Benchmarks in transition (LIBOR and overnight)

With the increased expectation of some IBORs discontinuation, the overnight benchmark changes and the increasing regulatory requirements related to benchmarks, a clear quantitative finance perspective on the impacts for derivatives is becoming paramount. The recent regulations include the mandatory Variation Margin (VM) and the EU Benchmark Regulation (BMR). VM and the related remuneration of collateral means that overnight benchmarks are now ubiquitous. The EU BMR will have severe impacts on derivative market from January 2022. For all major currencies, new benchmarks have been proposed and the markets are in a transition phase. Each transition has its own idiosyncrasies and a common transition approach cannot be expected. On the EUR side, a recalibration approach with clean discounting has been introduced for EONIA to ESTR transition since 2 October 2019. On the USD side, two overnight benchmarks exists in parallel: SOFR and EFFR. The existence of multiple overnight benchmarks generate not only discounting adjustments but also "convexity" adjustments between similar instruments with different collateral rules. Regarding IBOR fallbacks the "compounding setting in arrears with 2 days shift" adjusted rate and the "historical median spread with a 5-year look-back period" have been selected. The historical approach has created and still creates value transfers. The overnight compounding in arrears change significantly the risk profile of the legacy instruments. Moreover the instruments generated by the fallback are not OIS-like and have hidden and unmanageable risks. At the same time new instruments are created on the new benchmarks while the liquidity associated to them is progressing at different speeds in different currencies. Those new benchmarks are themselves in competition with new comers like AMERIBOR, term rates or Bank Yield Index.

In the **workshop,** all those issues are presented in detail, based on quantitative finance analysis. Historical data is used to illustrate the impacts. All the aspects presented have been implemented in production grade libraries by the lecturer and the analysis is based on those implementations.

Prerequisites for the attendees: Understanding of the main interest rate derivatives (swaps, OIS, FRAs). Familiarity with the pricing of derivatives.

Workshop Agenda

- Cash-collateral discounting and overnight benchmarks
    - The standard collateral results and their exact application
    - What is hidden behind OIS discounting ; Bond collateral
    - Impact of new benchmarks on valuation
- Overnight benchmark transition
    - SOFR / ESTR / SONIA
    - Futures on overnight benchmarks
    - Alternatives to SOFR in USD
    - Current Market liquidity, cleared v bilateral
- Brief history of transitions
    - LIBOR underlying and manipulation
    - Market liquidity
    - EU/UK Benchmark Regulation
- End of IBORs and fallback procedures
    - ISDA consultation results for derivatives
    - The adjusted rate: compounding setting in arrears.
    - Development of term rates
    - The adjustment spread: historical median approach
    - Value transfer: transfers already incorporated and transfers to come

- Presenting the fallback in the language of quantitative finance
- New conventions for bonds, loan and securitisation. Fallback for bonds.
- ECB consultation on EURIBOR (Bonds, loans, etc.)
- LIBOR futures fallback
- What will happen to ICE Swap rates?

- ISDA Protocol
  - Bilateral legacy trades
  - Pricing bilateral trades and value transfer
  - Non-adherance

- Alternatives to fallback and protocol
  - Fallback adoptions (or not), CCP divergence from ISDA definitions
  - New term and credit benchmarks in USD
  - Not using any fallback

- Risk management of transition.
  - Current adjustment spreads
  - Delta risk through the transition
  - Impact on curve calibration
  - Vanilla becoming exotics: cap/floor
  - Value transfer and arbitrage opportunities
  - Multi-curve: quit or double?
  - Valuing derivatives in a two collateral world
  - Hidden convexity adjustments in different transition processes
  - Impacts on swaptions