



Skewed views: banks, auditors split on CDS index trades

Views on risks and accounting treatment of arbitrage repack differ across the Street





Skew notes are popular with yield-hungry investors, but Street is split on how to structure them

Louie Woodall

27 Oct 2016

NEED TO KNOW

Dealers have been packaging a credit default swap (CDS) basis trade into structured notes and selling them to insurers, pension funds and private banks.

The notes repackage the difference between the spread of a CDS index and its constituent single-name CDS contracts – known as the skew.

The notes are typically leveraged to boost the coupon for the end-investor – by as much as 50 times in one case.

The skew is volatile, meaning the products have to be packaged into products that are not marked-to-market.

Issuers face risk of losses if the skew moves so far that it wipes out the investor's principal.

Differing risk appetites and accounting opinions have led to a range of structural features being included in the notes.

Some banks are believed to have been unable to achieve the accounting treatment needed to trade the notes.

An old-school money making strategy has found its way to a new roster of investors. The credit default swap (CDS) index arbitrage trade, which exploits mispricings between the CDS indexes and their single-name constituents, was

a highly lucrative hedge fund play in years gone by.

This year, some banks have been packaging up this intricate basis trade into so-called skew notes, leveraging up the exposure, and selling millions of dollars worth to European insurers and private banks desperate for new sources of yield.

But while some believe the notes represent high-coupon, risk-free investments, others see them as an overly risky bet that could lead to heavy losses for investors. Banks' ability to do these trades also depends on the view of their auditor: in some cases, dealers have been shut out of the market as they have failed to gain the needed accounting treatment.

"Every bank does its skew transactions in a different way and it's been a huge topic of discussion among auditors and accountants how these trades should work," says Paul Bajer, a director in the solutions business at Credit Suisse in London.

Skew notes have been traded in jumbo sizes. Citi, through its Irish special-purpose vehicle Libretto Capital, issued \$60 million of these products in \$10 million clips in June alone – plus a ¥2.5 billion (\$370 million) note in May. BNP Paribas, meanwhile, issued a note referencing a \$3 billion skew portfolio to a European insurer last year. Other issuers include Credit Suisse, JP Morgan, Royal Bank of Canada and Societe Generale.

The amount of leverage involved is eyebrow-raising. Market participants say a basis exposure leveraged 15 to 30 times is typical, although one source claims to have seen 50-times gearing.

Every bank does its skew transactions in a different way and it's been a huge topic of discussion among auditors and accountants how these trades should work

Paul Bajer, Credit Suisse

Some issuers are concerned about their own exposure: if the skew falls too far in the wrong direction and the client unwinds, the losses can be larger than the investor's principal, leaving the bank on the hook for further losses. This means getting non-mark-to-market treatment of the investment is key.

While some issuers have also incorporated safeguards in the notes to limit their exposure, others are happy to trust their modelling.

It's an attractive trade for many banks – especially if they are using it to offload skew already on their books – but it's ultimately up to a bank's auditors as to whether they can get involved. Three separate issuers say Goldman Sachs is notably absent from this market, which many believe is due to uncertainty around how the notes and their accompanying hedges should be accounted for. Goldman Sachs declined to comment.

Other banks are thought to have made repeated efforts to gain approval for the product – stepping into the market, then out again, and then returning with a slightly different approach.

"Some banks have been very aggressive, then retracted, gone back in, then retracted – and you can tell in between that some of their traders' assumptions were challenged internally or they have had to revise their positions here," says the head of credit exotics trading at a US bank.

A welcome dislocation

Skew is a transient quirk of the credit markets caused by supply and demand factors, plus structural differences in trading (see box: *The rise and fall of the skew*). Arbitrageurs – typically hedge funds – used to leap on the dislocation whenever it occurred to lock in credit risk-free returns. When "positive skew" emerged, the funds would sell the overpriced index and buy the underpriced single names; when "negative skew" reared its head, they'd buy the index and sell the single names.

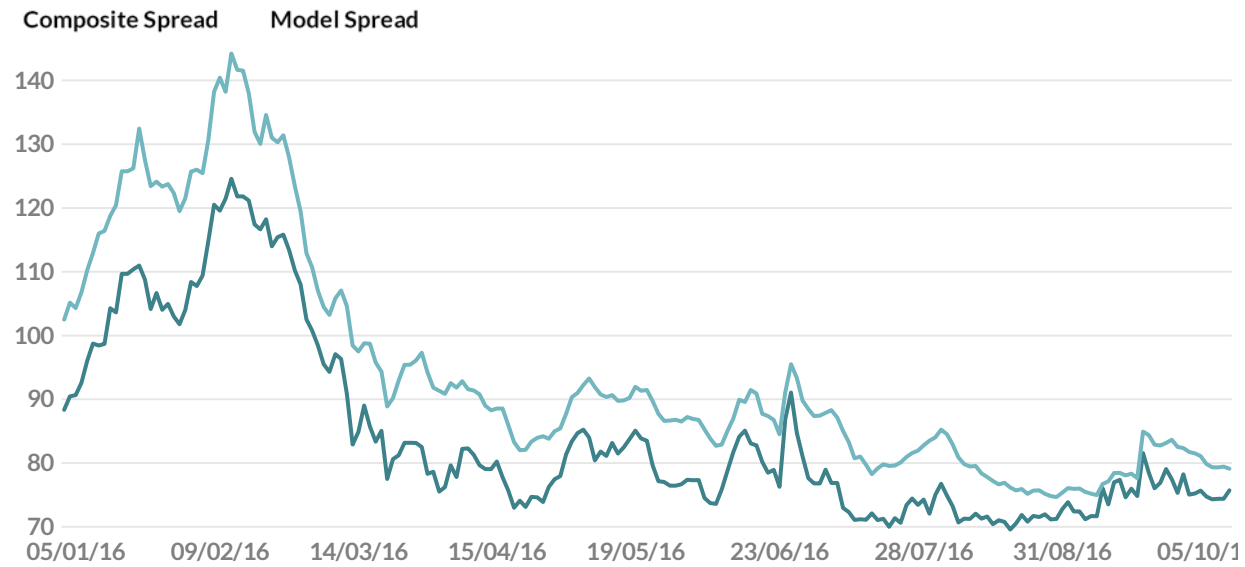
The offsetting positions would insulate them from credit risk, and when the basis collapsed under the weight of arbitrage money they could unwind their positions at zero cost, walking away with the skew premium. As the basis is often measured in single-digit basis points, funds would typically leverage up their positions to boost returns.

The trade ran aground in 2013 as funds struggled to reconcile the [different margining regimes](#) applied to the two legs of the trade. Banks also became less willing to facilitate the trade as regulatory capital constraints began to [raise the costs](#) of the relevant derivatives positions.

This relieved the pressure of arbitrage money from the credit markets, allowing the basis to drift – and for longer intervals (see charts below).

CDX NA IG

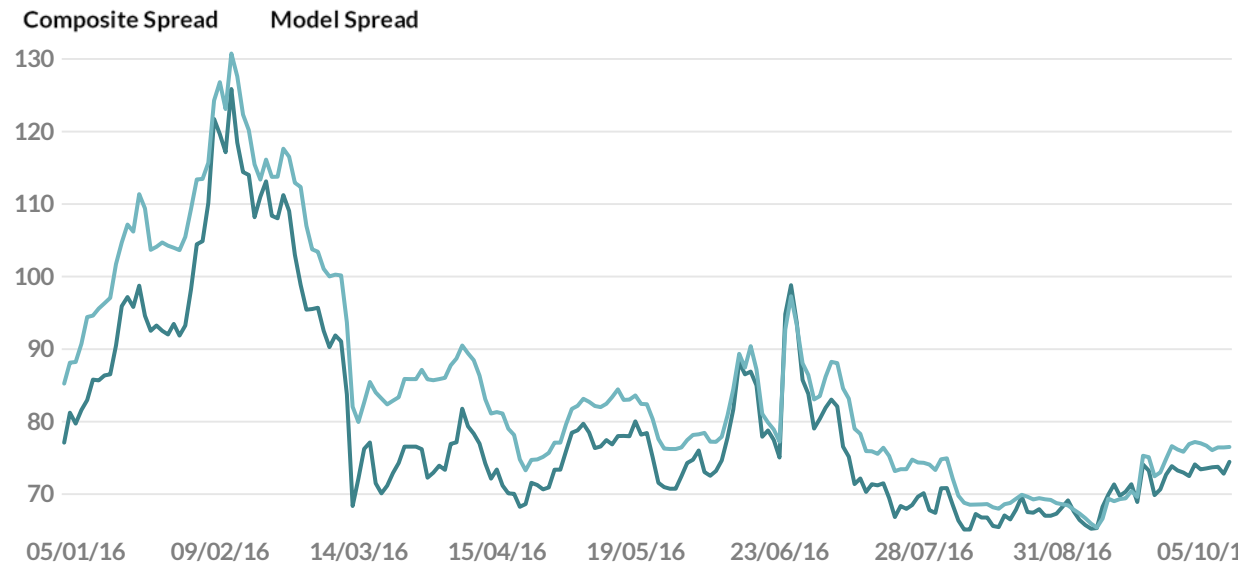
Spread between CDS index (composite spread) and its constituents (model spread)



Source: Markit [Embed](#)

iTraxx Europe

Spread between CDS index (composite spread) and its constituents (model spread)



Source: Markit [Embed](#)

"One of the reasons skew persisted for a very long time in 2016 is because the barriers to locking in skew have increased dramatically since 2007. Because of the volume of index you have to trade to make a decent amount of money from skew, these barriers are severe," says Bajer at Credit Suisse.

The retreat of arbitrageurs from the skew trade has opened the door for dealers to market the trade in a note format to a new clientele. These are buy-and-hold investors, such as insurance companies, pension funds and private banks.

"It's a hunt-for-yield investment. Once you get your head around the basis and the skew it is a good trade for an

insurer to put on. They are selling the liquidity of a bank note to maturity, and receiving a premium for locking up money," says the head of structured derivatives for Europe, the Middle East and Asia at a European bank.

The notes also benefit from a favourable regulatory capital treatment under the EU's Solvency II regime, says the head of credit structuring at a second European bank. This is because the derivatives portfolio referenced by the notes constitutes a long/short play on the relevant credit index, protecting the insurer from any additional credit risk beyond that posed by the issuing bank.

A third European dealer says they have enjoyed particular success marketing the notes to Swiss clients. Local private banks grappling with negative rates have petitioned the bank for capital-guaranteed products that pay a positive yield, and skew notes have [filled that need](#).

Depending on the referenced credit index and amount of leverage, a five-year skew note can yield anything from 50–100bp above the issuing bank's funding rate. That's a healthy pick-up given yields on a five-year Bund were at –0.50% on October 19.

However, skew notes come with a sting in the tail. The embedded leveraged skew position is highly volatile as the basis jumps around with each day's trading. For example, the spread of the iTraxx Europe index over the so-called model spread – the theoretical spread for the index if it was calculated using CDS spreads on individual constituents rather than traded as its own entity – was –8.12bp on January 1, widened to –13.68bp on March 11, and had shrunk to –2.05bp by October 11. The basis even flipped briefly positive in June and early September, with a high of +2.31bp on September 13.

Though the skew amount is locked in on the pricing date of the note, the fluctuation in the basis over the life of the trade means the mark-to-market of these notes can swing wildly. "It needs to be clear to the end-client that although this is a product for which the coupons are known and foreseeable there is mark-to-market volatility here where if they unwind early they might make a loss – or even be redeemed at zero. By nature that will limit the number of clients who are able to fully appreciate the volatility," says the third European dealer.

This means that only institutions able to warehouse these notes in their buy-to-hold portfolios, and account for them at book value, are willing participants in the trade. Dealers have been careful to match the right client with the right wrapper to guarantee this treatment. Banks selling to German institutions, for instance, have packaged the skew in a Schuldschein format. Schuldschein products are a special form of loan that are marketed like bonds, are tradeable, but are non-mark-to-market.

In our view the main problem is the potentially significant mark-to-market volatility, especially if these products use leverage

Andreas Bertl, Uniqa Finanz-Service

From a book value perspective, skew notes then look like illiquid, bank-issued paper that simply yields more than vanilla debt. The volatility of the embedded skew position is completely discounted.

However, the favourable accounting treatment gained by the wrapper can't hide the fact that investors are taking on exposure to a volatile arbitrage strategy – a fact that has made some potential clients wary.

"In our view the main problem is the potentially significant mark-to-market volatility, especially if these products use leverage," says Andreas Bertl, a member of the management board at Uniqa Finanz-Service in Vienna. "Ultimately, the use depends on the accounting regime and on how much P&L volatility an investor is willing and able to stomach."

A portfolio manager at an asset manager in the UK is more explicit: "Putting it in a note format seems to obfuscate the trade. The treatment should be similar if it was done outright on the balance sheet instead of wrapped in a note. I suspect that the trades are less likely to happen if it's done explicitly despite the risk being no different. This raises a question as to what the attraction is: the slight income pick-up from taking a highly levered CDS position or that it can be hidden in an illiquid note which doesn't have an observable price and thus lacks price volatility?"

Called to account

The first European dealer is particularly sensitive to these buy-side concerns. Facing a wall of redemptions on skew notes sold in previous years, the bank is trying to entice clients to reinvest. Yet according to the head of structured derivatives, some insurers are doubtful whether the notes will qualify for non-mark-to-market treatment under International Financial Reporting Standards 9 (IFRS 9), which is set to replace the existing International Accounting Standard 39 (IAS 39).

"My view of IFRS 9 is that it shouldn't change much if they have done that step of thinking that it's fine to account it under IAS 39. IFRS 9 says basically as long as the coupon is not directly impacted by the derivatives – which is the case here – it is okay [to not mark-to-market]," he says.

It all comes down to how an investor interprets IFRS 9's section on embedded derivatives. Here, an embedded derivative is defined as a component of a hybrid contract that also includes a non-derivative host – for example, a structured note – where this component causes some or all of the cashflows related to the contract to be modified. A product with an embedded derivative would have to be marked-to-market under IFRS 9.

However, the head of structured derivatives says that as their skew notes contractually guarantee fixed cashflows regardless of the fluctuations of the embedded credit derivatives portfolio – as long as they are held to maturity – they should not be captured by the embedded derivative treatment.

The mark-to-market volatility of the skew, though, may cause bigger problems for the issuers themselves. On the surface, skew notes appear to be a good means of recycling the P&L volatility of vanilla skew positions banks have on their own books. Even for those that don't have a large outstanding position to offset, they will need to hedge the notes by building their own CDS and index positions in the market. The problem is these skew notes may not be as tight an offset for the derivatives as some think.

The issue is that ability to buy back is capped at the face value of the note. They can't claim back more than par

London-based capital markets consultant

"The portfolio of credit derivatives would be accounted for at fair value. There may be overlay for bid/offer or liquidity that will filter through to P&L. The associated hedge value is the amount the issuer attributes to their ability to unwind the sold note early and crystallise those derivative losses. The issue is that ability to buy back is capped at the face value of the note. They can't claim back more than par," says a London-based capital markets consultant.

The utility of the note as a hedge diminishes with the amount of leverage embedded. Consider a bank with a \$1 billion notional skew position on the books. Say they sell a \$50 million note embedding a 20-times notional exposure to this skew. Theoretically, though only 5% of the bank's position has been offloaded, the case can be made that 100% of the mark-to-market skew risk has been transferred to the noteholder.

Or has it? If a sudden basis move cuts the mark-to-market value of the credit portfolio by \$80 million, the note can absorb \$50 million but no more: the issuer cannot ask the noteholder for more cash to balance its position. This creates significant gap risk for the issuer, and a lot of questions from auditors trying to determine whether the note can be considered an accounting hedge of the derivatives positions.

"The question is: by getting rid of that first 5%, is it then okay from an accounting standpoint for you to transfer 100% of the P&L volatility to your client?" asks Bajer. "Maybe, maybe not. It depends how leveraged the transaction is and the likelihood of that 5% being sufficient to cover all the potential mark-to-market. I've heard of skew notes with as much as 40-times leverage being printed. At those levels, it becomes difficult to say it would be 'impossible' that the mark-to-market of the skew would exceed the face value of the note. Credit Suisse employs limits on leverage and gap risk hedging strategies to mitigate this kind of risk."

If an issuer has assumed the sold note would carry the full mark-to-market risk, they may not be prepared to face

the losses. An issuer with a \$1 billion skew position that has sold \$25 million of notes at 40-times leverage on the CDX investment grade index, for example, could face losses of up to \$9 million if the basis moved by 75bp. This is an unlikely jump, but not impossible. Skew on the iTraxx main has fluctuated between +60bp in December 2008 and -15bp in 2016.

Conservative issuers are alive to the gap risk: "There is a gap option on the skew which means that a bank issuer has only a limited independent amount to hedge their mark-to-market. That is one of the key concerns of this trade: how do you model this gap, and how do you value this gap? This means thorough discussions with their partners from the risk department and accountants as there can be a mismatch between how much skew you've sold to the client and how much you have traded in the market," says the third European dealer.

That is one of the key concerns of this trade: how do you model this gap, and how do you value this gap?

European dealer

To limit their exposure, at least one bank incorporates mark-to-market triggers in their skew note hedges. As the mark-to-market moves towards the floored value of the hedge, the leverage ratchets down in line, preventing the issuer's exposure on their hedge exceeding the face value of the sold product. The bank also caps the amount of leverage they embed to 30 times the notional on high-grade indexes to limit their risk.

"The way we have constructed our notes is by basing our leverage levels on stress tests so we are confident our mark-to-market triggers will not have to be used," say the senior credit structurer.

This so-called re-delta feature increases issuer costs, as they have to unwind their skew exposure at unfavourable levels to match the drawdown in note leverage. However, the senior credit structurer says this is not passed on to clients as yet.

The head of credit exotics at the US bank goes one step further: "When we sell notes we put in some triggers to make sure we transfer the exact mark-to-market risk. So if the mark-to-market skew goes up a certain amount, there will be an early unwind. An investor then does not have an unsecured claim on our credit; they are suffering the volatility of the skew."

He admits this makes them less attractive investments to buy-to-hold investors, which explains why the bank has been less active than its competitors. "[Our competitors] rely on the assumption that if you staple 125 CDS and one index trade together and repackage them in a structured note, you do not introduce another basis skew with the hedges. This is particularly debatable in this case given the skew is itself the reflection that 125 CDS contracts stapled together in an index trades at a slightly different price than the sum of the pieces," he says.

A second accounting issue has dogged the sale of skew notes that embed an issuer callable option. "There's a question of how much profit you can account for day one on the sale of these notes," says the London-based capital markets consultant.

"Under IFRS you would place the day one profits in reserves and amortise it into P&L over the life of the note. Under US Gaap [Generally Accepted Accounting Principles] you would reserve only for specific uncertainties but otherwise release the full P&L. However there was a debate about whether you can attribute value to the basis position up front. If an issuer chose to unwind the transaction before maturity they could realise a gain by unwinding the associated hedges. The debate was over how much value to give to this option to buy back."

The debate is complicated by the fact that there is no secondary market in these notes issuers can use to anchor a valuation. The option value is, therefore, wholly subjective. This complicating factor put a brake on some firms' issuance plans.

"My experience was that some issuers were reluctant to enter into a new trading initiative if they couldn't get clearance on the P&L side," says the consultant.

The rise and fall of the skew

Skew is a fleeting phenomenon in the credit markets. Each time it rears its head, market participants attribute it to different causes, though supply and demand factors play a leading role. In 2008 and 2009 a "positive skew" emerged – with the CDX index trading wider than the single names – as firms piled into the index for protection at the height of the financial crisis. Meanwhile, trades in the single names stagnated because of their relative illiquidity compared to the index.

In contrast, this year a "negative skew" hit the market – with the single names trading wider than the index.

"Because the bond market has become very illiquid, with central banks buying a lot of corporate bonds and lower new issuances volumes, asset managers have been struggling to fill their allocations to credit. In order to get exposure to the credit market without buying increasingly illiquid cash bonds at expensive levels, asset managers have been selling CDS indexes. That caused index to rally versus single names," says Paul Bajer at Credit Suisse.

Skew on the CDX investment grade index ranged between –0.65bp and –20.85bp between January and October.

European credit markets, while also susceptible to this pressure, have seen skew arise for reasons all of their own. "This year on the iTraxx crossover there have been a number of event defaults, so some CDS were trading much higher than their spread in the index. The dispersion was pretty high between the weighted average of the single names and the index. Another reason is liquidity. We have different actors trading the index than those quoting the single names," says a senior credit derivatives structurer at a European bank.

Skew on the iTraxx Europe ranged between +2.31bp and –13.68bp between January and October, and +12.5bp to –43bp on the iTraxx crossover.

In addition to these market factors, differences in the way the various swaps are traded can have an amplifying effect on the skew. Credit indexes are subject to mandatory clearing through central counterparties. [Single-name CDS](#), on the other hand, are not – though an increasing number of contracts are being cleared voluntarily. The different pricing inputs affecting cleared and non-cleared trades have also been blamed for generating skew between the contracts.

A wide basis makes skew notes an attractive investment for end-investors. Issuers have also been helped by the persistence of the skew this year. The longer it lasts, the more time dealers have to package it up and sell it forward.

"Not only has the arbitrage trading done by hedge funds reduced, the trading done by banks has also reduced as a result of the Volcker rule in the US, and the increased costs of capital introduced by other regulations. This means the skew converges more slowly than in the past," says the senior credit structurer.