INTERNATIONAL ORGANISATION OF PENSION SUPERVISORS

Toolkit for Risk-based pensions supervision

Module 5

Supervisory Response

Introductory note

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 guidance for **Module 5: Supervisory Response**

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INTRODUCTION

Risk-based supervision (RBS) is a structured approach which focuses on the identification of potential risks faced by pension plans or funds[1] and the assessment of the financial and operational factors in place to minimise and mitigate those risks. This process then allows the supervisory authority[2] to direct its resources towards the issues and institutions which pose the greatest threat.

A. Purposes

A fundamental aspect of risk-based supervision is that a logical connection should be made between the outcome of any risk analysis undertaken (which is described in detail in Module 4 of the IOPS Toolkit) and the nature of the subsequent supervisory action taken in response. Knowledge of where the greatest risks remain is of little value unless the supervisor has the authority and capability to act upon this knowledge and, in fact, does so. Pension supervisory authorities may wish to devise a response matrix to help determine and organise their supervisory action. Such matrixes also help authorities plan their actions or supervisory timetable and use their resources in an efficient fashion.

Once the supervisory authority has determined what supervisory action it should take in response to the level of risk identified and that response has been suitably communicated, the authority needs to determine how to monitor that any actions required from supervised entities are followed, how to adapt its own supervisory response accordingly and how to increase the

[1] According to the OECD's taxonomy (OECD 2005), a pension fund is a legally separated pool of assets forming an independent legal entity that is bought with the contributions to a pension plan for the exclusive purpose of financing pension plan benefits. The plan/fund members have a legal or beneficial right or some other contractual claim against the assets of the pension fund. Pension funds take the form of either a special purpose entity with legal capacity (such as a trust, foundation, or corporate entity) or a legally separated fund without legal capacity managed by a dedicated provider (pension fund management company) or other financial institution on behalf of the plan/fund members.

A pension plan is a legally binding contract having an explicit retirement objective (or – in order to satisfy tax-related conditions or contract provisions – the benefits cannot be paid at all or without a significant penalty unless the beneficiary is older than a legally defined retirement age). This contract may be part of a broader employment contract, it may be set forth in the plan rules or documents, or it may be required by law. In addition to having an explicit retirement objective, pension plans may offer additional benefits, such as disability, sickness, and survivors' benefits.

In EU countries, this module may not apply to those pension funds and pension plans that fall outside the scope of the EU Directive 2003/41/EC of the European Parliament and of the Council of 3 June 2003 on the activities and supervision of institutions for occupational retirement provision, *e.g.* pensions funded via book reserves.

[2] Pension supervisory authorities referred to in the IOPS Toolkit are defined as any entity responsible in whole or in part for the supervision of pension funds, plans, schemes or arrangements in a country, or the subdivision of a country, whether invested with its own personality or not.

supervisory pressure should the level of risk be seen to escalate. In order to carefully 'pitch' its initial response to a problem in a proportional and fair fashion, and then follow up in an appropriate way, supervisory authorities may wish to develop a 'enforcement pyramid'.

The purpose of this module is to provide an overview of how pension supervisors might determine, organise and tailor their supervisory response according to detected or suspected risks. Suggestions and examples of how to build a supervisory response matrix will be provided, along with an overview of how to escalate their supervisory response.

B. Principles and Guidelines

This module builds on the following IOPS *Principles of Private Pension Supervision* (IOPS 2010):

Principle 5: Risk-based Supervision

Pension supervisory authorities should adopt a risk-based approach

Principle 6: Proportionality and Consistency

Pension supervisory authorities should ensure that investigatory and enforcement requirements are proportional to the risks being mitigated and that their actions are consistent

Principle 9: Transparency

Pension supervisory authorities should conduct their operations in a transparent manner

The IOPS *Guidelines for Supervisory Assessment* (IOPS 2008) also provide the follow guidance:

Guideline 6: In-depth Evaluations – Planning and Preparation

Pension supervisory authorities should carefully coordinate on-going monitoring and in-depth inspection procedures to ensure maximum efficiency and avoid duplication

Guideline 8: In-depth Evaluation – Assessment and Reporting

The results of in-depth evaluations should be fed into the supervisory authority's risk assessment mechanisms

Where appropriate, pension supervisory authorities should provide clear findings and recommendations for action following in-depth inspections, provide the opportunity for the pension fund to respond and follow up to ensure that they have been acted upon

In addition, this Module 5 of the IOPS Toolkit is designed to provide in-depth and practical support to the IOPS *Guidelines for Supervisory Intervention, Sanctions and Enforcement* (IOPS 2009a).

Guideline 1: Goals of intervention, enforcement and sanctions

The pension supervisory authorities should have clear and well defined strategic supervisory goals for the use of intervention, enforcement and sanction powers

Guideline 2: Intervention, enforcement and sanction powers

The pension supervisory authority should have adequate intervention, enforcement and sanction powers to fulfill its supervisory duties and responsibilities.

Guideline 3: Decision making process

When a potential or actual breach of legislation or standards is identified, a well defined decision making process should be in place and followed.

Guideline 4: Consistency of decisions

The actions of the pension supervisory authority should be consistent, following well documented procedures

Guideline 5: Proportionality and escalation of response

The investigatory and enforcement response of the pension supervisory authority should be proportional to the risks being examined. Subject to the availability of regulatory and administrative powers and measures, the response should be escalated appropriately to achieve the desired regulatory objectives.

Guideline 9: Information disclosure

A transparent information disclosure mechanism and timely publication of intervention and sanction decisions should be in place subject to relevant confidentiality requirements.

SECTION 1: SUPERVISORY RESPONSE MATRIX

A fundamental aspect of risk-based supervision is that a logical connection should be made between the outcome of the risk analysis undertaken, on the one hand, and the scope, nature and depth of the supervisory response, on the other. A key step in designing a risk-based supervision (RBS) framework is establishing a methodology for allocating scarce supervisory resources to where the risks to the supervisor's objectives are assessed to be greatest.

Supervisory authorities should have an organised and transparent approach for deciding how the risk-scores (described in Module 4 of the IOPS Toolkit), and/or the results of other types of risk analysis – including systemic analysis- translate into supervisory action.

A. Individual Entity Risk

One way to direct the response of the supervisory authority to specific entities which have been identified as posing a greater threat is via a supervisory response matrix. This may be a simple "intervention" index generated by the product of probability and impact, or some variant of this. More complex supervisory models allow for grouping (*e.g.* all funds/institutions with a score on the intervention index that falls within a certain range may be classified as requiring the same level of supervisory attention, such as "low attention", or "intense oversight", or "wind up"). Grouping can also be on a pre-screening basis shaped by the authority's risk focus. For example, the Australian Prudential Regulation Authority (APRA), (which supervises several thousand funds), puts all small funds into a separate class to which it applies a lighter version of RBS. Further gradations are also common among supervisors applying RBS.

Example: Australia

In Australia , the Australian Prudential Regulation Authority (APRA) does not assign a SOARS stance to its small superannuation funds (which have fewer than 5 members and are known as SAFs or Small APRA Funds). Instead a SOARS stance is applied to the trustee, which may be responsible for a large number of such funds.

A sampling approach is used for reviewing the SAFs. The selection of the SAFs for review would be based on a number of factors and is primarily up to the responsible supervision team in APRA to determine which ones should be reviewed – essentially based on the range of qualitative and quantitative information received in relation to SAFs, and identifying outliers which may need closer scrutiny. The sampling may also take into account whether the SAF has been reviewed in the past and whether there are issues that need to be followed up.

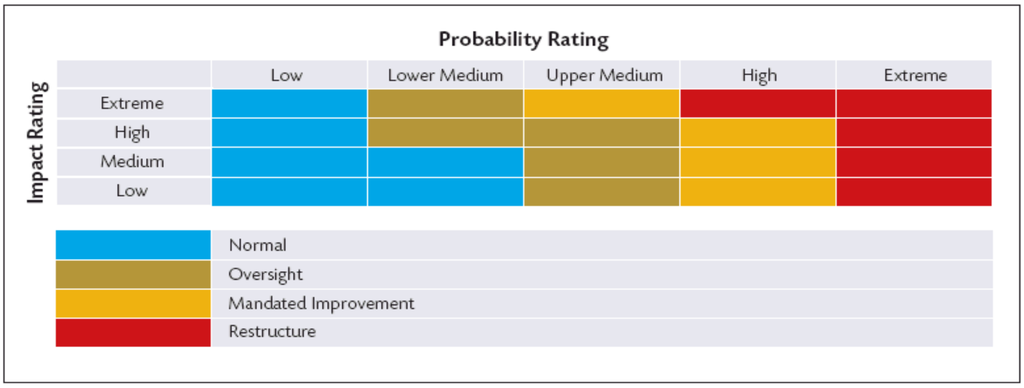
Once the SAF has been reviewed (which is usually undertaken at the same time as the review of the RSE Licensee), the PAIRS assessment and SOARS stance for the RSE Licensee would be updated.

Each entity (or operational area) maybe assigned to one of the supervisory response categories. Where the authority has oversight responsibilities for a large number of small entities, a sampling approach may be used.

Inputs into Matrix

Where supervisory authorities derive a risk-score (as described in Module 4 of the IOPS Toolkit), the categories into which these scores are divided (*i.e.* high, medium, low) feed directly into the supervisory response matrix.

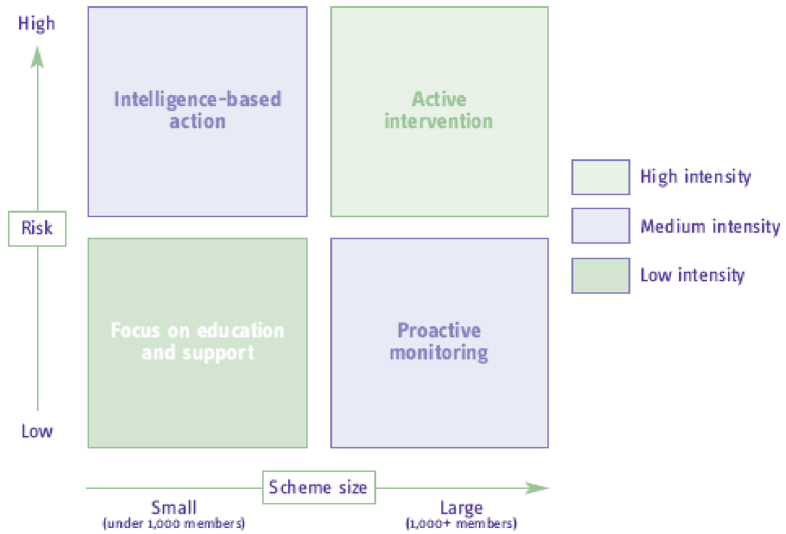
Figure 1: The Australian Prudential Regulation Authority PAIRS/SOARS Matrix



Source: Australian Prudential Regulation Authority (2008)

Where an authority does not derive a risk-score for each supervised entity – for example, as is the case with The Pensions Regulator (TPR) in the United Kingdom, which oversees over 55,000 pension plans - the supervisory response matrix is made up of a combination of a probability and impact factors (*i.e.* using similar inputs which other authorities use to derive the risk scores described in Module 4 of the IOPS Toolkit), as well as standard triggers (*e.g.* 'business rules' in the United Kingdom) and judgement based inputs (*e.g.* in the United Kingdom case, the 'triage' team reacting to outside notifications – see country case study for further details).

Figure 2: The Pensions Regulator's "risk and intervention" model



Source: The Pensions Regulator, United Kingdom

Results of stress tests may also be fed into the supervisory response matrix - for example the Danish Financial Supervisory Authority (DFSA) combines internal scores with the results of its 'traffic light' solvency stress test to guide the intensity and scope of supervisory activity. Some attempt might be made to make stress testing more forward looking by projecting solvency results, as is done by the Office of the Superintendent of Financial Institutions (OSFI) in Canada.

Structure of Matrix

The supervisory response matrix itself is usually divided into a series of risk categories, indicating a range of supervisory tools that would typically be employed to those within each category.

The lowest risk category would require a less intensive supervisory touch (*e.g.* regular oversight), whilst the highest would justify or require more intensive supervisory tools to be used (such as in-depth analysis, on-site reviews,[3] detailed directions etc.). For example, the Financial Services Board (FSB) in South Africa conducts compliance visits on all high risk funds and administrators (*i.e.* with a risk rating score over 80 and 81 respectively) and on all high impact funds (*i.e.* with an asset value exceeding $13.4 million) and high impact administrators (with the total value of assets under administration exceeding $1,330 billion).

[3] On site reviews referred to in the IOPS Toolkit are reviews which take place physically at the premises of the supervised entity.

One response may be financial (where authorities are funded by supervised entities) - applying a lower levy to institutions with lower risk rating (as the FSB is considering) – though implications arising from disclosure issues would have to be considered (see following section).

The number of rows and columns in the response matrix will depend on the preferences of the supervisory authority and the environment in the country. For example, the FSB in South Africa operates 5 (based on 5 rating scores), whilst the Australian Prudential Regulation Authority (APRA) in Australia has 4 stances (based on 4 impact and 5 probability levels) – APRA moved to an even number to force supervisors to rank firms as above or below average as it was found that where a rating of 1-5 was offered supervisors tended to rank too many firms as a middle or average '3'.

Thresholds should be set which highlight suitably risky cases, but equally do not place too much burden on what is often a limited number of supervisory staff. The objective should be for most plans or funds to fall into the lower risk categories (so that few need any intervention). If plans or funds move into higher risk category the supervisory authority should know about it rapidly and should have the goal of returning the plan or fund to the lower categories as soon as possible.

Table 1: Inputs Driving Supervisory Responses

Supervisory Authority	*Entity Risk-score*	*Solvency Measures*	*Systemic Analysis*	*Probability*	*Impact*
APRA, Australia	✓ (includes systemic analysis)	(where appropriate)		✓	✓
OSFI, Canada	✓	✓			
SP, Chile	✓		✓		
BaFin, Germany	✓ (includes solvency and stress tests)				✓
HFSA, Hungary	✓ (includes systemic analysis)				✓
CONSAR, Mexico		✓ (VaR)			
DNB, Netherlands	✓	✓	✓	✓ (includes impact)	
FSB, South Africa				✓ (includes entity risk score)	✓
TPR, UK			✓	✓ (including solvency measures)	✓

Figure 3: Supervisory Response Matrix – Hungarian Financial Supervisory Authority (HFSA)

STRONG IMPACT	– Close supervision – Supervision program – Comprehensive institution assessment – Complex SREP	– Close supervision – Supervision program – Comprehensive institution assessment - Complex SREP	– Close supervision – Supervision program – Comprehensive institution assessment – Complex SREP – Intense monitoring, Information to management	– Close supervision – Supervision program – Comprehensive institution assessment – Complex SREP – Intense monitoring, Information to management	– Immediate action – Intense monitoring – Information to management
ABOVE MEDIUM IMPACT	– Standard supervision – Supervision program – Simplified institution assessment – Standard SREP	– Standard supervision – Supervision program – Simplified institution assessment – Standard SREP	– Close supervision – Supervision program – Simplified institution assessment – Complex SREP	– Close supervision – Supervision program – Comprehensive institution assessment – Complex SREP – Intense monitoring, Information to management	– Immediate action – Intense monitoring – Information to management

BELOW MEDIUM IMPACT	– Monitoring – Action upon breaching of laws, CEO letter – Simple SREP	– Monitoring – Action upon breaching of laws, CEO letter – Simple SREP	– Monitoring – Action upon breaching of laws, CEO letter - Simple SREP	– Standard supervision – Action upon breaching of laws, CEO letter – Standard SREP – Follow-up	– Immediate action – Monitoring – Information to management
WEAK IMPACT	– Monitoring – Action upon breaching of laws, CEO letter – Simple SREP	– Monitoring – Action upon breaching of laws, CEO letter – Simple SREP	– Monitoring – Action upon breaching of laws, CEO letter – Simple SREP	– Monitoring – Action upon breaching of laws, CEO letter – Simple SREP – Follow-up	– Immediate action – Basic monitoring
	LOW RISK	**MODERATE RISK**	**SIGNIFICANT RISK**	**HIGH RISK**	**OCCURRED RISK**

Table 2: Australian Prudential Regulation Authority SOARS Supervisory Responses

Normal	Prudential reviews Analysis of data received on a monthly, quarterly and/or annual basis Other supervisory activities as required or at discretion of the responsible supervisory team
Oversight	More frequent and/or more targeted prudential reviews by the supervision and risk/technical specialist teams More frequent and more detailed collection and analysis of data and reports Communication with auditors and actuaries Special investigations by external experts (*e.g.* auditors, actuaries etc.) Requests for revised business plan Assessing the rectification plans put in place by the entity Expressing concerns to the responsible persons of the entity Expressing views/ concerns to relevant overseas regulators where applicable
Mandated Improvement	Requiring rectification plans and monitoring milestones Requiring revised business plans Increasing capital requirements Issuing directions Enforcing acceptable undertakings, often undertakings to exit the business by finding a new and sounder owner Engaging external resources (special investigator, actuary etc.) to report to APRA Consideration of fit and propriety issues Placing prohibitions on acquisitions
Restructure	Withdraw licenses Replace persons and /or service providers Merge entities Run-off existing businesses Restrict business activity Quarantine assets Appoint an inspector, judicial manager or provisional liquidator Issue directions or sanctions Place the company into receivership/ liquidation

Source: Australian Prudential Regulation Authority (2008)

Uses of Matrix

As well as helping to determine and organise their supervisory action and response to detected risks, such matrixes also allow authorities to plan their supervisory timetable and use their resources in an efficient fashion. The supervisory response matrix allows the choice of appropriate supervisory responses to take place in an atmosphere of careful consideration and discussion – as opposed to formulating plans only when an emergency situation arises or may arise.

In addition to the intensity of the supervisory response, these matrixes may be used to determine the timing of supervisory action -*i.e.* how urgently the supervisory authority needs to respond. For example the lowest risk category might require only regular supervisory oversight (*e.g.* regular data submissions - quarterly or annually - and a regularly scheduled, more in-depth review every few years). For higher risk categories a more urgent - if not immediate - supervisory response would be required (*e.g.* stepping up reviews from tri-annual to annually). Institutions whose risk rating is deteriorating over time may also require more intensive or urgent supervision (this being one factor considered by De Nederlandsche Bank (DNB), for example).

The matrix can be used to establish a supervisory response to a supervised entity as whole or to prioritise between business lines, operations or functions within a larger conglomerate or supervised institution.

Country examples

In **Mexico**, where the supervisory authority – Comision Nacional del Sistema de Ahorro para el Retiro (CONSAR) - has a limited number of entities to oversee, inspections are conducted on the basis of an integrated risk map, which allows the supervisory authority to identify the different events that, due to their relative importance, likelihood and economic impact, can affect the pension funds being supervised.

Likewise, DNB in the **Netherlands** used their FIRM risk scoring model to prioritise across smaller institutions and within larger ones.

The DFSA in Denmark report that the use of the traffic light system has not led to an increase in the number or frequency of on-site inspections, but rather has focused their attention, with greater emphasis now placed on verifying that adequate internal risk control systems and standard operating procedures are in place rather than verifying compliance with specific DFSA rules.

Quality Control

Quality control mechanisms are needed to ensure that the supervisory response dedicated to each entity is appropriate. Consistency of risk scores applied to individual entities was discussed in Module 4 of the IOPS Toolkit. Here the same issues apply in relation to ensuring that supervisory responses are consistent. Consistency of actions by the supervisory authority should be ensured between pension funds and over time.

As discussed in Module 4 of the IOPS Toolkit, a balance needs to be struck between individual supervisor's judgement and central control, weighing responsiveness of the assessment system with accuracy. Mechanisms for ensuring that entities are allocated to supervisory categories in a consistent fashion include peer reviews, sign off protocols, benchmarking sessions, internal comparisons and validations, as well as training for supervisors. However, ensuring that internal control mechanisms do not become too cumbersome is key.

The matrix and supervisory response categories should be reviewed regularly to make sure that they are working and the correct supervisory approach (*e.g.* targeting, timing, supervisory tool, scope) is being applied to problems detected. Back-testing of matrixes could also provide a useful check.

Practical challenges are, however, associated with devising a supervisory response.[4] Whereas supervisors are said to allocate resources successfully according to the main risk categories, a harder task is to ensure that all entities within the high risk categories receive the appropriate attention (especially when supervisory resources are particularly scarce) and how to prioritise between institutions which have all been deemed 'high risk'.

A counter problem is establishing what the appropriate oversight for the low risk category should be, balancing the appropriate allocation of resources with making sure the supervisory authority does not overlook potential problems– in what can be described as dealing with the problem of the 'bulge' (as the bulk of the supervised entities will tend to fall in the low risk category). Three main ways in which supervisors deal with this issue can be identified:[5]

- information campaigns (informing small entities of their regulatory requirements);
- random inspections (detecting non-compliance, acting as a deterrent and protecting the supervisors credibility); and/or
- themed inspections, including sampling.

A related risk is that of missing what might be a low risk that is not significant at the individual fund level but may well have a significant impact if it occurs across a large proportion of funds. Hence the importance of systemic risk analysis and identification (as discussed in Module 3 of the IOPS Toolkit).

Aligning the timing of risk identification and supervisory planning (which can be done up to a year in advance) and the redirection of assets towards politically sensitive areas (irrespective of their risk categorisation) are also highlighted as practical challenges when directing supervisory resources. This may well be the case in situations (such as the financial crisis of 2008-2009) where financial oversight and failure are receiving particularly intense public and political scrutiny.

A typical approach towards high, medium and low risk entities is outlined below.

[4] See (Black 2008a) p.24

[5] See (Black 2008a) p.24

High risk cases

In some cases, the pension supervisory authority will be alerted to risk areas by the report of the supervisor covering a specific institution, leading to the authority undertaking an on-site review.[6] In fact, plans or funds that are in imminent danger should be inspected as a matter of urgency without necessarily waiting for the report. The pension supervisory authority might be alerted to such high risks through automatic triggers, member or beneficiary complaints, input from actuaries or other third party professionals who are concerned about the status of the plan or fund or even by external warnings such as newspaper reports.

In this case an on-site review should be carried out, concentrating exclusively on the particular area in contention (for example consistently delinquent contributions, or a high profile merger, acquisition or spin-off). The supervisor should be flexible and also persistent in questioning a particular matter until satisfied he has understood the issue.

The visit might only last for a day or two (although repeat visits might be required to check on implementation of previous recommendations) and should be followed up very quickly with a written letter with specific recommendations.

Since each case will be somewhat different it is difficult to provide hard and fast rules on the conduct of such an inspection.

High to medium risk cases

Where a supervisor has identified cases where there are considerable weaknesses, but there does not seem to be imminent danger, an on-site review should be used to probe issues more deeply than can be done on an off-site basis and ensure that a recovery plan is in place. The supervisor should follow up to make sure the plan is being put into effect and is having the desired effect. For example, plans or funds identified as having management and control weaknesses would be a candidate for this type of inspection. Simply having a low funded and/or solvency ratio is not sufficient reason to require an on-site review, unless the supervisor is convinced that the unsatisfactory ratios are symptomatic of an underlying management weakness.

The following process is suggested in order to ensure the on-site review is performed in the most effective manner possible. In the planning process, where the on and off-site processes are handled by different supervisors, the on-site supervisor will study the report of the supervisor who conducted the initial analysis and discuss it with them to ensure that all problems areas are well understood. In some authorities off-site analysis and on-site inspections are handled by the same members of staff who have overall responsibility for supervision of that entity.

The supervisors will then draw up an inspection plan.

[6] On-site reviews referred to in the IOPS Toolkit are reviews which take place physically at the premises of the supervised entity being investigated.

Suggestions for Conducting On-site Inspections

On-site inspection plans may consist of:

- an initial meeting with governing board members of the plan or fund administration;
- a meeting with independent professionals;
- an examination of specific areas of weakness;
- an overview of other areas that might not have been identified by the off-site analyst;
- preparation of draft report;
- a wrap-up meeting with responsible parties;
- finalisation of report, including input from plan or fund administrators and others;
- a request for a recovery plan, or alternatively direction of the pension supervisory authority for a plan or fund to reduce risk levels.

The supervisory authority will then contact the plan or fund administrators, to arrange for a visit, letting them know who the supervisors would like to meet. There should be no more than one or two week's notice. This would be followed up by a letter listing the documents that the inspectors would like to have access to. This list would be related to the particular risk areas, although other documents would probably also be requested for completeness. If there is suspicion that documents might be altered or destroyed, then even less notice (or even an unannounced visit) might be contemplated, but this would only be used if there were suspicions of criminal activities (in which case police presence might also be required – hopefully this would be an extremely rare occurrence, but it cannot be ruled out). Supervisors should never visit premises alone; there should always be at least one witness, in case charges have to be laid.

Where the on and off-site inspections are carried out by different individuals or teams, for this type of inspection, the on-site supervisors will probably not need the presence of the off-site supervisor, but should be able to contact him or her at short notice in case clarification is needed.

Once on site, the supervisors should have a preparatory information exchange with as many of the parties as possible, outlining the issues to be discussed and inviting the participants to present any mitigating arguments. The supervisors should outline the plan of the inspection, including examination of documents and separate meetings with various parties. Where possible, the initial examination of documents and meetings with management and staff of the pension fund should take place off-site in order to allow the inspection to proceed as efficiently as possible and to take as little time.

The supervisors will then follow the plan, taking copies of documents if they can (some documents, such as Board minutes, may be confidential and the company might not want them copied, in which case the supervisor will just take notes at this stage – if a *sub poena* is required this can be obtained at a later stage). The supervisor does not have to confine himself to pension plan or fund documents – he should also ask to see company Board minutes that relate to the pension plan or fund. Naturally the focus should be on documents which could not have been examined off-site before the inspection occurred. Supervisors may wish to ask for additional documentation as part of the visit as a means of checking the pension fund's filing and record keeping – noting how easy it is and how long it takes for staff to produce the requested material.

The supervisor will also interview individuals (such as the actuary or the auditor) if need be to deepen his knowledge of the situation. He might also interview junior personnel to investigate such things as controls and reporting.

Inspections should be at a high level while focussing at the high level risk areas. In other words, the supervisor looks at policies, controls, risk management etc. He interviews key players to understand their roles. He examines policy documents (governance documents, delegation, outsourcing agreements, investment policies, plan or fund amendment discussions etc) and ascertains the extent to which these are actually followed and monitored – checking to see that the systems described on paper or before the visit are actually being put into practice. He might also look at IT systems, but this is a more specialised activity and, if there are real concerns with computer systems, an independent expert might have to be called in. This is also the case with some other areas, such as the actuarial report. If there are grave concerns about this, an independent actuary might need to join the team. Similarly the supervisor will look at the reports of independent professionals, such as actuaries, investment managers and auditors and may interview them, to ensure that the reports are properly prepared and procedures followed.

The supervisor should avoid getting bogged down in detail, firstly because it is very time consuming and secondly it is not useful – they should be looking for systems failures not minor errors in the accounting. That is the role of the internal and external auditor. The supervisor should not be usurping their role, but supplementing it. The supervisor's interest is in systemic failures that threaten the interests of the plan or fund members, and these should be big picture issues. If good systems are in place errors should be minimised and if they are not, then even the absence of major errors is not a satisfactory outcome. Looking for minor errors is therefore wasting everybody's time.

Once the inspector has gathered all the pertinent information a draft report (probably in point form) should be prepared.

Suggestions for Inspection Reports

Inspection reports would normally be expected to:

- be factual;
- be backed up by evidence;
- avoid value judgments;
- distinguish clearly between breaches of the legislation on the one hand and lapses of best practice on the other;
- be polite, but clearly point out problems;
- invite the responsible parties to suggest remedies, or offer solutions if requested;
- propose solutions, if none are forthcoming from the responsible parties.

This summary report should form the basis for the wrap up meeting. The wrap up meeting will give the responsible parties the opportunity to either refute some of the allegations, or alternatively to offer solutions. The supervisor should be prepared to alter some of his conclusions if counter facts are proposed, but should maintain his view where he is convinced of his ground.

This will be the end of the on-site visit. Such visits will typically not last more than 3 to 5 days.

Where the on and off-site inspections are carried out by different individuals or teams, the on-site supervisors will then present a formal report, in cooperation with the off-site supervisor. Ideally, this report should be prepared as soon as possible after returning from the inspection. It should cover issues raised in the summary report and the wrap up meeting and not introduce new topics. If appropriate, the supervisor might present a formal report detailing failures that are breaches of the legislation and a "management letter" that will be less formal and provide guidance on how to improve standards. The pension plan or fund governing board members and others who are named in the report will have an opportunity to review it (or the formal report and management letter, if these are prepared separately). Again, the supervisor should be prepared to change the report where convincing arguments are given. The final report that goes to the governing board of the pension supervisory authority could include the comments from the pension plan or fund personnel and others (*e.g.* actuary or auditor).

The Trustees or governing board members will be asked for a recovery plan, or failing that the supervisory authority would impose a recovery plan on the pension plan or fund, and this would form an appendix to the inspection report. A follow up visit (or just a written report and a conference call) would be scheduled for some time in the future to monitor progress. The frequency of these monitoring calls would depend to some extent on the nature of the issues to be resolved, but monitoring would continue, mostly by the off-site analyst, until the plan or fund had returned to a lower risk level.

Low to medium risk cases

While off-site analysis will give the pension supervisory authority a good picture of risk levels of pension plans, on-site reviews, even for low risk plans or funds, is good practice among all types of financial supervisors, including those for pension plans or funds. However, few, if any authorities will have the resources to examine all pension plans, even over a 5 or 10 year cycle, as compared to supervisory authorities of other financial institutions where 100% coverage is often feasible – for voluntary occupational plans or funds the numbers are often orders of magnitude greater than the number of banks and insurance companies. This does not apply to individual account type systems, where often the number of plans or funds is in single digits and the pension supervisory authority will be able to inspect them all – some even have a permanent presence. This section will therefore concentrate on occupational pension plan and fund systems.

Ideally, the pension supervisory authority should be able to perform off-site analysis on all pension plans or funds, especially now that information technology makes it possible to perform at least the first *triage* fully automatically.[7] Authorities which have implemented a system based on the previous modules should be in a position to classify all plans or funds by risk level and probably by

[7] The term *triage* comes from the Emergency Room terminology where it is important to be able to distinguish those with truly life-threatening conditions from the walking wounded rapidly and accurately.

impact through a process of automated triage and more in-depth analysis based on filed documents or supplementary documents requested by the pension supervisor. All of this can be done without leaving head office. Pension supervisory authorities unable to do this may need to be working towards this situation eventually. This classification would allow authorities to determine which plans or funds should be inspected as a priority as described above, or which can be treated on a statistical basis, as discussed below.

The pattern of these inspections would follow those given above. Where off-site and on-site analyses are undertaken by different individuals or teams, it might be appropriate for the off-site supervisor to take part in some or all of the inspection. While this can be disruptive of the off-site supervisor's regular schedule, it does give these supervisors a greater in-depth of knowledge of the actual operation of pension plans, which is invaluable.

One approach to this type of inspection is to have a "theme" each year. Rather than having a comprehensive inspection of a pension plan or fund, one issue would be chosen each year, for example, investment, governance, controls, actuarial reports, defined contribution plans, and so on. The inspectors would then spend only a few days (less than a week) on each pension plan or fund, perhaps examining 3 pension plans or funds in a week, but concentrating on this one issue. The objective is to examine best practices. While the pension plan or fund sponsor will receive a short letter outlining his performance in this area, more importantly, the results (in anonymous format) would be disseminated to the industry with the aim of raising standards all round.

Again, even though the inspection is abbreviated, planning is important and should follow the pattern outlined above for high risk inspections. Both the initial meeting and wrap meeting are important, especially if problems are found. A written report is also prepared. Depending on the findings, follow up may or may not be required.

If resources are available, it might be ideal to try to schedule a number of inspections each year, perhaps concentrating on plans or funds initially, but also looking at small and medium sized plans and funds on a sampling basis. For example, over a 5 year period, a pension supervisor might have a plan to visit all of the 10 largest defined benefit plans or funds, a sample of 10 of the 50 next largest plans or funds, 20 of the smallest plans or funds, 10 of the largest defined contribution plans or funds and a few of the smaller defined contribution plans or funds. Visits could also be scheduled for providers of the defined contribution plans or funds, such as banks and insurance companies. The themes could be designed around the categories of risk identified in the particular schema of the pension supervisory authority. Visits to banks and insurance companies could be arranged in coordination with the respective supervisors of these institutions.

It is important that plans have a positive if small chance of being inspected and this will act as a deterrent to poor behaviour. It is also important that an on-site review not be a once in a life-time affair, otherwise pension plans or funds will be "immunised" (in the medical sense) against being inspected ever again, once an inspection has taken place. Again, the possibility of another inspection sometime in the future (however distant that might be) will also be a deterrent. Ideally, at least the larger plans or funds may be examined once in 5 years if a serious inspection program is to be undertaken. As problems become rarer, such inspections will become more routine and less time consuming for the supervisors.

B. Systemic Risk[8]

Just as risks can be identified on a systemic as well as an individual entity basis, so the response of the supervisory authority may also be industry wide rather than targeting certain entities. The supervisory authority should select its supervisory response based on cost and impact – so that, if there is concern that a specific risk could impact the pension sector as a whole, it may be more efficient to devise a response on a system-wide level, rather than interacting with pension funds individually. For example, as discussed in relation to systemic risk in Module 3, many newly established pension supervisory authorities have found that poor record-keeping and administration by pension funds is a systemic problem. The supervisory authority may therefore choose to focus resources on finding an industry-wide solution to improving record-keeping (*e.g.* through training, issuing of model or mandatory management information system requirements, imposing a centralised administration system, etc.) rather than devoting inspection resources to the record-keeping performances of individual pension funds and pursuing actions in a piecemeal fashion.

Systemic responses from the supervisory authority can range from launching further in-depth thematic reviews on a particular topic or extraordinary requests for data (*e.g.* De Nederlandsche Bank (DNB)'s review of pension fund investment in alternative assets), to -in extremis - undertaking legislative initiatives (for example mandating that defined contribution plans use market or market related rates of return). Supervisory responses to systemic risks highlighted by the financial and economic crisis of 2008/2009 included temporarily suspending some potential counter-cyclical funding regulations, and intensifying stress tests and reporting requirements.[9]

The supervisory authority may also consult with industry associations as to how identified systemic risks could be alleviated. For example – again as described in Module 3 of the IOPS Toolkit - there could be poor working practices on the part of service providers. The pension supervisory authority can work with industry groups to improve these. Likewise, training may be needed to get trustees up to speed, or to improve the quality of data used (*e.g.* actuarial assumptions). For example, the German supervisory authority BaFin works closely with the German Actuarial Organisation and professional organisations that develop mortality tables for pension funds.

Internally, supervisory staff responsible for cross-sector, thematic analysis should make sure that individual supervisors are aware of the issue and give it proper weighting and importance in their analysis and risk scoring.

A key systemic response for a risk-based supervisor would be to issue guidance on an identified systemic risk issue. As discussed in Module 1 of the IOPS Toolkit, one of the key changes a pension supervisory authority has to make when adopting a risk-based approach is issuing guidance to supervised entities as to what is expected of them, thereby attempting to improve the system-wide standards. For example, if an industry survey shows weaknesses in pension funds risk-management systems, the supervisory authority may react by issuing a guidance note, directed at all funds,

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[8] As noted in Module 3 of the IOPS Toolkit, the term systemic risk used in the Toolkit refers to both systemic risk - *i.e.* a specific factor which can have an impact on the pension sector as a whole (*e.g.* increased volatility in worldwide capital markets, as was experienced in 2008/2009) – and also 'system-wide risk' – *i.e.* a risk factor which may be prevalent in most pension funds (*e.g.* weak governance).

[9] For details see (IOPS 2009b)

explaining what systems are expected to be in place. Likewise, if the stress tests required by the authority show low funding levels, the requirements for recovery plans for all funds may be adjusted in reaction.

Example: Hungary

The Hungarian Financial Supervisory Authority (HFSA) in Hungary integrates both institutional and thematic analysis into their risk analysis framework.

The HFSA usually test and assess thematic risks on a sample of institutions in order to draw conclusions for the universe of supervised entities. Depending on the results, further follow up investigations with a group of or specific individual institutions then take place.

The HFSA has a range of working methods to deal with thematic risks, including theme investigations, supervisory visits (theme discussion), extraordinary requests for data, theme analysis (of a particular topic), consultation with trade associations, consumer surveys or even test purchases. Though all these mechanism achieve the same purpose and work towards the same goal, they are different in terms of flexibility. Selecting between these tools is based on which is most suitable and reliable in terms of the nature and special features of the information required, the number of institutions involved and the resources required.

If important risks are revealed during the thematic analysis in regard to one or more institutions, the authority has to consider whether the matter should be taken up via the institutional analysis process, investigating the individual institution – *i.e.* work which starts as thematic investigations can lead to targeted investigations.

Example: United Kingdom

The Pensions Regulator (TPR) in the United Kingdom runs regulars campaign around key themes where improvements in behavior have been identified as necessary (governance, DC, DB). These can include a number of products. So for example its governance campaign in 2009 included a statement, workshops, guidance, e-learning and a consultation document. This campaign approach allows for maximum reach of its communications while minimalising regulatory burden

Policy areas with specific risks are identified within TPR corporate plan which is published regularly, thereby adopting risk-analysis methods outside the prism of its risk-scoring model. For example, internal controls have been a focus of the TPR, whilst the authority envisages a shift in priority towards enforcement where sufficient progress has not been made towards the targets set in its guidance.

SECTION 2: COMMUNICATION OF RISK ASSESSMENT TO INSTITUTIONS

A risk-based approach to supervision involves different dynamics in terms of communication between the supervisory authority and the supervised entity. The greater application of supervisory judgement under risk-based supervision creates various communication challenges. Since the risk assessments, even with the best analytical tools, typically incorporate considerable judgement, the ability to act on the basis of these assessments may not be as clear-cut as dealing with an issue of legal non-compliance. Supervisors must be able to explain their assessments and communicate their most significant concerns to the financial institutions, both verbally and in writing.

The supervisor, perhaps in consultation with industry, will need to determine an appropriate level of detail for reporting the results of its assessments to each supervised entity. While transparency is important, excessively detailed reports could result in unproductive arguments about minor details, taking the focus away from the most important issues. For example, once a risk analysis has been undertaken for a supervised entity, and in many cases a risk-score derived (as described in Module 4), the actions required by the supervisor need to be communicated to the supervised entity. Many factors are considered in the risk analysis, and supervisory concerns might, for example, relate to weaknesses in risk management practices. The supervisor must be able to explain such concerns in a credible manner and require appropriate action by the institution, which might not involve a single "best answer" If necessary the supervisory authority requires the pension fund to develop an acceptable plan for correction of problems and checks compliance with corrective actions and remedial measures.

Disclosure of Risk-Score to Entity

Whether to disclose the actual risk-score to a supervised entity remains a matter of debate. Some authorities may not share their risk rating with the institution itself – particularly in the first phases of designing and implementing their risk-based frameworks, where supervisors may focus on internal issues. For example, the Financial Services Board (FSB) in South Africa only alerts an institution if it falls within a high risk category – if the others enquire they are told that they are not in this group (however the FSB does give funds the opportunity to respond to their interim rating). The Australian Prudential Regulation Authority (APRA) does not inform institutions of their risk rating but does inform them of their 'SOARS stance'[10] that is, the range of supervisory activities to which they will be subject in the coming period.

On the other hand, it may be the case that where institutions are not informed they may not understand the results of their risk assessment or the implications for their relationship with the regulator.[11] It may at least be considered good practice that entities should be provided with the opportunity to respond to the supervisory authority's findings.

[10] Supervisory Oversight and Response System

[11] As noted in (Black 2008a)

Public Disclosure of Risk Score

Conditions under which public disclosure of risk assessments might be appropriate must also be considered. When using disclosure, the supervisory authority needs to distinguish between conduct of business supervision (where information is published in order to act as a deterrent) and prudential supervision (where information may need to be kept confidential in order to prevent a panic reaction to a particular institution or loss of confidence in the integrity of the system as a whole).

Financial regulators generally do not publish risk assessments of individual entities, largely out of concern that they will be misunderstood by the public and damage market confidence (unlike the authorities in some other sectors). A "run on the bank" phenomenon is less likely in a pension plan or fund than in other financial institutions and in any event one of the main elements of risk assessment, the solvency and/or funded ratio for defined benefit plans or funds, may already be known to the plan or fund members, at least in jurisdictions where either the report or an extract thereof, is freely available to plan members, if not publicly available in some cases. APRA in Australia, for example, do not allow funds to release their 'SOARS' stance publicly so that this cannot be used as a marketing devise or be seen as some sort of recommendation by the supervisory authority.

However, some authorities overseeing systems where individual members have the choice of which plan to join believe that it is important that their risk rating should be known. For example, the Retirement Benefits Authority (RBA) in Kenya require that the fund should communicate and disclose their risk assessment results in a special section in their Annual Report, and the authority's risk assessment reports are available on request.

Disclosure of Supervisory Methodology

In order to make the supervisory process as transparent as possible, the broad outline of any escalating pyramid or enforcement ladder (see discussion in following section) used by the supervisory authority should be made public, in order to help supervised entities understand what is expected of them, and what will happen in cases of non-compliance. Sharing with industry an outline of what broad supervisory response can be expected in certain circumstances may strengthen the credibility of the authority, clarifies what is expected of supervised entities and consequently may help them stay in compliance with regulations and supervisory expectations. Such supervisory response matrices could therefore be seen as useful planning tools for industry as much as the supervisory authorities themselves.

However, it needs to be made clear that these matrixes are plans or frameworks for supervisory action and do not constrain the supervisory authority to adapt its response when appropriate. Communication is vital both within the organisation, with politicians, with firms, and with the public as to what the process is, what the risk scores mean, and how the framework may need to be adjusted. In particular, openness with the industry as to the fact that it is being rated, what the rating means, and that the rating they get will have an influence on how the supervisor interacts with them is vital. [12]

[12] See (Black 2008a) p44.

SECTION 3: ESCALATION OF SUPERVISORY RESPONSE[13]

Once the supervisory authority has determined which supervisory response category an entity should be subject to, a more detailed individual response to the entity needs to be established. As outlined, a logical connection should be made between the risk analysis and the scope, nature and depth of the supervisory practice. The interventionary actions and/or sanctions imposed by the pension supervisory authority should be proportional to the problem (risk) which is addressed, taking into account the nature, scale and complexity of the risk and potential compliance irregularities relating to the relevant party.

To maintain the credibility of the supervisory system, supervisory responses should be perceived by supervised entities as meaningful and appropriate to the circumstances. This is particularly important for RBS. With rules-based supervision, the response to a pension fund being in violation to a regulation is likely to be more clear cut (*i.e.* the consequence of violating rule X is penalty Y). However, with RBS, supervisors are attempting to deal with risks and problems before they occur, and a graded way of dealing with issues as/if they develop is required (including moving entities up into higher risk categories if identified risks are not dealt with or the response of the supervised entity is not satisfactory). The supervisory authority should carefully 'pitch' its initial response to a problem in a proportional and fair fashion, and then follow up in an appropriate way. Supervised entities need to be convinced of the need to act on the recommendation of the supervisor, rather than debating the soundness of supervisory conclusions and the appropriateness of remedial actions. Supervisors therefore need to be seen to be not only fair and reasonable, but also decisive and firm. Due process should be considered at each stage when deciding on the appropriate supervisory action to be taken.[14]

Enforcement Pyramid

In order to ensure such proportionate responses internally, and to be able to explain them to supervised entities, the supervisory authority may find the concept of the enforcement pyramid useful.[15]

In essence, the pyramid is a graphical representation of an action plan for intervention, allowing the supervisory authority to consider in advance various scenarios and to develop appropriate strategies for supervisory action, rather than waiting until problems arise and then, under pressure,

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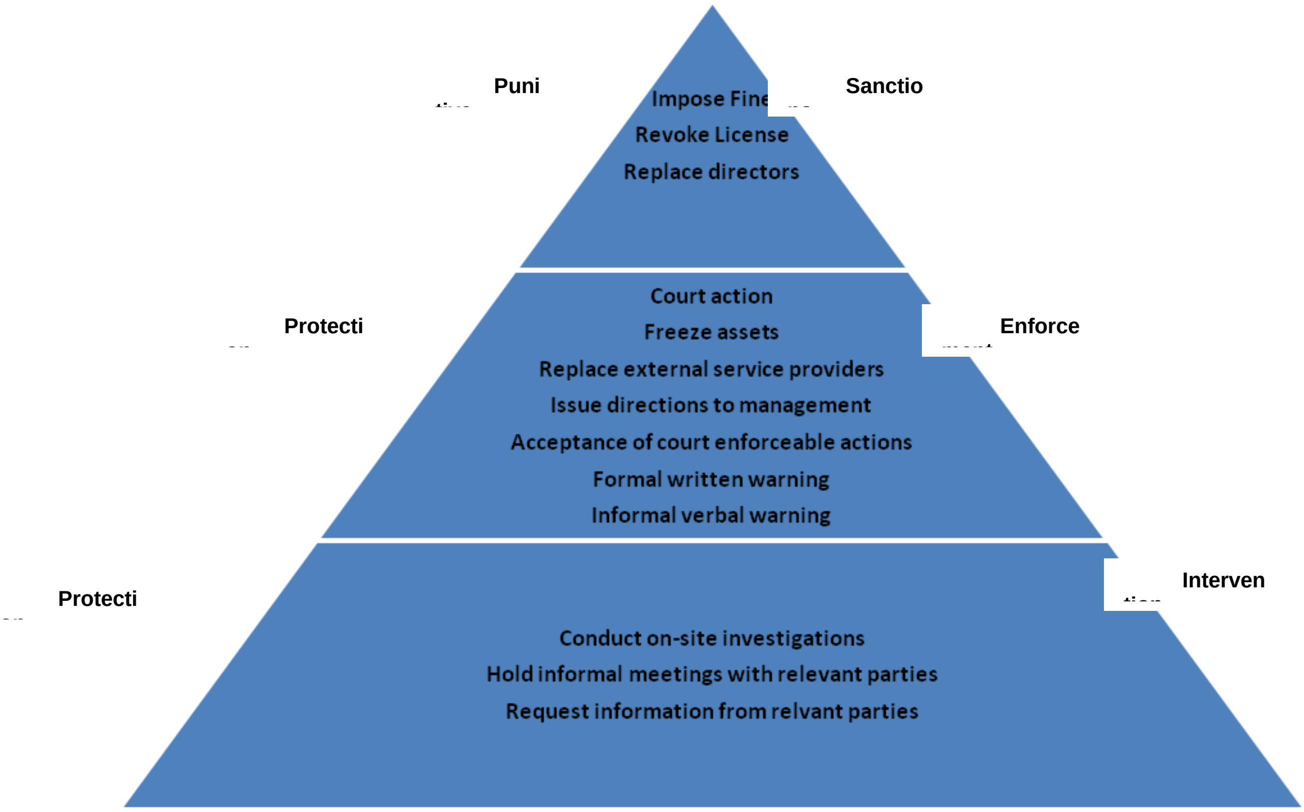
[13] See (Ayres and Braitwait 1992), (Baldwin and Black 2007) and (Black 2008b)

[14] According to the IAIS Core Curriculum (ICP 15), due process describes the checks and balances that a supervisory authority should have in place to ensure that supervised entities are treated fairly, consistently and openly. Due process should be considered at each stage in the process when deciding on the appropriate supervisory action to be taken and should be structured to ensure that supervisors operate in an objective and professional manner. The triggers for intervention - let alone any punitive action - should be as objective as possible, and should be clearly and transparently communicated, both within the supervisory authority and to supervised entities.

[15] An enforcement pyramid may also known as an intervention ladder -*e.g.* in IAIS Core Curriculum.

having to decide what action should be taken.[16] The categorisation of problems is needed to ensure that the supervisory authority properly balances the severity of the failure or weakness with the appropriate enforcement tool and the related sanction. The processes for collecting the evidence of the violation and determining its severity must be applied in an even-handed manner. Failures of similar severity should prompt enforcement actions of similar strength, and different entities with similar violations should receive similar treatment.

Figure 4: Enforcement Pyramid



Source: IOPS Secretariat

The layers of the pyramid represent different types of intervention and enforcement activity, with the levels and structure of the pyramid depending on the powers available to the supervisory authority.

[16] It should be noted that, in keeping with the concept of proactive / risk-based supervision, supervisory strategies can be triggered by high-risk situations that have not yet given rise to an actual problems or situations of noncompliance.

How to Use the Pyramid

Despite the heterogeneity of pension fund systems in the world today, certain approaches to pension supervision have been identified, which are driven by factors such as the nature of the pension system being supervised, the level of legal and financial market development etc. (see Hinz 2005 IOPS 2007a). These various approaches imply that some pension supervisors may use their powers and engage with pension funds more regularly than other supervisory authorities. This implies that some authorities may start higher up the pyramid (*e.g.* may conduct more on-site reviews) and may escalate their response more rapidly than others. The pyramid should include as many scenarios as can reasonably be considered, including those that may be of a local or regional nature. Most markets have specific characteristics and supervisory issues that are somewhat unique to the environment, and it is important to build these into the pyramid structure.

As mentioned previously, in order to make the supervisory process as transparent as possible, the broad outline of the enforcement pyramid should be made public, in order to help supervised entities understand what is expected of them, and what will happen in cases of non-compliance. The triggers for intervention - let alone any punitive action - should be as objective as possible, and should be clearly and transparently communicated, both within the supervisory authority and to supervised entities.

The key to using such a pyramid successfully is knowing at what level the enforcement action should start and how quickly to move up through the pyramid's layers. A balance needs to be struck between too lenient an approach (which does not protect individuals sufficiently and could undermine supervisory authority, leading to resistance if the supervisor does, unexpectedly, apply a tough approach), and too strict (which could be costly and, if seen as unfair, can lead to resistance and non-compliance – in extreme cases making the sector very difficult to supervise at all).[17] A balance therefore needs to be struck between an '*accommodative*' vs. a '*deterrence*' based approach to supervision.

The escalation of action should be tailored to the individual situation. Supervisors do not need to move through every, graduated step in the enforcement pyramid in each case, and may need to escalate their response rapidly to ensure a swift response to an urgent problem. When deciding on the timeframe between the above phases, the seriousness of the breach and the potential risks to members and beneficiaries should be taken into account. On the one hand, a feasible timeframe should be allowed between phases in order to enable the relevant parties to respond properly. Parties should also be given some flexibility, as deemed appropriate, in the manner in which regulatory compliance is achieved. On the other hand, given the fact that a long delay could increase risks to fund members and beneficiaries and the cost of remedying the particular risk (in some cases significantly), the above-mentioned timeframe and flexibility should be designed to be as appropriate as possible in order to avoid abuse. If the timeframe needed for a particular type of action is longer than acceptable in view of the seriousness of the situation, then a different and probably more severe intervention must be considered.

[17] Black (2008b) discusses how principles based regulation in particular will not survive overly punitive enforcement as regulated firms will demand detailed rules in order to know how to stay in compliance.

A reciprocal strategy is advised, with the supervisory authority adopting an accommodative approach when the supervised entity does so, but becoming increasingly strong in its response if non-compliance or non-cooperation is encountered.[18] Monitoring progress toward the successful implementation of an effective remedial action is consequently important – *i.e.* the supervisor needs to have a targeted way of following progress towards a measurable goal (which needs to be clearly defined, with steps to achieve it and a suitable timetable set).

Supervisors should also try to understand why non-compliance or violations have occurred. Genuine mistakes, for example, need to be rectified, but may justify a less punitive response than wilful and persistent violations. The supervisory authority should be responsive to the supervised party's own behaviour – if the relevant parties are acting cooperatively, the supervisory authority should generally do so as well.[19]

Table 3: Suggestions for When to Use Supervisory Tools

Description of Supervisory Tool	When Appropriate to Use
Request information from relevant parties	Minor or emerging issues; cooperative management
Hold informal meetings with relevant parties /Moral suasion	Minor or emerging issues; cooperative management.
On-site Reviews	Could be part of regular supervisory work. Resources directed towards higher risk cases, but also some medium to lower risk cases, partly for deterrent effect
Informal warnings	Minor or emerging issues; cooperative management.
Formal written warnings	More serious, developing issues; less cooperative management, attempts at informal remediation have failed
Remediation plans	Problems which require longer period of correction especially related to inadequate funding or requiring changes to procedures (for example

[18] In severe cases the supervisory authority may need to intervene to protect and stabilise a situation first, and then may go back and punish or seek restitution from culpable parties.

[19] Baldwin and Black (2007) argue that to be 'really responsive' supervisors will have to consider more than just the response of the supervised entity. They will also need to take into account the entity's own operating and cognitive framework (their 'attitudinal settings' – whether accommodative, resistant, disengaged etc.); the broader institutional environment of the regulatory regime (*i.e.* levels of authority's resources, other controls over authority etc.); the different logics of regulatory tools and strategies (*i.e.* strategies of disclosure, compliance or deterrence assume different models of behaviour from supervised entities); the regime's own performance (*i.e.* measuring whether enforcement tools are successful); and to changes in each of these elements. This approach should incorporate all different types of enforcement activity – *i.e.* detecting undesirable or non-compliant behaviour; developing tools and strategies for responding to that behaviour; enforcing those tools and strategies; assessing their success or failure; and modifying them accordingly.

	poor governance or internal controls).
Acceptance of court enforceable undertaking	More serious, developing issues; less cooperative management, where less drastic measures have failed
Issue directions to management / Compliance directives	Increasingly problematic issues; uncooperative management, where previous efforts at voluntary remediation have failed.
Replace external service providers	Problematic service providers. This could affect just one or a few plans if the service provider is generally satisfactory, but has not handled relationship with particular plan well, or it could involve the service provider itself, if it is incapable of providing adequate service – in this case the action would need to be directed against the service provider, and this will depend on the powers the pension supervisory authority has in regard to such service providers.
Freeze assets	Suspicion that assets are not being used exclusively for the benefit of plan members or that illegal or highly risky investments are being made. If inappropriate assets have been purchased they might be difficult to divest – legal action against fiduciaries might need to be contemplated.
Court Action	Serious problems which could not be solved by cooperative means. Could also be used as show strength of supervisors' intent as a deterrent to others.
Replace directors/ Replacement management	Suspicion that pension plan or fund is not being run exclusively for benefit of members. Suspicion of fraud and diversion of funds. May lead to legal action against fiduciaries.
Revoke license/ Close to new members or other restrictive actions short of wind-up	Concern that new members funds being used to unreasonably subsidise current members (must be egregious, some degree of cross-subsidisation is acceptable, at least in defined benefit plans). In pension accumulation system this action could be taken to protect against "good money being thrown after bad", although would probably lead to wind-up as current members would probably withdraw as well. This action will only be used if pension plan and/or plan sponsor are in significant financial difficulties already.
Penalties and fines	Serious or repeated breaches or regulation or supervisory direction, or breaches of "compliance issues", such as serious history of non-payment of contributions or filing of documents.
Winding up	Continuation of pension plan poses more of a threat to members and beneficiaries than wind up. However, this action will be used rarely except in cases where the plan sponsor is already in financial difficulties or even insolvent itself.

Source: IOPS Secretariat

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