NORTHERN TRUST

DEMYSTIFYING LONGEVITY RISK COLLATERAL STRUCTURES

As life expectancy continues to rise, pension funds across Europe are increasingly looking to de-risk some of their liabilities by entering into an agreement with an insurer.[1] These arrangements are typically supported by collateral structures, which are often complex to navigate. However, they don't need to be. The process of longevity collateral management can be simplified by early engagement, preparation, and management of all parts of the project lifecycle, according to Mark Austin, Northern Trust's Head of Asset Owners, UK, and Pensions and Insurance Executive, Europe.

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Imagine that you need to transfer your scheme's longevity risk to an insurance company as part of a wider de-risking strategy. Typically these types of transactions utilise a collateralised structure to achieve their aims. However, the deal is rife with complexity and a myriad of interested parties. You will have a multitude of advisors, actuaries, and legal consultants to help facilitate the transfer to a fronting insurer. Your collateral services provider is also there to ensure that operationally things go smoothly. In the end, the structure becomes overly advised by a plethora of professionals, and as a stakeholder, you may find yourself buried in the middle of the process.

Whether you are pension fund trustee, an advisor or a consultant, collateral structures are complex to navigate. This paper explores how longevity collateralisation structures work to support the transfer of risk and breaks down their different components to demystify the process around them and support stakeholders through the process.

INTRODUCTION TO COLLATERAL STRUCTURES

Broadly speaking, collateral solutions are used to mitigate counterparty risk, particularly in any reinsurance arrangement where there are concerns about things going wrong and the trustee being unprotected against a loss of assets, or the insurer in turn not collecting its fee. They are like life vests under the seats on airplanes. It is highly unlikely that you will ever have to use them, but they are necessary.

There are different options for pension schemes to de-risk using an insurance company. One of these is a "buy in" where a portion of a pension scheme's risk is transferred to an insurance company. Under this option, the pension scheme holds an insurance policy representing that transaction and, in the meantime continues to pay its pensioners. A second option known as a "buy out" goes further and involves all risk being transferred to the insurer which takes full responsibility for all liabilities. A third option – and the focus of this paper – is concentrated exclusively on longevity risk insurance.

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WHAT IS LONGEVITY RISK

Ultimately this is the risk of the pension scheme's participants living longer than projected under the scheme's funding plans. One of the key risks companies who pay pensions face is the increasing life expectancy of pensioners and making sure enough funding is available to meet ongoing payments. Longevity risk is often transferred from a pension scheme to an insurance company which in turn transfers some, or all, of this risk to a reinsurance company. The principal financial instrument used to achieve this is called a longevity swap. This involves two parties exchanging or swapping payments based on estimations on how much pension payments are required and for how long based on the age profile of the pensioners. For instance, the pension scheme makes fixed agreed payments to the swap provider (e.g. an insurance company). The swap provider in turn makes variable payments back to the scheme to meet obligation to its pensioners for as long as they live. If the payments ultimately don't cover what the scheme needs (i.e. members live longer than expected) then the insurance company needs to meet the shortfall to address the scheme's risk exposure.

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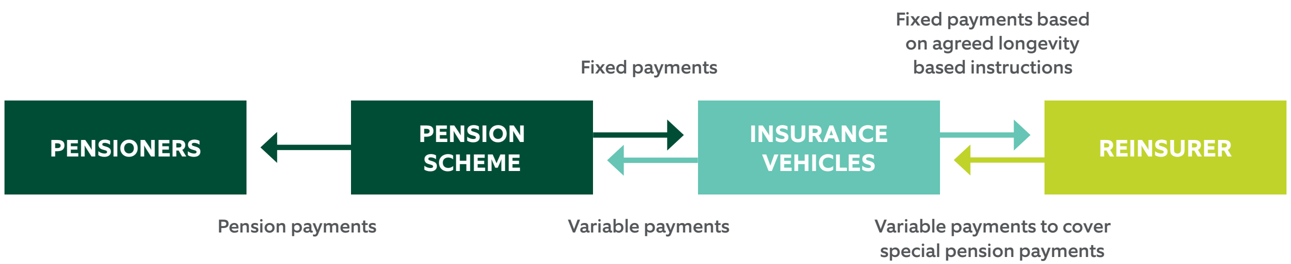
UNDERSTANDING COLLATERAL STRUCTURES IN THE CONTEXT OF LONGEVITY RISK

Pension funds use collateral structures to mitigate against longevity risk for different reasons, among them the profile and funding level of the scheme. As discussed above the profile and age of the pension scheme's members may raise concerns around whether the scheme would be sufficiently funded to be able to pay in the future. This is compounded by economic and inflation factors potentially eroding the pension fund's balance sheet over time. Moreover, regulatory drivers require both sponsors and pension fund trustees to create strong risk management and governance frameworks. As a result, a pension fund may need to de-risk some of its liabilities by entering into an agreement with an insurer to pay those liabilities in the future as outlined above. It is in effect a financial hedge against potential risk in the future. Such arrangements are typically supported by collateral structures.



CONSIDERATIONS FOR COLLATERAL STRUCTURES

If you are looking to transfer risk between two parties using an insurance contract, where longevity typically goes through a fronting insurer to the reinsurer, then it is likely that one party will seek to use a collateral structure as best practice. Depending on the structure, collateral is used to cover fees and sometimes experience, therefore there is a need for a collateral manager to independently hold these positions and facilitate the collateral that moves between the parties. Typically there are two types of activity that are collateralised in this context:

1. **Experience collateral** – This is another word for the collateral that moves because of pensioners living longer or shorter than the original assumptions. Collateral moves back and forth between the parties based on the periodic changing value of the swap. Often this is delivered as title transfer.
2. **Fee collateral** – This is simply the collateralisation of the fee agreement between the parties connected to the transaction. The structure will need to reflect the interests of all parties. Collateral structures are also used to ring fence assets as a precaution against the insurer failing, so that although the insurer can invest assets with autonomy, those assets are segregated and owned by the first party – for example – a pension scheme. This means that, in the event of a distressed scenario, the pension scheme can recover those assets rather than take its chances as a creditor alongside others.

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Collateral solutions can end with three outcomes:

The arrangement is no longer needed, often as the result of novation to a buy-in or -out.

The end of the collateral process has been reached. The assets committed in a collateral arrangement are no longer required and can be drawn down.

The counterparty goes into default, but assets are protected.

There are several key components of collateral management:

ACCOUNT SET UP

It is worth noting that the pricing and preparing of assets for a collateral transaction takes time. Additionally, the underlying insurance contracts are often price-sensitive. Starting the process as far in advance as possible and bringing all the parties together as early as possible, means you are more likely to be in a strong position, particularly if you later need to react to favourable pricing.

You will need to consider where your collateral is coming from, and how you will provide it. One consideration will be what type of account you open. Segregated Collateral Accounts (SCAs) are different from standard custody accounts, in that they allow clients to hold cash and securities that are pledged as collateral away from their counterparty. Unlike standard accounts, assets in a SCA have been pledged to a third party that can instruct certain movements from the SCA under a triparty Account Control Agreement (ACA). If either party defaults on their commitment, one party can be granted exclusive control of the assets in the SCA. This mitigates risk if something goes wrong.

THE OPERATIONAL SET UP

Operationally, understanding the mechanisms of the collateral arrangement is really important. How collateral will be paid, to who and where from, as well as how independent valuations and calculations are made, are all key.

When thinking about asset movements, there are challenges around 'eligible versus available' assets, for example. Assets that are easy to move in a collateral agreement are often the best and most liquid ones, whereas a lot of the available assets are actually less easy to transfer, but will not meet exposure or distribution profile criteria, for example. There might also be other calls on eligible assets if for instance they are managed as part of an LDI/CDI mandate.

Another consideration will be timeframes, and what type of transaction is being undertaken. In any longevity transaction, for example, lifecycle management is an important factor, and will depend on how comfortable stakeholders are with their counterparties. Longevity can have a very long time horizon, and there will be a premium associated with that, which will need to be paid to the insurer.

Reporting and monitoring are also important to ensure that asset movements comply with agreed valuation protocols and/or legal agreements. Ongoing valuations of assets for reporting are an important component of the process, and all parties will need to consider aspects such as how frequently assets should be valued, whether on a daily, monthly, quarterly, or other basis, particularly in the context of interest rate and inflation risks.

THE LEGAL SET UP

Once accounts have been set up and operational considerations have been addressed, legal agreements will need to be put in place. These agreements will include account control and custody agreements, as well as collateral and compliance agreements.

FROM THEORY TO IMPLEMENTATION

Longevity collateral structures, while traditionally used by pension schemes as part of a de-risking strategy, are useful for all parts of the fund management business. Northern Trust has been supporting its clients with the execution of their collateral transactions in a variety of different ways, from asset reporting, safekeeping, valuation, risk management, and the movement of collateral. In addition, Northern Trust has extensive experience acting as collateral manager and associated custodian specifically in longevity insurance transactions for a number of clients, all of whom have varying needs as illustrated by the following case studies:

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1 FEE COLLATERAL – SEGREGATED ACCOUNT

What was the issue?

A European pension scheme chose to de-risk its liabilities (retirement payment obligations to its employees past and present) by entering into an insurance contract with a European pension insurer. In this case the entity providing the insurance (in exchange for a fixed fee) would pay the pension scheme regular amounts periodically to meet their obligations.

The pension scheme required a segregated account to hold collateral representative of the "fee arrangements" exchanged between the two parties as well as an agent to move collateral to and from that account when needed. In addition, it needed a legal and operational framework in place to cover the scenario of the insurance provider defaulting on its payment obligations or becoming insolvent. This would give the pension scheme "exclusive" control over the assets in the collateral account.

How was it resolved?

A tri-partite account control agreement was entered into between the pension scheme (the secured party) the insurance company (the counterparty) and a custodian bank. The custodian bank was appointed to establish and maintain the collateral account in addition to performing a passive collateral management service. Fee related collateral subject to the terms of the account control agreement was placed into these accounts at the pension scheme's instruction. The pension scheme derived the benefit of having achieved its de-risking objective whilst mitigating its risk exposure against the insurance entity it had hired.

2 ACTIVE COLLATERAL MANAGEMENT SOLUTION FOR EXPERIENCE COLLATERAL

What was the issue?

A European pension scheme wanted to address longevity risk within its plan by entering into a longevity swap arrangement with a global insurer. The global insurer in turn intermediated 100% of the risk on a 'pass-through-basis' to a global reinsurer who provided reinsurance capital. The transaction objective was to protect the pension scheme against the risk of its covered members, or their dependants, living longer than expected. It was tailored to balance the trustee's key requirements of maximising future flexibility, control and security whilst minimising cost, governance and operational burden. This required a collateral structure in place vis a vis the de-risking contract relationship between the pension scheme and its ultimate counterparty (the reinsurance company). A custodian bank was appointed to open and hold assets in a collateral account and provide active collateral management. This involved determining which assets needed to be moved into and out of the segregated collateral account via title transfer.

How was it resolved?

A tri-partite legal agreement was entered into between the pension scheme and the reinsurance company (the counterparty) and a custodian bank and the structure launched successfully. In this case it involved active collateral management movements based on both experience swap collateral movements (pegged to the changing valuation of the swap because of pensioners living longer or shorter than original assumptions) and fee collateral movements. Under the provision of active collateral management services, the pension scheme also benefited from the collateral service provider to support the various operational elements. These encompassed determining when to move collateral, how much to transfer and selecting the assets to transfer such that they met the eligibility rules and complied with the pension scheme's asset utilization objectives. The pension scheme successfully achieved its objective of mitigating the longevity risk of the scheme whilst reducing its costs.

3 ACTIVE COLLATERAL MANAGEMENT SOLUTION FOR EXPERIENCE COLLATERAL – **WITH RETROCESSION**

What was the issue?

One of world's largest reinsurance companies entered a longevity de-risking contract with a European pension insurer. The reinsurance company also wanted a solution to retrocede (onward transfer) a portion of the risks it took on from its client to a European insurance company. It required an experienced custodian bank/collateral manager to hold the collateral assets in a secure account and actively manage the collateral movements between the four parties via title transfer.

How was it resolved?

A legal agreement was entered into which covered all four parties' roles. The structure involved active collateral management movements based on both experience swap collateral movements (pegged to the changing valuation of the swap because of pensioners living longer or shorter than original assumptions) and fee collateral movements as well as onward moments to the life insurance company. As in case study 2, the pension scheme benefited from active collateral management services to support operational elements such as collateral movement triggers, transfer amounts and asset selection to meet eligibility rules and comply with scheme's asset utilisation objectives. The reinsurance company successfully achieved their objective of an appropriate collateral management solution for their longevity book of business.

IN SUMMARY

Collateral structures do not have to be prohibitively expensive, nor do they have to have a myriad of protections unless those protections are required for a complex transaction. The process of longevity collateral management can be simplified by early engagement, preparation, and by the management of all parts of the project lifecycle.

ABOUT NORTHERN TRUST

Northern Trust's EMEA Asset Owners Group provides services to more than 330 clients with collectively more than $2.54 trillion (as of 31 December 2021) in assets under custody across Europe, Middle East and Africa, (EMEA). It is focused on supporting the evolving front and back office needs of pension funds, insurance companies, non-for-profit organisations, central banks and sovereign wealth funds and other inter-governmental agencies across EMEA.

Northern Trust Capital Markets' Securities Finance offering provides a suite of integrated capabilities across securities lending and borrowing, financing and liquidity and collateral solutions that allow you to drive greater portfolio optimisation.

FOR MORE INFORMATION

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COLLATERAL STRUCTURES:

Key Considerations Checklist

- [x] Is a longevity collateral solution required?
- [x] What types of accounts are needed to hold the assets that mitigate against future risk?
- [x] Where is the collateral coming from?
- [x] Who will value the liability; is an independent check required?
- [x] What is the lifecycle/time frame of the structure?
- [x] How frequently should assets be valued?
- [x] Which stakeholders and third parties are required to complete the transaction?

1. Source: *De-risking Report 2022*, Willis Towers Watson, January, 2022.