Toolkit for Risk-based pensions supervision

Case Study
Republic of North Macedonia

Risk-based Pensions Supervision provides a structured approach focusing on identifying potential risks faced by pension funds and assessing the financial and operational factors in place to mitigate those risks. This process then allows the supervisory authority to direct its resources towards the issues and institutions which pose the greatest threat.

The IOPS Toolkit for Risk-based Pensions Supervisors provides a 5-module framework for pensions supervisors looking to apply a system of risk-based supervision. A web-based format allows: a flexible approach to providing updates and additions; users to download each module separately as required; and a portal offering users more detailed resources, case studies and guidance. The website is accessible at www.iopsweb.org/rbstoolkit.

This document contains **The Republic of North Macedonia Case Study.**

REPUBLIC OF NORTH MACEDONIA

I. Background

A. Pension System

The pension system in The Republic of North Macedonia comprises of:

- Pillar I – unfunded, pay-as-you-go that provides a full pension for those outside the funded system and top-ups as necessary for those within;

- Pillar II – funded, established in 2006, that collects the compulsory contributions for employees employed after January 1, 2003. This pillar was open until December 31, 2005 for employees employed before January 1, 2003. As of January 1, 2019 the criteria for enrolment in second pillar was changed[1], namely all newly employed persons after January 1, 2019 who on the day of entering the mandatory pension and disability insurance are younger than 40 years of age are mandatory members in second pillar. Members of Pillar II have their contributions split between Pillars I and II. The contribution to Pillar II is 6% of the gross wage since August 2012; and

- Pillar III – voluntary funded, available since 2009 to anyone between the ages of 15 and 70 regardless of their employment status. The benefits can be employer-sponsored as well as come from contributions made by individuals.

As of September 30, 2019 the total net assets of the mandatory pension funds were around 1192 million euros and total net assets of the voluntary pension funds were around 30 million euros. The number of members reached 507,012 in the Mandatory Fully Funded Pension Insurance, and 24,796 in the Voluntary Fully Funded Pension Insurance. As of December 2018, total net assets of mandatory and voluntary pension funds were about 10% of GDP.

The main market participants in the funded part of the pension system are:

- **The State Pension and Disability Insurance Fund** (PDIF) that enrols all active members of the formal economy into Pillar I and Pillar II, and collects contributions from employers, arranging for the transfer of information for pillar II members to the Agency for Supervision of Fully Funded Pension Insurance (MAPAS). The PDIF also provides this information to pension companies as well as transfers pillar II contributions to pension funds. In addition, PDIF allocates on a random basis according to the formula prescribed by MAPAS, the members who did not actively choose a pillar II pension fund. Since January 2019, each pension company has the obligation to pay a monthly fee to the PDIF equal to 0.1% of each paid contribution in the previous month in the mandatory pension fund under its management.

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[1] *The amendments to the Law on Mandatory Fully Funded Pension Insurance (Official Gazette of Republic of Macedonia No.245/2018 from 28.12.2018.), stipulates several crucial changes regarding the enrollment in the mandatory fully funded pension insurance starting from 1.1.2019.*

- Three **pension companies** that administer pillar II and III pension funds on behalf of their members. The companies are wholly owned by financial institutions (founders). One pension company belongs to financial institutions with mixed capital from the Republic of North Macedonia and Slovenia. The two others belong to financial institutions from Slovenia. They are totally ring-fenced from their founders and must hold their own capital to meet any losses incurred. The pension companies are remunerated for their management activities solely through regulated fees charged to member accounts. Their main role is to acquire new members, using a large network of sales agents, maintain records of member accounts, manage the fund investments and pay pensions as scheduled withdrawals. The pension funds themselves have no legal personality being an aggregation of individual accounts owned by the members. While the two original pension company licenses were allocated by competitive tender (between three participants), since 2009 other companies have been allowed to apply for licences. At the end of March 2019, MAPAS granted a license for establishment of a new Joint Pension Company as well as an approval for management of a mandatory and voluntary pension fund.

- Each pension company uses a **pension custodian** service provided by commercial bank. Before 2009 the National Bank of the Republic of North Macedonia provided this service to both existing companies. Since 2009 pension companies can choose a private sector custodian. The move has reduced costs/fees and improved service. The custodian holds all the assets of the pension funds and settles all investment transactions, charging a fee for the service.
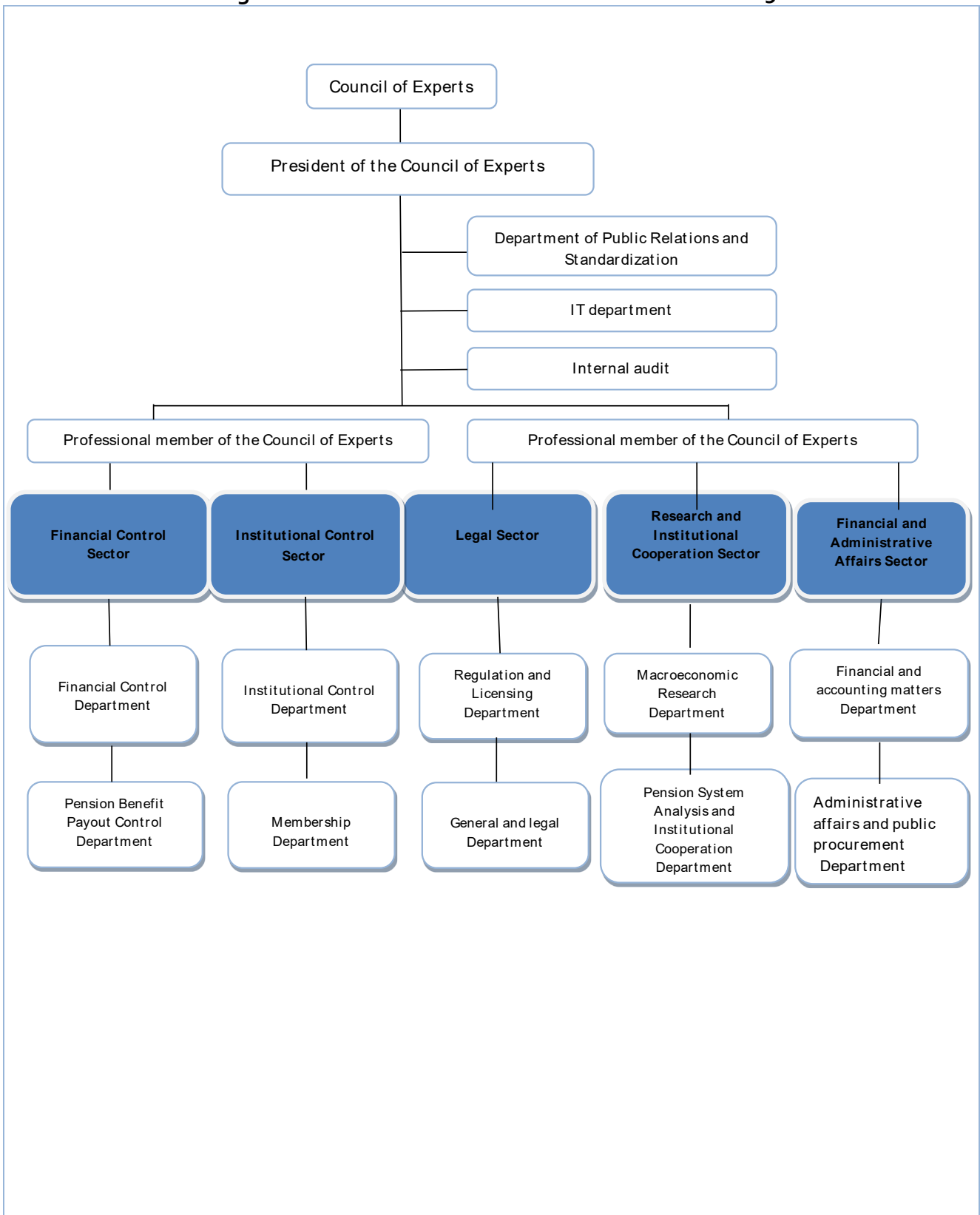
B. Agency for Supervision of Fully Funded Pension Insurance – MAPAS

The Agency for Supervision of Fully Funded Pension Insurance – MAPAS is a regulatory and supervisory body, established in July 2002 to protect the interests of the current and retired pension funds' members, and to enhance public awareness about the characteristics of this type of insurance and to promote the development of the fully funded pension insurance. The Agency is a legal entity and responds for its operations to the Parliament of the Republic of North Macedonia. The Agency is responsible for granting and withdrawing licenses for pension companies and approvals for managing pension funds. The Agency supervises the operations of the pension companies, the pension funds, as well as the custodians and any foreign asset managers.

In addition, the Agency maintains the primary membership register for pillar II, provides membership allocation weight to the PDIF which allocates to pension funds the new members who have not made their choice, provides contribution details to pension funds and pension custodians and controls daily valuations of pension fund accounting units. MAPAS conducts on-site and off-site control for pillar II. For pillar III, MAPAS gathers information about membership and contributions from pension funds and completes on-site and off-site control. It also controls payments to members when they leave the system and controls the transfer between pension funds. The full costs of MAPAS are covered by fees from the pension companies.

In February 2013, according to the law, the Parliament of the Republic of North Macedonia appointed a new authority within MAPAS – the Council of experts. The Council is a body comprising of five persons: a president, two internal (employed in the Agency) and two external members. Beside the Council of experts, MAPAS has 24 staff (as of September 2019). MAPAS is also the regulatory authority to the extent that it can issue rule-books and binding guidance. Figure 1 presents the organogram of MAPAS (as of September 2019).

Figure 1 – The structure of MAPAS as of December 2019

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Professional member of the Council of Experts	Professional member of the Council of Experts

Financial Control Sector	**Institutional Control Sector**	**Legal Sector**	**Research and Institutional Cooperation Sector**	**Financial and Administrative Affairs Sector**
Financial Control Department	Institutional Control Department	Regulation and Licensing Department	Macroeconomic Research Department	Financial and accounting matters Department
Pension Benefit Payout Control Department	Membership Department	General and legal Department	Pension System Analysis and Institutional Cooperation Department	Administrative affairs and public procurement Department

C. Risk-based supervisory approach

Since March 2011 the Agency for Supervision of Fully Funded Pension Insurance has worked on a project to introduce risk-based supervision, so as to strengthen its supervisory and administrative capacity. The key objectives of the project were:

- Implementing risk-based supervision practices;

- Strategic and business planning with business processes definition;

- Improving knowledge management and security.

The authority shifted its supervisory approach from a rule-based supervision model to a risk-based one with the primary objective of enabling a more intense focus on the highest risks in the pension system to be more effective at mitigating them and effectively use resources.

The following five principles have been applied:

- **A focus** of efforts and attention on those risks assessed to be the most intense;

- The development and use of **quantified measures** of the risks;

- **The selection** of activities of pension funds to examine, or take action on, according to an objective and transparent assessment of risk;

- The promotion of **risk management by the pension funds** themselves, so as to enable appropriate reliance to be placed on their systems and policies; and

- An emphasis on **enforcement action that is effective** in preventing or remedying risks materializing, rather than issuing sanctions for their own sake.

A high-level design process was built on the analysis of risks and gaps to identify the changes to the Agency's processes needed to allow for risk-based supervision. In summary, the high-level design entails:

- an approach of 'educate, enable and enforce' with the intention that many of the outcomes that MAPAS is seeking will be achieved without resorting to formal enforcement action;

- a concerted effort to drive up the standards of investment strategies and policies, and their implementation, under-pinned by enhanced legislation;

- an annual self-certification (assurance) relating to the key control processes of pension companies and custodians;

- an explicit (scored) assessment of each entity's compliance with good investment practice, key controls to mitigate other risks and governance;

- a greater emphasis on looking at the bigger picture, in terms of the achievement of pension fund investment strategies and market trends;

- checking of daily reports on valuations from the custodian and company;

- attention to the finances of the company, especially the costs which may inflate future fees, and on marketing materials; and

- giving MAPAS the credibility needed to convince supervised entities that what it recommends is right, addressing issues of Agency's independence and governance, as well as developing the necessary staff knowledge and skills, in a way that ensures that MAPAS can cope with the turnover of staff inherent in any financial services supervisor.

At the beginning of 2013, MAPAS adopted amendments regarding the adjustment of risk-based supervision, introducing the fiduciary duty of managers of companies and drew attention to the risk based principles for investing the assets of the pension funds. MAPAS, in the same period, prepared a manual for risk-based supervision and the first pilot on-site controls was conducted by the control team of MAPAS with consultants of the IPA (Instrument for Pre-accession Assistance) project. Since then MAPAS is applying risk based supervision.

II. Risk-based Supervision Process

Figure 2: The Risk-based Supervision Process

1. Risk Focus

Supervisory Objectives

MAPAS's mission is to protect the interests of the members and the retired members of the pension funds and enhance the development of the fully funded pension insurance for safer retirement days.

The goals of the agency are:

- *MAPAS will ensure that risks to members' assets and benefits and the reputation of the system are managed and, so far as appropriate, minimized;*

- *MAPAS will promote an accountable and transparent pension system that has member and public support;*

- *MAPAS will improve its capacity for strengthening its supervisory and regulatory role in the pension system.*

RBS therefore inclines MAPAS and the institutions it oversees to five specific features:

- A focus on the highest risks – for the reasons given above. For MAPAS this means identifying the highest risks and implementing strategies to address them;

- The promotion of good governance and risk management by pension companies – so that they can be effective front-line supervisors. For MAPAS this means encouraging pension companies to improve their governance and risk management through regulation, guidance and assistance during on-site inspections;

- The use of quantitative techniques to measure risk – to help improve understanding and to identify where risks are most intense. For MAPAS this means implementing a scoring system for pension company (and custodian) governance and seeking quantitative measures of the risks involved in pension fund investment strategies and their implementation;

- The selection of entities or subjects to examine based on risk – so that effort is prioritized where risks are greatest. For MAPAS this means planning supervision on the basis of structured assessments of the intensity of each risk relevant to the supervisory activity concerned; and

- An emphasis on remediation rather than sanctioning – so that risks are minimized and mitigating activities encouraged. For MAPAS this means ensuring that recommendations for improvements that are made are acted upon, through persuasion applied with a forcefulness that is proportionate to the risk.

Nature of the Pension System

After the introduction of RBS and identified 30 risks, MAPAS conducted continual review of risks on Risk committee. New risks were introduced and current risks were updated regarding inherent probability and impact. These could directly affect the benefits of members and the reputation and sustainability of the system. With continual control and mitigation Agency has reduced the probability of many of the risks.

The risks in the system have been categorized under the following headings:

- **A. Strategic investment risks:** covering the risks arising from pension funds investment strategies and policies. Should these risks materialize this will directly affect the size of members' benefits. There tend to be strong inter-relations between different types of investment risk. For instance, a sophisticated investment product may mitigate duration and inflation risks while generating credit, liquidity or valuation risks.

- **B. Operational risks:** covering the risks arising from the operational processes of a pension company relating to the assets of the pension fund, and their investment, along with the IT and office systems supporting the pension fund. Should these risks materialize, the pension company could be exposed to substantial costs or reputational damage that might affect its solvency. In extreme circumstances, there could be damage to the ability to pay the members the right benefits.

- **C. Company/fees related risks:** covering the risk to member retirement outcomes or the system's reputation from the fees or costs charged to member accounts being higher than necessary to manage the pension funds efficiently and effectively or from the insolvency of the pension company (which could in turn increase the costs charged to member accounts).

- **D. Risks to member data:** covering the risks of errors in the posting of contributions or member records, personal or financial, which could ultimately affect the ability of pension funds to make the right payments to the right people without undue delay or cost in cleaning records. Should this risk materialize, there could also be reputational damage, while the costs of remediation could put

pension company solvency at risk.

- **E. Payments out of pension fund risks:** covering the risks to member retirement outcomes or the integrity or reputation of the system associated with making payments out of member accounts, which will in due course cover the risks involved in the member choice of retirement payment product.

- **F. Understanding and awareness:** covering the risks to the sustainability of the system arising from pension fund members being misinformed or ill-informed about their accounts, eventual benefits or the system, as well as the risks to system sustainability from low or distorted public awareness of the system.

These risks were mapped on a probability/impact matrix, and used to identify those ones where MAPAS should allocate the most resources. In addition, MAPAS evaluates governance and risk management at each pension company, which contributes to the assessment of the strength of risk mitigation.

Risk Appetite

The response to the different levels of risk depends on the Agency's risk tolerance (or appetite), that is the degree to which inherent or residual risk can be accepted. In a mandatory system, such as the Macedonian second pillar, the tolerance is low because members have no choice about participation - more risk can be tolerated in the voluntary funds.

MAPAS obtains information from a variety of sources, most notably from data supplied by pensions companies and custodians and from the results of on-site supervision. It may also come from public sources, for instance financial markets or media reports, or potentially from complaints from members or alerts from auditors. There is also a feedback loop from the review of supervisory outcomes.

On the basis of the available information MAPAS analyses the risks in the system, to identify any new risks or risks that have become more serious, as well checking that its assumptions about the intensity of other risks remain valid. MAPAS then formulates or reviews its strategies for responding to those risks that it considers sufficiently serious to warrant particular attention. In practice, there will be a much smaller number of strategies than there are risks, as most strategies will address several risks. These strategies are reflected in the strategic and annual plans of MAPAS as well as they provide a starting point for planning supervisory actions. The types of strategy vary according to the risks involved, but they commonly include some on-site and off-site supervision activity. MAPAS communicates its expectations as to how pension companies and custodians should respond to identified risks, including the governance and internal control arrangements needed for that purpose.

Figure 3: The value chain for risk-based supervision process
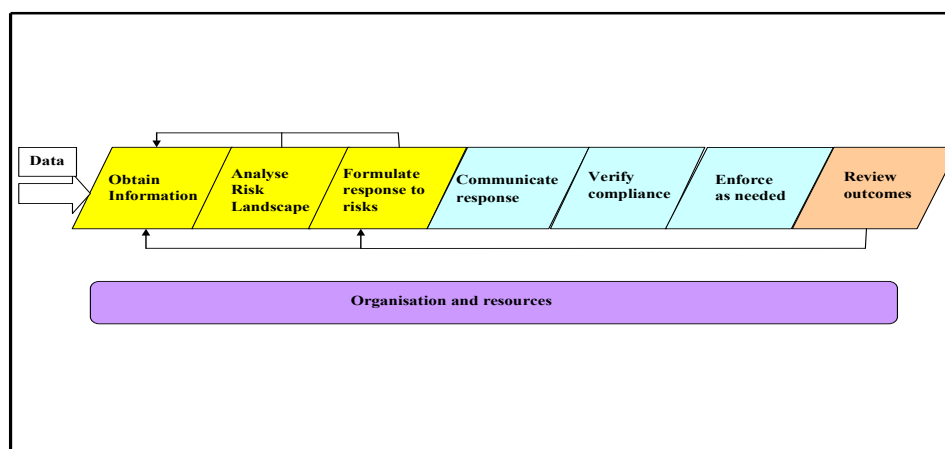
The process of supervision (on-site and off-site) is then designed so as to enable the verification of compliance by pension companies and custodians with its expectations, and mitigating risks, with MAPAS seeking to enable them to comply through discussions and recommendations. Where such activity is insufficient to achieve the required level of compliance, and taking account of the seriousness of the risks involved, MAPAS may wish to initiate enforcement action.

Everyone in MAPAS has a role to play within the value chain to help deliver risk-based supervision. Control sectors are most responsible for RBS since they undertake regular off-site and on-site controls. Other functions, such as handling data from external sources (IT), publishing information (public relations), undertaking research (Research Sector), preparing new legislation, licensing (Legal Sector) and the human resources and finance functions are essential for risk-based supervision to be effective.

2. Risk Factors

A. Individual

The risks set out by MAPAS (below) are the identified risks within the system. These risks are relevant to on-site or off-site supervision, providing a definition, indicating the risk assessment criteria, and monitoring requirements for each risk.

Each defined individual risk is reviewed for each pension company and for every pension fund individually. Certain defined risks are reviewed based on samples and their testing by the control team that mitigations for specific risks are in place. Control teams undertake interviews with board members and other key staff of the entity, using detailed questions that have been devised to be specific to the current circumstances of the entity, to enable the prepared questions to be answered. The control team then undertakes compliance tests to check whether key controls / processes are functioning as intended and they may undertake further tests where a serious failing is suspected, to accumulate evidence as to the scale and impact of the failings.

In addition, MAPAS assesses governance, strategies, internal control and risk management at each pension company, which contributes to the assessment of the strength of risk mitigation.

Figure 4: Examples of defined risks

Risk category	Risk item	Risk category	Risk item
Investment risk	strategy, interest rate, inflation, credit, currency,	Member data	data, contributions, account
Operational risk	investment tactics, trading discipline, settlement, valuation, loss of assets	Pay-out understanding and awareness	payments and transfer choice of pay-out product sales agents, members, public
Company risk	IT security, disaster recovery, personal data solvency and fees		

The reasoning for the assessment should be presented on an individual overall risk assessment form, along with a summary of MAPAS mitigating actions. The individual risk assessments are then consolidated on a risk assessment spreadsheet. This document assesses the impact and inherent risk for each risk type. The various risk assessments can then, by applying the standard risk matrix, give an overall picture of the inherent risk exposure of the industry.

B. Systemic

There are risks that affect the industry as a whole and might imply the need of closer supervision to both pension funds. These risks are identified by different sources of information: central bank macroeconomic reports, information provided by other financial supervisors, signals of other macroeconomic or sector analysts, trends identified from customer complaints. These systemic risks might affect the overall rating of the supervised entities.

3. Risk Indicators

All relevant risks have been identified and assessed (inherent and residual). The most resources will be applied to the highest risks. For each risk, risk assessment criteria have been established. Definitions of risks and assessments of their impact and inherent probability are included at the appropriate point. MAPAS has established a mechanism of quantitative and qualitative criteria involved in internal risk-based model.

A. Quantitative

MAPAS is investigating quantitative measures for the DC risk by comparing and analyzing the data submitted by the entities to MAPAS. These include: check of daily valuation, examination of portfolios (with test-checking of transactions and reconciliations), checking of investment limits (legal and internal), cross-checking of members' records, and examination of financial reports. Mechanised processing of this regularly reported data allows the authority to monitor the operation of institutions. In terms of quantitative criteria MAPAS, through legal criteria, has established limits for investing the pension funds assets. These limits include, for example the number of investment instruments allowed, limits per instrument, limits per issuer, by geographical region, and prohibited instruments for instruments.

A range of quantitative indicators used by MAPAS on off-site control include the following:

- periodic examination of portfolio composition, transactions and risks to analyze the compliance of portfolios with the legal and internal restrictions and assessment of the trend of the portfolio;

- examination of valuation and reconciliation processes to verify that daily valuations and reconciliations performed by pension companies and custodians are being correctly undertaken;

- reviewing of ad-hoc reports from the custodian.

Given that it is a defined contribution system, more risk indicators are qualitative and through testing and the experience of control team can bring an appropriate conclusion.

B. Qualitative

Qualitative criteria are particularly important in forming the final assessment of risk. The control team, through on-site control, paying attention to governance and risk management, can assess through interviews and checking documentation. The team can also perform key controls over high risks tested through interviews and direct testing to feed into the risk assessment criteria.

A range of qualitative indicators used by MAPAS through off-site control include the following:

- examination of investment strategy and policy to consider whether the strategy is meaningful and consistent with the fund's target return, and whether this target appears appropriately challenging. It also covers whether a new strategy or policy may be needed, which emerges from the quarterly portfolio analysis process;

- examination of pension fund marketing materials to confirm that pension company publications do not give a misleading view and accurately represent the underlying data known to MAPAS. These publications may include facts or figures regarding the portfolio of a pension fund, its performance or annual accounts of the pension fund;

- examination of internal audit reports and programs of pension company, pension funds and custodians to check that they provide sufficient coverage of risks;

- examination of the pension company's annual financial statements and business plan;

- follow up of complaints about sales agents to identify miss-conduct by sales agents and enable action to be taken to strengthen controls over the agents or penalize agents (for deterrent effect) as necessary;

- annual survey of members to obtain evidence on the operation of the marketing activity and transfer processes of each pension company (through feedback on the experience of new members), and on the effectiveness of pension company communications with existing members.

4. Risk Mitigants

The probability (and in some cases the impact) of a risk can be reduced by risk mitigants. The most common mitigations are the control procedures applied by pension companies and custodians, and indeed, the higher level governance processes they have in place to ensure that controls work. Other mitigants can include actions of MAPAS to check compliance and similar action by other supervisors, or even holding companies.

Risk mitigation falls into two broad categories:

- control procedures, internal controls, that are specific to a particular risk or group of risks, which can be assessed in the context of those risks and;

- the governance of the entities which should ensure that decisions take proper account of risks and that control procedures are effectively monitored and remedial actions taken promptly. MAPAS assesses the governance of pension companies and a custodian separately from risk-specific risk mitigants, and the assessment made can influence assessments across all risks. As the quality of governance can result in worse as well as better assessment of risk, it can be perceived as being an indirect risk as well as a mitigate.

The governance assessment contributes to assessing the risk mitigations for each control category. Governance within a pension company is defined as the extent to which management is sufficiently competent to give direction to the Pension Company and the extent to which management is sufficiently active and involved in the operational management and results and the effectiveness with which powers are delegated to decision making bodies.

Supervision processes have been designed to assess the quality of governance and risk mitigation at each entity against pre-determined criteria, looking in particular for board ownership of compliance and risk management.

In addition to governance and risk management, the mitigation of risks within the following categories is supervised:

- management quality and structure in terms of competence of management and characteristics of structure of top and middle management;

- clarity of corporate strategy/direction and the team considers the extent to which the Board has and communicates a strategy for the entity that gives the organization direction;

- quality of the control framework and the team of control considers the attitude of the Board to the management of the control framework needed to manage risk, and the overall effectiveness of that framework;

- risk management in terms of the quality of the risk management function and process in enabling the Board to understand and manage the risks to the pension company and pension fund;

- the propriety and transparency of decision-making and the team considers the decision making process within the entity, especially its propriety and transparency.

Concerning the assessment of governance to assess residual risk, the evidence derived from the monitoring requirements is analyzed and the extent of mitigation is placed in one of the following categories:

- **F.** Fully effective: the mitigants taken together provide a comprehensive response to the risk and there are processes to ensure that the mitigants are always in place.

- **M.** Mostly effective: the mitigants should in principle usually prevent the risk materializing, although there may be doubts about whether this will always be the case.

- **P.** Partially effective: some mitigants are in place, but taken together they do not reliably provide assurance that the risk will be prevented, for instance because of a serious gap in, or scope for circumventing, control processes.

- **N.** Not effective: there are no mitigants, or what mitigants that do exist are not effective.

5. Risk Weightings

The intensity of each risk in the system is plotted on a risk matrix illustrating the two dimensions of probability and impact using the standard matrix illustrated at Figure 5, below, with color coding indicating the extent to which MAPAS should respond to the risk. Each cell in the matrix is given a score to assist the risk assessment process. The colour coding assumes that only '1', green, is fully tolerable, yellow needs some attention, orange is serious and red is very serious.

The risk matrix used by the Agency has three levels of impact and four levels of probability. So far as possible, the impact and probability of risks should be measured consistently. The definitions for the different degrees of impact are:

- *High:* should this risk materialize, many pension fund members would receive significantly reduced retirement income, some would lose most or all of their income or the reputation of the system would be seriously compromised in the minds of the general public and politicians.

- *Medium:* should this risk materialize, many pension fund members would be placed at a greater risk of receiving reduced retirement benefits, some pension fund members would receive significantly reduced retirement income or the reputation of the system would be temporarily damaged in the minds of the general public and politicians.

- *Low:* should this risk materialize, some members would be placed at a greater risk of receiving reduced retirement benefits, a few members could receive significantly reduced retirement benefits or there could be adverse media or political comment about the pension system.

Probability assessments are graded:

- *High:* risk is already materializing or confidently expected to materialize soon unless mitigating action is taken (with say a one-year probability of over 60%).

- *Medium/high:* risk is more likely than not to materialize in the next few years (with say a one-year probability of 25-60%).

- *Medium/low:* risk is less likely than not to materialize in the next few years but there is nonetheless a substantial probability that it will do, or alternatively it is more likely than not over a longer time-frame (with say a one-year probability of over 10-25%).

- *Low:* risk is unlikely to materialize but there is some non-zero probability that it will do so (with say a one-year probability 10% or less).

6. Probability

For probability, MAPAS identifies two processes, inherent probability, which is the position before MAPAS has taken any risk mitigation, including inspection, and residual probability, the current position, which

reflects the impact of all risk mitigants.

It was recognised that it would be impossible to reduce higher impact risks to a tolerably low level of probability without sub-dividing the low probability category. It was also recognised that probability ranges should not be linear but logarithmic as the effect of mitigation on risk is multiplicative. These insights are illustrated in Figure 5.

In probability MAPAS have four levels: L(low); M/L(medium/low); M/H(medium/high); H(high). In some cases after the assessment of residual risk, which is the inherent risk reduced by a factor reflecting MAPAS's assessment of the effectiveness of risk mitigation, the result tells MAPAS whether more mitigation is needed, and with what priority, as well as the strength of any enforcement action and then the level of probability L(low) can be divided into L1, L2 and L3.

Figure 5: stylised illustration of the probability ranges used for the risk assessment of pension funds
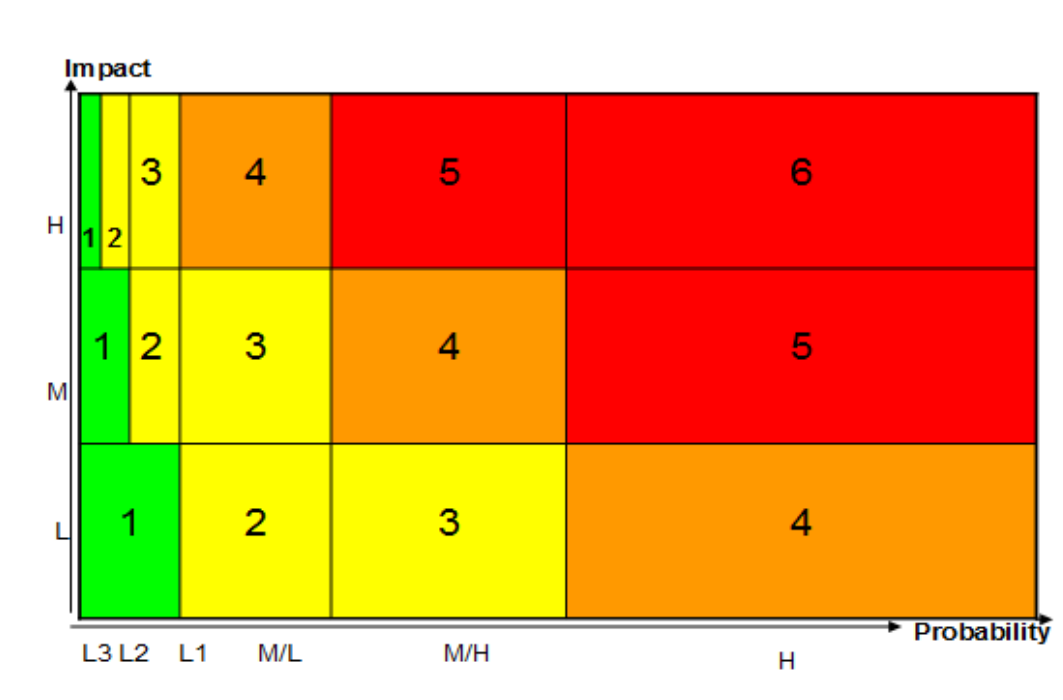
7. Impact

Impact represents the potential consequences should a risk materialise. This judgement would not be expected to change quickly or unpredictably. Risk-based supervision is helping MAPAS to identify and address current and potential risks to participant interests and the sustainability of the system before they have impact on the retirement income of the participants. The most serious risks to the objectives of MAPAS can be defined as those risks that have a potentially large impact on participants should they materialize and have a high likelihood of materializing. This is most likely to be the case where there is a serious principal/agent risk or an absence of transparency, or worse still both.

A base is to identify the risks in the system and assess their inherent impact and probability. Hence, risk has two dimensions: probability and impact, which need to be assessed separately, and a risk description that covers both dimensions in a manner precise enough to enable its level to be assessed. For impact

MAPAS recognize indicators low, medium and high.

8. Quality Assurance

MAPAS reviews the outcomes of supervision to assess how effective its strategies have been in mitigating risks and to determine whether other actions are needed.

To oversee the application of risk-based supervision and to ensure consistency in the judgments MAPAS staff make about levels of risk, all risk assessments are reviewed by the Risk Committee. This Committee comprises of internal members of the Council of experts, the sector managers and the managers of deparments in control sectors in MAPAS. The Committee is meeting at least four times a year, including meetings soon after each on-site inspection. The Committee's terms of reference are to:

- ensure that MAPAS staff have sufficient awareness and understanding of risk and risk-based supervision;

- input to and validate the periodic systemic risk assessments;

- consider or validate potential changes to individual entities and system risk assessments arising from the results of inspection activities;

- consider developments in the pensions sector or financial markets that may have implications for the assessment of risks;

- identify new risks and, where appropriate, redefine the existing risks;

- identify any change to legislation or regulation are needed and specify what changes to legislation should be proposed.

Other processes for quality assurance cover how the Agency will respond to serious problems at supervised entities, according to the level of risk, and other specified relevant factors. The response follows an adapted version of the IOPS enforcement pyramid, Figure 6.
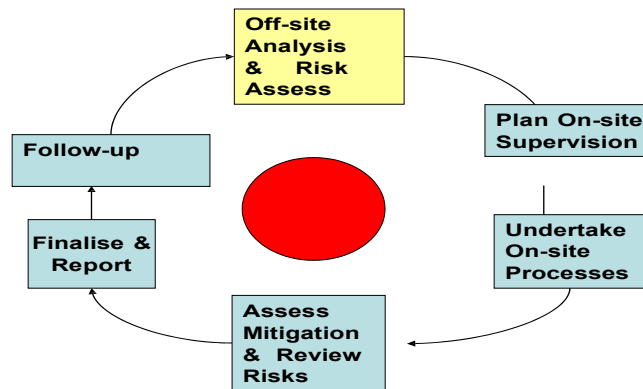
Figure 6: The Agency's enforcement pyramid
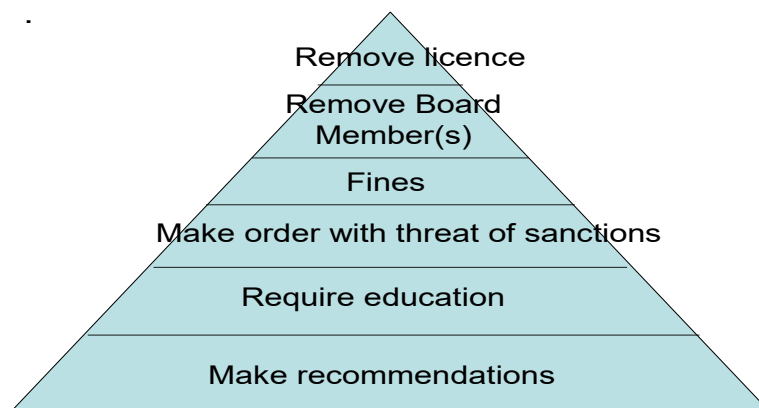
9. Supervisory Response

The supervision process can be seen as a cycle (Figure 7 below) with off-site supervision filling the gap between and informing on-site supervision.

Figure 7: The supervision cycle

Each stage of an on-site inspection is work-shopped and mapped out, and once agreed, written up in the Manual. The stages are: planning, execution, finalization and reporting and follow-up (including enforcement).