RISK MAPPING FOR SOCIAL SECURITY PENSIONS[1]

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Risk management and social security are both complex concepts.

Social security pensions are different throughout Europe. But in common, we are all thinking of a mandatory system which covers all the working population as well as those who retired from working and an intergenerational social contract linking them. Risk management on the other hand has become an integral aspect of all organisational governance and operations. The intersection of these two areas is particularly crucial for entities tasked with ensuring the financial stability and long-term sustainability of their operations for the sake of their beneficiaries. This context requires and enables a general approach to define a social security risk management framework. During this journey starting by devising general risk categories for all organisations, we examine similar institutions' risk management solutions and take into account the social dimensions of pensions as the main difference with the counterpart institution.

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Enterprise Risk Management (ERM) principles are widely adopted as standard practice, even if individual institutions have unique characteristics that necessitate specialised risk management frameworks. Governance and organisational structures apply to all >

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enterprises and institutions. It is their individual mission and the approach they are fulfilling it that sets them apart.

Based on these common and distinctive characteristics, we define a new approach for the main risk categories for all organisations. In specific: Every entity faces risks of governance and organizational structures, operational risks of the organisation and risks of their own business from their specific operations. A share company with a board and organisation of general assembly, Chief Officers, heads of departments and units is a general governance and organisational model with its usual risks. This is applicable in all sectors: from factories to banks. However, their individual business area and business model define their specific own risks even in the same industry.

The general COSO or ISO31000[2] ERM approach may serve as the common starting point in finding the similarities and differences between pensions and other financial institutions: their processes and methods are similar; the objectives differ.

Within the financial sector, banks adhere to the Basel Accords, while insurers operate under the principles of the Solvency regime. These regulations, predating the ERM standards, effectively manage own risks specific to banks and insurers. However, they also integrate ERM into their risk management strategies as organizations.

In a step-by-step approach pension funds, which are financial institutions entrusted with safeguarding the financial security of many individuals in their retirement years, are often perceived to be similar to insurance products or savings plans, despite their intricacies and crucial societal role. Pension funds though as financial institutions, trade in risk and money collect contributions and pay pension on retirement.

Considering the similarities with other financial institutions, we may find where they differ.

In specific: The event space of a pension entity can be described by a multi-state model of the events of the active career and the eventual retirement. In a multi-pillar pension system, the different pillars are usually defined along their targeted socio-economic group and their corresponding level of pension benefit and risk appetite. A basic pillar covers the largest part of the population with the most guarantees. In an occupational pillar trustees protect >

[2] Committee of Sponsoring Organizations of the Treadway Commission, International Standards Organisation

> ***Actuaries can contribute positively to the adoption of a holistic approach to risk management***

the interest of the beneficiaries in a fiduciary relationship. In an individual arrangement the contractual relationship suppose adequate financial literacy and disposable income of the client. In this sense, a multi-pillar system in itself can be regarded as an old-age risk management tool. By including affordability and robustness in the definition, we arrive at the core concept of the COSO risk framework with appetite/tolerance and performance/target coordinates, ready to be applied to social security. This strategic integration not only enhances our understanding but also facilitates the systematic development of a Risk Management Framework tailored to social security pension systems.

This way we can interpret the general principles of ERM, applicable to pensions as financial institutions and identify the intrinsic features of social security pension schemes that differentiate them. Mandatory social security pension schemes, generally designated as 1st pillar, designed to provide a safety net for the working population add an additional layer of complexity to risk management practices.

A universally applicable, comprehensive risk management framework tailored specifically to social security pension systems remains an underdeveloped area of study. Our outline for a generalised Risk Management Framework for social security systems intends to identify the gaps in social security risk management for actuaries and initiate the discussion about this topic.

Actuarial knowledge and expertise are essential in designing, implementing, and operating the risk management framework of social security pension schemes. Establishing a Risk Management Function in the organisation and preparing regular Own Risk Assessment reporting framework involving actuaries, would be beneficial for Social Security Administrators. Actuaries may play a fundamental role in this. As regular actuarial reviews of the financial health of social systems are already critical measures in risk monitoring and risk mitigation, actuaries can contribute positively to the adoption of a holistic approach to risk management. This will result in the improvement of both the management and the outcomes for the beneficiaries of the social security systems. <

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