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Best Practice 2020 *Special Report*

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Improving performance

T

his *HFM* special report looks at how applying best practices throughout various areas of a hedge fund business can help streamline processes and realise efficiencies.

Best practices can provide multiple benefits. Applied at the outset – whether outsourcing an IT function, hiring the right personnel or otherwise – they ensure that a given process will not have to be modified at a later date, but can rather be scaled as required.

By applying best practices to the trading desk set-up, insights from trade allocation analytics can be gleaned that can result in improved performance.

Best practices can provide multiple benefits. Applied at the outset they ensure that a given process will not have to be modified at a later date, but can rather be scaled as required

How hedge funds can approach optimising their derivatives trading ahead of the (delayed) uncleared margin rule (UMR) is also considered within.

This report should give readers much to think about across many areas of their business.

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HFM

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Best Practice 2020 *Special Report*

Compliance

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Regtech 2020: technology to advance compliance

Jerome Lussan of Laven Partners examines the virtues of a regtech solution

Regtech has seen a rapid rise in prominence over the last few years, coming from a place of relative obscurity to become a key asset in the regulatory space. As *HFM Insight's* report *Regtech Rising* stated in 2019, 87.5% of alternative managers now use some form of regtech solution to supplement the traditional compliance process.

The "so-called regtech" (FCA, 2015) industry is now estimated to be worth \$4.9bn in annual revenue and shows no signs of slowing down. According to Reuters, the global regtech market revenue is expected to reach \$7.2bn by 2023.

One of the main factors behind this dramatic swell in popularity is regtech's time-saving capabilities that help compliance professionals cope with the growing list of



Jerome Lussan
Laven Partners

Jerome Lussan is the founder and CEO of Laven. His background includes acting as a COO of a hedge fund and as a financial lawyer at Jones Day. Lussan has a broad degree of expertise in the fund management industries, specialising in operational risk and regulatory matters with a focus on the alternative sector. His most recent experience covered CTAs (FX and futures) and prior to that he also worked in the private equity and real estate sectors.

regulatory responsibilities. Traditionally, the compliance process has been inherently manual with all the relevant policies being solely driven by an in-house compliance officer, compliance team, or outsourced to a consultant. Until recently, compliance officers have been relying on non-subject-specific tools such as Excel, Word and Outlook to structure the workflow. Regtech offers a subject-specific tool that streamlines the compliance workload by automating manual parts of the workload without losing oversight or increasing the risk. This can save

compliance managers a significant amount of time – up to 75% on some tasks and generally 40% overall.

Regtech also helps maintain oversight and leaves less room for error or forgetfulness when completing compliance tasks. When you see the number of matters that are forgotten or skipped over, specific regtech tools are very good value for money. They are also very useful when helping to demonstrate that compliance processes were followed, something that all operational due diligence consultants and/or regulators love to see. The regtech tools offer assistance that is driven by basic pre-defined algorithms, worth at least a member of the junior team in any compliance group.

At Laven, we use our regtech solutions for our compliance consultancy, due diligence and regulatory

hosting business lines. We have first-hand experience of the benefits as do all of our clients. On average, across our business, we have seen a 40% saving on time spent on compliance tasks as automation allows staff to rely on much of the groundwork being in place and to focus on other higher value tasks and advice. We have also seen an uptake of regtech solutions in some non-compliance specific applications, as the customisable tools leave lots of possibilities for users. For example, Laven's regtech solution has also been implemented in HR departments to store reports.

Of course, regtech demands a certain adaptation and some flexibility of the mind. Some users cannot change their processes that easily or have interpretations of the regulations that are beyond 'standard' expectations. Regtech can be adapted but for it to offer additional performance, it is best to keep it in line with best practice conformity or else the algorithm and time saving elements can be lost.

Compliance

Compliance tasks completed poorly or inefficiently can lead to the whole business being put at risk. Furthermore, over our 15 years providing regulatory compliance services, we have seen compliance evolve into a core function that, if done well, can enhance the whole performance of a business from operational infrastructure through to client experience. For example, client due diligence solutions streamline the client onboarding procedure making the process far simpler and convenient for clients. On Laven Tech, for instance, instead of sending documents back and forth via email, your clients can be given access to Laven Tech, where they can then use webforms to quickly and efficiently fill out the required information. The regtech solution then formats the webform into a report for your firm to carry out the relevant checks. This not only improves the client experience but also ensures a more secure method for exchanging documents which contain personal data that comply with the stricter data laws under GDPR. This also saves time for the onboarding team as red

flags and concerns are automatically flagged giving an easy managerial overall assessment.

Given the sheer amount of regulation that has come in over the last five years, with no sign of slowing down, the need for the compliance functions to have more time and to have access to better logistics is key. There is also the need to demonstrate that controls have been duly effected in line with risk management programmes and compliance policies. A regtech solution ensures that all compliance documentation is stored in one place and can be easily accessible while all being uniformly formatted.

Regtech offers a subject-specific tool that streamlines the compliance workloads by automating manual parts of the workload without losing oversight or increasing the risk

Regtech innovations in 2020

Regtech has made use of many of the key technological innovations that have been developed over the past decade. For instance, cloud computing is now a key aspect of many regtech solutions due to the sheer amount of documentation which is needed to be compliant and the necessity for this to be readily available at the regulator's request.

Many regtech solutions provide an easily accessible location for all your compliance documentation allowing for easy access to any document stored – such as the compliance manual – as and when it is needed. Many, Laven Tech included, go further, offering a full audit trail which allows compliance staff to keep on top of changes that have been made to important documents. Additionally, contrary to common belief, the cloud in most cases is more secure than other methods of digital storage as generally cloud service providers invest much larger sums of money in their data encryption and cyber-security than the average office server.

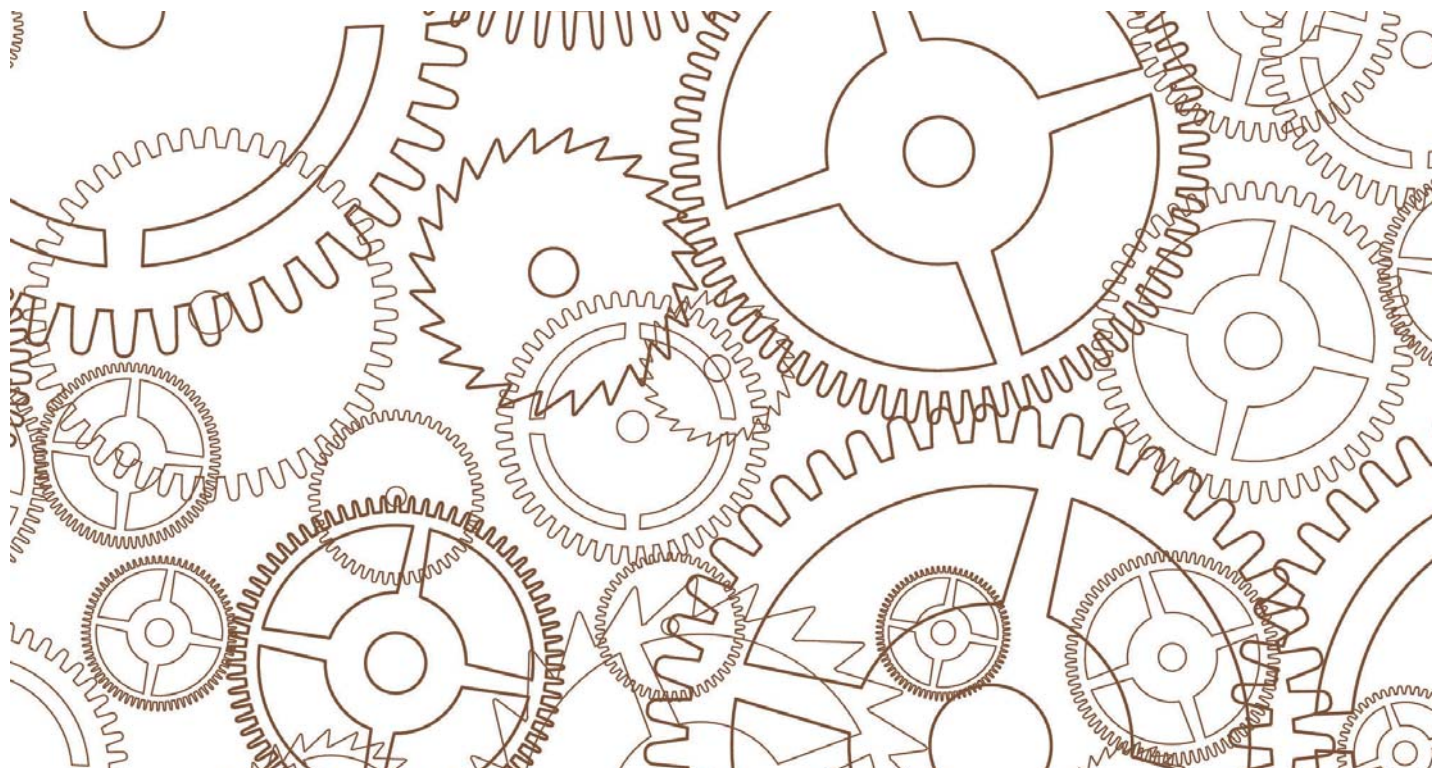
We are also seeing the early stages of machine learning being implemented into regtech, especially in client due diligence and know your client solutions. For example, machine learning can be employed to train a system to scan a set of data, whether that be reports from the regulator, media outlets or specific watchlists, to find mentions of the company or individual which may affect a firm's choice to onboard or work with this company.

Evidence

Recent regulations such as GDPR and SM&CR have stated that firms will be held accountable for not taking sufficient and/or reasonable steps to ensure compliance with the new and existing regulation. This means firms must accurately record any edits/changes made to the content or records within its compliance documents through the use of an audit trail tool. In response to the FCA's emphasis on accountability, Laven has also seen fit to introduce version control to ensure employees only read and interact with most recent documents while historic documents are still safely stored in the back end. As previously mentioned, it is important to have a clear and structured document repository, which can now be stored on many regtech solutions.

Regtech vs compliance

As a leading compliance consultancy that has built its own proprietary regtech, we believe that both options are possible with regtech forming the majority of the compliance workflow and the use of occasional consultancy to supplement the user's knowledge. Laven's regtech is designed to give a compliance officer the independence and infrastructure to carry out effective compliance oversight without solely relying on an outsourced compliance consultant. Essentially, the software ensures that users maintain full oversight of all their compliance obligations and a consultant can be utilised to fill any gaps that are exposed. This can then be supplemented by additional consultancy work as and when it's needed, such as the implementation of a new piece of legislation. ^{HFM}



Best practices in algo wheel design and implementation

Alistair Cree of FlexTrade discusses the evolution of algo wheels and how they can be used to apply a philosophy of continuous improvement to the trading process

Q How have algo wheels developed in the last decade?

A Algo wheels are the application to trading of the idea of randomised controlled trials, which originally comes from the natural sciences. When you have some new innovation in the healthcare space, for example, you have to make sure that a new treatment actually works and improves outcomes for patients. In the case of finance, this translates into the outcomes for orders. Trials are run by splitting the orders into two groups; a treatment group and a control group. That's done at random so you know that any difference between those groups is due to the treatment itself and not because one group contains a higher number of more difficult orders. This means that when you look at the cost or performance of your orders, you can



Alistair Cree
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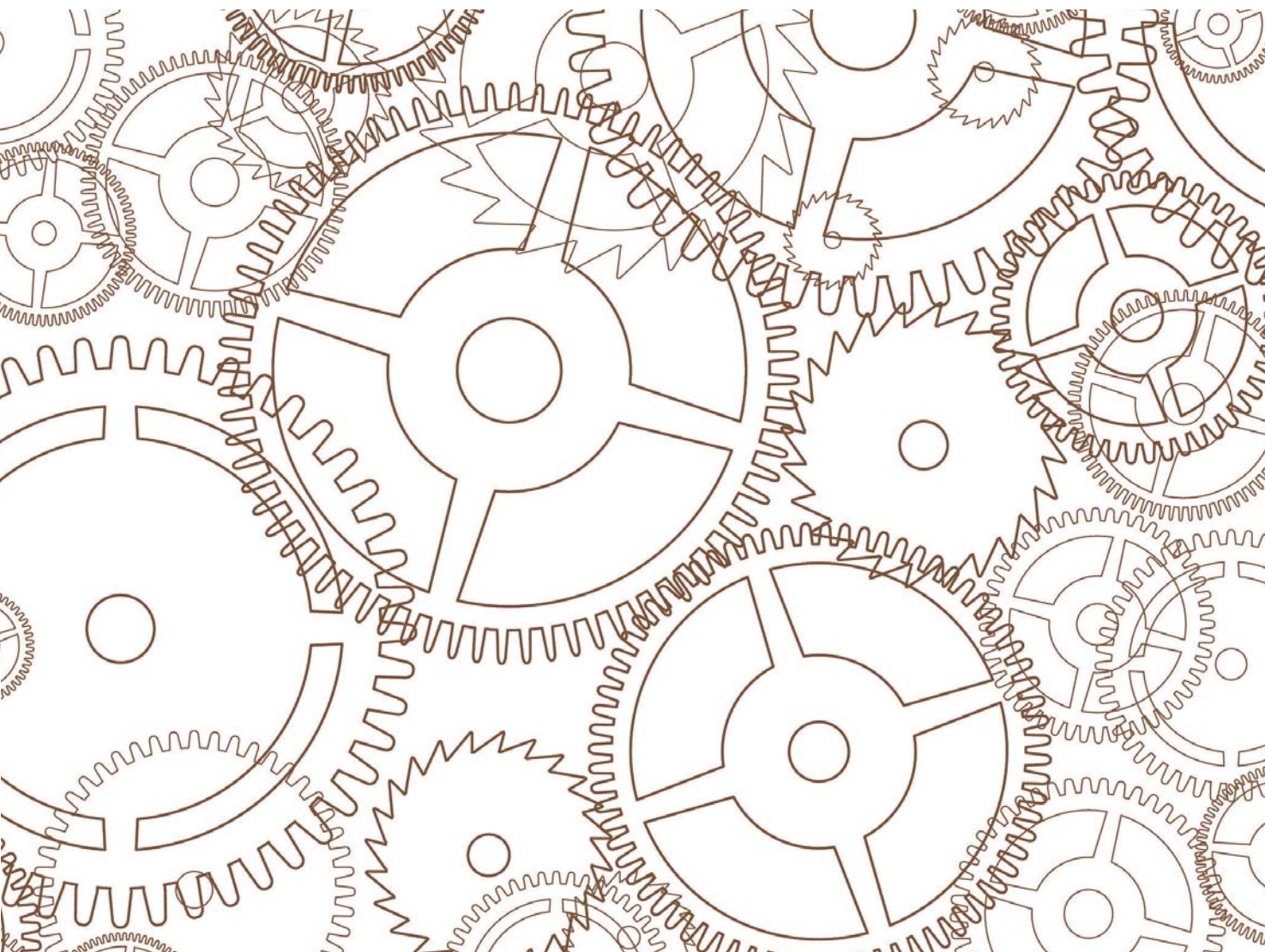
be confident that the difference that you see in the outcomes between those two groups is due to whatever intervention was made.

Trading is broadly moving in step with trends in other industries to become more quantitative, and that signals the use of more rigorous evaluation techniques, of which the randomised control trials are really the gold standard. They generate the best possible data you can get to work with to answer questions about whether an intervention is effective.

In trading, this mode of evaluation has evolved from looking very

narrowly at the questions of broker selection inequities towards the idea that more and more aspects of the trading process can be standardised and evaluated in this way.

Initially, the idea was to standardise your broker's algo offerings into a few groups that could be used interchangeably. Rather than sending an order to a particular broker's algo, an order can instead be sent to an IS algo, VWAP algo destination. Then, behind the scenes, the choice of broker can be randomised. You can determine, with some degree of confidence, that any difference in the performance of the orders sent to those two brokers is really down to the selection of the broker themselves and not down to the market conditions, order characteristics, or some other decision made which affected the difficulty of the order.



Q How does trade automation feed into this conversation?

A The first generation of algo wheels would just look at broker selection. This is a relatively straightforward decision and the trader still needs to be fairly closely involved in deciding which wheel to use. Traders make lots of other decisions as well: they select the algo; they select the algo parameters. Additionally, the trader also makes higher-level decisions which are perhaps a little more difficult to pin down, including the urgency of the order, how aggressive they want to be, or whether they want to weigh more heavily towards closing auction or trade throughout the day. So trading automation really starts to come into this once you have people applying the same ideas not just to the question of broker selection,

but also to the question of algo selection and to some degree the questions around urgency.

Much of this comes down to identifying a subset of relatively simple orders that can be automated. For example, these could be identified by the order size, market conditions,

of the order has been automated.

Once automated, you can begin collecting data on the process. Using that data, you can refine the process. For example, you start by sending all of your orders that are under 5% of ADV to a VWAP wheel, and then you introduce into that wheel a split between VWAPs that include the closing auction and VWAPs that try to complete before the close. Looking at the performance of those two groups, some orders for a particular portfolio manager may perform better including the close or not. You can then split your wheel based on the portfolio manager. This iterative process will eventually result in quite a complicated structure, and that's what we've seen the most sophisticated firms doing in this space. **HFM**

Trading is broadly moving in step with trends in other industries to become more quantitative

or some other set of criteria. Once defined, these orders can be sent into an algo wheel and the choice of broker randomised. This marks the first point at which trade automation starts to kick in because at that point a good chunk of the life cycle

AANA management and strategic clearing

Mohit Gupta of Cassini Systems outlines the ways in which their clients can find opportunity in the UMR delay

Derivatives trading has undergone wide ranging changes in regulation since the global financial crisis. The requirement for posting margin on cleared and bilateral trades has been one of those changes; impacting the cost of trading directly, while aiming to reduce the counterparty credit risk and ensuring stability.

While the requirement for initial margin was initially only mandatory for trades cleared through a central clearing house, it has since also encompassed bilateral trades. Given the widespread scope of bilateral derivatives, BCBS/iosco proposed a five-phase implementation towards mandatory posting of initial margin. As part of this, the last phase – phase five – was to come into effect in September 2020. However, with phase four commencing 1 September, a widely expected delay was announced on 23 July. This added a new threshold and thereby introducing a sixth phase, which comes into effect in September 2021.

Those firms with over \$750bn in average aggregate notional amount (AANA) will still be required to begin posting initial margin from 1



Mohit Gupta
Cassini Systems

Mohit Gupta is a senior product specialist at Cassini Systems leading pre-sales efforts and looking at different aspects of product, analytics and helping clients solve complex problems. Gupta brings with him depths of experience; both in the software and risk analytics field having worked in rates trading at Goldman Sachs. An engineer by background with an MBA, he graduated from India's premier institutes – Indian Institute of Management, Ahmedabad and Indian Institute of Technology, Bombay.

September (phase four). Firms with 50 BN-749 BN notional exposure will now begin posting in 1 September 2020 (phase five) and those with exposure between \$8bn and \$49bn will begin posting from September 2021 (phase six). As before, firms with AANA under \$8bn are exempt.

As aptly summarised in a statement from the Basel Committee below, the delay is meant to help counterparties prepare better from an implementation point of view:

"The Basel Committee and iosco have agreed to this extended timeline in the interest of supporting the smooth and orderly implementation of the margin requirements which is consistent and harmonised across their member jurisdictions and helps avoid market fragmentation that could otherwise ensue. The Basel Committee and iosco expect that covered entities will act diligently

to comply with the requirements by this revised timeline and strongly encourage market participants to make all relevant arrangements on a timely basis."

Impact of delay

Before the delay was announced, Isda estimated about 1,100 counterparties would come in scope in September 2020 once the threshold falls from \$750bn to \$8bn. With the delay now introducing a new phase with a \$50bn threshold, the number of counterparties coming into scope will be significantly lower, due to the higher threshold. A study by Isda estimates that the number of counterparties caught in phase five will fall by 70% – with the remaining going in to the newly formed phase six. Further similar studies by regulators CFTC and FCA have this number at 77% and 66%, respectively. Suffice to say that the delay pushes a lot of counterparties from phase five to phase six.

The opportunity and solution

What does this mean for firms with AANA under \$50bn? BCBS/iosco intend the delay to provide more time for smaller and mid-size firms

to prepare fully, especially in Europe where they are also required to perform back-testing. The temptation will be to simply put the uncleared margin rules (UMR) and standard initial margin model (SIMM) project on hold for 12 months but that would be a mistake, as the delay is being allowed specifically to provide additional time to prepare for the upcoming requirements.

Ultimately, the delay is meant to help provide time to work diligently towards implementing a solution for the regulations. At Cassini Systems, we think this delay is an opportunity which can be used both by firms in phase five and phase six to appropriately get ready for the regulations in a holistic sense rather than just looking at uncleared margin.

The key question is this: how can a client act on this delay and benefit from it? A few ways in which we at Cassini are helping our clients are enumerated below.

Understanding your AANA

AANA stands for average aggregate notional amount. This is the metric which decides if the client falls in phase five or phase six or is totally out of scope. The exact method of calculating AANA depends on the jurisdiction as certain products might be excluded in one jurisdiction but included in another. Even though the officially reported AANA has to be calculated for certain specific days dependent on the jurisdiction, it is recommended to have a process to be able to monitor AANA exposure on an ongoing basis as this will help to get an idea of the phase of implementation the firm will be in and then act accordingly. For instance, if my current AANA is €100bn, I am most likely going to fall in phase five unless something drastically changes and reduces the exposure.

Managing your AANA

Once the firm has a clear picture of its AANA, the next step is to see if there is any way one can optimise the portfolio to reduce the AANA. Reducing AANA should be of particular interest to firms who are on the cusp of the threshold (i.e. close to €50bn or €8bn) as this can help them flip to the next phase or out of scope completely.

A reduction in AANA can be achieved through following approaches:

Compression: It is not uncommon to see trading books which have trades back and forth for the same risk. This is usually the case when original trades were not taken off but replaced with equal and opposite risk trades. This extinguishes the risk but still counts towards notional exposure. Compressing portfolios both unilaterally and multilaterally can be used to reduce notional exposure, keeping the risk profile within constraints.

The key question is this: how can a client act on this delay and benefit from it?

Strategic clearing: The premise of the regulation imposing margin for uncleared derivatives is to bring them in line with cleared derivatives which have a margin associated with them. Given margin is to be posted for uncleared (if you breach the \$50m posting threshold) and cleared derivatives, it can often be preferable to use the clearing avenues. The margin requirement for cleared trades is based on a five-day margin period of risk and so is generally less for the same trades than uncleared margin requirements which are based on a 10-day margin period of risk. With the arrival of more clearing houses, the range of products which can be cleared has greatly increased and this offers more avenues to firms while still keeping liquidity in mind. A few examples are as follows:

- **Interest rate swaps and inflation swaps:** These are liquid, with multiple exchanges offering them as products. Voluntarily clearing trades on rates products that are not mandatorily cleared can offer synergies in reducing AANA exposure.
- **FX options:** Clearing FX options at exchanges rather than keeping them as bilateral can reduce the AANA exposure. Given options have higher leverage than spot transactions, clearing them offers

a bigger 'bang-for-buck' in reducing AANA.

- **CDS:** A traditional bilateral market like CDS has seen the share of clearing on the rise of late and this further supports the argument for clearing over bilateral.

Trading style: While it might not be possible for everyone to change their trading style, there are ways for those who can adapt to look at reducing AANA by such methods. A few examples are as follows:

- **Swap note futures:** Trading swap note futures to mimic the exposure of a traditional swap is one way of reducing AANA.
- **Interest rate futures:** Trading futures which mimic the swaps exposure (EuroDollar, ERIS futures) is another way to reduce AANA.
- **FX forwards:** Even though physically settled FX forwards are not under scope for margin posting, they still count towards AANA calculations. Using FX futures to mimic the exposure of physically settled FX forwards is one way to reduce AANA.

Conclusion

The impact of UMR on buy-side firms can be significant in operational and collateral costs, and while on the surface the change to split phase five into two seems benign, by moving the deadline out a year it actually presents opportunities for phase five and phase six firms.

Phase five firms can review their AANA levels and may be able to take some of the steps suggested above to get themselves into phase six. This saves the cost of collateral for another year as well as allowing more time to be fully prepared.

For phase six firms there is more time to review and modify trading behaviour, as well as balancing counterparty agreements to maximise the \$50m posting threshold, which can reduce or possibly eliminate the cost of UMR.

Importantly it also helps firms by allowing time to implement a holistic solution across all derivatives trading to reduce IM requirements, identify cost of carry, attribute costs to portfolios and trades and generally implement a full cost control process for collateral. HFM

The cloud standard

Darrell Tucker of Abacus Group highlights the best practices regarding the outsourcing of a cloud solution

Cloud IT services have become an acceptable standard in the financial services industry, and the goals for moving to the cloud are typically common across most organisations: increase operational efficiency through advanced technology and features; enhance cyber-security through the use of more robust tools, utilities and infrastructure; an enhanced ability to scale; and last, but definitely not least, manage (also read as minimise) costs associated with the overall technology implementation. Along with these objectives comes the challenge of balancing convenience with security.

There is no shortage of cloud-based hosting options and the debate continues over the best method for delivering a comprehensive solution that addresses most, if not all, of these items. Some are settling into a private cloud as the next evolution of their IT, which means hosting resources away from their offices and into a data centre. Others have moved to a more prevalent hybrid-type solution, which can be a mix of on-premise infrastructure, private-cloud and public-cloud resources. All of these platforms have modular technologies that are nimble enough to be effectively integrated into other solutions.

A sound technology solution will diligently and consistently assess the compatibility and effectiveness of all of its components and make adjustments as necessary without impact to your operations. Another alternative is a full public-cloud solution,



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which utilises all public-cloud resources to deliver a complete hosted IT solution. Public cloud platforms can offer many advantages, such as turnkey solutions to solve everyday business challenges, geographically diverse locations to mitigate the effects of latency, and economies of scale to provide a more robust and scalable infrastructure at a manageable cost. A key advantage of cloud outsourcing lies in removing the dependency on your local premise and enhancing your business continuity by being able to continue working from any internet-connected location. There is no doubt that public cloud providers, such as Microsoft, Amazon and Google, are major players in the hosted infrastructure and service delivery space and have the capacity to accommodate even the largest firms.

Arguably, Microsoft has the most complete solution from an end-user perspective. Its native Office 365 solution has been purpose-built to provide most, if not all, of the required components for a complete solution, while Microsoft manages the underlying infrastructure. Its Azure platform provides infrastructure resources for those who prefer to build a more bespoke solution on personally managed servers.

While Google does this to some degree, their productivity suite can be somewhat insulated and difficult to integrate with other third-party software or services.

Amazon is more focused on the hosted infrastructure model and could require more overhead to deliver a comprehensive solution, and this can prove costlier.

Whose role is it anyway?

As outsourcing and cloud technologies become more prevalent in the financial services space, the need to have technical personnel on staff has been eliminated. As a result, there has been a convergence of roles and responsibilities. Non-technical staff are being asked to select, coordinate and manage the technology solution. Commonly, the COO, CFO or CCO is wearing the hat of the CTO, and they are forced to quickly come up to speed on the likes of terminology, hardware and software, ancillary services and IT best practices around all of these things. This is not necessarily a bad thing as this cross-functional role can more closely align technology with business objectives. That said, your business priorities and compliance requirements should drive the technology, not vice versa.

The Infrastructure as a Service (IaaS) model has simplified this selection process by allowing you to procure IT on the merit of service delivery and not get too deeply entrenched in the nuts and bolts, such as back-end infrastructure. Practically speaking, you should document a framework for how your



organisation will work. You can build on this later, but answering the following simple questions will help get the process started:

- What is the size and expected growth of the firm?
- What operational applications (if any) will be used (beyond standard email and file storage)?
- How much travel is expected and by whom, or is there a remote workforce?
- What data is expected to be available outside of the office?
- What regulatory and investor compliance requirements will you be governed by?

Answering these questions can help in selecting the appropriate cloud infrastructure for your firm and the resources required to manage it effectively. A managed service provider (MSP) that can deliver IaaS is often a great way to address this, as they can help meet some of the original goals – operational efficiency, scalability, robust architecture, economies of scale and budgeting. Additionally, they provide a broader range of expertise and eliminate the key risk associated with relying on a single IT professional to manage the entire solution. They will be integral in delivering and managing the IT services and infrastructure, along with interfacing with your staff to provide support. Essentially,

they function as an extension of your firm, so you should ensure that such providers can demonstrate prudence around internal processes, infrastructure management and cyber-security; conformance to industry standards; maintain a proactive methodology for managing hardware, software and technology solutions; and maintain relevant and detailed documentation. Bonus points for holding relevant certifications and credentials – for example, SSAE18/SOC or ISO 270001, GDPR, Privacy Shield and CCPA.

Rules for everybody

With respect to compliance and security policies, it is important for companies to establish and enforce at the firm-level. Catering to individuals can make enforcement of policies difficult or unmanageable. Whenever possible, you should use advanced security features and ensure they align with your firm's policies.

For example, mobile device management will allow you to craft and enforce policy around the use of smartphones, tablets and laptops, and protect corporate data when used on these devices.

Dual-factor authentication will add another layer of security to standard passwords for authenticated access to protected data or resources. This can be beneficial if there is a lot of travel within your organisation, which increases the probability that users are working on

public or unknown networks where passwords can be compromised.

Utilise DLP features like conditional-access policies, which control access to data based on approved conditions, such as location or device type.

Finally, a SIEM will allow for monitoring and reporting to validate that these solutions are working and identify where there might be any gaps. Whether it's personally identifiable information from investors or intellectual property (investment or trading strategy), you must work with your IT service provider to manage your data. Know where it is stored, how backups are handled and what the retention period is. Know who has access to it and who has accessed it.

Now that technology is being consumed as a service, should you care which cloud is being used – private, hybrid or public? Arguably, the effectiveness of the services being delivered, and the expertise and effectiveness of your service provider, should be your main priority. With technology now an integral part of doing business, cyber-security concerns are a constant threat. Having a comprehensive, stable and robust IT solution is paramount in mitigating risk. Selecting which cloud platform you will move your technology to is not nearly as important as prioritising which MSP service provider you determine to work with, and understanding how to manage them. **HFM**

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Abacus Group is an award-winning global firm that provides outsourced IT services and a selection of leading-edge private, public and hybrid cloud solutions to over 600 investment management firms. An enterprise technology platform specifically designed to meet the unique needs of the financial services industry, the Abacus Cloud allows investment managers to source their technology needs as-a-service with the capacity to scale on-demand to meet current and future cybersecurity, storage and compliance requirements. Abacus has offices in New York, NY; San Francisco, CA; Boston, MA; Dallas, TX; Greenwich, CT; Los Angeles, CA; Charlotte, NC; and London, England.

TRADING PLATFORM / TECHNOLOGY

FLEXTRADE SYSTEMS

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REGULATION

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