

## Less complexity for pricing analytics

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A number of software suppliers sprang up in the early part of the decade offering pricing and analytics software for ever more complex derivatives structures. In the new age of less complexity, how are these firms adapting? By Clive Davidson

Before the crisis, intricate financial engineering was worn as a badge of honour by banks, with dealers seeming at times to be trying to outdo each other by launching ever more complex derivatives structures. In turn, there was a relentless demand for advanced analytics that could price and manage the risks of these deals. A mini-industry sprang up to meet the demand, with a host of boutique providers, often specialising in a single asset class, setting up shop. But now the markets have crashed to earth and investors are shunning complex products in favour of simplicity, what has become of the pricing specialists?

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Perhaps counter-intuitively, many claim to be flourishing. Given the long-term nature of many over-the-counter derivatives deals, large numbers remain on the books of financial institutions and now, more than ever, require accurate, transparent pricing. "Many institutions still have lots of exotic structures on their books, and they need to be priced," says Steven O'Hanlon, president and chief operating officer of New York-based pricing and risk analytics vendor Numerix.

A case in point is Lehman Brothers Holdings, which has hired Numerix to help in the valuation process as it attempts to unwind its derivatives book and resolve creditor claims. The portfolio includes 300,000 exotic deals, as well as a "couple of billion dollars worth of live trades that need management and hedging", says O'Hanlon. Numerix has around 40 staff working on the project, using its integration technology to consolidate the deals that were dispersed over more than 20 systems into a single portfolio, then employing its analytics for valuation, risk analysis and hedging.

One aspect that has changed since the crisis is the greater insistence by clients on accuracy and transparency in the pricing process. "Institutions are looking more closely at how their systems generate prices, and are demanding a greater understanding of the maths methodology and market data sources used in their applications," says Richard Brunt, global head of Fenics, the forex pricing analytics division of New York-based brokerage GFI Group. This is being driven at least in part by regulators, which have called for the independent valuation of assets. Meanwhile, both the International Accounting Standards Board and US Financial Accounting Standards Board (FASB) published guidance last year that clarified banks aren't required to use market prices in distressed markets, or if no observable inputs are available.

"Complex instruments have not disappeared from the books of any firms – rather, they are now receiving increased attention because of rules like FASB Statement 157, which requires marking-to-model on nearly all instruments," says Rich Tanenbaum, chief executive of New York-based Savvysoft, a pricing and risk analytics and portfolio management systems vendor. "Also, much of the financial crisis of the past couple of years can be traced back to poor risk management, and having robust pricing models that can drive simulation-based risk measures is more important than ever to prevent the debacle from being repeated."

Given the failures experienced by banks, many buy-side firms have woken up to the fact they should not take sell-side valuations of deals at face value – a trend pricing analytics providers believe is likely to generate more business for them. Bob Park, president and chief executive of British Columbia-based derivatives analytics specialist FinCad, says several high-profile derivatives blow-ups in the 1990s acted as an effective marketing tool when the company was growing its business in that decade. He believes a similar thing will happen this time around.

“One of the most surprising things about the recent crisis was how many organisations were still taking values from their sell-side counterparties and hadn’t learnt the folly of that from the 1990s,” says Park.

AG Insurance (formerly Fortis Insurance Belgium) is a typical example of a financial institution that now feels the need to more closely scrutinise sell-side pricing. To this end, it recently hired Paris-based pricing analytics specialist Pricing Partners to perform independent valuation for some of its equity, funds and interest rate structured products. “We wanted to challenge and double check the valuation provided by our counterparties for our OTC products,” said Alain Bombo, senior financial consultant for finance and structured products at AG Insurance, at the announcement of the deal. The service will also help the company develop its in-house pricing expertise and support the risk management of its investment strategies, he added.

It is not just the problems at banks that have increased the need for independent pricing. In the wake of Bernard Madoff’s \$65 billion Ponzi scam, revealed last December, hedge fund investors have started to demand more independent and transparent pricing, claim vendors. “While there are no regulations for hedge funds to seek independent valuations, investor scrutiny has pushed for more due diligence, oversight and demonstrable controls, and consequently we have seen more demand for independent valuations coming from these types of clients,” says Gavin Lee, chief operation officer of SunGard Reech, a unit of Pennsylvania-based software vendor SunGard that specialises in pricing analytics and independent valuations.

Offering independent valuation services has become an important second string to the bows of many pricing analytics specialists. For example, SuperDerivatives offers SD-Reval for the independent revaluation of derivatives portfolios, and in March launched Mark-to-Market Data, which it claims provides risk reference data for vanilla and exotic derivatives across commodities, energy, equities, foreign exchange and interest rates. In July, FinCad launched a new web-based valuation service called Fair Value Insight together with London-based interdealer broker Icap (which provides the market data for the valuations). Other services include FastVal from SunGard, Turnkey Valuation Services from Savvysoft, Portfolio Valuation Service from Numerix and Price-it Online from Pricing Partners. Despite the fact much of the recent activity has focused on legacy trades, and interest in new complex structures has fallen off a cliff since the crisis, some pricing analytics vendors reckon this is just a temporary phenomenon and that demand will return. That is despite a regulatory push in the US and Europe to force standardised derivatives through central counterparties and to make dealers hold additional capital for non-standardised contracts.

FinCad points to an annual survey it conducts, covering a significant sample of its 3,500 clients. This year, the vendor says 7% more clients are using complex products compared with last year, and 70 of the sample overall said they plan to use complex products in the future. Meanwhile, several pricing analytics vendors report signs of renewed interest in certain markets. SuperDerivatives, for example, claims to have made sales over the past six months to ICBC (Asia), the Hong Kong arm of Industrial and Commercial Bank of China, and Mecklai & Mecklai, an Indian interbank foreign exchange broker. And some other industries, particularly insurance, are making increasing use of complex derivatives to create end-user products. “We are seeing a lot of life in structured products in the insurance sector,” says O’Hanlon. Numerix now has 14 insurance company clients.

While they build on the potential of these new opportunities and wait out what they believe to be a temporary lull in the market for complex instruments, the pricing analytics vendors have been keeping themselves busy in a number of other ways. One has been to improve their pricing analytics offerings. “Analytics to value vanillas and ‘digestible’ exotics are under a lot of focus for increased accuracy and speed, and will almost certainly evolve in the coming years,” says Maroun Edde, chief executive of Paris-based trading and risk system vendor Murex.

In addition to taking the time to round out its support for vanilla products, Numerix has been focusing on its Numerix Portfolio deal capture and management system, which includes high-performance grid computing tailored to the company’s analytics library and can link with multiple trading systems to provide an integrated view of derivatives portfolios. This is the system it is using at Lehman Brothers to extract deals from the defunct bank’s old trading systems and manage the winding down of the portfolio.

Meanwhile, SuperDerivatives has been extending its tools for decision support, such as pre-defined instruments and strategies and a trade ideas generator, as well as tools for managing OTC products throughout their life cycle. “For example, our online deal blotter constantly monitors all instruments in the system, alerting users if action is required

on any life-cycle events, so they can inform customers instantly and carry out the actions,” says Stephen Baker, UK head of SuperDerivatives.

The pricing specialists have also been extending their partnerships with trading and risk systems providers. A few of these vendors develop pricing analytics themselves to a level that competes with the specialists, such as Murex and Paris-based Sophis in the equity derivatives and structured products areas. However, many trading and risk systems vendors cover only the most common products and allow their clients to integrate their own in-house pricing models or those of third-party specialists into their systems.

This has always been a route to market for the pricing specialists, but it has assumed greater importance since the crisis. Eric Benhamou, chief executive of Pricing Partners, even says having the quality of analytics to attract partnerships with major trading and risk systems and services vendors is essential for survival. In September, Pricing Partners announced a partnership with Paris-based capital markets consultancy Ester, in addition to its existing partnerships with London-based trading and risk system vendor Misys and New York-based exchange NYSE Euronext (for its independent valuation service via Primesource).

In the same month, SuperDerivatives announced a partnership with Calypso to integrate its independent pricing service and pricing and execution tools with Calypso’s cross-asset front- to back-office system. Meanwhile, Park says FinCad has been experiencing growth in demand for its analytics through its partnerships, particularly with California-based Moody’s Analytics, which now includes the KMV and Fermat range of enterprise risk management systems, and North Carolina-based SAS Institute, another risk management system specialist.

Furthermore, in the aftermath of the crisis, there is a joint endeavour between the pricing specialists, trading and risk vendors and financial institutions themselves to better integrate complex products into straight-through processing and enterprise risk management environments. “Now is the time to solve all the secondary requirements that were previously forgotten about in the gold-rush phase,” says Harald Rudolph, product manager of the Adaptiv 360 enterprise risk system for SunGard.

He says a major effort is under way to ensure complex instruments are integrated into established systems in order to achieve the same levels of security, auditing, reproducible pricing, central position keeping, smooth risk management integration, limits management and high-quality trade documentation available for vanilla products. “Trading departments know complex products can only grow again if the bank’s board and all stakeholders, including heads of trading, risk managers, accountants, auditors, operations managers and regulators, are really confident that things are fully under control,” adds Rudolph.

Another survival strategy of the pricing specialists is to broaden the asset classes they cover. Many pricing analytics vendors started out specialising in a single asset class, but the larger vendors at least have gradually extended their range over the years. One vendor bucking the trend is GFI Fenics, which has stuck to its guns in forex options. However, like the other pricing vendors, GFI Fenics has extended the functionality of its products beyond pricing libraries to support price distribution and integration with sales desks and end-customer services. “Pricing has become increasingly commoditised, so Fenics has evolved into more of a forex options middleware solution,” says Brunt.

It seems the pricing analytics vendors have tried to keep themselves busy, but how has that translated into actual earnings and business survival? O’Hanlon says Numerix has been growing 40–60% a year since 2003, and claims the past year has been no different. Brunt says 2008 was the best year for GFI Fenics since he joined the division five years ago. On the other hand, while there has been no news of any smaller vendors going out of business recently, there are reports of several putting themselves forward for sale. O’Hanlon says Numerix is “readying to acquire some of these companies by the year end”. Brunt says GFI Fenics has no acquisitions planned at present, but “wouldn’t shy away from any suitable opportunities”.