

Equity Linked GIC Pooling Approach

Guaranteed investment certificate provides investors a guaranteed interest rate for a fixed amount time. Interest is accrued daily on GIC. Accrued interest will be reported annually.

Payoff for equity GIC requires a dynamically created basket such that the weight factors incorporate a division by the spot levels on the issue date, which converts the payoff to one based on a basket of comparative returns (rather than basket returns). To automate feeds on a daily basis we will need to create new baskets on a daily basis.

The equity GIC product has the property that strike levels are the closing index levels on date of issue. The proposed specification for pooling employs poolidents with the same maturity, issue date, and index levels.

The intent of construction of these pools is to create a unique, permanent, Pool identifier. This pool identifier should incorporate the initial index level observation date as a stamping date for example.

A necessary element of this designee is that every equity GIC in the pool should fix strikes on the same date, have the same issue date, participation rate, index weights and index levels. Backdated deals should be booked to join an existing pool with the same GIC type, maturity and fixing date. Early or partial redemptions should be recorded as changes to notional for existing pools.

The Pooling Criteria is the process of grouping like securities for the purpose of creating a pseudo-GIC to efficiently hedge the total balance. The new process will group a portion of the GICs, greater than 3 million, into pools and leave the remaining GICs in Unallocated pools.

GICs exist on four source systems; IPS (non-registered), RRSP (registered), RRIF (registered) and SIT (registered and non-registered).

Pooling is an integral part of the product book approach to managing the hedging and funding activities of the retail bank. Both the Canadian and US governing accounting bodies acknowledge pooling as a tool for the application of hedge effectiveness. This section deals with the rules surrounding pooling as well as the practical application of pooling for our hedging and testing of hedge effectiveness.

Once the preliminary pool has been constructed based on the selected qualitative traits, each item in the pool must pass the quantitative test in order to remain a constituent of the pool. The quantitative criterion is that the proportionate change in fair values of each item to be included in the pool must be expected to be within 10% of the overall change in fair value of the pool attributable to the hedged risk.

The pooling process for the existing populations will be somewhat different from ongoing pooling. As part of the 'First Pool Ident', all certs with the exclusion of non-redeemable certs with a maturity ≤ 1 yr will be pooled into 3 month maturity buckets and for redeemable certs with a maturity < 1 yr a one month maturity bucket will be used. For an ongoing basis monthly maturity bucketing will be used.

The Pool Ident, at the certificate level, is generated based on the following characteristics, where the "First Pool Ident" process is grouped by the Maturity Month with 3-month intervals.

The "First Pool Ident" process will be run at the inception of the pooling logic with the purpose of grouping the existing GIC portfolio.

The “New Pool Ident” process will be the process used to allocate GICs as new and renewing GICs occur in the portfolio. This process will be executed each day during the regular processing routine. The “New Pool Ident” process will follow the same logic as the “First Pool Ident” process with the following changes; Group by Maturity Month (1 month intervals not 3 month).

Pools will be designated as permanent pools when we wish to stabilize them and have them available for entering into a specific hedging relationship. As a part of the “First Pool Ident” process, pools that are over \$5 million will automatically be stamped as permanent pools.

On an ongoing basis, at each month end, the system will review all temporary pools and if the balance of the temporary/combable pools is equal or greater than \$10 million, we will stamp the pool as a permanent pool.

All new and renewing GICs will automatically become part of combable pool. Once these temp pools have been created the Middle Office book runner, with the authorization of Treasury, will have the option to flag them as 'hedgeable' (permanent pool) or wait till the system combs all the combable pools daily, and stamps temporary pools with balance =>\$10Million as permanent pools.

GICs that have a term of less than three months will not be eligible for inclusion in permanent and combable pools, and are thus flagged as being “non-combable pool”. This means that these instruments are not considered in the creation of temporary pools described above.

Generally speaking, an event that would give rise to re-transfer pricing (see <https://finpricing.com/lib/FiBond.html>) would also give rise to removal from the pool and vice versa. There are a couple of important exceptions to this rule. For example, in the event that the

customer rate changes (common in the first couple of months after origination because of administrative misunderstandings) the transfer rate must change but the instrument should remain a part of the same pool.

Pools will occasionally have to be unwound for a variety of reasons such as inaccurate consumer behavior assumptions leading to low hedge effectiveness ratios and frequent rebalancing, etc.

The process of unwinding a pool would consist of

- 1) placing a written request to treasury Technology to de-designate the pool and send the certificates back to pool
- 2) unwinding the associated hedges
- 3) generating the appropriate terminal accounting entries, and
- 4) at the end of the next year, removing the details from the pool detail history table.