

CPR&CDR Alpha ATOMS™ Index

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CPR&CR Alpha's Available TBA-Only MBS Supply Index (ATOMS™) is a US mortgage backed securities tracking index that market participants can use to benchmark the composition and performance of freely-tradable generic TBA-eligible fixed rate MBS pools guaranteed by Fannie Mae (FNMA), Freddie Mac (FHLMC), and Ginnie Mae (GNMA). The ATOMS™ Index is comprised of TBA-eligible MBS pools that are NOT officially held from the overall secondary market supply by central banking authorities, committed to structured investment trusts, or would be traditionally traded as specified pools. Slated to be introduced in 2015, the ATOMS™ Index reflects the portion of TBA-eligible outstanding pools that could realistically be obtained so that market participants will have a practical, real-world way to track and replicate the MBS market's performance.

Index Securities Inclusion/Exclusion Guidelines

Currency Denomination: All securities' par values, principal, and interest are exclusively in US Dollars.

Index Pool Composition: ATOMS™ pool constituents will be selected from fixed-rate US Agency MBS pools that are TBA-eligible.

- Quality - US agency MBS should continue to have at least the same rating as US Sovereign Debt.
- Coupon - Fixed-rate MBS should be in 50bps increments, as with prevailing TBA coupon ranges.
- Security Types –
 - GNMA I&II, FHLMC, FNMA fixed rate MBS
 - Whole and portions of pools that are TBA-eligible for 30-year and 15-year delivery
 - Exclusions:
 - Pool amounts pledged to Collateralized Mortgage Obligations (CMOs) and/or IO/PO structures
 - Pools amounts held and publicly disclosed by central banks such as the Federal Reserve as part of long term asset purchase programs
 - FNMA mega, FHLMC giant, and GNMA platinum pools
 - ARM MBS
 - Any special program pools that are not eligible for delivery into fixed-rate TBAs

Index Frequency: Index level and returns will be calculated at the end of each month using actual cashflows and composition changes that occur daily during each calculation period.

Reinvestments: Intra-month security cashflows contribute to monthly index return and are reinvested into the index for calculations at the end of each month to reflect total returns over each successive monthly period.

Index Pool Pricing Guidelines

Index included pools and portions of pools will be marked daily. Valuation sources will include:

- TBAs prices will be for the current month standard settlement date that is traded (as prescribed each month by SIFMA). Pricing sources will include Bloomberg aggregate prices as well as TRACE TBA trade prices as publicly reported by SIFMA. As the Index will be constructed of predominantly generic TBA-eligible, tradable pools, all included securities will be priced at the appropriate TBA price level.
- Price quotes for each day will be as of 3pm EST (1pm EST on early market closing days) using either actual execution prices (TRACE) or bid-side market levels from reliable pricing sources. For month-end, the price as of the last business day of the month will be used.
- Pools to be included and priced within the Index will have been issued within at least the valuation month and will have a factor for that specific trading month.

Index Return Calculation Guidelines

Changes in the Index on a monthly, and other prescribed observation periods, will reflect the aggregate total return of the underlying constituent pools' total returns over the relevant observation periods. The ATOMS™ components of total return that are aggregated for each security will be:

- Market Value Return – The aggregate difference in the same-day settlement market value of Index constituents from the beginning of the observation period versus the end of the period will constitute the portion of total return due to market value changes.
 - $\text{Market Value Return} = (\text{Period Market Value Change}) / (\text{Beg Period Value})$
- Coupon Return – The amount of aggregate coupon accrued that is due and/or paid based on the observation period will constitute the portion of total return due to coupon payments.
 - $\text{Coupon Return} = (\text{Period Coupon Accrued and/or To Be Paid}) / (\text{Beg Period Value})$
- Paydown Return – The gain/loss from monthly scheduled and unscheduled principal payments due to security prices that are above or below par.
 - $\text{Principal Paydown Return} = [(\text{Premium/Discount}) * (\text{Paydown Amount})] / (\text{Beg Period Value})$

