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FACULTY OF COMMERCE, LAW AND MANAGEMENT

An examination of the theory and planned application of a risk equalization mechanism within the South African medical schemes industry

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Abstract

S29(n) of the Medical Schemes Act 131 of 1998 proclaims all schemes may set the levy (price) also known as a member contribution due for each available benefit option based exclusively on two characteristics: Income and number of dependents. The former pricing procedure results in a regulatory requirement known as community rating. In reality, there are other observable characteristics which are more indicative of claims experience such as age and a patient health condition(s) which medical schemes cannot take into consideration in setting the levy. The inevitable consequence of this restriction is that high and low risk members could be in the same scheme and the same risk pool. Therefore, two schemes offering the exact same benefits would have different prices. Arguments are put forward which suggest that in the interests of preserving social solidarity, the introduction of a risk equalization mechanism would act as a necessary support for the current community rating provisions. That is, a risk equalization mechanism would transfer funds between the two schemes so that in the end both schemes would charge the same price. Although it was proposed in the 1990s, that a risk equalization mechanism be adopted within the South African medical schemes industry, it was not implemented. Grounded theory is used to build a theoretical basis for risk equalization using data that is extrapolated from the situational maps of other similar global private, healthcare funding markets that have enacted and applied community rating legislation alongside some form of risk equalization. The general theory which emerges from the grounded theory process shows that generally, in private, healthcare funding markets where community rating is adopted, a risk equalization mechanism is also adopted. Not surprisingly, consistent with theory and global experience, the re-introduction of a community rating system as a centerpiece of the 1998 Medical Schemes Act with plans to also adopt a risk equalization mechanism was a sound policy decision. However, recent healthcare policy changes suggest that medical schemes will not disappear completely but will play a less significant role in future. As such, the most opportune time for implementing risk equalization in South Africa has in all probability passed.

Keywords: Grounded theory; Community rating; Risk equalization; Medical schemes

Declaration

I, Sibongile Zwane, hereby declare that this is my own unaided work, the substance of or any part of which has not been submitted in the past or will be submitted in the future for a degree into any university and that the information contained herein has not been obtained working under the aegis of, any other person or organization other than this university. It is submitted in fulfilment of the requirements for the degree of Master of Commerce (MCom) at the University of the Witwatersrand, Johannesburg.

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Glossary of Terms

The below term definitions are adopted from Hutcheson (2012) and Van den Heever (2012:2) unless stated otherwise.

Actuarially fair premium - A term defined by neoclassical economics to mean a situation where the premium is equal to the expected costs of the insured risk in the absence of moral hazard (Kenneth Arrow, 1963). A fair premium for individuals varies in according to different individual risk characteristics also known as an experience-rated health insurance premium (Pupp 1981:612; Meyers and van Hoyweghen, 2018:434)

Community rating – refers to the regulation of medical fund or health insurance price (levy) determination practices which can take on several forms, notably: community rating per health plan which requires medical schemes to charge all consumers that choose the same plan regardless of the individual's expected cost of care or restrictions on rating factors used to determine prices or rate-banding (i.e. a minimum and maximum price between rating categories) or can also refer to guaranteed renewability. Currently, in the South African medical schemes market, a community rating is applied wherever a contribution due for each available benefit option is determined. Hence, different plans can have different community-rated prices. A community rating applies wherever the contribution is determined and is used as a risk-solidarity mechanism to channel cross-subsidies from low-risk consumers to high-risk consumers (Pauly, 1970:407; Pupp, 1981; Rothschild and Stiglitz, 2011; McLoed, 2005:153; Van Kleef et al., 2018)

Contribution table: A statistical table containing the scheme community rate for each option. (McLeod et al., 2004)

Council for Medical Schemes - A regulatory body responsible for the statutory supervision of medical schemes in South Africa. Section 7(n) of the Medical Schemes Act No. 131 of 1998 outlines the statutory functions and duties of the Council for Medical Schemes

Cross subsidization - refers to the empirical difference between the community rate charged by an insurer and the fair actuarially insurance premium (Pupp, 1981:610)

Demand heterogeneity – refers to consumers who represent the same actuarial risk to medical schemes but who differ in their attitudes toward risk and willingness-to-pay for medical insurance or consumers with identical risk preferences who face the same expected losses but may differ in the spread of their risk distributions (Geruso, 2017:930)

Guaranteed renewability – refers to cases where regulation compels medical schemes to renew a health insurance contract or medical scheme coverage at standard prices and standard conditions (Pauly et al., 1995; Van Kleef, 2018)

Health Plan – refers to a risk-bearing entity that performs at least some insurance function, but that may also manage or provide health care. So, on the one hand, a health plan can be a traditional commercial insurer that has no contractual relationship with the providers of care, and which (partly) reimburses the fee-for-service bills sent by the providers to the consumers also known as "remote third-party payer". On the other hand, a health plan can be a managed care organization, e.g., a capitated provider group, that itself delivers the care to its members. Optimal provider reimbursement is relevant for remote third-party payer health funds only (Enthoven,1994)

HMO (Health Maintenance Organization) - A cluster of managed health care organizations which generally provide a predefined, comprehensive set of health services to a voluntarily enrolled population through contracts between the HMO, insurers, and health care providers. Healthcare providers are reimbursed on a capitation basis or through risk-sharing arrangements.

HMOs can integrate the financing and provision of healthcare (Report of the Advisory Group on the Risk Equalization Scheme: Minister for Health and Children's independent review of the Risk Equalization Scheme, 1998)

Law of Large Numbers or Law of Averages – A statistical principle related to the central limit theorem used to explain the pooling of losses in the insurance business. Risk pooling is strengthened by the law of large numbers as it enables the actuary to estimate expected future costs to a medical scheme within a reasonable confidence level (Smith and Kane, 1994:1). Therefore, the larger and more diverse the risk pool in question, "the more stable and predictable the results and the lower the risk of insolvency" (McLeod and Ramjee, 2007:11)

Medical schemes – refers to a regulated, voluntary private healthcare financing and fee-for-service insurance market arrangement that is available in South Africa (McLeod et al., 2004)

Managed Care – refers to arrangements in which insurance and service delivery are fully integrated. Some examples are staff and group model health maintenance organizations (HMOs); arrangements in which insured people are restricted to a defined set of providers, such as independent practice associations (IPAs); and arrangements in which the choice of providers is unrestricted, but insurers provide incentives to use selected providers and monitor the care provided, such as preferred provider organizations (PPOs) that conduct utilization review of costly services (Gilead, 2000)

Occupational scheme - Historically, the first health insurance instruments developed as a part of the transition towards a commercialized private health system in South Africa. Refers to an employer-sponsored medical scheme regulated by the Medical Schemes Act No. 131 of 1998 as a "restricted membership scheme"

Open scheme - A type of medical scheme permitted by law, from the year 2000 onwards to accept any applicant for enrolment as a member of a particular medical scheme subject to a mandatory waiting period and may impose age related penalties

Open enrolment - the legal requirement for open medical schemes to accept any member of the public who applies to join at the standard community rate (McLeod et al., 2004)

Prescribed minimum benefits (PMBs) - A predefined schedule of healthcare benefits that must be offered by all medical schemes as minimum basic coverage. Annexure A to the Regulations of the Medical Schemes Act No. 131 of 1998 defines PMBs in terms of approximately 270 diagnosis-treatment pairs

Preferred risk selection/Cream skimming/Cherry picking - Risk selection practice/s employed by the insurer where preference is given to insured risks where the risk-adjusted per capita payment is more than the expected cost level. Particularly, in instances where a risk pool is made up of heterogeneous risk groups (van de Ven and van Vliet, 1992:23; Kinghorn, 1996)

Propitious selection - Refers to a situation where individuals with a higher probability of loss or greater propensity to claim against the insurance policy are the least likely to purchase insurance cover (Hemenway, 1992:250-251)

Restricted membership scheme - A type of medical scheme permitted by law to limit membership to a specified group associated with a specific employer, industry, profession, and/or trade union (MSA, 1998)

Formal risk adjustment – refers to a series of techniques that make use of predefined risk adjusters to predict or explain risk-adjusted predicted health care expenses for a defined population or individual members or for use in the retrospective evaluation of health care provider performance or to allocate resources internally among providers (Blumenthal et al.,

2005). Risk adjustment is also said to occur when an insurer can alter the price of medical insurance based on the risk characteristics of the individual. For example: Surcharges for persons with diabetes

Risk equalization – refers to a practice that involves the transfer of funds between South African medical schemes based on risk profile (Kaplan, 2015:115). Risk equalization mechanisms are compensation funds that facilitate the transfer of risk-adjusted equalization payments to and from insurers with the aim of achieving risk cross-subsidization from low-risks to high-risks as intended by a healthcare financing market regulator (Van de Ven et al., 2017)

Risk factor - refers to a health, demographic or other factor identified by the actuary or pricing professional which assists in predicting the cost of healthcare for a specific group of people (McLeod et al., 2004)

Risk pooling – Refers to the grouping or classification of risks in the insurance industry which is underpinned by the law of large numbers. The grouping of risks can occur either at a benefit option level (where each option's risk pool is considered be separate and self-sustaining therefore community rating occurs within each benefit option), the scheme level (where all the benefit option risk pools within an individual scheme are combined and treated as a single large risk pool for the purposes of community rating), or at an industry level (where the risk pools of all medical schemes across the medical schemes industry are combined into a single large risk pool and community rating is applied at an industry level (Kaplan, 2015:15)

Risk rating – refers to an insurance contract where the premium reflects expected claims (Van Kleef, 2018)

Risk profile - refers to the distribution of a risk factor according to some other variable for example age in a scheme or the industry (McLeod et al., 2004)

Risk Equalization Fund (REF) - A statutory risk equalization mechanism proposed in the year 2005 but never introduced into the South African medical schemes market (McLeod et al., 2004)

Ex-post risk solidarity – refers to the limited redistribution from the unexpectedly healthy towards the unexpectedly sick. (In Kirch W. (eds), Encyclopedia of Public Health, Springer)

Risk sharing – The concept of risk sharing is an arrangement that can take several forms for example outlier or proportional risk sharing. For the purposes of this dissertation, risk sharing is deemed to refer to instances where a regulator retains a portion of the risk related to insurer healthcare expenditures or where risk sharing occurs between insurers and contracted providers of care (Van de Ven et al. 2001, McGuire and Van Kleef, 2018:105-131)

Sickness funds - refers to the earliest providers of sickness insurance funds usually organized by companies or labour unions that provided cash payments for medical care or in some cases medical benefits to members that were unable to work due to sickness or injury (Murray, 2008)

Statutory returns - the annual and quarterly returns made by medical schemes to the Registrar of Medical Schemes, as prescribed by the Medical Schemes Act (McLeod et al., 2004)

Social solidarity - refers to healthcare market reform mechanisms implemented in the socialization of health insurance markets. E.g., the principle of community rating and prescribed minimum benefits (PMB)

Chapter 1:
Introduction

1.1 Study aim: The aim of this research inquiry is to present an examination of the application of risk equalization, within the South African medical schemes' context, drawing upon international evidence and different schools of thought to adequately frame a theoretical discussion on risk equalization.

1.2 Background and brief outline of the topic

South Africa there are two medical funding markets: First, are medical schemes regulated in terms of the Medical Schemes Act 131 of 1998. Second, are insurers which sell Gap Products regulated now in terms of the Insurance Act of 2017. The previously mentioned markets are completely different. The focus area for this dissertation will be the South African medical schemes market. Currently, the Medical Schemes Act No.131 of 1998 sets out specific terms and conditions that are applicable to the admission of a medical scheme member and his/her dependents. One such condition is the determination of contributions based solely on income or the number of dependents or both. The former gives rise to a regulatory requirement known as community rating. In addition to community rating, medical schemes are required to provide prescribed minimum benefits (PMB); are not permitted to refuse any application (i.e., open enrolment) and may not cancel membership other than for a limited number of reasons such as non-payment. The previously mentioned market features exist in the absence of a risk equalization mechanism in support of community rating. The implementation of community rating rule 'forces' the pooling of risks and imposes a 'one size fits all' pricing approach which distorts prices and, in some cases, may even bring about market inefficiencies and substantial welfare losses (Arrow, 1963; Zweifel and Frech, 2016).

On the other hand, risk equalization should be applied within prospective or pre-paid medical funding markets where the objective is to "level the playing field", so that medical funds are not able to gain from attracting profitable members nor lose from attracting unprofitable ones

in line with the not-for-profit market orientation of the South African medical schemes market (Ash et al., 1989). It has been announced several times in South Africa that some form of risk equalization is necessary. However, the announced policy has never been implemented. A grounded theory process is used to review South African and global risk equalization experiences a means to build a general theory that is 'grounded upon' situational data. The outcome of the grounded theory process will serve to establish whether the once-planned risk equalization implementation within the South African medical schemes industry is still required even though the medical schemes industry continues to function in its absence, albeit with challenges.

1.3 Assumptions, scope, and relevance of the study

It is appropriate to use the terms "medical schemes", "medical schemes market" or "medical schemes industry" throughout the dissertation, when reference is made to the South African market, as reflected in the title of the dissertation. The scope of this dissertation is limited to the theory and the practice of risk equalization within the context of the South African medical schemes industry drawing from lessons learned in global private, health care funding markets. To clarify, medical schemes have risk pools. However, risk-rated pools do not exist in the South African medical schemes markets because schemes are prohibited by law from making use of risk rating to determine member contributions. For the purposes of this dissertation, risk equalization and risk adjustment are deemed to be different but the related concepts. On the one hand, risk equalization is deemed to have more of an 'exogenous focus' that is most suited to prospective healthcare finance where the individuals' willingness-to-pay is important and the common goal is to "level the playing field" so that medical funds are not able to gain from attracting profitable members nor lose from attracting unprofitable ones (Ash et al., 1989). On the other hand, risk adjustment is deemed to have more of an 'endogenous, retrospective focus' and is applicable when the societal goal is efficiency of health care service provision and health care resource allocation across a given population regardless of an individuals' ability to pay. Hence, a detailed discussion of risk adjustment is not required for the purposes of this dissertation. A single payer public health insurance system in the form of a national health

insurance system (NHI) constitutes a government monopoly in healthcare finance and thus falls outside the scope of this dissertation. As such, a discussion of risk equalization within the context of a national health system is not required for the purposes of this dissertation. However, given that South African healthcare policy appears to be moving towards social healthcare, where medical schemes are likely to play a less significant role, it may be necessary to briefly discuss this aspect further to enhance the relevance of the study. For ease of reference, a glossary of terms is made available to the reader.

1.4 Study limitations and exclusions

South African medical schemes are involved in the financing of health care services and do not provide health care services to members which means that a discussion of risk adjustment is not relevant for this for the purposes of this study. Practical constraints do not allow for a more comprehensive review of income cross-subsidisation and the potential implications of a risk equalization mechanism on medical scheme solvency requirements. A discussion of medical price inflation falls outside the scope of this dissertation because with or without inflation, both community rating and risk equalization remain relevant considerations. Risk adjustment is said to occur when an insurer (i.e., medical scheme) can alter the price of medical insurance based on the risk characteristics of the individual. For example: surcharges for persons with diabetes. The implementation of risk adjustment is not possible in South Africa due to the existence of legislation in favour of community rating and the absence of risk rated pools within the South African medical schemes industry. Equally, risk sharing which normally supplements risk adjustment and premium regulation will also be included but only insofar as its relevance to risk equalization. Unless otherwise stated, this dissertation will adopt the same terminology used in literature to minimize confusion.

1.5 Problem Statement

The South African medical schemes market consists of approximately eighty registered medical schemes which are broadly divided into open and restricted schemes operating alongside private health insurers which provide Gap Cover. Medical schemes continue to be the primary source of health care funding. Generally, medical scheme coverage is linked to

or is a benefit of employment contracts within the formal economy (Woolard et al, 2011). At present, operations in the medical scheme industry are informed by the principles of community rating, prescribed minimum benefits without any form of risk equalization (McLeod, 2005:157). Section 29(n) of the Medical Schemes Act 131 of 1998 permits the determination of contributions to be based on member income or number of dependents or both. Member income or number of dependents are factors that are independent of risk. The principle of community rating is applied to determine the contribution due for each associated benefit option. In other words, the 'price for cover' is the community rate per PMB (McLeod, 2005:153, McLeod and Ramjee, 2007:12). In markets without premium regulation, competition forces premiums to be in accordance with risk due to sources of heterogeneity (at an individual level) with respect to illness and degrees of risk aversion among others. Therefore, the presence of consumer heterogeneity implies that the present value of expected future healthcare expenditure also differs across different members. At times, government intervention has no economic justification and could even be contrary to sound economic arguments. In this instance, community rating prevents medical schemes from charging risk-based premiums which is a violation of marginal cost pricing (Frech and Zweifel, 2017:414). As such, principle of community rating is an example of government intervention for the ideological grounds of social solidarity. Community rating imposes the use of uniform contributions that are independent of risk in a highly competitive market which offers choice. The linchpin of community rating is cross-subsidization and is considered by authors such as McIntyre et al. (2007) as one of the key tenets underpinning the initial design of medical schemes in South Africa. Faulhaber (2005) defines a cross-subsidy as "an internal flow of cash implicit in the rate structure" from those paying "too much" to others that are paying "too little." Hence, in the context of medical schemes market, cross-subsidization is said to occur when the healthy, younger, low-income scheme members subsidize, on average, the unhealthy, older, high income scheme members during the period of cover. According to Zweifel and Breuer (2006:172), cross-subsidization can have counter-productive effects.

Pupp (1981:610) defined the concept of cross-subsidization as the empirical difference between the community rate charged by an insurer (i.e., the value of insurance that is revealed by an individual's demand pattern) and the fair actuarially insurance premium (i.e., the true value of insurance).The definition of cross subsidization put forward by Pupp (1981) suggests that the presence of information asymmetry and other behavioural (demand) frictions will lead to a situation where some members pay "too little", and others pay "too much". Faulhaber (2005:442) states that in a competitive market, market forces facilitate an adjustment of the cross-subsidy. Hence, in competitive, unregulated markets there is no need for a risk equalization mechanism. The former suggest that cross-subsidization can arise only in instances where a government authority establishes prices through regulation and restricts entry. In South Africa, the medical schemes market is competitive with regulated pricing and unrestricted entry. The principle of open enrolment makes self-selection within health plans possible and ensures that competition is not curtailed (Zweifel and Breuer, 2006:171). In spite of the non-profit motive, medical schemes may wish to compete for healthier individuals in an effort to offset the higher costs of healthcare and to try offer more affordable coverage that aligns more closely to the risk profile of members since they are unable to adjust contributions based upon risk propensities. All in all, this leads one to conclude that prevailing regulation fails to fully prevent risk selection resulting in inefficient market outcomes Also, (ideally) cross-subsidisation within regulated markets should act as an effective equalising factor akin to the forces of demand and supply within competitive markets but it is not (Zweifel and Breuer, 2006).

In addition to community rating, medical schemes are required to provide prescribed minimum benefits (PMB); are not permitted to refuse any application (i.e., open enrolment) and may not cancel membership other than for a limited number of reasons such as non-payment. This means that the absence of mandatory membership within the medical schemes market means that healthier and younger members have the option to opt out of the market because they are more likely to underestimate the value of having medical scheme coverage. The underestimation tends to discourage healthier, younger members from buying coverage

which translates to an erosion of cross subsidization across the different groups. The previous result makes sense because age is a risk factor and realistically health status is partly or completely observable once an illness has materialised which is an effect that community rating does not consider (Hutcherson, 2012; Spinnewijn, 2017). That being said, at the individual level, inefficient cross subsidization coupled with open enrolment requirements may still result in a '*future pensioner medical expense time bomb'* where older, high-risk members at the retirement age that on average have a greater propensity to claim for more expensive medical services, more frequently, as they continue to age, will, in effect be subsidized by increasingly fewer younger members who earn less income. The '*future pensioner medical expense time bomb'* phenomenon occurs due to barriers to efficient cross subsidization. One possible barrier could be the historical dominance of employment-based medical schemes coverage in South Africa which could potentially lead to the discontinuity of medical scheme coverage and possible market failure beyond the pensionable age (Woolard et al, 2011).

In reality, there is limited evidence to suggest that the elderly, are necessarily also wealthy. On the contrary, the elderly in South Africa, usually have two main sources of income: private retirement funds and the state pension fund. Usually, many people are not able to save adequately for retirement and as a result depend solely on the state pension fund which is not enough to pay for medical scheme membership. This means the elderly may have to forfeit medical cover in favour of other living expenses (Woolard et al, 2011). Even for elderly persons that can afford to remain members of medical schemes, in many instances, once individuals reach pensionable age and retire, they often cannot afford the more comprehensive benefit plans and thus, move down the benefit stack – at a time when they arguably require the highest tier of benefits (Cutler and Zeckhauser, 1998; Van Zyl and Van Zyl, 2016). Alternatively, the elderly can switch to open schemes upon termination of employment, which are also subject to open enrolment. However, open schemes may also not be able to provide to basic coverage at an affordable rate due to the mandated application of late joiner penalties. If you recall, medical schemes are not allowed to discontinue existing

policies, even in cases, where continued membership is expected to be unprofitable in future (i.e., beyond the retirement age). As such, higher contributions may eventually drive older members out of the market not younger members. So, the classical argument that the presence of higher risk types will lead to increases in contributions and drive lower risk types out of a market does not hold because there is limited evidence in support of adverse selection within medical scheme markets (Akerlof, 1970; Spinnewijn, 2017).

On the flipside, another plausible cause of inefficient cross subsidization could be that of job insecurity and job scarcity amongst the youth in South Africa. It is no secret that the South African population suffers from persistently high rates of unemployment with a large portion of the unemployed being the youth, who also happen to be potential medical scheme members (Pupp, 1981:626; Neuhaus, 1995:96; Pearmain, 2000; McLeod et al., 2002; McLeod & Ramjee, 2007). Unfortunately, for the value of cross subsidization to be maximised through more efficient risk pooling, there must be an adequate number of risk averse young, healthy members to subsidise older, sickly members with higher-than-expected medical costs (Smith and Kane, 1994).

In sum, the current application of community rating rule 'forces' the pooling of high and low (heterogenous) risks and imposes a 'one size fits all' pricing approach where medical schemes cannot price based on observable risk factors such as age. To compensate medical schemes for the inability to price in accordance with risk, once high and low risks are pooled, (for whatever reason), a risk equalization as supplementary regulation in support of community rating becomes important, or even essential. A risk equalization mechanism is to be applied with the objective of "level the playing field", so that medical scheme funds are not able to gain from attracting profitable members nor lose from attracting unprofitable ones in line with the not-for-profit market orientation of the South African medical schemes market (Ash et al., 1989). It has been announced several times in South Africa that some form of risk equalization is necessary. However, the announced policy has never been implemented. (McLeod, 2009; Fish and Ramjee, 2007, Hutcheson, 2012:219; McLeod and Ramjee 2012;

Kaplan, 2013; Ramjee and Vieyra, 2014). More recently, healthcare policy changes seem to suggest that medical schemes will not disappear completely but will play a less significant role in future. As such, perhaps one should acknowledge that the most opportune time for implementing risk equalization in South Africa has in all probability already passed.

1.6 Research objectives

The broad objective of this research study is to engage with the larger global literature, reflect on the broader evidence and draw insights based upon the risk equalization experiences of private, health funding markets in other countries. A more specific objective is to put forward a general theory of risk equalization, detail implementation plans and document the relevance of a risk equalization mechanism within the South African medical schemes market.

1.7 Research Questions

The dissertation seeks to answer the following key research questions:

1. What are the deficiencies and/or challenges that gave rise to the proposed introduction of risk equalization as a regulatory reform in South African medical schemes market?
2. What are some of the best practices (if any) that can be derived and/or lessons that can be learnt from the experiences of private health funds in other countries' regarding the adoption of risk equalization?
3. Is the once-planned South African application of risk equalization still required within the medical schemes market?

1.8 Research Design and Methodology

There are multiple ways to view and interrogate and provide possible answers to a given research problem. The chosen research methodology to be used for this enquiry is a qualitative research method. A qualitative grounded theory study is useful for developing a general theory whereas a quantitative study serves to validate a theory once it has been developed. Qualitative researchers focus on understanding and interpreting real word events in context specific settings as they unfold naturally where scholarly arguments are based on the underlying philosophical nature of each paradigm rather than statistical analysis of empirical data

(Golafshani, 2003). In this instance, further elaborations on the notion of risk equalization to be presented initially as a concept and thereafter as the evolution of social process rather than an isolated occurrence at a specific point in time (Chamberlain-Salaun et al., 2013). Traditional qualitative data collection methods such as interviews are deemed not be a reliable method of soliciting satisfactory responses to the research questions at hand. The use of a questionnaire, focus groups or interviews as a qualitative method will bring about random, subjective, and unsubstantiated viewpoints from different stakeholders which will result in a completely divergent set of research outcomes unrelated to the research objectives at hand as opposed to documented, verifiable facts obtained from credible references. Also, in South Africa the lack of publicly available risk equalization transfer data means that the sampling of empirical data is simply not possible at this stage.

The former is also a compelling reason as to why a qualitative study was chosen as opposed to a quantitative study. The use of three fundamental questions to test the legitimacy of a given research inquiry can be used to obtain a multidimensional understanding of the phenomenon at hand. Denzin and Lincoln (1994) have suggested. Each question is underpinned by a specific worldview or paradigm. Firstly, the ontological question relates to a more factual or realistic stance; secondly, the epistemological question represents an interpretive stance on what reality should be or a knowledge of the reality; and lastly, the methodological question relates to a factual assessment to determine the truth based on experience or observations made over time. The research design to be introduced will facilitate the knowledge building process employed to obtain an answer to the research questions.

The main purpose of this section is to establish the philosophical foundation of the chosen research design by describing the methodological and theoretical context of the study which aims to discover and understand the patterns and processes inherent in the interaction of application and theory of risk equalization within different healthcare contexts both in South Africa and abroad (Stern et al., 1982). Grounded theory is the chosen research method to be

used to make a theoretical contribution in this instance as first postulated by Glaser and Strauss (1967). Strauss and Corbin (1994) describe grounded theory as a methodology which is useful for defining and explaining the morphology of a system or behavioral shifts of a subject under study. A key advantage of grounded theory is that it enables systematic data collection and simultaneous comparative analysis in the inductive theory development process (Chamberlain-Salaun et al., 2013).

A central feature of grounded theory as a conceptual framework is thematic and constant comparative analysis based upon emergent theory extracted from the sample of data sources that form part of the literature review (Wilson and Hutchinson, 1991; Strauss and Corbin, 1994). The qualitative comparative analysis required by grounded theory involves theoretical and purposeful sampling of credible textual data sources dating from the last decade until 2018 (Cutcliffe, 2000:1477). The appropriate research paradigm to be utilized for the purposes of this study will be symbolic interactionism which will attempt to determine the symbolic meanings of policy responses and actions using conceptually dense textual knowledge.

1.9 Data analysis in grounded theory

The initial approach in addressing the research question is to conduct an in-depth comparative textual analysis, documentary assessment and thorough review of literature to provide a synthesis of current views (Denzin and Lincoln, 1994). A secondary more deductive approach involves the use of a qualitative comparative analysis as means to capture the experiential trajectory of the risk equalization phenomenon both in South Africa and abroad. A comparative analysis of international risk equalization related practices proves useful. The simultaneous systematic data collection, thematic and comparative analysis will be beneficial in performing linkages, source(s) cross references to allow the theory to emerge thus providing a full and rich understanding of the patterns and processes that pertain to the topic under review. It is expected that key categories and concepts to emerge during the data analysis phase giving rise to the need to sample textual data sources. Cutcliffe (2000:1477) states that the theoretical and

purposeful sampling of sources should be allowed to continue until each category is saturated in other words until nothing new emerges from the data under exploration.

1.10 Research sampling technique in grounded theory

Cutcliffe (2000:1477) observes that grounded theory is a form of non-probabilistic sampling. Maximum variation sampling will be employed to not limit the number of data sources to be utilized as part of the literature review for the purposes of theoretical completeness. However, the focus will be targeted at institutional participants who are deemed to possess proven and credible experience in the topic of interest (Morse, 1998).

In other words, as hypotheses emerge from the textual data this will inform the data sample size as noted by Baker et al (1992). There is a risk of unintentionally 'boiling of the ocean' through extensive and more varied sampling technique resulting in ambiguous research outcomes if sampling is not conducted in a purposeful manner. Therefore, where possible sampling will be purposeful and in line with key themes or categories presented in the textual analysis. The introduction of theoretical coding is useful for constructing relevant research questions such as `What is happening here?' Stern (1980:281) recommends the use of substantive codes to encode substance into the data even to the extent of quoting research actors verbatim although the use of theoretical coding is preferred for the purposes of inducing factor related theory. Substantive codes will be used possible in as far as it helps to answer the following questions: `What is this?' `What are the components of this social process?' (Strauss and Corbin, 1994; Cutcliffe, 2000). Substantive codes in the form of key definitions, descriptions of the risk equalization process across different countries to be included. Key differences in the practice of risk equalization to be highlighted in tabular or graphical form, where possible. The integration of substantive codes interwoven into a theory prove useful in allowing logical inferences to be drawn and related back to substantive codes as hypotheses (Cutcliffe, 2000:1482).

1.11Data sources

This dissertation uses the qualitative research method which has a naturalist view of the phenomenon of interest that is subjective in nature, influenced by a dominant world view and the different social contexts that emerge during the research process. The research process employed will be repetitive in nature across different sections. Conceptual and textual data will be used to tell a story of each country's stance on risk equalization within healthcare markets based on interactions between different groups of active participants from both private and public sectors (Cutcliffe, 2000:1477). The author will refer to credible, published textual material to ensure that the study findings remain consistent. A glossary of terms is included to minimize confusion caused using industry jargon across different publications.

Relevant sections contained in publications produced by the Research and Monitoring division of the Council for Medical Schemes (CMS) as statutory body providing regulatory supervision of private health financing in South Africa are also included. CMS publications are deemed to represent the views of the South African medical schemes industry apart from bargaining council schemes. The rigor, dependability and applicability of the research study is persevered through insights drawn from sound institutional knowledge such as information sourced from the archives of actuarial societies, centers for actuarial research, relevant industry associations, published academic journals and the state produced publications. The synthesis of the textual data collected and relevant categorical propositions on the social phenomenon will be validated and compared across interdisciplinary literature until theoretical saturation is achieved. Emergent themes, categories and fundamental convergence points identified across multiple and different information sources will be noted as part of the research data collection process (Creswell and Miller, 2000).

1.12 Contribution of the study

The research inquiry hopes to give impetus to discourse within the relevant research communities and seeks to lay the groundwork for ongoing private, financing healthcare industry debate on the subject matter. The findings will constitute a modest yet progressive

contribution to the health economics and insurance and risk management fields, respectively. Published studies have thus far presented either a European, American or an outdated South African policy position on matters related to risk equalization. As things currently stand, there have been few studies to date which investigate the African or transitional economies' perspective on the implementation of risk equalization and to some degree its suitability. This research project is a collation of interdisciplinary knowledge that may be beneficial to different stakeholders notably: policymakers, industry practitioners and academics. The researcher is aware that, broadly, South African healthcare policy appears to be moving towards social healthcare system where medical schemes are envisioned to play a less significant role than that seen at present. More importantly, the current and/or future adoption of an NHI would constitute a government monopoly on healthcare financing which would render this contribution irrelevant. However, medical schemes will probably not completely disappear with the change in healthcare policy making the discourse around risk equalization still important and relevant.

1.13 Chapter outline and structure of dissertation

The dissertation has ten Chapters in total. Chapter one sets the scene with in-depth details pertaining to the research proposition and acts as contextual prelude to the research inquiry. Chapter two describes the rationale for the use of grounded theory as research methodology employed for the purposes of this study. Henceforth, the literature review proceeds in three parts: Part A, B and C. Part A is comprised of Chapters 3 and 4 which serve as the knowledge-building component of the study; Part B consists of Chapters 6 , 7, and 8 which are situational maps of the South African and global risk equalization experience and lastly, Part C consisting of Chapters 9 and 10 concludes with study findings that are 'rooted' in theory and sets forth emergent outcomes using a comparative analysis approach with the aim of constructing a general theory of risk equalization.

Chapter 2:

A discussion of grounded theory as research methodology

2.1 Introduction

The principal objective of this Chapter is to discuss the analytical logic of grounded theory as a knowledge-building method used to conduct this qualitative research enquiry. Chapter two justifies the use of ground theory within the context of risk equalization theory and application.

2.2 The general tenets of grounded theory

This section is an articulation of the origins, purpose, and applications of grounded theory for contextual purposes. Egan (2002) suggests that grounded theory offers promising possibilities for the development of conceptual frameworks that are situated in practice and emerge directly from research. Grounded theory is an inductive, systematic methodological approach to qualitative research that is focused on the extrapolation of patterns from a range of data cases to identify conceptual categories. Conceptual categories serve to capture inherent uniformities across data and other relevant properties and dimensions of the data (Dey, 1999). The resultant conceptual categories obtained through constant, comparative analysis for theory construction purposes emerge directly from data and are said to be 'grounded' in data (Charmaz, 2006; Charmaz and Henwood, 2007, Bryant and Charmaz, 2010). Furthermore, grounded theory allows theory to be built from 'the ground up' through an iterative data collection and analysis process that involves 'systematic conceptualization and constant comparisons with similar and distinct research areas' in order to examine all possible theoretical angles that contribute to or underpin empirical findings (Bryant and Charmaz, 2010:493).

More specifically, Glaser and Strauss (1967:3) and (Stern et al. 1982) conjointly states the initial definition of grounded theory as the use of applicable and 'meaningfully relevant' categories gleaned from the data under study' with the aim to discover the latent processes or patterns in order to explain the behaviour under study. Furthermore, grounded theory compels the researcher to set aside any "preconceived" notions and take on a more neutral stance prior to and during the knowledge building process (Egan, 2002:278). The development of grounded theory by Barney Glaser and Anselm Strauss in 1967 as qualitative research design allowed

academic scholars to conduct research enquiries into relatively uncharted research areas. Also, grounded theory allows the researcher through theory that is induced from the data to present a fresh perspective or present a new viewpoint in familiar situations (Glaser and Strauss, 1967; Lincoln and Guba 1985; Stern, 1980; Cutcliffe, 2000).

Cutcliffe (2000:1476) suggests that grounded theory is rooted in symbolic interactionism which refers to a theoretical perspective whereby the researcher assigns symbolic meanings to interactions between interest groups as a means to adequately explain the behaviour of the research participants under study. Symbolic interactionism is most useful when current available theories fail to describe a phenomenon of interest. The grounded theory framework approach utilised for the purposes of this research enquiry is objectivist grounded theory of action set within a constructivist paradigm wherein the researcher assumes the role of a 'dispassionate, neutral observer'. More importantly, the researcher takes on the reflexive stance of a detached expert that seeks to analyse the policy environment in which the research subjects participate and make a representation(s) of the perspectives or theoretical renderings of research participants in an impartial and unbiased manner.

The appeal of grounded theory in its different forms: objectivist, constructivist, and situational serves as a step-by-step guideline of procedures that can be adopted in the construction of a particular theory tailored to a specific problem (Charmaz, 2006: 130–131, Clarke, 2005, Bryant and Charmaz, 2010:455). Further to this point, the constructivist argument begins with the experience (i.e., status quo) and asks questions that serve to 'unpack' the policy implementation logic and trajectory with the aim of obtaining multiple views of the phenomenon, locate its web of connections and constraints as a means to offer the best depiction of how reality or realties are constructed. In this regard, an assumption is made that the researcher's interpretation of the studied phenomenon is also merely a construction that paves the way towards the formulation of substantive theory. Substantive theory is defined as a 'theoretical interpretation or explanation of a delimited problem in a particular area' and informs the initial theoretical coding (or possible modes of integration) and category formulation processes (Glaser and Strauss, 1967: 79).

The theoretical interpretation of the researcher must be grounded within relevant substantive areas which could translate into further abstraction(s) that may later inform formal theory or narratives that adequately explain the underlying evolutionary processes of the studied phenomenon. In this instance, substantive areas such as risk pooling function of medical schemes, may translate into abstractions about the introduction of risk-adjusted and income based cross-subsidies and later formal theoretical narratives in support of the implementation of the Risk Equalization Fund (Glaser and Strauss, 1967; Glaser and Strauss, 1971:77; Charmaz, 2000; Charmaz, 2006:189; Bryant and Charmaz, 2010).

2.3 Overview of grounded theory process steps

As already mentioned, the practice of grounded theory produces emergent, constructivist theory that is "grounded" in data that is systematically gathered and analysed (Charmaz, 2000). The theory generated from the data is said to evolve during the research process as result of the continuous interaction between interpretive analysis and interrelated data collection (Glaser and Strauss, 1967; Strauss and Corbin, 1994). However, the actual application of grounded theory is applicable only once the problem statement and data selection methods have been defined. Thereafter, 'emerging' theory can be discovered through a recursive procedure of theoretical sampling, comparative analysis until theoretical saturation of categories is reached (Bryant and Charmaz, 2010:82).

Further detail of the theory discovery process to be share herein. Theoretical sampling is a data collection process whereby the data is collected, coded, and analysed simultaneously. Sampling in this instance draws abstract data samples that are not meant to be representative of the population but that are able to be classified, compared, and grouped to facilitate the theory construction process (González-Teruel and Abad-García, 2012:31). Afterward, the researcher then decides what additional data to collect next and where to source it in order to develop theory as it emerges. Theoretical sampling then follows whereby the researcher seeks out related information that serves to further illuminate and define category boundaries and relevance.

The purpose of theoretical sampling is to sample data pertinent to the (theoretical) category development process and the characterisation of substantive area(s) of study. A conceptual code is then deduced that encapsulates the underlying patterns, themes and forms similarity cluster which represents an abstraction of the new emerging between data and theory. The theoretical codes developed during the theoretical sampling phase help to achieve depth of theory by specifying all known 'possible relationships between categories' that have been formulated as part of the substantive coding process (Glaser 1978).

The formation of focused theoretical codes is more abstract in nature when compared to a substantive variable assessment process (Charmaz,2006:63). Coding in grounded theory refers to the qualitative data content definition process that must not be tainted by the researcher's preconceived ideas but whose meaning is derived only as it emerges from the raw data itself. Furthermore, the coding process is valuable in that it may reveal other related but equally important areas of study. Consistency in the coding and theoretical sampling process is said to be achieved when the relationship of the code or category to the phenomenon under investigation has been demonstrated and sufficiently evidenced and it appears in subsequent discussions or observations made under similar conditions (Corbin and Strauss, 1990; Glaser and Strauss, 1967). Axial coding as a type of theoretical coding paradigm put forward by Strauss and Corbin (1990) was applied for theory building purposes in this research inquiry. Axial coding begins with a set of open codes which come about because of intense scrutiny of documented data. The open codes lead to concepts that relate back and 'fit the data'.

The previously mentioned category(s) forms the 'axis' around which further coding and category building will be done and if comprehensive enough may eventually become the core category of the identified paradigm items or emergent theory (Strauss, 1987:28-32). Notably, a key rationale for the use of axial coding is that it ensures that the data, categories, sub-categories, and theory overall is crystallized in a coherent manner. Theoretical coherence ensues once the theoretical coding process is completed. In this regard, constant comparative analysis method essentially brings into effect a theoretical coherent research inquiry. There is a pivotal intermediate step between data collection and draft grounded theory reports is known as memo

writing. Memos that are firmly grounded in the data enable the researcher to conceptualise the data in narrative form and aid in the interpretation of the social environments of the respondents or observed group (Engward, 2013). Selective coding is also employed as part of the grounded theory process which involves the following three procedural steps: 1) extraction of the core category based on the main category, 2) analysis of the correlation between the core categories, the main category, the initial category and third is the construction of a new theory (Glaser and Strauss, 2006).

The nature and process of grounded theory is informed by an analytical approach known as constant comparative analysis which is a method that allows the researcher to generate increasingly abstract concepts and theories through an inductive process that involves a 'like-for-like' comparisons across data, categories, and concepts. Comparisons are a crucial part of the analytic concept development stages. For example: Data is constantly compared to other relevant emerging data on the same subject matter to find latent patterns. The resultant close engagement with subject matter data then leads to the formation of associated conceptual elements of theory also referred to as a category. Thereafter, categories are compared to other emerging categories to achieve a higher level of abstraction and theoretical elaboration. The previously mentioned procedure is known as the constant comparative analysis method. The method is repeatedly applied until emerging categories constitute a theoretical integration and successive accumulation of categories also known as theoretical concepts (Glaser and Strauss, 1967: 36; Glaser, 2002:2).

Indeed, Glaser and Strauss (1967:21–27) suggest that grounded theory relies upon the iterative nature of the constant comparative analysis method to ascertain the logic of comparison as part of theory verification. The integrated knowledge building process described above ends when the theoretical concepts obtained as an outcome of the study are deemed to be comprehensive, mutually exclusive, and collectively exhaustive. More formally, theoretical saturation refers to a point reached during the research inquiry at which the gathering of additional data associated

with a theoretical category reveals no new theoretical properties nor insights about the emerging grounded theory.

Bryant and Charmaz (2010:265) states that theoretical saturation can be accomplished through 'constant comparison of incidents (indicators) in the data to elicit the properties and dimensions of each category (code)…. until the process yields the interchangeability of indicators, meaning that no new properties or dimensions are emerging from continued coding and comparison'. The ultimate goal of grounded theory is the use of systematically analysed qualitative data as means to identify the necessary action steps to be undertaken by market agent participants in a particular situation or in the practice of a specific discipline (Clark, 2005). As such, situational analysis techniques are popular for the ability to adequately capture positionality. In other words, situational analysis techniques aid the researcher in knowledge production in terms of the provision of descriptions or valid interpretations of the stance or policy position of the observed group (i.e., both national and global policymakers), in relation to the social and governance context of this particular study (Coghlan and Brydon-Miller, 2014). Also, Clarke (2005:291) states that situational analysis is a 'complementary and supplementary' process to conventional grounded theory. Situational analysis offered a means to represent the commonalities and even more so the differences in the risk equalization practices of the research subjects in question by drawing attention to the 'invisible and silent sociocultural forces' that constrain or shape action or interaction (or the lack thereof) on the part of the observed group as collective actors in the resolution of a social problems(Bryant and Charmaz, 2010:147; Foucault, 1982).The next section offers a rationale for grounded theorising using situational analysis as a theoretical basis.

2.4 The application of situational analysis to grounded theory

Stern and Pyles (1985), Clarke (2003) and Timmermans and Tavory (2007) concur that situational analysis is an innovative supplement to analyses generated by conventional grounded theory because the conditions of the situation serve as a basic unit of analysis. Hence, situational maps and analyses are said to regenerate and update grounded theory in the articulation of the complexities and differences of social life as seen through a post-modern turn lens (Clarke, 2003). Indeed, grounded theory combined with situational analysis develops

theory which provides a more theoretically dense, systematic, and saturated view of the social world or arenas in which the phenomenon of interest is embedded (Glaser, 1978:93; Strauss and Corbin, 1994; Creswell, 2012). The social process under study is more precise in this context as it refers to a range of variation in the trajectory of a phenomenon of interest as opposed to merely the transition of a social process from one phase into another (Strauss, 1975:47). It makes sense then that situational analysis assumes the conditional, constitutive elements of a situation emerge directly from an analysis of the situation itself. Situational analysis addresses and brings to the forefront key elements in a situation through an investigation and interpretation of the inter-relationships between and among concepts.

On the other hand, Clarke (2005) claims that the situational analysis approach also focuses on problems associated with disciplinary growth and changes within a specific social world or arena. As such, for the purposes of this dissertation and due to resource constraints, constant comparison of documented evidence in the form of textual data was found to be most practical knowledge production tool for the purposes of grounded theorising using situational analysis. The textual data collected for the purposes of this study ranges from the informal or ideological texts to texts that present mainly objective information (Gee, 1999). The collated information is used to produce situational maps or inform situational analysis. Clarke (2003:554) notes three kinds of situational maps in existence notably: situational maps; positional maps and social worlds/arenas maps. This research inquiry is essentially a situational map and trajectory of the positions taken and not taken by both human and nonhuman actors on matters of interest (Bryant and Charmaz, 2010; Fagerhaugh and Strauss, 1977:23). The next section will discuss the process followed in applying grounded theorising using situational analysis model to policy responses and implications in the risk equalization related knowledge disciplines.

2.5 Grounded theory as knowledge-building approach to analysing global risk equalization practices

This research inquiry was commissioned to address the following main research title: An examination of the theory and application of risk equalization within the South African medical schemes industry. The title suggests that a policy position on risk equalization did exist at a point in time. It is well known that the risk equalization has been proposed several times but

has never been formally applied within the South African medical schemes industry. In this regard, policy documentation suggests that risk equalization was indeed included as part of proposed mandatory health insurance policy submissions in the early 1990s (McIntyre and Van den Heever, 2007); McLeod and Grobler, 2009).

In a sense, one could argue that the title is misleading. However, if one looks closely at the focus of the dissertation it becomes clear that it focuses on the risk equalization policy reform trajectory and the conditions which have led to its informal application or 'shadow mode', that is, with no money yet changing hands (McLeod and Grobler, 2009:168). Thus, in relation to this dissertation, the application of classic grounded theory is extended to policies or policy responses in relation to risk equalization. Grounded theory as a method of inquiry allows for systematic, structured, and purposeful policy analysis and interpretation of policy positions and the implications thereof in relation to healthcare challenges in a focused yet 'optimal' manner (Charmaz, 2006, Ritchie and Spencer, 2002; Sadovnik, 2007).

In this instance, the utilisation of grounded theory as methodology is logical because policy research presents a 'different research challenge' in that the application of inductive reasoning must bring about insights that help explain meanings of policy positions across different jurisdictional contexts. In general, during the study, interpretations of documented policies revealed 'diverse imperatives, innate contradictions, contextual dilemmas and often conflicting perspectives' with respect to the policy positions of each country studied as part of comparative analysis. The previously mentioned disparity makes sense because the policy positions of each country studied are informed by differing legal systems and healthcare financing structures. As expected, each country has its own set of idiosyncrasies which further justifies the use of an 'open-ended', problem orientated emergent approach to knowledge building (Richards and Farrokhnia, 2016). To follow, a discussion of the problem orientated approach as applied to risk equalization.

2.6 A problem orientated approach to risk equalization

There must be logical alignment of the research title, purpose, problem, and research question (Merriam, 2002). The foundations of a typical research inquiry are centred upon a clear problem

statement and posing coherent research questions to which, the emerging 'thread of inquiry' serves to answer as part of an aggregate knowledge building process (Richards, 2013). The problem statement represents the macro-level purpose of the research inquiry, and the research data-building questions are deemed to be the micro-level data-building aspects of a given research inquiry (Richards and Farrokhnia, 2016:4). In the end, the knowledge building process must be flexible enough to allow the researcher to, where possible, work backwards or trace the emergent process of transforming the accumulation of descriptive data or information into relevant knowledge in the form of refined concepts, codes, and theories (Richards, 2013).

Biggs and Tang (2011:78) further distinguish between surface and deep learning approaches to knowledge construction to which grounded theory is to be applied. As already established, grounded theory involves an 'ongoing engagement' with data through linking words and ideas as part of an interdependent view of interaction combined with knowledge-building modes of description and interpretation (Strauss and Corbin, 1994, Glaser and Strauss, 2017). In other words, grounded theory as integrated research design allows the researcher to identify the data and emergent successive refinement of information along a value chain wherein the outcome to a targeted problem or objectives of inquiry can be linked to an associated research question(s), the research question(s) linked to a corresponding defining concept or recurring theme and lastly the defining concept or recurring theme can be deconstructed into micro-level textual content (i.e. contextual information or data patterns) as its lowest common denominator. The previously mentioned process acknowledges the underlying interpretive frames in use and recognises the interplay of internal and external axes of inquiry which as a whole constitutes a hierarchy of data-information-knowledge-wisdom (Fricke, 2009). The previously mentioned hierarchy of data-information-knowledge-wisdom represents the knowledge-building as an emergent and convergent process that facilitates ongoing dialogue in time and space (Richards, 2011). Richards (2013) argued that an accumulation and description of data and organised/rationalized informational evidence as external axis is open to be transformed with the aim of reaching an outcome in relation to an internal axis of knowledge, experience, and understanding. The next section discusses how the research outcome can be made richer with a situational analysis framework.

2.7 The outcome of grounded theory using situational analysis framework

Ritchie and Spencer (2002:2) recommended that a research inquiry into policy response matters should be 'appropriately targeted towards providing answers. Thus far, the study is presented as a rhetorical analysis of relevant policy documentation and positions or directions in the interests of improved social outcomes (Richards and Farrokhnia, 2016:12). The policy research process approach employed herein is a purposefully structured yet iterative problem-solving process that demands further policy refinement aimed at uncovering the policy related dilemmas and challenges associated with risk equalization policy ecology within the specific policy environments under study (Bardach and Patashnik, 2016).

The study identifies the risk equalization policy implications in conjunction with applicable 'situational' contexts in order to build an interdisciplinary contribution based on a hybrid between 'policy analysis as problem solving approach' and 'policy analysis as a subset of economic analysis approach' developed from the principles of government and market failure (Mintrom, 2011; Richards, 2015). In a nutshell the study makes a distinction between insurance, theory; economic theory; healthcare financing systems and related in-country policy frameworks or responses.

The outcome-based approach utilized for the purposes of this research inquiry allows the researcher to work 'backwards. In other words, the narrative emerges in reverse because knowledge was built from the conceptual inception upwards and forwards towards an explanation of the status quo to highlight significant events that transpire during the risk equalization implementation journey. Equally, the outcome-based approach employed herein views the inherent strategic challenge involved in the implementation of a given policy as emanating from both macro and micro directives that may differ across policy environments and implementation contexts respectively (Richards and Farrokhnia, 2016). For the purposes of this dissertation, a systems approach to problem-solving is adapted to situational analysis based grounded theory. However, the foundational, iterative grounded theory process of combining emergent data-building and contemporary thinking to yield productive, interdisciplinary knowledge-building will be maintained until theoretical saturation is reached (von Bertalanffy and Sutherland, 1974; Richards and Farrokhnia, 2014, 2015).

The process is illustrated in Figures 2 and 3 below.

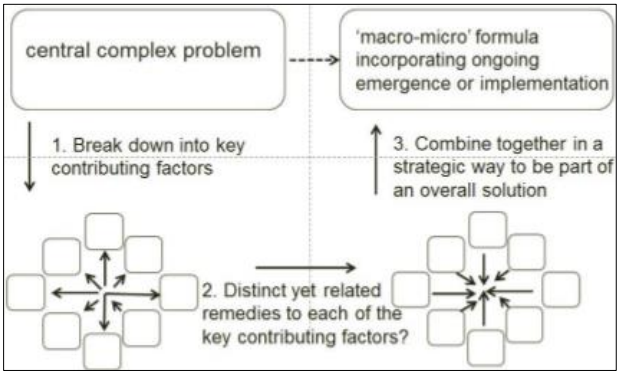


Figure 2: A systems approach to complex problem solving. Adapted from Richards (2015).

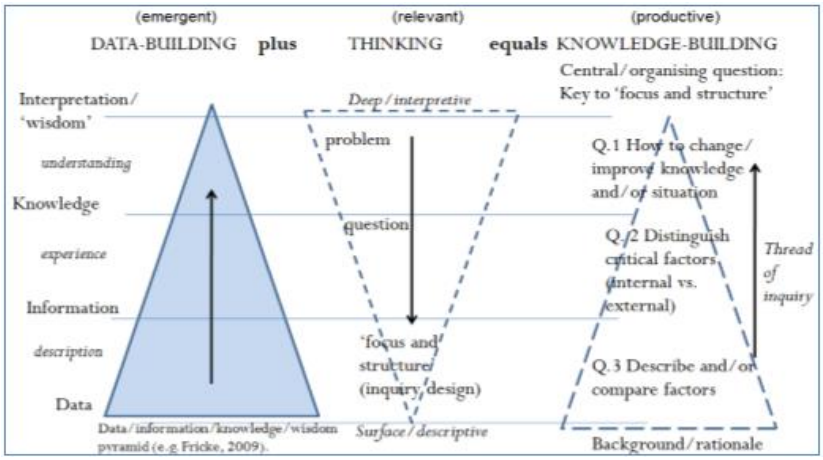


Figure 3: An illustration of the knowledge-building process. Adapted from Richards (2013).

2.8 Concluding remarks

To conclude, the current research inquiry constitutes an interpretive-rhetorical analysis of available South African and global documented sources, positions, or directions about risk equalization with a specific focus on inter-scheme risk equalization where relevant. Also, the application of grounded theorising using situational analysis is most useful in transforming the theory building process into an emergent, situational narrative consisting of selective evidence-based rationalizations of multiple policy and application related perspectives (Richards, 2013, Richards and Farrokhnia, 2016).

Literature Review- Part A:

Study background and knowledge-building component

Chapter 3:

Government intervention within private, medical funding markets

3.1 Introduction

The existence of market failure within unregulated markets serves as justification for some form of government intervention usually in the form of regulation. Broadly, this Chapter serves a point of departure for further discussions on community rating and risk equalization as private, medical funding market regulations.

3.2 Key role players and payment flows within medical care financing markets

At this juncture, it is important to define the role players within a typical healthcare funding market. Consumers also referred to as patients on the demand side of the market pay for medical cover on a monthly basis to a medical scheme fund for access to the best health services which they may otherwise not be able to afford. There also exists suppliers of healthcare or medical funding and providers of health care services. In South Africa, there are two medical funding markets: Medical Schemes regulated in terms of the Medical Schemes Act 131 of 1998 and insurers which sell Gap Products regulated in terms of the Insurance Act of 2017. The previously mentioned markets are completely different. The South African medical schemes industry undertake liability in return for a contribution to aid members in financing the medical expenses incurred in connection with the "rendering of any relevant health service" by means of payments to third party providers of health care services once a member has utilized health services. It goes without saying that medical schemes only pay for medical expenses and have virtually no control over expenses nor the cost of healthcare services.

In recent years, medical schemes have advocated and introduced systems to control costs such as HMOs (Health Maintenance Organizations), but this idea has lost steam in South Africa. On the other hand, medical practitioners and hospital groups act as suppliers and/or providers of

actual health care at the point of service. The supply side of the market also includes suppliers of medical treatment by doctors and/or hospitals. A full historical background on the South African medical schemes industry to be discussed later in this dissertation. The next section will discuss in detail the affordability and efficiency problems within competitive health care funding markets.

3.3 Market failure in medical care financing markets

Arrow (1963) argued that competitive markets in the absence of regulation are not ‘‘genuinely competitive’’ and display ‘‘a tendency to equalize, rather than to differentiate premiums’’. Therefore, contrary to popular belief ‘risk-adjusted premiums’ are actually a norm not an exception within competitive markets because markets will ‘naturally’ tend toward risk rating (Van de Ven and Ellis, 2000). In other words, a medical scheme which charges a lower price will attract risk averse, low-risk consumers and the price would then automatically equalize as high-risk members join the lower priced scheme. However, in a perfectly competitive health funding market, a medical scheme which fails to charge lower prices to low-risk members would lose members to competing medical schemes that charge cheaper prices. This leads one to ask: Why is the former outcome not satisfactory? The answer lies in the fact that risk rating often denies the poor and those with pre-existing or chronic medical conditions access to basic insurance coverage due to a lack of affordability, at times, even for healthy persons (Bundorf and Pauly, 2006).

Arrow (1963) highlighted the absence of insurance suppliers for persons over the age of 60 and makes references to health insurers in the American context. Dowd and Feldman (2000) provide clarity that it is in fact the failure of the market to provide long-term health insurance contracts that protect consumers against exogenous changes in health risk that should be a key concern rather than the attainment of risk segmentation within health funding markets. Unless government compels health insurers to provide insurance coverage for the elderly or sickly members of society then insurers may be forced to leave the market. The same applies to the South African medical schemes market in relation to the discontinuity of coverage at pensionable age for the elderly who need health care the most. In addition, due to age related

penalties, obtaining medical scheme coverage becomes more expensive after retirement. Therefore, risk rating usually leads to unintended social consequences for some market participants. The previously mentioned vulnerable group(s) do have the option to access healthcare via the public health system. The issue then become one that concerns the State's ability to deliver health care to its citizens. A discussion that is beyond the scope of the current study. The focus of this dissertation is on members that are able and willing to pay for medical scheme coverage but due to structural challenges within the medical schemes industry are unable to access to basic insurance coverage (i.e., the elderly, younger members with/without pre-existing or chronic medical conditions). At this juncture, a clear distinction should be made between the consumer's ability to pay which refers to a member's budget and the consumer's his/her willingness to pay reflects how much value members assigns to basic coverage. An affordability problem arises in cases where the insured member is not able to pay the actual price charged by an insurer for basic coverage whereas an efficiency problem is said to arise when the insured member is able but not willing to pay the actual price charged, regardless of the fact that he/she values basic coverage at more than his expected claims plus a loading fee (Geruso, 2017).

Arrow (1963) asserts that for medical insurance to be socially beneficial and for competition among medical schemes to bring about increased efficiency then "a maximum possible discrimination of risks" is necessary. The former statement implies that in the presence of perfect information, the different groups must face different prices or a 'separating' equilibrium in order to sort themselves efficiently across insurance contracts (Rothschild and Stiglitz, 1976; Geruso, 2017:929). Interestingly, Rothschild and Stiglitz (1976) put forward the notion of insurers embedding self-selection mechanisms as part of benefit option design or product offerings such as managed care especially in cases where an insurer is (legally) not able to differentiate between member types. The plan chosen by a member signals their respective risk type (e.g., chronically ill members choose the most comprehensive plan options). In the former situation, the medical scheme hopes that the medical plan designed to suit the health care needs of a low-risk member will not be chosen by high risks and vice versa. Pauly (1970) and Arrow

(1963) concur with Rothschild and Stiglitz (1976) that when members in different risk classes pay a price based upon the group average or ‘‘community-rated’’ price then low risks will tend to demand an inefficiently low level of coverage and pay too much for cover. On the other hand, high risks will tend to demand too much cover for too low a price. Therefore, Arrow and Pauly concluded that the pooling of risks through community-rated prices induce price distortions which ultimately led to market failure. Rothschild and Stiglitz (1976) also argued that it is the presence of asymmetric information and the use of coverage as a signalling mechanism on the part of insurers which induces market failure within a given health funding markets. The existence of market failure within unregulated markets serves as justification for some form of government intervention usually in the form of regulation.

3.4 Government intervention within medical care financing markets

Governments can intervene through regulation to restrict medical funds from setting premiums based on observable member characteristics such as age and gender aimed at promoting equity. The principle of community rating as a standalone regulatory intervention often leaves the market susceptible to full or partial market failure, as more costly members self-select into more generous contracts (Akerlof, 1970). Furthermore, the medical funds market lacks information regarding the current and future health status of members which makes the calculation of future expected claims (i.e., predictable costs of medical care) rather difficult. In other words, medical schemes are faced with demand heterogeneity but due to government compulsion are required to adopt standardized, non-discriminatory pricing policies. As a result, medical schemes have the incentive to favour predictably, profitable members with a lower propensity to claim than predictably, unprofitable members with a higher propensity to claim. The former situation is a market phenomenon known as cream skimming or cherry picking. It is for this reason that community rating is generally accompanied by secondary regulation such as medical fund compensation in the form of risk equalization to be discussed in further detail later.

3.5 The introduction of medical funding regulation and its complexities

As noted in the previous section without adequate regulation, medical funding markets fail to meet social objectives and may bring about inefficient outcomes because of cream skimming.

Newhouse (1996) defined risk selection as "actions by consumers and health plans to exploit unpriced risk heterogeneity and break pooling arrangements". Cream skimming or cherry picking is prevalent in environments where regulation does not allow medical funds to set contributions based on observable consumer characteristics such as gender and age. Geruso (2017) mentions that members are heterogeneous with respect to preferences and costs, due to risk aversion amongst other reasons. Cream skimming or cherry picking is known to affect the consumer in one of two ways: first, are pricing distortions that result in members choosing the "wrong" amount of basic coverage. In other words, there is inefficient (self-selection) or sorting of patients into and among medical plan benefit options (Van Kleef et al, 2018). The "wrong" medical fund plan is one that offers the least net benefit relative to cost (i.e., the price charged by the scheme). Second, is the intentional distortion of medical plan/benefit option design in order to make funds less attractive to predictably, unprofitable members such as the sick. A key assumption that validates the former statement is that medical schemes can target specific member group through selective advertising. On the flipside, from the medical schemes perceptive, the incentive to distort medical fund plan/benefit design is related to the extent to which revenues (incremental member contributions) at the plan level are set in advance and the extent to which any cost (future incremental costs) that can be incurred by an individual member reduce net revenue of the plan. The resultant over or under compensation at a group level represents predictable profits or losses which influence the medical scheme incentives to engage in risk selection (Van Kleef, 2018:34-40).

As mentioned elsewhere, the production of health care is funded and not delivered by medical schemes. It safe to assume that South African medical scheme funds are not HMOs, medical scheme benefit structures should be designed in direct response to consumers' preferences both in terms of coverage, price and should reward plans for innovation. In other words, medical plans should innovate only if the said innovation is worth more than the cost to the consumer and the reward to the medical plan will be increases in enrolment over time (McGuire and Van Kleef, 2018:150).

Therefore, in this context, regulation should aim to foster incentives for medical schemes to use innovation as a cost reduction tool which through competition will pass savings onto consumers in the form of lower premiums. Equally, regulation should also lead to an efficient consumer choice of medical plan. The levels of (equity) affordability and efficiency that are achievable within a given medical care finance market is largely dependent upon prevailing medical funding regulation.

3.6 Concluding remarks

The production of health care is funded and not delivered by medical schemes in South Africa which presents an interesting challenge in terms of market dynamics. A lack of regulation within a medical funding market leads to risk rating which have unintended consequences for some market participants. For example, the chronically ill and the elderly are uninsurable. However, the market for medical scheme coverage does not fail because market participants rendered uninsurable still display a willingness to pay for health care services due to a relatively higher need for health care. It is evident that an equity-efficiency tension exists within medical funding markets. Cream skimming or cherry picking can lead to pricing distortions that result in the inefficient sorting of consumers across these plans. Also, medical schemes have the incentive to intentionally distort medical plan/benefit option design in order to make funds less attractive to predictably, unprofitable members to control spending. The price of medical scheme cover within a regulated medical funding market represents an artificial deviation from efficient pricing. The next section will discuss and the rationale for pricing restrictions since markets are able to ‘risk adjust’ prices. One could argue that in fact fairness is preserved in unregulated markets as those that require more health care cover pay more to obtain cover.

Chapter 4:

The rationale for community rating as social solidarity intervention

4.1 Introduction

The South African medical funding industry is highly regulated, that is, it is subject to considerable government intervention. This Chapter articulates the rationale for community rating as regulatory intervention within medical fund markets.

4.2 The meaning of social solidarity within the context of medical fund markets

A common justification for regulation within medical funding markets is the identification of market failure. Schoenfeld and Meštrović (1989) and later Prosser (2006) argued that another justification for regulation lies in the maintenance of social solidarity and the protection of the basic right to health care as a 'basis for moral order' and as a form of social justice within modern society (Olsen, 1997). In South Africa, the socialization of medical funding stems from the economic and social right to access health care (Constitution of the Republic of South Africa, 1996). Pauly (1970) defines community rating as applicable to "any scheme in which the insurance rates for some high-risk persons are subsidized through higher-than-experience rates for some low-risk groups or persons".

The former disparity justifies regulatory intervention in private, unregulated medical funding markets as means to define the rules that are to govern risk pooling because cream skimming due to incomplete risk rating of premiums and exclusion of vulnerable groups from the market is inconsistent with social objectives (Newhouse, 2002). Literature highlights two known forms of social solidarity, notably risk solidarity and income solidarity. Risk solidarity refers to cross-subsidies between the high-risk (older, chronically ill) members and the low-risk (younger, healthier) members and the latter referring to the cross-subsidies from high-income earners to low-income earners (Van de Ven and Ellis, 2000). Simply put, in instances where members are offered a choice among multiple benefit options, it is highly unlikely that an identical distribution of health risks will self-select into every plan (Feldman and Dowd,

2000:499). Therefore, community rating is regulation that restricts medical fund risk rating with the goal to "level the playing field" making all member groups represent the same expected cost of care to medical funds in the interests of social solidarity. In other words, community rating can 'correct' the unfair outcomes obtained under risk rating especially for high-risk members. Hence, the rationale for community rating is often implemented as a response to a policymaker concern for social solidarity and for equity because the price paid for medical funding is required to be socially fair at a group level as opposed to actuarially fair at the individual level (Van Kleef et al, 2018).

4.3 Limited pricing categories as a source of deviation(s) from efficient pricing

Community rating can be applied in several forms: First, is community rating per medical plan basis whereby one price is charged for all consumers who choose the same plan which means each plan must be community-rated however different plans can have different (community-rated) premiums. Second, are rating restrictions based upon rating factors. For example, a requirement for no premium differentiation on the basis of medical conditions. Third, is rate-banding where a minimum and maximum price is applied between rating categories and finally there exists guaranteed renewability which places an obligation on medical funds to offer members the option to renew coverage after a specfied period of time (Van Kleef et al., 2018:35). In effect, in a community rating environment, the competition for good risks results in an 'market access' problem for bad risks and a 'excess premium' problem for good risks because the good risks help to retain the bad risks through subsidies that compensate for resultant shortfall(s) in average contribution rate of the group. As a consequence, strong financial incentives exist for competing medical funds to be unresponsive to the preferences of high-risk members such as the chronically ill (Davis and Schoen, 1998).

The incremental prices within regulated, competitive medical funding markets are defined as differences in prices determined at a group level rather than at an individual or family level (Diamond,1992). Further to this point, at a group level, differences in premiums of more than 10-fold can arise based on age and gender alone and much larger differences are possible if

health status or other information is used to determine premiums. It is near impossible for markets, regulated or not, to generate person-specific incremental prices due to information asymmetry. To some degree, community rating serves to neutralize information asymmetry by virtue of risk rating being prohibited by statute. Hence, the regulator (indirectly) compels new members to disclose some information and (directly) compels medical schemes to limit the categories to be used to determine contributions (e.g., income and number of dependents in the South African instance).

4.4 The relationship between community rating and cross-subsidization

An unregulated, competitive market is a Pareto optimum, whereby risks are pooled with no cross-subsidization which results in prices and marginal costs that are equalized across all enrolled members (Bator, 1958). The current community rating system in South Africa, 'forces' risk pooling in the interests of achieving social solidarity. However, the community-rated, pooled market is not Pareto optimal and is inefficient. There are instances where community rating leads to the cross subsidization of wealthy members with unhealthy lifestyles which no social solidarity argument can reasonably justify. To clarify, wealthy members with unhealthy lifestyles need to adopt healthier lifestyle behaviors to reduce propensity to claim. Incentive schemes and wellness programs should be used to correct the former problem not cross subsidization. Further to this point, Pupp (1981:610) mentiones two distinct cross-subsidization methods: The first assumes that the marginal cost to provide a service is equal across all member groups which justifies a higher price or loading fee for some groups to counterbalance a lower price for other groups. A second and more popular method in medical funding markets is one that assumes marginal cost differences amongst member groups and levies the same price for all groups. Community rating regulation in medical funding markets wherein benefit options are not standardized represents an efficiency cost for the fairness achieved through the cross-subsidization of sick by healthy members which means that "community rating and the cross subsidization of high risks" must be "inextricably intertwined" (Pupp, 1981:625; Layton et al., 2018:517). Also, an advantage of cross-subsidies from healthy to sick members through limitations in pricing categories is the (implicit) insurance against 'reclassification risk' associated with the potential future financial consequences of a transition from a healthy to a

sick state after developing a medical condition (Handel et al., 2015). So far, we have established that the price of medical cover under community rating is not based on the per person expected claims but on the average expected claims within a specific group. Simply put, for community rating to be deemed effective, the sum of (implicit) member contributions from low-risk members must be equivalent to the sum of (implicit) scheme compensations to high-risk members within the same medical funding market. However, often member contributions and scheme compensations tend to differ due to unpriced risk heterogeneity and selection-related inefficiencies (Einav and Finkelstein, 2011; Van Kleef et al., 2018:30).

4.5 Community rating and unpriced risk heterogeneity

As noted elsewhere, community rating as government pricing intervention gives rise to risk selection. Newhouse (1996) defined cream skimming or risk selection as "actions by consumers or health plans to exploit unpriced risk heterogeneity and break pooling arrangements". Therefore, the existence of unpriced risk heterogeneity and the "actions of consumers or health plans" are the necessary pre-conditions for the occurrence of risk selection". In South Africa, there is no conclusive empirical evidence that points to the existence of adverse selection within medical funding markets. As such, the "actions of consumers" to which Newhouse (1996) refers to is all the possible consumer responses to actions taken by medical schemes to contain spending through initiatives such as setting co-payments and designated provider networks (Withagen-Koster et al., 2018). The "actions of health plans" refers to the ability of medical schemes to place inefficient limitations on coverage and services in markets with passive selection mechanism such as restricted provider networks (Feldman and Down, 2000:502).

Withagen-Koster et al (2018:1351) defines unpriced heterogeneity as the "predicted variations in health care spending not reflected in either premiums by insurers or in risk equalization payments''. Community rating result in a situation whereby regulators require medical schemes to purposefully omit certain individual member risk characteristics such as health status which are relevant for the prediction of member demand heterogeneity which is not reflected in either prices charged for cover or in risk equalization payments (Geruso, 2017). Literature defines this type of omission as unpriced risk heterogeneity. Consequently, the existence of unpriced risk heterogeneity attests to the existence of 'internal' opportunities for competition based on

medical scheme benefit option design and inefficient self-selection of consumers across plans within the same market.

4.6 Further considerations: heterogeneity, demand for insurance and adverse selection

As mentioned in the previous chapter there is heterogeneity in demand within medical funding markets that often is not accounted for as part of community rating provisions due to omissions in health risk related characteristics in categories used to determine prices. As such, unpriced risk heterogeneity is reflected through incremental prices which mirror underlying differences in plan generosity and in risk composition among benefit options or plans (Van Kleef et al, 2018). This section seeks to briefly discuss the relationship between relationship between an individual's risk type and the demand for medical scheme coverage. Hopefully this section will help the reader be able to comprehend linkages between insurance demand, heterogeneity, and adverse selection.

4.7 A critical examination of variation in insurance demand

Economic markets consist of both a demand (consumers) and supply (producers) side which often guide the design of policy interventions. Health care funding markets are no exception. An individual's risk type often plays a limited role in explaining an individual's demand for insurance, which raises questions about factors that drive variation in insurance demand. There are two main dimensions of a consumers demand for basic coverage - the consumer's his willingness to pay (i.e., psychological value attributed to basic coverage) and ability to pay (i.e., money to spend). A consumer's ability to pay for medical scheme coverage is measurable and can effectively 'dictate' an individual's choice of coverage or level of coverage that a consumer is able to afford. The ability to pay has a useful selection effect which is indicative of the constraints that may have had an impact on an individual's choice of health plan. On the other hand, a consumer's willingness to pay is more abstract in nature is mostly a reflection of the value that a consumer assigns to cover relative to expected future healthcare expenditure.

As such, more times than not, consumer plan selection is guided by individual preferences, the existence of price subsides and their degree of risk aversion. This section provides reasons for variation in the demand for insurance insofar as it relates to consumer's his willingness to pay

and sorting of consumers into the market for medical scheme coverage. The idea is to interrogate the assertations made by Cutler, Finkelstein and McGarry (2008) and later Spinnewijn (2017) in relation to the source of the heterogeneity, consumer selection into health plans.

Cutler, Finkelstein and McGarry (2008) emphasize the role of preference heterogeneity in help to explain the welfare cost of inefficient of selection. All the authors concur that standard asymmetric information theories that consider adverse selection due to risk heterogeneity to be a key driver insurance purchasing decisions do not provide a full picture of the nature of market inefficiencies created by private information within insurance markets. In general, adverse selection is induced by information asymmetry between consumers and health plans due to private information that is not accessible to the insurance provider or due to the presence of community rating provisions where the insurer is prohibited from using observable factors such as age and medical history for pricing purposes. Standard adverse selection theories predict that lower risk individuals tend to under-insure (i.e., buy less complete cover or no cover at all) whereas higher risk individuals tend to over-insure (i.e., buy full or near-full insurance). In practice, the converse may be true if once considers the prospect of selection that is profitable to the insurer. In stark contrast to Cutler et al., Spinnewijn (2017) put forward the concept of behavioral (demand) frictions as an alternative reason as to why an individual's risk type may play a limited role in explaining their demand for medical scheme coverage.

More importantly, behavioral frictions distinguish between the individual's estimation of the coverage provided by an insurance contract as revealed through an individual's demand (i.e., observed choice) and the true value of insurance. Geruso and Layton, 2017 In other words, individuals tend to underestimate their levels of risk exposure and underestimate the value of coverage provided by an insurance contract will most likely decide not to buy insurance because contributions are deemed to be beyond the consumers' willingness to pay also known as consumer sorting into a health plan market (Geruso and Layton, 2017). Consumer sorting within health plan markets also known as inefficient sorting of consumers across plans with

different coverage level refers to a situation where consumer preferences with respect to "contract dimensions" are correlated with expected claims (van Kleef et al., 2018). In other words, individuals with higher than average expected medical costs will choose more generous plans in each choice set. Competition places health plans under pressure to be efficient and to innovate in response to consumer preferences. However, community rating prevents the customization of health plans in accordance with individual preferences. Thus, curtailing the inclination by consumers to demand "too much" cover when fully insured because the consumer does not bear the full cost of the care received. It is well-documented that competition through consumer choice does not necessarily lead to efficiency, particularly, in the presence of incentives to related to adverse selection (Rothschild and Stiglitz, 1976). Therefore, a blend of health plan payment policies is required to achieve social solidarity. Community rating combined with supplementary regulations in the form of an insurance mandate and/or subsidies can be used to retain low-risk individuals whenever there is an issue with selection by consumers into the market. Ideally, risk equalization should be invoked as complementary regulation to lessen selection by consumers within the market. The previously mentioned health plan payment policies do not adequately capture all the relevant dimensions of an individual's expected health care spending (Geruso and Layton, 2017).

4.8 Concluding remarks

A competitive market is a Pareto optimum where risks are pooled with no cross-subsidization (Bator, 1958). In practise, private information or regulatory constraints prevent medical funding markets from setting prices that reflect expected medical costs obtained through risk rating (Dardanoni and Li Donni, 2016:998). Currently, community rating system 'forces' risk pooling in the interests of achieving social solidarity. However, community rated prices do not result in Pareto optimality due to cross-subsidization that gives rise to coverage related inefficiencies and inequitable prices (Pupp, 1981:610). Also, community rating presents a medical schemes market dilemma where, on the one hand, exists the principle of community rating which violates the principle of marginal cost pricing is meant to preserve the medical scheme not-for-profit environment. On the other hand, medical schemes were designed to fund services that are

delivered through a for-profit, private health care sector that operates the basis of a fee-for-service reimbursement model. Therefore, further regulation which makes provision for risk equalization may be justified provided that it is combined with subsidization targeted at high risks with low income. It now becomes useful to frame a theoretical discussion of risk equalization in the Chapter to follow.

Chapter 5:
Theoretical concepts of risk equalization

5.1 Introduction

Chapter four discusses the theoretical concept of risk equalization within the context of medical or health funding markets. Most of the detail in this section has largely been adapted from Part I of Van Kleef et al. (2018); Ellis et al. (2018) and McGuire and van Kleef (2018).

5.2 Risk equalization as an indemnification mechanism for medical funding markets

5.2.1 Differences between exogenous and endogenous risk equalization

Relevant literature suggests that risk equalization and risk adjustment are closely related concepts. The term 'risk equalization' is generally understood to make reference to a medical fund restitutive system which 'balances the effects' attributable to (implict) member demand heterogenity based on predicted medical care expenditure at the beginning of the financial year (ex-ante) or at the end of the financial year (ex-post) without matching the underlying insurer profit margins or claim costs (McLeod and Grobler, 2009, Geruso, 2017). The key difference between risk adjustment and risk equalizaition is that risk adjustment applies when risk segmentation is possible and risk equalization applies when market segmentation is subject to some form of regulation (Feldman and Dowd, 2000).

Risk equalization is usually based on endogenous factors that are influenced by health insurers or medical schemes in the South African context. The extent to which insurers can influence endogenous risk factors is correlated to the degree to which insurers are able to influence treatment decisions made by healthcare service providers within a given market (Geruso and Layton, 2015). Endogenous risk factors are known to insufficiently correct for predictable variation in medical claims however they are useful as a link between treatment decisions and (prospective) health plan compensation. On the other hand, exogenous risk factors which are determined by an external authority such as a regulator and introduce incentives for healthcare providers to oversupply. Since medical scheme are not in the business of providing healthcare services to patients then the former modality cannot refer to risk equalization as defined in this study but rather to risk adjustment which has been excluded for the purposes of this disseration.

However, there are exceptions to this rule because in practice, many risk equalization models may rely on endogenous risk factors such as morbidity classifications based on utilization of health care (Van Kleef et al., 2018:43). In sum, risk equalization is a form of "risk rating in plan payments from a central fund" designed to 'make good the loss' associated with the 'forced' enrolment of predictably, unprofitable members due to community rating provisions and potential disenrollment of predictably, profitable members due to the due to the principle of voluntary participation and the inability to reject applicants. As a consequence, it is expected that there are mismatches between the revenue and costs of medical schemes due to asymmetrical distribution of risks across medical plans (Pauly, 1970; McGuire and Van Kleef, 2018:5; Feldman and Dowd, 2000). Ellis et al (2018:83) states that under risk equalization the regulator seeks to achieve "accuracy in the matching of plan obligations to predictable spending at the individual level while incorporating concerns about selection.…and fairness".Whereas risk adjustment is tax-funded subsidy fund that is admininstered by a sponsor which caters for the 'per head' retrospective healthcare utilization across a regionally defined population in the interests of efficient health care resource allocation (Oliver, 1999). Another related concept is that of risk sharing and will be discussed next.

5.2.2 The role of risk sharing within the context of risk equalization

More often than not, risk sharing is combined with some form of pricing regulation and risk equalization to bolster medical funding policy interventions (McGuire and Van Kleef, 2018). Risk sharing refers to an financial arrangement which is effectively stop loss reinsurance for medical plans which can compensate for very high cost patients and achieve some similar objectives to that of risk equalization (Van de Ven et al. 2001; Newhouse, 1996). However, risk sharing should be evaluated on a case by case basis as it may not always be necessary. The next section will discuss the different forms of risk equalization.

5.2.3 Social objectives and risk equalization

Van Kleef et al. (2018:35) put forward the following six objectives: 1) Affordability of basic coverage for high-risk individuals; 2) Affordability of basic coverage for low-income individuals; 3) Efficient health plan design; 4) Efficient enrolment in basic coverage; 5)

Efficient sorting of consumers across basic-coverage plans; and lastly 6) Incentives for efficiency in the production of care. Important to note is that not all six objectives are not applicable for the purposes of this dissertation. The discussion in this Chapter examines risk equalization in relation to the social objectives of affordability of basic coverage for high-risk individuals; efficient health plan design; efficient enrolment in basic coverage and efficient sorting of consumers across basic coverage plans. The social objectives affordability of basic coverage for low-income individuals and the incentives for efficiency in the production of care relate to risk adjustment and consumer subsidies which serve to retain or increase the enrolment of low-risk groups. In sum, a major practical challenge for regulators is to design an appropriate risk equalization mechanism that incorporates without any major, unintended consequences on market operations.

5.2.4 The various forms of risk equalization transfers

5.2.4.1 Risk equalization transfers in the absence of an external consumer price subsidy

In the absence of an external consumer price subsidy, the risk equalization payment (REP) for each individual is the difference between expected claims for individual and the mean expected claims in the population. A combination of risk equalization and risk sharing has 'push' effect whereby the premium for all groups tend towards the mean which is disadvantageous as it deters low-risk persons from obtaining basic coverage. The participation of low-risk persons within insurance pools is a strict prerequisite for cross-subsidization to occur. In the former case, the regulator attempts to completely correct for the variation in expected claims. As such, risk equalization payments enable cross-subsidization to take place from high to low risk individuals (i.e. health funds contributions from plans for low-risk individuals are required to 'subsidize any cost shortfalls' in the high-risk individuals group(s). The expected claims for individuals pool will differ across but not within medical condition of the same groups. A possible explanation for the former could be that community rating is applied per health plan, therefore each health plan is community-rated but different plans can have different (community-rated) prices.

5.2.4.2 Effects of risk equalization in the absence of an external consumer price subsidy

A risk equalization and risk sharing fund without an external subsidy will reduce expected costs for high-risk members and increase expected costs for low-risk members. All in all, under this blend of regulatory intervention, all enrolled members in the market represent the same "cost" to the insurer which is same competitive equilibrium effect as that of complete community rating. Complete community rating refers to a complete correction for variation in expected medical claims. In other words, risk equalization and risk sharing without an external subsidy serve to reduce unpriced risk heterogeneity and by implication mitigate inefficient sorting across health funds and insurers risk selection. This is largely attributable to risk sharing. The opposite is true for inefficient sorting into the market. A risk equalization and risk sharing fund without an external subsidy has mixed result on affordability and efficiency too. On the one hand, this regulatory tool is able to mitigate risk rating and thereby decrease in average premiums for the relatively high-risk persons within a given market. However, the former decrease in average premiums may not be sufficiently low to retain low-income members and may even constitute an increase in the average premium for low-risk members that require basic coverage. In terms of incentives for efficiency in production, risk equalization and risk sharing have different effects. To the extent that, risk sharing is able to mitigate unpriced risk heterogeneity, it reduces the expected returns on risk selection and any returns on cost containment obtained via selective marketing. On the other hand, ultimately, this means that risk equalization and risk sharing fund without an external subsidy favours cost containment.

5.2.4.4 Risk equalization transfers and risk sharing in the presence of an external fixed subsidy

In this section, we assume the existence of income-based subsidy contributions from regulators to insurers. Often, a subsidy of this nature, may be combined with a risk equalization or risk-sharing scheme and serves as an effective regulatory tool in the reduction of risk selection into the insurance markets. Alternatively, the regulator can transfer the income-based subsidy contribution directly into a risk equalization/risk sharing fund. The external fixed subsidy has the effect of reducing the consumer premium thereby improving affordability particularly for low-income individuals. Surprisingly, relative premium differences amongst the different groups tend to increase overall. Relative fixed subsidy increases demand elasticity for health

funds can affect choice of health plan with more indirect effects on insurer incentives for selection and cost containment. However, the affordability problem due to risk rating is not fully resolve but in as far as incomplete risk rating results in inefficient sorting into the market the external fixed subsidy does bring about a positive difference. This approach has been tested in Belgium where the external fixed subsidy is approximately equal to the average expected claims in the population.

5.2.4.5 Consumer subsidies

Subsidies to consumers can take on three forms: risk-based subsidies; premium-based subsidies and income-based subsidies. Often, a regulator can choose to provide consumers with a risk-based subsidy usually in the form of a risk-adjusted voucher (independent of consumer plan choice) that is based on endogenous risk factors used for premium differentiation. Endogenous factors as rating factors serve as a link between treatment decisions and future premiums. Risk-based subsidies work in the same direction as endogenous risk equalization. Typically, risk-based subsidies do not mitigate selection problems in community rated environments. Hence, the premium charged is based on average expected claims in a premium-risk group which results in unpriced risk heterogeneity and other selection-related inefficiencies (Van Kleef et al, 2018:49). Zweifel and Breuer (2006) suggests that premium-based subsidies in the form of a premium-based state allowance or a premium-based employers' contributions to consumers to promote affordability within health insurance markets.

A premium-based subsidy is like a fixed subsidy which is the same for all members in markets without premium differences among plans. In the event that premium differences among plans do exist then premium-based subsidies mitigate the net premium differences which can mitigate the effects of price distortions due to selection of consumers across plans (Van Kleef et al., 2018). It goes without saying that the insurers' incentives for low pricing and cost containment are reduced because consumers will have a lower incentive to maintain or improve their health status. Income-based subsidies are commonly found in health insurance markets as a mechanism to directly subsidize lower-income groups and lower net premiums for high-risk

persons. Income-based subsidies can take several forms, namely, income-based allowances such as those administered through the Netherlands national health insurance scheme; income-related employer' contributions; tax deductions or tax credits such as those in US Marketplaces. The next sub-section summarises the effects of risk equalization when it is combined with risk sharing as detailed above.

5.3 The effects of risk equalization in medical funding markets

A. Risk equalization when implemented in conjunction with risk sharing help to reduce premiums for high-risk individuals' due to reductions in the variation of expected claims as reflected in premiums.
B. Risk equalization when implemented with some form of risk sharing increases (on average) premiums for low-risk members. As a result, low-risk members might choose to not purchase basic coverage which drives up premiums for remaining members of the insurance pool. This means that low-risk members value basic coverage at more than their expected claims. In other words, the low-risk willingness to pay in the present is less than what they expect to pay for future costs of care which is inefficient. Based on Pupp (1981) definition of cross-subsidization, the actuarially fair prices for low-risk members are lower than the community-rated price charged by medical schemes.
C. Risk equalization and risk sharing correct for unpriced risk heterogeneity through a reduction of returns obtained through selective advertising or selection incentives to use benefit design as a member screening mechanism.
D. However, risk equalization and risk sharing also mitigates the potential for price distortions due to inefficient self-selection of unprofitable and profitable members into medical plans for basic coverage. The inclusion of an external income-based subsidy serves to improve affordability for high-risk individuals with low income but not entirely for high cost cases (i.e. persons with chronic conditions).
E. Exogenous risk equalization helps to mitigate unpriced risk heterogeneity with respect to returns made by medical schemes from selective advertising activities.

F. Risk equalization on the basis of exogenous variables should be combined with a sufficiently large external subsidy in a manner that attracts low-risk member encourages these memebrs to opt into insurance markets for basic coverage. In theory, exogenous risk equalization does improve outcomes in relation to the social objectives of affordability of basic coverage and efficiency.

5.4 Concluding remarks

Community rating as primary regulation induces risk equalization (Frech and Zweifel, 2017). Risk equalization is effectively "risk rating in plan payments from a central fund" and is a mechanism designed to compensate medical schemes or insurers for the 'forced' enrolment of predictably, unprofitable members due to community rating requirements (McGuire and Van Kleef, 2018:5). Whereas community rating seeks to guarantee access to medical funding market coverage for predictably, unprofitable members with higher than average medical costs. As mentioned elsewhere, attempts by medical schemes to avoid the enrolment of unprofitable members can in turn use benefit options unattractive for members with specific medicals conditions. Thus, distorting the efficiency of the health plan design (Rothschild and Stiglitz, 1976; Newhouse, 1996; Glazer and McGuire, 2000).

In sum, risk equalization based on exogenous risk factors as relies on external risk factors that can help to predict or quantify differences in the expected medical care costs among scheme members in order to pay medical funds more for higher-risk members whereas risk equalization based on endogenous risk factors relies on internal risk factors to might want to predict member utilization patterns in order to fund future health care purchases (Van Kleef, 2018:42). A key difference between risk adjustment and risk equalization is the role of the regulator. Under risk adjustment, the regulator 'adjusts for risk' and compensates medical funds for differences in costs through retrospective provider reimbursement. Whereas Ellis et al. (2018:83) states that under risk equalization the regulator seeks to achieve "accuracy in the matching of plan obligations to predictable spending at the individual level while incorporating concerns about selection.…and fairness". In other words, the risk equalization fund accepts losses on some

members through cross-subsidization with the gains of others (Van de Ven and Ellis, 2000). The introduction of community rating necessitates the introduction of risk equalization. South Africa has long understood, proposed and made provision for risk equalization. However, risk equalization is yet to be implemented. The next Chapter presents international experiences in the implementation of risk equalization.

Literature review – Part B:

Risk equalization situational maps

A situational map of the South African risk equalization experience:

Chapter 6:

The historical developments and the current position of private healthcare funding in South Africa

6.1 Introduction

This Chapter will present a brief overview of the key historical developments in the South African healthcare system coupled with a high-level view of the present-day situation. The key objective of this section will be to present the distinctive features and relevant regulatory reforms which have shaped medical schemes as a pre-paid healthcare financing market in South Africa.

6.2 The basic architecture of the South African social protection system

The South African social protection system is dualistic in nature consisting of social assistance programmes and social insurance. It is useful to distinguish between social assistance and social insurance. Social assistance programmes are aimed at promoting social development and poverty reduction whereas social insurance which is largely linked to or a fringe benefit of formal sector employment (Lund, 1993). It is useful to distinguish between (1) social assistance, where transfers in cash made to deprived populations such as the elderly and (2) social insurance instruments which are statutory funds restricted to the formal economy aimed providing a financial cushion for households against adverse events such as retrenchments.

There exist five major social assistance grants administered by the South African Social Security Agency (SASSA) in South Africa, namely: the Disability Grant; the Child Support Grant; the Foster Care Grant; the State Old Age Pensions and the Care Dependency Grant. The state also provides for three primary statutory funds, namely: the Compensation Funds;

the Road Accident Fund (RAF) and the Unemployment Insurance Fund (UIF). Briefly, the Compensation Funds provides medical care and income benefits to employees who are injured or develop occupational diseases at work or due to the nature of their occupational activity and the UIF provides short-term unemployment insurance. The Compensation and UIF funds are administered by means of employer mandates and subsidies. The Road Accident Fund provides compensation for the funeral costs, loss of earnings and medical costs of road accident victims. Membership and contribution to each of the previously mentioned funds deemed mandatory. Lastly, the Council for Medical Schemes established under the Medical Schemes Act of 1998 regulates voluntary insurance schemes such as medical schemes and retirement funds. Up until now, there has been a skewed focus towards the expansion of the social assistance system of social assistance while little progress has been made to extend social insurance (Woolard et al, 2011:363). As a consequence, while there have been numerous proposals to develop a system of social health insurance, the vast majority of the South African population continues to receive primary healthcare through the public health system. However, no other social health insurance mechanisms beyond private medical schemes have been instituted to date.

6.3 Key historical developments in the South African private healthcare funding market

The two–tier South African healthcare system comprises of a public healthcare sector which is funded through general tax revenues and a highly regulated, prefunded private healthcare sector. The private healthcare sector consists of voluntary private not-for-profit medical schemes and for-profit healthcare insurance product provider market (Van den Heever, 2012). This has not always been the case. Important regulatory changes have taken place which have steered the country's healthcare system into its present-day state. The formative years of the South African private healthcare system predate the establishment of the Union of South Africa in 1909. The first medical aid scheme was established in in 1889, namely the De Beers Consolidated Mines Ltd Benefit Fund. Medical aid schemes emerged through greater employer involvement in employee healthcare funding. An example is that of employers within the mining sector that funded and provided onsite doctors and hospital services to

members of staff (Erasmus et al., 2016). The main aim of employer sponsored medical aid schemes was to assist members with the payment of medical bills and health services such as visits to general practitioners (GP) in the private sector. In 1910, seven similar schemes were formed and by the onset of the Second World War, approximately 48 additional medical aid schemes were in existence. The medical aid schemes of the time were not subject to any formal regulatory supervision which persisted until the year 1956, when both the public and private healthcare sectors, were governed by the Friendly Societies Act, No. 25 of 1956. The 1960s saw the emergence of three types of schemes namely, Sick Funds, Benefits funds, and Assurance Schemes. At the time, there was consensus amongst medical scheme industry stakeholders that membership to medical schemes should become mandatory. The industry lobbied policymakers for this change to be effective in healthcare policy.

The Reinach Committee was not in support of the industry petition for mandatory membership and instead it recommended that medical cover be offered as a separate supplementary benefit in addition to benefits such as sick leave payments, funeral costs, and disability insurance. In the year 1962, the Snyman Commission after much debate concurred with the observations made by the Reinach Committee resulting in recommendations that gave legal effect to the Medical Schemes Act of 1967. Van den Heever (2012:4) states that the Medical Schemes Act of 1967 was the first, coherent regulatory framework to govern medical schemes thereafter. McLeod (2005:142) describes the introduction of community rating to the medical schemes market through the enactment of the Medical Schemes Act of 1967, as the implementation of solidarity principles (refer to glossary of terms for definition). The introduction of community rating meant that member contributions would be determined in accordance to one's ability to pay rather than an individual or group's risk factors such as age and health status. The principle of solidarity informed the *modus operandi* of medical schemes at the time. The existence of community rating leads to the pooling of high and low risks. However, practically within the open scheme environment, medical scheme community rates may differ across the industry which creates the need to consider risk equalization (McLoed, 2005), a central feature of this dissertation to be revisited later.

6.4 The application of "Free Market" reforms in the medical schemes industry

The period following the enactment of the Medical Schemes Act of 1967 was characterized by membership as a condition of employment, centrally determined private professional fee reimbursements, changes to tariffs and payment regulation. As a result, industry began to petition for less regulation. The 1980s were characterised by several industry debates in support of free market reforms and a change in policy direction with the focus being on healthcare system defragmentation and better policy co-ordination. From the year 1980 onwards, medical schemes primarily reimbursed the expenses on private health professionals and public sector hospital services and were required to make full payments for all health care services consumed in line with the scale of benefits. The scale of benefits was compulsory a system of mandatory minimum benefits to which schemes had to comply which specified reimbursement percentages for consultations, tariffs, or procedures (Van den Heever, 2012). Access to public hospitals was subject to a financial means test for patients who earned an income above the legislated tax threshold. A practice that still exists today. In the 1980s, patients who earned income above the tax threshold would enrol onto medical schemes to avoid catastrophic health expenses associated with private specialist and public hospital services (Van den Heever, 2012:4-5).

The tax-base funding allocated to the public health service began to decline substantially from the year 1982 and the subsequent years thereafter. This fiscal action coincided with the emergence of private hospitals owned by part-time medical specialists who also served as civil servants in the public sector. There existed a financial incentive for part-time private specialists working in the private sector to divert medical scheme member patients away from the public sector to private medical practices and doctor owned hospitals (Van den Heever, 2012). The gradual shift in treatment occurred from public to private hospitals, which resulted in medical scheme cost increases. Implicitly, the public hospitals system subsidised the medical costs incurred by medical scheme members but could not recover full costs from medical schemes. In addition, as employer schemes continued to evolve, scheme operations became increasingly more complex. As a result, there arose a need for independent third-party scheme administrators. Van den Heever (2012:2) notes that third party scheme administrators

were firms that were contracted to medical schemes that assumed responsibility for a scheme's major operational functions. In turn, employers paid the administrators on a cost-plus basis. The operational functions executed by third party scheme administrators were inclusive of but not limited to handling claims processing; provider negotiations and member management on behalf of a contracted scheme. As such, the burgeoning medical administrators market became a lucrative business and gradually demand gave rise to market saturation (Van den Heever, 2002).

6.5 Risk rating practices and the medical schemes industry

The Browne Commission was appointed in 1980 and concluded its work in 1986. The Browne Commission endorsed the application of free market principles within the healthcare industry. The Browne Commission advocated for medical schemes to apply risk–ratings that were customised according to a member's age or medical history across different risk groups or classes of risk. McLoed (2005) notes verbatim a quote sourced from a document produced by the Department of Health quoting the Browne Commission landmark recommendation in support of risk-rating and experience-rating within the medical schemes industry. The recommendation noted in Department of Health (2002) is as follows:

> "Greater flexibility in contribution rate determination should be allowed, enabling schemes to charge different contribution rates for different classes of risk. Provision could also be made for allowing different levels of benefit to be chosen by groups or individuals to satisfy their needs. This will encourage merging of small schemes with larger ones, resulting in increased administrative efficiency. In some cases, significant cost savings could be achieved if the member paid small himself [sic] and was only allowed to claim from the scheme after a specific amount had been paid by himself."

Yet, the Department of Health's White Paper (1988) commentary drafted in response to the Commission of Inquiry Report into Health Services did not accept the recommendations made by the Browne Commission. One of the key points of contention was the removal of compulsory minimum benefits. Although the proposal was rejected by policymakers, amendments to legislation still took place viz. the Medical Schemes Amendment Bill of 1988 and again in 1989, by means of a modification to Regulation 8 of the Medical Schemes Act of 1988.Therefore, in sum, prior to the year 1989, medical schemes were considered a

‘cottage’ industry whereby healthcare insurance providers were required to determine their contributions on a group basis (i.e. to apply a community rating) and it was unacceptable to enrol high risk members (Doherty and McLeod, 2002).

As such, prior to the year 1989, the not-for-profit medical schemes industry was characterised by low investment, weak competitive forces, and a lack of product innovation (Erasmus et al., 2016). However, the revised regulations allowed medical schemes to utilise risk rating to determine member contributions. Member contributions were determined using risk factors such as number of dependants, income level, age, geographic area, claims experience, extent of cover provided, period of membership and size of group to which a member belongs were permissible for use in member contribution calculations (Department of Health, 2002). The use of risk rating factors to determine the respective risk profile of an individual or group/s of individuals within a risk pool is an occurrence described by McLoed (2005:143) as the application of mutuality (refer to glossary of terms for definitions). At this point in time, insurers and medical schemes were essentially permitted to operate within the same commercial environment. Thus, by implication, medical schemes were compelled by market forces to also risk rate to remain operational and competitive. However, medical schemes are only able to do so by means of a legal directive which is at the policymaker’s discretion. It is important to note that there was no literal introduction of a risk rating system within the health insurance product provider market because risk rating is a standard business practice within this specific market. Risk rating practices specifically within the medical schemes market were legally permitted for a further eleven years.

Since the late 1980s and throughout the 1990s, benefit expenditure and scheme contributions have been on an ever-increasing trend above inflation levels despite the introduction of managed care initiatives during the same period. During the same period, medical scheme members also experienced dramatic increases in co-payments (Cornell et al., 2001). The end of the 1980s was characterised by a decline in the quality of healthcare offered by public hospitals which continued to operate alongside the private health service.

6.6 The 1989 de-regulation of the medical schemes industry

Community rating and risk rating are opposites which cannot co-exist. The 1989 amendment of the Medical Schemes Act was implemented to stimulate scheme competition through the removal of the principles of open enrolment and community rating from statute and the reintroduction of rating related regulation in the medical schemes industry (Söderlund and Hansl, 2000). This event is widely known as the de-regulation of the medical schemes market. The application of risk rating meant that schemes could charge higher contributions to higher risk members, which eliminated existing cross-subsidies between the young and old as well as between the healthy and sick.

The contributions of members were rated in accordance with age and/or medical history. The implications of the 1989 amendments were that the sickly and elderly could not obtain coverage as noted in Söderlund and Hansl (2000:379). Therefore, the period from the year 1989 leading up to 1993, was characterised by medical scheme premium and cover risk rating (refer to glossary of terms for definition). This led to exponential growth within the private health care sector and systematic exclusion of older and sicker members with a high propensity to claim from cover. In other words, scheme members who need medical cover the most. Evidence provided by Söderlund and Hansl (2000:384) suggests that the average risk profiles of open schemes began to deteriorate in the 1980s, later showing an improvement in the early to late 1990s. Parallel to this, was a common trend in the private health system during the 1990s, where an increasing number of corporates took over the ownership of private hospitals (van den Heever, 2012).

Also, key to this discussion are the 1993 amendments to the Medical Schemes Act of 1967 which preceded a period of partial deregulation. The 1993 amendments to the Act were passed into law in direct response to industry claims that regulatory controls placed unnecessary constraints on the medical industry's ability to manage cost escalations (Doherty and McLeod, 2002). The amendments made provision for, amongst others, the guaranteed payment of claims, the involvement of for-profit entities in the market notably, third-party administrators and large life insurance institutions and the removal of statutory minimum benefits. Hence, partial deregulation in 1993 gave rise to greater commercial opportunities for insurance

market participants to enter the pre-funded healthcare financing market. The insurers have continued to utilise observed risk factors as part of normal premium determination practices. Gradually, these life insurance market participants either established new open schemes or acquired the for-profit administration and managed care businesses of existing schemes albeit with varying levels of success. Relatively few of the life insurance market incumbents are still operational today apart from Medscheme. The operational failures of the life insurers can be attributed to the deteriorating risk profiles of underlying schemes and lack of viable growth prospects (van den Heever, 2012; Erasmus et al, 2016).

In 1993, government employees were also given permission to become voluntary members to a medical scheme of their choice. All mandatory government-sponsored public sector medical schemes in existence were subsequently converted into open commercial schemes. The parliamentary; police force and correctional services staff medical schemes are examples of schemes that were subject to conversion. However, the above-mentioned schemes were still to remain closed and mandatory (Van den Heever, 2012:6). The medical schemes market was growing rapidly yet the pre-1994 policy framework did not adequately address the challenges experienced by insurers. It became apparent that cost containment began taking centre stage due to increasing non-health care costs (van den Heever, 2012:9). A new regulatory framework reinstated the solidarity principles and create free market incentives to manage costs. In the year 1995, a new regulatory framework was proposed which reinstated measures removed in 1989 and 1994, one of which was the application of community rating, the introduction of open schemes and prescribed minimum benefits.

6.7 The effects of advanced risk rating in the medical schemes industry

The rationale for deregulation was to stimulate medical scheme industry competition based on price. Price competition through risk rating on the demand side of the medical schemes market would eventually translate to increases in scheme membership. However, in practice, on the supply-side of the medical schemes market, schemes were essentially price takers. A more detailed discussion of the demand and supply side dynamics of the industry to be discussed in Chapter 2. Adjacent to the medical scheme market was a hospital market which operated as an oligopoly (Van den Heever, 2012). In the period leading up to 1994, employer

policies began to change significantly with respect to subsidies for medical scheme membership past the retirement age with the focus being on lowering the impact of health care subsidies on the medical scheme's balance sheet in accordance with global best practice. There have been significant increases in the cost of healthcare services and non-health costs which materialised after 1994 rendering healthcare unaffordable for the ordinary medical scheme member. Health care industry cost escalations continued with total contributions growing faster than inflation between the years 1996 and 1998 despite this occurrence scheme membership remained stable. McIntyre and Gilson (2000) states that in the 1990s, Social Health Insurance (SHI) was intended to be a policy instrument to be used to restrict medical schemes cost spirals and redress the resource disparities within the public and private sectors relative to the population served by each sector. The call for the implementation of an NHI was tabled in the late 1990s.

The risk rating practices employed by schemes limited medical scheme coverage on offer in the industry and led to increases in member contributions. High-risk members with pre-existing conditions such as the elderly or chronically ill were subjected to life-long exclusions or deprived of coverage (Doherty and McLeod, 2002). Consequently, there was a 'dumping' of private patients onto the public sector in instances where medical schemes benefits had been exceeded. The latter were practices combined reduced medical scheme coverage for private patients who required medical care the most under the guise of cost avoidance. The unintended consequence of the former practices also resulted in a greater burden on the public sector (Van den Heever, 2012).

6.8 The resurgence of community rating under a capitalist private healthcare system

Amidst considerable industry opposition, the passing into law of Medical Schemes Act No. 131 of 1998 was legally opposed by the medicals schemes industry. After many failed attempts to stop the legislation from being passed into law, the Medical Schemes Act and accompanying regulations of 1999 were implemented from January 2000 with several amendments thereafter (Doherty and McLeod, 2002). The introduction of the Medical Schemes Act (No 131 of 1998) effectively reversed most of the 1989 deregulation and 1993 partial deregulation provisions. Amongst other things, the Medical Schemes Act of 1998 made

provision for the following: the establishment of an independent regulator; community rating which made it compulsory for schemes to charge contributions that were differentiated only on the basis of income and the number of dependants; minimum solvency requirements; open enrolment which requires every scheme to accept all eligible applicants; the introduction of a comprehensive package of hospital and outpatient services known as the Prescribed Minimum Benefits (PMB) and the accreditation of brokers and broker commission regulations. The Act effected in the year 2000, omitted matters pertaining to mandatory membership and the introduction of risk-equalization.

In practice, prior to the passing into law of the amendments to the Medical Schemes Act No. 131 of 1998, there were market challenges that arose due to the development of the hybrid structures. The hybrid structures arose due to the existence of a parallel insurance environment created by sellers of insurance products that were in direct competition with medical schemes. Market conditions like those seen during the period leading up to the deregulation in 1989 materialised again. This time around, scheme members resorted to purchasing gap cover for shortfalls in medical expenses (McLoed, 2005). This event has some important implications for the medical schemes industry, the most prominent being the demarcation regulation dispute which culminated in the Guardrisk v. Registrar of Medical Schemes case which is to be discussed elsewhere in this research paper (Doherty and McLeod, 2002:43. Hansl and Soderlund (2000) claims that the Act of 1998, having been partially applied had led to some reductions in contributions, improved equitable coverage and downward shifts in cost trends.

On the other hand, market stability, enhanced risk pooling and access for low-income groups were not achieved at this stage. As already mentioned, at present, operating alongside the above-mentioned health care sectors exists two additional private healthcare funding markets: a highly regulated medical schemes market and a health insurance product market. Insurers operating in the insurance product market have since the beginning been excluded from the medical schemes market but can provide gap cover as regulated in detail by the demarcation regulations to be discussed later in this research paper. There are a wide variety of product types which can be classified as health insurance products notably: shortfall cover, top-up

cover, hospital cash cover, ancillary cover such as dental cover, travel insurance. (Erasmus et al, 2016). In contrast, the medical schemes industry continues to prioritise the payment of expenses that arise due to catastrophic illness. On the other hand, the health insurance product market offers top-up insurance coverage to medical scheme members and/or offers standalone cash based or care-based products which offer to pay out a lump sum cash benefit which are linked directly to the cost of treatment or related to a set scale.Further, healthcare service providers such as managed care organizations, intermediaries and fund administrators introduce a profit and growth motive into an otherwise not-for-profit medical scheme environment which to some degree is conducive to healthy market competition (Erasmus et al, 2016).

Nonetheless, considerable challenges do still exist within the private healthcare funding market such as cost containment, controlling utilisation and the development of low-cost, affordable options to attract lower-income earners and other uncovered market segments into the private sector healthcare market. There have been two major regulatory initiatives tabled to date which are aimed at extending medical scheme cover to the low-income market: First, is the consultative investigation into Low Income Medical Schemes popularly known as the LIMS process. The more recent initiative was the development of a framework which exempts schemes from certain provisions of the Act to enable schemes to provide low-cost benefit options (Doherty and McLeod, 2002). Until now, the Low-Cost Benefit Options (LCBO) framework development process has stalled due to competitive tensions and interdependencies between the medical schemes market and insurance product markets (Erasmus et al, 2016).

6.9 Regulated competition in the South African medical schemes industry

South Africa does not have and has never had a health insurance market. Instead, there exist voluntary medical funds which serve to provide social insurance and private retirement funds. Generally, both types of funds are linked to formal sector employment and are a fringe benefit of most formal employment contracts. A important difference between medical schemes and retirement funds is that medical schemes serve to redistribute funds from the healthy to the sick

whereas there is no redistributive component in the retirement funds industry (Woolard et al, 2011:359).

Most of the equity and sustainability related challenges facing the South African health sector can be directly attributed to the nature of operations within the medical schemes market and imbalances inherent within the current public–private sector mix (McIntyre et al, 2003). The 2002 Taylor Committee of Inquiry made recommendations to be applied to the public, notably: petitions in favour of public hospital capacity enhancement. The Taylor Committee of Inquiry also revisited the recommendations first made by the Medical Schemes Act of 1998 again which called for mandatory membership and the introduction of risk-equalization. However, none of the former recommendations have been implemented to date. The lack of implementation of the relevant recommendation within the public sector has translated into public hospitals not being able to compete directly with private hospitals for the patronage of medical schemes and specialist services for the longest time (Van der Heever, 2012). Van den Heever (2012:5) notes that the decline in the number of public sector beds recorded from 1986 until 2010 can be linked to an increase in the number of beds in the private sector. This demonstrates a dramatic shift of treatment from public hospitals into private hospitals compatible with increases to the cost of medical schemes.

In the private sector, the absence of mandatory membership implies that medical schemes compete within what is essentially a voluntary scheme environment. In parallel, the Act sought to ensure a continuation of membership within the medical scheme funding system through the introduction of the open enrolment principle. In addition, penalty framework consisting of late-joiner fees and waiting periods was instituted by the same Act to mitigate possible instances of anti-selection against sickly and older members. As already established in the above context, the existence of community rating and open enrolment without mandatory membership gives birth to the need to consider the risk equalization recommendation as put forward by the Taylor Committee of Inquiry. Risk equalization in the form of a Risk Equalization Fund proposal was only considered in the year 2005. The Council for Medical Schemes acted in the capacity of shadow transfers administrator. The implementation of the

REF following its shadow period was deferred to an indeterminate future date due to a change in health policy. The focus of health policy has shifted towards the implementation of a National Health Insurance scheme, whose implementation has also been subject to delay since its introduction in 1944 (McLeod and Grobler, 2009).As a result, the Medical Schemes Amendment Bill of 2018 refers to a National Health Insurance Fund (NHIF) which is to serve as a financing mechanism for universal healthcare coverage.The next section provides a more recent policymaker viewpoint on the risk equalization proposal.

6.10 An overview of 2019 Health Market Inquiry (HMI) recommendations

The 2019 Health Market Inquiry has made it a legal imperative for all medical schemes to participate in the NHI environment. The proposed NHI implementation trajectory calls for the application of a Risk Adjustment Mechanism (RAM). In addition, for the RAM operations to bring about equitable outcomes, it must be applied to a standardised benefit option package which will be offered by all schemes and is yet to be fully defined by policymakers. Work completed as part of the shadow Risk Equalization Fund process revealed that approximately 80% of risk variation in the medical schemes industry is attributable to age and gender factors respectively. However, policymakers should be careful not to deviate from the social solidarity principles of health insurance. In other words, the implementation of a RAM and income related cross-subsidization should as far as possible to ensure that low-income scheme members do not end up subsidising higher income groups due to inherent correlations between age and income. As already mentioned elsewhere, a crucial element in the implementation of income related cross-subsidization is the replacement of the current tax credit with a contribution subsidy.

Later, in this dissertation, the revenue collection aspects of risk equalization will be discussed in more detail. Globally, it has become common practice for tax authorities to administer income subsidy payments while risk adjusted contributions are administered by a central fund responsible for the risk-adjusted subsidy payments. The 2019 HMI Report recommends the use of an integrated risk and income adjusted subsidy payment approach subject to approval by the Council of Medical Schemes (CMS). No new reforms have emerged from the 2019 HMI report if one compares the recent policy proposal to theoretical predecessors on the same

subject matter going back to the year 2005. However, still outstanding is recommendations with respect to mandatory membership. The section that follows will discuss the distinguishing features of the medical schemes industry in sufficient detail.

6.11 South African private healthcare funding – A focus on medical schemes

The previous section refers to a time in health care history, where policy direction was in support of the implementation of a SHI and later a National Health Insurance arrangement. Kutzin (1998) suggest that many countries implement a SHI to generate additional revenue for tax-funded spending on health services. In the early 1990s, policymakers envisioned the delivery of a broader South African SHI policy framework. Under the SHI policy framework, it was proposed that medical schemes would facilitate the gradual extension of income cross-subsidies, risk cross-subsidies and the eventual implementation of mandatory contributions for members that earn above the income-tax threshold (Doherty and McLeod, 2002:43; McLeod and Ramjee, 2007). Similarly, within the context of a post-NHI healthcare environment, Ramjee et al (2013:94) postulates that the continued existence of medical schemes would be dependent on the ability of medical schemes to contribute effectively to the achievement of social solidarity. However, in the absence of both SHI and/or NHI arrangements as mandatory prepayment mechanisms, a portion of the voluntary healthcare financing market, until now still resides with medical schemes covering a membership base which is approximately 16% of the total South African population (CMS Annual Report, 2015/16). Medical schemes in South Africa operate as non-profit entities and governed by the Medical Schemes Act No. 131 of 1998, subject to regulatory oversight by the Council for Medical Schemes. A medical scheme is comprised of essentially two components: Firstly, the medical fund described by McLeod (2005:141) as a mutual fund/society which is managed by a board of trustees.

Second are fund administrators which are appointed by the mutual society's board of trustees responsible for scheme operations and are permitted to obtain profits from administration fees (McLeod and Ramjee, 2007). There are three broad medical schemes categories currently in existence: Registered medical schemes; Open schemes and Bargaining Council schemes.

Registered medical schemes are schemes which are governed fully under the regulatory control of the Medical Schemes Act of 1998. Also, Bargaining Council schemes (previously known as exempt schemes) are schemes that are not able to fully comply with the provisions of the Medical Schemes Act of 1998 and are as such granted exemptions from certain provisions, particularly with respect to PMBs. Open medical schemes are permitted by law to enrol any member of the public without restriction and are also subject to standard pre-determined conditions made by the Act such as late joiner penalties and mandatory waiting periods. The Medical Schemes Act No. 131 of 1998 also permits membership restrictions based on employment or former employment in a profession, trade, industry or calling, or by an employer or class of employer. The former has made provision for the formation of employer-based restricted medical schemes apart from GEMS, which employers use as a vehicle to fund the healthcare needs of employees. Historically, Bargaining Council schemes existed which typically covered the employees of the South African National Defence Force (SANDF), the South African Police Service and Correctional services as well as schemes that were created before the first Medical Schemes Act of 1967(Doherty and McLeod, 2002). Furthermore, Doherty and McLeod (2002) suggest that bargaining council schemes used to offer very limited benefits such as primary health care delivered by salaried or panel doctors. Hence, due to the broader benefits packages offered by open and restricted schemes, over time, many of the Bargaining Councils schemes such as: Polmed; Transmed and Medco have subsequently acquired registered scheme status as conferred by the Council for Medical Schemes (Budlender and Sadeck, 2007).

Additionally, medical schemes also operate in conjunction with third party service providers. The third-party service providers are deemed to be for-profit entities which provide a range of services such as administration, marketing, intermediary, managed care, consulting and advisory services. Further to this point, a portion of managed care organisations are owned by administrators and offer advice to schemes regarding appropriate treatment protocols, hospital admission criteria and other cost containment measures. In parallel, exists corporate and individual intermediaries focused on open medical scheme administration. Interestingly, in

the 1990s, intermediary activities facilitated a significant shift of members from restricted to open schemes (Doherty and McLeod, 2002). To not digress, it has already been established above, that medical schemes and insurance product providers provide a similar class of health care insurance coverage. However, consumers may not always be aware of the legal distinction between medical schemes, medical scheme service providers and insurance product providers. Private insurers have operated in isolation to the medical schemes market but are permitted to provide gap cover and other for-profit insurance products offerings as specified by the demarcation regulations. The next section details the demarcation regulation requirement between medical schemes and health insurance product providers in terms of key developments in its evolution and the current stance.

6.11.1 Scope delineations between the medical schemes business and insurance business

Medical schemes and health insurance product providers are separate entities governed by different sets of legislation and cannot be allowed to compete within the same commercial environment due to differences in commercial motives. Private insurers and third-party service providers are driven by a for-profit motive whereas schemes are driven by the opposite (i.e., a not-for-profit motive). The key aim of demarcation regulation was to dissuade the long-term insurance market from utilizing for-profit insurance products sold on a risk rated basis as a tool for risk selection to the detriment of the business of a medical scheme (Erasmus et al, 2016). Arguably, the insurance product market and medical scheme compete for the same health care consumer within the same sector and as such it is expected that competitive overlaps would exist between the forms of insurance products on offer and services provided by medical schemes. Also, one can put forward the argument that the need for demarcation first arose as early as 1989, due to brand confusion created by large life insurers due to similarities in the names of insurance entities and healthcare insurance products on offer. An example of brand similarities is Momentum wherein Momentum administers a Momentum-branded medical scheme. Another equally important motive for the demarcation regulation is due to the Act having created a commercial environment for medical schemes to operate to the exclusion of the corresponding health insurance product market which was devoid of a

legislative framework under which to operate. As such, it is the opportunistic behaviour on the part of the insurance product market which led to consumer market confusion giving rise for the demarcation of product offerings.

To begin, Section 1(1) of the Medical Schemes Act 131 of 1998 provides a detailed definition of the business of a medical scheme. The business of a medical scheme as defined by the Act as: "undertaking liability in return for a premium or contribution – (a) to make provision for the obtaining of any relevant health service; (b) to grant assistance in defraying expenditure incurred in connection with the rendering of any relevant health service; and (c) where applicable, to render a relevant health service, either by the medical scheme itself, or by any supplier or group of suppliers of a relevant health service or by any person, in association with or in terms of an agreement with a medical scheme." The term a "relevant health service" which is defined further as: "any examination, diagnosis, or nursing home; for a physical or mental defect, illness, deficiency; or pregnancy". On the other hand, private health insurance refers to policies/products are subject to market conduct regulatory oversight by the Financial Sector Conduct Authority (FSCA) an regulatory body, previously known, as the Financial Services Board (FSB).Private health insurance policies/products are governed by the Long-term or Short-term Insurance Acts of 1998.A health insurance policy is not a substitute for private medical cover but is a binding contractual agreement between an insurance company and the policyholder for cover against an insurable event subject to specific policy exclusions. Health insurance policies are not permitted to indemnify policyholders against the actual cost of healthcare nor reimburse health care providers. Policies pay a pre-defined lump sum to cover a specific health related event (Hutcheson, 2012:18). Econex (2013) provides a useful example of popular health insurance products on offer, such as dread disease; disability cover; hospital cash plans and lastly 'gap' cover. Luiz (2009:260) defines gap cover as policies that pay the difference between the actual cost of the medical services and the amount paid by the medical scheme. Gap cover is not meant to cover the full cost of medical services nor to fund members that make use of service providers that charge more than a pre-determined rate set by a medical scheme (Luiz, 009).

To reiterate, medical schemes are required by law to apply the principle of community rating as part of the determination of member contributions whereas insurers are permitted to risk rate. The law governing medical schemes has always sought to preserve the commercial terrain of medical schemes by prohibiting insurers from engaging in direct competition with medical schemes. However, McLeod (2005:146) states that it was the existence of gaps within private health insurance regulation during the period leading up to the passing into law of the amendments to the Medical Schemes Act No. 131 of 1998, which resulted in some insurers engaging in business practices similar in nature to that of the "business of a medical scheme" as defined in Section 1(1) of the Medical Schemes Act.

Hence, by implication the demarcation between medical schemes and health insurance products is dependent upon the interpretation of the definitions set out in Medical Schemes Act of 1998. As already mentioned in Chapter one, it was only in theory that insurers offered products outside of the defined medical schemes environment. The legal distinction between Gap Cover and the business of a medical scheme is an interesting feature of the South African health financing market and at a point in time become the subject of a legal dispute. The legal battle in question is Guardrisk Insurance Company Limited Insurance Co Ltd. v Registrar of Medical Schemes and Another 2008 (4) SA 620 (SCA) and Registrar of Medical Schemes v Guardrisk Insurance Company Limited Insurance Company Limited 2007 JDR 0868 (W).

6.11.2 Case law discussion – a matter involving Guardrisk Insurance Company Limited, the Council of Medical Schemes and the Registrar of Medical Schemes

In essence, both cases involve the Registrar for Medical Schemes and the Council of Medical Schemes initiating a joint application for a court interdict against Guardrisk Insurance Company Limited. The court interdict was meant to prohibit Guardrisk Insurance Company Limited, a medical service supplier of AdmedGap and AdmedPulse policies, from marketing and selling the policies on the grounds that Guardrisk Insurance Company Limited was conducting the 'business of a medical scheme'. According to Erasmus et al (2016:17), the AdmedGap and AdmedPulse policies were deemed to provide benefits that cater for the exact

shortfall between specialist in-hospital treatment to be reimbursed by a medical scheme and the actual charges of the provider. Therefore, the insurance products in question provided cover that is directly linked to the actual cost of care. In addition, the Registrar for Medical Schemes and the Council of Medical Schemes considered this category of products to be in contravention of the definition of a medical scheme. It was further alleged that Guardrisk Insurance Company Limited did not obtain the necessary registration required by the Medical Schemes Act enabling it to do so. Furthermore, the Registrar also submitted that the policies in question were in fact accident and health policies as defined by section 1(1) of the Short-term Insurance Act 53 of 1998.The High Court was called upon to adjudicate as to whether the relevant statutory definitions that of the 'business of a medical scheme' and 'accident and health policy' were properly interpreted by the parties involved (Luiz, 2009).

Luiz (2009:264) mentioned that the High Court granted the interdict against Guardrisk Insurance Company Limited stating that it was in fact undertaking the business of a medical scheme. The policies did pay for expenses incurred by the policy holder during ‘rendering of any relevant health service’ which is one of the activities listed under the definition of the business of a medical scheme. Guardrisk Insurance Company Limited escalated the matter to the Supreme Court of Appeal on the grounds that it is the interpretation of the words 'and' and 'or' in statute was at the root of the legal dispute The Registrar applied to the Constitutional Court for leave to appeal the decision of the Supreme Court of Appeal and it was over turned (Luiz, 2009).The Registrar for Medical Schemes and the Council of Medical Schemes alike concur that a conjunctive interpretation is likely to have adverse implications on the application of the principle of community-rating within the medical schemes environment (Harrison, 2008). A major concern of the Registrar for Medical Schemes and the Council of Medical Schemes was the types of health insurance products which encouraged younger healthier medical scheme members to opt for a combination of insurance products and cheaper medical scheme options. The combination of a community-rated medical scheme options and risk-rated insurance product/s was the core reason for challenging the validity of the product

combination in court. An important consequence of this combination is the diminishing value of risk cross-subsidies between medical scheme members (Erasmus et al, 2016).

One would think that the Registrar for Medical Schemes and the Council of Medical Schemes were trying to avoid the onset of regulatory adverse selection. The risk and experience for ratemaking purposes is prohibited within the South African medical scheme's environment through the community-rating principle. This is clearly not a cause for concern in this instance. The main argument led by the Registrar for Medical Schemes and the Council of Medical Schemes was that member interests would not be protected should insurers other than those registered under the Medical Schemes Act be allowed to engage in the business of a medical scheme. The financial protection afforded to the members of medical schemes through the right of access to health care services as guaranteed by the Bill of Rights in the Constitution of the Republic of South Africa (1996) would be diluted (Luiz, 2009).Member claims in excess of above threshold benefits would render members financially vulnerable due to unaffordable out-of-pocket gaps, resulting in members having to face either an untimely death or the prospect of financial ruin in the absence of healthcare financing alternatives. The requirement for segregation between medical schemes and insurers has always existed but has been difficult to define.

The original demarcation agreement did set out the proposed conditions under which the products would operate but did not have full legal effect or recognition. The main proposed changes contained in the original demarcation agreement released in 2014 included: Amendments to the definition of a medical scheme which is to include a requirement for health insurance products to play a complementary and supportive role to the business of a medical scheme; Impending removal of risk based underwriting and broker commission reduction for insurance based products; to confer additional regulatory role and authority to the CMS and Medical Scheme Registrar in the regulation of health insurance products; all benefits to be clearly stated in Rand terms before a claim incident; prohibition of benefits ranges or bundled offerings designed to mimic the benefit structures of medical schemes and lastly health

insurance offerings are barred from offering coverage which act as indemnification for health related expenses (Erasmus et al, 2016).

Thereafter, it then emerged that the original demarcation framework had two main flaws, the first was the definition of the business of a medical scheme was technically flawed and secondly the framework was not deliberate enough in its consideration of the health insurance market. To remedy the first technical flaw, the proposed alternative definition set out in the demarcation regulation guidelines implies that any health insurance product which performs any of the three components listed under Section 1(1) of the Medical Schemes Act will be deemed to be conducting the business of a medical scheme. Further to this point to remedy the second flaw, a broader category or scope of health insurance products to be introduced that will be deemed to fall under the ambit of the MSA once the demarcation regulations have come into effect. The demarcation agreement proposed change was to replace the contentious 'and' with an 'or' in the definition of the business of a medical scheme as a direct response to the Guardrisk case which did happen. Finally, the recommendation of the High Court was for the parties to attempt once again to draft demarcation regulations. Luckily, the demarcation regulations have been finalised after a lengthy 30-year development process that was riddled with delays.

As a side note, there may be a room for demarcation regulation requirement with respect to medical schemes and medical scheme service providers as subject matter for a future study. Additionally, Econex (2013:33) claims that 'balance billing' as a practice which is commonly utilised by most medical schemes may be an indirect catalyst for the creation of a gap cover insurance product market. The private health care financing market was initially established using occupational funds. Medical schemes and health insurance product provider markets are merely the incidental results of a long history of employer involvement within the sector. The section that follows provides an observation of the ongoing, crucial role of employers within and alongside the medical schemes market.

6.11.3 The present day ongoing and pivotal role of employers within the medical schemes market

Employers continue to play a significant role in the funding of global health markets (McDonald, Mecklenburg, and Martin, 2015). Employers play a range of roles within the pre-funded healthcare financing system particularly in the absence of a mandated social security system for health care. South Africa is no exception to this rule, the deregulation of medical scheme in 1989 and 1990s led to greater commercial opportunities for large corporates to purchase healthcare services on behalf of employees and improve consumer affordability through cost of cover subsidies which make health insurance coverage more affordable for insured employees. McLeod and Ramjee (2007:52) suggest that employers are increasingly no longer directly involved with medical schemes opting to rather pay contributions over to open medical schemes.

The majority of employers usually impose mandatory medical scheme membership as a condition service requirement, conferred to an employee through an employment contract normally as part of cost-to-company remuneration (McLeod and Ramjee, 2007).The condition of service requirement is normally applied by employers to employer sponsored restricted membership funds which are essentially in-house medical funds set up by employers in the formal employment sector to provide more affordable healthcare coverage to employees. Employer-based restricted funds usually have predefined benefit structures with contribution tables which facilitate effective cross subsidies across different income bands. Therefore, the condition of service requirement can effectively diminish the impact of anti-selection for a specific portion of the market adding a level of overall stability to the medical schemes market. McLeod and Ramjee (2007) further argues that the use of income bands may place lower income members of medical schemes at a disadvantage as it reduces the extent to which income cross-subsidies can be achieved in the interests of market stability. Erasmus et al (2016:21) also points out that there has been a consistent downward pressure on employer subsidies particularly in instances where members are about to go on retirement (Abraham, Malherbe, and Carswell, 2018). The changing nature of employment is also a contributory factor that allows employees to switch companies over the course of their working life. In the

life-cycle hypothesis put forward in Ando and Modigliani (1963), it has been established that individuals effectively accumulate savings throughout their working life to finance any expenses to be incurred at retirement. Employers have thus far successfully reduced health care inflation risk associated with early employee exits by effectively conferring the risk onto workers and pensioners through a change in employer policy from defined benefit to defined contribution retirement schemes. Moreover, McLeod and Ramjee (2007:52) gives an indication that fewer employers are willing to offer new employees medical scheme cover which extends beyond the pensionable age. The former statement is a rather disappointing outcome, since Butler and Van Zyl (2012) suggests that many South African households are largely unaware of the risk that the retirement savings accumulated before age 67 may be insufficient in funding the cost of future health care once retirement age is reached. McLeod et al. (2002) and McLeod et al. (2003) emphasized the full effect associated with the transfer of present-day medical inflation risk and investment risk to the elderly and future retirees whose impact may only become apparent some 10 years to 30 years well into the future when it may be already too late to remedy.

McLeod et al (2002) cautions that the shift from defined benefit retirement funds to defined contribution funds will result in '*a future pensioner's medical expense time bomb'*. This is because under defined contribution retirement schemes, it is the members of the retirement fund that ultimately bear the longevity and expense risks as stated in Van Zyl and Van Zyl (2016). Relevant literature claims that the change in employer policy is expected to have devastating effects on future pensioners who joined companies from around the year 2000 onwards especially in the unfortunate event that economic conditions continue to worsen. This matter requires serious attention from policy makers as it will have a direct impact on medical scheme affordability due to the increasing number of future pensioners who may find themselves in a predicament of having to increase out of pocket expenditure to fund the full cost of health care.

However, a more recent pilot study by Abraham, Malherbe, and Carswell (2018) found that this trend may be changing. South African employers in the occupational retirement funds

segment may not be entirely opposed to extending the normal retirement age. To this point, the Abraham, Malherbe, and Carswell (2018) study shows that employees may also be willing to work past normal retirement age due to increasing longevity. In addition, McLeod et al (2002) claims that pensioner's benefit the most from options with lower income-based contribution tables which in turn negatively impacts a scheme's overall risk profile. The former is especially applicable to the open schemes environment wherein intermediary involvement in the open scheme environment creates increased member awareness of benefits which may results in a downward migration of beneficiaries to cheaper options also known as buying down, which has an influence on the increasing popularity of open schemes amongst members (Erasmus et al, 2016).

Contribution determination practices involving the use of income bands may create an economic incentive and competitive pressure for schemes to engage in risk selection practices (McLeod et al, 2003). The resultant risk selection practice is another reason for the decline in the use of income bands as an income cross-subsidization device within the medical schemes industry. The achievement of income cross-subsidies within open schemes and across different industry schemes can only be possible if government adopts a deliberate income cross-subsidy policy coupled with mandatory membership which is currently not the case. In contrast, several employers in industries such as the energy and mining sectors have shown a commitment to prefunded occupational healthcare by opting to invest in onsite healthcare provision that is only accessible to employees. Employers such as Sasol offer pre-fund care for employees under an occupational health framework (Econex, 2013). Adams et al. (2007) explains that onsite employer healthcare facilities provide medical benefits to higher-income employees through a company specific restricted medical scheme.

Lastly, employers can also offer employer subsidized membership. The Government Employee Medical Scheme (GEMS) is an example of a state-owned employer subsidized membership scheme which has been proven to be very effective in increasing member affordability. Overall, government is deemed to be the largest employer in the medical schemes industry. GEMS could become a continual point of entry into the medical schemes

market as well as a source of growth for the South African medical schemes market (Erasmus et al, 2016).

6.12 Concluding remarks

There exist voluntary insurance schemes in South Africa in the form of medical schemes and private retirement funds. Medical schemes form part of the overall social protection system and were intended to function as pure insurance without a redistributive mandate (Woolard et al, 2011). The implementation of the South African risk equalization fund also known as the REF scheme was proposed in 2005 and subsequently abandoned at an advanced stage of development. The REF scheme has never been implemented to date. Thus, policymakers saw the October 2019 Health Market Inquiry as an opportunity to revisit the reinstatement of risk equalization recommendations and its practical usefulness between medical schemes. How did the South Africa medical schemes market get to the conclusion that risk equalization may be a necessary policy response?

Chapter 7:

South African experience with risk equalization

7.1 Introduction

Chapter six diverts the reader's attention on the South African stance on risk equalization in relation to initial endeavours; proposals that were never taken forward and future policy proposals in support of the future implementation of a risk equalization mechanism.

7.2 A highly competitive yet not-for profit medical scheme industry – A dichotomy

Conventionally, health care financing markets with a social orientation tend to prioritise social solidarity. Consequently, most health care financing markets with a social orientation are usually highly regulated as policymakers seek to bring about social solidarity. Regulation in social health care financing markets usually prescribe the following: a mandatory health care benefits package that must be offered to all members; enrolment of all applicants regardless of health status and the community-rating of premiums that is unrelated to health status of the insured individual. The current legislative environment aimed at the attainment of social solidarity and the highly competitive South African medical scheme market presents a contradiction. In this regard, for medical schemes to remain profitable in a contradictory market setting, schemes to have an incentive to 'cream skim' relatively healthy members with a higher income and a low number of dependents. Historically, the medical schemes industry began as employer-based health insurance. In other words, employees and beneficiaries obtain medical insurance as a condition of employment. Further, the medical scheme industry consists of multiple, independent, standalone medical funds. Thus, medical scheme with a sicker, poor membership generally charges higher premiums than funds with a healthier membership due to unpriced risk heterogeneity.

At a point in time, authors McLoed and Grobler (2010) put forward the view that risk equalization is a necessary step to National Health Service, a centralised public system that is similar to that introduced in the UK funded through general taxation(sic). However, McLoed and Grobler (2010) is not a grounded theory study and is therefore not sufficient to prove of

disapprove the previous statement. The next section will explain the reasons for the risk equalization as chosen area of focus and some of the problems which lead to its proposal as policy tool.

7.3 Why is risk equalization required in South Africa in the first place?

The main objective of this discussion is defined key terms and concepts related to health care funding so as contextualise the concept of social solidarity as an underpinning principle for the requirement for risk equalization. It is well accepted that governments are responsible for pooling tax revenues for allocation to social causes one of them being health care for the entire population. McIntyre and Van den Heever (2007:73) claims that health insurance only comes into play in instances where contributions to tax revenue for risk polling purposes is not sufficient to cover the health service requirements of the full South African population. Health insurance occurs in different forms. The first overarching health insurance system is known as mandatory health insurance which is based upon the principle of social solidarity as defined in Chapter 4 of this dissertation.

Mandatory health insurance often referred to as Social Health Insurance (SHI) is a health insurance system wherein a legal requirement prescribes health insurance membership for the entire population, or a sub-set of the population and it is only members who make income contributions to the insurance scheme who are entitled to make use of its benefits. Another significant feature of solidarity is that of National Health Insurance (NHI), which is a term used to describe a universal health insurance system where benefits accrue to population in its entirety even if the individual does not or has not made contributions to the scheme. McIntyre and Van den Heever (2007) deem mandatory insurance to be a more inclusive term which if implemented should bring about social solidarity within a given insurance market. On the other hand, under voluntary health insurance it is citizens who choose whether to become members to a health insurance system. McLoed and Grobler (2010) notes the introduction of free market reforms within the private health insurance in the late 1980s and early 1990s.The previously mentioned health care financing reforms had unintended consequences for healthcare equity

and access for the most vulnerable medical scheme members (i.e., the elderly and those with chronic diseases). Admittedly, South Africa has seemingly insurmountable legacy health care system related challenges if one were to be compared to European countries mentioned in Chapter 4 of this dissertation. However, a point of convergence exists with respect to health policy related matters. At present, South Africa has a private insurance market that is characterised by rampant competition and an increasingly urgent need for greater solidarity whereas European countries have a long-standing tradition of subsidising solidarity which brings about a need for increased competition (McLoed and Grobler, 2010:27). Hopefully, the former definitions will eliminate any confusion created by the inter-changeable use of the terms social and national health insurance.

7.3.1 The crux of key assertions made by McLeod and Grobler (2010)

McLeod and Grobler (2010) that argue the rationale for risk equalization in the South African medical scheme context is to correct behaviour where schemes compete based on benefit design. This suggests that the behaviour of medical schemes is misplaced. However, it can be argued that risk selection practices are a mechanism to create risk pools that are more homogenous – where say benefit option design helps to cherry-pick healthier (lower-risk) individuals. In spite of the non-profit motive, medical schemes may wish to compete for healthier individuals in an effort to offset the higher costs of healthcare and to try offer more affordable coverage that aligns more closely to the risk profile of members since they are unable to adjust contributions based upon risk propensities.

7.4 What role was risk equalization envisioned to play within a South African mandatory health insurance system?

7.4.1 The 2002 Taylor Committee of Inquiry

The Taylor Committee, also known, as the Social Security Committee of Inquiry produced a report for the Department of Health in 2002. The report outlined the Taylor Committee's mandatory health insurance policy proposals. The report was one of the first policy documents to call for the phased implementation approach in moving towards an NHI, even if achieved only in the long-term. The Taylor Committee (2002) advocated for mandatory membership by

medical schemes to a risk equalization mechanism. The medical schemes market was envisioned to remain a key feature of the health system even under a national health insurance system. In addition to this, McIntyre, and Van den Heever (2007:79) claims that the Taylor Committee recommended a comprehensive services package which would move the South African health system:

> ".... toward a NHI system over time that integrates the public sector and private medical schemes within the context of a universal contributory system"

One of the key objectives of the Taylor Committee (2002) recommendations was to provide policy guidance to extend insurance coverage to a greater proportion of the South African population. However, of key interest in relation to the objective of this research paper is the recommendations which pertain to increased risk-pooling such as the call for community-rated mandatory health insurance contributions, risk pool optimisation; the introduction of risk related cross subsidies for prescribed minimum benefits across all risk classes. Parallel to this, the Taylor Committee (2002) also recommends other preparatory activities such as the creation of an income pool which combines both insurance contributions and tax resources with the aim of enabling risk equalization between public and private sectors; efforts to improve public hospitals health services; the replacement of medical scheme contribution tax exemptions with direct tax subsidy per person which is to be covered though an insurance arrangement and the implementation of a Risk Equalization Fund (REF) between individual schemes.

McIntyre et al. (2003:55) concurs with the Taylor Committee (2002) by pointing out that it is in the policymaker's interests to operate a risk-equalization mechanism between individual schemes as this will ensure that the mandatory benefit package can be purchased within the bounds set by risk-adjusted contribution revenue. The Taylor Committee described risk equalization as a mechanism that would bring about a larger, aggregated industry wide risk pool made up of a sum of smaller, independent individual scheme risk pools. Furthermore, the Taylor Committee propose that a risk equalization fund (REF) be designed to protect principle of

community rating by equalising risk adjusted contributions. The contributions made by medical schemes with above average risk profiles will be subsidised by the REF and conversely, medical schemes with below average risk profiles will not be required to make payments to the REF. The Taylor Committee also emphasised that for risk equalization to be successful, it should be based on objective risk factors and not diagnostic information, nor actual medical costs incurred by medical schemes to enable the improved efficiency. The risk equalization formula should be based upon demographic information and be subject to regular refinements over time in the interest of accuracy.

The Taylor Committee conducted an assessment and identified five areas fundamental to a risk-equalization process. The five areas are namely: Risk criteria that could be applied in a South African context; (b) options for income cross-subsidisation; (c) legislative requirements; (d) institutional requirements; and (e) expected impact on the medical schemes' environment. The Taylor Committee found no reason for delaying the implementation of risk equalization in the South African insurance market and in fact, the Committee called for its immediate prioritisation. As previously mentioned, the Taylor Committee had an interest in how the presence of risk equalization could aid the move towards the implementation of mandatory health insurance. To follow is a critical examination of the key assertations made by the Taylor Committee (2002) in light of the theory that has emerged from the study thus far.

7.4.2 A critical examination of the key assertions of the Taylor Committee (2002)

The analysis compared the cost-weighted demographic profile of all registered schemes with the cost-weighted demographic profile of each individual medical scheme. The results of the analysis indicated that risk profiles of open schemes, restricted schemes and overall did not change significantly, in the year 2000. The Taylor Committee asserted that variations in risk profiles exist, and a disproportionate risk distribution exists in the South African medical scheme market which require the urgent application of risk equalization. Plausibly, the inherent differences in scheme community ratings may also create an economic incentive for schemes to exploit inter-scheme arbitrage by employing preferred risk selection practices (Neuhaus, 1995:97). Figure 1 below illustrates that restricted medical schemes have an overall cost

advantage relative to open schemes, which may translate to opportunities for preferred risk selection. Further to this point, an analysis was conducted of risk pool variation within the open scheme market by the Taylor Committee, as part of an on-going investigation to prove the value of risk equalization. The analysis was based on the statutory returns of registered medical Schemes for the 1999 financial year, which translates to approximately 90% of the total number of beneficiaries that subscribe to open schemes (see Figure 1).

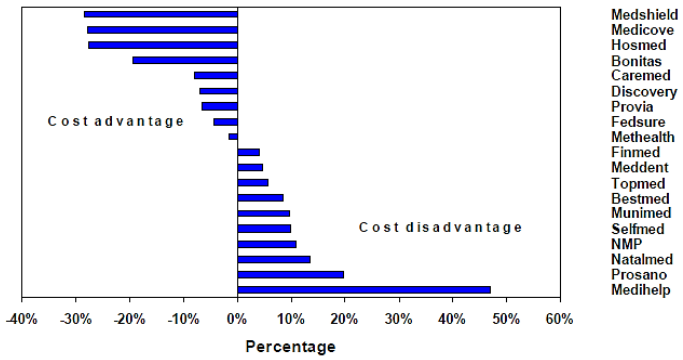


Figure 1: Statutory Returns of Registered Medical Schemes for the 1999 financial year. Adapted from the Taylor Commission of Inquiry documentation (2002).

The Taylor Committee's asserts that variations in risk profiles exist, and disproportionate risk distribution exists in the local medical schemes market which require urgent application of risk equalization. Firstly, there is little evidence to suggest that a root cause analysis was undertaken. Secondly, there are also assertions that high-risk individuals (particularly, the elderly) are necessarily also wealthy – there is limited evidence to suggest that may be the case. In many instances, once individuals reach pensionable age and retire, they often cannot afford the more comprehensive benefit plans and thus, move down the benefit stack – at the time when they arguably require the highest tier of benefits. The differences in the distribution of high and low risk individuals across medical schemes and benefit options representing opportunities for preferred risk selection, it is a misnomer. In the absence of risk rating – applying the principles of community rating and open enrolment – it is only reasonable to expect that contributions paid to medical schemes would be linked to the choice of medical scheme plan and/or benefit option. In this way, medical schemes can create a link between the expected cost of claims (reimbursement of expenditure incurred for health care) and the 'premium' charged for such

cover. Naturally, the distribution of high and low risk individuals across medical schemes and benefit options will lead to a differential in the price charged per medical scheme and benefit option. We can now turn our attention to the REF Task Group.

7.5 The REF Task Group and the International Review Panel on REF

Ministerial task team were established to select the Taylor Committee proposals for implementation. One of the key interest groups of focus are the REF Task Group and the International Review Panel on REF. Recommendation by the interest groups deem it premature to implement an NHI even in the short term but endorsed the implementation of an SHI (Davies and Carrin, 2001). The International Review Panel endorsed key elements of the Taylor Committee recommendations such: as the immediate implementation of the risk equalization mechanism, the introduction of income-based cross-subsidies through mandatory SHI tax contributions will be channelled through the REF (Armstrong et al., 2004). The International Review Panel on REF had the view that risk and income cross-subsidies must be implemented prior to the passing of legislation requiring mandatory membership to a medical scheme. In addition, the International Review Panel dealt with matters pertaining to risk variations amongst medical schemes noting the need for limitations to be place upon benefits and for benefit options to be standardised. The International Review Panel noted the potential for the reappearance of risk-rating for ‘‘standardised benefit packages (SBP)’’ which are a more comprehensive version of a basic benefit package (BBP). The Panel held the following view:

> “Standardization will reduce product competition based on the design of numerous benefits packages (which hardly benefits the consumer) and increase price competition among the medical schemes. Standardization of the SBP should discourage medical schemes from selling benefits packages that are specially designed for preferred risk selection.
>
> Selling the SBP under open enrolment and community rating without risk adjustment through the [Risk Equalization Fund] may give the medical schemes very strong incentives for selection (as currently is the case for the entire range of products). In order to reduce this preferred risk selection, the open enrolment into the standardized supplementary benefits packages should be combined with contribution rate bands”

A detailed discussion of the process to standardise the current benefits package is deemed to be outside the scope of this study. Therefore, the International Review Panel made a finding in

support of the simplification and standardisation of benefit packages to improve market competition (Armstrong et al, 2004). Consequently, amendments to the Medical Schemes Act were published in 2008 which required a clear distinction to be made between basic benefits and supplementary benefits as corrective measure instituted by policymakers to reduce the incentives to risk selection on the basis of benefit design. Mandatory health insurance once implemented can effectively deal with both adverse selection and cream-skimming as mandatory membership is specified by law.

In addition, Ramjee, et al. (2013:101) also suggests the introduction of the following reforms to enhance cross-subsidization and social solidarity: revised and standardized PMBs; revised solvency requirements as a motion towards risk-based capital and the implementation of the Risk Equalization Fund. There have been differing opinions for various reasons in relation to the inclusion of a risk equalization mechanism either between public and private sectors or even amongst medical schemes (McIntyre and Van den Heever, 2007). McLoed and Grobler (2010:35) postulates that risk equalization involves the implementation of risk cross subsidies which will act as a 'future vehicle' for the implementation of income cross-subsidies required as part of a mandatory health insurance system. The future role of medical schemes will be to become financial intermediaries where each scheme's pays over a share of the mandatory contributions would be paid over a tax authority. McIntyre and Van den Heever (2007:82) and Davies and Carrin (2001) concur that a single integrated pool will lead to more optimal risk-pooling and the realisation of a fully integrated funding system where the funds are distributed to public sector facilities and individual medical schemes alike on a risk equalization basis.

Policymakers envisioned the creation of a single integrated pool that facilitates the transfer of risk-adjusted payments to competing health funds in conjunction with income cross-subsidies to which membership will be mandatory for employed citizens(Soderlund and Peprah, 1998; Davies and Carrin, 2001).As mentioned above, a range of health care financing proposals have been put forward, in support of the implementation of a mandatory health insurance mechanism in South Africa for over two decades (McIntyre et al., 2003). It has been firmly established that some of the fundamental tenets of an integrated mandatory health insurance system have not

been fully implemented which implies that the South African health insurance system is still voluntary in nature. One such outstanding policy objective is that of risk equalization which will be the focus of the next section.

7.5.1 What problem would risk equalization help solve within the South African health insurance system?

The current medical scheme environment has significant challenges pertaining to obscure product offerings; cost escalations in excess of consumer inflation, and fragmented risk pools (Kaplan, 2015). This section will outline problems associated with ineffective risk pooling function of medical schemes due to disparate risk or insurance pools. Erasmus et al (2016) maintains that the pooling function is fragmented at a medical scheme industry level and national private funding level which poses a significant risk to the health financing market. In addition, McLoed and Grobler (2013:166) confirms the plausible reason for the fragmentation of risk pools within the South African medical scheme industry is due to the treatment of each benefit option as a separate 'risk pool' for community rating purposes as required by statue. Also, Kaplan and Ranchod (2015:113) and Hutcheson (2012:219) substantiate the finding that risk equalization should seek to address the existence of preferred risk selection in favour of lower risks due to the careful manipulation of marketing activities and benefit options carried out by medical schemes seeking to exploit gaps in the current regulatory framework. Chapter two of this paper discusses, in detail, the problems associated with persistent adverse selection and cream-skimming within the medical schemes' environment despite the existence of regulatory controls (McIntyre and Van den Heever, 2007). However, McIntyre and Van den Heever (2007:73) argue, in the event that medical schemes act as financial intermediaries under mandatory insurance and are equal in number, there may be residual cream-skimming issues which need to be addressed through a risk equalization mechanism.

7.5.2 The requirement for more pooling reforms in South Africa

The introduction of free market reforms in the early 1990s, led to healthcare equity and access related problems for the chronically ill and the elderly in the South African private health insurance system (Van der Heerver, 2012). McIntyre (2003) cautions against the separate

treatment of SHI funds apart from private health insurance pools without a risk-adjustment mechanism. Matsaganis (1991) provides evidence from Argentina, Greece and Chile which suggests that if employed individuals are permitted to opt out of the SHI in exchange for private insurance cover reinforces segmentation due to the migration of high-income workers to private health insurers. Important to note is that the resultant segmentation places a limitation capacity to pool risks under a SHI system. Therefore, public healthcare and the SHI would eventually only cover low-income, high health-risk groups reinforcing a lack of access to healthcare (Barrientos and Lloyd-Sherlock, 2000).

As discussed, the health policy changed to towards a requirement to implement a national health insurance system in tandem with mandatory membership in the presence of risk-adjusted payments and income cross-subsidies. These principles have continued to be common policy paper themes since the introduction of the Medical Schemes Act, No. 131 of 1998(McLeod and Grobler, 2010).The Medical Schemes Act is an insurance pooling reform which permits the co-existence of the principle of community rating, the principles of open enrolment and prescribed minimum benefits (McLoed, 2005).McLeod and Grobler (2010:164) advises that the previously mentioned policy concepts were designed with the aim of enhancing the risk pooling or coverage function of schemes. The principle of community rating prohibits risk rating and applies at the benefit option level with income and number of dependents as legally permitted grouping factors within a particular medical scheme. Member contributions are determined on a community rating basis irrespective of age or risk of illness as required by statute (McIntyre et al., 2003). The principle of open enrolment requires schemes to enrol anyone who wants to become a member at standard rates. Lastly, prescribed minimum benefits (PMBs) refers to a minimum package of mandatory healthcare benefits that must be offered by all medical schemes whose cost must be covered in full of without limits or co-payments.

However, the regulatory efforts made to date by policy maker are not enough. The implementation of the envisioned mandatory health insurance system in South Africa is still not possible due to the following outstanding policy reforms: healthcare contributions made on an ability to pay basis; mandatory membership and the introduction of a risk-adjusted cross-

subsidies. The first policy reform relates to access to affordable healthcare based upon the ability to pay which will be facilitated by the introduction of income-based cross-subsidies. In turn, income-based cross-subsidies will ensure that citizens who need healthcare the most and cannot afford it are able to obtain access. The second reform introduces a degree of compulsion to an otherwise voluntary health insurance market where citizens earning above a certain threshold are required by law make contributions to and remain members of the health care insurance system. Lastly and most importantly, in line with the objective of this paper, the third reform deals with the introduction of risk-adjusted cross-subsidies through a central risk equalization mechanism in the form of central REF (McLoed and Grobler, 2009). The next section will describe the proposed risk equalization related reforms and the rationale for the implementation of risk equalization in more depth.

7.5.3 How was risk equalization to be applied within the South Africa health insurance system (if implemented)?

As already discussed, policy makers were aware of the need to introduce a mandatory insurance system amongst existing private health insurance funds and various health care reforms were proposed as means to pave the way for the introduction of national health insurance system. If one ponders the requirement for risk-adjusted cross-subsidies, it becomes evident that a lot of work is required seeing as there currently no linkages between private sector and public sector risk pools. The relevance of risk equalization in terms of its operation in the public sector relates to broader risk adjusted cross-subsidies in respect to communicable diseases that affect the majority of the general population within a country such as HIV/AIDS (McLoed and Grobler, 2009).

As previously noted, prevailing legislation within the medical schemes industry has led to the current market orientation, which is one of open enrolment, community rating and prescribed minimum benefits devoid of risk equalization. McLoed and Grobler (2009:166) and Kaplan and Ranchod (2015) concur that medical schemes have remained viable due to the strong incentive to utilise benefit design as means to cherry-pick healthy members in order to subsidise sick members who will have higher predicted claims ratios therefore competing on the basis of risk selection and risk pool segmentation at a benefit option level. This form of risk selection arises

mainly due to benefit design complexity which is a by-product of the proliferation of offerings. Medical schemes treat each benefit option as a separate risk pool for community rating and are also required by law to be self-sustaining which has led to an enforced form of risk pool fragmentation (McLeod and Ramjee, 2007).

It was observed by Kaplan and Ranchod (2015:117) that benefit design in a community-rated environment is instrumental in risk pool profile determination and has an impact on the overall competitiveness of a scheme. McLeod and Ramjee (2007:12) further support the evidence put forward by Kaplan and Ranchod (2015) by stating that generally, open schemes with a lower risk profile will be more competitive within a community rated environment wherein a risk equalization mechanism does not exist. This finding is consistent with that Erasmus et al (2006:54) who noted that medical schemes with a mostly younger funds would be become net contributors to REF and those with mainly older funds would be net claimants from the REF.

The Medical Schemes Act 131 of 1998, as governing legislation has by in large failed to provide the necessary policy direction required to fully implement the underlying solidarity principles which will underpin a mandatory insurance system in South Africa. McLeod (2005) postulated that the shortcomings of the legislative framework are due to the exclusion of mandatory membership and risk equalization as essential principles conducive to the stabilisation of risk pools. There is industry consensus that community rating needs to occur at a scheme level, however, this would result in large increases to contributions which could give rise to an affordability problem in the absence of further policy intervention, should an environment of voluntary membership be allowed to continue. Each successive round of contribution increases could have a ‘death-spiral’ effect on the remaining members of medical scheme as more young and healthy members choose to opt out of the private health insurance system. This can be attributed to younger and healthier scheme members typically choosing cheaper benefits options due to income and price sensitivity (McLoed and Grobler, 2009).

The possibility of a death-spiral effect in the South African medical schemes’ environment needs to be evaluated in relation to current schemes solvency requirements. The impact of

proposed risk equalization reforms on a solvency requirement will not be discussed here (Scott and Lowe, 2015). Two other areas of uncertainty are the current open enrolment principle which allows members to join medical schemes as an when they wish to do so despite the existence of waiting periods and late-joiner penalties and lack of common benefits designated for risk equalization purposes (Armstrong et al., 2004).

McLeod and Grobler (2010:35) assert that the risk equalization proposal arose as result of the following market deficiencies: the lack of risk pooling between the public sector and private health insurance funds and at a granular level the lack of risk pooling at a scheme level within the medical schemes industry. The proposed solution to the abovementioned challenges was the implementation of a central Risk Equalization Fund (REF). To follow, a detailed account of the Risk Equalization Fund proposal in terms of its aim, role, and implementation trajectory. The following section does not seek to interrogate the REF design but to discuss point in line with the research objectives.

7.5.4 The Risk Equalization Fund as proposed policy tool

As mentioned, the Risk Equalization Fund was first proposed by the Taylor Committee. The REF design work began in the year 2003 with actuarial and clinical teams determining the risk factors for inclusion in the risk equalization formula (McLeod et al., 2004). The risk factors subject to agreement are gender, maternity events, number of members with multiple chronic diseases, age, and number of members with certain chronic diseases. It is important to note challenges associated with defining chronic disease across multiple schemes due to a lack of PMB standardisation across the medical schemes industry. A key matter that was already highlighted in policy proposals. Monthly test data has been gathered from schemes to test the functioning of the REF in ‘shadow mode’. Shadow mode refers to the operational status of the REF without money changing hands since the year 2005(Armstrong et al., 2004). Confidential adjustment related information was concealed during the shadow period to prevent schemes from taking advantage of any arbitrage opportunities prior to the introduction of REF. The data collection process followed by industry schemes during the shadow period

was to institute contributions that are based on an industry community rate to the REF to be followed thereafter by the joint receipt of risk adjusted payments from REF to each pool contributor.

The key objective of the REF is to preserve the principles of open enrolment and community rating in a highly competitive market. McLeod and Grobler (2010:31) conducted an initial evaluation of REF shadow net payments per scheme whose results revealed the existence of risk related differences between competing schemes. The results show that the maximum transfer on record to a scheme fund being 272 % higher than the PMB industry community rate. Conversely, the maximum transfer to a scheme by the REF was only 34 % of the same value which is a significant impact when one considers the fact that total net transfers were in the region of only 8 % of the value of funds in shadow mode. Notably, relevant literature also suggests that the Risk Equalization Fund was designed to homogenize inter-scheme contribution schedules or tables and extend risk-related cross-subsidization to the industry as a whole thereby fully enforcing the mandatory community rating provisions set out by the Medical Schemes Act of 1998 (Armstrong, et al., 2004, McIntyre et al., 2007, Van den Heever, 2012). As noted elsewhere in this paper, as a secondary objective, the REF will act as a 'future vehicle' for the implementation of income cross-subsidies in the transition towards mandatory health insurance system.

The main goal of the Taylor Committee was to create a core institutional mechanism which would facilitate a change in the competitive dynamics of the medical schemes sector shifting it from one that competes on the basis of risk selection to an industry that competes on the basis of cost effective health care delivery (McLeod and Grobler, 2010).Porter and Teisberg (2006) affirms the healthcare delivery requirement as a critical component of value-based competition which could promote demand and supply side innovation in a private healthcare system. Furthermore, McIntyre et al. (2003) draws upon experience from Israel, to put an emphasis on the importance of effective integration between SHI contribution, private insurance, and risk pools in order to achieve long term health system equity and sustainability goals The following part of this paper moves on to discuss the envisioned outcomes that risk

equalization would affect within the South African health insurance system in the event that it is implemented.

7.5.5 The intended effects of risk equalization as pooling mechanism

McLeod and Grobler (2010) suggests that if a central REF is implemented the REF would function as a centralised pooling mechanism replacing the pooling function of medical schemes at a scheme level. This makes one wonder about the possible implications of the former on the principle of open enrolment. This begs the question would the principle of open enrolment fall away and be replaced by mandatory membership? The REF would facilitate the transfer of risk-adjusted payments to each medical scheme with some residual pooling at an individual scheme level. Initially, the REF will operate between competing private medical schemes. The primary effect of REF between competing private medical schemes lies in ensuring that all members across pays a similar community rate for the same package of benefits across all medical schemes in the industry. Moreover, Erasmus et al (2016:54) claim that if the REF had been implemented as planned it would have resulted in direct cost increase for funds with a younger and healthier membership base than the industry average in the short run as the main funders of REF.

The REF will force medical schemes to pay more attention to operational efficiency and cost containment. If cost associated with PMBs delivery are in excess of the risk-adjusted amount. The difference between PMB delivery cost and REF risk-adjusted payment amount received would be passed onto members. The converse is true if PMBs are delivered more efficiently with the surplus used to fund additional member benefits. The implementation of the REF could possibly make scheme operational costs more transparent to members and the regulator. The REF can also be extended to the public sector and used to effect risk-adjusted budgeting across the nine provinces at a later stage. McLeod and Grobler (2010:165) provides an example of human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS), as a prevalent chronic benefit affecting the majority of the general population, which would be best managed through a single risk equalization pool across public and private sectors. The jury is

out in questions related to the broadening of the current definition of prescribed minimum benefits to include more diseases to accommodate additional members in the public sector.

It appears that all the risk equalization related reform proposals tabled to date are all in agreement that risk equalization will best serve its purposes, if implemented between individual competing schemes as opposed to between health care sectors. In the event that the REF is implemented between competing schemes then schemes would be act as a conglomerate of collection organisations wherein schemes with high-risk membership profiles would accept payments from REF and schemes with relatively low risk membership profile would make payment contributions to the REF (McLeod and Grobler, 2010). The next section explores an alternative implementation approach where risk equalization acts as an allocation mechanism. In the last decade, the involvement of intermediaries within the medical schemes industry has led to a significant shift of younger members from restricted schemes to open schemes. This movement has resulted in restricted schemes with age ranges that are either predominantly old or young. Once risk equalization has been implemented the scheme level PMB community rate will not be influenced by age and disease profile of individual schemes. The efficiency of the medical scheme in purchasing and delivering health care to its members will take centre stage in pricing practices, ceteris paribus.

7.5.6 The intended effects of risk equalization as allocation mechanism

There is an alternative implementation approach put forward by policy makers was envisioned as part of the implementation of mandatory health insurance system wherein SARS acts as the single collection point for general tax revenue and mandatory health insurance contributions forming a single pool of funding (McIntyre et al., 2003). Risk-adjusted capitation payments sourced from the single SARS pool would be channelled into multiple individual schemes or specific public sector health facilities which may not be a party to the mandatory insurance system. Risk-adjusted capitation payments are monetary amounts allocated per insurance beneficiary based on the overall risk of illness or health status of scheme beneficiaries.

The risk of illness is determined using numerous observable risk factors such as the presence of chronic disease, age, and gender. Subsequent to the introduction of risk-adjusted capitation

payments will be the commencement of income-related contributions to account for variances between the minimum benefit package price and the public sector subsidy (McIntyre et al., 2003). A combination of risk adjusted capitation payments, direct subsidies per person and income-related contributions in respect of the total minimum benefit package would then be paid to the REF. In turn, the REF will transfer monthly risk-adjusted payments to medical schemes.

No progress has been made by policymakers thus far in terms of effecting changes to the tax subsidy, per capita subsidy nor the introduction of income cross-subsidies. McLeod and Grobler (2010) is of the view that the introduction of income cross-subsidies prior to the introduction of other reforms is key to retain stability of the current system. Accordingly, full income cross-subsidies are crucial to the REF implementation for the following reasons: full income cross-subsidies facilitate a reduction in the price of healthcare for lower income groups, if implemented in the correct manner could cover around 50 % of total PMB cost ensuring schemes gain as beneficiaries of the REF and may give impetus to the system infusing the competitive edge required to attract new members (McLeod and Grobler, 2010).

During the planning phases of the REF implementation, it became evident that industry stakeholders were of the view it would not be prudent to implement the REF, make changes to benefit option design nor the size of the benefit package before any of the other reforms. First and foremost, the standardised treatment of benefit options must be firmly inculcated across the medical scheme industry as a widely accepted practice before risk equalization can be introduced in order to decrease the incidence of risk selection. This will ensure that every scheme across the entire industry is required to offer a standard pre-defined benefit package leaving little room for deviation or consumer confusion (Kaplan, 2015).

7.5.9 At what point in time, was the risk equalization fund to be applied within the South African medical schemes industry?

As it stands, the implementation of the REF following its shadow period was deferred to an indeterminate future date due to a lack of legislation which warrants industry wide compliance to data collection requirements. The initial draft of the Medical Schemes Amendment Bill of 2008 made provision for the establishment of the REF and its operational implementation and

was published in the Government gazette in November 2006. However, the Bill was not submitted to parliament as scheduled in 2008.McLeod and Grobler (2010) estimates that in the absence of delays, financial transfers to and from the REF could have taken place as early as 2011.There have been no further developments in this regard since the appointment of the Council for Medical Schemes as the administrator of shadow transfers in 2005.The more recent release of the revised Medical Schemes Amendment Act of 2008 for public comment in May 2018, omits all matters related to the Risk Equalization Fund instead making reference to the formation of a National Health Insurance Fund. The former discussion indicates a change in healthcare policy direction with the focus being on the implementation of National Health Insurance.

7.5.10 A review of the 2005 Risk Equalization Fund (REF) Proposal

The transition to a National Health insurance system requires policymakers to consider a myriad of factors and the potential impact that the introduction of reforms may have on current voluntary medical schemes market operations. McLeod and Grobler (2010) points out policy maker concerns in relation to the REF implementation pattern to be followed and suggests a sequential implementation approach. The sequential implementation approach was proposed in order to avoid the potential onset of a cost spiral as a result of the implementation of the REF prior to the income subsidy and mandatory membership (McLoed and Grobler, 2009). The role of benefit design in risk selection has already been established and how it is linked to market instability in the form of industry community rate upward spirals. McLeod and Grobler (2010: 37) recommends a phased approach with clear timelines for the introduction of age-gender risk adjustment system to mitigate benefit design induced cream skimming and the implementation of uniform identification of chronic disease across the industry. Moreover, the introduction of age-gender risk adjustment would address the plight of schemes with adverse risk pool profiles who face the prospect of financial distress due to a lack of equalization.

As explained in the previous section, different patterns have been proposed for the purposes of implementation with the least impact on affordability of lower income employees (McLoed and Ramjee, 2007).McLoed and Grobler (2009:191) puts forward the following implementation sequence propositions: an introduction of community rating, open enrolment and minimum

benefits which has already been implemented; next is the removal of current tax subsidy which is reimbursed to medical scheme members; replace tax subsidy with direct subsidy per person; introduce the REF between benefit options; introduce an income cross-subsidy and lastly, introduce mandatory membership for income earners. One unanticipated finding made by McLoed and Grobler (2009) is the possibility that a wage subsidy or subsidy of social security contributions may be required for the lower income bands as a flat percentage of income. A more suitable trajectory was to be created to include benefit option restructuring propositions required to institute improvements in community rating at scheme level and the extension of the minimum benefits package.

It is possible for policymakers to implement all the sequence steps simultaneously, but it is considerably risky due to capacity constraints and the varied potential stakeholder specific impacts. However, the need for risk equalization has never been more urgent and the lack of implementation timelines may have indirectly contributed to dwindling affordability levels within the private health insurance system. It is the informed opinion of McLoed and Grobler (2010) that a viable step towards the simultaneous introduction of the REF would require partial income subsidises and per person subsidy to be in place. The existing medical scheme fees tax rebate would also need to be abolished. It is in the best interests of policymakers to communicate timelines for the introduction of compulsory contributions and full income cross-subsidies. McLoed and Grobler (2010) also found that partial income subsidises are useful in reducing the price of health care for lower income groups up to 20% of member income. However, relevant literature cannot stress enough the importance of carefully considered implementation sequence that will achieve a greater likelihood of success (McLoed and Grobler, 2009; McIntyre et al., 2003). Moreover, McLoed and Grobler (2010:192) note that an institution created to administer risk equalization will also function as a mechanism for pooling subsidies and social health contributions or any other revenues earmarked for the mandatory healthcare system. The former suggests that the role of risk equalization was to be extended to beyond that of risk pooling stabilization mechanism aimed at the reduction of risk selection.

7.6 Recommendations in the 2019 Health-Market-Inquiry-Report (HMI Report)

As already established, the social solidarity principles of open enrolment and community rating were always meant to be supported or implemented alongside a risk equalization mechanism and mandatory membership. The absence of a RAM (Risk Adjustment Mechanism) previously known as the REF (Risk Equalization Fund) has resulted in competition based on benefit design with the aim to attract younger and healthier members. The requirement for medical schemes having to pay for PMBs at cost has resulted in higher medical expense costs and therefore higher member premiums (HMI Report, 2019:34). Ideally, competition in health care insurance markets should be based on basis of price, cost and quality of medical care as opposed to risk avoidance. In the South African context, a risk adjustment mechanism is a regulatory instrument which is designed to eliminate risk pool fragmentation and expedite the creation of a single risk pool that is ready for integration with the NHI Fund in due course or as deemed appropriate by policy makers.

Most importantly, the risk adjustment mechanism can lead to more effective public health care purchasing activities by the state which will serve to stimulate a greater competitive environment that is conducive to the NHI. The proposed risk adjustment mechanism (RAM) mentioned in the Health Market Inquiry Report 2019 document is aimed at bringing about income cross-subsidisation in the interests of social equity. The Competition Commission is aware the RAM is a contested matter but emphasises that it is a vital regulatory component in the elimination of risk rating and will build greater technical capacity in the health funds industry. At present, the South African regulatory environment excludes the requirement for a risk equalization mechanism. A significant amount of work has taken place since the year 2003 with respect to the design of a risk equalization formula which culminated in the development of a ‘shadow’ REF process by 2007, which allowed the CMS (Council for Medical Schemes) to simulate how the fund would operate in practice. However, the actual implementation of the REF has stalled due to a shift in policy focus towards the implementation of the NHI and the provision of universal health coverage by 2026.

7.6.1 Additional comments on the 2019 Health market Inquiry (HMI) Report

The 2019 Provisional Findings and Recommendations Report established that the absence of a RAM has resulted in health care funders to resort to offering a large menu of different benefit options or partial insurance contracts in order to invoke self-selection of the part of members on the based on their respective health profile as put forward in Rothschild and Stiglitz (1976). The latter is also known in practice as proxy risk-rating wherein the desired outcome would be that older/unhealthier applicants self-select into more comprehensive coverage options with the converse being true for younger healthier members. Even so, older/unhealthier members still have a higher probability of incurring higher costs which eventually translates into higher-than-average premiums thus eroding a given medical schemes competitiveness relative to its rivals irrespective of the efficiency of providers contracting or procurement services. As illustrated in the 2019 HMI Report, the scheme PMB expenditure constitutes a premium contributions price floor (largely correlated to demographic risk factors such as age) below which a given scheme would not be sustainable.

The 2019 Provisional Findings and Recommendations Report recommended that a risk adjustment mechanism be implemented and a comprehensive base benefit package to be offered by all schemes be defined. Additional submissions of stakeholders in the 2019 Provisional Findings and Recommendations Report call for the HMI to consider the potential impact of a risk adjustment mechanism on smaller medical schemes. Most pertinent it that that The HMI should not permit the restricted medical scheme market to cross-subsidise the open scheme market. This is done to protect the commercial interests of the open scheme market because the restricted market's superior risk profile may destabilise cross-subsidisation efforts.

7.6.2 Risk Adjustment Mechanism (RAM) in South Africa

The 2019 NHI Bill indicates that the State (i.e., the public sector) will become a purchaser of services from the private sector with regulatory interventions such as the RAM acting as necessary precursors to the enhanced managed competition in health care (Enthoven,1986). The main idea is for the RAM to reduce and eventually eliminate risk pool fragmentation in order for purchasing to become more efficient under the NHI enabled through competition on the basis of cost and quality. The earlier mandatory health insurance proposals put forward in South Africa in McIntyre and Van den Heever (2007) and McLeod and Pieter Grobler (2009) both

mention policymaker intentions to replace the current tax subsidy on member contributions with a direct income subsidy per person equivalent to the amount spent per person in the public sector. Seeing as the current tax subsidy only benefits the high-income groups with earnings above the tax threshold with no real benefits accruing to lower income groups. The 2019 HMI stakeholders have reached consensus that the RAM is to be facilitated initially by the CMS as part of the transition to another separate statutory body.

As such, policymakers envisaged that the removal of the tax subsidy would provide substantial relief to lower income groups which in turn would make contributions more affordable. The direct subsidy per person which is sourced from tax revenue would eventually be paid to the RAM. Thereafter, the RAM would facilitate monthly risk and income adjusted payment transfers of the direct subsidy per person amount to medical schemes. The RAM will allow for a transfer of funds across medical schemes in accordance with the risk and income profile of the schemes. The ongoing evaluation of income and risk will also expedite the implementation of income related cross subsidies across the entire population thus creating a virtual single risk pool which is deemed to be an essential first step towards the implementation of the NHI fund (HMI Report, 2019:117). In the South African context, the implementation of a RAM will enable high risk schemes to be cross subsidised by low-risk schemes only in cases wherein risk arises primarily as a result of community rating profile of the scheme membership and not operational inefficiencies. In other words, schemes with younger, healthier, richer members will be net payers into the RAM system whereas schemes with older, sicker, and poorer members will be net receivers of risk adjusted subsidies. The continued absence of a RAM has to date lead to indirect competition on the basis of demographics (e.g., younger and/or healthier members, families, and groups) rather as opposed to factors that benefit members or enhance overall consumer welfare such as generous benefits. There is a key issue has not been covered by the 2019 HMI Report which is the lack of continuity of medical cover especially in cases where a member reaches pensionable age or where medical scheme cover is obtained as an employment related benefit.

7.7 Concluding remarks

The trajectory of the South African experience with risk equalization represents various policymaker attempts at introducing social solidarity into a small yet highly competitive private medical schemes market as early as the year 2005. The rationale for risk equalization in the South African medical scheme industry is to correct behaviour where schemes compete based on benefit design (McLeod and Grobler, 2010:192). The notion of risk equalization in South Africa is best understood by policymakers as the introduction of a mechanism which functions as a centralised pool which facilitates the transfer of risk-adjusted cross-subsidy payments between competing private medical schemes in support of the community rating provisions as set out in the Medical Schemes Act of 1998.

Ideally, the medical schemes industry should use the price structure of the health care financing market as a mechanism to offer incentives for members to make benefit option choices that provide maximum value for money as opposed to the current situation where the community rating mechanism cross-subsidises benefits for some groups at the expense of others (Enthoven,1978:654). The 2019 Health Market Inquiry Report further reiterates the South African policymaker intention to implement an NHI fund and risk adjustment in conjunction with income-related cross subsidies. Indeed, the 2019 Health Market Inquiry Report raises questions regarding the relevance of such an analysis, since South African healthcare policy appears to be moving in the direction where medical schemes will probably play a less significant role in future compared to today.

Situational maps of the global experience of risk equalization:

Chapter 8:

International experience with risk equalization

8.1 Introduction

Chapter eight sets forth international experience with a strict focus on the application of risk equalization among competing health care funds wherein community rating is applied. A large majority of countries under study refer to prepaid, prospective healthcare funding markets as 'health insurance' systems or markets. Since the markets are defined as health insurance then the payment received from consumers must be a premium. Hence any form of regulation such as community rating is considered premium regulation. The detail in this section has been adapted from Part II of McGuire and Van Kleef (2018:118-598).

8.2 Switzerland

8.2.1 Historical and contextual background

The mandatory Swiss health insurance market is organized accordance to the principles of risk solidarity, efficiency, and the preservation of health plan affordability. All Swiss residents, including refugees, individuals with habitual residence, asylum seekers, and expats that work for companies based in Switzerland are required by law to purchase individual health insurance plans offered by private health insurers. In turn, Swiss insurers offer a standard health plan with a comprehensive, standardized benefit package subject to a standard monetary deductible and unrestricted choice of outpatient healthcare provider. The principle of open enrolment applies which means that insurers are obliged to accept all members who wish to join regardless health status and/or age. Importantly, all health insurance contracts between the insured and the insurer are on an individual basis. Health funds do not cover the dependents of principal member. Equally, employer-based health insurance and group contracts are not permitted (Leu et al., 2008).

Health funds and providers alike compete on basis of price and quality. In principle, insurers are required to charge community-rated premiums for basic coverage but are also permitted to

risk rate on the basis of certain age groups and regions known as cantons(van Kleef, 2018:35).That is, health insurers are obligated by law to charge the same premium to all individuals of the same age group who purchase the same health plan and live within the same municipality, canton or in a subset of cantons referred to as cantonal premium regions. Community-rated health plan premiums can differ across different age ranges except for children from ages 0 to 18 which have to be lower than that of adults. All health plan premiums are subject regulatory approval by the Federal Office of Public Health (FOPH). In addition, the regulator is required to cover costs according to the combined ratio (i.e., sum of claim ratio and loading ratio, assess insurer solvency and reserve ratios. Means-tested premium subsidies are also applicable in the interests of preserving health plan affordability for consumers.

8.3 Swiss health insurance payment flows

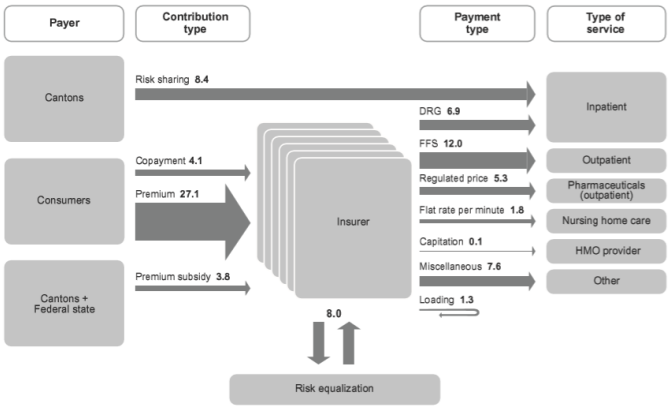


Figure 4: Payment flows in Swiss health insurance system. Adapted from: Schmid (2018:466).

The left-hand side of the above illustration depicts contributions made within the system. The insureds are almost two-thirds of the expenditures through premiums paid to the insurer. A substantial part of the population receives a premium subsidy which is funded both at the canton and federation level. The Swiss cantons risk sharing payment circumvents the insurer and is disbursed directly to the provider. The right-hand side depicts flow of the payments: Inpatient hospital care reimbursement is a flat-rate payment divided between cantons and insurers based

on DRGs that is financed through general tax revenues. A large majority of outpatient care is still paid on an FFS(Fee-For-Service) basis.

8.3.1 Risk equalization (RE) in Switzerland

To recap, premiums are community-rated by health plan, canton, and age group. Risk equalization was introduced to ensure that community-rating does not create incentives for insurers to engage in risk selection. Over the years, the Swiss regulator has gradually developed more sophisticated morbidity-based formulas. The current risk equalization formula is a far cry from the ineffective demographic formula employed in the early 1990s. Risk equalization is administered directly between insurers. In practice, for every consumer with below (above) average medical spending in its subgroup the insurer pays (receives) a certain amount into (from) the risk equalization fund. RE and premium regulations are not consistent in Switzerland because premium regulations allow for rebates not considered in the RE formula.

8.4 The Netherlands

8.4.2 Historical and contextual background

The Dutch health insurance system has long been in transition from a public non-competitive system to a private market-based system. The Health Care Authority monitors the health plan market and the behaviour of actors (i.e., insurers, consumers, and healthcare providers) operating within a market. However, healthcare financing markets were largely unregulated. Two major health insurance schemes were introduced to establish universal access to medical care in the period 1940 to 1970. The first was called the “Sickness Fund Scheme” (1941) which is a mandatory insurance program for low and middle-income people which covered mostly curative short-term care. The second program was called “Exceptional Medical Expenses Act” (1968), which still exists to this day under the “Long Term Care Act”. The Long-Term Care Act is a mandatory program for all individuals living or working in the Netherlands. Further, the Long-Term Care Act provides for long-term care coverage such as palliative home care for the elderly and disabled people. A large majority of the Dutch population also purchases supplementary insurance coverage over and above the extensive coverage provided by the two

mandatory programs. A large portion of high-income individuals that were not eligible for the sickness fund insurance, purchased private health insurance with similar coverage.

The Sickness Fund Scheme and the Exceptional Medical Expenses Act led to significant increases in medical spending. Hence, cost containment become a problem which the government hoped to resolve through the implementation of stringent supply-side regulation. In the early 1980s, regulatory mechanisms had become too complex with mounting dissatisfaction with the stringent supply-side regulations. Moreover, the structure healthcare financing system had become fragmented in the absence of incentives for innovation and efficiency in the delivery of care. The Dutch regulator sought to establish cross-subsidies from high-income to low-income individuals (referred to as income solidarity) as well as from the healthy to the sick (referred to as risk solidarity) to achieve individual affordability of health funds. The Health Insurance Act was touted as the means to achieve the Dutch regulators end.

8.4.2 The Health Insurance Act in the Netherlands

The Health Insurance Act replaced the sickness fund and former private health insurance market (Van de Ven and Schut, 2008). The Health Insurance Act is modified the market so that insurers and providers of care compete on based on price and quality. All contracts are on an individualised basis and insurers have freedom with respect to network design, provider payment design, network of contracted providers and out-of-network coverage. Insurers are permitted to own healthcare facilities, waiver out-of-pocket payments under the deductible for preferred providers and charge co-payments for out-of-network spending.

In the same vein, the Health Insurance Act made provision for the following: 1. Every person who lives or works in the Netherlands is obligated to enrol in a health plan offered by a private insurer; 2. Insurers must accept all applicants and charge a community rated premium; 3. The benefits package is standardized and specified according to the law in terms of types of medical care. Health insurers are compensated (in part) for the variation in medical spending through a risk-sharing mechanisms and risk equalization system for risk selection induced by community-rated premiums. In this case, risk solidarity is imposed by the requirement of community-rating

per health plan in conjunction with risk equalization and risk sharing. In addition to premium regulation are premium subsidies known "health allowances", which are designed to cater for low-and middle-income families. The government is responsible for the enactment of laws to protect public objectives such as individual affordability and accessibility of health funds. The next section provides a summary of the payment flows under the Health Insurance Act.

8.4.3 Payment flows in the Netherlands

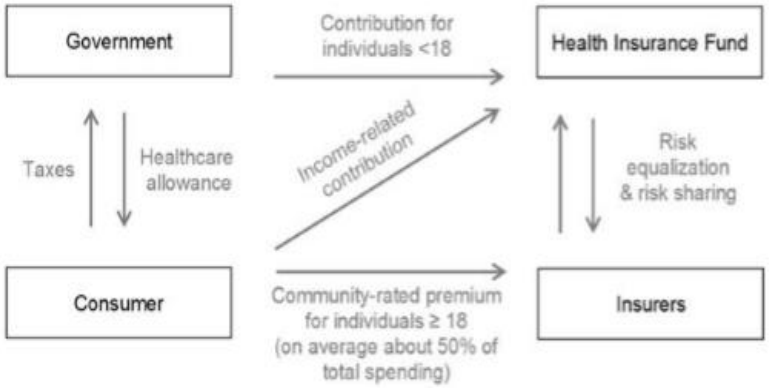


Figure 5: Payment flows under the Health Insurance Act in the Netherlands.
Adapted from van Kleef et al. (2018:403).

The government makes a direct contribution to the Health Insurance Fund which is financed through general tax revenues to compensate for the zero premiums of people under the age of 18. Everyone that has reached majority status pays pay a community-rated premium to an insurer of their choice. The premium charged by insurers may be too high for low- and middle-income families. As such, families receive an income-related premium subsidy which is financed with general tax revenues also known as "healthcare allowance". On the hand, income-related contributions are sponsored in part by their employer and partly by the insured. Total contributions are collected in the "Health Insurance Fund," and channelled to insurers via the risk equalization system and some risk-sharing mechanisms. All in all, the risk equalization system pays insurers a contribution for members with expected spending above the average premium. In the same vein, the risk equalization system receives a contribution from insurer for members with expected spending below the average premium.

8.4.4 Risk equalization in the Netherlands

The risk equalization system in the Netherlands was first implemented in 1993 within the sickness fund insurance. The Health Insurance Act states that risk equalization should provide compensation (exclusively) for variations in medical spending due to differences in health status of individuals, age, and gender. By the year 2017, there were four different risk equalization models designed for different medical care types: notably, out-of-pocket expenses due to the mandatory deductible; somatic health care; short-term mental health care; mental treatments and long-term mental health care. The four models are used to predict medical spending per individual, which forms the basis of the risk equalization payment. Interestingly, the risk equalization model for out-of-pocket payments due to the mandatory deductible is applied to correct payments for (differences) in out-of-pocket spending (across high-risk and low-risk individuals) under the mandatory deductible. Prior to mandatory deductible, the risk equalization model for out-of-pocket expenses was applied to a no-claim rebate. As a side note, mental health care is not included in risk equalization model for somatic care. In some instances, where it is permissible for the regulator to decide that the difference in residual spending due to healthy/unhealthy lifestyle choices or specific unhealthy behaviours is not to be compensated for by the risk equalization model. There are arguments that insurers should be allowed to charge those who partake in unhealthy behaviours must be charged a higher premium than those who do not (e.g., smokers pay more to risk equalization model than non-smokers).

8.4.5 Risk equalization formula variables in the Netherlands

The generic Dutch risk equalization model started off with risk equalization formula variables such as age interacted with gender, source of income interacted with age, pharmacy-based cost groups for mental diseases, socioeconomic status interacted with age, household size interacted with age and zip-code clusters for mental care. The Dutch risk equalization system includes risk adjustor variables that are based on prior cost or utilization of medical care. Research suggest that variables based on prior cost or utilization of medical care are good predictors of future spending and significantly reduce selection incentives. However, there is a downside: retrospective risk adjustors create a (positive) correlation between spending in the current year and the risk equalization payment in later years which reduces insurer incentives to promote

efficiency in the delivery of care and introduces incentives for upcoding (Van Veen et al., 2014). Upcoding refers to the active endorsement of progressively (expensive) medical care usage. The regulator might be confronted with a dilemma in cases where a specific risk adjustor(s) is found to result in unacceptable levels of upcoding. On the one hand, inclusion of retrospective risk adjustors in the risk equalization model will eliminate incentives for risk selection with respect to the groups identified by the risk adjustors. However, the use of retrospective risk adjustors will also reduce incentives for efficiency and introduce incentives for upcoding.

8.5 Ireland

8.5.1 Historical and contextual background

Health care financing come from a number of different sources including government funding which constitutes about 70% of total funding, out-of-pocket expenditure which constitutes 17% of total funding and lastly voluntary health insurance premiums which constitutes about 13% of total funding (Colombo and Tapay, 2003).The voluntary private health insurance markets in Ireland cover benefits for primary care and hospital-related services and often duplicate coverage offered within the public healthcare system (Armstrong, 2010). An important milestone was the establishment of the Voluntary Health Insurance (VHI) Board in 1957, as a statutory organization with sole task of providing private health insurance on a voluntary basis making it monopoly insurer until the mid-1990s.At present, there are open and closed insurers. The closed insurers are self-insured bodies that offer occupational-related cover to members based on employment. An open insurer allows anyone within the population to enrol for coverage. There are three open insurers at this stage, namely, the VHI and the other two are Laya Healthcare (the successor of Bupa Ireland) and Irish Life Health (recently established because of a merger between Aviva Health and GloHealth).

The Voluntary Health Insurance Act of 1957 required the VHI to operate on a not-for-profit basis and to set premiums that to be no higher than sufficient to meet the cost of providing benefits to the Irish population. Consumers are free to choose amongst many health funds offered by an insurer. Insurers offer both primary and hospital benefits however historically consumers have tended to choose health funds with more comprehensive hospital benefits and

relatively lower levels of primary care benefits. Ireland has a voluntary health insurance market which is tightly regulated with the intent to achieve risk solidarity through cross-subsidisation from low-risk to high-risk persons to promote affordability of private health insurance coverage for all its citizens regardless of their risk profile. Accordingly, the principles of community rating are applied combined with risk equalization in support of risk solidarity. Thereafter, a modified form of risk equalization was reintroduced in 2003 in support of community rating.

8.5.2 The Health Insurance Act of 1994 (Ireland)

The Health Insurance Act of 1994, as amended, set out several important legislative provisions in relation to equity in healthcare financing and access to insurance: First, community-rating must be applied across all health funds. Secondly, the principle of open enrolment applies which requires that an insurer must accept all applicants. Waiting periods can be applied to reduce potential for adverse selection subject to the predefined maximums outlined in regulation. Thirdly, insurers must cover a minimum package of benefits subject to the benefit limits applicable to with respect to inpatient, day patient, medical services, and hospital outpatient benefits as specified in regulation. Lastly, open insurers are required to participate in a risk equalization system that provides cross-subsidies among different insurers with different risk profiles. The Health Insurance Act is one of many regulatory interventions that sought to open the private health insurance market to competition while retaining the principles of social solidarity in financing health care. In this regard, private health insurance competition was based on the network of contracted healthcare providers, the health plan/benefit package provided to customers, premiums and the quality of the administrative services provided to insured members (Armstrong, 2010). More importantly, the Health Insurance Act made provision for the introduction of a risk equalization scheme. A discussion of the Irish risk equalization scheme to follow.

8.5.3 Risk equalization in Ireland

As mentioned, Health Insurance Act establishes risk equalization scheme. In addition, the Act confers powers onto the Minister for Health to appoint an independent regulator to administer the risk equalization scheme. The Minister of Health can issue regulations relating to the

circumstances under which risk equalization transfers between insurers would commence. Initially, the risk equalization scheme also placed a monetary threshold of the level of risk equalization transfers that were required among insurers before the scheme would applicable. The logic for the monetary threshold was that new entrants would be required to pay risk transfers which would discourage participation given the historic monopoly position of the VHI. The former case could lead to efficiency problems in as new entrant attempt to profit from selecting healthier members. In 1996, the risk equalization scheme was based upon 16 age-gender risk classes and accounted for differences in utilization rates among insurers across risk classes (Armstrong, 2010). The calculation basis of the risk initial equalization scheme has important implications on market operations. For example: If the utilization rate for the market was 40% within a given age-gender risk group, then the normative costs for across insurers would be calculated based on a 40% utilization rate. This could potentially affect incentives for efficiency because any efficiencies (or inefficiencies) in the claims and provider management practices of one of the insurers (regardless of size) would feed back into the market average.

Similarly, differences in utilization attributable to risk profiles (not accounted for by age and gender) would also affect market averages. In effect, the more a health plan spent, the higher the compensation from the risk equalization scheme (Armstrong,2018:344). The Minister for Health revoked the risk equalization scheme prior to implementation in 1996 due to the entry of Bupa Ireland as competitor to VHI and legal challenges to the risk equalization scheme in both the Irish and European courts. The Irish Government rapidly introduced a new risk equalization scheme from 2009 onwards. The current version of the risk equalization system consists of two parts: First, risk-related prospective payments made to insurers which equate to approximately 80% of plan payments. Second is a cost-sharing mechanism which pays a fixed amount to each insurer for each night a patient risk equalization spends in hospital or for each hospital day-case episode (Armstrong,2018).

8.5.4 Payment flows in Ireland

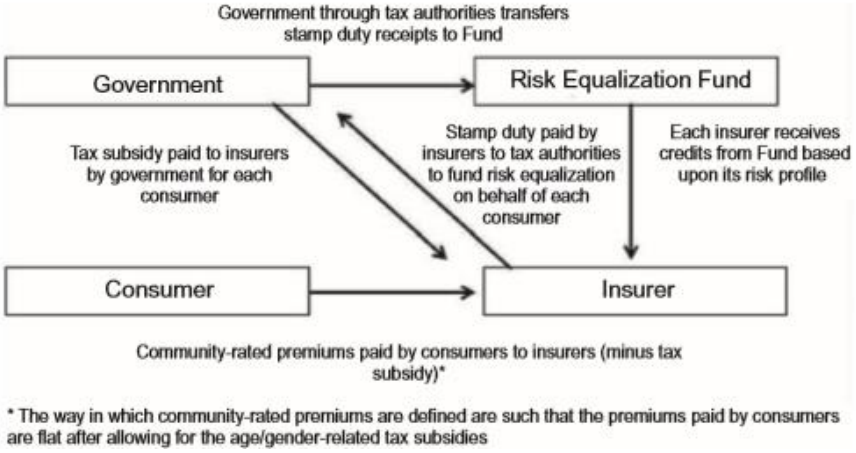


Figure 6: Payment flows under the Irish Health Insurance Act.

Adapted from: Armstrong (2018:347).

The discussion that follows will provide an overview of the payment flows under the 2013 Irish risk equalization system. As previously mentioned, all insured individuals are required to pay a community-rated premium to the insurer which in turn provides for the cost of benefit payments by the insurer. Each insurer is then required to pay a flat stamp duty for each insured member to the Irish tax authorities. The stamp duty calculated on a prospective basis, funds the risk equalization payments among insurers for overall cost of both age/gender/type of cover risk-sharing payments and the hospital utilization (cost-sharing) payments. The stamp duty is then pass it to the Risk Equalization Fund which is administered an industry regulator known as the HIA. All insured members receive a tax subsidy (which varies from person to person) towards the cost of health insurance. The premium (after tax subsidy deductions) for all insured persons remains the same. The level of subsidies (risk equalization payments) and stamp duties are subject to approval by the Irish Parliament. The regulator must introduce a more sophisticated system of risk equalization and new risk adjusters that allows for more accurate predictions of health expenditure. The choice of risk adjuster should encourage insurers to adopt behaviours that preserve risk solidarity and bring about more product innovation.

8.5.5 Risk equalization formula variables in Ireland

The current risk equalization system utilises age bands, gender, level, and type of coverage as risk adjusters to determine transfers under risk equalization. Age and gender risk adjusters fail to fully capture the tendency of higher-risk individuals to select the health funds with more comprehensive coverage. It is not surprising that none of the risk adjusters are indicators of illnesses. The variable of interest is level of coverage which indicates whether a health plan is either a "nonadvanced" or "advanced" type of contract. For the purposes of risk equalization, the determination of whether a health plan is either "nonadvanced" or "advanced" depends upon whether the health plan provides indemnity cover for private hospital accommodation that is more than 66%. Also, the inclusion of coverage as a risk adjuster is to compensate for under higher premiums paid for cover beyond the standard level of benefit in other words to factor in members that purchase supplementary cover (Enthoven, 1988).

All disbursements from the risk equalization fund to each insurer is based upon risk adjusters. Prevailing legislation explicitly excludes risk transfers for individuals within the 0 to 49 age range. The rationale for the exclusion is that to the variability in health costs among young people is relatively small therefore including these individuals would increase the monetary-based stamp duty. Equally, no transfers are made for persons aged from age 50 until 64 years because the HIA has determined that the relative risk profile of the group is identical across insurers and including transfers for this group would require an increase in the stamp duty. Over the years, there have been many changes to the risk equalization model. A change worth noting is the introduction of health status as risk adjuster in the 2003 risk equalization formula (Armstrong and Paolucci, 2010:528). Perhaps the Irish regulator should consider the inclusion of a health status risk adjuster for more accurate predictions of health expenditure. A benefit-cost analysis would assist the regulator in assessing the feasibility of the inclusion of a health status risk adjuster within the risk equalization formula would require additional morbidity-related data to be collected.

8.6 Australia

8.6.1Historical and contextual background Historical

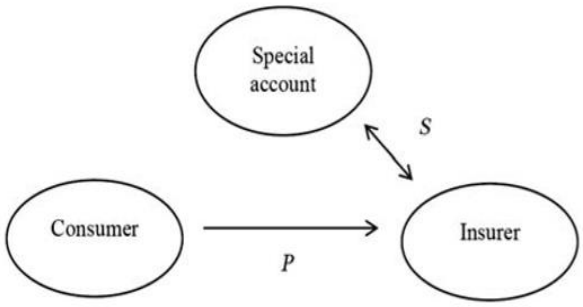
The Australian healthcare system is characterized by a mix of public and private financing and provision of healthcare services. The main component of the public scheme is known as "Medicare," which is a national health insurance scheme that covers a broad set of healthcare services to all citizens. Alongside, Medicare is a market for voluntary private health insurance (PHI) which was created through the enactment of the Private Health Insurance Act of 2007, which provides supplementary coverage for healthcare services. The PHI provides supplementary coverage for healthcare services that have been excluded from both the Medicare Benefit Schedule (MBS) and Pharmaceutical Benefits Schedule and services already covered by Medicare such as treatment in a public hospital. The Australian PHI market consists of 33 competing insurers, 25 of which are open to members of the public that can afford cover. The remaining eight operate as not-for-profit "closed" insurers which restrict membership to health funds to specific professions or unions. The principles of open enrolment and community rating have long been the backbone of health plan regulation. The National Health Act of 1953 specifies the community rating, minimum benefit, portability, and open enrolment provisions. In other words, insurers are required to charge the same premium to consumers that purchase the same health plan and to accept any applicant. Also, insurers apply maximum waiting periods for hospital and medical treatment. Another key feature of the PHI is that of Lifetime Health Cover, designed to encourage younger people to purchase PHI cover by the age of 31 and for every year beyond the age of 30 that the purchase of PHI is foregone, an individual is required to pay a surcharge which applies only to services that require hospital admission (i.e., a 2% loading fee in addition to the community rated premium). In addition, insurers can enter negotiations providers to agree on the price insurers pay for treatments provided to health funds' members. Once terms and conditions have been agreed, the insures enter into agreements with private hospitals called Hospital Purchaser Provider Agreements (HPPAs).

8.6.2 Risk Equalization Trust Fund (RETF) in Australia

The Private Health Insurance Act of 2007 established the "Risk Equalization Trust Fund" (RETF). The sole objective for the introduction of the RETF was to "increase industry stability in the context of community rating" and promote equity among insurers. A key feature of the

RETF is that it is in fact a hybrid system comprised of both risk equalization and risk sharing also known as "claims equalization." Some scholarly articles refer to claims equalization as ex-post risk equalization or ex-post claims equalization scheme. The next section will describe the payment flows within Australia's claims equalization scheme.

8.9.1.3 Payment flows in Australian claims equalization scheme



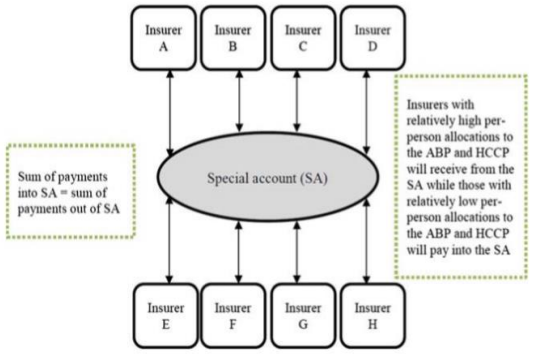


FIGURE 6.2 The claims equalization scheme. *Source: Connelly, L. Paolucci, F. Butler, J. Collins, P., 2010. Risk equalization and voluntary health insurance markets: the case of Australia, Health Policy 98, 3–14.*

Figure 7: Payment flows under the Australia's claims equalization scheme.
Adapted from: Paolucci (2018:186,195).

Insured members pay a community-rated premium to the insurer, denoted as P. The payment is transferred between the insurer and the Special Account, denoted as S. S is essentially a payment that represents the combination of risk equalization and risk sharing. Accordingly, every 3 months insurers with a risk profile composition that is dominated by elderly and high cost insured members will receive a payment from the Special Account. On the other hand, insurers with risk profile composition that is dominated of healthy and low-cost insured members will make contributions to the Special Account. The age-based portion of the payment is a combination of risk equalization and risk sharing and the high-cost portion of the payment is a form of risk sharing. Consumers do not make direct contributions to the Special Account, only payments to the insurer. All transfers from and to the Special Account occur at the state level. Furthermore, no payments and contributions are made nor received by a government agency (Connelly et al., 2010).

8.6.3 General principles of claims equalization in Australia

In a nutshell, claims equalization in Australia operates in the following manner: First, the Australian Prudential Regulation Authority (APRA) as regulator specifies the individual-level insurance claims that are eligible for claims equalization. The regulator then calculates the average eligible claims per insurer per state. Insurers with above-average eligible claims in a state receive a payment from the Special Account while those with below-average eligible claims make payments to the Special Account. Connelly et al (2010) indicates that claims equalization applies to claim costs for three types of services: chronic disease management programs; hospital service and hospital substitute services provided by ancillary providers. The individual-level claims are allocated to the claims equalization pool which consists of two components: The first component is referred to as the Age-Based Pool (ABP) and is calculated as the product of claims costs and an age-specific weight. The second component is referred to as the High-Cost Claimants Pool (HCCP) and is based on the claims costs that remain after subtracting the allocation to the ABP. The sum of ABP and HCCP allocations is the "claims costs eligible for claims equalization" and forms the basis for transfers between insurers and the Special Account.

8.6.4 Risk equalization formula variables in Australia

Australia makes use of age and gender-based risk equalization formula variables. There is room for improvement of the current claims equalization formula through the addition of health-based indicators such as Diagnosis-related Groups (DRGs) together with some form of risk sharing will be crucial (Paolucci and Shmueli, 2011). DRGs permit the insurer to identify an individuals' health status and the associated claims. Moreover, ex-ante risk-adjusted subsidies are necessary based on of percentage of elderly members within a specific pool to reduce selection and efficiency.

8.8 Russia/The Russian Federation

8.8.1 Historical and contextual background

Post the collapse of the USSR in the 1990s, Russia restructured healthcare financing to create a role for insurers and a universal package of medical benefits. The healthcare financing system in Russia can be split into four layers: Layer 1 is direct governmental funding for socially

important care; Layer 2 is mandatory health insurance established through the passing of MHI Law of 2010 into law; Layer 3 is Voluntary health insurance established through the passing of Health Insurance Law of 1991 into law; Layer 4 is Out-of-pocket payments. The general aim was to introduce a Mandatory Health Insurance (MHI) system as prudent purchaser of health care with some competitive elements to enhance the efficiency of healthcare delivery. Appropriately, the Health Insurance Law (1994) introduced both MHI and voluntary health insurance (VHI). MHI is highly regulated whereas there is little to no regulation applicable in VHI markets only the setting of requirements for solvency is regulated. According to this law, MHI coverage provides for most medical services and other costly care excluding prescription medication. The majority of VHI health funds are offered to employee groups on a community-rated basis and executed through private insurance companies who bear financial risk. However, VHI premium rates (in themselves) and the prices of medical facilities contracted by insurance companies are not subject to regulation. Currently, health care policy does not permit insurers to set up their own healthcare facilities. Also, selective healthcare contracting with limited patient choice is not permitted which means that insurers cannot establish designated network of providers nor negotiate for preferred (co-payment, or out-of-network) payment rates. In other words, the insured can see any provider irrespective of the enrolment with the specific insurer.

The benefit package under VHI is standardized both in terms of the type and quantity of medical care covered; maximum waiting time; referrals rules and conditions of care delivery. The principle of open enrolment applies within VHI markets; however, the insured can change insurers at any time. Moreover, health insurers do not act purchasers of care but merely end users of the provider payment method. Competition amongst VHI insurers was deemed to be the appropriate policy instrument for reforming the healthcare sector. VHI is optional and offers similar benefits to MHI.VHI grants enrolled members access to advanced medical facilities and a higher quality of care. Like MHI, the VHI does not cover prescription medication, it is mostly an out-of-pocket expense. Unique to the health markets in Russia is the requirement to disclose

information on insurers and service providers' performance to establish quality of care standards.

8.8.2 Risk equalization under the guise of universal coverage (Russia)

The risk equalization formula applies to all 85 regions in Russia and is rather clear cut based only on age and gender of members. To date, no other Risk equalization formula variables have been developed. Risk equalization is applied to across all types of medical care irrespective of specific services in question. Risk equalization payment is the result of the multiplication of the ratio with the average capitation in a region for each age/gender group. MHI utilises capitation for outpatient care and the Diagnosis-Related Group (DRG) method for inpatient care. Subsidy payments compensate hospitals for losses under the DRG payment method. Gender and age utilization of health care estimates based on regional estimates are used for setting differentiated capitation weights across age/gender groups. MHI policies rank maternity care and child-care high on the list of national priorities. For example, poor regions with lower average capitation rates have higher payment rates for the youngest group. At this stage, any improvements to risk equalization from health plan focus to a broad geographic focus are not a high priority for the current MHI. The insurers in Russia have low risk bearing capacity and cannot differentiate between health funds therefore risk selection among insurers is not regarded as a problem. The former viewpoint is surprising because the individual choice of insurer makes markets vulnerable to consumer selection.

8.8.3 Mandatory Health Insurance (MHI) payment flows in Russia

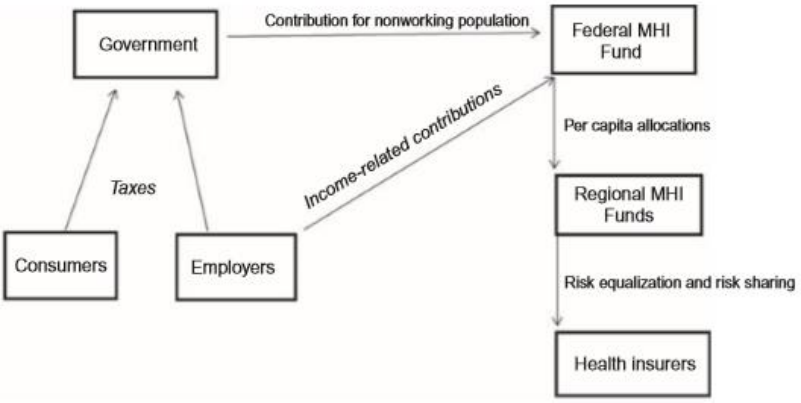


Figure 8: Payment flows under the Mandatory Health Insurance Law in Russia.
Adapted from: Sheiman (2018:440).

A combination of income-related employers and regional government contributions are collected and pooled in the Federal MHI Fund. The former funds pay for employed or unemployed citizens including children, pensioners, disabled, and the unemployed. Individual consumers do not make direct contributions to The Fund. The pooled contributions of are distributed to 85 Regional MHI Funds according to the number of residents in a region and financial capacity (i.e., poorer regions receive higher subsidies). The Regional MHI Funds contract health insurers and fund residents in accordance with the number of the members with some risk equalization. Then the responsibility falls on health insurers to contract with health providers and reimburse for services utilised based on volumes of care approved by regional commissions, control for quality of care, and protect the rights of the insured. According to MHI Law, in cases where, an insurer's healthcare spending falls below the insurer's revenues (i.e., underspending), the health insurers is required to return the savings to the Regional MHI Fund. In the more common case of overspending, health insurers can apply to the Fund for subsidies. The Fund reserves the right to accept or reject the subsidy application provided that the insurers apply for subsidies. In cases where a health insurers application is rejected then amounts for overspending will have to be deducted from own reserves. Some examples are an unexpected increase in morbidity or tariffs (prices) used for provider reimbursement.

8.8.4 Risk-equalization weights in Russia

Risk-equalization weights are influenced by health policy priorities at a national level. Each region is responsible for setting its own capitation rates across age/gender groups. As mentioned elsewhere, only age and gender risk equalization formula variables are used.

8.9 Chile

8.9.1 Historical and contextual background

The origins of the current healthcare system in Chile stem from the introduction of a semi-public entity known as the National Employees Medical Service (NEMS), which made provides

for mandatory insurance coverage for both public and private employees in the early 1940s (i.e., blue-collar workers or obreros). The NEMS was funded through contributions from employers and employees who can choose among healthcare providers with co-payments at the point of delivery (Henrıquez, 2018). A decade later, the National Health Service (NHS) funded through general taxation was established to administer the public provision of healthcare services. Alongside the NHS, an employer-based social insurance scheme was formed to protect employees against the financial consequences of occupational accidents and diseases events. In the late 1970s, the Fondo Nacional de Salud (Fonasa) was formed because of a merger between the NEMS and the NHS. Shortly thereafter, in 1981, the private health insurance market known as Instituciones de Salud Previsional (Isapres) was created.

Fonasa and Isapres alike cover hospital, in-patient drugs, ambulatory services, and sick leave which are funded through mandatory income-related contributions paid by employees. In sum, the Chilean health insurance system consists of two layers: The first layer is mandatory insurance implemented by Fonasa (public insurer) and Isapres (private insurers). The second layer is voluntary insurance cover approximately 15 % of the population offered by private insurance companies that offer cover for health care obtained in medical centres; specialist benefits such as dental care; co-payments of mandatory insurance and catastrophic expenses (beyond a predetermined threshold). There are currently about 13 regulated Isapres, seven of which are open Isapres (covering a large majority of the Isapres population) and the remaining six which are employment-based plans known as closed Isapres open to employees and their dependents only. The principle of open enrolment and deductibles are not applicable in the Isapres environment.

Isapres can offer multiple health funds that differ in terms of type/quality of the contracted network of healthcare providers; supplementary benefits included and financial coverage. However, premiums charged per plan and some aspects of product design are regulated mainly due to policy reforms introduced in the 2002. The most important change was the extension of the minimum coverage requirements for the diagnosis and treatment associated with certain

health conditions and services known as the GES services (Garantı´as Explıcitas en Salud). The GES services provide assurance to beneficiaries that access to benefits will happen in a timely manner such as within specified maximum waiting times and offer the necessary financial protection at the desired level of quality. Furthermore, reforms also imposed community rating on a per insurer per product basis and introduced a risk equalization scheme with the objective of mitigating incentives for risk selection, but only for GES services in the Isapres market.

Insurers can offer complementary plans which include all services other than GES services can be purchased voluntarily. The price of complementary coverage can vary with age and gender within a certain band. Fee-for-service is still the standard practice in the execution of provider payments and conditions such as gatekeeping are not common practice. Instruments for insurers to promote efficiency in the delivery of care are as follows: 1. Selective contracting with private providers which allows for GES and catastrophic services to be delivered by a restricted network of providers; 2. Isapres plans cannot contract with public providers; 3. Isapres is designed to fund health services and benefits hence vertical integration between insurers and providers is forbidden; 4. Co-payments are varied and applied across all plans. GES service co-payments are fixed; and finally, 5. Isapres insurers have substantial contracting freedom in relation to price and methods of payment. Even so, FFS remains the standard provider payment method. For the purposes of this dissertation, the focus will be on Isapres (private insurers).

8.9.2 Isapres payment flows (Chile)

This section will describe the high-level payment flows within the Isapres market. Each beneficiary makes a health plan premium payment towards the health plan of his choosing. Each health plan premium consists of two components: a community-rated portion for GES services (i.e., base premium) and a regulated portion for additional services covered by the plan that is risk-rated based on gender and age. A ‘virtual’ Solidarity Compensation Fund collects a fixed contribution charged to open Isapres and then allocates risk-adjusted payments to insurers through a risk equalization scheme. The actual transfers occur between Isapres under the supervision of the Superintendent of Health.

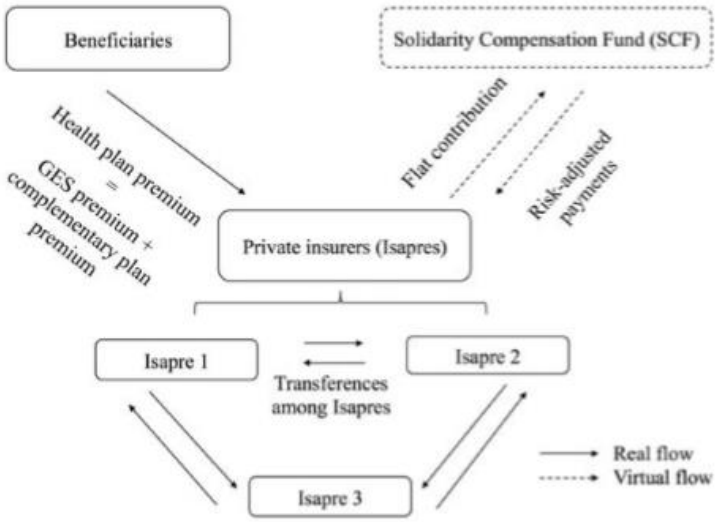


Figure 9: Payment flows of Isapres.
Adapted from: Velasco et al. (2018:243).

The base premium of each health plan is subject to an annual increase within a defined range as defined by premium regulation. At present, premium regulation requires that increases should not be greater than 1.3 times and less than 0.7 times the average increase of all base premiums of the Isapres.

8.9.3 Risk equalization in open Isapres market and GES services (Chile)

The risk equalization system was first introduced in 2005 and the Superintendent of Health oversees the operations of the risk equalization scheme. In Chile, risk equalization applies to GES services and open Isapres only which translates to less than 10% of Isapres' total expenditures in health services. The main purpose of risk equalization is to achieve risk-solidarity through cross-subsidies from low-risk to high-risk persons. More importantly, risk equalization reduces incentives for risk selection in an environment where community-rating is applied in the absence of open enrolment regulations. The Superintendent of Health is involved in the execution of the three main steps of the risk equalization process: (1) calculations of the fixed contributions that are paid into the Virtual Compensation Solidarity Fund; (2) computations of expected costs per cell; and (3) to calculate and monitor transfers among Isapres. In Chile, risk equalization and risk adjustment have a parent-child relationship. Hence,

step two of the risk equalization process is the application of a risk adjustment based on an actuarial cell method where cells are based on age and gender (e.g., 18 classes for men and 18 classes for women). Further in this regard, expected expenditure for GES services in a cell is based on the expected cases in that cell and the applied services' tariffs. The Superintendent of Health calculates the total transfer from/to an Isapres by subtracting the difference between the total virtual contribution of that Isapres and its total expected costs for GES services.

To date, the Superintendent of Health has not performed an empirical evaluation of the impact of the risk equalization scheme in terms of its reduction of risk selection incentives. A report focused on the risk equalization scheme was published in 2007 by independent researchers. The report concluded that the current risk equalization scheme does little to reduce selection incentives and its limited impact is attributable to the insensitivity of transfers to risk differentials rather than the size of the monetary transfers.

8.10 Theoretical interpretation of international experiences

The regulation of enrolment practices, coverage and health plan payment serves as means to avoid market failures to guarantee efficiency, access, and individual affordability within health care financing markets. Inevitably, regulatory decisions are complex and involves a variety of trade-offs between healthcare objectives and is also dependent on the weightings that regulators assign to the different objectives. This Chapter focused on six countries with voluntary, competitive health insurance systems: the Netherlands; Ireland; Australia; Russia; Chile and Switzerland.

Interestingly, all six countries studied, private health insurers compete on basis of price and quality within the bounds set by regulation. The insurance systems in the Netherlands, Chile, Switzerland, and Australia allow for cost-sharing options; product differentiation; variation in provider network and/or supplementary benefits in addition to basic minimum coverage. Russia allows for very little flexibility in health plan design and its only in Ireland that enrolment is voluntary. The principle of open enrolment does not apply to Isapres in Chile. In other words,

insurers in Chile are subject to community rating but are permitted to reject applicants based on health status (i.e., with no restrictions on plan design).

All in all, all six countries rely on some form of risk equalization to compensate insurers for sicker persons. The Netherlands makes use of more sophisticated health-based, cost-based risk equalization formula variables and/or diagnostic information as variables within the model formulas to better correct for predictable spending variation (Ellis et al., 2018). In Chile, the risk equalization scheme is promising but has proven to have very limited impact due to proliferation of plans which limits access to private insurance coverage for good-quality care difficult for low-income, high-risk individuals. One of the reasons for some of the shortcomings of the Chilean risk equalization scheme is that it only applies to Isapres for minimum package of GES services. Further to this point, community-rating regulations in the absence of an open enrolment requirement has curtailed the benefits of competition, generating incentives for risk selection instead of improving quality of care for high-risk individuals.

The experience in Ireland indicates that it is possible to introduce risk equalization in a voluntary health insurance environment despite significant challenges to its adoption. Ireland has a long history of using a combination of community rating and risk equalization in a voluntary health insurance market with competition to meet social solidarity goals (Armstrong, 2010). In most countries with similar environments to Ireland, a standardized benefit package coupled with subsidies for low-income people would need to be developed to support the combined health plan related regulatory interventions. In fact, the subsidy facilitates a reduction in member insurance premium which leads to increasing enrolment levels among young and healthy members. An increase in the enrolment of young and healthy members makes cross-subsidisation implemented by risk equalization more effective (Layton et al., 2017). On the other hand, the Australian private health insurance market operates alongside the Medicare system which is provides universal coverage. In both Australia and Ireland exists the principles of community rating and open enrolment as essential market features for the preservation of risk solidarity (Paolucci and Shmueli, 2011:73). Furthermore, Australia and Ireland have established risk equalization schemes as a legislative measure aimed at the removal of ex-post

differences in risk profiles between insurers. A key difference between Ireland and Australia is the existence of a hybrid system comprised of both risk equalization and risk sharing also known as “claims equalization.”.

8.11 Concluding remarks

The regulation of health plan payment is a complex matter which involves multiple trade-offs with the end goals being that of efficiency and affordability. In all of the six countries, it has become standard practice for community rating of premiums to implemented alongside a risk equalization mechanism that provides compensatory payment to health plans which attract a disproportionately high number of consumers with higher average medical costs.

Part C:

Theory construction - Comparative analysis and emergent outcomes

Chapter 9:

The application of grounded theory to risk equalization research

9.1 Introduction

Chapter nine will present an application of grounded theory as an outcomes-based research practice which serves to establish a link between the emerging knowledge building component in previous Chapters and theoretical interpretations made in the study finding contained in Chapter ten.

9.2 Data analysis and interpretation

This section seeks to show the data collection; data coding phase, textual data analysis phase and literature comparison phase which serves as the building blocks of the information building process. The results have been ordered into related themes and concepts. The contributions of Pundit (1996) and Cao et al (2019) was used as a grounded theory procedural guideline in the grounded theory construction process and was applied to answer the main research questions as outlined in Chapter one of this study.

9.3 A discussion and interpretation of research results with linkage(s) to literature review

Systems thinking and theoretical data gleaned from literature constitutes the underlying thread of the inquiry. The literature comparison phase represents a convergence of theory which is the critical component in the construction of an informed observation of South African risk equalization mechanism based on comparative textual analysis of international best practice.

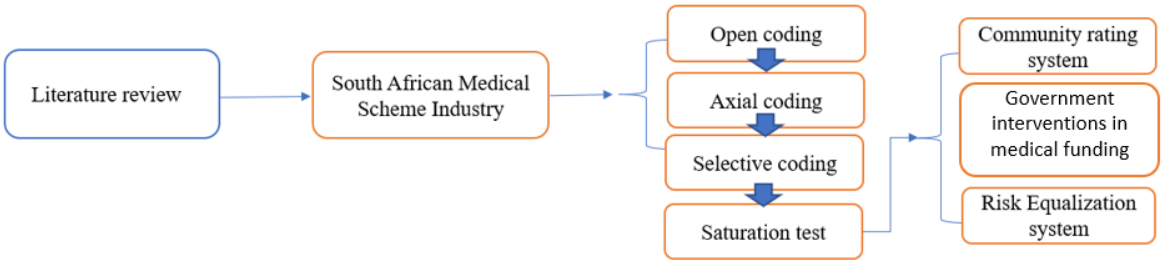


Figure 10: Theoretical coding process

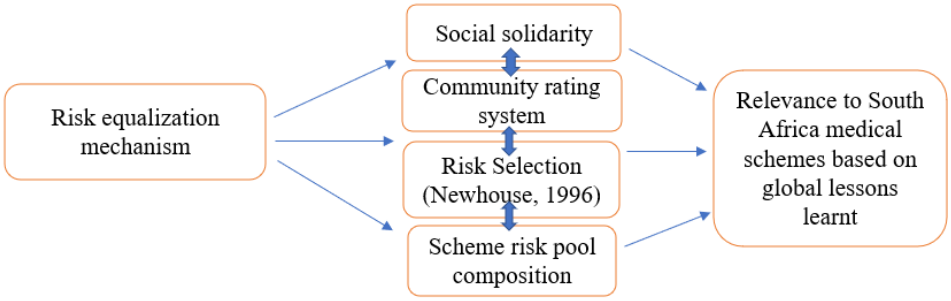


Figure 11: Drill-down of core theoretical themes and concepts

9.4 Open coding

The open coding process is the most repetitive and rigours of the grounded theory coding methods due to the sentence-by-sentence coding and focus on assessing fit and relevance to the topic. The purpose of open coding is to examine the social phenomenon to be studied, repeatedly define related key information in order to compare, screen and refine concepts with the aim of discovering the initial category. The initial conceptualization of the main influential factors in relation to risk equalization are qualitatively analyses and classified in order of importance based on keyword repetition within credible publications and sources of academic literature. The open coding process ends when general categories emerge from refined concepts. The initial 6 concepts must be mutually exclusive with no further refinements required.

Open Coding	Initial concept	Initial Category
OC001	Risk rating threatens affordability of high-risk members	Inefficient/incomplete markets
OC002	Further justification for regulation - the maintenance of social solidarity and the protection of the basic right to health care	Social solidarity
OC003	Expensive coverage, healthier and/or young scheme members choose to opt out of medical schemes market	Community rating
OC004	The rating categories are limited under community rating. The excluded (risk-related) categories are not 'priced' by schemes	Unpriced risk heterogeneity
OC005	The concept of cross-subsidization as the empirical difference between the community rate charged by an insurer and the actuarially fair price. Cost of efficiency associated with the fairness achieved through cross-subsidies.	(Implicit) cross subsidization
OC006	Incentive for by medical schemes to manipulate benefit option design.	Risk selection

Table 1: Illustration of open coding process outcomes.

9.5 Axial coding

Axial coding normally follows an extensive open coding process which serves to bring the study into focus through continuous comparisons and cluster analysis of categories and narrow it down to key groupings. Axial coding is useful for uncovering the internal logical relationships between the initial categories which have a direct impact on the implementation of a risk equalization mechanism (REF). The refined key groupings present a new perspective of the phenomenon under study. Therefore, the process of axial coding preserves the mutually exclusive relationship between the initial categories and integrates to formulate logical key groupings. Axial coding brings forth categories and logical groupings that give substance of the subject under study.

9.6 Selective coding

A repeated comparative analysis found that in all the global medical funding markets examined as part of this study, where community rating is adopted then one would expect to find that risk equalization is also adopted. The selective coding process established various linkages and relationships between concepts and key themes. First, selective coding found that the core and initial categories appear most often within regulation orientated literature. This led to the inference that both community rating and risk equalization must be regulatory concepts on opposing sides of the medical schemes market. The analysis established further that the role of community rating is to generate (implicit) cross-subsidies from low-risk to high-risk members which translates to a reduction in premiums for high-risk members. However, community rating is also linked to potential for price distortions within the market through increases to unpriced risk heterogeneity and inefficient sorting across basic coverage plans due to worsening medical scheme incentives for risk selection through benefit design (Newhouse, 1996).

On the other hand, the role of risk equalization is to correct, through monetary transfers to/from medical scheme, for unpriced risk heterogeneity and the potential for price distortions. The selective coding also revealed that community rating and risk equalization have opposite and equal effects in the market. This means that community rating leads to inefficient benefit option design from a medial scheme perspective and inefficient sorting across basic coverage plans by medical scheme members (McGuire and Glazer, 2000). Risk equalization, through monetary transfers to/from medical scheme, reduces inefficient benefit option design and inefficient sorting across basic coverage plans by medical scheme members (Van Kleef, 2018). Therefore, the six initial categories have been further refined into three groups, namely the government intervention, community rating and risk equalization mechanism.

Axial Coding	Principal Category	Initial Category
AC001	Markets tend to risk rating without regulation	OC001 Inefficient/Incomplete markets
AC002	Equity and Efficiency	OC002 Social solidarity
AC003	Social solidarity	OC003 Community rating
AC004	Risk cross – subsidization	OC004 Unpriced risk heterogeneity
AC005	Risk Selection	OC005 (Implicit) cross subsidization
AC006	Scheme risk pool composition	OC006 Risk selection

Selective Coding	Core category	Principal Category
SC001	Government interventions within medical funding markets	AC001 Markets tend to risk rating without regulation AC002 Equity and Efficiency
SC002	Community rating	AC003 Social solidarity AC004 Risk cross - subsidization
SC003	Risk equalization system/mechanism	AC005 Risk Selection AC006 Scheme risk pool composition

Table 2: Illustration of axial and selective coding process outcomes.

9.7 Saturation test

As mentioned in the methodology Chapter of this dissertation, grounded theory research is concluded only once the researcher has reached a data saturation point meaning that the knowledge building process comes to an expected end and a theory has emerged from the data. The data saturation point has been reached as no additional collection of data would provide further insight into answering the research questions (Glaser and Strauss, 2006). However, it can be argued that a critical examination of certain key theoretical assertions would be beneficial at this point to ensure that all factors affecting risk equalization within the South African medical schemes industry are sufficiently saturated in theory. In addition, a further discussion of other aspects such as preference heterogeneity, adverse selection, and possible

linkages between an individual's risk type with the demand for medical scheme coverage were included to further contextualise the topic.

9.8 Concluding remarks

The above-mentioned grounded theory coding and conceptual theme development process assisted the researcher in the following:

1. The development of a theory of risk equalization mechanism which pertains to the South African medical schemes market and that is also applicable to health care funding in general.
2. The development of generic, practical notions that pertain to the application of a risk equalization mechanism within the South African medical schemes market.

Chapter 10 discusses study findings and presents emergent theory that is grounded in situational data presented in earlier Chapters.

Chapter 10:
Conclusion

10.1 Introduction

Chapter ten concludes the discussion and articulates key findings in relation to the theory and once-planned application of a risk equalization mechanism within the South African medical schemes market.

10.2 Final comments

To conclude, Chapter ten provides answers to the research questions outlined in Chapter one as follows:

Question one: What are the deficiencies and/or challenges that gave rise to the proposed introduction of risk equalization as a regulatory reform in South African medical schemes market?

The main deficiency or challenges that gave rise to the proposed introduction of risk equalization as a regulatory reform in South African medical schemes market is the counterproductive effects of inefficient cross subsidization due to the prevailing regulatory framework. The current application of community rating rule 'forces' the pooling of high and low (heterogenous) risks and imposes a 'one size fits all' pricing approach where medical schemes cannot price based on observable risk factors such as age. Moreover, the absence of mandatory membership, restrictions in law that prevent medical schemes from cancelling membership and/or open enrolment without right of refusal to provide cover and to some extent demand frictions distorting consumer choices can be barriers to effective risk pooling. To date, government has largely focused on the expansion of social assistance to the detriment of voluntary insurance such as medical schemes. Therefore, socio-economic issues pertaining to youth unemployment and the historical market dominance of employment-based medical schemes coverage in South Africa affects continuity of medical scheme coverage especially for persons beyond the pensionable age are also key equity related considerations. Time taken to implement and the lack of political will was also a concern. The best and most opportune

time to implement risk equalization in South Africa has probability already passed if one considers recent healthcare policy changes which seem to suggest that medical schemes will not disappear completely but will play a less significant role in future.

Question two: What are some of the best practices (if any) that can be derived and/or lessons that can be learnt from the experiences of private health funds in other countries' regarding the adoption of risk equalization?

The general theory which emerges from the grounded theory process shows that in general, in international private, healthcare funding markets where community rating is adopted, a risk equalization mechanism is also adopted. In most countries, the principle of open enrolment and principle of community rating co-exist with the exception of Chile. Naturally, countries that require open enrolment are able to guarantee that health plans are unable to discriminate members at the individual level. Naturally, this means discrimination across member groups on the basis of network design or benefit option design becomes almost inevitable. It is common for health insurance to also be compulsory, in countries where standardized benefit package is defined and regulated by the government. The application of a risk equalization mechanism in the interests of meeting solidarity goals is particularly cumbersome within competitive, voluntary healthcare financing environments with product proliferation such as Ireland and South Africa. In this regard, Zweifel and Frech (2016) suggest that community rating be replaced with risk rating of contributions combined with subsidization targeted at high risks to ensure optimality.

Question three: Does South Africa still need to apply the once-planned risk equalization mechanism? Seeing as the South African medical schemes industry continues to function in its absence, albeit with challenges.

Briefly, different answers can be given to this question.
An answer derived from economic theory would be based upon Arrow (1963). Arrow (1963) argued that competitive markets in the absence of regulation display ‘‘a tendency to equalize,

rather than to differentiate premiums''. Therefore, contrary to popular belief 'risk-adjusted premiums' are actually a norm not an exception within competitive markets because markets will 'naturally' tend toward risk rating. In other words, the medical scheme fund which charges the lower price will attract high risk consumers and the price through normal market operations automatically 'equalize' as high-risk members join the lower priced scheme. However, the theory of economics is not the only place where an answer is given. Another place is within political economics from which emerges the principle of social solidarity. Again, Arrow (1963) argued that the exclusion of persons of a pensionable age from the market was an example of market failure and could justify some form of regulatory intervention which plausibly came in the form of Medicare, a public insurance program that caters specifically for the elderly. The concept of social solidarity is different to that of market failure. Social solidarity is a concept that is associated with 'complex' policymaker responses to pertinent questions of how a given health service should be financed, how prices should be determined and the basis for the allocation of a given health service. In other words, will health service allocation be based on willingness to pay or capacity to benefit and/or need for health care (Smith and Normand, 2011). This dissertation concerns itself with the notion of prospective market failure within the context of incomplete social solidarity features. McGuire and Van Kleef (2018:12) suggests that if a regulator that seeks to avoid market failure(s); offer guarantee market access and improve individual affordability then the regulation of medical funding becomes essential. However, if one considers the South African medical schemes market it becomes apparent that the market does not fail but may have incomplete elements due to (in part) social solidarity related regulation that has not been (fully) implemented. For example, the lack of a standardized benefit package in the South African medical schemes markets and other countries such as Ireland have led to community rating per product/plan which induces (indirect) premium differentiation akin to that obtained under risk rating (Van de Ven, 2011:148).

Interestingly, the rationale for community rating stems from social solidarity which seeks to protect the basic right to health care as a 'basis for moral order' or 'social justice' in the attempt to secure the best possible outcome for the most disadvantaged members of society (Olsen, 1997). However, community rating as standalone regulation does not suffice in curbing the

effects of pricing distortions and the inefficient self-selection of consumers across funds (Van Kleef et al., 2018:30-38).

10.3 Emergent theory - A general theory of risk equalization and its application

The following general rules have emerged or have been developed from theory that is "grounded" upon academic knowledge and situational data collected, in this case, the international and South African situational maps and experience review:

1) Community rating serves to "level the playing field" because all members or member groups represent the same expected medical cost or expense to medical funds in the interests of social solidarity. In other words, community rating serves to correct for the lack of fairness inherent in the free-market outcomes obtained under risk rating especially for high-risk members.
2) The cost of (implicit) cross subsidization is an empirical difference between the community rate charged by a medical scheme and the actuarially fair contribution that is obtained through risk rating.
3) Community rating is a necessary pre-condition for unpriced risk heterogeneity and (implicit) cross subsidization to exist.
4) Risk equalization and community rating are two sides of the same regulatory coin. The regulatory coin, in this instance, refers to basis for government intervention. Community rating is government regulation of medical funding prices and risk equalization is government regulation meant to match medical scheme payment obligations to predictable spending at the individual level to bolster social soldarity.
5) Risk equalization transfers (in the absence of an external consumer price subsidy) are based on some concept of expected claims and serve to reduce unpriced risk heterogeneity and mitigate for the effects due to the possible actions taken or responses to actions taken by medical schemes and/or members to exploit unpriced risk heterogeneity.
6) Risk equalization is a form of "risk rating in plan payments from a central fund" designed to 'make good the loss' associated with the 'forced' enrolment of predictably, unprofitable members due to the application of community rating provisions and

potential disenrollment of predictably, profitable members due to the principle of voluntary participation and the inability to reject applicants.

7) Risk equalization also establishes a form of restitution or indemnification within the South African medical schemes market in the sense that it would restore or 'make good' the pricing related competitive advantage which is relinquished or lost due to the legal prohibitions imposed under community rating. The pricing related advantage refers to the advantage that each individual South African medical scheme would have otherwise had relative to its competitors under risk rating in the absence of compliance costs.
8) Risk equalization (in the absence of an external consumer price subsidy) serves to "level the playing field" through a regulatory system of risk-adjusted financial transfers to/from medical funds. The purpose of the monetary transfers is to 'equalize' for the inherent differences in underlying member risk compositions and ensure that schemes are not able to gain from attracting profitable members nor lose from attracting unprofitable ones.
9) In South Africa, especially, risk equalization is a sound policy decision because it preserves the not-for-profit orientation of the South African medical schemes market. Even so, competition for healthier individuals can be beneficial from a behavioural economic standpoint and it may bring other benefits – such as the alignment of expected benefits received to the costs of benefit provision.
10) Consistent with theory and global experience, private, medical funding markets where community rating is adopted a risk equalization mechanism is also adopted.
11) It is international best practice for risk equalization mechanism to be implemented in conjunction with risk sharing to cater for excessively high-cost cases, an arrangement akin to stop loss reinsurance.
12) Even so, risk equalization is not dependent on the pre-existence of a national health system. Global situational maps suggest that even in countries, where public-private health care sector partnerships co-exist (e.g., Australia), a risk equalization mechanism still has a role within national health.

The 2019 Health Market Inquiry mentions that policy makers have opted to implement a risk adjustment mechanism instead of a risk equalization mechanism. The implementation of risk adjustment is not possible in South Africa due to the existence of legislation in favor of community rating and the absence of risk rated pools within the South African medical schemes industry.

Therefore, it becomes clear based on the above-mentioned observations that emerge from the theory construction process that the joint implementation of community rating and a risk equalization mechanism, albeit with challenges, remains a sound policy decision. However, given the new policymakers thinking around healthcare policy, one should at least acknowledge the fact that the best and most opportune time for implementing risk equalization within the South African medical schemes market has in all probability passed. The medical schemes industry continues to function in the absence of risk equalization and will probably not disappear with the change in healthcare policy making. As such, the discourse around risk equalization is still relevant in the short term.

10.4 Study findings

Risk equalization and community rating are two different sides of the same regulatory coin. The regulatory coin, in this instance, refers to the basis for government intervention. The South African medical schemes industry undertake liability in return for a contribution to aid members in financing the future medical expenses incurred in connection with the "rendering of any relevant health service" by means of payments to third party providers of health care services once a member has utilized health services. It goes without saying that medical schemes only pay for medical expenses and have virtually no control over expenses nor the cost of healthcare services. A general theory which emerges from the grounded theory process shows that within private, healthcare, or medical funding markets wherein community rating is adopted, a risk equalization is also adopted. Community rating is government regulation of medical funding prices and risk equalization is government regulation meant to match medical scheme payment obligations to predictable spending at the individual level to bolster social soldarity. Hence,

consistent with theory and global experience, the concurrent implementation of community rating and a risk equalization mechanism is a sound policy decision.

If one considers the amendments to the 1998 Act, where community rating was re-introduced as a centerpiece, it is evident that the South African medical schemes market is not an exception to the general rule. The 2019 Health Market Inquiry mentions that South African policymakers have opted for a risk adjustment mechanism instead of a risk equalization mechanism. However, evidence found as part of this study suggests that the implementation of a risk adjustment mechanism (by definition) is not possible in South Africa due to the existence of legislation in favour of community rating and the absence of risk rated pools within the South African medical schemes industry. The former policy decision may be due to the focus on National Health within the context of universal coverage and cost containment. Even so, risk equalization is not dependent on the pre-existence of a national health system. However, it is international best practice for risk equalization mechanism to be implemented in conjunction with risk sharing to cater for high-cost cases. As such, South Africa still needs to apply the once-planned risk equalization mechanism even though the medical schemes industry continues to function in its absence, albeit with challenges.

10.5 Recommendations for further study

A matter worth investigating as an area for further study is the legal status of medical schemes as not-for-profit companies incorporated in terms of the Companies Act of No. 61 of 1973 as amended. As previously mentioned, medical schemes operate on a non-profit basis and are essentially trusts, governed by a board of trustees with a fiduciary duty towards members of the scheme in accordance with the Medical Schemes Act of 1998 (McLeod, 2005:114). The main statutes regulating aspects of trust law in South Africa are the Trust Property Control Act of 1988, Estate Duty Act, Income Tax Act, and common law. Applicable trust laws do not treat trusts as juristic persons similar in nature to a company or a close corporation. There may be potential legal implications in terms of limitations placed upon trust variations and other potential inconsistencies which may exist between statue and common law (Du Toit, 2013).

The following additional areas of study arose as part of literature review: The possibility for a transition towards a modified form of community rating system within the South African medical schemes market and the requirement for an empirical analysis of unpriced heterogeneity in the South African medical schemes market.

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