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A global issuer's perspective on structured products

by Michael Bennett¹, World Bank

THE LAST FEW YEARS HAVE NOT BEEN KIND TO THE STRUCTURED PRODUCTS INDUSTRY. THE GLOBAL FINANCIAL CRISIS THAT BEGAN IN 2008 WITH THE IMPLOSION OF THE US SUB-PRIME MORTGAGE-BACKED SECURITIES MARKET THREW AN OFTEN HARSH PUBLIC SPOTLIGHT ON STRUCTURED PRODUCTS. RATINGS DOWNGRADES, STEEP PRICE DECLINES, DEFAULTS AND DISPUTES INVOLVING VARIOUS STRUCTURED PRODUCTS, FROM COLLATERALISED DEBT OBLIGATIONS (CDOs) TO STRUCTURED MUNICIPAL SWAPS, ALL HAVE DRAWN PUBLIC AND REGULATORY ATTENTION TO A MARKET THAT PREVIOUSLY HAD ATTRACTED LITTLE COMMENT AND ONLY LIGHT REGULATORY SUPERVISION.²

Many regulators now consider any complex financial product inherently suspect. This reaction is understandable given the scale of the collapse in some of the most complex segments of the structured products market, in particular sub-prime mortgage-backed CDOs. It is also a predictable response of regulators who themselves have come under strong criticism for their failure to foresee the problems that developed with some of these products. Because simpler products are simpler to regulate, it is not surprising that regulators would prefer to see a general reduction in the complexity of financial instruments.

Certainly not all criticism of structured products has been unwarranted. Structured products have been sold to investors that were not able to understand fully the risks. In Asia, for example, Lehman Brothers, prior to its collapse in 2008, distributed through local banks multiple tranches of complex credit linked notes known as 'minibonds' to almost 100,000 individual investors in Hong Kong, Singapore and Taiwan. When the Lehman Brothers'

bankruptcy led to losses on these notes, it became evident that many of the investors had not adequately appreciated all of the risks of their investment in minibonds.³ Incidents



Michael Bennett

Head of Derivatives and Structured Finance

World Bank

tel: +1 202 458 5099

fax: +1 202 477 8355

email: mbennett1@worldbank.org

like these, where structured products have been sold improperly, have contributed to the regulatory bias in favour of simple financial instruments.

Notwithstanding such incidents, structured products remain useful and important investment and hedging tools. On the investment side, they permit investors to earn enhanced yields and obtain exposure to assets and markets they may not otherwise be able to access. A hedge-fund return-linked structured note, for example, offers investors both the opportunity to earn a higher yield than they could with a straight bond and exposure to an asset class – hedge funds – that is generally accessible only to the wealthiest investors. Likewise, insurance-linked structured products allow investors to receive insurance premium-type returns by taking exposures that have traditionally only been accessible to insurance companies.

As a hedging tool, the complexity of structured products reflects the reality that the risks faced by many investors are themselves complex. Consider, for example, a US investor that holds a euro-denominated bond issued by French company X, and it is the only euro-denominated security in the investor's portfolio. The investor would like to enter into a swap to exchange the euro payments it will receive under the bond for US\$, but obviously will not need that swap to continue if company X defaults on the bond. The investor could enter into a credit-linked, euro-US\$ swap with a dealer that terminates automatically if company X defaults on any debt obligation. Although such a swap would be relatively complex, it would also better meet the investor's specific hedging objectives than any plain vanilla product could.

As a result, and despite the criticisms, there continues to be strong institutional and retail investor interest in structured products.⁴ In fact, given the extent of the losses suffered by investors during the financial crisis, the yield enhancement offered by structured products may make them even more popular in the coming years as investors seek to rebuild their damaged portfolios.

In this article, I examine certain of the key issues with respect to structured products in light of the experience of this market during the financial crisis. I also highlight some

of the World Bank's experience as a frequent issuer of structured notes.

What are structured products?

Structured products are financial instruments with cash flows that depend on the value or performance of underlying assets or embedded derivatives.⁵ They are customised financial products that permit parties to meet specific risk-return objectives that cannot be met using only traditional instruments, or to hedge exposures that cannot be adequately hedged using only plain vanilla instruments.

In some cases, a structured product is composed of two plain vanilla instruments, such as a zero coupon bond and a call option, that could be purchased separately. The principal benefit of packaging the two elements into a single structured product is convenience for the investor. Other types of structured products are more complex. Some of these products are composed of a complex set of risk elements that would be very difficult for an investor to compile on its own. Others provide investors exposure to types of risks or markets that they could not invest in directly. There are structured products linked to interest rates, foreign exchange rates, commodities, credit risk, inflation, carbon, insurance, hedge fund returns and many other underlying variables, as well as hybrid products that combine some of these variables into a single product.

The World Bank as an issuer of structured notes

The World Bank has been issuing bonds in the international capital markets for more than 60 years to fund its activities as a global development organisation, and in recent years has issued about US\$35bn of bonds per year.⁶ It seeks to diversify funding sources by offering bonds in different markets, currencies, maturity structures and formats. As part of that diversification strategy, the World Bank issues a variety of types of products including benchmark bonds, plain vanilla medium-term notes in core and emerging market currencies, as well as structured

notes. The types of structured notes the World Bank issues range from simple callable notes to more complex structures linked to equity or bond indices or multiple currencies.

Issuance of structured notes is largely driven by reverse-inquiry from dealers and investors, and the terms of the notes generally are customised to meet specific investor needs and preferences. In a typical year, structured note issuance represents roughly 25% of the World Bank's total funding programme. As a frequent issuer of structured notes and a leading AAA-rated name in the international capital markets that understands the franchise value of its reputation as a responsible issuer, the World Bank constantly strives to raise standards and promote good practices in the structured products market.

Certain key issues with structured products

Investor suitability

'Investor suitability' is the term used to describe the duty of licensed securities dealers to recommend investment products that are suitable to their clients, in light of the clients' investment objectives and financial means. Although the precise nature of the investor suitability standards varies by jurisdiction, some obligation of this type exists in all major securities markets.

Structured products pose particular difficulties for securities dealers seeking to satisfy their investor suitability obligations. Because these products generally include embedded derivatives, at a minimum an investor needs to know how to value options in order to price them. Investors also need to have some understanding of the correlation among the various elements of a structure in order to gauge the valuation impact of having these elements packaged together into a single product.⁷

In addition, less financially sophisticated investors may fail to appreciate fully the risk of loss they are taking when they purchase structured products. Although the investor may understand in general terms the nature of the risk

embedded in the product, the complexity of the structure may make it difficult for the investor to determine with precision how market movements will impact the product's value.

Given that some investors may not be able to properly price structured products or fully assess the embedded risks, it is essential that dealers take their investor suitability obligations seriously and restrict the sale of these products to investors that do not have such limitations. In order to do so, dealers must ensure that their sales professionals have sufficient training to understand fully the embedded risks in structured products.⁸ If salespeople lack the skills to evaluate the price and risk of a structured product, they obviously cannot make an informed judgment that the product is suitable for their customers.

Moreover, dealers must carefully evaluate the distribution chains they use to sell structured products. In many cases, products are created by one bank but distributed to customers through other institutions.⁹ Such a distribution chain is common for structured products, since the ability to create these products tends to be concentrated in large, international banks while their sale to end customers is often handled by smaller local or regional dealers. With such a chain, the salespeople making the investor suitability determinations may not even be employed by the same institution that created the product. As a result, dealers that originate these products must be vigilant in ensuring that sufficient knowledge about the products filters down through the distribution chain to the salespeople who are ultimately facing the end customers.

Many dealers respond to the limitations on the ability of salespeople to understand fully all types of structured products and the reality of distribution chains by asking investors themselves to certify that products are suitable for them. Such a certification generally takes the form of a statement inserted into the product's sales material which provides that the investor understands the product and has deemed it to be suitable given the investor's own circumstances.¹⁰

Although obtaining such representations gives some comfort to dealers, the investor suitability obligations imposed in most major financial markets put the obligation on the dealer to make this determination. The rules do not suggest that the dealers can effectively shift this obligation to the investors themselves by asking the investors to certify that products are suitable for them. It is, after all, the dealers who are expected to have the professional experience and expertise to evaluate financial products and determine their suitability for a particular investor's portfolio.¹¹ Therefore, dealers should consider such representations as an additional form of comfort, but not as a substitute for the dealer making its own determination about suitability.

As a frequent issuer of structured notes, the World Bank takes investor suitability very seriously. We require each dealer that underwrites one of our note issues to represent that it has determined that the investors have the financial capacity to bear the risk associated with investment in the notes and sufficient knowledge and experience to evaluate those risks. Depending on the risk of a structured note, we will also set the minimum denomination high enough that we are comfortable it could only be purchased by investors with significant assets.

However, we do not believe that a dealer can rely solely on an investor's asset size in determining investor suitability. When it comes to evaluating the price and risk of structured products, it is not clear that the size of an investor's asset base is always a good proxy for knowledge and expertise.¹²

Even many investors with relatively large portfolios may invest almost entirely in plain vanilla products, such as stocks and fixed rate bonds, and have little or no experience with structured products. Moreover, as mentioned earlier, structured products come in an almost infinite variety. It would be unrealistic to expect even a large and very knowledgeable investor to have expertise in all structured product areas. Therefore, dealers must continue to exercise their judgment with regard to investor suitability even when selling structured products to large institutional investors.

Conflicts of interest

Numerous conflicts of interest can arise in the structured products market. Most of these conflicts stem from the size of the dealers that are most active in this market. They tend to be large, global institutions engaged in many different business lines, from creating structured products to providing investment banking advice and asset management services. Given the breadth of their businesses, these dealers are taking thousands of different positions in various markets every business day. Some of these positions may adversely affect the returns on the structured products the dealer has sold to customers.

Consider, for example, a dealer that creates a credit-linked note that provides investors with a long position on company X. As long as company X does not go bankrupt or default on any of its outstanding obligations (either of which is defined to be a 'credit event'), the note will pay a high rate of return to the investors. If, however, company X does suffer a credit event, the note will redeem early for less than 100% of the principal amount. Imagine as well that the dealer is separately an important lender to company X, and that company X's business is dependent of its ability to keep receiving loans from the dealer. If the dealer terminates its credit lines to company X, that action could cause company X to have a credit event and consequently for the credit-linked note to be redeemed for less than its par value, creating a loss for the investors.

A similar result could occur if, rather than being an important lender to company X, the dealer's investment banking division was hired by company X as an investment adviser at a point in time when company X was facing extreme financial difficulty. If the dealer, in its capacity as investment adviser, reviewed company X's financial situation and advised company X that its best option was to file for bankruptcy protection, the bankruptcy filing would similarly be a credit event that would lead to a loss on the credit linked notes.

In order to effectively manage and mitigate the impact of these sorts of conflicts of interest, dealers that originate and sell structured products must have processes in place that allow them to identify the conflicts.¹³ Establishing such

processes is difficult, given the size of the dealers that are most active in this market. For example, there are practical limitations on the ability of a structured products division within a large global institution to know all of the relationships and market positions that are maintained by their institution as a whole. The structured products division may be physically separated from the corporate lending and investment banking divisions in a different building or even a different country, and may also be separated by so-called ‘Chinese wall’ regulations from sharing information with those divisions. Therefore, effective management of conflicts requires oversight at the highest management level of the dealer where senior managers have access to information from all of the various divisions.

When the World Bank works with a dealer to underwrite and market one of our structured notes, we seek to identify upfront all of the actual and potential conflicts of interest that dealer may face. To the extent possible, we will eliminate conflicts. For example, we may enter into a swap with the dealer in a connection with a structured note under which we pay the dealer a floating rate of interest and receive from the dealer an amount equal to the coupon on the note. In such a case, we generally do not permit the dealer to act also as calculation agent under the notes, since the note calculations will determine what the dealer owes on the related swap. For other types of conflicts that cannot be eliminated, we require full and clear disclosure in the note documentation.

Collateral

Many structured products involve the use of the special purpose vehicles (SPVs) that are required to hold collateral. For example, an SPV will issue a note in which the cash flows that repay the note are generated by the SPV entering into a swap or other type of underlying transaction. The SPV will use the proceeds of the issuance to purchase collateral that will act as security for the notes and be the source of the principal repayment.

The global financial crisis highlighted the importance of the credit quality and liquidity of that collateral. In many cases, structured products that generated losses for

investors did so not because of any defect in the embedded derivatives or otherwise in the structure, but rather because of significant declines in value of the underlying collateral. Many dealers, for example, used their own bonds as collateral for the structured products they originated. When the creditworthiness of the dealers deteriorated or, in the case of Lehman Brothers, collapsed, the market value of the collateral underlying their structured products declined, leading to losses on those products.

Given this experience, many dealers are now looking for safer securities to use as collateral for structured products. One option that has been used is World Bank bonds. In the catastrophe bond market, for example, dealers need collateral that is both safe and easily liquidated in the event a specified natural disaster occurs.¹⁴ To meet those requirements, World Bank puttable bonds have been utilised for a number of transactions since 2009. A World Bank puttable bond provides the security that comes from the World Bank’s AAA credit rating and also guarantees liquidity through the put option that is provided to the investor.

Conclusion

The global financial crisis has been blamed in part on the increasing complexity of financial instruments, and has led many regulators to consider ways to curb financial innovation.¹⁵ Complexity, however, is not an inherently evil characteristic in a financial instrument. Rather, it is often just a natural, necessary consequence of tailoring an instrument to meet an investor’s specific needs and risk-return objectives.¹⁶ In addition, over the past few decades, the structured products market has grown to encompass products that reference a wide variety of underlying variables, including equity index returns, inflation rates, commodity prices and even mortality statistics. As these variables are complex, structured products that reference them are naturally complex as well. It would be wrong, therefore, to assume a financial instrument is inappropriate merely because it is complex.

Complex products are not appropriate for all investors, however, and the sale of such products places a particularly strong duty on dealers to ensure they treat their investor suitability and conflicts of interest obligations seriously and pay close attention to the quality of collateral that secures the products they sell. Issuers of structured products must also be vigilant in impressing on dealers their expectations regarding investor suitability and conflicts of interests. Finally, investors must honestly assess their ability to understand and value structured products as part of their investment decision-making process.¹⁷ If all market participants live up to these obligations, structured products should come to be seen for what they are: valuable investment and hedging tools for investors that have the requisite expertise to understand them.

Notes:

- 1 The author is the Head of Derivatives and Structured Finance in the World Bank Treasury. The findings, interpretations and conclusions expressed herein are those of the author and do not necessarily reflect the views of the World Bank or its affiliated organizations. Portions of this article are included in the author's article *Complexity and its Discontents: Recurring Legal Concerns with Structured Products*, NYU Journal of Law & Business, Vol. 7:811 (2011).
- 2 See, e.g., Jason Paez, *Defusing financial weapons of mass destruction*, Huffington Post (February 15, 2010).
- 3 For a more complete description of Lehman Brothers minibonds, see Freshfield Bruckhaus Deringer, *Briefing: An Overview of the Lehman Brothers Minibonds Saga* (December 16, 2008).
- 4 On the growth of the structured products market following the financial crisis, see John F. Wasik, *An Investment for the Experienced*, New York Times, October 20, 2010, at F8.
- 5 The UK Financial Services Authority defines a 'structured investment product', in part, as one in which the return 'is linked by a pre-set formula to the performance of an index, a combination of indices, a basket of selected stocks or other factors or combination of factors'.
- 6 During its 2012 fiscal year (July 1, 2011 to June 30, 2012), the World Bank raised over US\$39bn through 296 separate bond issues denominated in 23 different currencies.
- 7 On the price transparency of structured products, see, e.g., Aline van Duyn, *Derivatives Transparency is Key Battleground*, Financial Times (March 11, 2010).
- 8 See, e.g., Quality of Advice on Structured Investment Products, UK Financial Service Authority, October 2009.
- 9 For example, before its collapse in September 2008, Lehman Brothers distributed its structured products through more than 600 third-party distributors (US Structured Notes Update, MTN-I, August 29, 2008).
- 10 A typical certification of this type provides: 'prospective purchasers of the notes should ensure they understand the characteristics of the notes and nature of the risks associated with investment therein and that they have sufficient knowledge, experience and access to professional advisers to make their own legal, tax, accounting and financial evaluation of the merits and risks of investment in the notes, and that they consider the suitability of such notes as an investment in the light of their own circumstances and financial condition'.
- 11 Asking for such representations may also put the investor in a difficult position, since professional investors may feel uncomfortable refusing to attest that they have sufficient expertise to understand a financial instrument.
- 12 On the issue of 'sophisticated investor' exemptions from dealer's investor suitability obligations, see, e.g., Gillian Tett, *Sophistication debate heats up*, Financial Times, May 6, 2010.
- 13 Many dealers use very general disclaimers that attempt to cover every possible type of conflict of interest that may arise. A typical statement of this type, in the context of a credit linked note, provides: 'The dealer may deal with and engage generally in any kind of commercial or investment banking or other business with regard to the reference entity in the same manner as if any and all notes did not exist, regardless of whether any such action might have an adverse effect on the reference entity.' Although such language is broad enough to cover almost any action that a dealer could take in the market, it is so broad that it arguably does not constitute effective disclosure of any particular action.
- 14 A catastrophe bond is a natural disaster related insurance-linked security. In a typical catastrophe bond structure, a sponsor enters into an insurance contract with an SPV that issues bonds to capital markets investors. The SPV invests the proceeds of the bonds in collateral and transfers the return on the collateral, along with the insurance premiums paid by the sponsor under the insurance contract, to the bond investors as the periodic coupon on the bonds. If a specified natural disaster occurs during the term of the bonds, the SPV liquidates the collateral and uses the proceeds to make a payment to the sponsor in accordance with the terms of the insurance contract. In such a case, the investors suffer a loss of their principal.
- 15 Many of the regulatory changes that were introduced in the wake of the financial crisis will make it difficult for dealers to create complex structured products. For example, new derivatives regulations in both the US and Europe will impose higher capital charges on dealers with respect to their derivatives transactions that cannot be settled through a central counterparty. Since many types of complex structured products involve embedded derivatives that will not be clearable with a central counterparty, these rules will add to the costs of such products, and may make some types of structured products prohibitively expensive. For an overview of relevant regulatory changes that were introduced after the financial crisis, see, e.g., *The impact of financial regulatory reform on structured products*, Morrison & Foerster News Bulletin, June 29, 2010.
- 16 It should also be noted that a simple structure does not guarantee that a financial instrument will be a good investment, as plain vanilla products are capable of causing losses as great as complex ones. For example, as many investors lost money on the relatively easy to understand plain vanilla equity and bonds of financial institutions

that were involved in the sub-prime mortgage business in the US as lost money on complex sub-prime mortgage-backed CDOs.

- 17 For an institutional investor looking to purchase a new type of structured product, many different people within the investor's organisation will need time to be educated about the structure, from the portfolio manager who makes the investment decision, to the back office staff that need to know how to book the product in the firm's systems to the accounting staff that must understand how to account for it.

Contact us:

World Bank

1225 Connecticut Avenue NW, Washington,
DC 20433 USA

web: debtsecurities@worldbank.org