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Financial Risk Management News and Analysis

CCP stress-test rifts emerge as review gets underway

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June 9, 2015

Calls for more transparency surrounding stress-testing methodology and practice have led to CPMI-Iosco launching a policy working group to investigate whether to introduce standardisation, but the clearing houses argue CCPs know their products and markets, and should be allowed to design their own tests.

In a classic case of 'be careful what you wish for', after grumbling for months about flaws in the way clearing houses set their default resources – through stress tests subject to high-level principles – market participants finally persuaded regulators to roll up their sleeves and take a look.

The Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (Iosco) established a working group to examine stress-testing practices at central counterparties (CCPs) last October, and a formal review was announced in March this year. Detailed questionnaires have since been sent out, with more set to follow.

"We knew this exercise was important because the regulation had just been adopted and we had to see at some point how this was being implemented," says a European regulator close to CPMI-Iosco. "So the process was logical, but it's true some market participants felt particularly concerned and engaged."

The major CCPs are very open about their margin methodologies, but they are less transparent about some of the elements of stress testing

A second European regulator backs this up: "Clearing members and end-users complained about the lack of transparency around stress tests, so CPMI-Iosco launched a policy working group to look at this specific issue."

So, are CCP users happy? Not really. What started out as a shared crusade has become a divisive debate, exposing deep rifts among market participants and pitching clearing houses, banks, end-users and even regulators against each other.

This is because the various clearing houses have very different practices – with confidence levels running to one decimal place or 13, look-back periods covering 10 or 30 years, and default funds that are either specific to each product or are pooled so they cover all products at once (*Risk* October 2013).

These factors affect the size of the default fund and therefore the extent to which risk is borne by the inner circle of CCP members – all of which contribute to the fund, as well as posting initial margin – or the outer circle of clients that only post margin. Crudely put, each CCP's philosophy on the sharing of risk is reflected in its stress-testing practices – or it would be if those practices were transparent.
Clearing houses, with the notable exception of LCH.Clearnet, loathe the idea of regulators telling them how to run their stress tests.

"We very much support a principles-based approach to stress testing. All CCPs running the same scenarios introduces a significant amount of model risk," says Suzanne Sprague, managing director of credit risk, banking and solutions at CME Group. "CCPs know their products and the unique characteristics of the markets they serve. They should be allowed to innovate and calibrate their own stress tests."

Privately, some of the clearing banks that spent much of last year lobbying for standardisation now admit it may have been a mistake. "If you look at it from a high level, it seems like a good idea to make sure all CCPs are sizing their available resources in the same way – I supported this as well last year – but if you think it through, a standardised stress test is just not the right solution," says a senior clearing executive at a large European bank.

A senior risk manager at another European bank explains why: "Standardisation leads to homogeneity and pro-cyclicality. If government bonds become volatile, all the CCPs that accept them as collateral will raise haircuts at the same time, which creates more volatility. That's the downside."

Those still committed to the cause include a powerful coalition of derivatives market participants – BlackRock, JP Morgan, LCH.Clearnet and Pimco – which have all published white papers calling for standardised stress testing, as well as Citi.

BlackRock captured the essence of the pro-standardisation argument in its April 2014 white paper: "The asymmetry in regulatory approach between CCPs and large significant financial institutions needs to be addressed. If these large banking institutions are required to increase capital, undergo rigorous stress tests administered by regulators and be capable of being wound down without systemic impact, why not use the same regulatory framework for CCPs, where a large amount of risk will now be concentrated?"

Stress-test concerns

The internationally agreed risk management framework for systemically important CCPs – the *Principles for financial market infrastructures* (PFMIs), published in April 2012 by CPMI and Iosco - calls on clearing houses to conduct "rigorous" stress tests, based on "extreme but plausible scenarios" to size their default funds, which absorb spillover losses after a defaulting member's initial and variation margin payments are consumed.

But the principles are short on detail and do not specify how the tests should be designed, calibrated or administered. CCPs currently define their own scenarios and parameters, making the results available to regulators, which review and approve the methodologies, but not to clearing members, end-users or the public.
Market participants have criticised the inconsistencies and opacity of stress tests performed by global CCPs.

"Based on some of the stress tests we've seen, I can see why market participants might have concerns. The major CCPs are open about their margin methodologies, but less transparent about some of the elements of stress testing, such as the definition of 'extreme but plausible' scenarios and the assumptions they make around close-out periods and correlation offsets," says Chris Cononico, founder and president of GCSA Capital, which underwrites insurance products for financial institutions and market infrastructures, including clearing houses.

Pros and cons of diversity

True to form, the CCPs that spoke to *Risk* declined to discuss the specific scenarios and assumptions underpinning their stress tests. Some clearing members were more forthcoming, but would only speak anonymously, citing non-disclosure agreements with CCPs.

For instance, one major CCP runs its stress tests at a 99.9% confidence level. Another large clearing house calibrates them to seven standard deviations, translating to a confidence level of

99.9999999997440%, but this CCP assumes a normal distribution of returns while the other firm does not. It is not immediately clear which CCP is applying the higher standard, although one clearing expert believes the methodology of the first one is the stronger.

It does not end there. Clearing experts say the look-back periods used by CCPs to derive their stress scenarios can vary between 10 and 30 years. The number of scenarios used for stress testing also spans the gamut, with one major swaps CCP running more than 100 scenarios while another uses less than five.

CCPs contend any disparities in their stress testing methodologies are a reflection of the different products and markets they serve, which in turn calls for varying risk and business models and default fund structures.

Indeed, some argue the differences should be celebrated. "We believe diversity is a benefit to the system – that was one of the lessons of the financial crisis. Having a single set of scenarios or parameters is not particularly helpful, because the next crisis will be very different to what we've seen in the past," says CME's Sprague.

Forcing every CCP to use the same scenarios and parameters could stifle innovation, foster pro-cyclicality and spark a race to the bottom, thus magnifying systemic risk rather than reducing it, critics of standardisation argue.

However, those arguments neither wash with some market participants nor fully explain the secrecy around stress testing at most CCPs.

"CCPs are among our largest counterparties. We need to be able to manage that risk effectively. To that end, we would welcome more transparency and uniformity around stress testing," says the head of clearing at a US bank. "It may not be easy to calibrate a standardised stress test, especially for CCPs clearing different products, but we should be more thoughtful about how it is done. As a systemically important bank, we are subject to standardised stress testing and think the same framework should apply to CCPs."

Success of CCAR

Marnie Rosenberg, head of clearing house risk, strategy and advisory at JP Morgan, says CCPs may benefit from the experience of a rigorous regulatory stress-testing exercise similar to the Federal Reserve's Comprehensive Capital Analysis and Review (CCAR), which is run annually for large banks in the US.

"The banks have had to commit a lot of resources to support CCAR internally – and CCPs may worry about that – but it has been a very constructive learning experience for banks and supplements our own internally designed stress tests," she says.

Those arguments appear to be resonating with the central banks and prudential regulators that comprise the CPMI. At a public meeting held by the Commodity Futures Trading Commission (CFTC) in May, officials from the Bank of England and the Federal Reserve argued in favour of a CCAR-style regime for CCPs, while those from the CFTC and the European Securities and Markets Authority dismissed the idea (see box, *CFTC committee meeting exposes regulatory rift*).

CPMI-Iosco view

The argument is also happening behind the closed doors of the CPMI-Iosco working group, although internal sources who spoke to *Risk* for this story claim there is a fair amount of common ground.

"All the authorities agree we can't harmonise everything and we can't come up with one model for risk management. If we do that, we will create more systemic problems; we will kill innovation and step into some pro-cyclicality issues. That's precisely the opposite of what we're trying to achieve," says one European regulator.

"There are serious reservations in the regulatory community over standardisation. There is a willingness to articulate some general principles, PFMI-style, but there is a reluctance to stipulate a standard stress test that should apply in all cases," says an official at a US regulatory agency.

But proponents of a standardised stress test insist it is not a case of either/or - in fact, both are required. "We do believe CCPs need to design their own stress tests, based on their own unique portfolios, but there need to be minimum standards for that," says JP Morgan's Rosenberg. "However, separately and apart from those minimum standards for a CCP's own stress tests, we also believe there needs to be a regulatory driven stress test that is based on hypothetical scenarios, similar to the CCAR instantaneous shocks."

CCP practices surveyed

A final policy could be some way off. CPMI-Iosco began its work in earnest at the end of March when the policy standing group hosted a roundtable for market participants in Frankfurt.

Following the meeting, CCPs were asked to complete a questionnaire on their stress-testing practices - mailed to clearing houses in 28 countries in the first week of May – and given a month to respond. The questionnaire runs to around 100 questions, split into six sections.

The first section focuses on governance, with questions on who bears responsibility for designing and administering the stress tests, how often they are run, to whom the results are disclosed, and how stress testing fits within the risk management framework more broadly.

The second section asks about exposures and the methodology used to identify various sources of risk, while the third section covers scenario modelling, including the definition of "extreme but plausible", and the methodologies used to design them.

Section four questions how scenarios are applied to exposures, and how CCPs measure the stress linked to particular positions and collateral types. Section five focuses on offsets, with an emphasis on how CCPs assess stressed losses for the different instruments and asset classes placed in the same margining account.

The sixth and final section focuses on coverage requirements and the application of the so-called cover 1 and cover 2 standards, outlined in the PFMIs. The former requires a CCP to have sufficient resources to cope with the collapse of a member firm that would result in the greatest loss under stressed conditions, while systemically important clearing houses are expected to survive the loss of their two most important members.

But the questionnaire, the contents of which were described to *Risk*, appears to avoid two key areas where the pro-standardisation camp has been calling for greater clarity. First, the standard-setters "are not looking at all the various scenarios used by all the CCPs – we are just focusing on the methodology", says one European regulator with knowledge of the matter. Second, CPMI-Iosco made a conscious decision "not to carry out a comprehensive census of all the offsets used by the different CCPs – again, it's more about the methodologies CCPs use".

In other words, the regulators have chosen not to wade into the potentially toxic debate among CCPs and clearing members over margin offsetting and netting across asset classes and product types. These are risk decisions, but they are also a huge commercial battleground (*Risk* July 2014).

LCH.Clearnet white paper

In a white paper published in March, LCH.Clearnet called on regulators to ensure CCP portfolios are properly segregated into appropriate margin accounts and default funds prior to the stress-testing exercise, with offsets limited to products where correlations are structural and supported by an economic rationale. The firm argues that, at a minimum, portfolio offsets should not be permitted across equities, rates and credit products.

"If you have different products – equities and fixed income, for instance – in the same default fund, it's very easy to mask the risk when you do stress testing, because a bad day for equities isn't necessarily a bad day for fixed income. A non-segregated default fund is effectively sized to the largest product you clear and ignores the risk from the smaller products," says Dennis McLaughlin, group chief risk officer at LCH.Clearnet.

Some CCPs with commingled default funds that backstop multiple product lines may be significantly overstating their loss-absorbing capacity, he argues. LCH.Clearnet is not alone in making this argument – other proponents say it is a sensible position to take and it also simplifies the stress-testing exercise.

But this could also be viewed as a thinly veiled attack on its main rivals. The UK-based clearer has 10 separate default funds; one for each product line and asset class. CME and Ice have separate default funds for their futures and swaps businesses in each of the major jurisdictions where they operate, but use those funds to backstop risk across asset classes. Eurex, meanwhile, has a single, integrated default fund for all the products it clears.

Supporters of multi-product default funds argue that a CCP is best placed to judge whether correlation makes sense, as long as its approach is sound. "If a CCP explains why it is doing correlation in a very sensible way across various asset classes – for instance, forex and interest rate swaps and futures – I would say why not?" says one.

CME, which has won a healthy share of buy-side swap clearing in the US by giving users the ability to offset their cleared swaps against futures trades, also argues CCPs are best placed to assess the validity of correlation offsets, which can be found both at the margin level and within stress tests.

"We have always maintained there has to be a fundamental basis for products to be correlated. Margin offsets are only offered where that fundamental basis exists, and our stress tests assume the same level of fundamental correlation or breaking of some of those correlations," says Sprague. "The CCP, given its experience with the markets it clears, is best placed to ensure accidental correlations are not present in margin calculations or stress testing for the guarantee fund sizing."

CME, in common with all CCPs in the US, is already required to show a fundamental basis for correlations before granting offsets under US rules, she adds.

CPMI-Iosco is said to have no intention of wading into this debate, with regulators wary of setting any standards that would stifle the ability of CCPs to offer cross-margining and drive up costs for end-users.

"If you cannot benefit from correlation offsets then everything that's portfolio margined would have remedial initial margin. That's not a desirable outcome," says an official at a US regulatory agency.

The disagreement over segregation and offsets was one of the reasons why LCH.Clearnet decided to publish its own white paper on stress testing. Other CCPs opted to express their views collectively via the European Association of Clearing Houses, which published its own paper on stress testing in April. This paper simply states that correlation breaks "must be taken into account".

McLaughlin concedes "it is quite difficult to get consensus among the CCPs" on segregation, but he is not backing down. "There's a right and a wrong way to conduct stress tests. You don't want the results to be less accurate than they should be, because non-correlated asset classes are included in the same default fund. The right way to do it is to unpeel the assets," he says.