

RISK

UNDER THE MICROSCOPE

HEDGE FUND MANAGERS WHO USE FIXED-INCOME ARBITRAGE STRATEGIES SPECIALIZE IN WEIGHING AND MINIMIZING RISK.

BY ERIC UHLFELDER

It was toward the end of 2011, when Europe was getting hit with a blast of bad financial news.

Big banks were scarily in the red and their respective governments were getting dragged into the mess, trying to save their sinking financial systems. Borrowing costs reached double digits in the continent's most stressed peripheral markets, creating the scary prospect of state and bank debt default.

Then in 2012, hope was instilled in the markets when the European Central Bank announced it would do whatever it takes to save Europe.

More cash was plowed into depressed sovereigns through the bank's Securities Market Program, and its Long-Term Refinancing Operation, which lent more than a \$1 trillion at very low costs to banks, ended up being used to purchase more sovereigns.

These moves brought down interest rates like a shot of financial adrenaline, stabilizing bank balance sheets and calming investors.



But the crisis and subsequent government intervention also created pricing irregularities—a market inefficiency that didn't go unnoticed by some investors.

Bob Treue, manager of the 13-year-old Barnegat Fund in Hoboken, N.J., whose annualized returns have averaged 18.52%, saw opportunities in asymmetric market moves between like securities.

It was a classic fixed-income arbitrage play.

Complicated in detail, the essence of such investments, however, is pretty basic: locking in the spread between two very similar securities that have become divergently priced and hedging out much of the risk that can move against an investor. The trade collects an attractive yield while waiting for values to normalize back to traditional levels.

Sovereign Gap

Before the European Central Bank came to the rescue, “we were seeing inflation-protected sovereigns selling off faster than their nominal counterparts, both of the same maturities,” Treue says. This was caused in part by the negative outlook on Italian government debt, which threatened to push the country's credit rating to below A-minus. If this threshold were broken, it would've triggered Italian bond expulsion from the Barclays Euro Government Inflation-Linked Bond index.

(Italian bonds represent a much larger segment of this index than other indices tracking euro zone sovereigns.)

Anticipating expulsion was a fait accompli; many investors started fleeing these bonds, hoping to get out before panic selling started. The result: Inflation-protected Italian bonds were yielding nearly as much as the traditional nominal debt of the same maturity that didn't come with inflation protection.

The arbitrage Treue set up in late January 2012, before the European Central Bank's game-changing pronouncement, had three legs:

Barnegat purchased inflation-protected 2021 bonds at 80.77, which yielded the fund 5.35%. He then shorted the traditional bonds, also due in 2021, at a price of 93.88, which required him to annually pay out 5.66%. This generated a negative carry yield of 31 basis points.

The pair trade hedged out credit, interest-rate and capital risk. If a ratings downgrade were to cause Italian bond yields to soar and prices to fall, Barnegat's position would be virtually neutral.

To hedge inflation risk, Treue employed European Inflation Rate Swaps that are based on the same inflation-rate index as Italian bonds. This arrangement essentially made the two bonds the same. And since the swap's fixed rate was higher than the inflation rate he had to pay, the exposure netted him 2.31%. Deducting his carry loss, Treue established a trade that

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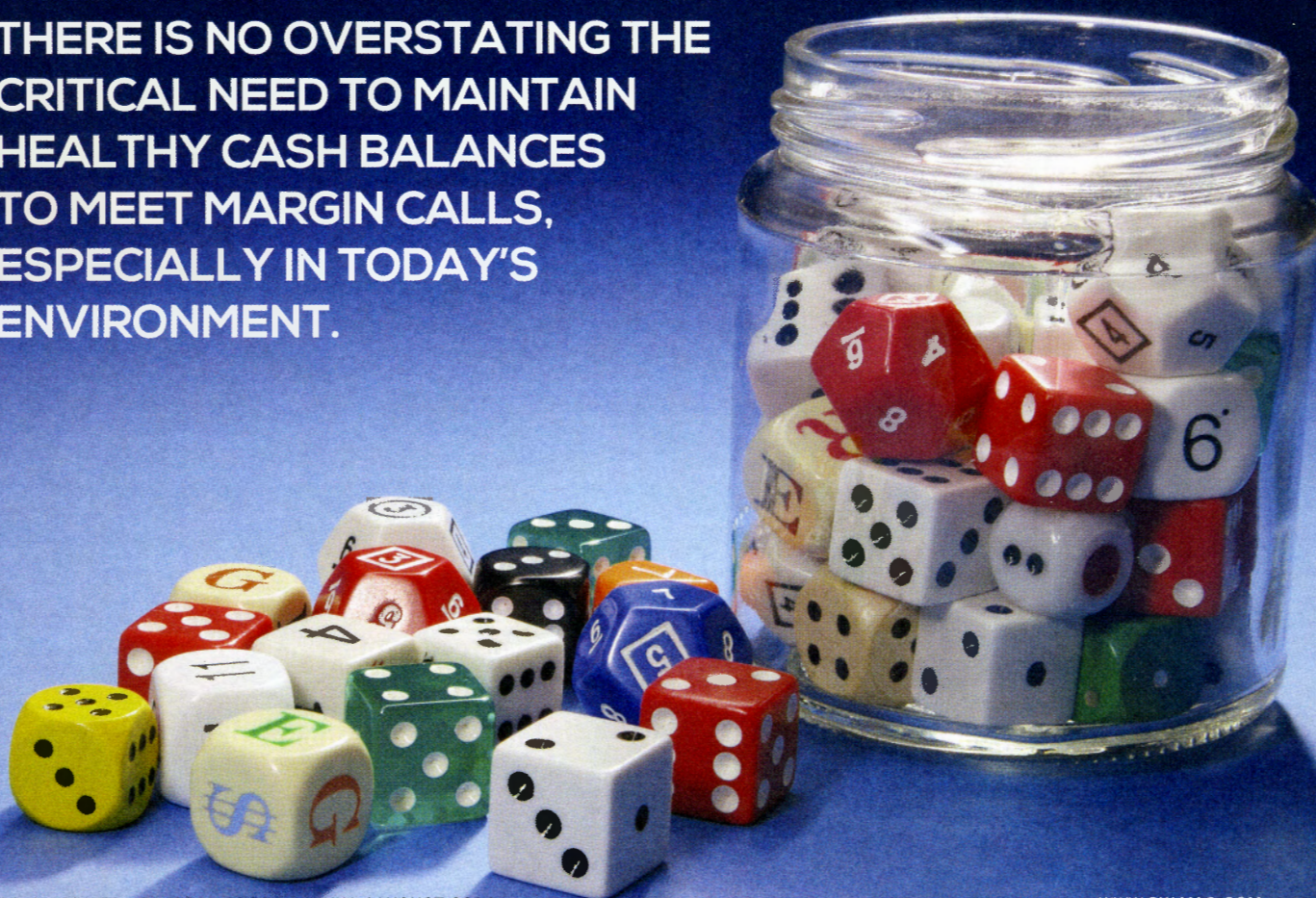


FIGURE 1

Performance Of Leading Fixed-Income Arbitrage Managers

HEDGE FUND	FUND ASSETS (\$MILLION)	1-YEAR NET RETURNS %	3-YEAR ANNUALIZED NET RETURNS %	5-YEAR ANNUALIZED NET RETURNS %	ANNUALIZED NET RETURNS SINCE INCEPTION %	1-YEAR STANDARD DEVIATION	5-YEAR ANNUALIZED STANDARD DEVIATION	5-YEAR ANNUALIZED SHARPE RATIO
Barnegat Fund Ltd (B)	675	7.67	21.40	29.62	18.52	12.2	13.95	2.12
Asgard Fixed Income Fund I Ltd EUR	398	15.68	23.42	26.76	14.68	2.60	5.50	4.85
Danske Invest Hedge Fixed-Income Strategy	1,467	17.37	22.67	26.45	13.98	3.95	6.17	4.27
Whitebox Credit Arb LP	339	18.55	7.72	25.36	15.76	3.17	11.06	2.28
Element Capital Fund Ltd	4,441	15.48	10.33	20.01	23.3	5.61	8.87	2.25
NGA Capital Ltd (A)	169	11.33	14.07	17.05	19.72	5.36	11.95	1.42
III Fund LP	166	8.77	10.78	16.87	5.83	3.53	5.37	3.12
Chenavari - Corp Credit Strat M1 USD	438	16.83	11.00	13.93	14.18	4.99	5.74	2.41
Blue Mountain Credit Alternatives Ltd	6,632	7.61	7.98	13.79	9.70	1.43	4.07	3.37
Barclay Fixed Income Arb. Index		8.34	7.14	11.4	6.15	1.93	3.07	3.68
S&P 500 Total Return Index		21.86	14.65	21.16	11.69	9.53	13.88	1.52
MSCI EAFE Index (USD)		14.42	4.01	12.65	8.12	12.95	18.41	0.68

Source: BarclayHedge. Data is through March 2014.

paid him an annual rate of 2 percentage points—a yield he's happy to sit and collect while waiting for the inflation-protected bonds to rise and the nominal sovereign to fall.

Because Barnegat employs substantial leverage in executing this arbitrage, the yield is significantly boosted. The trade represents half the fund's net asset value and has contributed 8% to the fund's returns.

Foreign exchange risk was also taken off the table because the impact of any currency move on Treue's short-term repo financing costs would inversely alter the value of the bonds. Simply put, if the euro gets stronger and requires higher payments to fund the trade, the value of the bonds in dollar terms appreciates accordingly.

While the deep, liquid and well-followed Italian bond market increases the likelihood that the trade will work, Treue says there are two basic risks—one predictable and avoidable and the other extremely unlikely. "If the interest rate spread widens, then we would be required to meet margin calls," explains Treue. He plans for such a possibility by keeping half of his assets in unencumbered cash.

If the repo market—the means in which he borrows and shorts bonds—sees a significant reduction in liquidity (a likely sign that all markets are in big trouble, as in 2008), Barnegat could end up paying a net carry yield. And if such negative conditions persist, Barnegat could be forced to liquidate the trade at a material loss.

Fixed-income arbitrage, or relative value, trades must target securities that are sufficiently comparable and in deep liquid markets to ensure the market will correct the price differential.

Fund managers also need to show patience and experience in deciding when the differential is wide enough to generate a return that's worth the risk and time. They must be able to sense when the mispricing is nearing its peak. Often, the difference in performance between fixed-income

arbitrage managers is not necessarily their ability to spot special opportunities, but their ability to time their investments.

There is no overstating the critical need to maintain healthy cash balances to meet margin calls, especially in today's environment, where interest rate creep is expected. The implosion of Long-Term Capital Management in 1998 wasn't the result of poor investment. In fact, the fund's venerable brain trust had it right. They simply didn't keep enough cash on hand to keep the trade funded when it moved sharply but temporarily against the fund.

Cold Trade

Several hedge funds in Copenhagen have made hay in pursuing a spread trade involving Scandinavian covered bonds—mortgage-backed debt, which, unlike MBS, are of high quality and remain on issuing banks' balance sheets with well-maintained loan-to-value ratios. Bonds are double back-stopped first by the banks and then by ring-fenced mortgage pools. Since they were invented more than 200 years ago, these bonds have never defaulted.

Michael Petry, head of Danske Capital's Invest Hedge Fixed-Income Strategies, with nearly \$1.5 billion under management and annualized returns of nearly 14% since it started in 2005, says the financial crisis created a special opportunity in this asset space that has lasted into 2014.

The trades are short in duration, typically playing out over six to 12 months. The fund rarely holds until maturity. Instead, it rotates exposure to maturities ranging from one to five years to capture the most attractive spreads versus short-term rates while hedging interest rates to protect against a move against the portfolio's position.

The trades are premised on the belief that profits can be churned from relatively wide covered bond spreads and/or from the financing of three-legged trades involving swaps to hedge interest rate risk and repos to finance the trade.

This is how it works:

Danske Capital would establish a position, say in a liquid, five-year, AAA-rated Nordea Hypoteck bank-issued covered bond with a yield of 2.5%. The corresponding swap rate, which hedges the fund's interest-rate exposure, cost the fund 2.1%. This netted a difference of about 40 basis points.

By participating in the swap, the fund would simultaneously receive a three-month floating payment of 0.93%. Using two-week-to-one-month repos to finance the trade costs the fund around 0.85%, or 8 basis points less than the floating swap payment. This leaves the fund with minor interest rate risk in the very short end of the curve—the maturity difference between the three-month fixed rate and the length of the repo.

So Danske Capital collects a total of 48 basis points a year. It then applies leverage, which has added an average of 5 percentage points a year to the fund's performance over the past six years.

If the cost of interest protection—or swap—rises, Petry believes the fund is protected by consistently rolling over this trade, reestablishing desirable spreads. This is normal given that the yield on covered bonds would likely rise at the same time. Likewise, if the cost of repo financing (which is secured by the bonds as collateral) were to rise, the floating rate payment the fund receives would likely rise even further.

As with the above-mentioned Italian bond trade, there's no currency risk because any shifts in currency value are naturally hedged by the use of repo financing.

The fund took an initial hit when it first established these trades as market dislocation caused sharp fluctuations in covered bond prices and financing. But since 2009, it's been a reliable source of performance. The fund has begun unwinding these trades as spreads have significantly narrowed.

Bankruptcy

The credit shop Whitebox Advisors in Minneapolis specializes in identifying mispriced pieces in distressed companies' capital structures. Since its Credit Arbitrage Fund started in 2002, this strategy has generated annualized returns of 15.76%.

Senior portfolio manager Peter Wiley says his team saw in 2010 that the market was divided in its response to financial turmoil surrounding the East Coast supermarket chain A&P.

Early that year, as the company's financing was worsening, a \$260 million second-lien bond with a 11.375% coupon due in 2015 sold off sharply on fears that the potential issuance of new debt would be superior in order of protection to the existing issue.

Meanwhile, some investors saw the potential new bond issue as a way to refinance the firm's \$255 million, 6.75% convertible bond, which was maturing in two years. Accordingly, its value held up much better, despite being lower in the capital structure than the second-lien bond.

Though the fund was reticent on trade price and timing specifics, Wiley said that the greater sell-off of the second-lien bonds significantly compressed the spread and mispriced risk. His team's credit research felt that even if bankruptcy

occurred, the second-lien bonds, which were fully collateralized, would likely be paid off at par. At the same time, bankruptcy would wipe out the convertible.

So the fund went long on the second-lien bond and short on the convertible bond, establishing twice the exposure in the former than the latter. Though the fund would pay a higher absolute yield in shorting the convertible, collectively this weighting created a positive yield carry.

"The most significant risk we ran," admits Wiley, "was if A&P stabilized its finances," in which case the convertible would likely have moved up more aggressively because of its shorter maturity. But the extra weight in the second-lien bond would likely have kept the net value of the trade in the black. "We choreographed the trade to work in multiple scenarios," says Wiley.

Turns out that Wiley's group didn't have to wait long for the investment to move. By the end of 2010, A&P's management didn't see any hope in piling on additional debt and opted for bankruptcy. While interest payments stopped on all vehicles, the price of the convertible collapsed and the uncertainty surrounding the status of the second lien bond was removed. This stabilized the bond's price. It eventually started to rally as other credit investors began to recognize its underlying value.

At the end of the following year, a triumvirate of investors negotiated the purchase of A&P, agreeing to make all bondholders whole to avoid having to deal with new equity investors. This surpassed Whitebox's expectations for a positive scenario, and by the summer of 2012 the fund was fully out of the trade.

Fixed-income arbitrageurs don't usually score big on both legs of a trade. But the unique capital structure issues Whitebox had recognized in this special situation enabled the hedge to turn very pretty.

Risks

Like any investment strategy, fixed-income arbitrage has inherent risks. Because price discrepancies don't correct overnight, investors must tolerate marked-to-market-induced price declines. That said, a manager needs to be astute enough to know when the trade's underlying thesis is no longer valid and cut his losses.

"One of the trickiest aspects of investing in this strategy," cautions former hedge fund manager Mathew Ridley, "is understanding how much risk a manager is adopting. Investors must be comfortable that the manager is not misleading or unduly reassuring them."

He also cautions investors to understand a manager's risk concentration. He may have many ostensibly disparate trades. But if a common event can trigger negative results across the portfolio, then it's not sufficiently diversified.

So investors need to review a manager's past performance. Invest only in funds where 85% to 90% of all trades have worked within projected time frames. And make sure you understand the arbitrage. If they are indecipherable, stay away.

There are basically only three reasons for failure: One, the manager didn't set aside enough cash to meet margin calls; two, the trade thesis was defective; or three, subsequent developments materially altered the thesis against the trade. *RW*