Risk Awards 2010

EQUITY DERIVATIVES HOUSE OF THE YEAR
SOCIÉTÉ GÉNÉRALE

The fourth quarter of 2008 will be remembered as one of the trickiest periods ever for equity derivatives dealers. Following the collapse of Lehman Brothers in September that year, global equity markets experienced unprecedented volatility alongside increased correlation and crumbling dividend expectations. A few equity derivatives desks incurred losses north of €1 billion in the last three months of the year alone, with barely any avoiding substantial losses (*Risk* December 2008, pages 20–23[1]).

Société Générale Corporate and Investment Banking (SG CIB) was one of those that reported losses. But its early action to cut its dividends exposure in particular meant the bank ended up reporting a profit in equity derivatives for 2008, unlike many of its rivals. Meanwhile, it continued to launch new products targeted to the market environment, especially around the tricky area of variance. It also provided liquidity during the worst of the turmoil and put renewed focus on clients, which has gone down extremely well with end-users.

"SG CIB is now more transparent, more global and offers more diversified solutions. I would certainly rank it as one of the best dealers in equity derivatives today, which was not the case three years ago. All organisations made progress on their risk management during 2009, but it has been quicker than most to answer queries and react to any particular situation that arises," says Stephane Rougier, structured solutions director at Aviva Investors in London.

Although SG CIB has sought to limit its dividend and correlation exposure through alternative risk transfer since 2002, the severity of the financial crisis and the resulting losses have forced the bank to re-evaluate that effort. While the equity business ended 2008 with a profit of €1.34 billion, it lost €608 million in the fourth quarter, of which roughly half came from dividend exposures and half from correlation positions. The loss was a fraction of the size of competitors such as BNP Paribas and Deutsche Bank, but substantial nonetheless – especially as it came in the same year as the revelation of a €4.9 billion fraud perpetrated by Jérôme Kerviel in January 2008.

According to Dan Fields, global head of trading at SG CIB in Paris, the loss could have been much greater had it not been for the reduction in its total exposure to both correlation and dividends. "We had an aggressive and disciplined approach to hedging risk on both the vanilla and the complex side, so our net risk in 2008, while not negligible, was relatively limited and in line with the risk profile we thought to be acceptable in the context of market conditions," he says.

By managing its risks centrally and finding appropriate hedges, SG CIB cut its dividend exposure by roughly half during the early part of 2008, so avoiding the severity of losses on dividends that afflicted many of its competitors. "As we went into September 2008, we had as defensive a position as I believe we've ever had. The loss that came from the dislocation in dividends and correlation was much less than it could have been given the scale of the fallout," says Fields.

But the fourth-quarter losses were larger than the bank would have wanted, and meant the early part of 2009 saw a period of further de-leveraging in long-term dividend and correlation positions, cutting daily value-at-risk in the equity derivatives business by 63% to €27 million in November 2009. The bank also refined its approach to market risk management, placing a renewed emphasis on preparing for dislocations in the equity markets.

"One of the lessons of 2008 was that there needed to be greater priority given to potential dislocations and lack of liquidity in particular instruments. We put more focus on stressing positions than in the past, with a more severe liquidity function to make sure the worst-case scenario of our stress tests correctly reflects our positions and potential for gain," explains Fields.

To ensure this new market risk approach was effectively executed, SG CIB appointed a team of 30 front-office staff dedicated to the management of market risk and counterparty risk, based mainly in Paris, but also in New York and Hong Kong. Established in July 2009 and reporting to Fields, the trading risk team is a direct effort to bring risk management into the front office and ensure all trades are appropriately stressed and tested to prepare for market dislocations.

The creation of the trading risk team coincided with the appointment of a smaller regulatory team to liaise with supervisors and industry associations globally on the future direction of financial services and over-the-counter derivatives regulation.

Both teams were created as part of a major organisational overhaul at SG CIB in July 2009, which brought all major asset classes together under a global markets umbrella, headed by Christophe Mianné, previously global head of equity and derivatives solutions and fixed income, currencies and commodities. "The new organisation is about breaking down the barriers between the different capital markets activities to leverage off our equity derivatives franchise and improve the cash equities, fixed income, foreign exchange and commodities businesses. One thing we really wanted to provide was a consistent service to our biggest clients and not be seen to be providing only one niche product," explains Mianné.

Beyond risk management and the global markets reorganisation, the bank has continued to provide liquidity, even in

[1] *www.risk.net/risk-magazine/feature/1498312/gambling-dividends*

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Christophe Mianné and Dan Fields: refused to allow market turmoil to get in the way of innovation

complex products. For instance, end-users say SG CIB was one of the few dealers to continue making markets in variance swaps during the crisis.

"The market turbulence of 2008 and 2009 created an opportunity for SG CIB to expand its reputation as the market leader in the OTC equity volatility markets, particularly in single-name and index variance swaps, by continuing to make consistent and tight markets and providing strong client service. Additionally, over this same period, it has built up market-making and research efforts in the expanding market for single-name and index dividend swaps," says Jonathan Loflin, portfolio manager at BlueMountain Capital Management in New York.

The variance swap market was one of the areas where dealers came unstuck during the crisis, as a lack of liquidity in listed options made it difficult to hedge short single-stock variance positions accumulated through dispersion trades (*Risk* May 2009, pages 63–65[2]). However, SG CIB says it bought several million euros of vega on single stocks in 2008, which helped protect it when volatility shot up post-Lehman Brothers. The bank claims it reduced its variance swap exposure by 80% between January and September 2008. As other dealers pulled back from the market, firms such as BlueMountain relied on SG CIB as virtually the only remaining liquidity provider.

Variance swaps give a payout equal to the difference between realised variance (the square of volatility) and a pre-agreed strike level, times the vega notional. Variance swaps were considered to be easy to hedge, as they can be replicated using a portfolio of vanilla options. However, the drying up of liquidity in the market for out-of-the-money options made it very difficult and expensive for dealers to manage their exposures. As a result, some banks such as BNP Paribas last year attempted to resurrect the volatility swap market, which gives traders direct access to volatility.

Despite pressure from other dealers, SG CIB has resisted the temptation to offer volatility swaps as an alternative to variance. "We put a lot of value on variance swaps because they are the only way to get reliable marks and access to volatility in a way that is hedgeable via listed options. Even though market conditions might have made the volatility swap work for six months, we didn't feel it was the right model because it is harder to hedge – you can't replicate the volatility curve using options as you can with variance," says David Escoffier, co-head of global equity flow at SG CIB in London.

But SG CIB has not shied away from tailoring the product to suit the changing needs of clients. In March 2009, it launched the American variance swap, which gives investors the ability to terminate the swap before maturity at its realised value only. This allows traders to buy volatility at a discounted price by selling SG CIB the right to step out of the trade, or sell volatility at a less attractive price but have the right to get out of the trade if volatility spikes.

"What we have done with variance swaps in 2009 is testament to our overall approach. We have been more prudent in terms of total exposure and risk management of our variance positions but we didn't quit innovating. As managers have redirected their investment strategies towards more vanilla, liquid and transparent products, the American variance swap is the perfect hybrid – a simpler, safer version of an already popular trading instrument," says Escoffier.

> "One thing we really wanted to provide was a consistent service to our biggest clients and not be seen to be providing only one niche product" Christophe Mianné, SG CIB

Variance was not the only area where SG CIB pursued innovation last year. The bank also came up with a product to cater to investors who want to benefit from the cheapness of long-dated hedges, yet have the flexibility of short-dated rolling protection. The so-called chooser put gives investors the ability to change the strike once during the life of the option, allowing them to lock in any gain in the event of a rise in the markets. After launching the chooser put in the third quarter of 2009, SG CIB had executed roughly €600 million notional by the end of the year.

"The chooser put gave clients a very effective way to manage the risk of having a hedge that isn't working any more. It's the type of innovation that was important in 2009, not only because it answered client needs but because it was such small steps of innovation that were the theme of the year, rather than very complex payoffs," says Escoffier.

Meanwhile, SG CIB beat four other bidders to buy the equity options portfolio of First New York on September 22, after the US prop trading house decided to exit the business. The portfolio contained roughly 900,000 options – a deal SG CIB claims demonstrates its position as a major player in the US single-stock options market (*Risk* November 2009, page 10[3]). ■

[2] *www.risk.net/risk-magazine/feature/1497621/an-aversion-variance*
[3] *www.risk.net/risk-magazine/news/1560810/traders-hit-low-levels-vol*

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