

U.S. Treasury Inflation-Protected Securities (TIPS) Index Construction Methodology Comparison

JBIM follows an index based U.S. Treasury Inflation-Protected Securities (TIPS) strategy. There are two major benchmark TIPS indices; the Barclays TIPS Index and the Citigroup TIPS Index. The construction methodologies, while similar, differ in some material aspects. JBIM periodically compares and evaluates each methodology to identify the differences and monitor how they evolve over time. Regardless of the methodology differences and the minor short-term performance deviations that may occur, longer periods of time demonstrate performance deviations between the two methodologies are negligible (see chart below).

The most notable variation from the methodology differences is the occasional minor discrepancy in the amounts outstanding of each qualifying constituent at their periodic rebalancing dates. The Barclays methodology allows for new issue and reopening amounts to qualify for inclusion in the next month's balances when issued up to last trading day of the current month. Citigroup requires up to 4 business days of trading before month end to qualify for inclusion in the next month. In this instance, if issuance occurs on the last day of the current month the new outstanding amount would not be included in the month immediately following issuance. It would be included the month after that. Discrepancies in constituent weights typically even out within a month or two.

The Barclays TIPS Index is float-adjusted, Citigroup is not. A float-adjusted index weights the constituent securities by the total shares that are available for public trading. Adjustments are made on a lagged basis, usually quarterly. There are also variations in what a float-adjusted index considers publically available. These considerations can change over time. If an index is not float-adjusted, the index weights are based on actual original issue and reopening amounts. The Federal Reserve began purchasing TIPS as part of the Quantitative Easing program in November of 2010 and caused slightly larger variations in float-adjusted versus non-float-adjusted constituent weights as those securities have been removed from public availability. Since that time, the Fed has purchased \$55 billion in TIPS. The total outstanding TIPS that qualify for indexing is approximately \$800 billion. Although the Fed has attempted to purchase maturities proportionately across the curve, purchases have been somewhat skewed to longer maturities. This in effect, has made the Barclays TIPS Index slightly shorter in maturity than the Citigroup TIPS Index due to the float-adjustment. Large interest rate movements can make these slight composition variations more apparent.

All the selected benchmarks JBIM manages to are not float-adjusted, except the Barclays Treasury Indices including the TIPS Index. Due to the complexities in maintaining float-adjusted amounts, we do not advocate this methodology. We continue to manage to the qualifying non-float-adjusted amounts outstanding for TIPS. All other methodology rules used by Barclays are applied to the JBIM TIPS Strategy.

US TIPS 5 Year Performance Comparison

	Percent Return Per Period		
	JBIM Composite	Barclays TIPS Index	Citigroup TIPS Index
Q3 2008	-3.32	-3.54	-3.51
Q4 2008	-2.58	-3.48	-2.32
Q1 2009	4.23	5.52	4.30
Q2 2009	0.55	0.66	0.40
Q3 2009	3.03	3.08	3.05
Q4 2009	1.91	1.76	2.04
Q1 2010	0.40	0.56	0.35
Q2 2010	4.03	3.83	4.07
Q3 2010	2.73	2.48	2.71
Q4 2010	-0.88	-0.65	-0.75
Q1 2011	2.06	2.08	2.03
Q2 2011	3.69	3.66	3.65
Q3 2011	4.92	4.51	4.95
Q4 2011	2.68	2.69	2.72
Q1 2012	0.74	0.86	0.75
Q2 2012	3.31	3.15	3.45
Q3 2012	2.21	2.12	2.19
Q4 2012	0.71	0.70	0.63
Q1 2013	-0.54	-0.36	-0.63
Q2 2013	-7.35	-7.05	-7.25
Total	24.07	24.08	24.44
Annualized	4.41	4.41	4.47