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Economic derivatives debut

Goldman Sachs and Deutsche Bank were claiming success last month for their debut auctions of 'economic derivatives' – options on economic indicators. The firms held auctions on October 1 and October 3 for options on the US Department of Labor's monthly non-farm employment statistic, which was released on October 4. The firms say the auctions created $19 million (notional) of positions.

While a modest amount, the figure helps put to rest the firms' biggest fear – that there would be no liquidity, and the product would flop. While proprietary and other product desks at Goldman and Deutsche were the main participants, the firms did attract some outside investors, mainly hedge funds, which placed 28 limit orders in addition to the firms' own desks, which placed 100. "We are extremely pleased to see how the market has received this in the current risk-averse climate," says Torquil Wheatley, vice-president in the economic derivatives team at Deutsche in London.

The auctions used the Parimutuel Digital Call Auction (PDCA) technology developed by Longitude, a New York-based financial technology firm (*Risk* August 2002, page 13). This mechanism is often compared to how odds are determined at a racetrack – the demand from auction participants for the different option strikes sets the prices. Open interest in the auction is pooled and there is no need for discrete order matching, which, Deutsche and Goldman claim, make this much more capital-efficient than running a typical option book. The premiums are determined by the final market-driven equilibrium price, and the out-of-the-money positions fund the in-the-money positions. Goldman and Deutsche earn a spread.

For the October auctions, participants were able to choose strike prices in increments of $10,000, ranging from –$150,000 to $250,000 on each tick (each tick being equivalent to 1,000 jobs).

For example, a proprietary trader seeking to hedge against a sharp increase in non-farm employment (say, because he runs a short equity book and fears a rally, or he runs a strategy based on monetary easing and worries stronger employment will reverse it) could place a limit order to purchase $1 million of protection using a non-farm payroll $50,000 call (reflecting a 5,000 increase in the payroll figure) for $0.40. If, at the end of the auction, the equilibrium price of the call is $0.40 or less, the entire order would be filled at the equilibrium price. So, if the equilibrium price settled at $0.35, the investor would pay $350,000. If the 5,000 or more jobs were added, the option would be in-the-money and would pay $1 million.

Neehal Shah, Deutsche's London-based global head of foreign exchange options, says that, while the banks provided most of the support for the debut auction, future auctions will not be as dependent on the two banks for liquidity as more participants enter the fray. "Percentage-wise we expect our involvement to reduce as the product evolves and there is less need for us to provide liquidity," Shah says. "However, in absolute terms we'd expect greater involvement. The aim is for economic derivatives to become a standard part of the risk manager's portfolio."

End-user

The banks say there was a range of end-users. Internally, the foreign exchange and interest rates trading desks participated. Externally, investors representing several hedge fund styles – mainly fixed income, equities and macro – sought to speculate on the payroll release. Peter Gerhard, managing director at Goldman Sachs in New York, in charge of fixed income, interest rate products and money markets, who took part in the auction, says that around 70% of the interest focused on digital options. "People were particularly interested in digital options, which have a very clean and well-defined payout," Gerhard says. "In these auctions, there was a tug of war between the speculators and the hedgers. From the market point of view, this is the perfect scenario."

The future of the product depends to a large extent on whether end-users embrace it as a hedging tool. Some argue that economic derivatives will make poor hedges unless, like, for example, interest rate swaps, they can be tightly linked to a position. Russ Abrams, New York-based fund manager at $180 million volatility arbitrage fund Titan Capital, says: "Economic derivatives are not going to have a net-user base, but are more likely to be used as a speculative instrument. Corporates, for instance, are more concerned about economic trends than a single economic number."

Goldman's Gerhard disagrees. "Economic derivatives could be used to follow longer-term trends. It would entail participating consistently from auction to auction. However, economic data does move together, so people could exploit this trending element."

Deutsche's Wheatley admits that the initial tools are unlikely to be used as hedging tools, but says that this could change as derivatives linked to other statistics – such as inflation and GDP – are introduced. "Next year, there will be inflation- and GDP-linked derivatives with longer maturities, ranging from six months to a year. We should see different players coming into the market, such as corporates looking to hedge against GDP and protection against inflation."

In any case, the first two auctions were more useful predictors of the payroll figure than a poll carried out by Bloomberg of 60 economists, which predicted a rise of 7,000 jobs. The first auction predicted a 38,000 drop in employment, much closer to the eventual release of a 43,000 drop (though the second auction predicted a more modest decline of 18,000 jobs).

"If you can get some estimate of the market forecast, as opposed to an economic forecast, you can gain a clearer idea of market expectations and position yourself accordingly," Shah says. "One shouldn't see so much unwinding of positions afterwards."

However, the market's actual reaction to the payroll data was influenced more by the revised employment figure for August, released at the same time as the September number, which showed a threefold rise from the previous statistic, than the September figure. Immediately following the release there was a sharp sell-off at the short end of the curve as investors looked to reverse their long positions built up on expectations of a weak overall number.

"The payroll figure is subject to so much volatility and is hard to forecast," says Lynn Reaser, chief economist and senior market strategist at Banc of America Capital Management in New York. "You could get the particular number right but might miss the impact on the market." However, Reaser added that other statistics, such as GDP or manufacturing figures, were less complicated and would perhaps be better suited to the auction.

The firms plan to expand the types of statistics and increase the maturities of the options they offer. The third and fourth auctions, scheduled to be held in late October after *Risk* went to press, were based on the Institute for Supply Management's manufacturing data and the Labor Department's payroll figure. This month, the firms plan to offer options on retail sales data. Wheatley says they will also launch options on inflation statistics and GDP at some point next year, with increased maturities, ranging from six months to a year. ■

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