

ReferenceDataReview presents

# Impact of Derivatives on Reference Data Management

They may be complex and burdened with a bad reputation at the moment, but derivatives are here to stay. Although Bank for International Settlements figures indicate that derivatives trading is down for the first time in 10 years, the asset class has been strongly defended by the banking and brokerage community over the last few months.

The industry is, however, on course for a significant overhaul of the regulatory regime governing the OTC derivatives market, both in Europe and the US. This, of course, means that the post-trade processing of these instruments is set for big changes. Credit default swaps (CDSs) are the first of the credit derivatives to be ushered onto clearing counterparties in a bid to reduce counterparty risk, but they will likely not be the last.

Moreover, the market is also awaiting the introduction of an alternative standard to the current five character Options Price Reporting Authority (Opra) codes next year. Earlier this year, the Options Clearing Corporation (OCC) was named as the operator of the new options symbology system, which has been estimated to cost the industry around US\$250 million to introduce.

All of these changes are likely to have a significant impact on the data management systems for these complex instruments, requiring the introduction of new processes and procedures. A challenge indeed for the vendor community.

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# Time to Embrace, Reject, or Ignore the Spreadsheet?

Brian Sentance, CEO, Xenomorph

**W**hat is 'Data Management' in financial markets? The simplistic, but unsatisfying, answer is probably anything you want it to be, so long as you can associate data with it. For many participants it concerns the management and distribution of real-time data, for others the management of security terms and conditions, the management of counterparty and customer data, corporate events, security transactions and their positions, or the management of prices and valuations etc.

Focussing on the derivatives industry, the answer to my initial question is probably "all of the above", as no other area is so data intensive, requiring all types and categorisations of data to be delivered and linked together in a consistent, high quality and flexible manner. Given this diversity and complexity of data requirements, it is perhaps unsurprising that the spreadsheet, aka Microsoft Excel, is still the leading platform for derivatives data management in financial markets.

## Centralising not Siloing

One of the great ironies of data management marketing is its desire to impress the importance of centralised data management, and moving away from isolated "data silos", whilst at the same time presenting its product offerings to the industry in a manner that is itself "siloed" around specific types of data (eg reference data, market data, counterparty data etc). If a financial product is constituted from a variety of data types, curves and pricing models, how can it be automatically "validated" as fit for purpose if these constituents are located in separate,

isolated systems? Put another way, derivative data management systems need to be business and product focussed rather than technology and data-type focussed. This is where the spreadsheet currently proves to be a vital tool for business users: it does not differentiate by data type; it copes with a high degree of data complexity; it is a fantastic integration tool for pulling data and analytics together; and it is ultimately easy enough for users to develop business solutions within the rapid timeframes they require.

The diversity and complexity of derivatives data management mentioned previously is also the reason why most of the "data management" vendor community chooses to ignore the problem of spreadsheet management of derivatives data. How many centralised data management implementations are deemed a "success" by proud vendors and IT departments, whilst ignoring the reality that front-office staff blithely generate a whole separate (and to a great extent duplicate) world of product and market data in desktop spreadsheets? Centralised, transparent data management it most certainly is not, and it is one factor why we all still see issues coming out in the press around front-office staff producing misleading derivative valuation numbers.

Of course some of the issues in derivatives data management are more cultural than technical in nature. Derivatives are complex products and as such the knowledge of what makes derivatives data "fit for purpose" sits with the front-office traders. Back office/operations staff have their view on the processing data they need, whereas IT staff are often more focussed on Technology rather than Information man-

agement. These "siloed" participants in the generation and consumption of derivatives data should be working closely together to maximise the efficiency and effectiveness of the data management processes being operated. At larger institutions it is rare to find these departments strongly aligned and, combined with a lack of "ownership" of data management, this can lead to poor data quality and much higher operational costs.

## Resorting to Spreadsheets

So without a single owner, and without front-office knowledge and involvement, traders will resort to using spreadsheets and the core data management systems will be ignored, increasing operational risk and missing a real opportunity to have the people who know most about the data involved in improving its quality.

So should we continue to ignore the usage of spreadsheets in derivatives data management? I think this approach is to bury our heads in the sand and hope that the issue goes away. Should we try to remove spreadsheets from derivatives data management? No, whilst attractive to many in removing the operational risks of spreadsheet usage, I think this approach is impractical and ignores the very positive benefits of spreadsheet usage.

So should we endorse the benefits of spreadsheet usage? In my view we should, taking the principles of simplicity, flexibility and ease of use of spreadsheets with a view to combining them with the control and transparency sought from data management. It might pain us all to admit it, but derivatives data management still has a lot to learn from the spreadsheet.

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# Reference Data Review Panel Debate: Derivatives Data Management



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David Lecompte, market development manager, SIX Telekurs



Brian Sentance, CEO, Xenomorph

Our panel of data experts discuss the current market conditions, the future focus of the industry and how to tackle the tricky area of derivatives data management.

## What is driving investment in derivatives data and/or data management systems in the current market?

**Husler:** The complications raised by growth in the volume, range and complexity of derivatives and the proliferation of regulation are placing ever-increasing demands on data management systems. It is widely agreed that volumes will increase significantly in the coming years, based on an increasing belief in the efficiency of including derivatives in trading strategies, either in conjunction with cash products, or exclusively.

**Lecompte:** In a regulatory environment that is moving towards more control for all systemic risk elements, the need for improved data management solutions is a hot topic now more than ever.

There are multiple causes of the current financial crisis and data management is probably not the main one. The period we are going through has its roots in a mixture of global imbalances, interest rates policies and, more generally speaking, regulations and governance. It is currently our political leaders' responsibility to lay the foundations for the sustainable development of capital markets.

That said, the recent trend we have seen pushing data management debates higher up in the banks' hierarchy certainly shows this topic has been underestimated in the past. In the current economical context, data is of paramount importance: it is used to evaluate assets, to feed risk management systems, is disclosed to investors and de-

manded by regulators. More specifically in our industry, investment is awarded to solutions that can help mitigate risk, improve operational efficiency and, if possible, provide transparency regarding cost structures. For SIX Telekurs 'information is everything' and truly speaking it is obviously impossible to build reliable risk management systems on unreliable reference data.

**Sentance:** Risk and regulation, set in the context of the current financial crisis, are the current drivers behind investment in derivatives data management. Data quality and auditability remain important issues for regulators in assessing the overall risk management capability of an institution. Counterparty risk has understandably become a key driver behind the need for accurate counterparty data.

New regulatory initiatives such as liquidity risk and improved scenario management are presenting new challenges and opportunities. Greater granularity of data will be required at a centralised firm-wide level. Regulation, cost pressures and the need for greater transparency also present new opportunities for data management to gain top management 'buy in' but firm-wide projects will continue to rub up against tactical, more siloed needs of individual business units.

## What are the major challenges to be tackled in this area of the market?

**Husler:** The growth in the volume and complexity of derivatives means that the challenges are likely to be ensuring the continued suitability of existing systems, the availability of skilled resources and the sourcing of quality and timely data to ensure clients have the information they need for accurate up to the minute pricing. Consolidation in the market and increasing competition from

multiple exchanges offering competing derivative products on the same underlying securities will magnify these challenges.

**Sentance:** I think the challenges are both cultural and technological. The cultural challenge is that each party has different viewpoints on the data and needs of it. This is not surprising given the number of parties involved in generating, managing and consuming data. For instance, operations staff is typically focused on data relating to trade processing; front office and risk staff are more focused on pricing and sensitivity data; and technology staff might be more interested in the management of a database, rather than the management of the data contained in it.

Furthermore, it may also be the case that no one clear overall 'owner' of the data management process has been set. In data management, or EDM, we often talk about technical architecture, but I think investing in understanding and managing the 'people architecture' of a data management project is vital to its success.

From a technological point of view, I believe that there will be an increasing convergence of the silos within the data management industry itself – that users need systems that combine reference data, products data, counterparty data, market data or derived data. Risk and regulatory reporting will drive this more integrated 'view' of all the data to be analysed and processed. This does not necessarily lead to the need for a single system that does all, but rather means that all these different types of data must be 'knitted' together in an easy to understand form for end users such as risk managers.

I also believe that the principles (consistency, transparency) of centralised data management will have to extend to the management of pricing model analytics and zero curve calculators. Why create a great data management infrastructure if you then rely upon pricing or valuation numbers provided from a desktop spreadsheet? Put another way, the investment in the quality of instrument data is wasted if the process is not carried through to the valuation numbers derived from this data. In my view, this disconnection in the management of derivatives needs to be corrected by bringing

data and analytics closer together.

**Lecompte:** Volumes and complexity are two major challenges in derivatives data management. If we consider our own database only, traded futures and options account for more than a quarter of the five million financial instruments we hold. And on an annual basis the highest growth rate in the number of instruments is for exchange traded derivatives, structured products and warrants.

There are specific issues when dealing with derivatives from a data processing point of view. For exchange traded derivatives, although processing can be automated for creation and maintenance of such instruments, it still requires a high degree of involvement from the back office teams in order to set up new series of instruments. The core of the data challenge is to cope with ever-increasing volumes and a need for efficient data updates. When you need to refresh prices in a 'snapshot' mode for 100,000 derivatives at a pre-defined point in time, you obviously expect reliable systems and precise timestamps from your data provider. Our Intraday Pricing Service (IPS) caters particularly well to this kind of requirement.

For more complex structured products, the challenge is different and lies in the capacity to capture terms and conditions so that they can be disseminated to downstream systems. For example, at SIX Telekurs we have always worked on coding complex structured products redemption conditions. It requires highly skilled operation teams, however the benefits are worth the effort. Processing derivatives and complex financial instruments is a challenge but it is the necessary foundation upon which sound risk management practices can be built.

### **How does your offering compare/differentiate itself from everything else on the market?**

**Lecompte:** SIX Telekurs is a global financial information provider and, in saying that, we mean that our aim is to deliver sustainable solutions to our clients in the field of data management. More precisely, thanks to our expertise, we can contribute to operational efficiency and compliance with regulations.

Having operations in all major finan-

cial centres around the world also means we are close enough to our customers to ensure that our product offering adapts to specific business needs and relevant regulatory environments.

Right now, what we hear from our customers is a need for increased timeliness in the delivery of reference data. This goes for derivatives as well as plain vanilla underlying instruments. To address this business issue we will introduce an add on to our reference data feed VDF.

VDF Pulse will deliver basic reference and cross reference data on new institutions, instruments and listings every 15 minutes, in other words, as soon as we capture the data in our database. We believe this will enable our customers to satisfy their needs across their organisation. More specifically it will contribute to narrowing down the information gap between front and back office areas.

**Husler:** At present we are the only vendor to offer an open standard, unique identifier widely distributed by all major global vendors, covering all instrument types, including ETDs.

**Sentance:** In the derivatives data management area, I would say that ease of use and the customisability of the data model is a key differentiator. Our clients find it easy to add new asset classes, add new fields and support complex data structures without having to return to us to make the customisation each time. This increases efficiency and reduces the operational running costs of the system. Operational risk is reduced also, since front office staff can be reassured that the new data management system has the flexibility to adapt with their needs, reducing the need for spreadsheet-based management of data.

Combined with this ease of use, our TimeScope product supports simple through to very complex data types (matrices, curves, baskets) and can optionally store them on both a historic and multi-sourced basis. One of the main reasons spreadsheets are still used extensively to manage derivatives data is the flexibility they offer, and in this regard we have extended the complex data types TimeScope supports to include spreadsheet-like data and calculations.

### What are the major trends in the market that are likely to impact your offering in the future? Increasing complexity of derivatives for example?

**Lecompte:** Regulation and pressure on costs are without a doubt two major business drivers for investment in data management. For instance, financial institutions will have to develop an in-house capacity to understand and evaluate all the assets they hold and possibly compare their findings to external providers' data. The big players will have no problems putting together the right resources to perform those tasks. Smaller players might want to rely on third party for valuation services.

Concerning costs, many companies right now are embarking on some cost control exercises. The short term effect might be a decrease in new projects. But in the long term, more focus on data management at financial institutions is leading us towards building stronger relationships with our customers, working together to develop solutions, delivering more training and advice. This period is an opportunity for providers like SIX Telekurs to show the real value we can offer with a fully coded reference data feed like VDF.

As for the complexity of financial instruments, there is a trend towards increased data exchanges across organisations. This calls for more automation, more standardisation and should continue to be a source of data management projects. Overall there is a need for more information. But this means better quality information, more standardised information favouring STP and more value added information.

**Sentance:** The regulators' decision on whether OTC derivatives are to be centrally cleared or maybe put on an exchange is vital to how things will develop in the future. Product standardisation inevitably leads to higher transaction volumes and hence more data to be managed and analysed. In contrast, product innovation and customisation will continue to present its challenges in the management of unusual or non-standard data.

I personally do not believe that complex derivatives will disappear, just that they will

be done in less size and there will be more regulatory pressure to quickly move standardised products through to central clearing on to exchange trading. Maybe we now need a new verb for this but 'vanilla-ise' doesn't work for me!

At a recent update meeting by the EDM Council it was also mentioned that the regulators are considering the creation of a 'data utility' to sit between the exchanges and the distributors and consumers of data. Standardisation efforts like this will bring fundamental change but as ever only time will tell what will work.

**Husler:** The main trend will be the sheer growth in volume. There are expectations that the cost efficiency and control provided by exchanges means that the volume of exchange derivatives will increase at the expense of OTC derivatives. Having said that, our next challenge is to proactively offer Sedol codes to OTC derivatives.

### How is the vendor community evolving in this area? What can we expect the landscape to look like in the next five years?

**Lecompte:** The growth in derivatives has led to an increase in the number of technology providers in derivatives valuations and data management space.

If we only focus in on the assets valuation area, there are multiple actors in this field, traditional data vendors, software providers, research companies, risk specialists, marketplaces and banks' securities services. In a way it is good to see that financial institutions now have access to a wide choice of business partners to fulfil their valuations duties.

Now, the essential part here is to assess which partners can offer reliable data, secure processes, transparent methodologies and the financial soundness to work with a sustainable view. Indeed, there is a new market space for providing valuation services – and, to some extent, data management solutions, but our customers will always favour long term partnerships, commitment and independence.

Prospective is a very difficult exercise right now, but there is room for both global data vendors and more specialised niche players.

At SIX Telekurs we maintain one of the biggest referential database with more than five million financial instruments. This includes derivatives as well as equities, bonds, funds, forex and also companies. We pride ourselves in providing quality data. In order to satisfy our customers' needs in asset valuations, we have chosen to broaden our offer in that field. Our Fair Value Pricing Service now provides four times a day price updates for about 90,000 bonds in 11 different currencies.

**Husler:** The vendor community has long recognised the advantage of ISIN and Sedol codes as a cross platform, multi-asset identifier, enjoyed in particular by the sell side and increasingly used by the buy side. To this extent, all the major vendors carry the ISIN and Sedol codes and we expect this to continue. In the next five years it is possible the number of different identification codes will have been much reduced to just a handful, helping clients to reduce costs, increase efficiency and minimise trade failures through misidentification.

**Sentance:** The landscape for data management will obviously depend on how the financial markets develop in the next few years and given the number of regulatory initiatives proposed at the moment, it will be an interesting time. Despite this uncertainty, I think that certain aspects of data management will become commoditised as they become more standardised, and as a result the data management vendors will end up moving further up the food chain with the centralised management of more complex business objects, analytics and processes.

It is certain that there will be more standardisation of data driven by both the regulators and industry (take for example current initiatives on standardised business entity identifiers), increased volumes of data and a more integrated approach to risk management, with all that entails in data quality and auditability. Data management systems will become 'real-time' and not just batch, facilitated by grid, distributing caching and 'cloud computing'. To summarise, I think the current crisis presents a real opportunity to get the technical and human infrastructure in place to manage data and analytics more effectively than ever before.