Original Article

Regulating complex derivatives: Can the opaque be made transparent?

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ABSTRACT This article discusses the general legal principles governing the relationships between banks issuing over-the-counter structured derivatives to non-bank clients. After a discussion of the evident informational asymmetries between the counterparties to such deals, a representative sample is presented of recent deals failed from the clent's viewpoint, all the subject of current negotiation or ligitation with banks in Germany. Mathematical (mis)pricing and (asymmetric) counterparty risk asessments for these examples are summarised graphically before discussing the legal implications of their egregious features and their possible mitigation in future deals by appropriate regulation and interpretation in the world's courts.

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INTRODUCTION

The response to the financial crisis of 2007–2009 has so far been largely concerned with proposals for sharpening the national and international regulatory framework; for example, by effectively reinstating the US 1933 Glass–Steagall Act (now called the 'Volcker Rule'), restricting institutions such as hedge funds and private equity firms and

practices such as short selling and credit default swap (CDS) trading, the US Dodd–Frank Act requiring cleared exchange trading of some complex over-the-counter (OTC) complex derivatives such as CDSs, or penalising or increasing the regulatory capital requirements on financial institutions. But it may well be that the deregulation of Thatcher and Reagan and their successors throughout the Greenspan years led to a situation that had less to do with Schumpeterian 'creative destruction' than with the abuse of market power. In the words of Robert Khuzami, SEC Enforcement Director, regarding the recent civil fraud suit involving a subprime mortgage bond or collateralised debt obligation (CDO) brought against Goldman Sachs, 'the product was new and complex but the deception and conflicts (of interest) are old and simple'.

The exact role played by derivatives in the financial crisis is of course controversial.[1] However, derivative deals of many kinds have been associated with abuses that raise important regulatory issues. In a highly sophisticated industry such as modern investment banking, specific rules are of only limited use. Markets depend on flexibility for their efficiency. This suggests that future regulation must first get the underlying market and institutional structures right and then efficiency is best guaranteed not by regulatory interference in the detail of negotiations, but by applying the founding principles of commercial life. They are *caveat emptor*, the principle that it is always the buyer who is responsible for evaluating the terms of a deal offered to him,[2] and *good faith*, the principle that contracts do not permit deliberate harm of one party by the other. Markets depend on these two principles being held in the right balance to one another and seen to be so held, which is probably impossible without supporting legislation.[3] Ultimately, however, they are judicial principles. They are applied not by regulators, but by courts.

Be that as it may, many of the biggest market disturbances were obviously unleashed by mispriced credit derivatives (notably in the cases of Citgroup, Lehmans, Merrill Lynch, AIG and AMBAC). CDSs – in any event in their commercially *bona fide* form – are a form of insurance. The constraints normally applicable to insurance (in particular, that indemnification is restricted to 'insurable interest', that is, real loss) significantly limit the risks of the insurer. However, contracts for credit derivatives invariably specify that they are not insurance (and therefore outside the rules for that industry). This inevitably increases the risk of the party writing the CDS – to a massive degree, as is now evident. AIG, itself traditionally an insurer, appears not to have taken this into account in accumulating its own huge exposure to CDSs. At the very least, the speculative element of what is after all 'fake' insurance needs to be adequately reflected in the price of the deal. Beyond that, perhaps disclaiming the 'insurance' element in CDSs should be banned altogether. That would be an example of an abuse that may be amenable to regulatory reforms.

In this article, we examine the case for applying general principles to such instrument-specific regulation. In the next section, we shall discuss the specific consequences for derivatives litigation of informational asymmetry arising from the market power of global investment banks. These insights are based on a large number of cases currently in progress involving major European and US financial institutions in the fields of fixed income, asset management and foreign exchange hedging, as well as credit derivatives. To set the stage for the subsequent discussion, the representative instruments involved are described from the plaintiff's viewpoint in a general way in the third section. In the subsequent section, we attempt to draw appropriate legal principles from these 'failed' derivative deals and in the penultimate section we turn to their regulatory implications and likely consequences. The final section concludes.

INFORMATIONAL ASYMMETRY

In a significant number of derivatives cases, it is clear that the initiators of the OTC, that is,

bespoke, deals have been able to take advantage of their contract partner's ignorance or inexperience. Indeed, it has been said in the City of London that '30 per cent of OTC derivatives are bought and 70 per cent are sold' meaning that 30 per cent of the deals are between counterparties who are professionally able to assess the risks involved, whereas 70 per cent are sold by the issuer to a counterparty who has no idea in detail of what they are buying. Does the latter, in any particular case, exceed those limits set on *caveat emptor* by good faith? Under what circumstances is a participant in a sophisticated market entitled to assume that everyone understands what is going on?

Three kinds of ignorance or 'informational failure' have played a role in dysfunctional derivative contracts in recent years, namely:

- commercial innocence
- documentary misunderstanding and
- technical ignorance.

To some extent, each is involved in all the various disasters that have recently befallen incautious investors. However, each element raises slightly different legal issues and we shall consider them separately.

Commercial innocence

Commercial innocence sounds like the kind of element that a mature market should *not* have to accommodate. Nonetheless, it has clearly played a major role in the context of the rapid development of the financial markets over the last half century. The most important change has been to remove, as far as possible, questions of capacity to contract from the functioning of the markets.

All markets are dangerous places for the uninitiated, and this is particularly true of the financial markets. Under German law, for example, access to derivatives trading was long restricted to persons qualified, for example by virtue of their status as 'Kaufmann' (that is, commercial trader, see § 53 of the Stock Exchange Act of 1908).[4]

However, restricting entry is alien to modern conceptions of market freedom. MiFID, which sets the terms of participation in European financial markets, represents the current high point in opening them up. Participants are still categorised in terms of capacity to contract – retail, professional, eligible counterparty – but these categories are negotiable in any particular case, and even at the most protected level (retail customers) the duties of care are now relatively abstract.[5]

Regardless of the merits or demerits of this development – and in most Member States of the EU the regulatory bodies still closely supervise at least the retail markets – there has been a marked change in the attitude of banks to their customers. Whereas in the past bank managers fell into the same category as solicitors or doctors – they were professionals charged with duties of loyalty and personal responsibility[6] – this has now given way to a relationship in which bank staff are under the same pressures as any other salesman. It has taken a little time for popular perceptions to catch up with this, and only now, after the mayhem wrought by the financial crisis, has it become widely apparent that banks should be entered with the same degree of caution as used car showrooms.

The change of the banking business model has posed problems for customers who were previously not accustomed to scrutinising offers from their bank in much detail. This is particularly true of municipalities, who throughout the world suffer from not having the cash for high-class staff in their treasurers' departments. The fact that they are also solid credit risks makes them especially attractive to predators from new-style banks. The consequences of this combination of characteristics have been visible in a series of cases, ranging from classics such as the *Hammersmith*[7] case and *Orange County* to more recent contretemps such as *Kenosha USD* v. *Royal Bank of Canada*,[8] and *Stadt Hagen* v. *Deutsche Bank*.[9] The latter is only one of a series of disputes between municipalities and banks that have been exercising the

German courts. Similar disagreements about structured derivatives have recently surfaced in relation to municipalities or public bodies in Greece and Italy, including the current pressing of criminal fraud charges against several global banks on behalf of the City of Milan involving swaps of the type discussed in the next section.[10] Such controversies have also arisen in America where the sums involved are even higher and threaten to bankrupt municipalities such as Detroit.[11]

Legal misunderstanding

The second category of problems is that of *legal misunderstanding*. By this we mean a failure to understand the legal import of an agreement.

It is a feature of some modern derivatives that the documentation is extremely voluminous. Early, and now notorious, examples of this were the so-called 'cross-border-leasing' deals struck by numerous municipalities and utilities in the late 1990s. Despite their name, many of these were in reality a combination of tax shelter and CDS. In exchange for a payment of several millions, municipalities would agree to 'sell' capital items to US investors and then to lease them back for a certain period. The deals were structured so that only a relatively small amount of money genuinely changed hands, and all the incidents of ownership remained where they were, that is, with the municipalities. The arrangement was allegedly intended to provide US investors with a tax shelter, although this is doubtful, as the IRS had already declined the model well before many of the deals were concluded. In fact, hidden among dozens of interlinked agreements and sub-agreements covering well in excess of 1000 pages was a CDS written on either AIG, AMBAC or another US insurer. Many of these deals duly blew up in 2008, to the dismay of the municipalities who had bought the 'leasing' agreements. So far, at least, this aspect has only been substantively litigated in the United States,[12] but the issue has involved numerous European municipalities.[13]

Technical misunderstanding

The third category is *technical misunderstanding*. The principal example of this lies in the valuation of the performance to which each party commits itself. Banks do not gamble, or at least they should not. Not only that: they are obliged by law to keep a close watch on the value of the assets and obligations they hold on their books.

Techniques for valuing structured products have developed in the past 30 years or so, and it is only to that degree that banks have been able to start trading them. This applies especially to exotic products – that is, structured instruments that can only be valued in terms of the parameters of a statistical distribution. Creating a model to value such an instrument is generally outside the competence of anyone who is not a financial mathematician (or 'Quant'). Although it is possible nowadays to obtain values for exotic products from specialist suppliers, and this method is frequently used by traders, such information is too expensive to be used by client counterparties to a bank's offered product.

More to the point – quite apart from the problem of knowing where to go for information, or having the money to pay for it – most people who are not themselves regularly trading in the markets do not even know what it means to value something in terms of statistical parameters such as 'mean' or 'standard deviation'. 'Price' in traditional parlance derives from the record of a concrete agreement reached in a liquid market between a willing buyer and a willing seller. By contrast, a statistical distribution generated from a computer simulation *seems* to bear more relation to a forecast than to an empirical fact. A statistical distribution, however, is typically required to specify the value/price of an instrument in relation to its opposing forward income streams. A 'fair market value' will be the mean of such a distribution after adjustment for risk. With or without this adjustment, the distribution's variance will give a measure of how risky it would be to rely on one outcome as opposed

to another, and as we shall see in the next section other simple measures may be more appropriate. All such ideas are extremely useful, and can no more be dismissed as mere 'forecasting' than the statement that the chance of throwing a four on a single throw of a die is one in six. Establishing regularity in terms of probability has nothing unfamiliar about it to particle physicists (a typical source of 'Quants'[14]). These techniques do not, however, *record* 'a price', and to anyone operating within a deterministic worldview their entire conceptual basis remains essentially foreign.

Ignorance of statistical pricing methods and of how they underlie derivative trading values has exposed numerous town hall treasurers to some highly unfavourable deals. Instruments that were variously presented as 'techniques for optimising interest rate payments' and 'modern debt management' were, in fact, no more than badly priced wagers on the yield curve. Losses were considerable (the German city of Hagen, for example, ended up €47 million under water on its rates deal with Deutsche Bank, LG Wuppertal 16.07.2008, and the current Milan case involves alleged total losses of €101 million).

A worrying aspect of these cases, of which there were many, was the evasive representation of valuation and risk. In the out-turn – for example, when calling the instrument – the banks made it clear that they were using statistical techniques to set prices. Giving evidence in court they explained that they bargained for the deal by first obtaining a fair market value from statistical models and then moving the strike (that is, essentially the line dividing the two parties' expected returns) as far in their favour as the customer would tolerate.[15] It was accepted by defendant banks that the 'profit margin' envisaged by this technique was in the region of 5 per cent of nominal (though 'nominal' is an abstract magnitude given the considerable leverage structured into the products).[16] When asked how the customer was supposed to bargain without knowing the fair market price, or even that such a thing existed, the witness in the Stuttgart case indicated that customers could always ask for terms from other banks. This was obviously a rather theoretical possibility, however, not least in view of the fact that the products were individually customised ('OTC').

In relation to risk, obscuring the basis for valuation was almost a systematic part of the sales information. In their term sheets, banks emphasised that risk and return were not amenable to certain forms of valuation. They said, for example, that writers of options (most of the disputed rate swaps involved the customer implicitly writing an option) were exposed to 'theoretically infinite' risk. They also claimed that a 'worst case' could not be quantified.

Whether or not these comments constitute fair warning, they certainly obscure the reality of the instruments from the professional traders' point of view. The suggestion – frequently made by the banks' representatives in court – was that rate swaps were entirely unpredictable and that the bank had nothing more reliable to go on than the customer. This is, of course, wrong! Nobody has a deterministic forecast for future interest rate developments. It is quite true that anything might happen. But it is not true that all outcomes are equally probable. And the financial markets price probabilistically, not deterministically (more on this in the next section).

Therefore, statistically speaking, deterministic concepts such as 'theoretical' risk and maximal 'worst case' are not relevant. Statistical pricing quantifies the relative probability of various outcomes so that, given a distribution, an investor can decide, for example, whether the possible return is worth the risk, whether a hedge is required, and so on. The banks had access to computer-generated statistical distributions because without them they would not have been able to establish the products' fair market values. And they needed to quantify the risk in order to manage the client credit risk, as well as their own market risk. In view of this knowledge, which would have been available to the bank in (for example) quantified value at risk

('VaR') figures, telling the client that her risk was 'theoretically infinite' sounds like deliberately pointing someone in the wrong direction.

Cumulative misunderstanding

The most striking calamities have, as widely reported in the press, taken place in the area of CDOs. Here too, there have been celebrated victims among public bodies, for example the Austrian state railways and the local transport system in Berlin, who together seem to have accumulated losses approaching €1 billion. Disasters of this kind are probably only explicable in terms of all three forms of informational imbalance coming together.

As is now generally known, CDOs serve to set exposure (risk and return) in line with the preferences of investors. They do this by channelling the risks arising from a portfolio of securities. Instead of sharing risk out evenly among a portfolio's investors (everyone takes a *pro rata* share of losses), losses flow sequentially to a hierarchy of 'tranches'. The lowest tranche takes losses first. If losses are so great that this one gets knocked out, the next tranche up gets attacked. To compensate for this, investors in the lower tranches reap a correspondingly higher rate of return – at least for as long as each tranche still exists – and so on up the hierarchy.

The CDOs that caused so much damage to European institutional investors were synthetic and structured around CDSs. This means that the portfolio did not consist of actually owned obligations, but are better compared with a group of race horses on which the investors bet. Misfortunes befalling the obligations, such as default, restructuring and the like (these are called 'credit events') trigger certain previously agreed consequences for the CDS counterparty, and these losses then flow into the CDO itself. A portfolio that escapes 'credit events' during the lifetime of the note may be compared to having all one's horses complete the season unscathed. Obviously, such a result would be highly desirable for those holding the 'lower' tranches.

As with interest rate swaps, modern financial mathematics makes it possible to calculate the risk adjusted net present value (NPV) and the risk profile of each tranche.[17] For the prudent investor, doing this should really precede engagement at any particular level. Such a procedure is, as with interest rate swaps, not easy for anyone outside the markets, because it requires access to credit risk data for all obligations in the portfolio. Such data are expensive and in any event the mathematical challenge remains.

One example of a CDO that was bought by German public bodies in the early summer of 2007, and which subsequently nosedived, was the Volante CDO Class A2E Credit-linked notes issued by Barclays Capital with a total volume of €100 million for listing on the Dublin Stock Exchange. The instrument was sold with an 'expected' S&P rating of AA and paid out 0.78 per cent over Euribor. By September 2009, it was rated at CCC-.

From the start, it had three features that perhaps give pause for thought. First, the tranche was only 1 per cent thick. The problem with such a thin tranche is that it can be wiped out by a correspondingly small incidence of losses in the portfolio.

Second, at 5.44 per cent to 6.44 per cent, it was deeply subordinated. That is to say, it was low down in the hierarchy – not quite first loss, but not far away from first loss, and thus exposed to attack after even a relatively small number of defaults in the reference portfolio. The reference portfolio consisted of 100 obligations, all roughly equal in weighting. This meant that the Volante notes could be under water even if only seven of the one hundred reference obligations generated 'credit events'.

The third feature was less visible from the prospectus, but lay concealed in the indicative portfolio. The portfolio consisted, at first glance, of securities from worthy issuers including Allianz, AT&T, Berkshire Hathaway, Deutsche Telekom and others. Also present, however, were the names Countrywide, Fannie May, GMAC LLC, Lehman Brothers, HSBC Finance, Merrill Lynch, Residential Capital

and Bear Stearns. By 8 June 2007, when the product was offered to investors, the subprime crisis had already been gathering momentum for 4 months, and the press had reported negatively about all eight of these names. A further 10 names in the portfolio were in subprime trouble by the end of the year: AMBAC, Capital One, Centex, CIT, Freddie Mac, Financial Security Assurance, MBIA, MGIC, PMI and XL Capital.

In view of this, it is hardly surprising that the Volante A2E notes are now largely worthless. Eight of the 100 portfolio names were known to be risky even when the product was sold; but by 6 months later, 18 fell into this category. A slender tranche at 5.44–6.44 per cent was clearly in massive danger from the start.

It is not unknown for CDO investors to criticise the *composition* of portfolios that have led to losses. This generally relates to substitutions made during the term of the note by the portfolio manager.[18] The Volante A2E portfolio is managed, but that does not seem to be the problem: the constituents of the portfolio were 'toxic' from the start. Why this should have been so may have something to do with Barclays' alleged $ 9 billion exposure in the subprime market.[19] The question for us in the section 'Legal Aspects of Failed Derivative Deals' however, is what legal consequences, if any, such a dramatic miscalculation should have for the parties – that is, for the German institutions that bought Volante on the one hand, and for Volante's seller on the other. But first we will discuss losing structured derivative deals for banks' clients in fixed income, portfolio management and FX.

This section attempts to illustrate the issues raised in the previous section in terms of various representative OTC-structured derivatives sold to clients by banks in the 2004–2006 boom period, with maturities ranging from 3 years to indefinite-lived consol bonds. The clients investing in these products were wealthy individuals, SMEs and local authorities in Continental Europe. The contracts between counterparties involved structured versions of swaps, bonds raising Tier 1 capital for financial institutions under Basel II and foreign exchange (FX) hedging programmes. Representation to clients of the risks involved in these investments was typically termed 'unlimited', as noted above, and/or ignored egregious features of the contracts such as embedded one-sided cancellation options without compensation.

SOME REPRESENTATIVE STRUCTURED DERIVATIVE DEALS

Structured swaps

A *par interest rate swap* is a standard contract between two counterparties to exchange cash flows. At set time intervals termed *reset dates*, one party pays a predetermined *fixed* rate of interest on the *nominal* value, the other a *floating* rate, until the *maturity* date of the contract. The floating leg of the swap fixes the interest rates for each payment at the rate of a published interest rate. The fixed rate, known as the *swap rate*, is that interest rate which makes the fair value of the par swap 0 at inception. Thus, the cash flows of the two legs of a par swap are those of a pair of bonds with face value the swap nominal, one fixed rate, and the other floating rate.

As the swap market is highly liquid with many par swaps traded every day, it is possible to obtain rates for swaps with a set of *constant* maturities from 1 to 30 years from the market each day.[20] From the market swap rates, a swap curve that gives the rates for constant maturity swaps (CMS) of *all* durations may be constructed each day. This market-determined curve may be used to price OTC swaps between a dealer and specific client counterparty. Illustrative swap curve movements over time are depicted in Figure 1.

A standard corporate treasury hedging situation for such an OTC swap is that the client, rather than the bank, pays fixed and receives floating to cover floating rate loan payments on a principal amount, matched by the swap

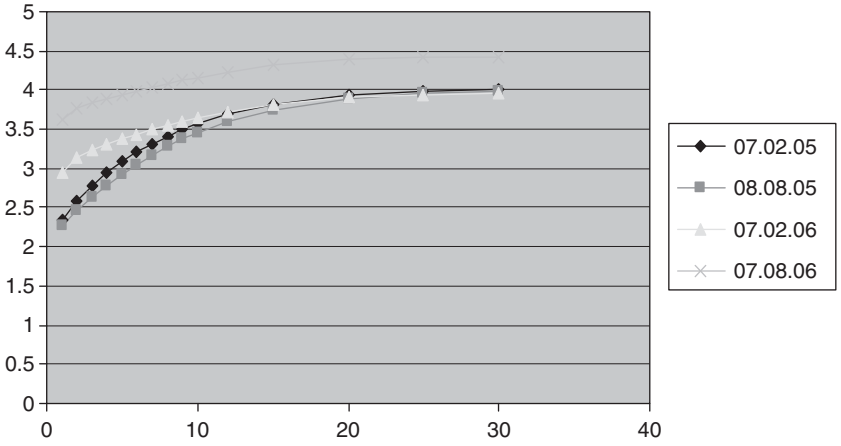

Figure 1: Illustrative swap curve movements (EU constant maturity swap curves).

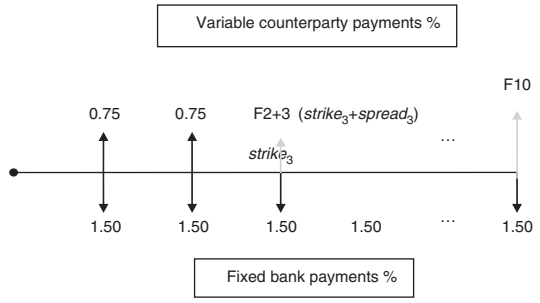

Figure 2: CMS swap payment illustration.

nominal, in order to hedge floating interest rate risk. However, in most of the CMS-spread ladder swaps issued to clients, the bank pays fixed and *receives* floating.[21] These payments are illustrated for a representative CMS swap in the conventional way in Figure 2, which shows the typical few (here two) initial fixed payment exchanges in the client's favour. These are typically followed by structured floating payments, the precise details of which need not concern us here except to note that at each payment date the spread shown in Figure 2 depends on the swap rates at different maturities and the strike and the gearing (here 3) are chosen by the bank to structure the product. The term *ladder* refers to the fact that at each payment period a term depending on these parameters and the current market spread is added to or subtracted from the interest payment of the previous period. We shall see that this can lead to an alarming rate of increase in the client's payments to the bank, which is paying *fixed* payments to the client.

Suffice it to say here for our purposes that it is possible with a suitable mathematical model to conduct a Monte Carlo simulation for possible swap forward cash flows to maturity, which upon time (and possibly risk) discounting yields a *NPV* distribution for the security as illustrated in Figure 3.[22] The expected value of this distribution with risk discounting is the so-called fair market *price* of the security; without risk discounting, the distribution corresponds to the ordinary NPV values used by corporate treasurers and illustrates the *relative* likelihoods (probabilities) of the NPVs of possible future cash flows.

The NPV distribution on the left is that of an exchange-traded par swap that has a symmetric NPV distribution of about zero after transaction costs. That in the middle shows the effect of the OTC swap client granting the bank an option to cancel without compensation in the contract that skews the counterparty's losses in favour of the bank. The rightmost diagram gives an indication of how much this skew is further moved against the client and in favour of the bank by adding the structured CMS-spread ladder feature to the client's floating payment.[23]

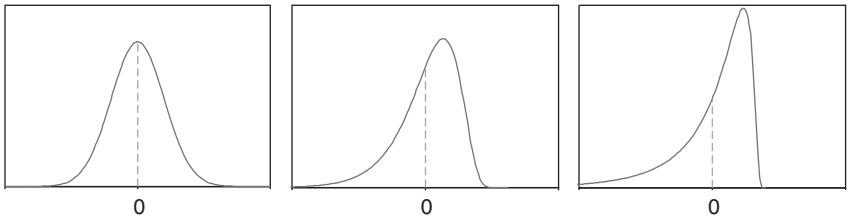

Figure 3: NPV distributions of three types of swaps: (a) Par swap; (b) Swap with bank cancellation; (c) Euribor ladder swap.

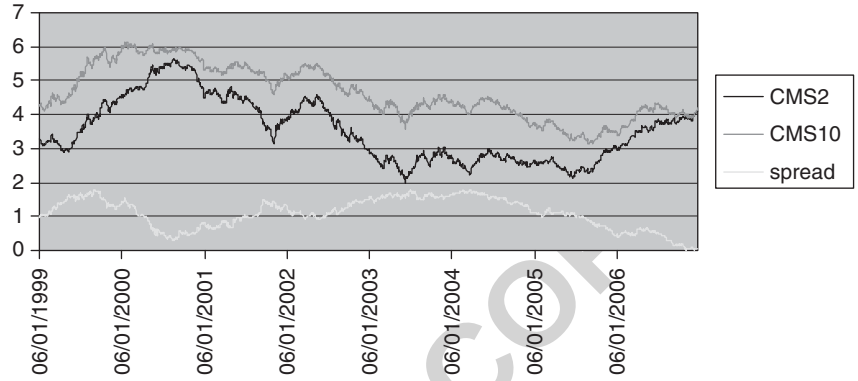

Figure 4: Base CMS rates and spread evolution 1999–2006 (CMS 2, CMS 10 and spread).

In essence, owing to the structuring of the swaps in the 2005–2006 issuing period, the counterparty gave the dealer a call option on the flattening of the swap curve shown in Figure 2, which normally follows sharp rises in short-term rates. Global macroeconomic conditions in the period that these contracts were issued clearly indicated sharply increasing short rates, a process that had already begun in the United States at the time and followed in the EU only shortly thereafter. Figure 4 shows the declining CMS 2–10-year spread since the inception of the euro to the end of 2006. The levered laddered payment formulae used to calculate a client's interest payments in CMS-spread ladder swaps issued in this period had the same intent as the infamous 'inverse floating' floating notes issued by Orange County, California to Merrill Lynch in 1994 which led to its bankruptcy. The 'laddered' dependence of the current client payment on the previous for the more recent CMS-spread ladder swaps have, however, an additional acceleration effect not present in inverse floaters.

The typical effects of this structuring in steadily increasing net client payments forecast for valuation purposes (as described above) at inception can be seen in Figure 5, which shows the expected payments and those at plus or minus one standard deviation from the mean of their forecast distribution in per cent of nominal for a specific swap. Even though a positive net payment stream in favour of the client is possible, it is capped at a relatively low value by a floor in favour of the issuer. In the vast majority of cases, when such valuation forecasts were conducted after several floating payments by the client to the bank, had actually been made their realised values fell close to the negative red line. In short, the declining spread increased client payments substantially.

The potential results of this at inception in terms of the NPV of simulated future cash flows distribution are shown in Figure 6, where both the distribution with and without the

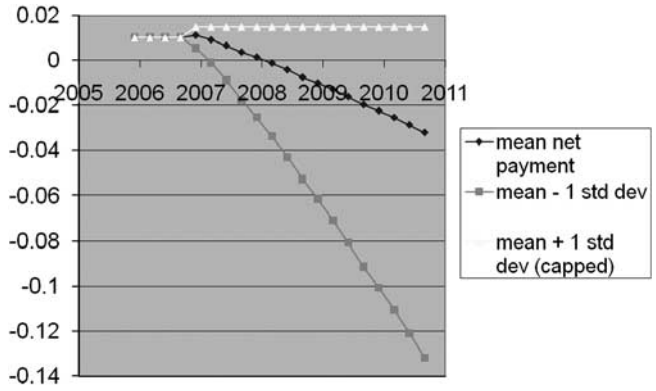

Figure 5: View of client net payments distribution at inception (net payments to Client over swap maturity at inception 30.8.2005).

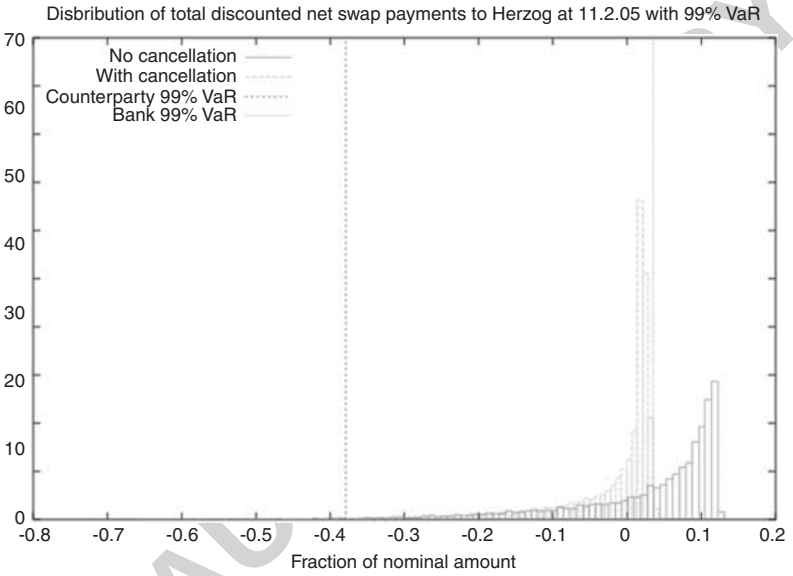

Figure 6: Distribution at inception of total net time discounted swap payments to client in per cent of nominal with 99 per cent loss level (value at risk) from 0 to client and bank (distribution of total discounted net swap payments to Client at 11.2.05 with 99 per cent VaR).

bank's cancellation without compensation option are shown. Note that the bank's cancellation option cuts off most of the client's upside (above 0) and skews the client's potential loss tail at the 99 per cent level far to the left while making the bank's corresponding loss level asymmetrically much smaller.

Figure 7 shows that over time (here 1 year) this net NPV distribution typically just gets worse (even though here the 99 per cent loss level remains approximately the same).

Capital-raising hybrid bonds

Under the Basel II recommendations, it became possible for banks to raise Tier 1 regulatory capital in the form of so-called hybrid instruments issued as bonds or notes but ranking in default seniority at the level of preferred shares. Most European banks, including the European Bank for Reconstruction and Development (EBRD), used the structuring techniques that we have seen above applied to OTC swaps to issue callable bonds of finite or infinite

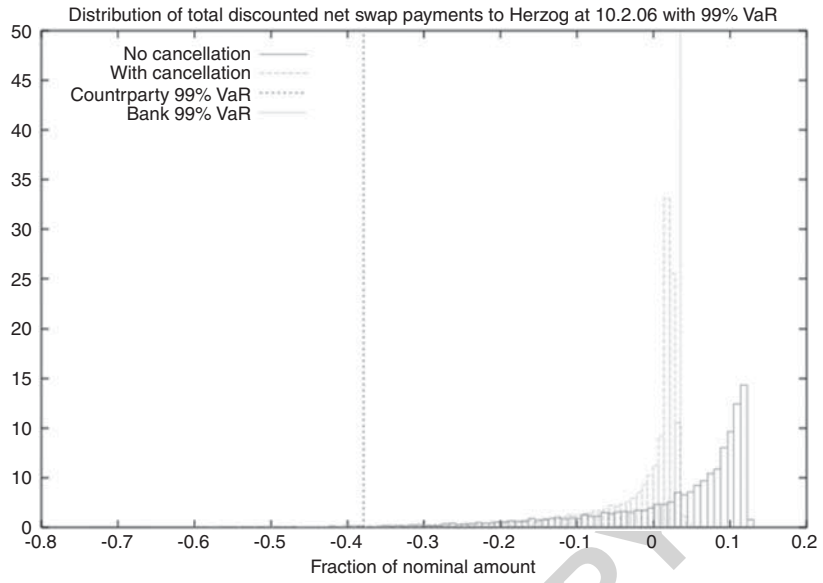

Figure 7: Distribution at first anniversary of total net time discounted swap payments to client in per cent of nominal with 99 per cent loss level (value at risk) from 0 to client and bank (distribution of total discounted net swap payments to Client at 10.2.06 with 99 per cent VaR).

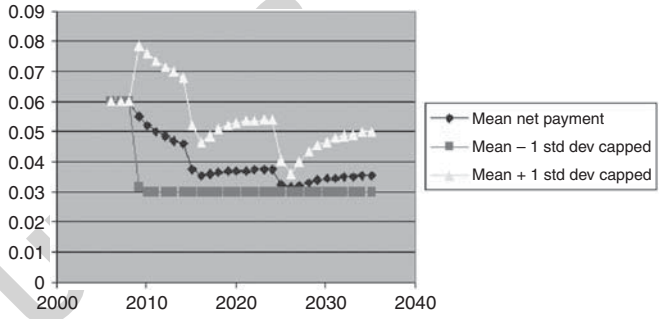

Figure 8: Prospective annual coupon payments at inception for a 30-year structured bond with coupon floor at 3 per cent (coupon payments by Bank over bond maturity at inception 15.2.05).

maturities. As before, these typically had the sweetening feature of a few fixed payments at higher than current market rate followed by floating payments by the bank, which sank well below expected market rates represented by the current forward interest rate curve.

Figure 8 shows this feature of annual coupon payments for a 30-year bond only callable at two specific dates in the future. For this bond, three annual coupon payments were at 6 per cent, triple the prevailing market rate (see Figure 14), followed prospectively at inception by a rapidly deteriorating coupon rate distribution, which was, however, floored at 3 per cent per annum. Many such instruments, including those issued by the EBRD, were, however, not floored. Figure 9 shows the features of the prospective semi-annual coupon payment distributions for a 20-year maturity bond (callable at floating rate payment dates), which at inception has a significant probability of paying the holder no interest at all after 10 years.

Figure 10 shows for a hybrid instrument issued by another bank early in 2005 the

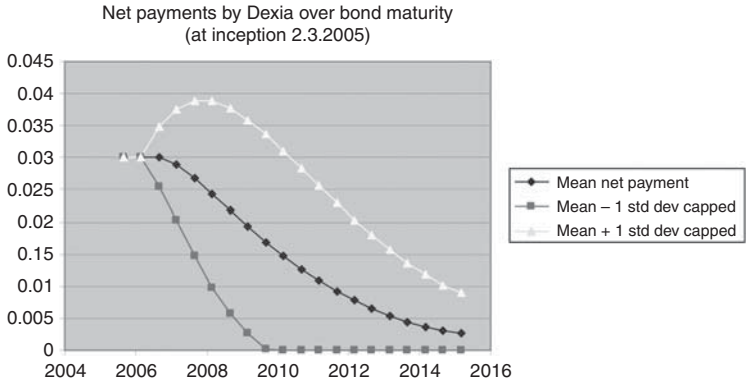

Figure 9: Prospective semi-annual coupon payments at inception for a 20-year structured bond with no coupon floor (coupon payments by Bank over bond maturity at inception 2.3.05).

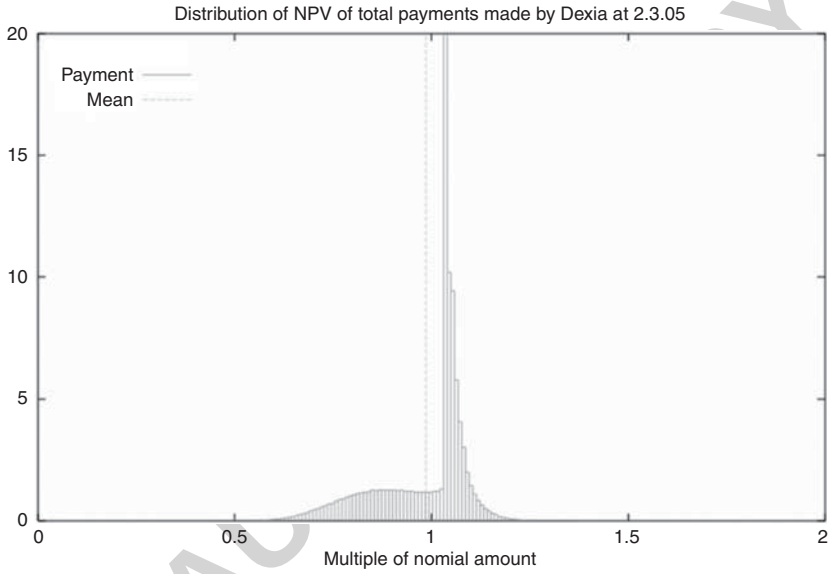

Figure 10: Prospective distribution at inception of the present value of future payments of the bank to the hybrid bond holder showing possible return on investment (distribution of PV of total payments made by Bank at 2.3.05).

prospective distribution at inception of the NPV of future coupon payments plus the final repayment of the invested capital as a fraction of this investment. Thus, the value 1 represents the repayment by the bank to the bond holder of exactly the initial investment effectively *without* any interest but only the capital appreciation that would accrue to the holder of a zero coupon bond because of the time value of money.[24] Outcomes below one represent loss of capital invested and outcomes above one represent the collection of some interest by the investor, taking account of the bank exercising its call option when market conditions lead to coupon payments becoming too high.

Figure 11 shows that because of the structured coupon payments, the prospective situation nearly 4 years later in late 2008 has become much worse for the holder of this bond – the investment will almost certainly be loss making!

As a demonstration of the conflicts of interest inherent in modern banking institutions, their

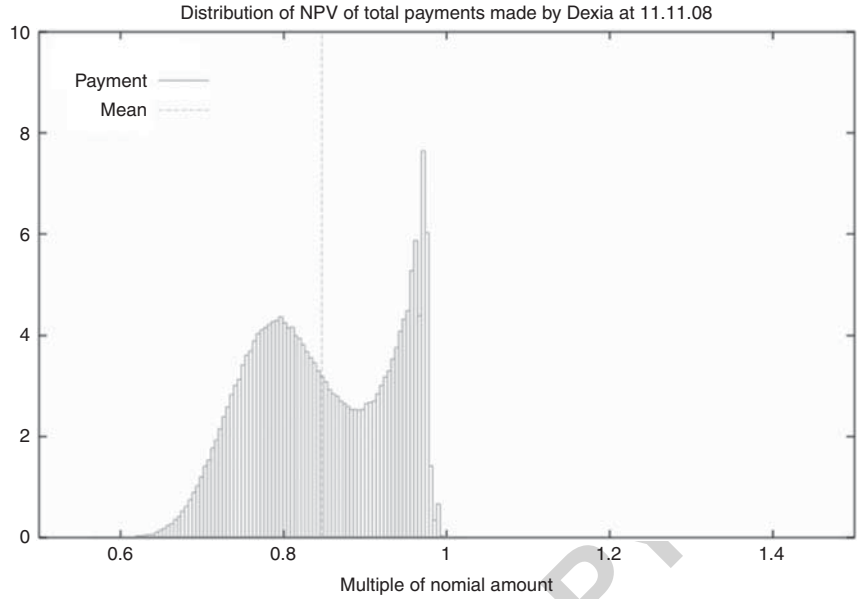

Figure 11: Losing prospective distribution of the present value of future payments of the bank to the hybrid bond holder nearly 4 years from inception (distribution of PV of total payments made by Bank at 11.11.08).

asset management divisions recommended to private pension funds and other risk-averse investors portfolios of these loss-making hybrid capital-raising 'bond' instruments issued by other banks, sometimes even including those issued by the investment banking arm of the portfolio manager's bank.

Subsequently, in 2007, banks extended the maturity of callable hybrid capital-raising instruments to the indefinite, thereby reviving a structured floating rate version of the *consol* fixed rate bonds issued by the British government in the eighteenth century and still alive today (with reduced rates). Such floating rate consols raise the issue of the not inconsiderable credit risk of the issuing bank defaulting on the interest payments over the potentially infinite maturity, however structured, and are very difficult to price.[25] Put simply, the issuing bank collects the invested capital up front for these bonds in return for a stream of interest payments terminated only by the bank calling the instrument and repaying its face value in extremely adverse market conditions or defaulting – think of the holders of the Russian Tsar's consols in 1917.[26] Interestingly, at inception, just before the credit crisis, these instruments were traded in the secondary market near par, as holders appeared to take the view that the bank would likely call these potentially infinite-lived bonds soon after the initial favourable fixed payments. With the manifold problems of the credit crisis, not least the insolvency and government rescue of many of the issuers, some of whom have suspended interest payments, these losing hybrid investments are currently trading at discounts ranging from 20 to 80 per cent of face value. Figure 12 shows the present value distribution at inception of future payments to the bond holder of such an investment that has a high return tail in the relatively unlikely event of coupon payments continuing over a very long period. To evaluate such an investment in the absence of credit risk, this PV payment distribution must be compared with that for a fixed-rate long-maturity sovereign or consol with the same face value, usually unfavourably.

Foreign exchange hedging

One of the most egregious failed derivatives deals we have seen to date involved a bank's

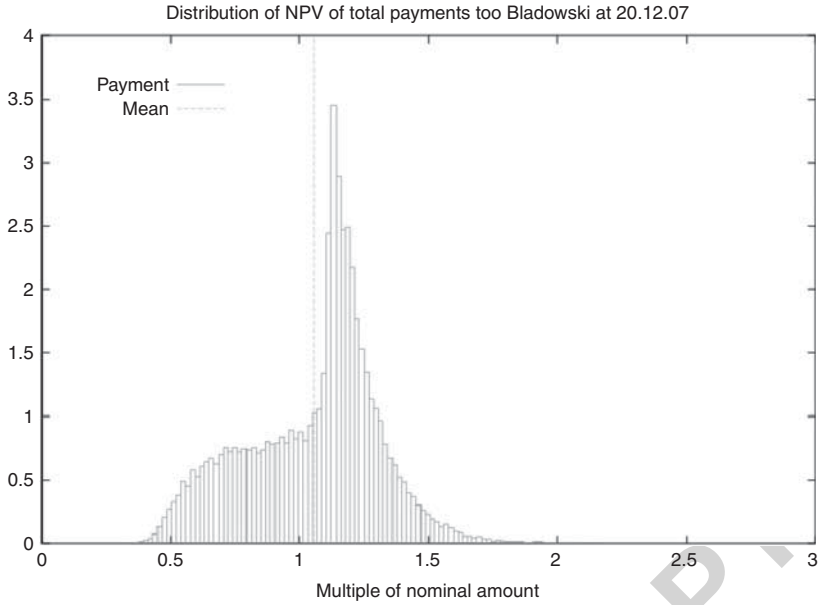

Figure 12: Prospective distribution at inception of the present value of future payments of the bank to the callable consol bond holder showing possible return on investment (distribution of PV of total payments to Client at 20.12.07).

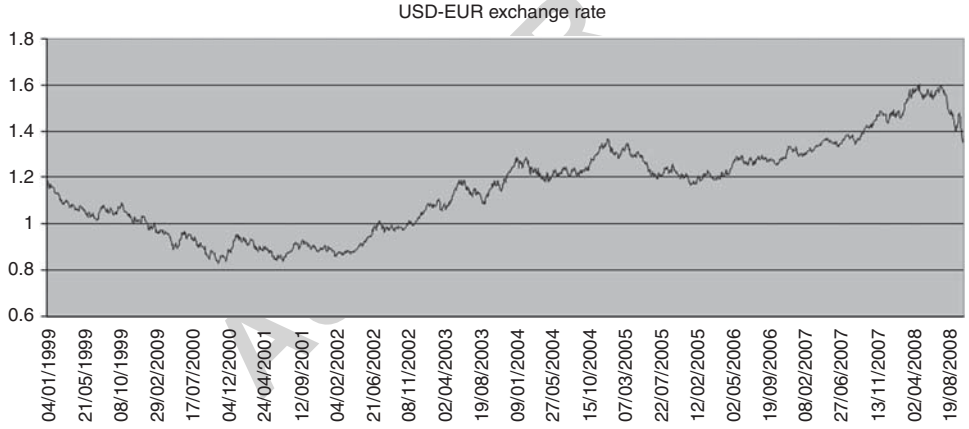

Figure 13: Evolution of the EUR–USD currency exchange rate from 1999 to 2008.

European corporate client with needs to continually purchase US dollars for euros that eventually led to over a 30 million euro loss. The firm had previously been using forward contracts to meet their requirements in line with its anticipated needs, but the bank suggested that this could be more cheaply done using foreign exchange (FX) options to hedge its exchange rate risk.

Figure 13 charts the evolution since the introduction of the euro of the EUR–USD exchange rate, giving the value in dollars of one euro. After a short initial weakening period, the euro enjoyed a steady rise in value from 2001 through the third quarter of 2008.

According to the theory of uncovered interest rate parity, the FX rates between two specific currencies respond to short-term

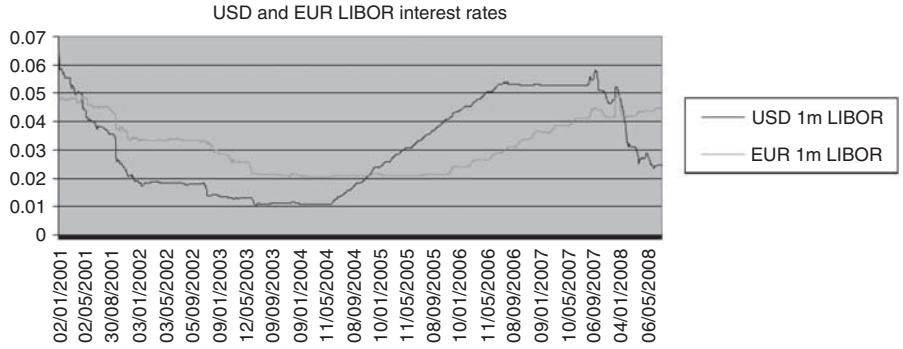

Figure 14: Evolution of USD and EUR LIBOR 1-month interest rates from 2001 to 2008.

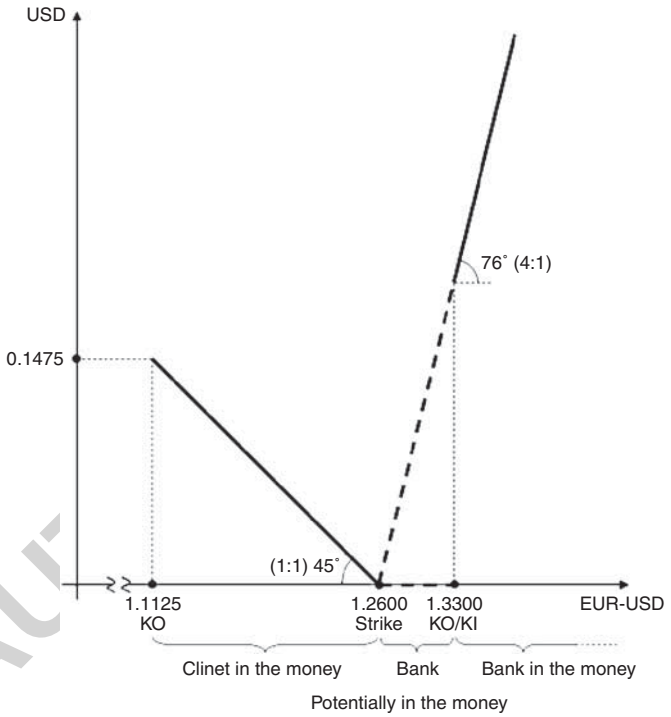

Figure 15: Counterparty barrier option pair payoff diagram in USD on the EUR–USD exchange rate.

interest rates in the two currency areas. However, Figure 14, which plots the US and EU London interbank offer (LIBOR) 1-month rates, suggests that the EUR–USD relationship is at best complicated and at worst entirely unpredictable.

When the corporate client was initially presented by the bank with a standard FX hedging programme, it likely considered the costs too high relative to forward dollar purchase at no upfront cost. The bank therefore came up with a deal to exchange at no upfront cost European (that is, exercisable only at maturity) FX barrier options whose payoff diagram in US dollars is shown in Figure 15.[27] It is immediately noticeable that the payoff structure is asymmetric with a favourable penny change in the dollar value of the euro worth initially four and later six times more to the bank than the client. The structuring of

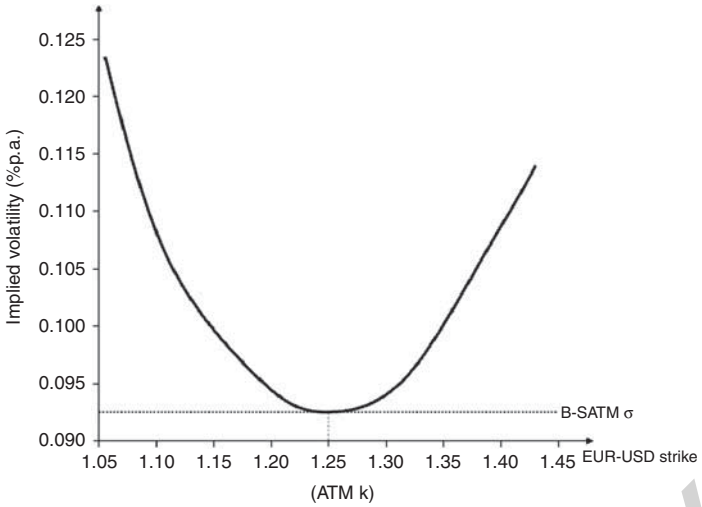

Figure 16: A representative EUR–USD implied volatility smile when the current rate is 1.25 USD per EUR.

both exchanged options involves a choice of *knock-out* (KO) points for the client's option and *knock-in* (KI) points for the bank's, both of which are marked in Figure 15.

Again, pricing of such options is a complex matter that involves adjusting prices to incorporate higher prices for option values away from the rate at inception in terms of the so-called *volatility smile* depicted in Figure 16. Many different methods are available and in use by different traders and banks including the Monte Carlo method.[28]

Over 33 months, 70 option pairs were exchanged between the bank and the client, many apparently mispriced in favour of the bank – in that the clients' options were underpriced, corresponding to *negative* smile corrections, and the banks' options overpriced. Regardless of the method(s) the bank uses, this is entirely inappropriate and leaves the impression of arbitrary pricing. Moreover, a large proportion of these deals were restructured by the bank to incorporate the client's mark-to-market losses on the existing deal and postpone any cash changing hands between the counterparties. At such restructurings, the bank always took the opportunity to improve the knock-in points for their option (the clients' having been knocked out, that is, dead) in their favour. Nevertheless, no significant cash changed hands for 27 months in these contract exchanges until early in 2008 when the client was billed over 5 days for €30.5 million for deals struck in the last 6 months of the programme, even though some of the bank's European options involved, a few struck only weeks previously, had not yet expired.

OTC-structured deals summary

In this section, we have described a number of representative failed OTC deals involving structured derivative and bond products. They have in common the features that they all possess an enticement to early client return but their final outcomes are highly skewed in favour of the issuing banks. Moreover, these swap and FX deals usually involve (often multiple) restructurings by the issuing bank to incorporate (often mispriced) client mark-to-market losses on the existing deal into each restructured deal and to postpone the eventual client losses, which always grow substantially. It is clear that a bank's counterparty in this position, like a good trader, should always cut their losses at the first opportunity, but unfortunately they seldom do.

LEGAL ASPECTS OF FAILED DERIVATIVE DEALS

Caveat emptor and market transparency

Obviously the fact that an investor suffers losses from an investment does not of itself ground any claims for compensation. On the face of it, this is a typical case for *caveat emptor*. Markets are highly efficient at the allocation of resources. One of the mechanisms behind that efficiency is the principle that prices are set by the competitive interaction of buyers, not sellers (as is typified by auctions). Sellers are, to a certain degree, responsible for what they say about their products. If, however, they make no representations about it, then it is up to the buyer to ensure that the purchase makes sense for him. Allowing, or requiring, sellers to set prices counteracts market efficiency. And the criteria for price, fitness for purpose and the like apply strictly *ex ante* – being wiser after the event is irrelevant for the validity of the contract.

Nonetheless, although *caveat emptor* is an effective device for ensuring market efficiency, it is only a device, not the basis of the market itself. Ultimately, the market is a system for generating information about the goods and services society needs at any given moment. Benefits of this sort flow directly from the market's openness and transparency. In contrast, situations where information is being suppressed or perverted contravene market principles at a more fundamental level than any individual departure from *caveat emptor*.

The law promotes transparency and openness in the market with the aid of various principles. First, it can exclude persons who do not have the *capacity* to deal in the market: the ignorant or those not competent to take risks with the property entrusted to them. Second, it can strike down bargains reached on the basis of *false representations* or *fraud*. These restrictions on pure *caveat emptor* are relevant in the cases we have mentioned, and we shall now look at them in more detail.

Capacity to contract

Capacity is the classic topic of derivatives litigation, having been the central theme of the *Hammersmith*[29] case, and, more recently, of *Haugesund* v. *Depfa*.[30] As a matter of principle, speculation as such is probably never within the 'capacity' of municipalities, which means the contracts are void and that third parties purporting to enter such agreements with municipalities are likely to emerge empty handed, whether they 'won' or not.

Capacity to contract – or its absence – is a significant part of the law of obligations, though less so than in the past. At present, for example, wives can, generally speaking, make valid contracts without the consent of their spouses, and it is no longer possible for commercial corporations to avoid obligations to third parties by reference to their terms of incorporation.[31] Municipalities are different, however. The doctrine that they cannot validly perform acts that lie outside the powers granted to them by legislators ('ultra vires') is definitely still part of English law and probably also part of German law. The 'Fischereiwirtschaft case'[32] explicitly recognised *ultra vires* as part of German law, though German courts have subsequently been reticent about using the term. Possibly a notion like 'exceeding one's radius of action',[33] which does play a part in German administrative law, identifies an equivalent position.[34]

Whether or not *ultra vires* as such is valid, the issues in any particular case will have more to do with two further elements.

First, are financial instruments like swaps 'speculation', or are they not simply modern instruments of what is known as 'debt management'? If the latter, surely they can be legitimately deployed as incidental to most municipalities' powers to organise their debts in the best possible way, at least if they are used only to modify the conditions of particular existing debts? Contrary to the tenor of the English decisions,[35] administrative practice in Germany seems willing to countenance the use of swaps subject only to the criterion of

'connexity' – that is, that swaps must be referable to existing debts (though the precise functioning of this criterion is a matter of some obscurity). No German court has taken the view that swaps were outside the powers of local authorities, though the matter has not so far been fully argued.

Second, what of municipalities or municipal offshoots that are not mere creatures of public law? In *Hammersmith*, for example, there was considerable debate about whether a London borough, which is a corporation set up by royal charter and thus can in principle do anything that an 'ordinary individual' (that is, a natural person) can do, is subject to the same limits on its power as a local council. In relation to the Borough corporation, the English courts rejected the argument that it could speculate even if a council could not, among other things on the grounds that its income was subject to statutory constraints and could only be used subject to those constraints, however 'free' the corporation as such might otherwise be ('the permitted use of council funds [is] not affected by the extent of the theoretical, legal capacity of the corporation').[36]

There are analogous distinctions in German administrative law between municipalities, which are always creatures of some higher legislature, and sovereign bodies such as the state and federal governments. This has not so far been an issue in swap disputes, though it might conceivably be relevant to situations where state banks (*Landesbanken*) have been involved in swap deals.

Questions of capacity are also relevant to cases in which the swap investor is not the municipality itself, but a private law entity set up by the municipality to perform certain of its functions. Certainly, it might be argued that a private company wholly owned by a municipality, set up under powers conferred by statute and performing statutory functions, should in principle be subject to the same constraints on its use of public money as is a purely statutory body (by analogy with *Hammersmith* in the English courts). Hitherto, however, German courts have resisted any attempt to subject a municipality's private law activities to public law rules. This obviously makes a degree of sense in formal terms. Beyond that, it also reflects the fact that German administrative law provides in detail for supervisory bodies to restrain acts in excess of jurisdiction, but with methods that can only be invoked in the context of the administrative structure itself.[37]

The Landesbanken have not, historically, been corporations within Art. 9 of Directive 68/151/EEC. The extent to which this would allow them to rely on their statutes as against third parties is unclear, but it seems doubtful as to whether such statutes would exclude the purchase of any financial instruments, however speculative (see Law establishing the Bavarian State Bank, Art. 2 (3)).[38]

Implied terms

Financial deals are subject to a number of terms implied by law or statute.

Good faith

A 'fall back' term that is everywhere implied is good faith. This is in some respects more familiar to Continental legal systems[39] but uncontroversially also plays a role in the common law treatment of financial relationships.[40] What it means in the present context is probably the same in either system: good faith means honesty and the absence of deception or fraud. It is not acceptable to deceive the counterparty for one's own gain.

How far this gets a claimant in a swap case is doubtful. 'Deception' generally has to be active; failing to clear up the counterparty's misconceptions is not generally dishonest unless there is a duty to do so. A duty arises when good faith requires it, for example because the counterparty is obviously and justifiably depending on information from the Defendant.[41] This argument is somewhat circular, however, and leaves open the question of what good faith specifically requires. In the case of professional investors, it

might readily be said that it is *not* justifiable, in the absence of explicit provision, for a buyer to rely on the seller to clear up any misconceptions.

Under the MiFID regime,[42] sellers are in any event entitled to assume that 'professional' buyers know what they are doing,[43] although this does not necessarily cover the case when a seller has *actual knowledge* that a buyer does not know what he is doing.

Advice

There is so far no case law on MiFID, and it is unclear how much difference it will make to securities sellers' duties, inasfar as investors have hitherto been able to invoke them in the individual Member States.[44]

In Germany, this may mean that the courts will continue to imply terms establishing a contract of advice.[45] Under *Bond*, this arises in any case in which a securities dealer engages in any discussion ('Gespräch') with an investor with a view to the purchase of a security. This obviously engages a wide spectrum of cases, although it excludes an 'execution only' scenario.

It is particularly important that, in *Bond* terms, the relationship of advice arises without regard to the status of the customer. If it turns out in the course of the relationship that the customer is experienced (or even 'professional'), then the dealer's advice may be abbreviated accordingly. But the relationship remains one of advice rather than one of mere 'information'. Thus, if he is aware of it, an adviser may not disregard the fact that his customer is labouring under material misconceptions. The difference between a duty of information and a duty to give advice is that the latter requires active engagement in the customer's individual state of mind and knowledge. In principle, then, that applies just as much when the bank is selling to another bank as it does when the customers are widows and orphans.[46]

Representations

There is clearly a good deal of scope for misrepresentation in deals which come with generous documentation, often amounting to hundreds of pages, and intensive sales presentations.

Causation

Not surprisingly, however, sellers of derivatives usually garnish their documentation with a multitude of disclaimers. Indeed, it is at this point that claims from investors typically fail. However much sellers may misbehave, for example by extolling their products for virtues they do not have, this will not be regarded as causative if the customer was an experienced investor, the literature contained clear disclaimers and warnings that were seen and acknowledged by the investor.[47]

German courts have in a number of recent derivatives cases followed a similar line of argument: as long as it is made clear that the product involves a substantial amount of risk, experienced investors cannot claim that their decision was materially influenced by the sales team's representations, whatever these may have contained. The warnings mentioned above ('theoretically infinite risk', and so on) have been held to be more than sufficient by a number of appeal courts.[48]

Representations as to randomness

Warnings as to risk may not be sufficient on their own, however – in particular it may be insufficient if such warnings are not quantified in terms of fair value, as well as risk and return. At least one German court has now accepted that this may be the case.[49] The argument goes as follows.

As several German courts have accepted, instruments such as the swaps described above are, functionally, wagers.[50] Gambling debts are in most European countries irrecoverable.[51] Swap debts are not in general caught by this, because in most countries financial instruments – or, more specifically, contracts for difference, which used to be regarded as bets – have been taken out of the restrictions on betting provided at least one of the parties is a regulated financial institution.[52]

So far, however, German courts have been slow to see the implications of their own viewpoint. They have tended to assume that if the swaps are wagers, and that if this was apparent to both parties, then the customer cannot legitimately complain about the outcome: he knew (or should have known) it was a wager, therefore he obviously wanted a wager, and everyone knows that wagers can be lost. Moreover, because the counterparty was a regulated bank, the debts incurred in the wager were recoverable!

This argument obscures the fact that categorising something as a wager raises a new set of legal consequences which go beyond the question of debt enforceability. Wagering contracts have their own rules or implied terms.

Under German law, for example, a person who proposes a wager represents by his conduct (that is, even without doing so explicitly) that he has not influenced the random character of the event.[53] Under English law, presumably any undisclosed interference with the randomness of the object of the wager constitutes 'cheating'.[54] In both cases, it is an implied term that the object of the wager has not been interfered with. Generally, in both Germany and England, for gaming or wagering, which departs from the principle of 'equal chance' not to be fraudulent, this fact must be disclosed. (Moreover, outside 'equal chance', all gaming and betting is subject to licensing requirements and other restrictions.)

Modern derivatives, as we have seen, are traded on the basis of fair market values. This is the starting point for price negotiations (at least from the bank's point of view, whether or not the customers realise this is happening). Moreover, the ascertainment of a fair value by statistical means necessarily generates information about risk – which the banks also use for their own trading purposes. Modern derivatives sellers know about the random distributions underlying their products, and they use this knowledge for pricing and for risk management.

Clearly, diverging from fair value to the benefit of the seller is not 'just' a matter of putting in a profit margin, for it alters the balance of risk and return as between the parties. Setting the strike price at a figure that makes the swap diverge from its fair value is analogous to adding green (zero) pockets to a roulette wheel. Pockets change the odds for the benefit of the casino (and, in the long run, provide its profits). Such an intervention is fair, however, because it is disclosed. The pockets on the casino's wheels are clearly marked by their distinctive colour, and the manipulation of the odds can readily be calculated by anyone anxious to do so. This transparency is not available, however, to derivatives buyers unless they (a) already understand the concept of fair value and how the seller is using it as a basis for his price negotiation, and (b) have a quant department to calculate the odds. Requirement (a) could in principle be met, but in the past clearly has not been for the vast majority of investors, however 'experienced'. As for requirement (b), we assume that it is currently not met even by major institutional investors.

In principle, then, non-disclosure of an intervention materially affecting the chances of a wager must be fraudulent. If, as has happened in all the cases mentioned above, the seller has structured the instrument so as to affect the balance of risk and return to his benefit, then he must say so, and he must put a number on it. Generalised declarations as to 'infinite risk' or 'no worst case can be specified' are certainly not enough, for they not only fail to identify the real question, they actively divert attention from it.

Representation summary

There appear to be two grounds on which investors of any category – that is, not only 'consumers', but 'professionals' as well – can in principle impugn complex structured finance deals.[55]

Breach of good faith: If investors can establish that the dealer was under a duty to give advice (as in

the US Dodd–Frank Act in some cases), then any failure by him to clear up material misconceptions that were or should have been evident is dishonest. Such a duty may arise, for example, under an implied term (as in Germany's *Bond* case law). Misunderstanding the nature of price and risk in a complex derivative is a material misconception.

Misrepresentation: In the absence of statements to the contrary, the offeror of a wagering contract implicitly represents that the balance of risk has not been manipulated. Even if it is clear to the buyer that the instrument is, functionally, a wager, this does not absolve the seller of a duty to disclose any interference.

Inadequate or false representations as to something that is basically a wagering contract can ground claims in ways that bypass questions of capacity or of causation. In principle, any investor, even including a sophisticated institution, is entitled to be told what risks his counterparty is preparing for him. It is not enough to warn the investor of 'infinite risks', because that, whether true or not, is merely incidental to what the counterparty's interventions have actually achieved for himself.[56] This applies however sophisticated the investor is: if he clearly does not know what game he has joined, then the counterparty must tell him. It is difficult to determine how that information can avoid including the basic element of the counterparty's pricing – namely, the divergence from fair value.

CONCLUSION

Courts have been relatively slow to move from *caveat emptor* to the considerations above more appropriate to OTC derivatives. It seems, however, that they are nevertheless finally moving towards an understanding of the problems posed by modern derivative instruments, although they are undoubtedly faced with a steep learning curve. Of course, this may become less necessary if some of the types of OTC deals we have discussed in this article are forced by legislation onto cleared exchanges. However, many tailored OTC products will likely remain in any case (cf. US Dodd–Frank).

A cost-effective relatively simple risk disclosure legislation in all jurisdictions could in any event alleviate the disclosure problems encountered by banking OTC clients. This would require institutions by law to display the asymmetric risks involved in their structured products along the lines of the NPV or PV distribution diagrams we have shown here for OTC swaps, bonds and FX contracts. We maintain that any potential client seeing the figures of this article in an OTC term sheet would think twice about signing the contract.[57] The result would be fairer OTC products and encourage the proper use of tailored derivatives by clients for hedging various risks. The concomitant would of course be smaller margins for banks, perhaps not a bad thing!

ACKNOWLEDGEMENTS

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2 'Contracts between *banks* for the sale and purchase of complicated structured products work perfectly well on the basis of the principle of caveat emptor'. Hamblen J in Cassa Risparmio di San Marino v. Barclays [2011] EWHC 484 (Comm), at para 544 (italics added).
3 The US Dodd–Frank Act defines an OTC 'swap' as virtually any derivative product written on other *broadly defined* securities, commodities, funds, indices, financial events, and so on and a 'security-based swap' as one written on a single security, loan, narrowly based index or event. It specifically sets high business conduct standards on issuers of these products regarding the client disclosure of their

material risks, incentives (for example, 'teaser' features), conflicts of interest and mark-to-market information. The Act further explicitly sets higher standards regarding advisors and counterparties of governments at all levels, pension plans and foundations by requiring actions in the 'best interests' of the client, thus putting US law in line with similar legislation in some other jurisdictions (for example, Italy). However, the details of the nature of required client disclosure are still open at the time of writing, and unfortunately the subject of fierce lobbying and political activity. It is not clear at this juncture that the US SEC and CFTC will succeed in removing the natural information asymmetry between issuer and non-bank client by the methods proposed in this article, or otherwise.

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5 Assmann, H.-D. and Schneider, U. (2009) *WpHG – Wertpapierhandelsgesetz*, 5th edn. Cologne, Germany: O. Schmidt, §31a.

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15 OLG Stuttgart 9 U 111/08 (settlement protocol). See also OLG Stuttgart, 9 U 164/08 and OLG Stuttgart 9 U 148/08. A similar procedure in the context of CDO structuring was described in a recent English case as positioning a portfolio in the 'arbitrage spectrum' – see Cassa di Risparmio di San Marino v. Barclays, [2011] EWHC 484 (Comm), para 322 (5).

16 LG Frankfurt/M 10.03.2008 – 2-4 O 388/06.

17 See, for example, Dempster, M.A.H. Medova, E.A. and Villaverde, M. (2010) Long-term interest rates and consol bond valuation. *Journal of Asset Management* 11(2–3): 113–135.

18 See *HSH Nordbank* v. *UBS* ([2008] EWHC 1529 (Comm)) and HSH's earlier dispute with Barclays (Jill Treanor, 'Barclays "toxic waste" row with German bank settled', *The Guardian*, 15.02.2005).

19 Gangahar, A. (2007) Fortress unit moves to cut subprime links. *Financial Times*, 25 September and more recently, P.Aldrick, Suspicions grow over Barclays toxic debt move, *The Telegraph*, 12.01.2011.

20 This is by contrast with the market yields for Treasury bonds whose actual maturities each day depend on a discrete number of previous auction dates and must be adjusted to approximate constant maturity.

21 Usually a swap rate from Reuters with resets at 3- or 6-month intervals.

22 For more details and further references, see Dempster *et al*[17].

23 We shall see a number of these Monte Carlo NPV distributions for actual instruments in the sequel.

24 An alternative representation would be to show the present value of the net gain over the initial investment of the bond holder as a percentage of nominal by subtracting it from the PV of the subsequent cash flows. This would produce NPV distribution diagrams comparable to those for swaps in which 0 rather than 1 becomes the pivotal value between client gains and losses. We are indebted to Professor Robert R. Bliss for this observation.

25 See for details Dempster *et al*[17]; We were unable to find any literature whatsoever on pricing floating rate consol bonds and had to devise appropriate techniques to approximately price these instruments taking into account all risk factors including default risk.

26 Some of whose descendants are still trying to make the current Russian government honour the debt.

27 Payments were actually in euros, which results in a nonlinear version of this diagram, but the dollar linear version shows the asymmetric payout structure more clearly.

28 See Castanga, A. and Mercurio, F. (2007) The Vanna-Volga method for implied volatilities. *Risk* January: 106–111, for a more advanced method often used.

29 *Hazell* v. *Hammersmith and Fulham LBC, [1990] 3* All ER 33 (QBD and CA), [1991] 1 All ER 545 (HL).

30 04.09.2009 – [2009] EWHC 2227 (Comm).

31 First Company Law Directive, 68/151/EEC, Art. 9.

32 BGH 28.02.1956, BGHZ 20, 119.

33 *Überschreitung des Wirkungskreises, Überschreitung des Wirkungsbereichs*.

34 Kewenig, W. and Schneider, H. (1992) Swap-Geschäfte der öffentlichen Hand in Deutschland. *Wertpapiermitteilungen*, Sonderbeilage 2/1992.

35 See the House of Lords in *Hazell* v. *Hammersmith & Fulham LBC* [1991] 1 All ER 545.

36 CA per Sir Stephen Browne, *Hazell* v. *Hammersmith & Fulham LBC* [1991] 1 All ER 545, at 77 f.

37 *Genehmigungsbedürftigkeit*, *schwebende Unwirksamkeit* etc., see § 58 (2) of the Administrative Procedure Act.

38 It is probably the case, however, that *ultra vires* applied to Landesbanken in their earlier incarnation, when they more closely resembled public bodies – see Christian Koenig in WM 49 (1995), 317–325.

39 See the German concept of 'Treu und Glauben', MüKomm BGB, §§ 242 Rn 10; §§ 242 Rn. 1.

40 *IFE Fund SA* v. *Goldman Sachs* – [2007] EWCA Civ 811 (65 ff); *Socimer International Bank Ltd (in liq)* v. *Standard Bank London Ltd* – [2008] EWCA Civ 116 (106).

41 *Wendtland*, in: *BeckOK BGB*, §§ 123 Rn 11–12.

42 which has only applied since 2007 and is thus not relevant for most of the examples mentioned here.

43 Directive 2006/73/EC, Art. 36.

44 See, for Germany, § 31 WpHG.

45 The so-called Bond caselaw – BGH 06.07.1993 – XI ZR 12/93; see Podewils/Reisich, (2009), at page 121.

46 However, as pointed out in Ref. 3, the US Dodd–Frank Act explicitly addresses the requirement for advice in the best

interest of the client only with regard to governmental entities, pension funds and foundations.

47 *Bankers Trust* v. *PT Dharmala* [1996] CLC 518; *Morgan Chase* v. *Springwell* [2008] EWHC 1186 (Comm).

48 OLG Bamberg, 11.05.2009; OLG Celle, 30.09.2009; OLG Düsseldorf, 29.06.2009, OLG Frankfurt[16].

49 OLG Stuttgart.[15] Some of these have recently been decided by the Federal Supreme Court (BGH) in March 2011 56.

50 OLG Bamberg[48].

51 Henssler, M. (1994) *Risiko als Vertragsgegenstand*. Tübingen, Germany: Mohr Siebeck.

52 see, for example, § 37e WpHG; Gambling Act 2005 s 10.

53 Schönke/Schröder. (2001) *Strafgesetzbuch*, Kommentar, 26. ed, München §§ 263 Rn. 16e.

54 Gambling Act 2005, s 42.

55 This is not to say that other claims may not arise on particular facts. One case in which a sophisticated investor scored a notable success was *Caiola* v. *Citibank*, N.A., 295 F.3d 312 (2d Cir. 2002). Mr Ciaola, the claimant, had major speculative positions in equities. He needed hedges for these positions. It was important, however, not to let other market participants see what he was doing, so he used synthetic (that is, index-based) OTC derivatives for hedging. His counterparty in this was the defendant bank. Obviously the bank also needed to hedge its position, but it was a term of the parties' agreement that the bank should restrict itself to delta hedging with index-based stocks, which obviates the need to trade the underlying stocks. After a certain period, however, the bank ceased to use this delta hedging and – without warning Ciaola – instead bought huge quantities of options on the underlying stocks on the American Option Exchange. The consequence was that the underlying stock prices moved and Ciaola's speculative positions went badly awry.

Ciaola was not the victim of any kind of ignorance or misunderstanding. He knew what he wanted, but the bank went against a clear agreement and failed to do what it said it would. Accordingly, the court, on appeal, had no difficulty in finding that there had been – on the facts stated – a material misrepresentation.

Ciaola turns on its own facts and is different in principle from the non-disclosure issues discussed in this essay. One small point should perhaps be mentioned, however. The court in *Ciaola* was anxious to bring the facts within the purview of US securities legislation, and this meant finding that the derivatives used were 'securities'. It is questionable, however, whether such a move is ultimately helpful. As we have argued above, the nature of derivatives really only becomes apparent if one recognises the very real differences from conventional securities. Indeed the new US Dodd–Frank and Consumer Protection Acts legislation give precise definitions of most OTC derivatives, which are generically termed 'swaps' or 'security-based swaps'.

56 See the recent appeal ruling on this specific point by the German Federal Court of Justice in Karlsruhe in Ille Papier v. Deutsche Bank (*International Herald Tribune*, 23 March 2011, p. 18). Here, a sales pitch was found to invite reliance by the client on its commercial bank and then any such reliance was disclaimed in the written contract, providing evidence of lack of good faith by the defendant. The similarity with the foreign exchange case treated in this article, with much more at stake, is striking.

57 Unfortunately, the implementation of the US Dodd–Frank Act by the SES and CFTC, due by the end of June 2011, is unlikely to incorporate this simple requirement.