



# Toolkit for Risk-based pensions supervision

Case Study  
**Chile**

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](http://www.iopsweb.org/rbstoolkit).

This document contains the **Chilean Case Study**.

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# CHILE<sup>1</sup>

## I. Background

### A. Pension System

The Chilean system was established in 1981 by effectively privatising the old age pension. Employees that entered the labour market after the system was introduced were required to join a defined contribution (DC) pension plan funded by employee contributions. Switching to the individual capitalization system was voluntary for workers that had paid their contributions into the pay as you go system. If the switch was made, their accrued benefits under the old system were recognised by an instrument called “recognition bond”.

Investment regulation has changed significantly throughout the years. The first major change included the shift from only fixed income instruments being allowed in only one fund (portfolio) to a system in which employees can choose from five commercially provided schemes with different exposure to variable income. The law allows these funds to invest up to 80% of total assets abroad. Currently the exposure to foreign investment is 45%.

At retirement, workers have to buy a life annuity or programmed withdrawal, although the date has some flexibility. There are different annuity products available and retirees are able to compare the insurance companies' offers and the program withdrawal products via an electronic quotation system called SCOMP.

The coverage provided by the system, measured as the proportion of contributors to total employment, is around 60%. Reforms have been introduced, not only in the investment area, over the years, including a major reform in 2008 (Law N° 20.255) introducing a solidarity or basic pillar which provides protection for lower income groups, including those receiving low pensions.

The low level of financial understanding, particularly related to pension systems, is an important issue for supervisors, especially for those supervising DC plans. In this regard, the pension reform also included the implementation of a Pension Education Fund. This fund has the objective of giving financial support to projects, programs, and other activities in order to promote education about the pension system.<sup>2</sup> The law also enables individuals and companies to act as “pension advisers”, guiding affiliates in taking informed

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<sup>1</sup> Taken from the presentation made by Solange Berstein, Superintendent of Pension, at the IOPS Regional Workshop on pension supervision for CIS, Caucasus and Central Asia region, 25-26 February 2010.

<sup>2</sup> This fund is managed by the Undersecretariat of Social Security at the Ministry of Labor. The resources of the fund are assigned by the Undersecretariat through a public tender. The Superintendence of Pensions is part of the committee that selects the projects. The selection committee for this fund has been constituted annually since 2009, assigning US\$3.6 million to 27 projects in 2013.

decisions such as the selection of funds, voluntary pension savings, and the type of pension to be drawn, etc.<sup>3</sup>

Regarding the governance of the entities supervised, each pension fund managing company (AFP) has on its board two named autonomous members in the investment committee. Also, the pension reform introduced the establishment of a Users Committee, that is in charge of monitoring the pension system as a whole and the performance of pension fund managers. The members of this committee are representatives of workers, pensioners, private and public pension providers. The chair of the committee is an expert named by the government.

To improve efficiency and competition in the AFP industry, as part of the pension reform, the government introduced a bidding process for the administration of the accounts of new members to the system, and a centralized auction mechanism to provide the disability and survivors insurance.

Given the significant changes to the pension system, the new Law N°20.255 reorganizes the pension system institutional framework by creating new institutions such as the Instituto de Previsión Social (Institute of Social Security, the former Instituto de Normalización Previsional), which is in charge of administrating the new solidarity pillar; and the Superintendencia of Pensions, which replaced the former Superintendencia of Pension Fund Managers (SAFP) and which is in charge of supervising and regulating the private and public institutions participating in the pension system. In this regard, the Superintendencia of Pensions (SP) has a broader supervisory role that includes the non-contributory benefits, benefits from the old pay as you go system, and unemployment benefits from the unemployment insurance fund.

The Superintendencia of Pensions (SP), as a public agency, is in charge of supervising AFPs, e.g. granting licenses, issuing directives, and levying fines for any misconduct. The agency also has primary legislative responsibilities – including applying strict licensing requirements to AFPs.<sup>4</sup> It has also the role of supervising and regulating the public solidarity pillar and the old pay as you go system that will eventually disappear.

### ***B. Risk-based Supervisory Approach***

As a specialized pension supervisor, the central mission of the SP is to monitor and oversee the Chilean pension system, and is particularly responsible for ensuring the smooth running and reliable operation of the AFPs. Generally speaking, the Chilean pension market is subject to relatively strict regulation. In this regard the SP closely monitors the operation and performance of each AFP in order to ensure compliance with the existing rules and regulations. For example, the SP collects information and data related to AFPs

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<sup>3</sup> Before, such advice was only provided by pension annuity brokers who received compensation only when the affiliate chose this type of pension, which was not necessarily in the affiliate's best interests. By contrast, this new "pension advisers" will be paid independently of the pension type selected and will also be able to offer advice at earlier stages of participation in the system. The secondary regulation regarding pension advisers was issued on August 2008, up to March 2013 there is a certified and registered list of about 640 pension advisers, validated jointly by the Superintendencia of Pensions and the Securities and Insurance Supervisor (SVS).

<sup>4</sup> Among others, such requirements include capitalization, insurance protection and fit and proper tests for management personnel. Any merger and acquisition of existing AFPs need to be approved by the SP. Meanwhile, if a SP notices any irregularities occurring in an AFP, which it believes is not of compliance with the relevant legislations, the SP is empowered to request the AFP to undertake corrective actions. If the severity of the problem is significant, the SP is also authorized to revoke the license, thus stopping further operation of this entity in the Chilean pension market.

on both a regular basis (including daily) and on ad hoc basis. The ad hoc collection of information and data typically becomes necessary when the SP notices irregular behaviour in a market related to an AFP. Moreover, the SP is directly involved with investment issues relating to each AFP, for example, the SP is in charge of investment regulation that basically sets investment limits, this regulation is also revised by an independent committee named the Technical Investment Council.<sup>5</sup>

It has been argued that such a level of intense supervision is feasible for the Chilean system, given that there are only a few supervised entities (currently six AFPs are operating in Chile). For countries where there are hundreds (or even more) market participants, such intensive supervision is not practically workable, largely due to the constraints on administrative and supervisory capabilities. The Chilean system is also mandatory, requiring greater protection and the less developed capital and financial markets in the country (certainly when the pension system started to operate) also imply a greater level of supervisory oversight (see Hinz et al., 2005).

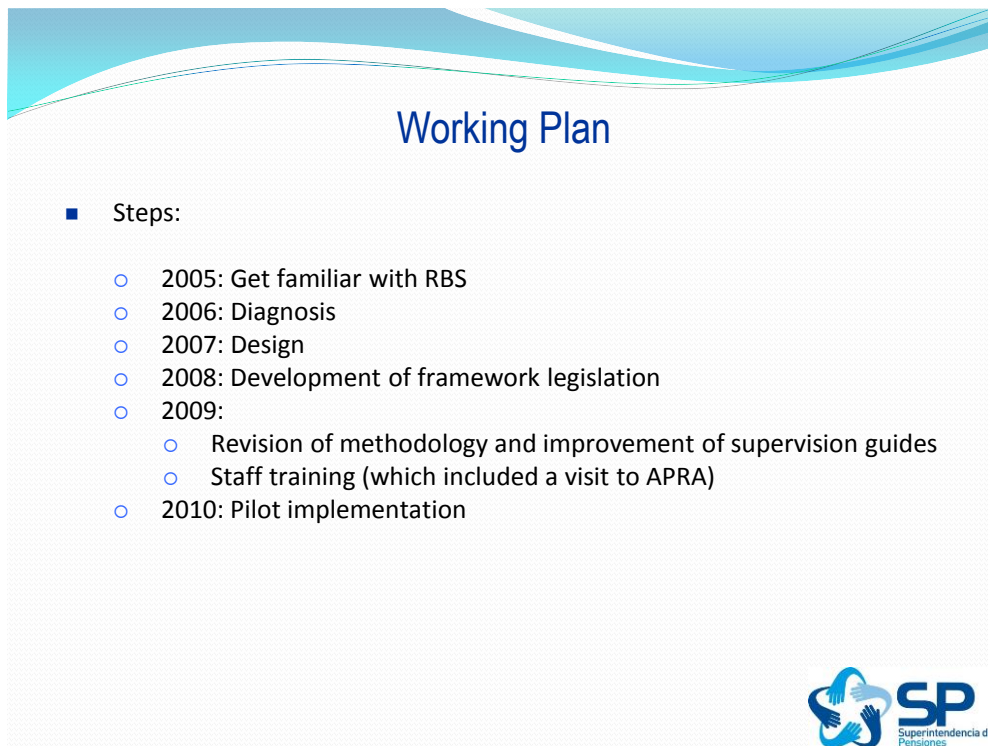
Since 2006, following an initial assessment by the World Bank and the FIRST Initiative, the Superintendence of Pensions has been working to introduce a risk-based approach to supervision with risk scoring features. The main motivations include the agency's desire to be forward looking, to investigate the root as well as the consequence of problems, and to adapt to the increasing complexity of the financial markets.

Up to 2010, pension system supervision in Chile was 100% compliance-based and the pension law (Decree Law DL 3,500) and its secondary norms were very specific as to what an AFP must do in a wide range of situations, in accordance with Chilean civil law. The focus of the supervisory authority has been driven largely by following complaints. The new risk-based approach involves a shift in the focus of supervision to the processes used by AFPs for risk management and the controls they have in place. This will permit the implementation of the prudential person principle. A Risk Based Supervision (RBS) pilot plan was implemented during the first semester of 2010. An RBS plan roll-out will take place between June and December of 2010. During 2011 and 2012 the RBS methodology was fully implemented.

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<sup>5</sup> Under Law N° 20.255, many of the limits on portfolio composition are no longer defined by law itself, but contained in secondary norms, broadening the AFPs options and providing greater regulatory flexibility. This secondary regulation, known as the Investment Regime, is issued by the Superintendence of Pensions following technical analysis and approval by the Technical Investment Council, formed by members with recognised financial expertise, one appointed by the President of the Republic, one by the Board of the Central Bank, one by the AFPs and two by the deans of the Economic and Business Faculties of accredited universities. The Investment Regime also makes it possible to establish specific methodologies for the measurement and control of investment risk.

Figure 1. Figure 1: SBR Working Plan<sup>6</sup>



## II. Risk-based Supervision Process

Figure 2. Figure 2: Risk-based Supervision Process



Source: IOPS Secretariat

<sup>6</sup> Taken from the presentation made by Solange Berstein, Superintendent of Pension, at the IOPS Regional Workshop on pension supervision for CIS, Caucasus and Central Asia region, 25-26 February 2010.

## 1. Risk Focus

### *Supervisory Objectives*

The Superintendence of Pensions is not only responsible for monitoring the operation of the AFPs, but also has a broader supervisory role that includes the non-contributory benefits, benefits from the old pay as you go system, and unemployment benefits from the unemployment insurance fund. In addition, the agency has primary legislative responsibilities – including applying strict licensing requirements to AFPs.

### *Nature of Pension System*

As the SP oversees a mandatory DC system, the focus of the authority is on processes rather than returns, and on the risk-management and governance of the AFPs. Given that the system in Chile operates via commercial providers, supervisory oversight has to focus on conflicts of interest – ensuring that those with a fiduciary duty are managing the funds as well as an individual would themselves. Also, as there are a limited number of providers (6), the focus of the SP is to identify risk areas within funds.

## 2. Risk Factors

### *A. Individual*

The risk-based model of the SP breaks down its risk evaluation into the following 5 areas:

**Figure 3: Evaluation Areas and Sub-areas by Entity**

<b>Board</b>	<ul style="list-style-type: none"> <li>• Fit and Proper Directors</li> <li>• Risk Management Policy</li> <li>• Board Committees</li> <li>• Strategic Definition</li> <li>• Reputational Risk Management</li> <li>• Information Disclosure and Transparency Policy</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• Management Composition and Structure</li> <li>• Planning, Management and Disclosure/ Transparency Process</li> <li>• Management Information Systems</li> </ul>
<b>Risk Management</b>	<ul style="list-style-type: none"> <li>• Risk Culture and Internal Control</li> <li>• Compliance Risk Management</li> <li>• Fiduciary Risk Management</li> </ul>
<b>Operational Risk</b>	<ul style="list-style-type: none"> <li>• Affiliates Relationship Management Risk</li> <li>• Accounts Management Risk</li> <li>• Benefits Management Risk</li> <li>• Technology Risk</li> <li>• Business Continuity and Disasters Recovery Plan</li> <li>• Outsourcing Risk</li> </ul>
<b>Financial Risk</b>	<ul style="list-style-type: none"> <li>• Market Risk</li> <li>• Credit or Counterparty Risk</li> <li>• Liquidity Risk</li> <li>• Entity Solvency Risk</li> <li>• Investment Process Management Risk</li> </ul>

### ***B. Systemic***

There are some risks that affect the industry as a whole and might imply the need for closer supervision to all or some of the companies. These risks are identified by different sources of information: central bank macroeconomic reports which are discussed with all financial supervisors on a monthly basis (in case of special situations these reports are drafted and discussed as often as necessary); information provided by other financial supervisors which are part of a committee that meets on a monthly basis; signals of other macroeconomic or sector analysts; and trends identified from customer complaints, amongst others.

These systemic risks are considered in a final stage assessment by affecting the overall rating of all or some of the supervised entities. It might be necessary to change the supervisory stance with respect to an institution because of this systemic risk.

These risks might also imply changes in Law or secondary regulation. The permanent evaluation of the system allows for the prevention of problems by adopting solutions early. The Studies Division of the SP has strong analytical capacities and has built models for projecting future pensions and assesses the impact of different events or policy changes.

## **3. Risk Indicators**

### ***A. Quantitative***

Currently there is a minimum return guarantee with respect to the average return of the industry. Therefore, returns are computed on a daily basis and checks are made to ensure that pension funds comply with this minimum return, measured over a period of 36 months. The probability of each pension fund hitting the minimum return is also computed to prevent non-compliance.

However, the authority is also investigating other quantitative measures for DC risk. It has been found that the current mechanism forces administrators focus on short term returns. Moreover, as it is a relative measure, it does not limit absolute risk, which is restricted by investment limits. This might not be an effective way of limiting risk and the regulator is evaluating a methodology that includes replacement rate targets.

### ***B. Qualitative***

The different risk areas are assessed for each institution by gathering information from different sources and comparing it against best practices in order to judge if the company is in adequate position. In order to have a qualitative indicator for each risk area the supervisor evaluates the inherent risk and assesses the existence of policies that mitigate these risks and also the way in which these policies are implemented and monitored in practice.

## **4. Risk Mitigants**

Each risk factor is ranked from 1 to 6 considering the policies that are set by the company and the way in which these policies are implemented and monitored. Even if policies are highly developed they must be assessed if they are in practice all of the time, most of the time or infrequently.



The scoring is defined depending on the degree to which policies are developed and how these policies are used in practice. Each score is associated to a qualitative concept: 1= Solid, 2= Healthy, 3= Adequate, 4= Vulnerable, 5= Weak, 6= Extremely weak or no information.

## 5. Risk Weightings

Risks are weighted according to the impact they have on members.

Significance Weights – measuring inherent risk – are ranked as follows:

- A: Critical
- B: Very Important
- C: Important

Figure 4: Risk Matrix by Entity

Area	Inherent Risk	Evaluation
<b>Board</b>		
Fit and Proper Directors	A,B,C	1...6
Risk Management Policy	A,B,C	1...6
Board Committees	A,B,C	1...6
Strategic Definition	A,B,C	1...6
Reputational Risk Management	A,B,C	1...6
Information Disclosure and Transparency Policy	A,B,C	1...6
<b>Management</b>		
Management Composition and Structure	A,B,C	1...6
Planning, Management and Disclosure/ Transparency Process	A,B,C	1...6
Management Information Systems	A,B,C	1...6
<b>Risk Management</b>		
Risk Culture and Internal Control	A,B,C	1...6
Internal and External Audit	A,B,C	1...6
Compliance Risk Management	A,B,C	1...6
Fiduciary Risk Management	A,B,C	1...6
<b>Operational Risk</b>		
Affiliates Relationship Management Risk	A,B,C	1...6
Accounts Management Risk	A,B,C	1...6
Benefits Management Risk	A,B,C	1...6
Technology Risk	A,B,C	1...6
Business Continuity and Disasters Recovery Plan	A,B,C	1...6
Outsourcing Risk	A,B,C	1...6
<b>Financial Risk</b>		
Market Risk	A,B,C	1...6
Credit or Counterparty Risk	A,B,C	1...6
Liquidity Risk	A,B,C	1...6
Entity Solvency Risk	A,B,C	1...6
Investment Process Management Risk	A,B,C	1...6

### Global Scoring

A global scoring is assigned to every supervised entity taking into consideration the inherent risk of each area or sub-area within the entity and the quality of controls for each inherent risk (i.e. scores are on a net risk basis). The global scoring takes values between 1 (lowest net risk) and 5 (highest net risk).

The risk matrix looks at the risk level, quality of controls, global scoring and change in evaluation over time. The rating that a company achieves gives the supervisor a sense of the net risk of the institution. The entities should try to achieve the best rating possible.

Figure 5: Global Scoring by Entity

Global Score	Entity Status
1	Good
2	Satisfactory
3	Regular
4	Weak
5	Extremely weak

### ***Business Intelligence System***

Starting from the end of 2012, the Superintendence of Pensions has developed and put in place an IT system called Business Intelligence System. This system has the purpose of further developing the risk based supervision workflow and reducing operational risk within the authority

This was developed in order to manage large databases, centralize the data collected and automatically generate the risk matrix by replacing the process of populating calculation sheets.

The data representing the evaluation of the AFP is introduced into the system by the members of the committee conducting the assessment, together with the reasoning behind their judgement and evaluation for each of the areas, subareas and themes contained in the risk matrix.

The result of this data collection and validation procedure is the centralized database and by using the Business Intelligence tool, the Superintendence can do the following:

- design the analytic cube for the analysis of the risk matrix in its different states at any point in time
- implement the procedures extracting, transforming and input data from the management platform to the analytic platform
- generate control command board and analytic cube.

By implementing this system and creating the database at different points in time, supervisors can view the evolution of the supervised entities over a certain period in all of the subareas of the risk matrix, evaluate the strong or weak points, and take the necessary measures.

The change of workflow will result in the enhanced quality of the risk based supervision process by producing more confidence in the generated results, increasing data security (both logistical and physical), assuring of data integrity and consistency, improving information management and aggregating information for consolidated results.

## 6. Probability

The rating (global scoring) of the institution reflects the probability of problems occurring.

## 7. Impact

The methodology used by the SP does not consider the relative impact of the entities supervised in the pension funds system (given the limited number of funds overseen, and the fact that they are all part of the mandatory pension system). However, when supervisory activities are designed following the attribution of the global score generated by the model, special attention and prioritization will be given, *ceteris paribus* the same score, to those entities of a larger size (market participation).

## 8. Quality Assurance

The assessment of an AFP is led by an Intendent (i.e. one of the deputy heads of the supervisory authority). A committee comprising of representatives from each division, the lead supervisor and the head of the authority check the assessment of the entity.

To keep the model permanently updated, the Studies and Regulation Divisions contribute in different ways. The former is in charge of evaluating the effectiveness of the model and incorporating new information useful for the assessment. The latter issues the regulation that supports risk based supervision and also the rules that a pension fund manager must comply with. These rules are very detailed and specific at this moment but it is expected that the risk based approach to supervision will allow more flexibility in the processes implemented by the companies as long as they have appropriate risk controls and the SP has in place the tools for an adequate supervision.

## 9. Supervisory Response

The supervisory stance of the SP is driven by the global scoring. The main activities of the SP– varying in intensity as required – are defined by the following:

**Figure 6: Supervisory Stance by Entity**

Global Score	Entity Status	Supervisory Stance	Activities
1	Good	Normal	Monitoring and general follow-up
2	Satisfactory	Normal with minor concerns	Follow up focus on areas and sub-areas classified as “important” that were assigned the worst scores.
3	Regular	Vigilance	Follow up focus on areas and sub-areas classified as “critical” and “very important” that were assigned the worst scores.
4	Weak	Require major improvements	Intensive supervision strategy specially focuses on areas and sub-areas classified as “critical” and “very important” to which the worst scores were assigned.
5	Extremely weak	Require intervention	Intensive supervision strategy focuses on the main weaknesses. Intervention might be required in specified cases of insolvency

