Bache Commodity Index℠

Research Report

Q&A: The Cash Allocation in the Bache Commodity Index℠

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An innovative feature of the Bache Commodity Index (BCI℠) is its dynamic allocation to cash. This unique feature provides many benefits for commodity investors. This paper answers questions about this feature of the BCI℠. Please note that we assumed that the reader is familiar with the basic structure of the BCI℠. Introductory information about the BCI℠ is available on the Bache website (www.bache.com).

Q: What is the cash allocation?

A: The BCI℠ has an allocation to 19 different commodity markets plus an allocation to cash. The cash is assumed to be held in 3-month Treasury bills, so it earns a risk-free rate of interest. The BCI℠ methodology is unique, in that all 20 of the index allocations are dynamic. The cash allocation plays an important role in the performance of the index.

Q: What role does cash play in the BCI℠?

A: Cash is used to control the volatility of the index. Cash also plays a deleveraging role in the BCI℠. This helps reduce the possibility of a large decline in the value of the index. Finally, the dynamic cash allocation is an important source of return.

Q: How does the cash allocation impact performance of the BCI℠?

A: The main benefit of the BCI℠ cash allocation is improved performance and less risk for investors. The cash allocation substantially reduces volatility, which means improved risk-adjusted performance. The cash allocation also helps reduce the odds of a large loss as the allocation will be higher during broad-based declines in commodity prices. The cash allocation return is negatively correlated with overall commodity index returns because it is more valuable in falling markets, and less useful in rising markets.

The following table shows the BCI[SM] returns directly attributable to the cash allocation each year. This information is in the left column below. On average, the cash allocation was responsible for about 0.9% (90 basis points) of annual BCI[SM] return. The largest positive contribution was in 1998 (3.9%) and the largest negative contribution was in 2005 (-0.8%).

BCI Return Attribution Measures, 1991-2007

Annual Factor Returns (%)

	Cash Allocation Factor	*Systematic Allocation Factor*	*Daily Roll Factor*	*Total BCI Factors*	*Commodity Beta Return*	*BCI Excess Return: Beta+Factors*
1991	1.6	0.0	1.3	2.9	(10.0)	(7.0)
1992	(0.7)	2.4	(0.0)	1.7	3.8	5.5
1993	0.6	2.2	0.5	3.3	(8.3)	(5.0)
1994	(0.0)	1.5	1.3	2.8	8.2	11.0
1995	1.6	0.6	(1.4)	0.8	10.5	11.3
1996	2.3	3.2	0.1	5.6	24.7	30.3
1997	0.8	(0.2)	1.9	2.5	(8.1)	(5.6)
1998	3.9	(0.8)	0.9	4.0	(24.9)	(21.0)
1999	0.9	2.2	1.0	4.1	21.9	26.0
2000	0.9	4.0	1.2	6.1	23.1	29.2
2001	1.3	(1.4)	2.4	2.3	(23.0)	(20.7)
2002	0.8	(0.2)	2.2	2.8	19.9	22.7
2003	0.6	(3.1)	1.9	(0.7)	18.3	17.6
2004	2.1	3.5	5.5	11.1	10.5	21.7
2005	(0.8)	0.3	4.6	4.2	14.8	19.0
2006	(0.7)	2.5	2.7	4.5	(11.6)	(7.1)
2007	0.1	1.1	1.2	2.5	14.8	17.2
Average	0.9	1.1	1.6	3.6	5.0	8.5
BCI Correlation	(0.19)	0.43	0.07	0.28	0.99	1.00

Source: Bache Global Commodities

The other unique factors in the BCI[SM] are the *systematic allocation factor* and the *daily roll factor*. The asset allocation factor measures the impact of dynamically changing the index weight of each commodity. The daily roll factor captures the value of the BCI[SM]'s daily roll strategy versus the monthly or quarterly roll strategy employed by other indices. As shown above, the systematic allocation factor added about 1.1 percent per year over this time period and the daily roll factor added about 1.6 percent per year. These factors added more return to the BCI[SM] than the cash factor. However, the cash factor is the only factor that has a negative correlation with the BCI[SM], so it provides an important diversification benefit.

Q: How does the cash allocation work?

The cash allocation helps support returns through a dynamic asset allocation model that adjusts the mix of assets as the markets rise and fall. Each commodity component is given a minimum and maximum allocation in the index. The sum of the

maximum allocations of all commodities in the BCI^{SM} is equal to 100%. The sum of the *minimum* allocations for all the commodities is 40%.

For example, soybeans have a 5% maximum allocation in the BCI^{SM} for 2008, and a minimum allocation of 2%. The BCI^{SM} methodology determines whether the allocation should be at 2% or at 5%, or at some level in between. If the methodology determines that the soybean allocation should be less than 5%, then the difference is allocated to cash.

Q: If the BCI^{SM} has a cash allocation, is it still an index?

A: The cash allocation actually enhances the BCI^{SM}'s capabilities as a commodity index. In the financial world, commodities are unique as they are real assets instead of financial assets like stocks and bonds. Commodity markets can experience ongoing shifts in supply which makes it impossible to measure their capitalization in a conventional way. Once the appropriate weight for a commodity has been selected for an index, there is no simple mechanism for deciding which maturities to hold, and when to roll to the next maturity.

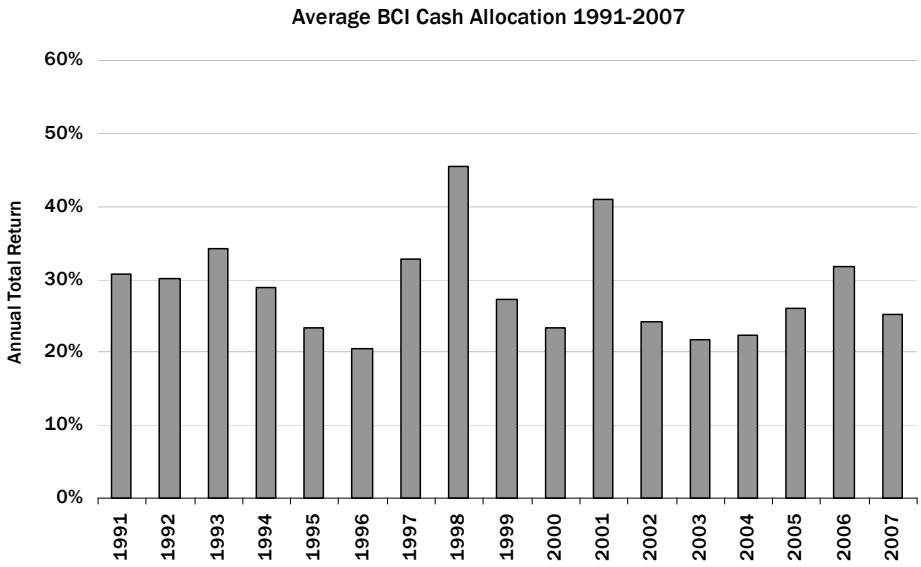
Equity indices are fully invested because stocks have a natural capitalization and no rolling or maturity issues. Since there is a natural way to construct an equity index, there is typically only one index that serves as a benchmark for a particular equity market, sector, or style. Commodity fund managers manage the risk in the variation in commodity supply, and the lack of a capitalization measure, by holding cash in addition to long commodity positions. The BCI^{SM} follows that same trading strategy. And because an index is meant to be a mechanism for benchmarking the performance of an asset class, the BCI^{SM} is an effective benchmark given that it follows the trading strategies of the commodities markets.

Q: What portion of the BCI^{SM} is typically held in cash?

A: For maximum flexibility, the BCI^{SM} is designed to hold a range of 0% to 60% cash, in the form of Treasury bills. However, the allocation can be at either end of this range, or in the middle, depending on market conditions. Based on historical results from 1991 through March 2008, the average allocation to commodities in the BCI^{SM} was 71.5% and the average allocation to Treasury bills was 28.5%.

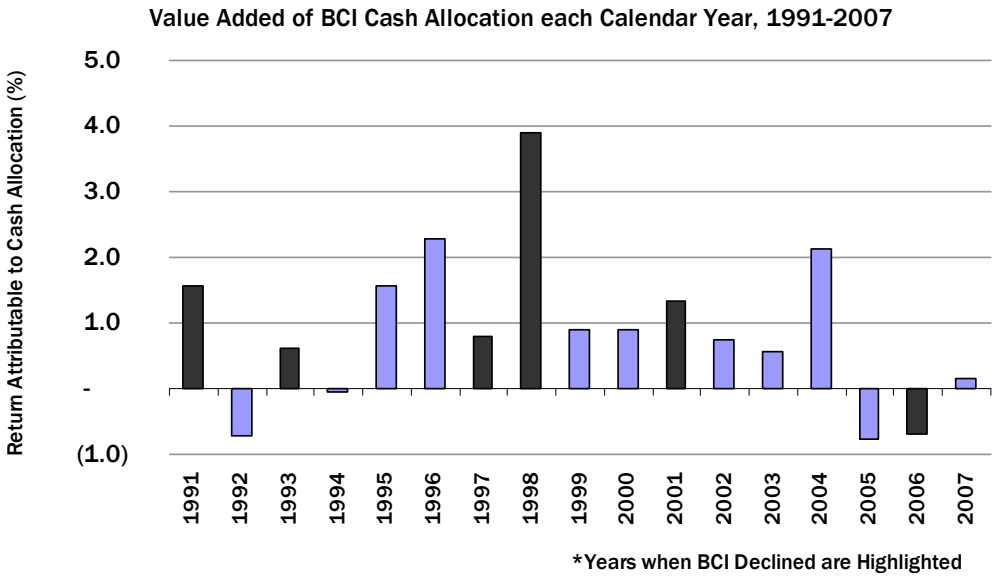
The following chart shows the average BCI^{SM} cash allocation from 1991 to 2007. Note that the average cash allocation in most years is in the 25%-35% range. The BCI^{SM} holds more cash during sustained bear markets (for example, 1998 and 2001) than in bull markets, as it is working to prevent further losses from weak commodity markets.

It is important to note that the index methodology is designed to limit the amount of daily change to the cash allocation. In fact, the average daily change in the BCI^{SM} cash allocation since 1991 has been a bit less than one percent per day (0.95%, to be precise). This element of the index design is meant to reduce turnover.



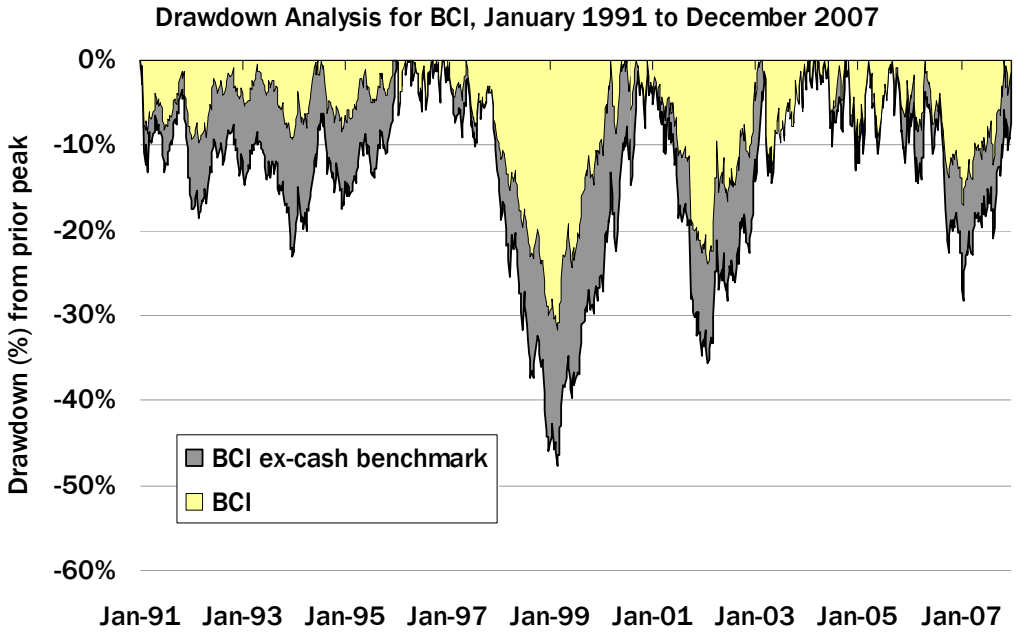
Q: ***How does the cash allocation impact BCI[SM] performance in down markets?***

A: The BCI[SM] declined in six calendar years since 1991. In five of those years the cash allocation made a positive contribution to the total return. The average contribution of the cash allocation during declining years was 125 basis points. The next chart shows the annual return attributed to the cash allocation, with years the BCI[SM] declined in value highlighted. The largest annual contribution from the cash allocation was in 1998, which is the largest annual loss incurred by the BCI[SM]. The cash allocation also added value in five of the 11 years when the BCI[SM] rose.



Q: Does the cash allocation help reduce the possibility of a large loss?

Since the cash allocation increases when prices decline, the cash allocation acts in some ways like a protective put option. The chart below shows the peak-to-trough drawdown of the BCI^{SM} and the BCI^{SM} benchmark that does not have an allocation to cash (known as the BCI^{SM} ex-cash benchmark). Note that in every major drawdown since 1991 the decline of the BCI^{SM} is less than the decline in the BCI^{SM} ex-cash benchmark.



Q: Is there a downside to the BCI^{SM} cash allocation?

A: Not surprisingly, holding cash can reduce the long-run return of the BCI^{SM} as compared to other commodity indices. In a period of rising commodity prices holding cash can be a drag on performance. The benefit is primarily felt during periods of declining prices.

Another issue is tracking error. The BCI^{SM} has a dynamic commodity beta, while most other indices have a static beta. The average beta of the BCI^{SM} measured over longer periods of time is highly predictable. However, *fluctuations* in beta can induce considerable tracking error versus other benchmarks if returns are evaluated at short time intervals. The dynamic nature of the BCI^{SM} beta means that tracking error and other benchmark performance measures are best evaluated over extended periods.