SFI White Paper on Structured Products: Performance, Costs, and Investments

Summary

Although structured products have attracted considerable attention over recent years, only few empirical studies exist. This paper provides the first comprehensive and representative analysis for Switzerland, based on more than 20,000 individual products and studying the period 2008–2014. The category warrants has been excluded from the study. Structured products come in many different flavors: depending on their type, their payoff profiles can vary substantially. Barrier reverse convertibles are by far the largest category in this study's sample, followed by tracker certificates, discount certificates, bonus certificates, and capital protection certificates. Within each class, the products themselves are highly heterogeneous. First, their life-spans range from just a few months to several years. Next, they trade in different currencies: slightly more than half of the products studied here trade in CHF, another quarter in euros, and the remainder in US dollars or other major currencies. Finally, the vast majority have either single stocks or baskets of stocks as underlyings, but some have indices. The main conclusions are as follows:

- In most of the years considered, structured products performed well. In the period 2012–2014 some 80% or more of structured products generated positive returns. Depending on the category and year, these products generated median returns of between 5% and 15%, per annum implying that half of the products achieved this return or exceeded it. A particularly successful year was 2009 in which most medians were in the range of 19% to 31%. In all of these years, equity markets also performed well. The years 2008, which saw the onset of the most recent global financial crisis, and 2011—the year of the European debt crisis—saw (large) drops in equity markets. These drops also affected the structured products in this sample as they are mostly equity-based, and they too had negative medians. A noticeable exception is capital protection products, where the impact of market movements, on either side, is rather weak.
- Estimating the costs of structured products is difficult as some cost components are difficult to measure or are simply not known at issuance: Structured products are payment promises, contrary to the performance promises of funds. The trader has to guarantee the payment promise from issuance to the redemption date of the product. Therefore, the best known value of the costs is at the termination of the product, and uncertainty about the future value of parameters such as volatilities matters in terms of so-called risk management costs.
- Adding the risk management costs to the theoretical (model) price, which assumes that there are no market imperfections (such as bid-ask spreads) and for which crucial price parameters such as volatilities are constant, defines the "fair price" for the product components if they can be manufactured at zero production costs, if distribution is costless, and if the issuer targets zero profit. Risk management cost figures are not available publicly. An anonymous survey of major issuers in the Swiss market was used to estimate these costs.

- The authors refer to the difference between the issuance price and the fair price of the components as the total expense ratio (TER). The TER equals the sum of the net margin and all production and distribution fees. A structured product's TER mimics the TER of the fund industry, which provides a first step toward comparing these two different wrappings of investment ideas. The empirical analysis for the period April 2012 to April 2015 finds the following rounded median TERs (all figures are per annum): 0.3% for tracker certificates; 0.6% for capital protection certificates; 1% for bonus certificates; 1.4% for discount certificates; and 1.7% for barrier reverse convertibles.
- Swiss investors have an appetite for barrier reverse convertibles on stocks, and behavioral motives appear to play a major role in investment decisions. A case study analyzes under which conditions an investor will survive—with a high probability—a full stock market cycle without breaching the barriers.
- Several additional case studies and illustrative examples distinguish investments in normal market conditions from event-driven investments made when markets are under stress. A main focus is on the SNB and ECB decisions of January 2015: the removal of the EUR/CHF cap and the introduction of negative CHF interest rates, and the decision to apply a program of quantitative easing in the eurozone, respectively. The case studies not only focus on possible return expectations but stress how investors' views are the key to investors making a sound investment or non-investment decision. The studies show that investment in structured products is based on a view of the markets contrary to that which prevails for investments in funds, where a mixture between a model and market view often applies.
- The events of January 2015 show that interventions can create many investment opportunities in different asset classes: equity, fixed income, credit, and FX examples are discussed in the setting of the aftermath of the SNB and ECB decisions. While some opportunities can be persistent, others exist only for a short amount of time. To transform such opportunities into investments two elements are necessary: structured products with a short time-to-market and a precise mapping of the opportunity into liquid investments, and investors who are fit to invest.