Discontinuation of TOIS fixing and replacement with SARON – impact and recommendations

Introduction

The National Working Group on CHF Reference Rates (NWG) is the key forum to foster the transition to SARON and to discuss the latest international developments. The NWG is open to any market participant and makes recommendations based on consensus to facilitate common views among market participants and to foster the evolution of market standards. The NWG will cease to exist once the transition to SARON is materially completed.

On November 15, 2016, ACI Suisse announced the termination of the TOIS fixing with effective date December 29, 2017.[1] Meanwhile, the NWG recommended that SARON shall replace the TOIS fixing as a benchmark prior to December 29, 2017.

Prior this decision, intensive work by the NWG led to reforms in the TOIS fixing.[2] However, all efforts did not lead to an increase of the robustness of the fixing. The continuously decreasing size of the panel and the lack of transactions underpinning the fixing affirmed the non-sustainability of the TOIS fixing. In 2015, the NWG analyzed the potential implementation of a new unsecured reference rate anchored in transactions and quotes and concluded that there is no broad and clear market support for it. At the beginning of 2016, the NWG decided to consider issues arising in the transition from TOIS fixing to SARON, to assess reforms for SARON and to reach out to a broader group of market participants. After extensive discussions in the meetings of the national working group and in a broader market outreach carried out during summer 2016 no major obstacles were identified and the transition timeline was supported.

The aim of this document is to describe the impacted areas of the transition and to give guidance to market participants in order to minimize contract frustration risk to the greatest extent possible.

Impacted areas

There are two contract types that are impacted by a discontinuation of the TOIS fixing and subsequent replacement with SARON:

1. Contracts that are directly linked to the TOIS fixing, such as CHF Tomorrow/Next Indexed Swaps with maturity dates beyond December 29, 2017 and

2. All CHF cash-collateralized derivative contracts not directly linked but currently using the TOIS fixing for remuneration of collateral posted/received (i.e., the so called Price Alignment Interest, PAI).

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[1] http://www.acisuisse.ch/website/var/assets/aci-suisse-statement-tois-15nov2016.pdf.

[2] http://www.snb.ch/en/mmr/reference/overview/source/overview.en.pdf

Guidance to market participants

1. Tomorrow/Next Overnight Indexed Swaps (TOIS) with maturity beyond December 29, 2017

For all TOIS with a maturity date beyond the discontinuation date of the TOIS fixing, the NWG recommends that TOIS be restricken to reference SARON from January 1, 2018, leaving all other terms (spread, maturity, fixed rate) unchanged. The reason for this being that these basis swaps are primarily used to hedge basis risk exposures resulting from cash-collateralized derivatives. This basis risk will also change with the change of the PAI for collateralized derivatives from the TOIS fixing to SARON, i.e. the change in the reference rate to calculate interest on collateral offsets the change in the reference rate of the swap, leaving all other terms and the economics of the hedge unchanged.

2. Rationale for a compensation payment of zero by switching to SARON for remuneration of collateral

The second set of contracts do not need to be altered, as none of the contractual cash flows will change. However, the PAI will change as the TOIS fixing falls away. There are several arguments to justify a compensation payments of zero by switching to SARON for the remuneration of collateral.

The theoretical arguments are as follows. Collateral is posted to ensure derivative present value exposures are counterparty risk free. Therefore, the PAI should reflect the risk-free overnight rate. The risk-free rate should also be used for discounting collateralized derivative cash flows. While the TOIS fixing has been used as a proxy for the risk-free rate historically, due to a lack of feasible alternatives, it is suggested to use SARON after the TOIS fixing falls away. SARON may even be a more appropriate proxy for a risk-free rate as it is a secured overnight rate and therefore nearly free of counterparty risk. Additionally, as the rate is used for the compensation of posting collateral, it is intuitive to use a repo-rate. Hence, the rationale of a compensation payments of zero is based on the fact that changes in valuation (and P&L) following the TOIS fixing-SARON transition are the consequence of a (known) weakness of the valuation model used, rather than an effect of the transition.

Furthermore, there are practical arguments for the same rationale. First, as the SARON swap market does not exist, the determination of any non-zero compensation payment is nearly impossible. Second, compensation payments have not been applied in former, similar situations where the valuation methodology has been updated.[3] Third, after extensive discussions in the meetings of the national working group and in a broader market outreach carried out during summer 2016 the rationale for a compensation payment of zero by switching to SARON for the remuneration of collateral has been widely supported by market participants.

Hence, the NWG supports the rationale of a compensation payment of zero between counterparties for cash collateralized trades in which the rate for the calculation of the PAI will be altered.

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[3] Such as the change from single-curve valuation to multi-curve valuation to introduce the LIBOR-basis or the introduction of collateral based discounting.

Appendix: Model weakness by using TOIS fixing

The PAI reflects a proxy for the overnight funding cost for collateral and thus a proxy for a risk-free overnight rate. It is debited from the receiver and transferred to the payer to cover the loss of interest on posted cash collateral. Following a "no arbitrage" argument, it seems intuitive to use the PAI for discounting cashflows of collateralized derivative transactions. However, the Present Value (PV) of a collateralized cashflow equals the collateral-discounted cashflow if, and only if, the PAI is the "risk-free" rate[4]. For every other collateral rate the spread over the risk free rate leads to the so called Collateral-Value Adjustment (CollVA) term in the Present Value formula which accounts for the cost of collateral, i.e.:

$$PV(\text{Cashflow}) = \text{Disc}_{coll\_rate} \cdot \text{Cashflow} + \text{"CollVA"}^5$$

In a first approximation the CollVA term will often be neglected in the calculation of the PV to simplify the valuation of derivatives. However, by replacing the TOIS fixing with SARON, the value of collateral-discounted cashflows changes as the discount curve used changes from TOIS- to SARON-based yield-curves. Therefore, an instantaneous mark-to-market impact will occur if the present value is calculated via collateral-based discounting without any valuation adjustments (as can be seen above). As the trade reaches maturity, such a mark-to-market impact will pull-to-par and will be offset by the net interest income from the collateral posted/received, which will also change due to the adjustment of the PAI. However, any mark-to-market impact due to the change in discount curves will be compensated by a corresponding change in the valuation adjustment (CollVA), leaving the present value unaffected by the change of the PAI. As a result, a change in the market value of collateralized derivatives is a manifestation of a model weakness and not an extrinsically induced effect of a TOIS-SARON transition. This economic explanation strengthens the rationale of the NWG for a compensation payment of zero when switching to SARON for the remuneration of collateral.

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[4] I.e. the valuation is done in a risk-neutral world.

[5] This formula is a slightly simplified version but shows the essential components of the correct present value calculation in the „non-risk-neutral" world.