Network for Studies on Pensions, Aging and Retirement

INTERNSHIP PROJECT PROPOSAL

Title	**NN-02: Management of balance sheet liquidity risks for pension funds**
Dutch language mandatory (strikethrough, or delete)	No
Type of internship[1]	As regular and as extended master internship
Internship period	Flexible
For students in	MSc Finance, MSC QFas, possibly MSc EME
Organization and (sub)section	NN Investment Partners, Integrated Client Solutions

Recent changes in market regulation (such as central clearing of interest rate swaps) and the current low yield environment have created new challenges in interest rate hedging for pension funds which are difficult to address within a conventional risk and return framework. The aim of this project is to create an enhanced framework which enables a more precise trade-off between generating additional yield through investing in a wider set of potential hedging instruments and the inherent liquidity risks these instruments may introduce.

Rather than measuring risk as the dispersion of asset only investment returns, liquidity risks need to be assessed within a client specific balance sheet context as well. The low yield conundrum has driven many pension funds to invest in less liquid fixed income investments, such as mortgages and private debt. At the same time, the introduction of central clearing of interest rate swaps creates additional liquidity needs under stressed market conditions, typically addressed by investing in cash and money market funds (which offer daily liquidity, but not necessarily for the entire portfolio). As a result, liquidity risk management has become a central theme in pension fund investing.

The results of this project will include 1) an overall measure of pension fund liquidity risk on a balance sheet level, 2) an assessment of liquidity risks within the available instruments such as mortgages, private debt and money market funds, 3) a risk framework encompassing liquidity risk stress scenarios and 4) an optimization or simulation approach to derive the optimal hedging strategy within this liquidity risk framework.

Literature:

Acharya and Pedersen (2005), “Asset Pricing with Liquidity Risk”, Journal of Financial Economics 77.

[1] TiSEM now also offers the possibility of an extended master. For more information, see the “Infopakket Extended Master.” An extended master follows a fixed program: Company traineeship March-October 2017; Company assignment and Master thesis October 2017-January 2018

De Roon, Guo and Ter Horst (2009), “Being Locked Up Hurts”, Netspar Discussion Paper 08/2008 – 058.

Xiong, Sullivan and Wang (2013), “Liquidity-Driven Dynamic Asset Allocation”, The Journal of Portfolio Management, Spring 2013.