

Regulatory Framework Project

Regulating by Measurement and Learning

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This report is published by the Policy Research and Monitoring division (PRMD) of the CMS. The division serves beneficiaries of medical schemes and members of the public by conducting research, collecting, and analysing data to monitor, evaluate, and report on trends in medical schemes, measure risk in medical schemes, and develop recommendations to improve regulatory policy and practice. Altogether, the division is comprised of policy analysts, health economists and clinical experts.

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ABSTRACT

There is a growing interest in market conduct, both internationally and domestically, due to the 'Twin Peaks" agenda. Also noted, is a growing body of research to understand how trust relationships and the credible commitment of institutions can be improved by supplying transparent and accessible information to market agents (market conduct). Indicators show that if market conduct is not improved, specifically relating to designated service provider (DSP) health-seeking episodes, information asymmetry will continue to be a driver of out-of-pocket payments (OOP).

The Policy, Research & Monitoring Division (PRMD) has been researching on understanding the impact of information asymmetry on trust and behaviour among medical scheme industry participants. Using the Complaints and Adjudication dataset to provide a descriptive analysis, PRMD developed a measurement construct to propose a method for identifying causal relationships between information asymmetry, trust, and market conduct.

Based on learning from reviewing peer-reviewed literature from the New Institutional Economics (NIE), it is unlikely that a super regulatory body for the financial sector, at large, could meaningfully monitor market conduct for a specialised industry such as the medical schemes industry. This is supported by a principle that the NIE calls "asset specificity[1].. Asset specificity problems drive transaction costs in markets with information asymmetries.

PRACTICAL IMPLICATIONS

The practical implications are that CMS can develop a market conduct framework by implementing responsive stewardship that involves a regulatory framework which espouses:

- Learning from the market conduct of buyers, sellers of health insurance and providers of healthcare; thus, enabling an environment of "managed

[1] Investopedia defines asset specificity to be the (in economics) the degree to which a thing of value, or even a person of value, can be readily adapted for other purposes

competition” that reveals a quality of health to patients during health-seeking episodes;

- Learning from patient health-seeking episodes to reduce market exit through ensuring cost efficiencies and continuously improving patient experience in achieving “effective cover;”
- Learning through harnessing the recent computational power of Artificial Intelligence (AI) text and sentiment analysis to develop regulatory interventions from a patient-centred approach and
- Disseminating information to the public in a coordinated fashion to avoid reputational risk caused by negative health-seeking experiences received by patients.

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1. INTRODUCTION

1.1. Background

The Health Market Inquiry (2019) found that information asymmetries are inherent in the medical schemes industry. An environment with unequal information can make patient channelling a logistical nightmare. This increases co-payments for going out of network and the number one 'transaction cost' in the medical schemes industry. Ultimately, transaction costs increase the costs of providing health funding for medical schemes and the cost of health-seeking episodes for medical scheme members alike. Co-payments resulting from a lack of optimal information impede the trust between medical schemes and members. Thus, ultimately affecting the behaviour of medical schemes and members as the lack of information may result in moral hazard on the part of both market agents.

The impact of information asymmetry on transaction costs and positive coordinated collective action for social benefit must be understood. Information asymmetry and its effect on market conduct will gain increasing importance as "Twin Peaks" gain momentum (Financial Regulatory Reform Steering Committee (2013)). Building the credible commitment of institutions is beneficial for positive market conduct (North (1993)). This is crucial for reducing the value-gauging impact of transaction costs (Coase (1998)) (North (1992)), and (Williamson (1998)). The work done by the Complaints and Adjudication at the Council for Medical (CMS) tries to undo the adverse effects of information asymmetry on behaviour.

In 2019, just before the COVID hard lockdown, out-of-pocket (OOP) payments were R35.2 billion (CMS, (2021), p.24) and of this amount, 48.6% was paid directly by medical scheme members. If one is not convinced that this outcome is against the net social benefit of medical scheme members and reduces the value of the medical schemes industry, this staggering amount should be of concern. Thus, the Competition Commission called for more transparency by distributing information to improve decisions made by members (HMI, 2019). Gilson (2003) is of the firm view that health systems should understand the "relationship and behavioural" problems underlying trust that impede coordinated decision-making, which Abelson et al. (2009) confirms

when studying the relational aspect of member trust among health insurers. Ostrom (2009) says coordinated collective action through information and sanctioning non-compliance can reduce the impact of transaction costs.

Information can activate members and increase their psychosocial skills while navigating the health delivery networks of medical schemes (Enthoven et al., 2019). Activated medical scheme beneficiaries will optimise their utilisation of efficient and effective contracting arrangements. This will reduce transaction costs and increase members' benefits and interests. Thus, demonstrating quality in preferred network arrangements, as per the recommendations of the HMI report.

In advocating the importance of information in channelling patients through health delivery networks, Enthoven et al. (2019) and van der Hulst et al. (2023) are in agreement that this is central to implementing managed competition (health access through cost-effective demand management). More importantly, if members are to properly consider the opportunity cost of choosing between voluntary and involuntary use of preferred networks, scheme members must understand scheme information about patient channelling and the related discount rewards. If not, members will go out of network and access health services relatively at more expensive fee-for-service open networks, when they are entitled to closed network health services provided at a discount for lower monthly medical scheme premiums. Because the services would be paid from a shared pool of funds, going out of network would be tantamount to 'free riding.' Thus, enabling the enhancement of coordinated collective action for integrated health services for reducing transaction costs, and efforts paid forward for integrated care services for the future health policy trajectory.

1.2. Purpose

This article aims to develop a regulatory framework for monitoring the effects of information asymmetry on market conduct. We explore the complaints dataset at CMS to learn about negative market conduct outcomes so that we may understand how the regulator can inspire coordinated efforts through transparent and accessible information. Hopefully, this will result in optimal choices by medical scheme members when navigating their schemes' healthcare delivery network.

1.3. Objectives

The objectives are to:

- Develop a framework to analyse market conduct emanating from the Complaints and Adjudication Unit;
- Merge the complaints classification with regulatory and information economics principles on asymmetric information and market conduct;
- Conduct an exploratory analysis using the newly developed regulatory framework and
- Propose a method for inferring the causal impact that information asymmetry has on trust relationships and behaviour among market participants.

2. METHODS

2.1. Framework of Analysis

2.1.1. Description of the market conduct environment

Figure 1 describes the scope of information standards and guidelines that can be effected on regulatory dimensions that support the sustainability of the medical schemes industry. Good market conduct could raise fewer complaints about: 1) benefit option entitlements; 2) discriminatory access to the most vulnerable risk groups; 3) access to DSP networks, and 4) member error resulting from members not knowing their DSP networks.

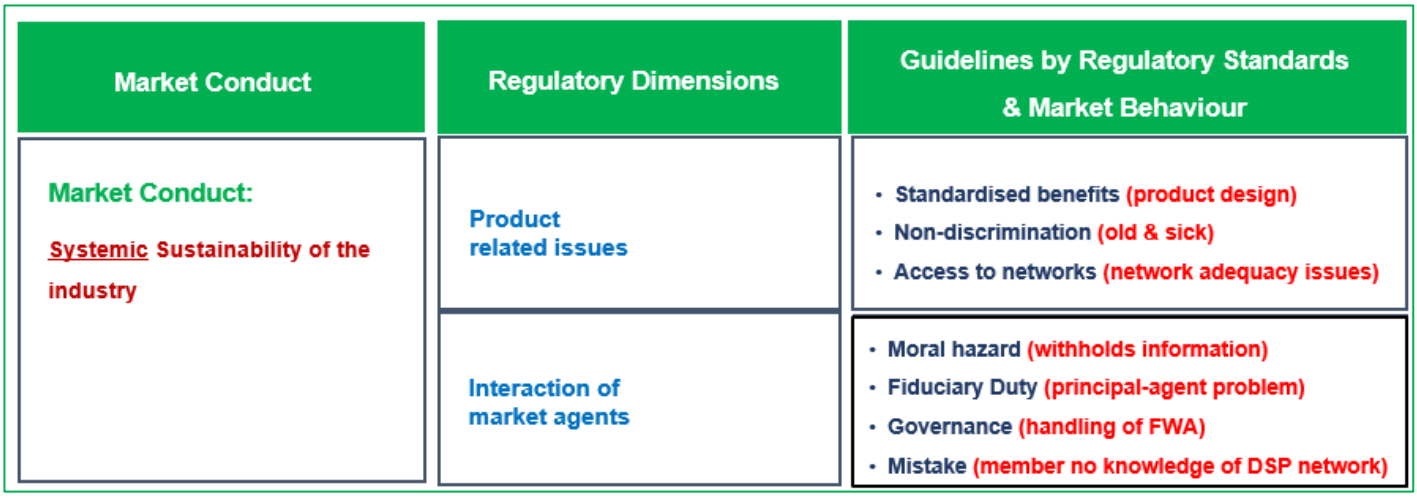


Figure 1: Regulatory dimension for market conduct
Source: Author, Policy Research & Monitoring, CMS

The logic model in **Figure 2** provides an analogy of market interaction between market agents. The figure (fig. 2) shows how relationships are formed around benefit options' structural characteristics/attributes. The interactions of market agents are contextualised by transactional relationships between; 1) medical scheme members, 2) medical schemes, 3) managed care providers (MCOs), and 4) healthcare providers.

Figure 2 amplifies the complexity of benefit designs, which may result in complaints associated with benefit entitlements, and accessing health services though networks. The figure is a modification of a descriptive illustration of the structural characteristic of benefit option attributes by Mattke, van Busum, and Martsolf (2014). The illustration shows two structural dimensions:

1) The demand side component of benefit design, which is composed of:

1.1) The different consumption bundles beneficiaries must choose from.

1.2) The different types of funding mechanisms associated with each health service consumption bundle.

1.3) The different benefit limits associated with specific health service consumption bundle.

2) The supply side component of benefit design, which is composed of:

2.1) Different networks associated with supplementary/discretionary in and out-of-hospital services.

2.2) Different types of disease management networks associated with the routine benefit of standard and supplementary chronic disease list.

2.3) Utilisation management protocols and evidence-based clinical controls which determine the criteria of benefit entitlement per healthcare utilisation claim.

Based on learning from negative market conduct outcomes, responsive stewardship and/or governance can improve market outcomes by enabling appropriate transparency and market information. Hence, the nudge effect occurs by linking members to optimal information on medical scheme health service delivery networks and standardised information on benefit option entitlements.

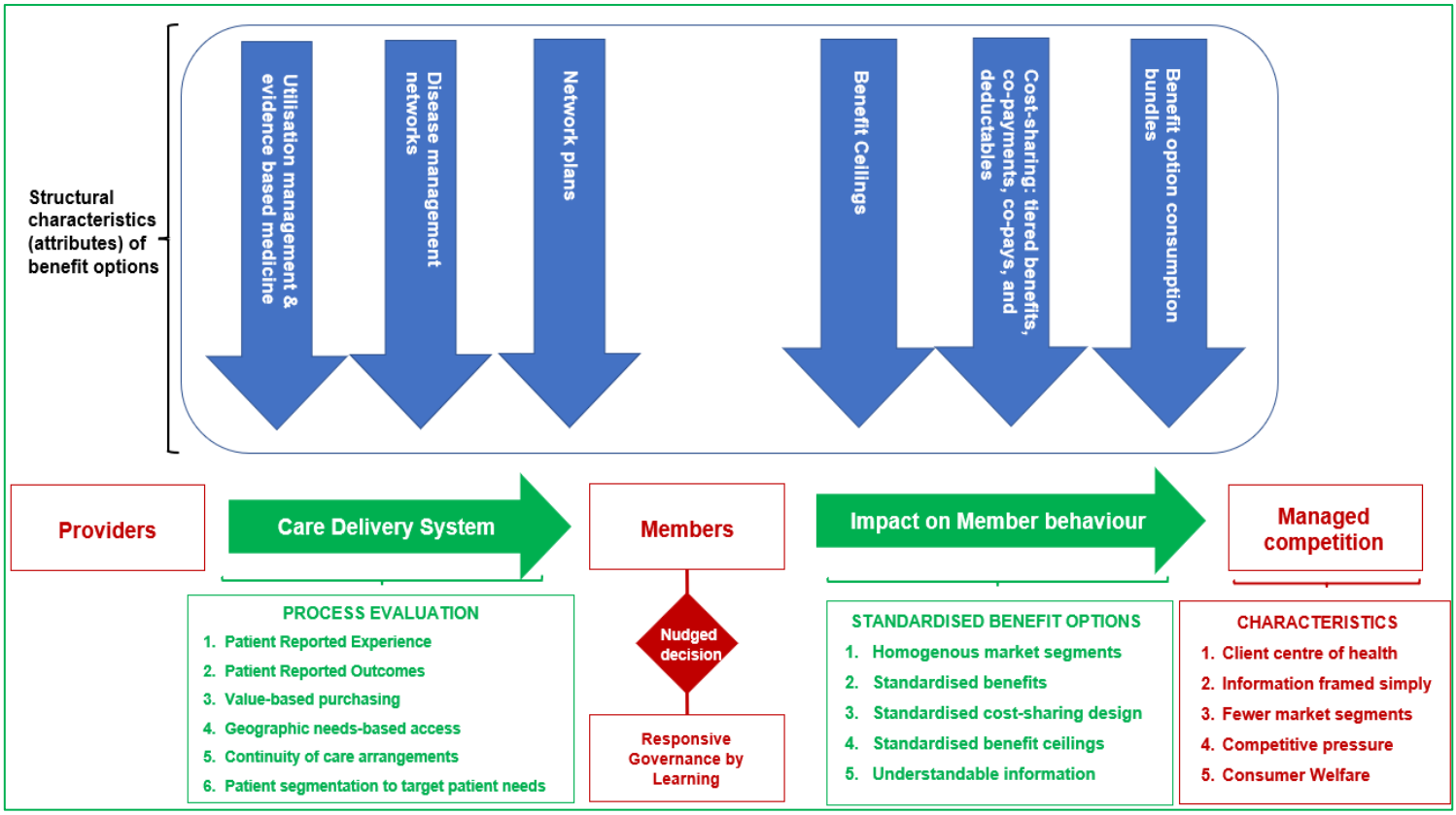


Figure 2: Logic model -- structural characteristics of benefit options
Author's adaptation of Mattke et al. (2014), p.7

2.1.2. Linking complaints to a regulatory policy framework

To develop a regulatory framework for analysing market conduct using complaints data, we formulated a classification system consistent with the research literature from information economics. Information economics is a branch of economics that explains how information asymmetry creates market inefficiencies. Market inefficiencies make decisions that could be more optimal. This is a direct result of bounded rationality. Bounded rationality is due to incomplete information sets at the disposal of medical schemes or members; thus, market outcomes might not be optimal. The regulator must understand such circumstances to implement interventions to reduce transaction costs. An example of transaction costs is co-payments. Co-payments resulting from members going out of network during health-seeking episodes. This also results in free-riding (when members use resources at fee-for-service rates if they do not pay the out-of-network premium). Transaction costs due to market inefficiencies are why the regulator ought to learn from member complaints to find ways to institute transparency and develop guidelines to reduce unnecessary costs (Gilson 2003).

Figure 3 shows that other fields of research literature, other than the economics of information and behavioural economics, were used. With the reviewed research literature, we were able to develop market conduct classifications which we could merge with the complaints data. We focused on the designated service provider (DSP) and network complaints.

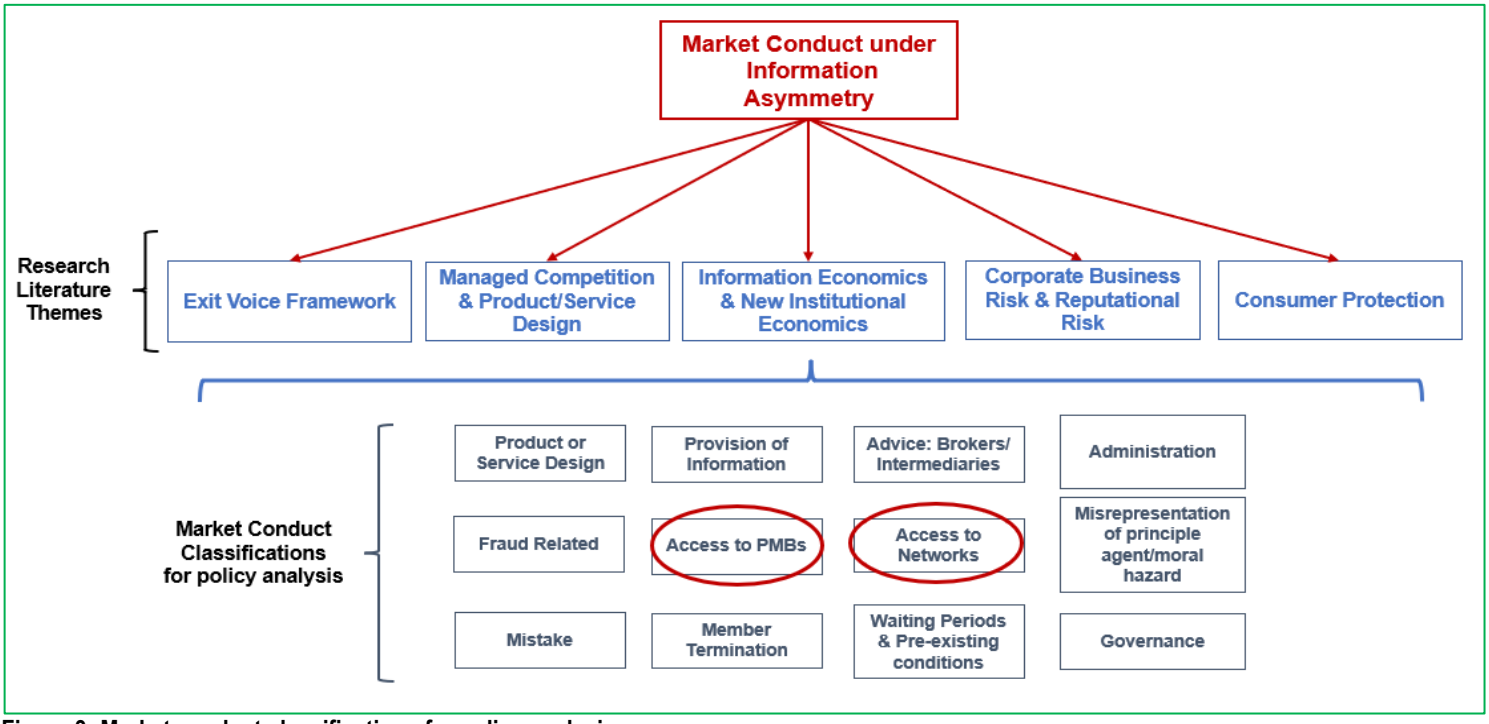


Figure 3: Market conduct classifications for policy analysis
Source: Author, Policy Research & Monitoring, CMS

2.1.3. Framework for analysing market conduct

Figure 4 describes the framework of analysis used to analyse complaints associated with accessing designated service providers (DSPs) and networks. Market agents such as medical schemes and beneficiaries conduct themselves with a specific type of behaviour (choose a strategy) within an environment of information asymmetry. The model/framework assumes misconduct on the part of the medical scheme or beneficiary. The misconduct is identified through an unfavourable ruling against the misbehaving agent (be it the medical scheme or beneficiary).

1) In the case of misconduct (based on an unfavourable complaint adjudication ruling) on the part of medical schemes:

1.1) The hypothetical behaviour of medical schemes can take the form of moral hazard or principal-agent (agency) problem.

1.2) The hypothetical strategies in this instance are either: i) partial payment of a PMB claim due to alleged non-use of a DSP or PMB formulary issues.

1.3) If this type of behaviour continues over a protracted period of time, it could lead to systemic reputational risk as:

1.3.1) Members who stay in the medical scheme and do not complain – communicate mistrust in the system, and not just a particular medical scheme, this

1.3.2) Reducing the perceived quality of insurance products in the medical schemes industry, and ultimately

1.3.3) Resulting in market failure.

2) In the case of misconduct (based on an unfavourable complaint adjudication ruling) on the part of a medical scheme beneficiary/member:

2.1) The hypothetical behaviour of the member can take the form of moral hazard. For example, in this case, a member is taking advantage of information asymmetries (i.e., the medical scheme not knowing that the member knowingly has a pre-existing condition when selecting a benefit option), or

2.2) The hypothetical behaviour (strategy) of the member might genuinely be that of ignorance or due to bounded rationality (too much information to take in); when choosing an option or going about a health-seeking exercise. Here are examples:

2.2.1) The member does not know the medical scheme networks when visiting an out-of-network provider,

2.2.2) The member is not aware that an emergency episode or routine benefit must be acquired at a medical scheme DSP,

2.2.3) The member unknowingly claims in a manner that is not consistent with disease diagnosis and treatment pairs,

2.2.4) The member unknowingly claims above a benefit ceiling for supplementary benefit.

2.3) If this pattern of behaviour continues unabatedly, members may pay for healthcare in large amounts of out-of-pocket payments. This would increase reputational risk as perceived quality dwindles.

The regulatory dimensions of the "rules of the game" and the "play of the game" (Williamson, 1998) are not similar for financial markets and medical scheme environments. Therefore, the CMS should continue to enforce and monitor the regulatory ambit as per the Medical Schemes Act. The differences in the "asset specificity" (Williamson, 1998) of financial products relative to that of medical insurance products; suggest that a financial crisis will have a differential impact on the two industries. Specifically, a financial instrument securing the discharge of a liability on presenting a bill is more transferable than a contractual obligation to provide health services to a group of beneficiaries under a network. Meaning that, the hazards or resultant reputational risk from market transactions will differ for regulatory institutions. Thus, healthcare access/medical schemes will be inappropriately placed under a financial regulatory super-structure.

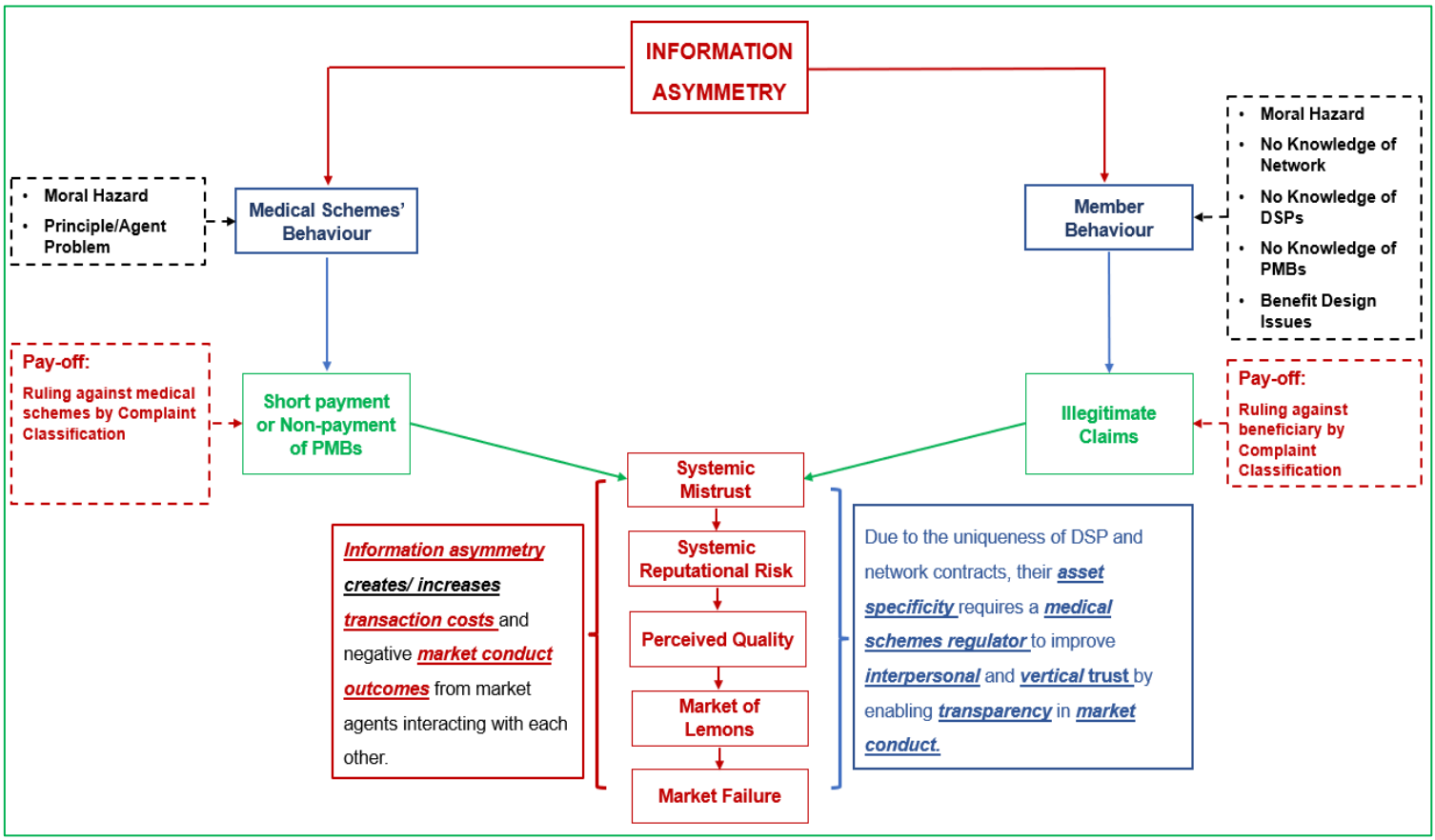


Figure 4: A causal framework for market behaviour to market failure.
Source: Author, Policy Research & Monitoring, CMS

2.2. Data Source

This study uses secondary data to describe complaints regarding medical scheme beneficiaries' use of networks and DSPs. The secondary data that was used in this study were sourced from the Complaints and Adjudication Unit at the Council for Medical Schemes (CMS). The period which the complaints data covers is from **January 2019 to September 2020**. The data is made up of 244 observations relating to DSPs & networks.

2.3. Data Management

The raw dataset of complaints was merged with other relevant data to capture some of the relevant criteria for analysing policy implications of market conduct. Thus, assisting in comprehensively describing potential systematic effects on reputational risks emanating from the complaints. The data were exported to Microsoft Power BI Premium to generate summary analyses and sentiment analyses to measure beneficiary sentiments.

The sentiments were measured by using the sentiment analysis AI tool in Power BI. The sentiment scores were used as proxies for reputational risk and were classified into very high, high, and moderate reputational risk.

We added new variables and classification codes to describe:

1) The behaviour (strategies) of market agencies (beneficiaries and medical schemes).
2) The resulting impact of the market agent behaviour by complaint classifications describing the specific regulatory standards and guidelines being contravened by the errant market agent (the entity that complaint adjudication ruled against).
3) The type of health-seeking episode relevant to the complaint (the appropriate health service being sort).
4) The benefit design preference of the complainant through adding benefit design classifications.
5) The impact of the determinants of healthcare utilisation, i.e., average, pensioner ratio and community rating.

3. EXPLORATORY ANALYSIS

3.1. Descriptive Analysis

3.1.1. Medical scheme moral hazard

Figure 5 describes observations made regarding the data describing adjudication outcomes for DSP-related complaints. It is important to note that CMS adjudicates complaints due to not being amicably resolved at the scheme level. In total, this is a small sample of all complaints or queries raised by medical scheme members.

Observations made from the panel analysis in **Figure 5** are that:

i) 39% of all adjudication complaints on DSPs were awarded to medical (see panel 5).
ii) 88.4% of such awards were due to the involuntary use of DSPs (see panel 2).
iii) 23.2% of the health-seeking episodes were related to hospital admissions, and 18.9% were related to surgical procedures (see panel 1).
iv) 41.1% of affected members were in comprehensive plans, followed by partial cover plans (32.6% of affected members), and then hospital plans (26.3% of affected members) (see panel 3)
v) The highest average age of affected members were those covered in large medical schemes.
vi) It is clear from these results that members demand the most comprehensive benefits, or are covered by the largest medical schemes, and their health-seeking episodes under dispute are catastrophic in nature.
vii) Co-payments occur for the relatively higher age groups demanding more healthcare. Co-payments can harm solidarity, as health-seeking episodes that end up including co-payments are within the larger risk pools.

3.1.2. Member error/no knowledge of PMBs

Figure 6 describes instances in which the adjudication board found beneficiaries errant in seeking healthcare services:

1) In 32% of adjudicated by the appeal board, members acted with no knowledge of PMBs (see panel 5)
2) In all these instances, members were found to be voluntarily using a non-DSP as a result (see panel 2)
3) Members obviously need information on what their PMB entitlements are, as they are obviously paying high co-payments for catastrophic cover (see panel 1)

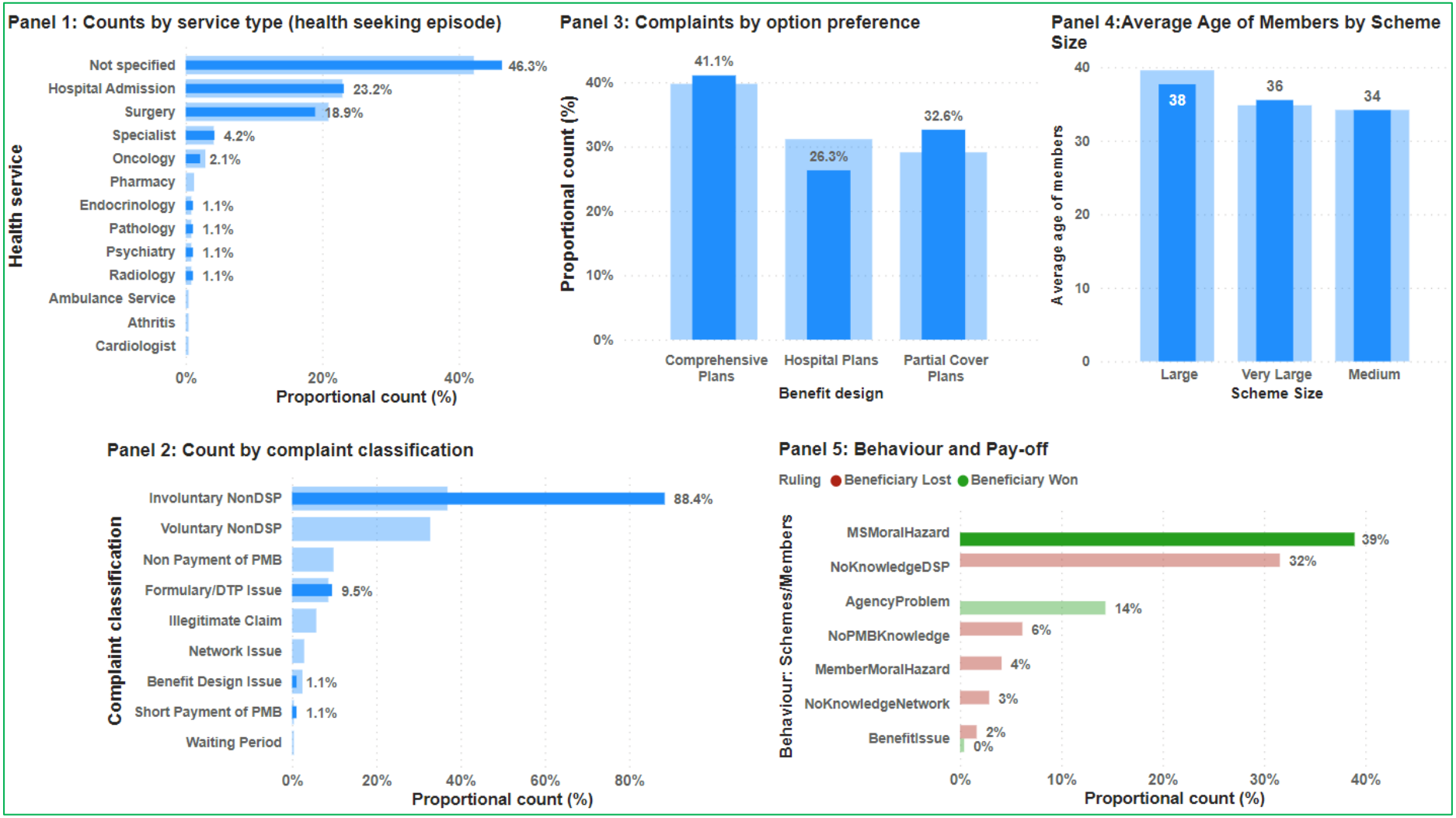


Figure 5: Analysis of medical scheme moral hazard.
Source: Author, Policy Research & Monitoring, CMS

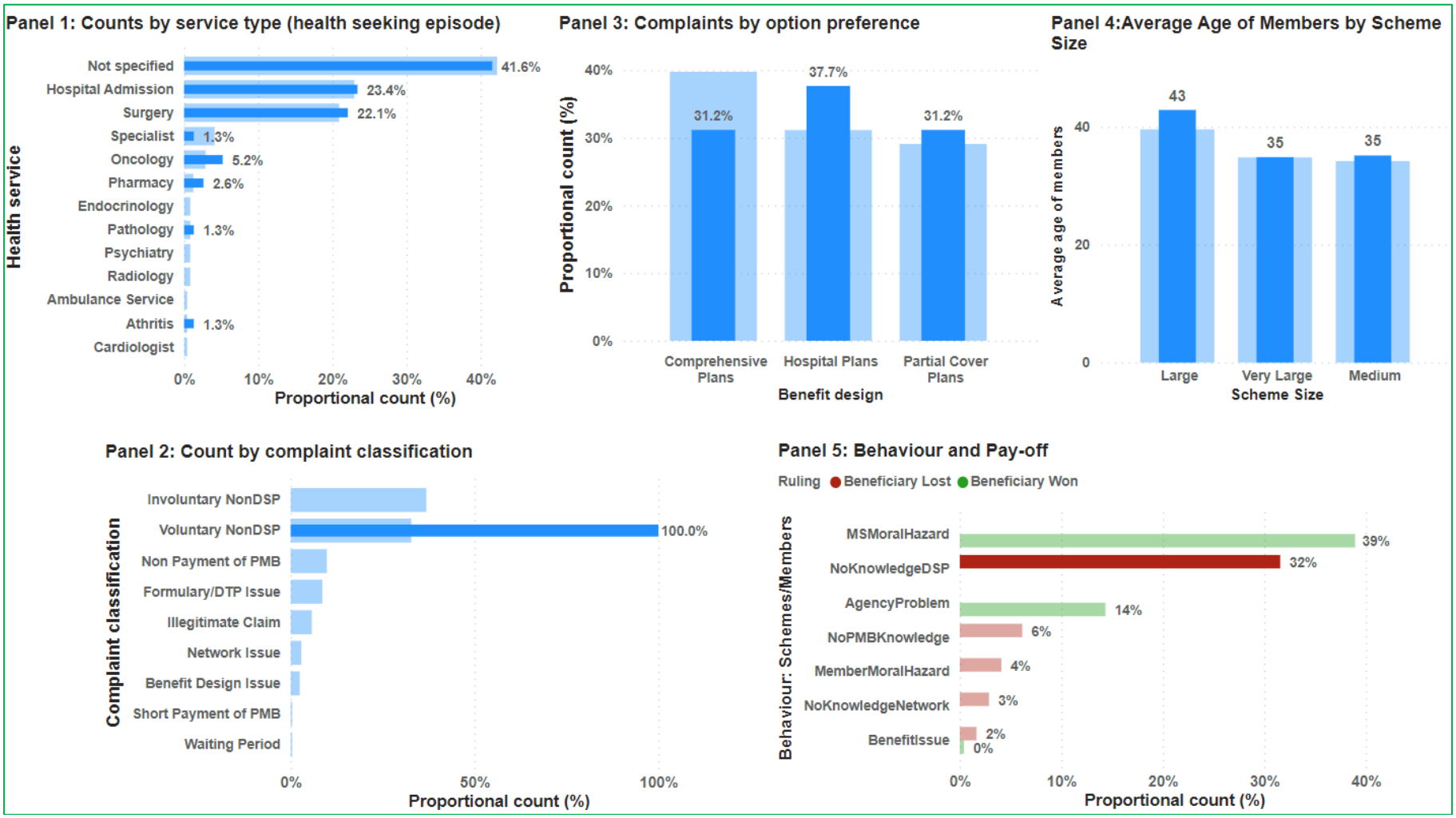


Figure 6: Analysis of member error.
Source: Author, Policy Research & Monitoring, CMS

3.2. Findings

There are clear patterns between the nature of market conduct, on the part of medical schemes and member behaviour. Due to the effect of information asymmetries, it opens up market participants to vulnerabilities associated with the credible commitment of counterparties. This points to the need to understand what implications information asymmetries have on inter-relationships and, thus, the market conduct of market participants.

4. PROPOSED FUTURE RESEARCH

Table 1 provides a theory of how relationships and behaviours (as process indicators), have an impact on outcome indicators (systemic reputational risk), and distil indicators (market failures that impeded the efficient functioning of competition). The hypothesis are listed under each column of the table (table 1). The source of the domain indicators, and the contribution of each indicator to the construct of validity of the hypotheses are provided.

Table 1: Hypotheses, Process & Outcome Indicators

PROCESS INDICATORS/RELATIONSHIP & BEHAVIOURAL DOMAINS				OUTCOME INDICATOR	DISTILL INDICATORS
1. Vertical Trust	2. Interpersonal Trust	3. Member Activation	4. Market Conduct	Reputational Risk	Market Failure
1. Hypothesis: The better vertical trust relationships are, the more informed and activated members are. 2. Trust relationship between: 2.1 The member and the medical scheme 2.2 The member and the Managed Care Organisations (MCOs) preferred provider designated service provider (DSP) network 3. The Multidimensional Trust Measurement Scale was used to identify tried and tested questions on trust relationships in the health insurance industry. 4. These Multidimensional Trust Scale was augmented by peer-reviewed papers on patient channelling through health insurance delivery networks in the Dutch health insurance industry.	1. Hypothesis: The better interpersonal trust relationships are, the more informed and activated members are. 2. Trust relationship between: 2.1 Medical scheme member, and 2.2 The member's healthcare provider. 3. Patient-reported experience measures (PREMS) are traditionally managed care Quality indicators. 4. PREMS are now also used as measurement scales for quantifying the impact of interpersonal relationships on trust in the health system, from an individual perspective. 5. The Multidimensional Trust Measurement Scale was used to identify relevant questions to measure trust	1. Hypothesis: It is hypothesised that the more information is made available to members, the greater the likelihood of optimising their use of medical service delivery networks. 2. Member activation measures the extent to which medical scheme members are empowered to use medical schemes' healthcare delivery network. 3. Access and convenience are also key drivers of patient activation. 4. Member activation includes knowledge of benefit option entitlements and PMBs	1. Hypothesis: It is hypothesised that a lack of trust in the health system, has a differential impact on the way different groups respond to trust vulnerabilities. 2. The different behaviours by groups have been identified as being: 2.1 Principal-agent problem 2.2 Scheme moral hazard 2.3 Member moral hazard 2.4 Member error/lack of knowledge	1. Hypothesis: he more members are not activated, the higher the likelihood that reputational risk will become systematic, as members perceive the industry as not providing quality outcomes	1. Hypothesis: The more the systematic reputational risk, the worse scheme solidarity outcomes, particularly for severe risk profiles

Source: Author, Policy Research & Monitoring, CMS

Tables 2, 3, and 4 show the latent variables and variables for the independent measurement models for the proposed full structural equation model in figure 7.

Table 2: Measurement model variables for trust relationships & member activation

Latent Variable	Survey Questions	Observable Variable
Vertical Trust	Medical schemes are good at what they do	VT1
	When needed, medical schemes will pay for you to see any specialist	VT2
	When questioned about what treatments are covered, medical schemes are honest with their answers	VT3
	Medical schemes will pay for everything they are supposed to, including treatment that is expensive	VT4
	If someone at your medical scheme made a serious mistake, you think they would try to hide it	VT5
	MCOs only care about keeping medical costs down and not what is needed for my health	VT6
	MCOs provide the highest quality in medical care	VT7
Interpersonal Trust	My healthcare provider is usually considerate of my needs and puts them first	IT1
	I have so much trust in my healthcare provider that I always try to follow his/her advice	IT2
	I trust my healthcare provider so much that whatever he/she tells me, it must be true	IT3
	Sometimes, I do not trust my healthcare provider's opinion, and therefore, I feel I need a second opinion	IT4
	I can trust my healthcare provider's judgments concerning my medical care	IT5
	My healthcare provider will do whatever it takes to give me the medical care that I need	IT6
	Because my healthcare provider is an expert, he can treat medical problems like mine	IT7
	My healthcare provider is usually considerate of my needs and puts them first	IT8
	I can trust my healthcare provider's decisions on which medical treatments are best for me	IT9
	My healthcare provider offers me the highest quality medical care	IT10
	All things considered, I completely trust my healthcare provider	IT11
Member Activation	I have a list of the medical scheme's preferred network of providers	MA1
	Are you aware of your PMB entitlements	MA2
	Are you registered on the medical scheme disease programme?	MA3
	Are the medical scheme preferred networks far from where you stay?	MA4
	How far is the preferred provider in drive time?	MA5
	In your opinion, what is a reasonable drive time	MA6
	Are there long waiting times at the service provider's office?	MA7
	What is a reasonable waiting time?	MA8
	Are you confident that you are aware of the entitlements in your benefit option?	MA9

Source: Author, Policy Research & Monitoring, CMS

Table 3: Measurement model variables for agency problem & medical scheme moral hazard

Latent Variable	Survey Questions	Observable Variable
Agency Problem	Were you accused by the scheme of having:	N/A
	Voluntarily used a NonDSP?	AP1
	If you answered yes to 4.2.1, how does this incidence make you feel?	AP2
	Incorrectly interpreted PMB Formulary/DTPs?	AP3
	If you answered yes to 4.2.3, how does this incident make you feel?	AP4
	Used the wrong network for Non-PMB claims?	AP5
	If you answered yes to 4.2.5, how does this incidence make you feel?	AP6
	Claimed while on a waiting period?	AP7
	If you answered yes to 4.2.7, how does this incidence make you feel?	AP8
Medical Scheme Moral Hazard	Did the medical scheme incorrectly charge a copayment/partially pay because you:	N/A
	Voluntarily used a NonDSP?	MS1
	If you answered yes to 4.3.1, how does this incidence make you feel?	MS2
	Incorrectly interpreted PMB Formulary/DTPs? (Yes/No)	MS3
	If you answered yes to 4.3.3, how does this incidence make you feel?	MS4
	Incorrectly interpreted your benefit option entitlements (Yes/No)	MS5
	If you answered yes to 4.3.5, how does this incidence make you feel?	MS6

Source: Author, Policy Research & Monitoring, CMS

Table 4: Measurement model variables for member moral hazard & member error

Latent Variable	Survey Questions	Observable Variable
Member Moral Hazard	Did the Appeal Board find you to have voluntarily, and knowingly, to have gone out of the medical scheme's DSP/preferred network?	MM1
	If you answered yes to 5.1, how does this incidence make you feel?	MM2
	Were you found to have knowingly gone out of the DSP network?	MM3
	If you answered yes to 5.3, how does this incidence make you feel?	MM4
	Did the Appeal Board find that you knowingly submitted an illegitimate claim as a result of going out of the DSP network	MM5
	If you answered yes to 5.5, how does this incidence make you feel?	MM6
	Did the appeal board find that you knowingly claimed based on an inaccurate interpretation of the PMB DTPs?	MM7
	If you answered yes to 5.6, how does this incidence make you feel?	MM8
Member Error/Knowledge	Did the Appeal Board find you to have voluntarily, and unknowingly to have gone out of the medical scheme's DSP/preferred network?	ME1
	If you answered yes to 6.1, how does this incidence make you feel?	ME2
	Were you found to have unknowingly gone out of the DSP network?	ME3
	If you answered yes to 6.3, how does this incidence make you feel?	ME4
	Did the Appeal Board find that you unknowingly submitted an illegitimate claim as a result of going out of the DSP network?	ME5
	If you answered yes to 6.5, how does this incidence make you feel?	ME6
	Did the appeal board find that you unknowingly claimed based on an inaccurate interpretation of the PMB DTPs?	ME7
	If you answered yes to 6.7, how does this incidence make you feel?	ME8
	Did the Appeal Board find that you have no knowledge of scheme DSPs and networks?	ME9
	If you answered yes to 6.9, how does this incidence make you feel?	ME10

Source: Author, Policy Research & Monitoring, CMS

Figure 7 provides a proposed full structural equation model (SEM). The structure of the model hypothesises:

1) Because of information asymmetries, and the ensuant influences/vulnerabilities on credible commitment (believability that the counterparty will as contracted).
2) Vertical trust between institutions such as medical schemes and managed provider and members occur. Adverse effects also occur in interpersonal relationships (trust relationships between members/patients and healthcare providers). The data collected from survey responses will provide self-reported information from medical scheme members who have filed complaints with the CMS. The observable variables are listed in tables 2 to 4 above.
3) The higher the relational trust issues, the more likely members are to be activated; information asymmetry is expected to be more prevalent in environments where market agents cannot trust each other.
4) If lack of trust is systemic and members are not activated for navigating the health delivery system, there will be reputational risk, as members cannot see quality in the medical schemes industry.
5) This situation will result in market failure.
6) It is also hypothesised that different groups will behave differentially in an environment where there is a lack of trust. Thus, we structure the model to explain the differential impacts by identifying the following:
    - The principle agent problem and moral hazard problem among institutions
    - The moral hazard of medical scheme members and member error created by a lack of information.
7) We thus propose a structural model that will predict covariances within the following structural design:
    - A second-order structural model design to estimate covariance in the hypothesised relationship between vertical and interpersonal trust relationships, and member activation
    - Analysis of differential market conduct across different groups.

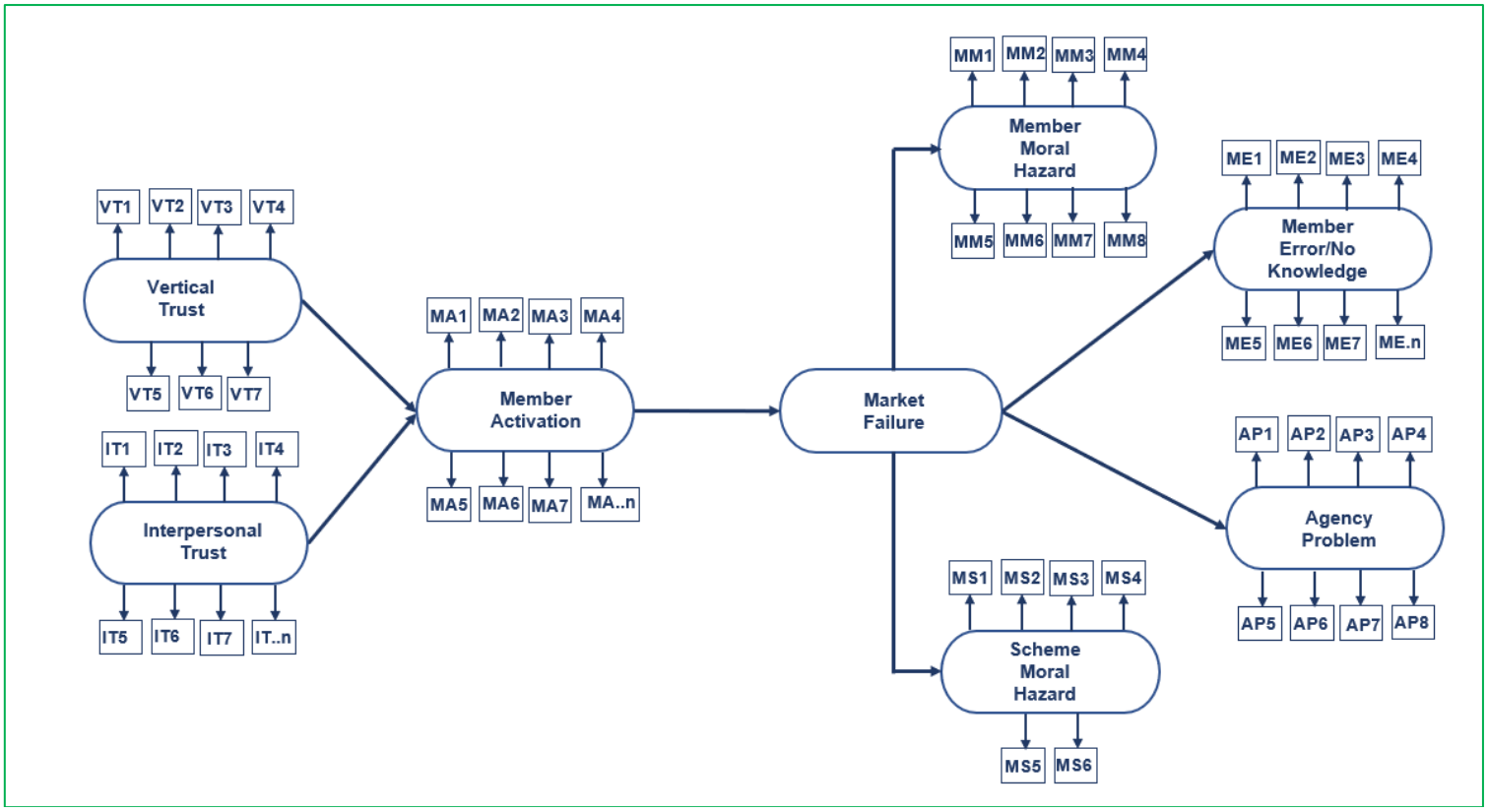


Figure 7: Proposed Full Structural Equation Model.
Source: Author, Policy Research & Monitoring, CMS

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