

Barclays US Aggregate Bond Index

From Bogleheads

The **Barclays US Aggregate Bond Index** (formerly the Lehman Aggregate Bond Index) was created in 1986, with backdated history going back to 1976. The index is a predominate index benchmark for US bond investors, and is a benchmark index for many US index funds.

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Overview

The Index is a composite of four major subindexes: US Government Index; US Credit Index; US Mortgage Backed Securities Index (1986); and (beginning in 1992) US Asset Backed Securities Index. The index holds investment quality bonds. The ratings are based on S&P, Moody, and Fitch bond ratings. Table 3 in the appendix provides credit quality breakdowns for the index from 2005-2009. The index does not include high yield bonds, municipal bonds, inflation-indexed bonds, or foreign currency bonds. In 2010, the index held more than 8,200 bond issues.^[1] The time line for the addition and subtraction of asset classes, as well as changes in the minimum issue size and credit quality standards for the index are included in the time line sidebar.

The current bond asset classes comprise the index:^[2]

1. Government
 1. Treasury bills, notes, and bonds
 2. Agency bonds
2. Credit
 1. Industrial
 2. Finance
 3. Utility
 4. Yankee Bonds
3. Mortgage Backed
 1. GNMA
 2. FNMA
 3. FHLMC
4. Asset backed
 1. Credit card receivables
 2. Auto Loans
 3. Home equity loans

The relative weighting of asset classes within the index changes over time as new asset classes are added to the index, as issuance of bonds grows and ebbs, and as market security values fluctuate. The following table shows the index sector allocation over the period 1973-2009. A breakdown of mortgage backed securities (GNMA, FHLMC, FNMA) in the index from 1978-2001 is included in Table 4. of the appendix. In June 2009, as a result of the 2008 financial crisis, Barclay's announced the creation of the US Aggregate Float Adjusted Index that excludes Treasuries, agencies and MBS held in Federal Reserve accounts.^[3]

Milestones in the Evolution of the Barclays U.S. Aggregate Index

- **1/73** Inception date for Government/Corporate Index.
- **1/86** Introduction date for the Mortgage-Backed, Yankee, and Aggregate Indices, with returns and statistics calculated back to 12/31/75.
- **8/88** Liquidity constraint increased from \$1 million to \$25 million for corporate issues. Yankee Index absorbed into the Government/Corporate Index.
- **1/89** Published durations changed from Macaulay duration to maturity to duration to worst. Published yields changed from yield to maturity to yield to worst.
- **1/90** Liquidity constraint increased from \$25 million to \$100 million for government issues. Yankee sector absorbed into the Corporate Index. Title XI issues dropped from the Government Index. Asset-backed bullet issues added to the finance sector.
- **1/92** Asset-Backed Securities Index added to Aggregate Index. Balloon issues added to MBS Index. Liquidity constraint increased from \$25 million to \$50 million for nongovernment issues. Mobile homes dropped from MBS Index.
- **1/94** Liquidity constraint increased from \$50 million to \$100 million for all issues.
- **1/95** GPMs dropped from the MBS Index. Average coupons par-weighted instead of market-weighted.
- **12/97** Added stranded cost securities to the Asset-Backed Securities Index.
- **12/98** Manufactured housing securities added to the ABS Index. Quarter-coupons dropped from MBS Index. All World Bank Issues moved to supranational component of Corporate Index.
- **7/99** Liquidity constraint raised to \$150 million from \$100 million. ERISA-eligible CMBS added to the Aggregate Index.
- **7/00** Renamed Corporate Index to Credit. Absorbed all Yankee Corporates into their respective industry classifications. Changed the liquidity constraint on the ABS Index—old constraint: \$150 million per tranche; new constraint: deal must be \$500 million, tranche must be \$25 million. ERISA-eligible B pieces to be included also.
- **10/03** Liquidity constraint raised to USD200mn from USD150mn. Started using the most conservative rating of Moody's and S&P to determine index eligibility instead of Moody's only for split-rated securities.
- **7/04** Liquidity constraint raised to USD250mn/USD25mn CMBS tranche size from USD 200mn.
- **7/05** Fitch ratings added to Moody's and S&P to determine index eligibility and classification.
- **4/07** Agency Hybrid Adjustable Rate Mortgage (ARM) securities added to the index, but not eligible for the Global Aggregate.
- **1/08** U.S. MBS Fixed-Rate Balloons and U.S. ABS Manufactured Housing removed.
- **11/08** Index rebranded as Barclays Capital U.S. Aggregate Index.
- **10/09** U.S. ABS Home Equity Loans removed.

▪ **01/11** Covered bonds become eligible, A1A tranches are removed from the CMBS portion of the index.

-- *Lehman Brothers: a Guide to the Lehman Global Family of Fixed Income Indices* (<http://www.scribd.com/doc/19601818/Lehman-Brothers-a-Guide-to-the-Lehman-Global-Family-of-Fixed-Inco4/07me-Indices>) *Figure 7.*; *Barclays US Aggregate Bond Index Factsheet* (<https://ecommerce.barcap.com/indices/index.dxml?pagelId=9>)

Table 1. Barclays US Aggregate Bond Index Sector Allocation ^{[4] [5]}

Year	Government	Corporate	Mortgage Backed	Asset Backed
1973	49.0%	51.0%	0.0%	0.0%
1983	59.0%	24.0%	17.0%	0.0%
1993	53.0%	17.0%	28.0%	2.0%
1998	46.0%	22.0%	31.0%	1.0%
1999	42.0%	21.0%	34.0%	2.0%
2000	38.0%	24.0%	35.0%	4.0%
2001	34.0%	27.0%	35.0%	4.0%
2005	40.2%	19.5%	34.9%	5.3%
2006	39.4%	19.4%	35.1%	6.1%
2007	35.4%	19.6%	38.6%	6.5%
2008	38.6%	17.7%	39.6%	4.1%
2009	40.8%	18.8%	36.8%	3.6%
2010	45.8%	18.8%	32.7%	2.8%
2011	46.0%	19.9%	34.1%	-
2012	46.7%	21.5%	31.8%	-
2013	45.7%	22.3%	32.0%	-


Index Returns

The following table provides return data for the index.

Table 2. Barclays US Aggregate Bond Index Annual Returns ^[6]

Index Funds

The Barclays US Aggregate Bond Index was formulated as a market benchmark and contains thousands of illiquid bonds. Index fund managers therefore use sampling strategies when attempting to construct index funds tracking the index. Bond holdings range from approximately 800 to 1600 bonds for SPDR and Ishares ETFs; and from approximately 930 bonds (TRowePrice) to 5200 bonds (Vanguard) for bond index mutual funds. The Vanguard Bond Market ETF is a share class of the Vanguard bond market index fund.

<p>Barclays Aggregate US Bond Market Funds</p>  <p>Low Cost Funds</p>	<ul style="list-style-type: none"> ▪ Dreyfus Bond Market Index Fund (https://public.dreyfus.com/product/0310/overview) ▪ T Rowe Price US Bond Index Fund (http://www3.troweprice.com/fb2/fbkweb/snapshot.do?ticker=PBDIX) ▪ TIAA-CREF Bond Index (http://www.tiaa-cref.org/public/performance/mutual_funds/profiles/92.html) ▪ Vanguard Total Bond Market Index Fund (https://personal.vanguard.com/us/funds/snapshot?FundId=0084&FundIntExt=INT)(Float-Adjusted) 	<p>ETFs</p>	<ul style="list-style-type: none"> ▪ Ishares Barclays Aggregate Bond Fund (http://us.ishares.com/product_info/fund/overview/AGG.htm) ▪ SPDR Barclays Aggregate Bond ETF (https://www.spdrs.com/product/fund.seam?ticker=LAG) ▪ Vanguard Total Bond Market ETF (https://personal.vanguard.com/us/funds/snapshot?FundId=0928&FundIntExt=INT) (Float-Adjusted)
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Appendix

Table 3. Barclays US Aggregate Bond Index Credit Quality ^[7]

Year	AAA	AA	A	Baa
2005	78.6%	4.7%	8.8%	7.8%
2006	78.9%	5.0%	8.7%	7.5%
2007	79.2%	5.4%	8.2%	7.2%
2008	80.9%	3.1%	9.3%	6.7%
2009	78.1%	4.1%	9.7%	8.1%
2010	77.7%	4.5%	9.7%	8.1%
2011	75.1%	5.1%	10.7%	9.1%
2012	73.1%	5.1%	11.0%	10.8%
2013	72.4%	4.9%	11.1%	11.6%

Table 4. Barclays US Aggregate Bond Index Mortgage Backed Securities 2010 forward ^[8]

Year	GNMA	FHLMC	FNMA
2013	26.7%	26.9%	40.6%
2012	25.7%	22.9%	46.5%
2011	23.5%	30.3%	46.2%
2010	20.4%	32.2%	47.4%

Table 5. Barclays US Aggregate Bond Index Mortgage Backed Securities 1978 - 2001 ^[9]

Year	GNMA	FHLMC	FNMA
1978	89%	11%	0%
1983	69%	22%	9%
1988	50%	30%	20%
1993	32%	33%	35%
1998	26%	34%	40%
1999	25%	34%	41%
2000	24%	34%	42%
2001	21%	35%	44%

Rules for Inclusion ^[10]**Amount Outstanding/Minimum Issue Size**

- For Treasury, government-related, and corporate securities, USD250mn minimum par amount outstanding. U.S. Treasuries held in the Federal Reserve SOMA account (both purchases at issuance and net secondary market transactions) are deducted from the total amount outstanding. New issuance bought at auction by the Federal Reserve does not enter the index. Net secondary market purchases/sales are adjusted at each month-end with a one-month lag.
- For MBS securities, pool aggregates with USD250mn minimum amount outstanding.
- For ABS securities, USD 500mn minimum deal size and USD25mn tranche size for specific ABS issuers for which Barclays Capital can accurately price the securities. The list of index-eligible issuers is available on Barclays Capital Live.
- For CMBS securities, USD500mn minimum original deal size, with at least USD300mn amount outstanding remaining in the deal; USD25mn minimum tranche size.

Quality

- Rated investment-grade (Baa3/BBB-/BBB-) or higher using the middle rating of Moody's, S&P, and Fitch after dropping the highest and lowest available ratings. When a rating from only two agencies is available, the lower ("more conservative") is used. When a rating from only one agency is available, that is used to determine index eligibility.
- Expected ratings at issuance may be used when there are other index-eligible bonds from the same issuer that hold the same actual rating as the expected rating.

Maturity

- At least one year until final maturity, regardless of optionality. For securities with coupon that converts from fixed to floating rate, at least one year until the conversion date.
- MBS must have a weighted average maturity of at least 1 year; CMBS and ABS must have a remaining average life of at least 1 year.
- Fixed-to-floating perpetual securities are included in the index. These are included until one year before their first call date, providing they meet all other index criteria.
- Subindices based on maturity are inclusive of lower bounds. Intermediate maturity bands include bonds with maturities of 1 to 9.9999 years. Long maturity bands include maturities 10 years and greater.

[additional rules are available on the Barclays Capital U.S. Aggregate Factsheet (<https://ecommerce.barcap.com/indices/index.dxml?pageId=9>)]

References

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3. ↑ Barclays press release, July 30, 2009 (<http://www.barcap.com/About+Barclays+Capital/Press+Office/News+releases/News,1454,Barclays+Capital+Announces+the+Creation+of+the+US+Aggregate+Float+Adjusted+Index>)
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5. ↑ Barclays Capital U.S. Aggregate Factsheet (<https://ecommerce.barcap.com/indices/index.dxml?pageId=9>) 2005-2009
6. ↑ **Data Sources:** Barclays Capital US Aggregate Bond Index Factsheet 1976-1983 (<https://ecommerce.barcap.com/indices/index.dxml?pageId=9>); Callan Chart 1984-2004 (http://www.pacadvisory.com/new/pacadvisory/Callan_Chart.pdf); Ishares Performance 2004-2010 (http://us.ishares.com/product_info/fund/performance/AGG.htm); US Aggregate Index Factsheet 2004-2013 (https://ecommerce.barcap.com/indices/Home/Guides_and_Factsheets)
7. ↑ Barclays Capital U.S. Aggregate Factsheet (<https://ecommerce.barcap.com/indices/index.dxml?pageId=9>) 2005-2009, US Aggregate Index Factsheet (https://ecommerce.barcap.com/indices/Home/Guides_and_Factsheets), 2004-2013
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9. ↑ Lehman Brothers: a Guide to the Lehman Global Family of Fixed Income Indices (<http://www.scribd.com/doc/19601818/Lehman-Brothers-a-Guide-to-the-Lehman-Global-Family-of-Fixed-Income-Indices>) 1973-2001
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