payments of stamp duty to the Revenue Commissioners. The Revenue Commissioners pass the total stamp duty amount collected on to the Authority.

We anticipate that the management of the proposed RE Fund would operate in a similar manner, however payments in respect of HBUC would be replaced over time with DRG based credits. In order to facilitate these payments insurers would need to provide details of DRG claims paid, i.e. age, gender, plan type, cover, cost of claim, DRG code. This DRG data would be based on hospital discharges within the month. The use of DRG data is likely to result in later payment to the insurers as it requires a discharge and a DRG classification, rather than details of bed use.

During the transitional phase, i.e. DRG based credits phased in and HBUC phased out over time, there will be a requirement to continue collecting data in respect of bed usage.

There is also likely to be a number of claims whereby the insurer would be entitled to HBUC payments ahead of the implementation of DRGs and possibly DRG payments following patient discharge. This will need to be dealt with carefully so that insurers are not overcompensated for these cases.

Data Certification

Insurers provide an annual return of RES claims to the Authority via a data download. These data downloads will need to be enhanced to include DRG data split by DRG for the proposed RES.

The current half year information returns require an independent accountant's report certifying that the returns are in accordance with the regulations in all material respects, the material assumptions are appropriate, consistently applied and adequately disclosed and that the returns are in accordance with the underlying books and records. This should continue to be the case for the proposed RES. The audited data returns would need to be provided by the end of February (currently January) following the financial year end.

We note that in its oversight role the Healthcare Purchasing Office (HPO) will be responsible for auditing the DRG data from hospitals and the Authority will need to place reliance on the checking performed by the HPO. Consistency checks would be performed by the Authority to ensure that the DRG data provided by the insurers was consistent with the HPO data, e.g. total number of DRGs by category, total claims cost by DRG etc. Experienced resources would be used to produce analytical reports to provide insight into cases at each insurer and to provide basic statistics on volumes and utilisation which could be used to identify systemic instances of potential up-coding.

Further details of DRG data considerations are included in Section 3

6. Relative strengths and weaknesses of features of individual schemes

6.1. Benchmarking of existing and proposed Irish regime

We have outlined throughout this report the relative advantages and disadvantages of implementing a DRG based RES compared to the existing scheme. We have therefore not repeated all of this detail in this section. At a very high level the existing system is relatively simple to administer and transparent in terms of its operation but suffers from the fact that the system of risk equalisation may not be as effective as it would be under a system which included DRG-based health status measures. Conversely while a DRG based system could prove more effective its main disadvantages are that they are less transparent, and more complex and costly to administer. We have set out the main advantages and disadvantages in Table 6.1 below:

Table 6.1

Advantages	Disadvantages
<ul style="list-style-type: none"> • The inclusion of DRGs would better support the Principal Objective of the legislation by increasing supports for less healthy insured persons. • The inclusion of DRGs would bring the Irish RES more into line with international RESs which generally allow for more risk factors than simply an age / gender / bed utilisation split. • Significant gains in terms of risk solidarity and reduction of incentives for insurers to engage in selection / market segmentation resulting in significant gains in efficiency whereby less insurer effort will be expended on risk selection. • The refined arrangement should encourage insurers to reduce cost of claims by improved efficiency either by reducing their payment to providers and/ or reducing inappropriate or unavoidable health service utilisation whilst maintaining affordable health cover for high risk individuals. Additionally, the use of DRGs should lead to increased comparability between insurers and hospitals. • The Authority expects that, within age groups, there may be significant variation in health status between insurers as unhealthy lives are less likely to switch. This has led to premium and covered benefit differences between insurers, whereby insurance products do not cover treatments required by older or less healthy people. As premiums increase or the benefits provided reduce more people are likely to lapse increasing market instability and the burden on the public health system. In theory as the effectiveness of the RES increases and the focus moves from risk selection to efficiency the differences in premiums across the marketplace for different risk types should begin to normalise. It is likely in that instance that the insurers with the worst risks would reduce premiums in order to improve the relative attractiveness of their products and to avail of the full RES payments. Over time that should result in premiums in the market place equalising somewhat as insurers with healthier lives will need to charge more. • HIPE system and collection of DRGs needs to be expanded anyway in context of "money follows the patient" and UHI. An efficient RES is one of the preconditions of managed competition under UHI. 	<ul style="list-style-type: none"> • Credits based on age and gender are simple to administer, transparent and easy to understand. The inclusion of DRGs adds an additional layer of complexity, additional costs and reduced transparency. • The use of DRGs significantly increases the level of data required from stakeholders. Additionally there are differences between the level of data currently captured by the various stakeholders; i.e. public / private hospitals and the insurers. Aligning the data providing will result in additional costs in terms of system enhancements, use of specialist coders and data validation. • The introduction of DRGs can have cause behavioural changes and result in an asymmetry of information between hospitals and insurers, for example: <ul style="list-style-type: none"> – Reclassifying patients into higher paying DRGs; – Increasing the volume of admitted patients; – Reducing the level of treatment provided to maximise profitability. • A focus on equalising for chronic conditions may also be an option (subject to data availability) given the disproportionate healthcare spend on a small number of individuals with multiple chronic conditions. • The introduction of a more refined scheme is likely to lead to significant changes in the RES cashflows and, in this context there may be benefit in phasing. • The implementation of DRGs is not a straightforward process and a number of key decisions need to be made in terms of design and speed of implementation. There needs to be a balance between improving the effectiveness of the current RES in a timely manner and making changes too quickly which could result in unintended consequences and market instability. Lessons can be learned from international experience. • There are large potential market impacts and changes to incentives on healthcare spending from the use of DRGs. For example credits for DRGs from the RE fund will mean that claims expenditure of insurers will be increasingly linked to DRGs which should drive efficiencies in terms of price but may lead to significantly increased demand unless measures are put in place to curb demand. Note that DRGs can incentivise hospitals to treat more patients but with less

Advantages	Disadvantages
<ul style="list-style-type: none"> The use of DRGs more generally for payments will likely lead to further consolidation of healthcare services into "centres of excellence" where the average cost for a given diagnosis/ treatment combination is driven downward and inefficient providers are no longer viable. 	services and measures need to be in place in order to protect quality.

As previously mentioned a DRG based system should serve to promote efficiency and reduce costs. We have set out in Table 6.2 below the relative advantages of a DRG based hospital payment system compared to the current fee for service/length of stay model.

Table 6.2

Incentives of DRG-based hospital payment	Strategies adopted	Effect on Quality	Effect on Efficiency
Reduce costs per patient	<u>Reduce length of stay:</u> <ul style="list-style-type: none"> optimise internal care pathways transfer to other providers <ul style="list-style-type: none"> improve coordination /integration with other providers transfer/avoidance of unprofitable cases ('dumping' or 'cost-shifting') inappropriate early discharge ('bloody discharge') 	<ul style="list-style-type: none"> Improve Improve Reduce Reduce 	<ul style="list-style-type: none"> Improve Improve
	<u>Reduce intensity of provided services:</u> <ul style="list-style-type: none"> avoid delivering unnecessary services substitute high-cost services with low-cost alternatives (labour/capital) withhold necessary services ('skimping/undertreatment') 	<ul style="list-style-type: none"> Reduce 	<ul style="list-style-type: none"> Improve Improve
	<u>Select patients:</u> <ul style="list-style-type: none"> specialise in treating patients for which the hospital has a competitive advantage select low-cost patients within DRGs ('cream-skimming') 	<ul style="list-style-type: none"> Improve Reduce 	<ul style="list-style-type: none"> Improve
Increase revenue per patient	<u>Change coding practice:</u> <ul style="list-style-type: none"> improve coding of diagnoses and procedures fraudulent reclassification of patients, e.g. by adding inexistent secondary diagnoses ('up-coding') 	<ul style="list-style-type: none"> Improve 	<ul style="list-style-type: none"> Reduce
	<u>Change practice patterns:</u> <ul style="list-style-type: none"> provide services that lead to reclassification of patients into higher paying DRGs ('gaming/ overtreatment') 	<ul style="list-style-type: none"> Reduce 	<ul style="list-style-type: none"> Reduce
Increase number of patients	<u>Change admission rules:</u> <ul style="list-style-type: none"> reduce waiting list split care episodes into multiple admissions admit patients for unnecessary services ('supplier-induced demand') 	<ul style="list-style-type: none"> Either 	<ul style="list-style-type: none"> Improve Either Reduce
	<u>Improve reputation of hospital:</u> <ul style="list-style-type: none"> improve quality of services focus efforts exclusively on measurable areas 	<ul style="list-style-type: none"> Improve Either 	

6.2. A suitable approach for Ireland

The proposed approach for Ireland's private health insurance market (a voluntary market) differs from the approach taken in the other countries included in Appendix 6 (universal health insurance

systems. The majority of the countries use a combination model, i.e. prospective with some form of retrospective adjustment which allows for actual experience. Appendix 7 is a case study of the Netherlands RES and includes details of issues and challenges that arose and how they might impact on Ireland. A particular challenge in the Netherlands is the increase in costs over time and the introduction of a deductible (€360 in 2014) that has been a big contributing factor in controlling healthcare expenditure.

The proposed Irish RES will be prospective, payments to and from the fund will be based on the actual underlying policyholder profile within each insurer. This removes the need for a retrospective adjustment in terms of age, gender and level of cover as individual insurers would not be impacted by the experience of others.

After age and gender, the third most prevalent type of risk factor included in each country's RES is the presence of chronic conditions. DRGs by contrast provide an indication of the cost of acute care for a given hospitalisation episode and therefore attach more weight to acute rather than chronic conditions (unless the chronic condition is such as to require multiple hospitalisation episodes). The proposed prospective DRG based RES should incentivise preventative care which should reduce costs over time. Additionally as ongoing pharmaceutical costs are not covered by the private health insurance market in Ireland there is less need to allow for chronic conditions within the RES and there is not the access to the relevant data.

Finally the proposed model fits in with the current system. As the ICD10-AR DRG coding system is currently used within the Irish public hospital system, and a level of expertise has been built up, it will help facilitate a smooth transition from HBUCs to DRGs.

7. Implementation of proposed new Risk Equalisation Scheme

In his 23 April 2014 letter to Insurers on PHI Policy Measures, the Minister outlined his high level timeline for the phased introduction of DRG-based health status measures into the risk equalisation calculations. At a high level the Department's intention is that, with effect from 2016, payment of the HBUC will be conditional on the provision of a patient's associated DRG for each corresponding episode of care, a period of shadow pricing will occur in 2017 which will facilitate the calculation of DRG-based credits, followed by the implementation of a DRG-based refined health status measure under the RES from 2018.

The implementation of DRGs is not a straightforward process and a number of key decisions need to be made both in terms of design and speed of implementation. These design decisions include consideration around:

- The target effectiveness of the scheme across the different cohorts of lives and how this could be objectively measured;
- The level of efficiency that should be brought into the scheme balanced against the need to provide adequate levels of care;
- How high the DRG payments should be in order to achieve this aim;
- Design features that would help the Irish RES address the implementation issues observed in other countries;
- Alignment of data between the key stakeholders and measures required to ensure the consistency and validity of returns;
- How co-payments are allowed for under the system;
- How the DRG credits would be calculated bearing in mind the considerations outlined in Sections 5.3, 5.4 and 5.5 of this report.

There needs to be a balance between improving the effectiveness of the current RES in a timely manner and making changes to the RES too quickly which could result in unintended consequences and market instability.

We have set out in Table 7.1 below a proposed timetable for implementing DRGs bearing in mind the Minister's PHI policy aims:

Table 7.1

Year	Required Changes	Note
2014 / 2015	Insurers engage with private and voluntary hospitals regarding the collection of ICD10-AR DRG data which is currently in use in public hospitals. Hospitals develop implementation plan to ensure new systems and resources are fully operation by 31/12/2015.	Specialist coders are required to input DRG data. These coders take approximately 9 months to train and additional resources would be required to meet demand.
2016	Payment of the current HBUC would be conditional on the provision of a patient's associated DRG for each episode of care.	Additional data may be required so that the appropriate DRG rate can be determined and outliers are appropriately identified and dealt with.
2017	DRG data for the 2016 experience is submitted to the HIA and used to help inform the design decisions outlined above. For example the HIA may group the DRG's by cost to give say 10 DRG groupings and project the results into 2017. Indicative shadow credits calculated for each age/ gender/ level of cover/ DRG group for 2017 and the resulting stamp	Consistency and quality of data is a key consideration in determining the suitability of the DRG credits. Options which could be considered include clear clinical guidelines on coding using specialist coders, additional auditing /spot checks of coding and imposing fines/sanctions

Year	Required Changes	Note
	duty are recommended by the HIA, determined by the Minister and announced.	in respect of breaches. Potential issues in getting DRG data in a timely manner given time taken to code DRGs and the potential for backlogs.
2018	Actual experience for 2017 is compared to the shadow results. The 2017 results are projected forward to 2019. Credits for each Age/gender/Level of Cover/ DRG group for 2019 and resulting stamp duty for 2019 are recommended by the HIA, determined by the Minister and enacted by the Oireachtas.	Decision to be made over the quantum of the change to credits given the introduction of DRG data. Historically changes to the RES have been incremental so that shocks to the system are not introduced suddenly. A change to a DRG structure would be a dramatic change so there may be a desire to maintain a high level of age/gender/contract type credits initially to avoid potential market instability. Credits for 2019 likely to be based on 2017 DRG data for the following reasons: <ul style="list-style-type: none"> • Delays in getting DRG data in a timely manner given time taken to code DRGs and the potential for backlogs; • Insurers will need more time to submit DRG data; • Increased level of complexity in the calculations requiring more time by the Authority to analyse and recommend credits.
2019	DRG credits commence	

We have set out in Table 7.2 below how an indicative timeline that could be used in order to implement the 2019 DRG credits:

Table 7.2

Date	Actions
February 2018	DRG data for the 2017 experience is submitted to the HIA. This data would be used as the base data for the 2019 credits.
April 2018	Actual experience for 2017 is compared against the 2017 shadow credit results determined using 2016 DRG data.
June 2018	2017 DRG data used to determine DRG groupings and projected DRG costs for 2019.
September 2018	Credits for each Age/gender/Level of Cover/ DRG group for 2019 and resulting stamp duty for 2019 are recommended by the HIA and submitted to the Minister.
October 2018	Minister proposes amendments to the Health Insurance Acts, where the amounts of the Risk Equalisation Credits are specified. Minister recommends to the Minister for Finance the rates of the Community Rating levy, which are provided for in the Stamp Duties Consolidation Acts.
December 2018	The rates of the Risk Equalisation Credits and the Community Rating Levy become law if enacted by the Oireachtas.
March 2019	Date revised credits start to apply to renewals in the period 1 March 2019 – 28 February 2020

Appendix 1 – Glossary of Terms

Australian Refined Diagnosis-Related Group (AR-DRG): The AR-DRG patient classification system from Australia was adopted in Ireland in 2005 for classifying day-case and inpatient activity (excluding non-acute psychiatry, geriatric care and rehabilitation). The current version of AR-DRGs (Version 6.0) was introduced in Ireland in January 2009. The system was developed in the late 1990s by the Australian Casemix Clinical Committee (ACCC). To update the AR-DRG system, the ACCC relies on Australian clinical and cost data, as well as on input from Australian health professionals (Commonwealth Department of Health and Ageing, 2008).

Casemix provides a means for standardising data collected on activity and costs within acute hospitals so that meaning comparisons can be made between different areas of activity and different hospitals. In Ireland Casemix operates in circa 38 public hospitals and is used for a range of applications including hospital budgeting and funding and service planning. From 1st January 2014 the National Casemix Programme and the Health Research and Information Division at the ESRI became the Healthcare Pricing Office (HPO).

Chronic care refers to medical care which addresses pre-existing or long term illness, as opposed to acute care which is concerned with short term or severe illness of brief duration. Chronic medical conditions include asthma, diabetes, emphysema, chronic bronchitis, congestive heart disease, cirrhosis of the liver, hypertension and depression.

Community Rating means measures which, whether in whole or in part, apply towards the achievement of the Principal Objective of the Health Insurance Acts, 1994 -2013. Insured persons pay the same level of premium for a given level of benefit regardless of health profile (age, gender, health status). Everybody is charged the same premium for a particular plan subject to a number of exceptions, namely;

- Children where the premium must not be more than 50% of the adult premium;
- Full time dependent students under the age of 23, where the premiums may be reduced. The reduced premium may not be more than 50% of the adult premium;
- Members of group schemes where the premium may be reduced by up to 10%;
- Pensioners of restricted schemes.

Diagnosis Related Groups (DRGs) are classifications used by hospitals, insurers and others to group episodes of health care based on the primary diagnosis.

Diagnosis Related Risk Factors are factors, linked to the diagnosis of medical conditions, which might be expected to be correlated to the claims cost of an individual.

Hospital Bed Utilisation is the number of days for which an insurer's customers are admitted to hospital. A day patient stay is counted as 1 day.

Hospital Inpatient Enquiry System (HIPE): HIPE is the principal source of national data on discharges from acute hospitals in Ireland. With effect from January 1, 2014, the Healthcare Pricing Office (HPO) will have responsibility for the Hospital In-Patient Enquiry (HIPE) scheme. While the HPO will initially be established on an administrative basis, it is planned that this Office will ultimately be established on a statutory basis.

ICD-10-AM: In all DRG like patient classification systems the coding of diagnoses and procedures is important, since this information forms the basis for the definition of patient groups. For coding of

diagnoses an international standard exists: most countries use the 10th revision of the World Health Organisation's international classification of diseases (ICD-10). Since January 2009, all clinical data coded in the HIPE uses the sixth edition of ICD-10-AM (10th edition, Australian modification) for diagnoses and the Australian Classification of Health Interventions (ACHI) classification for procedures.

Lifetime Community Rating is an amendment to the community rating system where the premium charged would vary with the age that an insured person was when they first commenced private health insurance. It would mean that a seventy year old who commenced health insurance when they were thirty would pay the same premium as a 30 year old. However a seventy year old taking out health insurance for the first time would pay a higher premium.

Lifetime Cover guarantees all consumers the right to renew their policies irrespective of age, risk status or claims history.

Minimum Benefit Regulations (Statutory Instrument No 83/1996): Under these regulations, all insurance products that provide cover for inpatient hospital treatment must provide a certain minimum level of benefits.

Money follows the patient funding model: Draft policy proposals have been prepared on the introduction of a prospective case-based payment system (Diagnosis Related Group system) which will replace the current block grant allocation mechanism for public hospitals. The proposals focus on public treatment in public hospitals. However, they will be complemented by further policy development on a new charging regime for private patients in public hospitals. They will also be continually developed so that the funding system evolves to support integrated care across different settings, i.e. so that money can follow the patient to the most appropriate care setting.

Open Enrolment means that insurers must accept all applicants for insurance cover, regardless of their risk status, age or sex, subject to prescribed waiting periods. Maximum waiting periods are set before a new customer can claim; customers who switch insurer do not have to go through the waiting period again unless they allow more than 13 weeks to lapse between leaving one insurer and joining the other.

Open Membership Insurers must provide private health insurance to everybody who requests it from them. Currently there are four such insurers operating in Ireland, namely Aviva Health, GloHealth, Laya Healthcare and Vhi Healthcare.

Pharmaceutical Cost Group are classifications of episodes of care based on the drug that is prescribed.

Principal Objective: The principal objective of the Minister and of the Health Insurance Authority under the Health Insurance Acts (1994 to 2009) includes the following:

"The principal objective of the Minister and the Authority in performing their respective functions under this Act is to ensure, in the interests of the common good, that access to health insurance cover is available to consumers of health services with no differentiation made between them, in particular as regards the costs of health services, based in whole or in part on the respective age range and general health status of the members of any particular generation (or part thereof)".

Resource Usage Factors are factors that are directly related to resources used in provision of

healthcare in respect of the claims experience of insurers.

Risk Equalisation is a process that aims to neutralise in an equitable manner differences in insurers' costs that arise due to variations in the health status of their members. Risk equalisation involves transfer payments between health insurers to spread some of the claims cost of high-risk members amongst all the private health insurers in the market in proportion to their market share. Risk equalisation is a common mechanism in countries with community rated health insurance systems.

Risk Equalisation Scheme 2013 (the "Scheme"): The Health Insurance (Amendment) Act, 2012 introduced a permanent Risk Equalisation Scheme (RES) in the private health insurance market, with effect from 1 January, 2013. The Act provides for the payment of risk equalisation credits in respect of private health insurance premiums paid under contracts renewed or entered into on or after 1 January 2013. These credits are payable from a new Risk Equalisation Fund administered by the Health Insurance Authority and are paid to registered undertakings in respect of:

- The payment of private health insurance premiums by insured persons aged 50¹ years and over, based on age, gender and type of insurance cover;
- €75 payment² per night for each hospital stay involving an overnight stay in a hospital bed in private hospital accommodation (including designated private hospital accommodation in a public hospital).

These Regulations set out the structures for submitting annual claims and returns by registered undertakings and the validation of those claims by the Health Insurance Authority. The regulations also allow for interim claims to be made by authorised registered undertakings (normally monthly). In addition, the regulations require registered undertakings to keep sufficient records and make them available to the Health Insurance Authority, to allow them to validate claims.

Risk Factors are factors that are correlated to the claims incurred by insurers.

Risk Segmentation is the provision (through marketing or other means) of different health insurance products to groups with (on average) different risk profiles.

Risk Selection is the process (through marketing or other means) of seeking to provide insurance to healthy lives and avoid unhealthy lives.

Underlying Risk Factor is a factor for which there is an objective classification method which may be expected to be correlated to the level of expected claims for the individual. Such risk factors include age, gender, address, employment status, welfare status and disability status.

Universal Health Insurance (UHI) means that everyone will be insured for a standard package of primary and hospital care services, including mental health services. Insurance will be provided under a multi-payer insurer model with no distinction between "public" and "private" patients. The system will be founded on principles of social solidarity, encompassing the fundamental tenets of financial protection, open enrolment, lifetime cover and community rating. While health insurance will be mandatory, a system of financial support will ensure affordability by paying or subsidising the cost of insurance premia for all those who qualify. The introduction of UHI will see the purchasing of healthcare largely devolved to insurers.

¹ Credits applied relate to insured persons aged 60 or over

² Subsequently reduced to €60 per night for policies effective from 1 March 2014.

Appendix 2 – Material Referenced

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Ministry of Health, Welfare and Sport (Netherlands, August 2012): Risk adjustment under the Health Insurance Act in the Netherlands

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- Daley, C., Gubb, J., Clarke, E. & Bidgood, E., 'Healthcare Systems: The Netherlands' (2013)
- Clarke, E. & Bidgood, E. (based on an update of a 2001 report by Green, D, Irvine, B.), 'Healthcare Systems: Germany (2013)

Department of Health Correspondence:

- The Path to Universal Healthcare: White Paper on Universal Health Insurance in Ireland, April 2014
- Letter from the Minister to private insurers on PHI Policy Measures, April 2014
- HIPE data on private patients in acute public hospitals 2010-2012 including data on
 - Top 20 high casemix cost DRGs (private inpatient discharges)
 - Top 20 high volume DRGs (private inpatient discharges)

Previous reports issued by the Authority:

- Report to the Minister for Health and Children on Risk Equalisation in the Irish Private Health Insurance Market, December 2010
- Consultation Paper on Risk Equalisation in the Irish Private Health Insurance Market, June 2010

In the course of our research we also referred to:

- Insurer submissions to the Authority in response to the 2013 Consultation on the development of health status measures in the Risk Equalisation System.
- Market statistics previously compiled by the Authority

Appendix 3 – Market Statistics

Average returned benefit per insured person

Comparing risk profiles by comparing the average returned benefit per insured person of each insurer is not completely reliable. It does not allow for the fact that insurers may conduct business in different ways and have different age profiles or that one insurer may sell more of a product that provides less benefits or provides a different level of cover (for example, by applying different excesses, exclusions or waiting periods)

Counting each child as 1/3rd and each adult as 1, the average returned benefit per insured person for each insurer is outlined in Table A3.1 below:

Table A3.1

Average Returned Benefits per Insured Person (€)				
Insurer	Jan-June 2012	July-Dec 2012	Jan-June 2013	July-Dec 2013
Aviva Health				
GloHealth				
Laya Healthcare				
Vhi Healthcare				
Market	486	556	495	522

The average returned benefit per insured person as a percentage of the market average for each insurer is set out in Table A3.2 below:

Table A3.2

Average Returned Benefits per Insured Person as a % of the Market Average				
Insurer	Jan-June 2012	July-Dec 2012	Jan-June 2013	July-Dec 2013
Aviva Health				
GloHealth				
Laya Healthcare				
Vhi Healthcare				
Market	100%	100%	100%	100%

Average returned benefit per treatment day

The differences in the average returned benefit per member is partly due to differences in the average benefit per treatment day for each insurer and partly to differences in the average number of treatment days per insured person for each insurer. The average returned benefit per treatment day varies between insurers as set out in Tables A3.3 and A3.4 below:

Table A3.3

Average Returned Benefits per Treatment Day (€)				
Insurer	Jan-June 2012	July-Dec 2012	Jan-June 2013	July-Dec 2013
Aviva Health				
GloHealth				
Laya Healthcare				
Vhi Healthcare				
Market	1,042	1,035	1,039	1,054

Table A3.4

Average Returned Benefits per Treatment Day as a % of the Market Average				
Insurer	Jan-June 2012	July-Dec 2012	Jan-June 2013	July-Dec 2013
Aviva Health				
GloHealth				
Laya Healthcare				
Vhi Healthcare				
Market	100%	100%	100%	100%

Average number of treatment days per insured person

Another approach for comparing risk profiles is to compare the average number of treatment days per Insured Person. However it does not separate out all differences in the way insurers conduct business or all differences in the level of cover.

The reliability of the average treatment days per member also relies on the assumption that the "value" (in terms of the underlying healthcare cost) of each treatment day is the same for each insurer. In practice, it is possible that this assumption may not be borne out. For example, where the cost of treatment days vary by age of the patient or the treatment and insurers' memberships have different age or treatment profiles, a comparison of the number of treatment days per member would not fully capture the differences in the risk profiles of the insurers.

The average number of treatment days per member for each insurer is set out in the Tables A3.5 and A3.6 below. Again, each insured child counts as 1/3 when counting the number of insured persons in order to allow for the fact that children are not charged a full premium.

Table A3.5

Average Treatment Day per Insured Person				
Insurer	Jan-June 2012	July-Dec 2012	Jan-June 2013	July-Dec 2013
Aviva Health				
GloHealth				
Laya Healthcare				
Vhi Healthcare				
Market	0.466	0.537	0.476	0.496

Table A3.6

Average Treatment Day per Insured Person as a % of the Market Average				
Insurer	Jan-June 2012	July-Dec 2012	Jan-June 2013	July-Dec 2013
Aviva Health				
GloHealth				
Laya Healthcare				
Vhi Healthcare				
Market	100%	100%	100%	100%

Age / Sex Risk Profile Index

We have also compared risk profiles based on the age/sex profile of the insurers' populations. We do this by applying a "risk weighting" to each member of the insured population. This weighting is based on the age/sex of the insured person. We can compare the average weighting for each insurer. We refer to this average weighting as the Age/Sex Risk Profile Index.

The difficulty with this approach is in finding an appropriate weight for each age/sex combination. One weight that may be considered appropriate is the market average number of treatment days for each age/sex group. Thus each insurer is using the same weight.

The use of the number of treatment days as the basis for setting the risk weights is not without its disadvantages. As already mentioned, the number of treatment days will not provide a pure measure of risk, since it could include an element of efficiency and other factors. Also, as noted earlier, it does not take account of differences in the value of treatment days. Here, it is not necessary to adjust for children by counting each child as a third in the calculation.

Relative values insurers' Age / Sex Risk Profile Indices

Table A3.7

Insurer	Jan-June 2012	July-Dec 2012	Jan-June 2013	July-Dec 2013
Aviva Health				
GloHealth				
Laya Healthcare				
Vhi Healthcare				
Market	100%	100%	100%	100%

Table A3.7 above shows that the relativities between the indices have remained relatively stable during 2012 and 2013, [REDACTED]

Hospital Utilisation Risk Profile Index

The Age/Sex Risk Profile Index ignores differences in risk profiles due to other factors, i.e. it ignores whether insurers' risk profiles vary within age/sex bands. In order to gauge the significance of variations of risk profile within age/sex bands, we calculate an overall index of hospital utilisation (ignoring the effect of differences in the age/sex distributions of the each insurer's population). We call this index the Hospital Utilisation Risk Profile Index.

This index is calculated by estimating the average number of treatment days that each insurer would have if they all had the same standard age/sex profile and their own level of treatment days for each age/sex group. The standard age/sex profile that we use is the profile for the market as a whole. The

resulting index for each insurer is then expressed as a percentage of the index for Vhi Healthcare. We do this to provide a base level to compare the average number of treatment days each insurer has relative to Vhi Healthcare, assuming the age/sex profile for each insurer is the same.

As we aim to ignore the effect of the age and sex profile with this index, there is no need to adjust for the number of children. Table A3.8 below shows the relative values of this index over time.

Relative values of insurers' Hospital Utilisation Risk Profile Indices

Table A3.8

Insurer	Jan – June 2012	July - Dec 2012	Jan – June 2013	July - Dec 2013
Aviva Health				
GloHealth				
Laya Healthcare				
Vhi Healthcare	100%	100%	100%	100%

Chart A3.1 below sets out the average number of treatment days by age band for each of the insurers for the period July to December 2013.

Chart A3.1



Appendix 4 – Impact of not having a robust Risk Equalisation Scheme

Market Trends

The inpatient health insurance market grew steadily from 1,871,000 at the end of 2001, the year the Authority was established, to 2,297,000 at the end of 2008. In 2009, the total market size declined for the first time since the Authority started collecting market statistics and this decline has continued since then, so that at end of 2013 there were 2,082,000 insured persons. The level of decline has been more pronounced at younger ages leading to an increase in the average age of the insured population. The level of reduction in insured lives since the end of 2008 is significant (c. 11%) and raises the question of whether the current economic conditions will result in a continued decline in the next few years, and consequently continued ageing of the remaining insured population. In a community rated market based on intergenerational solidarity, retention of existing profitable members and an influx of new younger members are key to market stability.

Over the period since competition began, all insurers were able to recruit a significant number of younger and healthier consumers during the economic boom. However, it is worth noting that, over much of this period, favourable economic conditions, including substantial employment and population growth, existed in Ireland. These favourable economic conditions assisted all insurers in recruiting younger customers.

It is profitable for insurers to recruit younger healthier consumers and avoid older less healthy ones. There is an incentive to sell different products to older and younger consumers in order to allow differential pricing. Despite community rating, there is evidence of this in the market place. What we have in the market at present, therefore, is a diluted form of community rating, which reflects the limited support to community rating provided by the current RES.

The differences that changed economic conditions appear to have made to the market are firstly that consumer's price sensitivity appears to have increased and that there may now be greater price competition for younger and healthier people. Secondly, younger people in particular appear to be less likely to take out health insurance and more likely to allow their policies to lapse or to switch to a lower cost product or provider. An insurer with a younger age profile may be in a financial position to offer discounted insurance plans, which are likely to be targeted at younger people. An insurer with an older age profile may endeavour to further segment its risks so that more expensive products are sold to older and less healthy customers while other products are designed to appeal to younger people and to compete with the products of its competitors. Products marketed to younger and healthier people can be deliberately designed with features to discourage older and less healthy people from purchasing them. There are currently c. 350 private health insurance plans available in Ireland. Many of them offer similar benefits at significantly different prices. This differential pricing can reflect differences in the risk profile of the people sold each product.

In the changed economic conditions a number of effects may have combined to accentuate market trends:

- Insurers with a better risk profile are in a position to offer cheaper policies targeted at younger consumers. Consequently, an insurer with a worse risk profile might be expected to experience an increased rate of lapsing with negative consequences for its premium income, but without a similar reduction in its claims;
- The economic environment may have led to a reduction in the inflow of young first time health insurance consumers;
- In the absence of a robust RES, insurers may have a strong commercial incentive not to sell insurance to older less healthy consumers;

- The current participants in the market are now all well established (with the exception of Glo Health who started selling policies on 1 July 2012) with the result that relative risk profile advantages and disadvantages may now be a more significant issue. The Authority expects that, within age groups, there may also be significant variation in health status between insurers. The Authority is of this view in part because it considers that unhealthy people may be less likely to switch insurer due to the perceived risks involved.

Consumer Impact

Risk selection and segmentation are vital to the commercial success or failure of health insurance providers in a community rated market without a robust RES. In order to compete in such a market, it would be expected that insurers would focus their commercial activity on improving their risk profiles rather than, for example, on improving their efficiency. As younger and healthier consumers are more likely to be profitable, insurers would actively seek them out as customers and these customers would be likely to benefit, in the short to medium term. As older less healthy consumers are not as profitable, insurers may make their products less attractive to them. Insurers may market themselves in a manner so that older and less healthy consumers are less likely to be aware of new more competitive plans aimed at younger healthier consumers. This could be done by introducing new more competitive products aimed at new customers while the existing customers are left on older products that offer less competitive terms. Despite the rules regarding community rating and open enrolment, a range of tactics are open to insurers to assist them in risk selection and risk segmentation and the Authority would expect insurers to increasingly adopt such tactics in the absence of a robust RES. The result will be that older and less healthy people will increasingly pay more for health insurance than younger and healthier consumers. This is contrary to the principal objective of the Minister and the Authority under the Health Insurance Act, 1994.

In the absence of a robust RES the marketing of health insurance will be dominated by risk selection and segmentation. Insurance companies will comply with the law in relation to community rating and open enrolment but, in the absence of a robust RES, the legislation will incentivise marketing and sales behaviour that will undermine these principles.

Market Impact

A systemic issue arises for the market because risks are created for the long term viability of insurers with less favourable risk profiles and consequently for the stability of the health insurance market as a whole. Regardless of its level of efficiency, an insurer with a less favourable risk profile at a product level will be obliged to either have higher premiums than the market or incur significant losses. If its premiums are higher than the market it is more likely to lose younger than older customers and its worsening risk profile may oblige it to increase premiums further, resulting in a cycle. It is important to note that, because competition is distorted, an insurer would incur such difficulties regardless of its level of efficiency or the attractiveness of its products; such difficulties would result directly from its risk profile in the absence of a robust RES.

Provision of Benefits

As noted above, insurers will have a strong incentive not to market health insurance to older and less healthy consumers and to sell products that do not cover treatments used by older people. If insurance products do not cover treatments required by older or less healthy people or if a significant number of these people allow their insurance to lapse then there will be a significant reduction in demand for private hospital services and a corresponding increase in demand for public hospital services.

Appendix 5 – Insurers Views on Proposed Inclusion of DRGs

A number of comprehensive responses were received, the most salient points of which are outlined below.

Aviva Health

[REDACTED]

[REDACTED]

[REDACTED]

GloHealth

[REDACTED]

Laya Healthcare

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

VHI Healthcare

[REDACTED]

[REDACTED]

[REDACTED]

Appendix 6 - International RES Comparison

Country	Age (U)	Sex (U)	Overview	Other Risk Factors (SE, DR, RU)	RES Calculation Methodology	Financing of Health Insurance
Belgium	Yes	Yes	Healthcare provision has two main elements: — Compulsory insurance, covering a broad range of benefits, and — Supplementary, non-compulsory, insurance designed to cover areas not included in the compulsory insurance	In receipt of benefit from specific disability Address of insured person In receipt of welfare benefits Mortality in the time period Home nursing care	Flat rate premium to sickness fund is community rated Partly prospective and partly retrospective. The current weighting is 30% prospective and 70% retrospective. Risk adjusted payment received by each fund is partly dependent on the expected healthcare cost of the fund based on the risk characteristics of its membership and partly dependent on the actual expenditure Calculations are carried out separately for employees and the self-employed Funds that have expenditure higher than the payment received receive a further amount to partially offset that "loss" and vice versa	Two main sources of finance for the healthcare system: — Income-related social contributions paid by individuals and collected by the Government — Government subsidies met from tax revenue Certain hospital costs are not met by the sickness funds and are directly financed by the Government Flat rate premiums paid by members of sickness funds
Germany (as per YE2012)	Yes	Yes	Almost 90% of the population have their primary cover-age with one of the 135 competing "sickness funds" (status 2012), non-profit organizations Private health insurance system exists for the remaining 10% of the population Public statutory health insurance (SHI) scheme is compulsory for all citizens and long-term residents with low income, dependants are covered. The scheme is operated by c.150 competing sickness funds For those with high income there is an option of private health insurance, but 85% of the population opt to remain with the SHI Long-term care is covered by a separate insurance scheme and is mandatory for the whole population Overall, the system proved to be of a good quality, has short waiting lists and attentive service, protecting the most vulnerable in society	Risk equalisation consists of: — 80 "severe" or "costly and chronic" diseases — invalidity pension status Central Health Fund (CHF) allocations are calculated on the individual level. They consist of: — Basic allocation — Supplementary allocations or deductions for age and sex — Supplementary allocations for recipients of an invalidity pension — Supplementary allocations for morbidity groups, and — Additional allocations for sick pay. SE: age, gender DR: morbidity rates of 80 chronic and/or serious illnesses	The model is prospective: Diagnoses and prescriptions of the previous year are used to allocate people to the risk groups. expenditure data are used from the year following the diagnoses. Prospective risk equalisation formula (morbidity oriented risk structure compensation or Morbi-RSA)	The scheme is financed as follows: — Sickness funds must ask for sickness fund specific additional flat rate premiums from their members if Central Health Fund (CHF) allocations are not sufficient to cover expenses; these premiums are community rated. Sickness funds can hand out refunds to their members if CHF allocations exceed their expenditure — Legally fixed contributions (as a percentage of income) on behalf of each member are financed through payroll taxes. The CHF pools all contributions and reallocate to SFs — SFs may charge an additional flat rate nominal premium, but they prefer to raise funds on contracts with providers or by improving efficiency in administration

Country	Age (U)	Sex (U)	Overview	Other Risk Factors (SE, DR, RU)	RES Calculation Methodology	Financing of Health Insurance
Israel (as at YE2013)	Yes	No	<p>Healthcare provision in Israel has two main elements:</p> <ul style="list-style-type: none"> Compulsory insurance, covering a broad range of benefits, including 4 Sick Funds, 11 Public Government hospitals, Public hospitals under private ownership, nursing homes, psychiatric and rehabilitation hospitals, and Supplementary, non-compulsory, insurance designed to cover areas not included in the compulsory insurance (community rated premiums). <p>Every Israeli resident must register as a member of one of the Sick Funds and is entitled to receive certain health services and medications included in a package. Every member can pay fixed membership fees (according to age and regardless of a health risk) for supplementary insurance approved by the government, in respect of additional healthcare services from the Sick Funds.</p> <p>Every resident can purchase a private health insurance policy, premium is calculated individually according to the age and health risk.</p>	<p>The mean normative cost level</p> <p>In theory, this process involves taking into account factors such as:</p> <ul style="list-style-type: none"> the level of health price inflation, changes in population and "technological" factor (which acts to increase costs). <p>Risk adjustment scale</p> <p>The only risk adjustment factor is age with the weightings for the 9 age ranges set in advance.</p> <p>Risk sharing</p> <p>Diagnosis in respect of 5 "severe diseases"</p> <p>SE: age, gender, geographical location</p> <p>DR: 5 critical illnesses (were decided by the social security in Israel)</p> <p>RU: number of people insured by each Sick Fund</p>	<p>The system is prospective, although, in addition, there is provision for risk sharing and extra subsidies from the Government. There are three elements to consider:</p> <ul style="list-style-type: none"> The mean normative cost level ("the mean premium") The risk adjustment scale (age band based) Risk sharing payments for "severe" diseases <p>The budget of the Sick Funds is based on a capping formula that takes into account the number of people insured by each Sick Fund, their age, their gender and their geographical location (in addition to the formula there is also a special budget for five critical illnesses). The capping formula is reassessed every few years.</p> <p>The 5 diseases budgeting is separate from the capitation formula and is allocated to the Sick Funds according to a rate which is updated every year</p>	<p>Government funding of the Sick Funds is 60%, the public funds the rest of 40%.</p> <p>The Government funding is divided between:</p> <ul style="list-style-type: none"> Income-related social contributions paid by individuals and collected by the Government Sick Funds Public government hospitals (service providers) Nursing homes, psychiatric hospitals <p>Three main sources of finance for the healthcare system:</p> <ul style="list-style-type: none"> Income-related social contributions paid by individuals and collected by the Government Government subsidies met from tax revenue Co-payments levied on individual members in certain circumstances
Netherlands	Yes	Yes	<p>Compulsory insurance covers the majority of medical treatments, including those delivered by general practitioners, medical specialists, clinical psychologists and midwives.</p>	<p>SE: Address of insured person, Employment status</p> <p>DR: Prescription drug group, Diagnosed with specific conditions</p> <p>RU: Claims exceeding €20,000</p>	<p>The prospective payments are based on estimates, made in advance, of the size of the membership of each insurer and how it is broken down according to the various risk factors.</p> <p>Retrospective correction of total costs</p> <p>Compensation for high costs</p> <p>Retrospective equalisation</p> <p>Retrospective compensation</p>	<p>The main sources of finance for the healthcare system:</p> <ul style="list-style-type: none"> The insurance is paid for by a mixture of community rated premiums and Payments received from the Government (financed by social insurance contributions paid by employees, employers and the self employed and possibly by a Government subsidy)

U: Underlying risk factor

SE: Proxy for Socio Economic Group

DR: Diagnosis related risk factor

RU: Resource usage factor

Appendix 7 – Case Study – The Netherlands

The healthcare system is regarded as one of the most sophisticated DRG systems in the world, having undergone significant reform in recent years particularly after the introduction of wide ranging legislation in 2006 (Health Insurance Act 2006). The Dutch Healthcare system is also the model on which the Department of Health's vision for UHI and 'managed competition' is based.

The Health Insurance Fund

In the Netherlands insurers are not allowed to risk-select. To compensate insurers for the excessive health risks they may have to bear because of this, insurers are required to send the nominal premiums they collect directly to the Health Insurance Fund (CVZ), which also pools the money collected through income-related payments. Funds are then redistributed by the CVZ according to the original choices made by consumers, but adjusted for 'solidarity criteria' relating to age, gender, region, employment status and disability. Also included in these calculations are pharmacy-based cost groups (PCGs), which assess the response of chronic disease to prescription drugs, and Diagnostic Cost Groups (DCGs), which allocates risk according to about 30 major diseases that patients may have. This system therefore aims to place both individuals and insurers on a level playing field.

Dutch RES Risk Factor Evolution

The Dutch risk equalisation model was implemented in the sickness fund insurance in 1993. The essence of this model is that insurers receive a payment for each enrollee on their list, depending on the risk characteristics of that enrollee. In the risk equalisation model of 2011, these risk characteristics are translated into 117 risk classes, i.e. 40 classes for age/gender, 10 classes for region, 17 classes for source of income / age, 24 pharmacy-based cost groups, 14 diagnoses-based cost groups and 12 classes for socioeconomic status interacted with age. The coefficients for the 117 risk classes in 2011 are calculated by a least-squares model, using information on cost and risk characteristics from 2008. Since 1993, the following risk characteristics have been added to the model:

- **Age/gender (1993):** Health insurers receive compensation for the age and gender of their insured persons. Older people have on average higher care costs than younger people. The effect of age depends partly on gender. Women aged between 20 and 35 have on average higher care costs than men in the same age bracket on account of their use of expensive obstetric and maternity care. Therefore, age and gender have been combined into a compound risk adjuster;
- **Region (1995):** This characteristic has little to do with the customary definition of a region as a self-contained geographical area. The division into regions is based on a clustering of postcode areas according to the socio-economic, demographic and care-related characteristics of a postcode area. There are ten regional clusters;
- **Source of income interacted with age (1999):** health insurers are compensated for the 'source of income' of their insured persons. Through this risk adjuster, it is possible to make rough allowance for socio-economic health differences between insured persons. Insured persons who receive state incapacity benefits or income support, for example, have higher care costs on average than insured persons in paid employment. The 2007 risk adjustment model makes a distinction between (1) people receiving incapacity benefits, (2) people receiving income support, (3) people receiving unemployment benefits and other state benefits, (4) self-employed persons and (5) insured persons in paid employment and those without their own source of income. Within the other five categories, a further distinction is made according to the insured person's age. There is additionally a separate category for children aged 0 to 14 and for people older than 65;

- **Pharmacy-based cost groups (2002):** Health insurers are compensated for the high costs of insured persons with a chronic disorder by means of the fourth risk adjuster called Pharmacy Cost Groups (PCGs). An insured person falls into a PCG if in a previous calendar year he/she was issued prescriptions for more than a certain quantity of defined medicines (enough for approximately six months' usage). This means that only chronic cases are included in the determination of PCGs. The 2007 risk adjustment model distinguishes between twenty different PCGs. Since 2007 an insured person can fall into more than one PCG. The inclusion of multiple health-based risk adjusters in the risk adjustment system reduces insurer's risk, if they insure individuals with multiple chronic conditions.
- **Diagnoses-based cost groups (2004):** PCGs do not identify all insured persons with chronic illness, because some disorders are treated clinically rather than pharmacologically. Moreover, PCGs are based only on use of medicines on an outpatient basis, while some insured persons with chronic illness receive medicines from hospitals. The costs of these treatments and prescribed medicines are not separately identifiable in insurer's records, because they are included in hospital prices. Diagnostic Cost Groups (DCGs) have been included in the model as a fifth risk adjuster to improve the prediction of the continuing care costs of common chronic illnesses. DCGs are based primarily on the diagnosis received by insured persons when discharged from a hospital. The only diagnoses included in the determination of DCGs are those expected to generate high costs in the coming year. Diagnoses with few implications for continuing care needs, like broken bones, are not factored into DCGs. The clustering of the diagnosis codes according to the thirteen DCGs takes place based on equivalent cost patterns and is not determined by medical classifications. That is why the 14 DCGs do not have names. Ineligibility for a DCG is also recorded in the DCG system; and
- **Socioeconomic status interacted with age (2008):** Health insurers are compensated for risks associated with socio-economic factors by using average income per household member to create three 'SES' groupings of low, medium and high and a fourth group of households with more than 15 residents (likely to be institutional care). These are then grouped into three age groups – 0-14, 15-64 and 65+ to create 12 risk groups overall. This zero-sum reallocation across the whole population of insured individuals sees the greatest movements in the 65+ age group, with plus €406.09 going to those in the lowest SES and minus €200.95 away from the highest.

Although the Dutch risk equalisation model is considered as one of the most sophisticated risk equalisation models in the world, recent studies indicate that it under-compensates for certain groups of people in poor health. In the presence of community-rated premiums, these under-compensations imply a predictable loss for the insurers.

Retrospective Adjustments

Because the risk adjusted payments do not fully explain claims variance and thus the problem of risk selection remains, the Dutch model also includes retrospective risk sharing. Risk sharing is both between Funds, and between funds and the central Health Insurance Fund. Retrospective risk sharing has been an evolving feature of health insurance in the Netherlands since 1993, prior to which funds were reimbursed their actual claims experience. The following retrospective adjustments are made at the end of the claiming year²²:

- **Retrospective correction of the number of insured persons per health insurer:** The retrospective revenue calculation from the central Health Insurance Fund is based on estimated membership numbers. At the end of the year an adjustment is made from or to the central Fund for the actual number of members;
- **Retrospective correction of total costs:** If actual total claims experience varies from the amount estimated in the risk adjusted funding, a retrospective adjustment is made from or to the central

Fund. The purpose of this adjustment is to negate the need to otherwise price this risk into the nominal premium charged by the insurer;

- **Outlier risk sharing (HKV Pool):** For each member with a claims experience in excess of €20,000 (increased from €12,500 in 2008), 90 per cent of the claims above this threshold will be adjusted to the Fund from the central Health Insurance Fund;
- **Generic risk sharing among health insurers:** 30 per cent of the difference between actual variable claims cost and that estimated is pooled between all Funds;
- **Proportional risk sharing:** This is a further sharing between Funds of 35 per cent of the actual variable costs of hospital care in excess of estimates, this time after Outlier risk and Generic risk sharing. Funds are fully compensated, retrospectively, for 'production independent' (or fixed) costs of hospital care;
- **Safety net:** A safety net is used if after the above adjustments the insurer's actual cost still deviates by more than €17.50 per premium-paying insured member from the ex-ante estimate. 90 per cent of the amount above or below €17.50 per member is shared with the central Health Insurance Fund.

It is recognised that ex-post risk sharing reduces the incentives for efficient purchasing by funds and therefore it is intended to progressively reduce the sharing of the generic, proportional and safety net risk pools. In 2008, the Government moved in this direction by increasing the outlier risk threshold from €12,500 to €20,000. It has also foreshadowed, for the ex-post sharing at the end of 2008, a five per cent reduction of the generic and proportional risk sharing pools (reducing them to 25 per cent and 30 per cent respectively).

Issues and challenges arising

In this section we outline the main issues and consequences (both intended and unintended) which have arisen as the Dutch system has evolved. Many of these observations were made in the July 2012 paper entitled 'Managed Competition in the Dutch Healthcare System: Preconditions and experiences so far', and we have considered each in the context of the Irish Healthcare system and RES. It is noted in this paper that important preconditions need to be fulfilled for successful application of managed competition. The corner stone of managed competition is risk equalisation. An important lesson from the Netherlands is that fulfilling these preconditions is a long process. The experiences so far reveal some positive effects as well as some serious issues which arose along the journey, some of which still need to be resolved.

(i) Cost issues over time – Managing healthcare budget by controlling volumes

DRG based payment systems provide strong incentives to increase the number of cases treated and to reduce the number of services per case. In contrast to fee-for service systems DRGs incentive hospitals to limit their activity to necessary services and in contrast to global budgets DRGs incentivise hospitals to treat more patients. In terms of expenditure control the effect of DRG-based payments thus depends on which effect prevails. In the early years after the introduction of the 2006 Health Insurance Act in the Netherlands the latter prevailed such that even though prices per treatment reduced volumes increased dramatically such that the consumption of healthcare exceeded Budget.

In the years after the Health Insurance Act 2006, the healthcare budget increased dramatically such that in 2011 a National Agreement was reached to cap growth in the healthcare budget at 2.5% p.a. and insurers were responsible for ensuring the spend didn't exceed that rate of growth. In 2012 the rate reduced to 1.5% and in 2013 (and currently) was 0%. The introduction of a deductible (€360 in

2014) was a big contributing factor in controlling healthcare expenditure due to its effect on consumer demand.

Considerations for Ireland:

Given that DRGs are to be incorporated into the formula for calculating credits insurers receive from the RES and insurers' claims expenditure will become inextricably linked to the provision of DRGs, then similar to the Dutch model Irish insurers could, recognising the incentives of DRG based payments on volumes, design products to contain demand for example through the introduction of co-payments, deductibles, the requirement for those insured to pay costs upfront with subsequent reimbursement etc.

(ii) Insufficiently Effective Risk Equalisation Model

Under-compensation of particular enrolees in poor health is a serious threat to the accessibility and quality of care as well as the level playing field for insurers. The Dutch reforms have shown, however, that the development and implementation of new risk adjusters is a complex and time consuming process (i.e. the risk equalisation model has been under construction for more than 20 years). Moreover, it can be questioned whether the risk equalisation model will ever be able to compensate for predictable, health-related cost variation completely.

Considerations for Ireland:

Changes to the RES can result in significant financial impact on premiums and the financial position of insurers and therefore requires a staged implementation pathway to allow for practical market adjustments.

Another alternative for reducing incentives for risk selection is "risk sharing" (e.g., retrospective cost reimbursement to insurers for enrolees who are undercompensated). This eliminates the predictable loss for insurers and, thereby, the incentives for risk selection. An important drawback, however, is that risk sharing also reduces incentives for efficiency. It is therefore the recommendation of the Authority that a prospective based RES payment scheme be put into operation. Such a scheme would incentivise preventative care and provide certainty to insurers on their RES payments (i.e. individual insurers would not be impacted by the experience of others).

Regardless of the level of DRGs used, there will be instances where some patients require much more resources than the majority of patients belonging to the same DRG. If outlier cases are not paid for separately, insurers are incentivised to avoid these high-cost cases, or for hospitals to under treat and discharge them inappropriately early. Such behaviour could be mitigated against by developing mechanisms to identify these outlier cases and to pay insurers via the RES (who in turn compensate hospitals) for the extra costs of treating such patients.

(iii) Risk Selection – Instruments available to insurers in Netherlands

Despite the requirement of open enrolment in the Netherlands, similar to Ireland, insurers continue to retain several instruments to risk-select which is inefficient as any resources used for risk selection (and not for improving the quality of care, for instance) can be considered as a welfare loss:

- Selective contracting: if an insurer has a predictable loss on patients with disease X, they can choose not to contract with physicians who have the best reputation in treating disease X, which will make the insurer unattractive for patients with disease X.

- Selective marketing: if an insurer knows that certain people are healthier and more profitable, they can target their marketing towards them.

Considerations for Ireland:

Risk selection is undesirable since it reduces access to good-quality care (particularly for the chronically ill) and may reduce solidarity when healthy enrolees and the chronically ill concentrate in different insurance plans (resulting in a relatively low premium for the healthy and a relatively high premium for the chronically ill). The less 'perfect' / suboptimal the risk equalisation arrangement, the stronger the incentive for insurers to risk select and the less incentive to seek to manage benefit outlay costs. This is particularly prevalent in the Irish Private Health Insurance market where there are currently c. 350 plans and insurers use various mechanisms to differentiate between policyholders.

A more effective RES which reduces the relative profitability differences of different policyholders would help to address some of the above issues whereby insurers would be more likely to focus on cost efficiencies than marketing techniques.

(iv) Non-contracted care

The Dutch regulator is not clear about whether and to what extent insurers should reimburse the cost of health care provided by hospitals and physicians that are not contracted. With respect to the spirit of the managed competition model (and comments can equally apply to the current, pre UHI regime in Ireland), it is desirable to have a relatively low reimbursement rate for non-contracted care in order to avoid unnecessary procedures.

Considerations for Ireland:

In the Netherlands, additional DRG based payments are made in the presence of more than one diagnosis requiring treatment. If such an approach was used in Ireland then it would need to be carefully implemented to reduce the incentives for unnecessary procedures.

(v) The connection between Basic Health Insurance (BHI) and Supplemental Health Insurance (SHI)

Most consumers purchase their BHI and SHI from the same insurance company. Since no regulation applies to SHI insurers are free to risk select and to charge risk-rated premiums. Some enrolees, in particular those with a chronic disease do not exercise their options to switch to an alternative insurer for BHI for fear that the new insurer would either not accept them for SHI or charge a higher premium for SHI. The explanation being that their current supplemental insurance includes a guaranteed renewability clause. In these cases, SHI can be a hurdle for some (high-risk) people to switch for BHI.

Since consumer choice of health plan is a crucial precondition for managed competition (i.e. if consumers do not "vote with their feet" then there will be hardly any competition among insurers), such a hurdle is undesirable. Given the rise in health care costs it is likely that SHI will become more important in the future (i.e. benefits may be transferred from BHI to SHI), which may increase the reluctance to switch for BHI.

Considerations for Ireland:

This is not currently an issue in respect of the existing private health insurance market in Ireland and equally would not be an issue under a revised DRG based RES. Under UHI where supplementary insurance is proposed to be risk rated (per the White Paper) consideration will need to be given to what benefits fall under the standard basket of services and to what benefits will be covered by supplementary insurance. Additionally there may be instances where the benefits included within the standard basket change over time. The ability of consumers to select different providers for the standard basket and supplementary cover could offer some benefits in terms of consumer choice and value although logistically may not work in practice as this is likely to lead to disputes over who provides the cover in the event of a claim. Maintaining the principles of Open Enrolment and Lifetime Community Rating in a risk rated market could help if all insurers were required to provide supplementary cover for policyholders based on the age and health status when the cover was first selected, whether in the standard basket or not.

(vi) The level of out of pocket premium

Enrolees contribute to the basic health insurance in two ways: via income-related contributions and out-of-pocket premiums with an average ratio of about 50/45. The other 5% is paid by the Government in respect of people under the age of 18. The average out-of-pocket premium per person per year is about €1,250. The level of out-of-pocket premium has risen over the years, however the number of people who have failed to pay is decreasing due to better follow up on non payers.

Considerations for Ireland:

This would be a consideration under UHI and not under the current private health insurance system. Ahead of the implementation of UHI, work needs to be done to determine the efficient market premium, and then to determine what levels of subsidies should be made between different socio-economic groups, i.e. to determine how much of the premium will be paid to the insurers from general taxation.

Appendix 8 – Implementation Issues Arising Internationally

Issue	Detail	Consideration for Ireland
Grouped DRGs	<p>Patient classification systems differ in the number of groups they define: most systems contain between 650 and 2,300 groups. The Dutch DBC system up to recently was an extreme outlier, comprising about 30000 DBCs in the 2010 version (now circa 4,000).</p> <p>However when it comes to incorporating diagnosis based cost groups into RES, a much smaller number of groups are typically included e.g. 13 Diagnosis-based cost groups (DKGs) are reflected in the Dutch RES albeit in addition to other risk factors such as 20 Pharmacy based cost groups.</p>	<p>There are currently 698 DRGs used in Ireland.</p> <p>Group DRGs (by cost) into a manageable number e.g. 10 at outset.</p>
Insufficient number of disease categories included in the RES e.g. Israel	<p>Israel implemented a form of condition-specific risk sharing for 5 severe diseases. Following this change the total number of reported cases with these severe diseases grew by 40% from 1995 to 1998 when introduced, while total population grew only by 9%.</p> <p>The view is that there are now other diseases which require substantive expenditure per patient and should be risk equalised in addition to the 5 major categories already included.</p>	Choose an appropriate number of underlying DRGs / DRG groupings
Inclusion of indicator of the presence of chronic diseases	<p>Persons with chronic diseases are predictably higher users of health care resources. The Dutch system which incorporates the most sophisticated use of chronic disease in RE includes circa 20 Pharmaceutical Cost Groups, mainly as an indicator of the presence of chronic illness.</p> <p>Chronic disease cost groups are also used as risk factors in Germany where 80 specific diagnoses with varying levels of severity are used resulting in 106 morbidity groups.</p>	<p>Per the White Paper 'The most striking issue from a health system design perspective is not the impact of ageing or income but, rather, the fact that the majority of healthcare resources are used by a minority of the population. Research from the United States indicates that 64% of all healthcare costs relate to only 10% of the population, while half of the population absorb only 3% of all healthcare costs.' Research further indicates that high users of health services often suffer from multiple chronic conditions.</p> <p>While it would not be feasible to include pharmaceutical cost groups in the current Irish RES because, unlike in the Netherlands, in Ireland most prescribing happens outside of the insurance system. Consequently it would not be possible to collect the relevant data from insurers so this could become an additional option under UHI.</p>

Issue	Detail	Consideration for Ireland
Equity: Assuring adequate payment for outliers and high-cost services	<p>While DRG-based hospital payment systems can be considered to provide adequate reimbursement for the average patient within each DRG, they overpay insurers for patients with below-average resource consumption and underpay for patients with above-average costs. DRGs in all systems incorporate patients that require much more resources than most patients belonging to the same DRG. The high cost 'outlier' cases often account for a sizeable share of total hospital costs and consequently have a strong influence on the average costs of cases within a DRG.</p> <p>Ensuring that DRGs comprise cases with relatively homogeneous costs has been a major concern in all countries as evidenced by the increasingly large number of DRGs in all systems.</p> <p>Most countries including Ireland have identified mechanisms to identify outlier cases and to pay hospitals separately for the extra costs of treating such patients. Without such mechanisms activities such as 'cream skimming' and 'dumping' can occur.</p> <ul style="list-style-type: none"> • Cream skimming involves hospitals attempting to admit only those patients within each DRG that can be expected to have costs below the payment rate (e.g. by selecting patients without co-morbidities if these are not adequately accounted for within the DRG system). Similarly insurers can design products which would be unattractive to high risk individuals. • Dumping involves dumping of unprofitable patients by transferring them to other providers or avoiding them altogether. 	Consider allowing for outlier cases in the RES also by increasing the DRG-based payment for long-stay outlier cases.
Increase in activity / the number of treated patients	<p>DRGs act to incentivise hospitals/insurers to treat a greater number of patients and to minimise the number of bed nights and procedures per patient. The impact of under treating patients may potentially result in an increased level of readmissions resulting in an increased level of DRG payments.</p> <p>In order to control frequent readmissions, Germany and England financially penalise hospitals if patients are readmitted for the same problem within 30 days after initial discharge. For these patients, hospitals do not receive a second DRG-based payment.</p>	Consideration of rules around payment of readmissions within short time frames.
Up-coding	<p>Hospitals or insurers changing coding or practice patterns such that patients are reclassified into different DRGs with a higher payment rate.</p> <p>Several countries have implemented auditing systems e.g. in Germany, teams are sent to randomly selected hospitals to evaluate the coding and treatment of patients by auditing patients' medical records.</p> <p>Other control mechanisms include determining global budgets or volume thresholds, which ensure that hospitals do not increase their activity beyond predetermined limits.</p>	<p>Using a DRG based approach could incentivise up-coding of claims, however we note that the existing HIPE procedures should adequately protect against this occurring.</p> <p>The regular recalculation of DRG weights and monetary conversion factors reduces the ability of hospitals/insurers to benefit from up-coding.</p>

Appendix 9 – Benchmarking of proposed Irish regime with the Dutch system

The Authority recommended in 2010 that risk equalisation payments be funded via the tax system, that payment rates in respect of each risk factor would be determined and published in advance and that the system would include age (with 5 year age bands), gender and a measure of chronic illness as risk factors. Each of these features is consistent with the Dutch system. This is consistent with the Minister's commitment to implementing a more refined health status measure to equalise risk in respect of the higher costs of insuring less healthy patients of all ages, as set out in his 23 April 2014 letter to the private health insurers.

The Dutch health insurance system, on the other hand, is a universal system, covering primary services and hospital services with a single standard level of benefits apart from a choice of deductibles and hospital networks. The differences between the Dutch RES and the proposed Irish RES arise as a result of the differences in the health insurance systems. Further details of these differences are outlined in the Table A9.1 below:

Table A9.1

Area of Consideration	Proposed Irish System	Dutch System	Note
Product Variation	C. 350 different product currently offered in the private health insurance market	Single standard level of benefits apart from a choice of hospital networks and level of deductibles	
Risk Factors Included			
<i>Age and gender</i>	Age (by 5-year age band) and gender	Age (by 5-year age band) and gender	
Product Type	Advanced/Non Advanced	Standard Product	
<i>Pharmaceutical Cost Group / Chronic Disease</i>	Pharmaceutical costs groups are not practical in the current RES	Pharmaceutical Cost Groups used, mainly as an indicator of the presence of chronic illness	It would not be feasible to include pharmaceutical cost groups in the current Irish RES because, unlike in the Netherlands, in Ireland most prescribing happens outside of the insurance system and consequently it would not be possible for insurers to collect the relevant data.
Funding	<p>Funded via a levy on private health insurance policies.</p> <p>Risk Equalisation Fund is funded by a levy in respect of all insured persons.</p> <p>Payments commenced from the Risk Equalisation Fund at the beginning of 2013.</p>	<p>Funded via the taxation / social security systems.</p> <p>Health Insurance Fund is funded by a levy in respect of all incomes.</p> <p>In the Netherlands the payments are made from the Health Insurance Fund, which is funded by charge payable in respect of all incomes.</p>	It is not appropriate in the current Irish voluntary system to apply a levy to the whole population to fund the RES, when only half of the population have health insurance. The situation would be different upon implementation of UHI when the entire population would have insurance.
Proxies for Socio Economic Group	N/A – In Ireland, only c. 12% of the insured population is from the two lowest income socio-	The Dutch system uses three risk factors related to socio-economic group (income, employment status and	On average, members of the lowest income socio-economic groups are less healthy than members of

Area of Consideration	Proposed Irish System	Dutch System	Note
	economic groups the benefit of including these proxies for socio-economic group as risk factors would be limited, while it would greatly increase the complexity of the system. The data is also not available to insurers.	address). However, it is important to note that even in the Dutch system the impact of these risk factors on payments is much lower than the impact of the other risk factors discussed above.	higher income socio-economic groups. Proxies for socio-economic group are, therefore, more useful in RESs in UHI markets, where all groups are well represented amongst the insured population.