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Single Supervisory Mechanism Asset Quality Review (AQR): the case of the Collective Provisions Challenger model - How was the AQR executed? With special emphasis on the methodology behind the challenger model used to enable a quantitative challenge of the Bank's provision models.

Francesca Armandillo, Martijn Schrijvers (DNB)

In the AQR the majority of assets on the balance sheet of the bank in scope were evaluated. In this presentation will be given an overview how this was done. Furthermore, for the purposes of the AQR a challenger model has been developed by DNB/Blackrock to estimate provisioning levels based on point-in-time data. In this session we will, as a case, discuss the methodology behind the challenger model which was developed according to ECB specifications to calculate provisions for both retail (collective provisions) and non-retail (IBNR provisions) portfolios of Dutch Banks in scope of the AQR.

Behavioural liquidity risk modelling

Eelco Rietsema, Maurits Malkus, Bauke Maarse (Deloitte)

In this presentation we will discuss what liquidity risk is, why it is important for financial institutions (especially banks) and why a behavioural approach is needed. We will discuss a general framework that can be applied in building behavioural models and touch upon a number of challenges that can be encountered in the modelling process. Finally, we will go deeper into a specific example.

How to discount your liabilities like a quant

Jan Rosenzweig (FinCad)

Discounting liabilities at market value was controversial when it was introduced with IFRS 13 and FAS 157, and it remains counter-intuitive today. It leads to PnL gains as an entity's credit position worsens, and its liabilities deteriorate faster than its assets. Ultimately, it sees an entity is at its most valuable when it is in default.

This talk will try to address some of these issues through simple bottom-up modelling of assets and liabilities in simple project finance SPVs, discuss the implications to liability valuation in general, and go over some simple, value-maximising ALM strategies in the context of managing risk of own default.

The talk will consist of three parts:

(i) How to price project SPVs like a quant
(ii) How to discount your liabilities like a quant
(iii) How to perform ALM like a quant.

Thy customer, where are thou?
KPMG's Indoor (Wi-Fi) Tracking, a big data approach: From simulation to implementation.

Jan Amoraal (KPMG Advisory N.V.)

How can we improve and make the shopping experience more convenient and enjoyable for our customers? What are popular or less popular products? Why is a (remodelled) section of our store underperforming? These are all questions on the minds of retailers who want to provide the best possible service to their customers, e.g. by reducing waiting times at cash registers, to improve the layout of a store, and ultimately to gain insights in the customer decision journey. To answer these questions and more KPMG developed an indoor (Wi-Fi) tracking system that enables retailers to track and monitor their customers in real time throughout their store. In this talk we will we give an overview of the theory behind tracking, the implementation and calibration of the system, and some preliminary results of a currently running Wi-Fi tracking system.

HPC aspects of the valuation of complex insurance guarantees

Jok Tang (VORtech) and Denys Semagin (ING Re).

In this talk, we will consider the HPC aspects of a typical Monte-Carlo simulation for the valuation of unit linked insurance guarantees such as variable annuities. The model including its background and relevance will be described. Different HPC solutions will be discussed which can be used to reduce the computational time for the valuation of the embedded options and their sensitivities to market risk factors. We mainly consider Windows HPC Server and GPUs. Those are compared in more detail and suggestions for further improvements will be given.

Risk Management in a Low-Latency Trading Environment

Robert van Gulik (Optiver)

Optiver is a proprietary trading firm that is active on a global scale as a liquidity provider on all major derivatives markets. Most of the orders and quotes that are sent to the different exchanges are generated by automated trading systems. These trading activities put extra requirements on the traditional market risk management framework. These activities also introduce a number of new risks that are at the intersection of market risk and operational risk. In this presentation an overview of the risk management frameworks within Optiver will be discussed.

Open source risk modeling

Philippos Papadopoulos (OpenRisk)

Open source and modern collaborative paradigms have proven remarkably successful for solving large scale problems and have already transformed important areas of economic activity. In this talk I will first do a broad review of this fascinating development: what "open source" means from a legal, organizational, technical, economic and human perspective. I will then move on to discuss the current role of open source in the broader financial services sector and demonstrate why there is a serious case for the adoption of the open source model by the risk modelling community.

The EBA stress test 2014 – Stressing assets, liabilities and people

Paul Wessels and Erik Rood (KPMG Advisory N.V.)

The introduction of the Single Supervisory Mechanism (also: Banking Union) marks a new phase in the EU integration. Starting from the 1st of November 2014 some 120 banks within the Eurozone will be supervised directly by the ECB. In preparation of the SSM, the relevant banks have been required to participate in a review of their balance sheets (the Asset Quality Review) and needed to compute the capitalization impact of a baseline and stress scenario going forward (the EBA Stress Test).

In this presentation, we will explain the high-level set-up of the EBA Stress Test and the areas where banks were required to develop their own models and estimates (according to EBA guidelines). Based on our experience in helping banks with the EBA Stress Test, we give some examples of the models and estimates used by banks to comply with the EBA stress test. We also discuss the impact of these own models and estimates on the outcome of the Stress Test. Finally, we give an overview of the results available, the feedback from the sector on the stress test and conclude with the realized and expected impact on the banks.

Prudent valuation and Additional Valuation Adjustments

Dirk Scevenels (ING)

In March 2014 EBA released its final version of the Regulatory Technical Standards for prudent valuation and AVA (additional valuation adjustments). We will analyze the content of these standards and highlight some of the implications for a financial institution.

A case study on the integration of Credit and Interest Rate Risk in the Banking Book

Erik Vijlbrief, Pim Stohr (Zanders)

The presentation will start with an overview of the best market practice with respect to Interest Rate Risk in the Banking Book (IRRBB) based on a market survey performed by Zanders. This will be placed in the context of the discussions within the Basel Committee to migrate IRRBB-calculations to Pillar 1. Special attention will be paid to the key elements in best market practice interest rate modelling as well as to the elements for which there seems to be no market consensus.

The body of the presentation will concern a case study, focused on credit and interest rate risk in the banking book. The goal of the analysis is to determine the interaction between those two risk types and to determine whether an integrated approach will result in an improved risk measurement compared to a silo approach.

In the case study, interest rate risk estimation is performed using an earnings at risk method under a variety of interest rate scenarios. The earnings are simulated by considering interest rate and credit risk simultaneously. In the simulation, counterparty credit quality is dependent on the interest rate scenario by using a Collin-Dufresne Goldstein implementation. In this way, the risk driving factors such as default probabilities can be defined.

This integrated approach is compared with standard credit and interest rate risk models. In this analysis, components such as credit spread risk, prepayments and credit losses are assessed separately to determine influential factors in modelling interest rate and credit risk in the banking book. The results of the case study can also be used when determining the required economic capital for a banking book portfolio (considering both interest rate and credit risk).

The impact of OIS discounting on Libor-benchmarked liabilities

Giampietro Carpentieri (Cardano)

Before the practice of OIS discounting became widespread, hedging Libor benchmarked liabilities was straightforward. A replicating portfolio (or as close to replicating as possible) of Libor swaps could be set up at inception and left unaltered, unless the liabilities cash flows changed or some specific curve strategies were pursued.

With OIS discounting, hedging Libor benchmarked liabilities is less obvious, as one has to deal with the Libor-OIS basis exposure, either passively or actively. The possible sudden increase of the Libor-OIS basis during periods of market stress and the lack of a very liquid OIS market are cause of concerns for LDI managers. Not to mention all the difficulties associated with updating systems and operational processes.

In the presentation we will investigate the impact of the Libor-OIS basis on Libor-benchmarked liabilities. In the first part the framework in which the liabilities are hedged is discussed. Then, the impact of OIS is assessed by considering generic liabilities hedged over two historical one-year periods. In order to take care of the basis, passive as well as active strategies are discussed. The analysis is also extended to inflation indexed liabilities. Finally, the impact of the Libor-OIS basis is compared to the impact of very common hedging assumptions.