

## AN INTRODUCTION TO STRUCTURED PRODUCTS

Whilst we as a business prefer plain vanilla index tracking investments, we are aware of the use of structured products within the investment environment and indeed many clients have received excellent returns with low volatility by using successful plans.

The purpose of this note is to try and explain the benefits and risks of these products so that clients can get a basic knowledge of the concepts before they consider the minutia of any specific offering.

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## **1. WHAT IS A STRUCTURED PRODUCT?**

Structured products is the name given to a group of investments that combine two or more underlying assets in order to offer growth or income potential whilst usually offering some degree of capital protection.

Most structured products consist of:

### **1.1 A Zero Coupon Bond**

A zero coupon bond is a bond of a pre-defined term (say 6 years) that does not pay a coupon (Interest). Instead it is purchased for less than the amount it will mature for. For example, a bond designed to pay an investor £1,000 in 6 years time may be purchased for £800 (a 20% discount). As opposed to a more traditional bond which, for example, may be purchased for £1,000 and pays out 3.79% as interest each year (which is the rate needed for the £800 example).

The “discount” is calculated using the “risk free” interest rate, or LIBOR (London Interbank Offer Rate) which is the rate at which a panel of banks will lend to each other.

Over the 6 year period, the zero coupon bond purchased at £800 (a £200 discount), grows to £1,000 and on face value, gives the ability of a structured product, to repay the full initial investment over the term.

The bond (in Europe at least) has the same security as any deposit a bank may receive and will receive the same return as deposit holders should the issuer go bust.

One way of increasing the discount is to make the bond promises over a longer period (hence 6 years is a very common structured product term). In our example here, were the promise made over 8 years the cost of £1,000 would be £744 thus releasing £56 more for the growth element of the plan.

Obviously if base rates are higher this increases the funds to enhance returns.

### **1.2 The Growth Component**

Having secured the return of the investor money with the zero coupon bond the hope is that the discount (20% in the above example) can be used by the bank to generate the growth offered in the product plus some profit for the bank. Since this 20% is not needed to return the clients capital it can be geared or placed in higher risk funds. There are a myriad of ways of spending this discount to achieve returns some of which are:

#### **1.2.1 Call Options**

At its simplest the bank might buy an option which gives it the growth in the FTSE 100 over 6 years. The benefit of the option is that the issuing bank which is guaranteeing the return will not be able to ask for money should the return be negative. The call option issuing bank gets a premium for this, the premium tends to rise and fall with the perceived volatility within the chosen stock market.

### 1.2.2 Bank Risk

As we saw in 2008 the banking system relies on countless numbers of cross indemnities. Bank A approaches Bank B and says if I give you £5,000 will you indemnify my bank from going bust to the tune of £250,000 over the next 6 years. These insurance premiums are used by Bank B to enhance the returns on offer within their structured products. However, of course, if Bank A do go bust whatever proportion of your product promised to their creditors is lost to you.

Bank B uses these premiums to gear returns so instead of 1 call option for the growth of FTSE 100 they may be able to buy 3 call options thus offering the investor 3 x the growth in FTSE within the product.

### 1.2.3 Limited Capital Protection

Whilst it is sold as a benefit, the inclusion of a barrier under which your capital is at risk does in fact provide the issuer with additional funds to boost the return, since the zero coupon bond mentioned in 1.1 above is providing the return of capital regardless so the issuing bank can sell the insurance of a drop of 40% or 50% within the market for a premium which again can be used to generate greater returns by purchasing more call options (1.2.1).

### 1.2.4 Limited Capital Growth

Again by limiting the maximum growth available (say a return of 3 x the FTSE 100 over a 6 year term **subject to a maximum of 60% growth**) the cost of the call options may be less or possible surplus growth above 60% can be sold to enhance the call options being bought.

## 1.3 An Index To Base The Returns Or Capital Protection On

Most of the UK structured plans use the FTSE 100 as their index. It is, however, possible to obtain offers which use just a few shares or offers which use International indices such as the Eurostoxx 50 or the S&P 500. Sometimes an offer will provide a combination of different indices.

The index is simply the basis for the return. Your money is never invested in the actual index being used as a benchmark for returns.

## 1.4 A Fixed Term

As explained in 1.1 above, the promissory note needs time for the merchant bank to obtain its profit so you will normally find that the plan has a fixed term typically of six years. There are nuances to this rule, for instance the kick out plans explained below.

## 1.5 The Plan Is Unrealisable

Following on from the above it is important that any investor understands that to all intent and purposes their money is locked away for the entire term of the structured product. Whilst many structured plans create an unofficial secondary market, there are absolutely no guarantees as to what if any return of the original investment is available prior to the fixed end date agreed within the contract.

Several plan managers agree a clause which returns the investment on death but this is by no means always the case.

## 1.6 Some Form Of Capital Protection

Typically capital protection is provided in terms of a 100% return of capital as long as the benchmark index for the product does not fall by more than 40% or 50%. We usually only recommend the European Soft Barrier formula which is taken at maturity as opposed to the American Barrier which applies to any one day in the plan's life.

Courtesy of SocGen we can confirm that the FTSE 100 index between January 1984 until September 2013 breached the barrier levels :

### 1.6.1 50% Barrier

	<b>European Barrier</b>	<b>American Barrier</b>
FTSE Falls by More than	50.00%	50.00%
% of 6 year term Barrier Breached	-	0.93%
Average Capital Repayment	100.00%	99.85%
Average Loss when Barrier Breached	N/A	(15.58%)
Maximum Loss When Barrier Breached	-	(27.41%)

### 1.6.2 60% Barrier

	<b>European Barrier</b>	<b>American Barrier</b>
FTSE Falls by More than	40.00%	40.00%
% of 6 year term Barrier Breached	-	19.02%
Average Capital Repayment	100.00%	98.17%
Average Loss when Barrier Breached	N/A	(12.50%)
Maximum Loss When Barrier Breached	-	(29.77%)

Don't forget, just because it has never happened before doesn't mean it won't happen in the future!

## 1.7 An Offer Period

If you understand that the basis of a structured product is a promissory note then it is obvious that there must be a date when the contract starts and ends. Likewise, you need a date to base the index level start point so a start date is essential. Typically, structured plans are offered over a period of four weeks.

### **1.8 There Is A Direct Correlation Between Risk And Reward**

Structured products are no different from any other form of investment, if the reward being offered seems high the risks associated with the offer will be correspondingly increased. In section 1.2 you have:

- The risk the bank giving the zero coupon bond goes bust
- The risk the bank issuing the structured product goes bust
- The risk that one of the banks being insured against loss goes bust
- The risk the market falls below the soft barrier level

### **1.9 You Lose The Dividends**

For many indices (and this certainly applies to the FTSE 100) the overall return clients receive is due to a large extent to the dividends which the equities provide. No structured product ever takes into account dividend payments when considering warranties or indeed returns.

## **2. COMMON ISSUES WITH STRUCTURED PLANS**

### **2.1 Tax Wrappers**

Not all structured products are acceptable to ISA or pensions legislation. You must know what environment you wish to purchase the structured product within before you consider the options available.

### **2.2 Platforms**

Many platforms cannot accept structured products and within platforms certain tax wrappers will be unable to accept certain structured plans. For instance, loan notes may not be acceptable to an ISA fund whereas a unitised fund structure would be. Many structured products are not domiciled in the UK and this would not be acceptable to a UK bond. Most platforms purchase all of their investments in nominee names. Some structured products cannot cope with this and require specific client names. Some structured products have a minimum contribution which puts them outside the scope of the ordinary investor.

### **2.3 Underlying Assets**

One could describe structured products as an asset class in their own right and indeed in the Swallow Financial Planning asset allocation report we do have a separate section allowing for derivative products. Even so, the underlying benchmark for 95% of these offers is the FTSE 100 which pushes up the client asset allocation link to UK equities.

## **2.4 Counterparty Risk**

At the maturity of the plan the only institution that matters is the counterparty with whom you're placing your bet. Even if your plan is offered by a household name such as L&G or Aviva, the counterparty may be someone else. After 2008 who knows who is a safe counterparty but it does make sense to watch the extent of your cash you have with any one institution particularly if they are a smaller bank for instance Investec, or a foreign bank such as Santander.

## **2.5 Averaging**

When the plan matures the designer can choose either to crystallise the index on a single day or (more commonly) he can use the average of the index over say a three month period prior to the redemption date. This is called averaging proponents of averaging will say that it greatly reduces the risk of the plan. The counterargument is that it also significantly reduces the return.

## **2.6 Tax Treatment Of Return**

Before purchasing a structured product the investor needs to decide how he or she wishes to receive the ultimate return. One of the biggest uses of structured plans in recent years has been to utilise the annual capital gains tax allowance using a (hopefully) lower risk alternative to direct equity purchase. Clearly in this case therefore the structured plan must produce a return in the form of a capital gain. Many structured plans provide a return in the form of interest which, whilst acceptable within say a pensions or bond environment would be unsatisfactory to a higher rate taxpayer. Some structured products are fine for a cash ISA but unacceptable for a stocks and shares ISA.

## **2.7 Structured Products Are Not Protected By The FSCS**

Very rarely is a structured product protected by the Financial Services Compensation Scheme. Therefore, if your counterparty goes bust you lose your money. As everyone knows, even the most secure counterparties can fail (Lehman Brothers) and clients need to understand that there is no safety net available. If the merchant bank takes your money and gives it to Nick Leeson then you may never see it again.

## **2.8 The Investment Is Opaque**

The investor will never know how their money is invested. You have to accept that the counterparty will give you your return under the terms of the contract you have with them. A bit like the old with profits funds there is no way for the investor to know what underlying assets are securing their eventual return.

## **2.9 You Cannot Cancel The Plan**

Clearly these are fixed term products so most providers will not offer any cancellation rights. Once you invest you cannot change your mind.

## **3. STRUCTURED PRODUCT TYPES**

The following are the main structured types at this time:

### **3.1 Capped / Fixed Returns**

With a capped growth plan you exchange the potential returns from the market (and don't forget you never get the dividend returns) in return for a degree of security.

At the lower end of the risk spectrum you are guaranteed to your money back regardless of market conditions as long as the counterparty doesn't go bust. At the higher end of the risk spectrum there will be a requirement for the two to have maintained some of its value and or have grown by a limited amount.

Typically the offer will be a return of say 6% per annum simple for the life of the plan as long as the FTSE 100 maintains its value. Regardless of what happens to the FTSE 100 you are promised your money back.

Some plans will offer the return at the end of the plan (growth) whilst others will offer monthly quarterly or annual income.

### **3.2 Simple Growth**

The simple growth plans were the first structured products available. The investor takes out the plan for a fixed term and then receives the return of the chosen index (or sometimes a multiple of the return of the index depending on the risk taken).

In exchange for some degree of capital protection the investor gives up the dividends from the market. The gearing of the return is linked to the risk taken in terms of the maturity options.

### **3.3 Potential Income/ Growth**

Again these plans are capital protected as long as the counterparty survives. The principle behind the potential income or growth is that the return is only offered if the index grows within a particular band of volatility in each of the years you hold the plan.

### 3.4 Kickout Options

The kickout category is by far the biggest of the plan types currently available which reflects the popularity of this genre. A typical kickout plan will have the usual structured terms but will throw in an early maturity option which enables the investor to have their money back should certain market conditions be met. So for instance, you may have a plan which offers a 6% simple annual return over a period of six years as long as the FTSE 100 is at or above the level at outset when the plan matures.

The designer will then throw in an added incentive which states that after three years of the six year term have elapsed, if the FTSE 100 is at or above the current levels on any anniversary then you can have your 6% simple per annum return immediately. So on the one hand the optimists will think they will get their return in three years whilst the pessimists think it unlikely they won't get a return after a period of six years!

## 4. SUMMARY

Despite all the possible problems which we have listed, under normal circumstances these products provide the returns promised and are therefore a worthwhile tool in the financial planning armoury. If, for instance, you are of the view that markets are likely to remain stagnant then a structured plan providing a fixed return which will use up your tax free capital gains tax allowance (or even your carry forward capital gains tax losses) is an exceptionally good way of investing part of your capital.

If like many you believe that fixed interest investments provide risk-free returns for a high risk of capital erosion, then structured products which provide security and your money back look very attractive. As with every financial product however if the offer looks too good, it probably is!

Please note that whilst every effort is made to ensure that the information contained within this explanation is correct, these notes are by necessity brief and of a generalised nature. Clients should seek specific personalised advice prior to undertaking any arrangement. These notes are named [06.2018 An Introduction To Structured Products](#) and was last updated in June 2018. Whilst we have done our best to ensure facts are current to this date laws and options are changing constantly so always check before action.

Investments are subject to market risk, including the possible loss of the money you invest. Bond funds are subject to the risk that an issuer will fail to make payments on time, and that bond prices will decline because of rising interest rates or negative perceptions of an issuer's ability to make payments. Diversification does not ensure a profit or protect against a loss in a declining market. Performance data shown represent past performance, which is not a guarantee of future results. Note that hypothetical illustrations are not exact representations of any particular investment, as you cannot invest directly in an index or fund-group average.

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