

Part of NERA's Series on Structured Products | At A Glance

Reverse Convertibles

Overview

A reverse convertible note is a structured product typically issued by a financial institution such as a bank. Evaluating the benefits and risks of such a note is more complex than doing so for a plain-vanilla bond or even a convertible bond. A reverse convertible typically pays an interest rate that is higher than conventional debt of the same issuer, maturity, and seniority. In exchange, the purchaser of the note accepts the risk that the full principal value will not be repaid at maturity.

A reverse convertible note typically references an underlying asset, such as a stock, a basket of stocks, an exchange-traded fund, or an index. The performance of the underlying asset or assets is used to determine whether the full principal will be paid at maturity. The exact conditions can differ among reverse convertible notes, but a common theme is that, if the value of the reference or underlying asset(s) declines sufficiently, then the investor may not receive the full value of the principal at maturity. This reduction in value of the principal can take the form of the principal being paid in shares of the underlying asset(s) instead of cash at maturity.

A Closer Look

An investor in a reverse convertible note can be thought of as both purchasing a bond from the issuer and selling a put option on the reference asset to the issuer of the bond. It is the sale of this put option to the issuer that allows the reverse convertible note to pay a higher interest rate than would otherwise be the case. The sale of the put option essentially means that the purchaser is "short" volatility, which means that he or she is betting that volatility will not be more pronounced than that implicitly priced into the

product. Because of this fact, a reverse convertible is more complex than a conventional debt instrument. As with a conventional debt instrument, the investor is subject to the credit risk of the issuer, as it is possible that the issuer may not be able to pay its obligation to the investor in part or in full. In addition, the investor is also subject to the risk that the reference asset may perform sufficiently poorly, and in doing so result in a payment at maturity lower in value than the value initially invested.

Many reverse convertible notes have the feature that the value of the reference asset needs to have fallen a predetermined amount at or by maturity in order for the possibility that the full principal value might not be repaid is realized. For example, a reverse convertible note may specify that the reference asset must fall in value by 20% before the maturity of the note, and not fully recover, before the full value of the principal would not be returned at maturity. This kind of provision is known as a "knock-in" provision. Other reverse convertibles may specify a reference basket of securities and may stipulate that, if any one of the basket of securities falls below a predetermined value for that security (another knock-in provision), and not fully recover, the principal is repaid with a predetermined



number of *that* security or the cash equivalent. In this manner, the investor may have less than his or her initial principal returned at maturity. In such a case, an investor is not only “short” volatility but also “long correlation” (i.e., of the securities in the basket). There are many further variations of reverse convertible products and the presence of the optionality features, which can vary a great deal in complexity, needs to be explicitly accounted for when valuing these products.

Investor Complaints

In October 2010, the Financial Industry Regulatory Authority (FINRA) fined Ferris Baker Watts (FBW), a broker dealer that was acquired by RBC Capital Markets, \$500,000 for selling reverse convertible notes to customers for whom the notes were deemed to be inappropriate. In addition to the fine, FBW was ordered to pay a total of \$189,723 to 57 of their customers who had suffered a net loss on the investments. In February 2010, the FINRA fined H&R Block \$200,000 for inadequate supervision of the sale of reverse convertibles by its brokers. H&R Block was ordered to pay \$75,000 to the purchaser of a reverse convertible that was sold by an H&R Block broker. A FINRA arbitration suit filed against Morgan Stanley in 2009 involves, among other items, investor complaints about reverse convertible securities. The investor ended up holding shares of Lehman Brothers that were acquired after the redemption of a reverse convertible note that did not return the full principal balance. This highlights both the lack of principal protection in the notes as well as the possibility that an investor may end up in a security that he or she did not expect to own. These cases suggest the possibility that further broker-customer disputes will follow, with the investor claiming that the risks inherent in reverse convertible notes were inadequately disclosed.

Key Areas of Expertise

NERA assists clients in disputes relating to a wide range of structured products including reverse convertible notes. NERA’s securities experts have been involved in numerous disputes where we have analyzed issues related to suitability, risk, and valuation of such products. Our experts have extensive experience valuing and analyzing complex

structured products and other derivatives. Our relevant expertise includes:

Broker-Customer Disputes

- Evaluating suitability and risk of specific investments
- Assessing portfolio performance
- Examining portfolio-level risk characteristics
- Evaluating liability
- Evaluating opposing expert reports and analyses
- Analyzing and calculating damages (if any)

Valuation and Risk Management

- Valuing structured products including various reverse convertible products
- Analysis of hedging strategies for the sale and purchase of reverse convertible notes
- Analysis of trading data to examine liquidity and efficiency of trading in secondary markets

About NERA

NERA Economic Consulting (www.nera.com) is a global firm of experts dedicated to applying economic, finance, and quantitative principles to complex business and legal challenges. For over half a century, NERA’s economists have been creating strategies, studies, reports, expert testimony, and policy recommendations for government authorities and the world’s leading law firms and corporations. With its main office in New York City, NERA serves clients from more than 20 offices across North America, Europe, and Asia Pacific.

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