PORTFOLIO CONSTRUCTION

PutWrite versus BuyWrite: Yes, Put-Call Parity Holds Here Too

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The CBOE S&P 500 PutWrite Index has outperformed the CBOE S&P 500 BuyWrite Index by approximately 1.1 percent per year between 1986 and 2015. That's impressive. But troubling. Yes – troubling – because the theory of put-call parity tells us that such outperformance should be almost impossible via a compelling no-arbitrage restriction. This paper explains the mystery of this outperformance, which has implications for portfolio construction.

What's Inside

This article explains why the CBOE S&P 500 PutWrite Index has historically outperformed the CBOE S&P 500 BuyWrite Index. I find that:

- The PutWrite and BuyWrite Indices performed similarly on non-option expiration dates, just as put-call parity demands.
- The difference in the strategies' performance occurs on option expiration dates.
- Options expire at the open, settling at the Special Open Quotation. The PutWrite and BuyWrite Indices do not replace their short option positions for approximately four hours. During this four hour window, the BuyWrite Index has a beta of 1.0 and the PutWrite Index has a beta of 0.0.
- Negative equity returns during the time from the Special Open Quotation until the time the two indices replace their option exposure, approximately four hours later, explain the difference in historical performance of the two indices.

Conclusion

Portfolio construction matters. So does performance attribution. A quirk in the portfolio construction of the CBOE S&P 500 PutWrite and BuyWrite Indexes has led to the PutWrite Index outperforming the BuyWrite Index by about 1.1 percent per year. Performance attribution tells us that PutWriting is not superior to BuyWriting – that the difference in performance is due to average negative market returns during the morning on option expiration dates. If we do not expect equity returns to be negative on average during the morning of option expiration, there is no reason to expect the PutWrite Index to continue to outperform the BuyWrite Index. On the other hand, those who do expect equity returns to continue to be negative on these mornings, do not need to trade the PutWrite Index to capture this predictable source of return – they can short sell equities instead. Investors should first understand what drives returns and then explicitly construct their portfolios accordingly.

investment losses.

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