



Index Definitions

VISTA CRT Indices™ are financial benchmarks based on daily pricingⁱ of Connecticut Avenue Securities (CAS) and Structured Agency Credit Risk (STACR®) debt notes issued by Fannie Mae and Freddie Mac, respectively. Collectively, these securities are known as Credit Risk Transfer (CRT) securities. CRT securities reference the payment, delinquency, and default performance of a designated group of mortgage loans guaranteed by Fannie Mae and Freddie Mac (GSEs).

Each index is expressed in terms of Index Value, Dollar Price and Discount Margin (DM). The Index Value represents the accumulated interest, principal repayments, defaults, and price changes since the inception of the index. The initial Index Value at inception is 100.000. The underlying values of CRT securities in each index are rebalanced monthly to reflect principal and interest payments. The Dollar Price and DM reflect the average of composite CRT security prices and DMs in the index, weighted by the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday.

2018 Vintage Index Definition

- 26 securities in total
 - All 2018 issued CAS 1M2, 2M2, 1B1, and 2B1 securities (16)
 - All 2018 issued STACR® DNA M2 and B1, HQA M2 and B1 securities (10)
- 2018 Vintage Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2018 Vintage Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2019

2018 M Index Definition

- 13 securities in total
 - All 2018 issued CAS 1M2 and 2M2 securities (8)
 - All 2018 issued STACR® DNA M2 and HQA M2 securities (5)
- 2018 M Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2018 M Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2019

2018 B Index Definition

- 13 securities in total
 - All 2018 issued CAS 1B1 and 2B1 securities (8)
 - All 2018 issued STACR® DNA B1 and HQA B1 securities (5)
- 2018 B Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments

- 2018 B Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2019

2018 High LTV Index Definition

- 10 securities in total
 - All 2018 issued CAS 2M2 and 2B1 securities (6)
 - All 2018 issued STACR® HQA M2 and B1 securities (4)
- 2018 High LTV Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2018 High LTV Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2019

2018 Low LTV Index Definition

- 16 securities in total
 - All 2018 issued CAS 1M2 and 1B1 securities (10)
 - All 2018 issued STACR® DNA M2 and B1 securities (6)
- 2018 Low LTV Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2018 Low LTV Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2019

2017 Vintage Index Definition

- 30 securities in total
 - All 2017 issued CAS 1M2, 2M2, 1B1, and 2B1 securities (18)
 - All 2017 issued STACR® DNA M2 and B1, HQA M2 and B1 securities (12)
- 2017 Vintage Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2017 Vintage Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2018

2017 M Index Definition

- 15 securities in total
 - All 2017 issued CAS 1M2 and 2M2 securities (9)
 - All 2017 issued STACR® DNA M2 and HQA M2 securities (6)
- 2017 M Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments

- 2017 M Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2018

2017 B Index Definition

- 15 securities in total
 - All 2017 issued CAS 1B1 and 2B1 securities (9)
 - All 2017 issued STACR® DNA B1 and HQA B1 securities (6)
- 2017 B Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2017 B Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2018

2017 High LTV Index Definition

- 14 securities in total
 - All 2017 issued CAS 2M2 and 2B1 securities (8)
 - All 2017 issued STACR® HQA M2 and B1 securities (6)
- 2017 High LTV Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2017 High LTV Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2018

2017 Low LTV Index Definition

- 16 securities in total
 - All 2017 issued CAS 1M2 and 1B1 securities (10)
 - All 2017 issued STACR® DNA M2 and B1 securities (6)
- 2017 Low LTV Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2017 Low LTV Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2018

2016 Vintage Index Definition

- 17 securities in total
 - All 2016 issued CAS 1M2 and 2M2 securities (9)
 - All 2016 issued STACR® DNA, HQA M3 securities (8)
- 2016 Vintage Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments

- 2016 Vintage Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2017

2016 High LTV Index Definition

- 8 securities in total
 - All 2016 issued CAS 2M2 securities (4)
 - All 2016 issued STACR® HQA M3 securities (4)
- 2016 High LTV Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2016 High LTV Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2017

2016 Low LTV Index Definition

- 9 securities in total
 - All 2016 issued CAS 1M2 securities (5)
 - All 2016 issued STACR® DNA M3 securities (4)
- 2016 Low LTV Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2016 Low LTV Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2017

2015 Vintage Index Definition

- 16 securities in total
 - All 2015 issued CAS 1M2 and 2M2 securities (8)
 - All 2015 issued STACR® DN, DNA, HQ, HQA M3 securities (8)
- 2015 Vintage Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults, and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2015 Vintage Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2017

2014/15 High LTV Index Definition

- 14 securities in total
 - All 2014 and 2015 issued CAS 2M2 securities (7)
 - All 2014 and 2015 issued STACR® HQ, HQA M3 securities (7)
- 2014/15 High LTV Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments

- 2014/15 High LTV Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2017

2014/15 Low LTV Index Definition

- 16 securities in total
 - All 2014 and 2015 issued CAS 1M2 securities, plus CAS 2014 C01 M2 (8)
 - All 2014 and 2015 issued STACR® DN, DNA M3 securities (8)
- 2014/15 Low LTV Index Value *equals* the accumulated interest (accrued and paid), principal repayments, defaults and price change of the securities since the inception of the index. The underlying values of CRT securities in each index are rebalanced on the 25th of each month, or the next business day if the 25th falls on a weekend or holiday, to reflect principal and interest payments
- 2014/15 Low LTV Dollar Price and DM *equals* the average of composite CRT security prices and DMs, *weighted by* the amount outstanding of each CRT security in the index. Dollar Prices and DMs are rebalanced on the 25th day of each month, or the next business day if the 25th falls on a weekend or holiday
- The Index began on January 1, 2017

January 2019

ⁱ As of November 1, 2018, individual CRT security prices used in Vista CRT Indices™ calculations are determined based on observable market data along with evaluation of end of business day prices, received directly from market sources. Market sources commonly include large underwriters and secondary-market broker dealers of CRT securities and may change from time to time. Prior to November 1, 2018, individual CRT security prices were determined as a trimmed arithmetic mean based on submissions from panel banks.