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OCC news

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occ participates in pandemic exercise and improves planning

On September 24, OCC joined more than 2,700 U.S. financial services organizations to participate in a three-week exercise simulating a severe global pandemic flu. The exercise was sponsored by the U.S. Department of the Treasury and the Financial Services Sector Coordinating Council for Critical Infrastructure Protection and Homeland Security (FSSCC), the organization currently chaired by OCC Management Vice Chairman George S. Hender.

The scenario for the exercise posed a realistic picture of the possible systemic risks to the sector. It included multiple avenues that could impact a financial organization during a pandemic, such as market volatility, increased demand by consumers and employees for remote access to the organization's IT networks, as well as problems associated with the financial sector's reliance on other critical infrastructures. More than 30 OCC employees participated, including the Crisis Management Team, who sought to determine the strengths and weaknesses in OCC's plans.



The exercise was specifically designed to stress the plans of participating organizations well beyond any of the real-world projections for a pandemic. Absentee rates were simulated at up to 49 percent across the country, while at the same time the critical infrastructures that the financial services sector relies on were stressed to a point where services were notably degraded. Each scenario update package included an absenteeism distribution based on the first letters of a person's last name as a way to approximate the scenario's target absentee rate. The letters were

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provided to participants one week in advance so that each organization had adequate time to review their human resources records, identify the absent individuals, and determine the distribution of the absent employees among their various departments as appropriate.

Based on the findings of this exercise, it appears that while a pandemic flu will significantly impact the financial services sector, the sector overall will continue to operate and cope with these impacts.

OCC was in the process of updating its business interruption plans (BIP) to include a pandemic flu response when the exercise took place last fall and it helped strengthen the BIP update. The exercise provided a deeper understanding of issues that OCC's plans need to deal with, including enhancing emergency communication capabilities. Another key lesson was to get more information from critical vendors about their continuity capabilities—something OCC was doing, but the exercise brought up a number of other important questions that need to be answered—and to have additional contingency plans in the event those vendors fail.

While the exercise provided many answers on the effectiveness of OCC's pandemic planning, it also, and perhaps more importantly, raised a number of policy issues that are now under consideration.

Overall, the majority of participants indicated that they understood their external dependencies and that their

plans, based on the exercise scenario, were moderately effective at addressing these dependencies. However, like OCC, 97 percent of participants stated that more attention to these dependencies is warranted.

Overall, the exercise revealed that a significant number of organizations in the sector have already done extensive planning for a possible pandemic. As the exercise revealed, this work was a key contributor to the sector's ability to continue to conduct critical functions and keep markets viable for the short term even as the simulated absentee rate moved up toward 49 percent. In fact, the exercise showed that there was little impact on critical operations for short periods at 25 percent absenteeism and generally at 35 percent as well.

The exercise did point out a variety of issues that can be addressed to further strengthen the sector's ability to weather a pandemic. These differ widely by organization. Notably, there were no glaring deficiencies that spanned broad components of the sector. Each individual organization will need to judge the value of potential enhancements to its strategies and plans and install those that suit its situation.

At OCC, the planning and preparation for a potential pandemic flu continue.

2007 ends on a high note five consecutive years of record volume

Options volume reached a new record for the fifth consecutive year in 2007 with 2,862,826,218 contracts, surpassing 2006's record by more than 41 percent. On average, 11.4 million options contracts were exchanged each trading day last year.

All top ten volume days were in 2007 (a number of new top ten trading days have already been added in 2008). The highest single trading day for total options occurred on August 16 when 23,745,650 contracts were traded. November experienced the highest trading volume reached in a single month with 310,801,122 contracts. That November record is higher than the annual volume for any year prior to 1997.

The 20 most actively traded options accounted for 37.5 percent of all options trading representing about 1.07 bil-

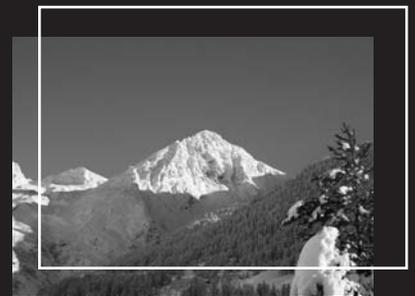
lion contracts.

That is an increase of 55 percent from

2006, when the top 20 most actively traded options represented about 692 million contracts.

OCC did not just see a record year for the number of options contracts cleared. OCC-cleared futures also set a new annual record of 9,242,341 contracts, up 10 percent from 2006.

The industry also reached new heights in terms of valuation in 2007. For the first time ever, total options premium surpassed \$1 trillion coming in at \$1.3 trillion. The notional value of options open interest at the end of the year was \$3.3 trillion.



industry insight

simon h. babbs



Simon H. Babbs is First Vice President of Quantitative Risk Management (QRM). With almost 30 years experience in the finance industry, Babbs has previously held positions with the Bank of England, NatWest Markets, HSBC, Bank One and most recently with Delaware Street Capital, a Chicago-based hedge fund.

Babbs' academic credentials include a PhD in Finance from Imperial College at London University and first class honors MA in Mathematics from Oxford. He has authored numerous papers in academic finance journals and contributed to various books.

OCC News sat down with Babbs to discuss his background in derivatives and his current work in quantitative risk management.

When did you first become interested in quantitative research and how did that experience lead to your involvement in the derivatives industry?

While studying mathematics at Oxford, I was always interested in its financial applications. When currency options started trading in the UK in the early 1980s, I was working as a bank regulator at the Bank of England, and I spotted the possibilities of using the Black-Scholes delta as a measure of exposure to the underlying. I left the bank to become a 'quant' in late 1985, though I don't think anyone in London used the term 'quant' until later.

What led you to your current role at OCC?

I came to Chicago in 1999 to lead Bank One's quantitative research team supporting its derivatives and capital markets businesses. The team grew as our responsibilities expanded, reaching 18 professionals with PhDs or master's degrees in quantitative fields. After the merger with JP Morgan, I wanted to stay in Chicago and left the bank to join a hedge fund. Together with a former team member from Bank One, I created a strategy for trading corporate debt against equity. Unfortunately, the onset of widespread stresses in credit markets in late 2007 made 'trading' and

'corporate debt' increasingly incompatible terms – at least for a small start-up strategy! The opportunity at OCC was an interesting one to pursue.

What is your primary responsibility as First Vice President of Quantitative Risk Management?

QRM is responsible for the modeling that underlies OCC's margin requirements. The current framework for OCC's System for Theoretical Analysis and Numerical Simulations (STANS) was created before my arrival, but requires extensions to accommodate new products, as well as an ongoing process of improvement. The platform which STANS provides may also be used to gain additional insights into the adequacy of OCC's Clearing Fund.

How has your past work experience prepared you for your current position?

I think it's a combination of many things: a strong record of published research; nearly 30 years of working in finance; management experience; communication skills; and a demonstrated commitment not only to quantitative excellence but also to a disciplined approach to building, documenting and testing quantitative software.

It helps just to have been around so long. I've seen an awful lot of products and quantitative techniques. Even if I'm not a personal expert in something, I'm at least fairly likely to be aware of it. So when an issue comes up, I generally have some initial ideas of how we might be able to handle it.

Why is the area of quantitative research and analysis fundamentally crucial to this industry?

Historically, equity options go back a lot further than the Black-Scholes pricing formula, but I think there is widespread agreement that the availability of analytical techniques has stimulated the derivatives industry. Indeed, I can think of some examples where a product did not exist until a quantitative researcher invented it.

I've created a number of products myself. More generally, however, because the derivatives industry is accustomed to having certain types of analytical tools available, I don't believe a new derivatives product would succeed unless quantitative specialists could value it and analyze its risk.

What are some of the core challenges you face working in the complex area of quantitative risk management?

It's often relatively easy for experienced quantitative researchers to analyze a single type of derivatives product, and to envisage its possible price behavior under ordinary market conditions. However, OCC needs to handle a growing diversity of products and underlyings on a consistent basis, and to consider their joint price behavior in potentially very turbulent conditions.

For this reason, we have to find a way of treating large numbers of products together on some kind of apples-to-apples basis. It's this last aspect that is most challenging. Some analytical techniques which might be helpful for an individual product are not as easily used when the product has to be analyzed on an integrated basis.

August 2007 marked the first anniversary of the launch of STANS. While you weren't at OCC during its initial implementation, you have had the opportunity to oversee its growth and development. How do you rate STANS' progress thus far and what do you envision for STANS in the future?

STANS stands out as an ambitious attempt to incorporate advanced theoretical ideas into actual margin practice. So far, it seems to have operated remarkably smoothly, given its inevitable complexity.

I envisage two main thrusts for the future. One goal is to extend the capabilities of STANS as the products cleared by OCC expand to encompass more types of underlying. The other thrust is to keep its theoretical and empirical foundations subject to continual review and improvement.

Within industry circles you have been called the "Rottweiler of Derivatives." How did you come to obtain this particular moniker?

The person who gave me the moniker had been a fellow-speaker at a number of industry conferences. As a clean-shaven man with a shaved head, he also pointed out that between the two of us we had "a perfectly-hedged facial hair portfolio"! I think the "Rottweiler of Derivatives" idea arose from two occasions when I had taken other speakers to task for faulty reasoning. They argued back, but I held on tenaciously and won the bouts. That was a long time ago. Now that I'm going white around the muzzle, I'm less inclined to use my fangs.

symbology update: industry testing scheduled

The Options Symbology Initiative (OSI) prepares for another milestone in June 2008 when OSI-compliant data becomes available from the exchanges and OCC. In addition, a high-level testing plan depicting industry test scripts will be delivered from the OSI Testing sub-committee. Inbound and outbound production data feeds will include both existing and OSI-compliant data values in new or enhanced record layouts. This passing of OSI-compliant data comes at the request of market participants for a mechanism to determine the quality of new inbound data elements to initiate early feedback prior to moving onto further steps in the implementation process.

After the delivery of the new data and test scripts, members will have the remainder of 2008 to complete and report on internal testing in preparation for industry-wide testing in January 2009. OSI testing will be conducted in an environment where both pre- and post-data conversion events are validated and the symbol consolidation plan is executed.

The Symbology committee continues to promote awareness to achieve its overall goal of all applications implemented into operation and tested by August 2009. At that time, OPRA codes will become obsolete from all data interfaces.

The Symbology project was developed in response to limitations in current methods, which have been magnified as options volume continues to increase. Representatives from many organizations including broker dealers, exchanges, vendors, OCC and the Depository Trust & Clearing Corporation participate in the Symbology committee and feedback from these organizations have assisted in shaping the committee's direction for the project.

For more information on Symbology or technical specifications on the upcoming testing plan, visit OCC's web site at www.optionsclearing.com/initiatives/symbology/default.jsp, or contact Mark Baumgardner at mbaumgardner@theocc.com.

key application enhancements implemented in 2007

Throughout 2007, OCC was hard at work providing application enhancements and support in areas to improve efficiency among platforms and customer service along with responding to clearing member requests. Several enhancements were made to the Data Distribution System and ENCORE in 2007 including:

- Improving the CMTA Transfer Message
- Adding a start-of-day message and execution time to trade messages
- Creating an unexercised message
- Enhancing the early price message to include pricing for non-standard deliverables
- Adding a new checkbox to various inquiry screens in ENCORE, allowing users to filter on products identified in the Penny Pilot Program

Additionally, OCC announced last spring that it had implemented a multiple delivery settlement procedural change which allows OCC to settle all known deliverables of an option and only suspend the unknown portions.

Thus far in 2008, OCC has implemented an accelerated expiration for equity cash-settled options. Also, plans are underway to develop penny thresholds for equity expiration as well as the creation of a new post-trade transaction called the Clearing Adjustment Record. This transaction is similar to a CMTA Transfer, however, the key difference is that the Clearing Adjustment Record will allow members to transfer fees as well as positions and premiums.

Information memos on all of the above-mentioned enhancements are available at www.myocc.com.

clearing members assess occ performance

Operations Roundtable members recently participated in an annual survey to assess OCC's capabilities in comparison to other clearing corporations. Participants were asked to evaluate OCC's performance in key areas such as systems, timeliness and reliability, collateral and ancillary services, communications, Internet services, business contingency and overall customer service.

All seventeen members of the Roundtable who were asked to respond to the performance evaluation replied. These members, including all of their respective clearing accounts, represent 80 percent of OCC's year-end

cleared volume for 2007.

Overall, in comparison to other clearing organizations, OCC continues to rank highly with strong commendations in the categories of customer service, clearing member education, innovation and responsiveness. Seventy-one percent of the participating firms were "very satisfied" with OCC's performance over the past year. Also, nearly two-thirds of the survey respondents replied that OCC's level of service has improved while the remaining participants felt that OCC has continued to maintain its same high level of service.

news briefs

► March Expiration Update

Pursuant to OCC Rule 805, expiration processing for standard equity and index options expiring in March 2008 will take place on Friday, March 21, 2008 (Good Friday holiday). All expiration processing that would normally occur on Expiration Saturday will take place on Friday. Accordingly, all processing that would normally take place on Friday will occur on Thursday. For more information, please refer to Information Memo #24100 on www.myocc.com.

► OCC Officer Re-elected

Dan DeWaal, OCC First Vice President and Chief Security Officer, was re-elected to the Financial Services Informational Sharing and Analysis Center (FS-ISAC) Board of Directors.

► Save the Date

Planning is underway for the 2008 annual Options Industry Conference with the Chicago Board Options Exchange serving as this year's host exchange. The event will take place April 30 through May 3 at the Green Valley Ranch in Las Vegas, Nevada. For details or to register, visit www.optionsconference.com.

► OCC News Online

Interested in receiving OCC News via email? Send a blank email message to join-occ_online_news@list.theocc.com to be added to the distribution list.



OCC cares

Every year, proposals highlighting charities that could benefit from the company's community outreach efforts are submitted by OCC employees. Upon decision by committee, two organizations are selected to be the year's charitable recipients. One Acre Fund

and Transition Resource Action Center were chosen as OCC's 2007 beneficiaries. Both groups collectively received more than \$31,000 in contributions raised by staff.

One Acre Fund (OAF) aims to educate farmers on necessary skills that can ultimately result in long-term hunger relief for people in East Africa. Donations are used to buy seeds, fertilizer, and

also to hire qualified local residents to advise farmers within the program on how to farm crops for consumption and to sell at market. Once the farmer is able, he or she then pays back the cost of getting started so that another family can benefit from the program.

The Transition Resource Action Center (TRAC) assists current and former foster and substitute care youth by helping them obtain the necessary skills to transition into independent adults as they enter the workforce or college.

Two new charities for 2008 will be selected this spring.

new encore features support accelerated expiration

On January 2, ENCORE went live with new features that give OCC clearing members more capabilities when it comes to accessing information on accelerated expirations for both American- and European-style options.

In early 2007, prompted by a request from OCC's Operations Roundtable, an amendment was made to Rule 807 that accelerated expirations were to include American-style equity options settling in cash only, or when the option contract is adjusted for a merger in which the underlying security is converted into the right to deliver a fixed amount of cash after the implementation date of the proposal. In response to this amendment, OCC's goal was to update all systems to allow for customers to access this information more efficiently.

ENCORE updates include a filter on the External Positions Screens, which allows the user to search on either the original expiration or the new accelerated expiration date to find a given

series and when it will actually expire. Also, an "Accelerated Expiration Checkbox" has been created as additional filter criteria for the Position Filter and the Position Listing Report Filter. This allows the user to identify and report on positions with an accelerated expiration date.

The greatest benefit of these new features is that they enable systems to extinguish open interest that is no longer trading and customers are not able to trade out of it for the next two or three years, depending on the original expiration. On January 19, the features were activated for use with the first accelerated expirations of 2008 available on the January expiration for the following options – Aspreva Pharmaceuticals Corporation (QOS, ZIT), Coley Pharmaceutical Group (QJC, OOA, LFF), and Chittenden Corporation (CFO). For more information, please refer to Information Memo #24040 on www.myocc.com.

OCC news

www.optionsclearing.com

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