Hedge Fund Leverage: What's the fuss?

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In the wake of the recent financial crisis, hedge funds have been widely scrutinized for their role in the overall economic downturn. Particularly, the lack of transparency, highly leveraged trading positions, and use of complex derivatives are among the few of many variables that generalize the industry to negatively employ and consequently earn a less than favorable repute. This article sheds further light into the specific use of one type of derivative, the total return swap (TRS), and the reason behind the increased popularity of their use among banks and hedge funds.

What are Total Return Swaps?

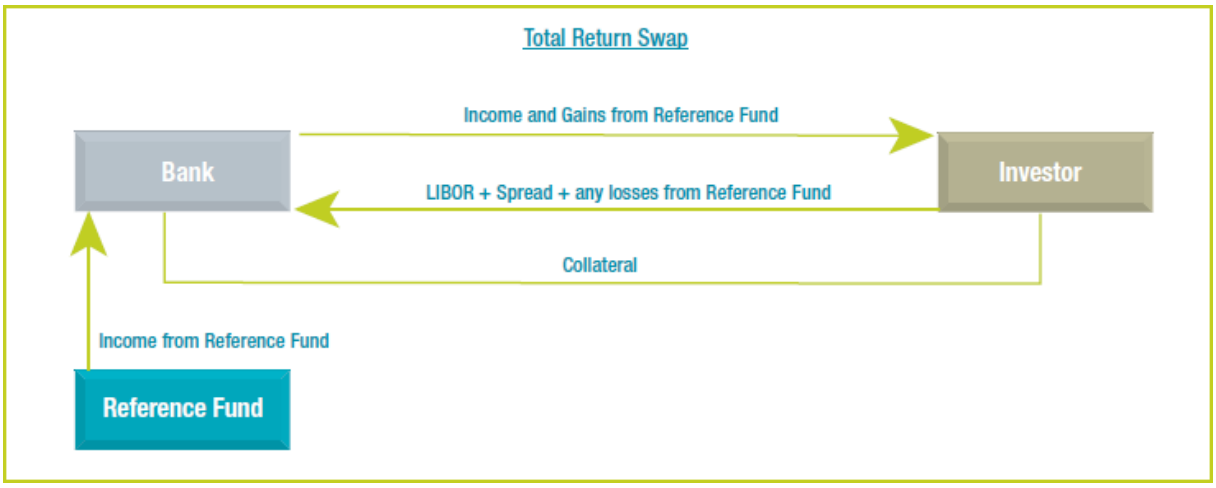
Basically, total return swaps are a type of derivative product where, by swap agreement, one party (the receiver) makes either fixed or variable payments while the counter-party (owner which is typically a bank) makes payments in line with the returns on underlying assets that includes any dividend income and capital gains. The underlying assets, referred as the reference assets, can be comprised of an index or portfolio of loans and or bonds. The reference assets are typically owned by the party that receives the agreed rate payment that usually is set to LIBOR + spread, where the cost of financing is typically factored in. It is important to note that the TRS receiver does not own the reference assets but is entitled to the economic performance of them.

What does this allow for receivers?

TRS products allow the receiver to capture any generated income on the reference asset as well as the benefits of asset appreciation for the life of the TRS on a stated notional amount. Should the reference assets depreciate in price of the life of the TRS, the receiver typically pays the depreciated difference to the owner. The TRS therefore allows the receiver to gain exposure to assets without necessarily having to own them. As a result, these products are very popular with hedge funds as it allows them to gain the benefits of large and levered exposure with minimum cash expenditure. There are multiple reasons why hedge funds have particularly embraced the use of TRS which include availability of off balance-sheet leverage, benefits of lack of regulation and transparency, competitive prime broker rates, lack of capital, and trading strategy conflicts. Since many funds may not meet capital requirements to purchase assets or where the purchase may conflict with their trading strategies, hedge funds can typically enter into a TRS to help them attain their goals. Due to the lack of regulation and transparency of these funds, the use of off balance-sheet leverage can also help entice hedge funds to use TRS.

For example, a hedge fund with assets of $20 million would like to offer its investors the economic exposure on a 5:1 leverage base and thus seeks to make a $100 million investment in certain assets without having to actually invest the total $100 million. The hedge fund can utilize the services of a synthetic prime brokerage and enter into a TRS. Since the prime broker has an account of $100 million of various assets, the account is "handed" over and managed by the hedge fund manager (counterparty to a TRS on that very account). The prime broker requires $20 million of margin posting which effectively allows the hedge fund to control and receive $100 million of assets with only $20 million on a 5:1 leveraged basis to pass the economic exposure to its investors.

Effectively, the prime broker creates an account that is managed by the hedge fund manager whom retains discretion over trading the account, but is owned by the prime broker. The prime broker then designs a TRS with the hedge fund as the counterparty and charges the hedge fund a swap payment (interest). The amount of leverage used by the hedge fund is at the discretion of the prime broker through the margin requirement.



The drawback for investors occurs when the portfolio of reference assets drops in value. Should this occur, the investor frequently is called to post margin. If the investor does not have enough capital to post the required margin, liquidation may result and in the case of a thin market possibly cause bigger losses. During the financial crisis of 2008, this was widely prevalent across institutional trading units as numbers of units were forced to unwind and liquidate positions causing further ripple effects.

The bank's benefits?

The spread charged by banks (typically the reference asset owners) tend to allow steady returns on capital for banks due to the accounting treatment of TRS. The reference assets and the negotiated rate payments received form an equal hedge which allows banks to use a hedge accounting treatment on their books. This is a method where the ownership of the reference assets and the payments are treated as one entry. Specifically, this allows the reduction of volatility created by the mark-to-market mechanism. This entry then remains on the bank's trading book with a VaR of zero thereby requiring regulatory capital on based off of the credit risk involved. By requiring investors to post margin, this risk can be mitigated and allows the bank to earn a healthy return on its capital. Also, initial capital charges do not apply in this case as the bank already maintains the portfolio of reference assets which contributes to its overall bottom line.

Overall, it is visible why various parties find this product useful. Each TRS is specific to a certain transaction and as a result, is executed over-the-counter. They have come under scrutiny as during the financial crisis, many investors were forced to liquidate holdings and the counterparty hedges would also fail as the market became very illiquid, resulting in higher bank write-downs. While there have been proposals to created clearing exchanges and other standardizations, the unique characteristic of this produce makes it very difficult to be standardized. The highly customizable nature of this product, along with the associated benefits of the accounting treatment, retains it as a highly popular instrument to quench the appetite for higher returns.

However as with the majority of structured products, these products have an inverted production cycle (similar to the insurance sector), i.e., they are sold before they are actually produced; the hedging and index tracking are done long after the sale.This is typical of the sell side business model.

Although simulation computations are used in order to calculate a margin including risk, many risks still remain uncovered (operational, settlement, liquidity, counterparty risk, etc.). In numerous papers (see our « BiNew » working paper) we have described how multi-horizon risk management is needed in order to deal with an inverted production cycle, as well as the risk linked to “intermediate consumption.” Indeed, both product life cycle and multi-horizon risk must be taken into account in order to assess the risk related to the trade and, therefore, the pricing of the trade.

Product Lifecycle Management (PLM) tools allow one to control and better manage the risks inherent to these products; it is designed to harmonize information systems and product intelligence. It can also help optimize and ensure the production of industrial products.

For further details on the topic, please read our article on Product Lifecycle Management tools[1] •

[1] http://www.otc-conseil.com/eng/High/publications/articles/2966/plm-in-cib.pdf