Moving away from spreadsheet risk

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Question: Why do people still use spreadsheets so extensively?

By Tim Rogers

A RECENT REPORT by industry analysts Commodity Technology Advisory (ComTech) confirmed what many of us already knew.

1. Spreadsheets are ubiquitous in energy trading
2. Most companies are worried about using them so extensively within their energy trading businesses, and that,
3. Almost everyone knows of at least one horror story involving the use of spreadsheets in energy trading.

So, the question has to be, why do people still use spreadsheets so extensively?

ComTech’s survey of the industry suggested that it’s because spreadsheets are both easy and convenient to use and, at the same time, extremely cost effective - or at least they appear so. These characteristics are so strong and persuasive that issues like lack of an audit trail, regulatory and compliance issues, risk of error, and other operational risks, seem to be often conveniently overlooked.

Spreadsheets in Trading

The study found that spreadsheets were used widely across business functions including risk management, operations, planning, origination and scheduling. When a commercial software solution was used to support those business functions, many companies still relied on extensive spreadsheet use to supplement it. Only a small minority claimed that implementing a commercial solution had eliminated spreadsheet use within their company.

While cited as convenient, cheap and easy to use, the other ‘benefits’ of spreadsheets were to address a lack of integration and bring in data from other locations, as well as keeping the cost of modifying their current software down. Disadvantages of spreadsheets were thought of as lack of audit trail, version control, testing, concurrent access, report generation, regulatory issues.
The study made for some surprising and perhaps worrying reading in places. For example, 90% of all of those surveyed said that they were concerned to some degree about the use of spreadsheets in their company with over forty percent indicating that they were ‘very concerned’. Meanwhile, almost 70% said that they knew of at least one horror story involving spreadsheets and an operational or financial issue. Many of these horror stories involved fat finger data entry errors, cut and pasting over formulae, sorting errors and even dependence upon a sole individual to understand the spreadsheets’ functionality.

The Regulatory Challenge

Although spreadsheets are undoubtedly convenient, easy to use and cheap, today’s trading environment of an invasive and pervasive regulatory regime, increased compliance, increased costs and more emphasis on risk management should bring the love affair with spreadsheets to an end. In the future, spreadsheet use will need to be minimised and there should be a switch to the use of commercially supplied or internally developed, flexible and comprehensive software solutions. In fact, according to regulatory expert, Aviv Handler of ETR Advisory, “If the use of spreadsheets is to be minimised, flexible systems, supplied by vendors who are committed to compliance, will be the best ones to chose and keep.”

REMIT and for some, EMIR too, means a whole raft of new reporting requirements with significant penalties for mis-reporting trades. How will trading companies deal with trades that are maintained off-system in spreadsheets? Many companies still rely on spreadsheets to capture structured and non-standard trades but these need not just to be included in reports but the trade data needs to be correct and there needs to be an audit trail of the changes and actions taken associated with these trades. The fact is that these days, reputable commercially supplied ETRM solutions, like enTrader, can actually capture all trades and hold them in a single database complete with validation, workflow and auditing. It isn’t just about accuracy and validity, but also about timeliness of reporting and this is where holding all trades in a single system of record can ensure that all of these criteria are met and penalties avoided. It’s not just the regulators who are interested in compliance. The external and internal auditors are also focused on compliance across a broad set of external regulations and internal rules and business processes. Utilisation of a properly architected ETRM solution offers not only the ability to check, validate and authorise trade and transaction data, but also to ensure that only those authorised to edit that data are able to do so – something that spreadsheets cannot achieve. Spreadsheets as primary sources of trade and related data are more often viewed as potential audit issues.
Spreadsheets can essentially place handcuffs on trading companies operating in a very competitive market

Another area of concern in this regard is forward curves and time series data. Where do your forward curves come from? Are they properly recorded and audited by the system? Forward curves can be based on different sources of variable quality, some might be derived and this data also needs to be carefully maintained, secured, changes audited, quality assured and archived securely. After all, this is the key information on which trades are valued and priced. A robust commercial ETRM solution will offer a depth of functionality around forward curves ensuring that all of these requirements are met simply and easily and out of the box.

Other Operational Risks

The ComTech report highlighted an entire list of actual issues experienced by respondents with spreadsheet use including:

- A $2 million trading error that was traced to the replacement of a cell formula with a fixed value,
- Numbers transposed on data entry into a master spreadsheet and downstream spreadsheets that had no visibility of that error in the master spreadsheet,
- An added row or column that didn’t get included in the calculations,
- Different versions of the same spreadsheet being used simultaneously and no one knew until too late,
- Incorrect positions as a result of missing certain cells on the spreadsheet,
- An attempt to sort a column resulted in wrong values and no one noticed,
- Copy and paste errors where formulas got copied rather then numerical values and all the results were wrong,
- Incorrect position data as some cells were omitted in the final calculation,
- Very common to find errors in trader spreadsheets being used to determine P&L.
  Traders will almost always put in some level of “Mark to Intent” numbers in the sheets to support larger bonuses than would be granted using Risk System numbers,
- Spreadsheet pulling in incomplete data resulting in risk mismanagement errors.

Other issues can also be avoided using an ETRM solution as opposed to spreadsheets. Workflow and automated controls can be used to ensure that actions are taken on a timely basis avoiding issues like imbalance charges and other penalties, for example.
Spreadsheets can essentially place handcuffs on trading companies operating in a very competitive market. Origination is one such area where innovation and creativity is a differentiator for trading firms. If a lot of the functionality around origination is tied up in spreadsheets, the firm will lack the required flexibility and responsiveness to be truly competitive. Furthermore, spreadsheets don’t often scale or provide flexibility, restricting the ability to grow the business or respond effectively with rules or changes in the market. On the other hand, an ETRM solution with a proper database management structure easily scales from 400 to 4,000 or 400,000 trades per period and beyond. It allows the firm to do more of the same faster and more conveniently. Today’s best ETRM software is also extensible and easily configurable so that entry into new markets is simply a matter of rapid configuration as opposed to the creation of a whole raft of new and complex spreadsheets with all of their inherent risks. A good ETRM solution will be modular with specific and focused modules to do a particular job and to do it very well. Position management, for example, will allow users to view up to the minute position any which way they need to, aggregating and calculating all of the base data and ensuring that only those who should have access to it do have access. The same applies downstream in areas such as nominations, settlement, confirmations, invoicing and risk reporting. In Europe, the rapid increase of renewable generation in power markets has meant that short-term trading is now where the price and volume volatility is. Traders are interested in trading closer to real-time. Short-term trading requires agility, speed and a degree of automation. These are all features that cannot be delivered by spreadsheets and that absolutely require an ETRM solution. Such a system ensures that everyone can access and share the same data, that all actions taken by authorised users are audited and recorded and that all data is validated on entry. These are all requirements of a well-managed business that meets regulatory and compliance requirements. A good ETRM should be a hub that manages and protects all of the required trade data in a single system of reference.

To be fair, spreadsheets are often convenient and easy to use tools that have a role in the business; however, trading companies need policies in place that limit where and for what purposes they can be used. There is no denying that Excel is a useful tool, but spreadsheets should not be deployed in mission critical areas of the business; and if they must be, their use needs to be tightly controlled with rigorous checks and constant scrutiny. Unfortunately, rarely are spreadsheets tested or controlled in the same manner that a commercial system would be before or during deployment. Despite that, there are sometimes good roles for spreadsheets in a trading business, either as a temporary solution or for a specific purpose. All good ETRM solutions should therefore include an ability to push data out to a spreadsheet and an API to allow data from spreadsheets and other temporary external sources to be easily pulled in. The system should allow spreadsheet data to be ‘vacuumed up’ from anywhere within the organisation easily by the end user where the data can be validated, shared and accessed by all those that need and are authorised to use it.

Business Flexibility & Scalability

Still a Specific Role for Spreadsheets?
Although some smaller and niche trading firms might have relied exclusively on spreadsheets in the past, there are significant benefits of using a commercial ETRM solution. These days, ETRM systems, like enTrader, can be leased, installed on premises or delivered in the cloud on an affordable subscription basis, meaning that entry cost is no longer a barrier. The system can even have the advantage of being an operating cost, in the form of a lease or subscription, as opposed to a perpetual licence fee that is a capital expenditure. Implementation can be faster than many expect and buyers should seek a vendor with a proven delivery approach and track record. Once a solution is implemented, it will provide a functional, scalable and extensible platform on which a trading business can operate and grow as well as manage its regulatory and compliance obligations. As ComTech state in their report; “There is little doubt that spreadsheet use will continue. Unfortunately, given the intensifying regulation of energy and commodity trading, their use will also become an increasing concern to those regulators. Given this increasing scrutiny and the well-known weaknesses of spreadsheets, any company that has not yet sought to reduce or eliminate their use by deploying a more structured, secure and auditable vendor supported solution should move quickly to do so.” These days, there are few reasons to run an energy trading business on spreadsheets. Some ETRM solutions are affordable, robust and proven platforms on which to base your ... there are sometimes good roles for spreadsheets in a trading business, either as a temporary solution or for a specific purpose business that can flex and grow with the business and market changes. They help meet audit and compliance requirements and will offer a rich but modular array of in-depth functionality to meet the business requirements. They will even include API’s and tools to import data from those few remaining specialist spreadsheets and to push data out in a variety of formats. I believe that energy trading companies who still use spreadsheets in mission-critical areas of the business should look closely at their use and consider how their business could benefit from moving to an affordable and proven ETRM solution.

Energy Risk Software Ranking 2017

Contigo have been voted number one for ease of implementation and number two for best cloud based ETRM solution globally by the ETRM community. Contigo also voted in the top five for a further ten ETRM awards.