CloudMargin

THE FUTURE OF COLLATERAL MANAGEMENT

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INTRODUCTION

Prompted in the main by new regulation, expected variations to collateral supply and demand dynamics over the next few years will challenge even the most sophisticated and experienced organisations. Whilst the implementation of new regulation has been delayed on a number of occasions, it seems now that the dates are fixed and that much of the new legislation will be implemented over the next 12 – 18 months with the longer-term impact felt over a 2 – 3 year period.

Unsurprisingly, with regulatory deadlines constantly changing and the phased implementation dates being pushed back, many firms have delayed their decision making around how best to manage under the new regime. This ‘wait and see’ policy has served them well in actual fact as the narrative around collateral has evolved during the period in which the regulations were being finalized.

This whitepaper will focus on the future of collateral management in terms of how the new rules have significantly impacted the risks of providing collateral, what is required of a comprehensive collateral management programme under the new regime and how technological innovation is developing to bridge the gap between past and present. Along with a review of the key regulation, historical analysis and a review of more recent trends will be used to define this new operating paradigm.

01.
THE EARLY YEARS

Whilst we have been collateralising financial market transactions for decades, many would argue that collateral management as a discipline (or industry) only began in the mid '90s. For those who can remember that far back however, it was very different from today. One look at ISDA's 1998 Guidelines for Collateral Practitioners demonstrates how far we have come. Simply the didactic nature of the document alone illustrates the general level of prevailing knowledge when it was published. References to, amongst other things, the size of the swap market, less than $30Tn in notional, and the "physical" delivery of collateral serve only to reinforce these differences.

Collateral for OTC derivatives, however, was not the only area of the market that was, by today's standards, somewhat antiquated. By way of example, a vast majority of users of tri-party collateral management were still manually approving individual securities movements, and the exchange of variation margin for repo transactions was limited to only the very largest investment banks.

It would be wrong to imagine that this absence of robust collateral management processes was a reflection of generally lower levels of counterparty exposure. One needs only to consider the crises caused by the collapse of Baring Securities and Drexel, Burnham & Lambert along with the (swaps related) bankruptcy of the State of Orange County, all in the 90s, to conclude that collateral management as an industry was, in this era, simply 'immature'.

02.

THE NEW MILLENNIUM

Lets fast-forward only a handful of years to the mid 2000s, and we see a very different picture. Amongst a raft of changes, three standout as being pivotal to the developments made.

Firstly, the dotcom bubble had burst sending the markets into a tailspin with the subsequent default of some exceptionally large US corporations. (Most infamous amongst these were Enron and Worldcom.) Added to this had been a series of global macro economic shocks; the 1998 Asia crisis and, in the same year, the Russian financial crisis. These had been followed in quick succession by the Argentinian debt default of 2001. Not to forget the collapse of LTCM in 1998 - a poster child of the risk management industry today.

It is perhaps unsurprising given the above that virtually all major market participants were getting serious about collateral management at this time. A good deal of the modern narrative around the role of collateral and indeed the risks of a collateral programme were born or materially reinforced during these few turbulent years.

The second major change was the buyside beginning to use OTC derivatives transactions with a vengeance. This shift alone radically altered the collateral landscape. Up until they began to trade swaps, most buyside institutions were not actively managing collateral: a majority of stock loan programmes were run by Global Custodians, collateral for Futures & Options transactions was, in a vast majority of instances, cash and variation margin on repo transactions was infrequently exchanged. The use of these instruments therefore was the trigger for non-tier 1 organisations to begin managing collateral themselves. OTC derivatives collateral management outsource service providers were rapidly created to meet this nascent demand amongst the buyside.

The third shift was a significant increase in sophistication and automation, principally, within investment banks. Under a range of banners, the optimisation of collateral had become an industry in its own right. Collateral Optimisation Groups were created to manage larger pools of collateral over multiple instruments and asset classes. This demand for efficiency had prompted tri-party service providers to further automate the solutions they offered to their investment bank clients. In addition to these advancements in automation and optimisation, market participants were pushing the boundaries on what was acceptable collateral, as balance sheets became 'cluttered' with esoteric and illiquid assets. As was generally recognised too late, whilst risk managers had not lost sight of the primary role of collateral, for most other groups in the bank it had simply become the primary 'building block' by which balance sheets were expanded.

03.

POST-CRISIS COLLATERAL MANAGEMENT

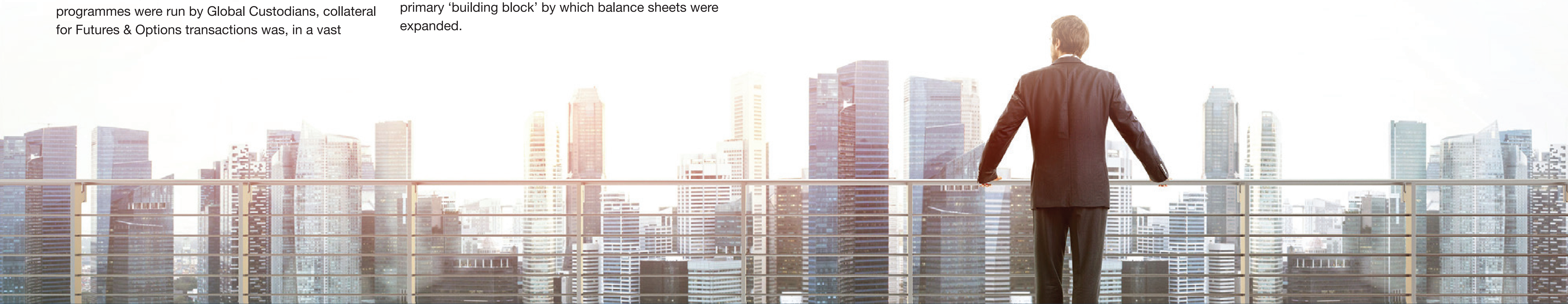
It will be no surprise that the third, and current, age of collateral began in 2008 with the Global Financial Crisis. Whilst collateral did not cause the crisis (far from it) it definitely played its role in both limiting its impact for some institutions as well as being the primary cause of the demise of others. With regard to collateral management itself, many of the warnings around managing a programme which had been entirely conceptual up to this point became shockingly real. Chief amongst these was the liquidity risk that the creation of a collateral management programme creates.

The regulators response post 2008 is what really characterises the current thinking around collateral management, and creates the challenges with which the market is currently grappling. These may be broken down into three main categories:

1. Increased usage – The migration to Central Clearing for multiple instruments, mandatory VM for all OTC derivative transactions, maximum thresholds along with initial margin for non-cleared transactions will increase both the values of margin in circulation and the frequency of calls.

2. Increased complexity – Whether it be segregation models, dynamic haircuts, risk sensitivity driven initial margin calculations or a host of other changes the management of collateral is becoming far more complex

3. Increased cost / opportunity – It is hard to argue that the impact of points one and two above will not lead to an increase in costs. In fact, this is already been evidenced in many areas today.



04.

THE LAW OF UNINTENDED CONSEQUENCES

For every action there is of course a reaction. Whilst surely an unintended consequence, there is a risk that the regulators themselves have created an environment where the very institutions that they were looking to protect are those that have been placed in harm's way.

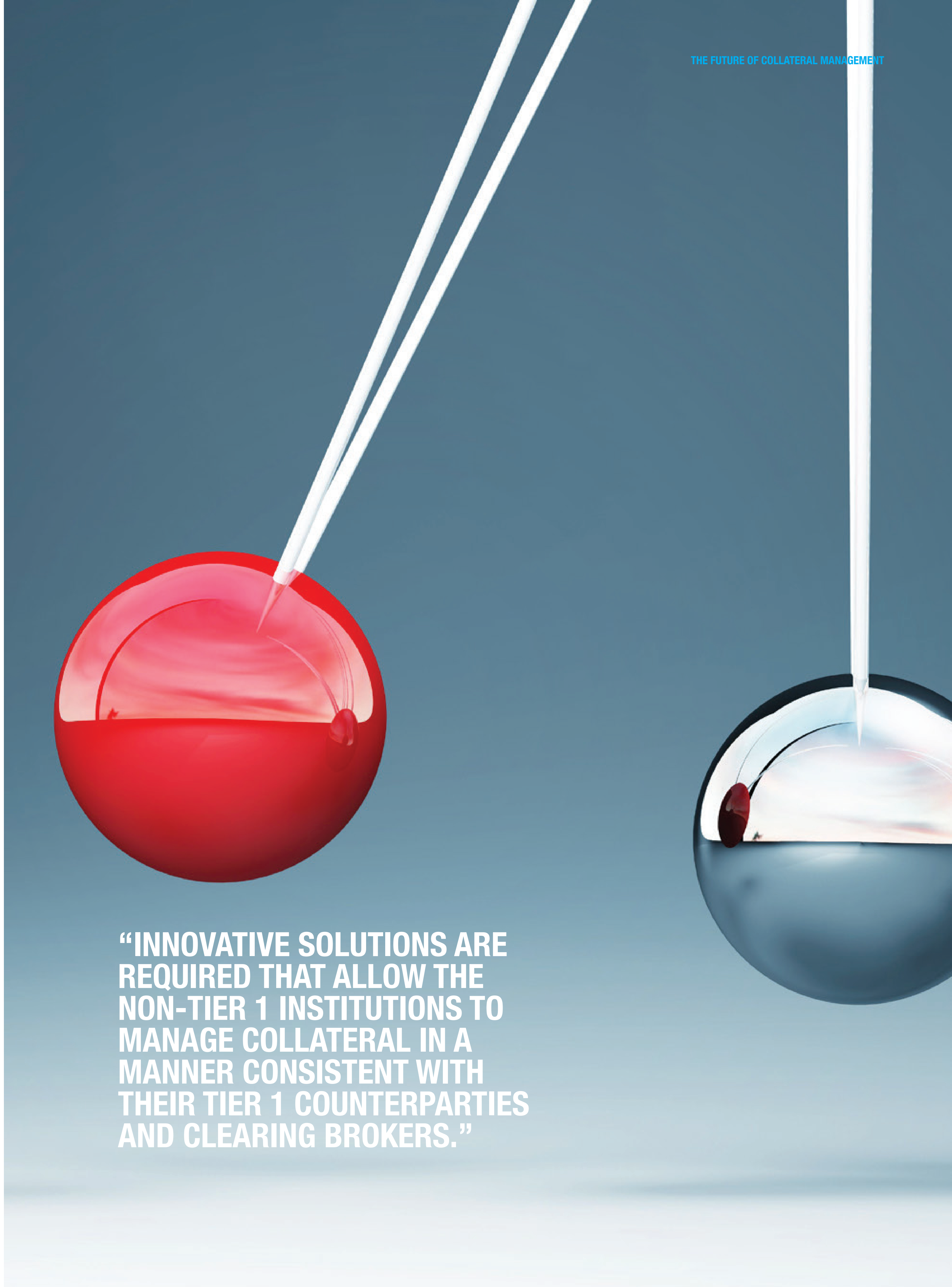
To expand further, under today's (new) regime, where institutions are able and prepared to spend significant amounts of money on new or expanded systems, they can achieve two highly desirable outcomes. They are far better able to leverage the new regulations through the implementation of additional risk mitigation policies such as trading with a broader range of counterparties, appointing multiple clearing brokers, implementing complex collateral segregation models and enhanced reporting (the benchmark of any collateral management programme). In addition, these same institutions are also able to further lower risk through increased automation across the entire margin they exchange and manage.

By contrast, those institutions that are unprepared or unable to spend significantly on sophisticated systems are far less able to implement those risk reducing policies described above, or benefit from the automation that a migration to a modern platform must bring. This leaves them far more exposed to the operational and liquidity risks that were the downfall of many institutions in the last financial crisis.

This conclusion is easy to reach. It is a direct function of the inverse correlation between risk and cost that has been created by the new regulations. It is of the uppermost importance that this relationship is severed. The way to achieve this is straightforward: innovative solutions are required that allow the non-tier 1 institutions (the vast majority!) to manage collateral in a manner consistent with their tier 1 counterparties and clearing brokers. This is not limited to just OTC derivatives however. It is also true of all cleared transactions, stock loan and repo.

In certain senses this is where the non-tier 1 institutions have an advantage. They are more easily able to achieve a cross instrument / cross asset class model, where all collateral is measured and managed in a central location, than the tier 1 institutions with whom they trade whose attempts at enterprise wide solutions are blighted by the legacy systems in which they have invested so heavily in the past.

In summary, where we consider the future of collateral management it is not difficult to determine what the near / medium term picture looks like. Rather, the challenge is how do a majority of market participants arrive at this 'destination' in a manner consistent with their broader institutional strategy and in line with the regulators demands. As is so often the case, it seems that innovation is the answer.



05.

THE FUTURE OF COLLATERAL MANAGEMENT

To summarise the above, specific to a majority of non-tier 1 organisations and in the absence of innovation, the Regulators' response to the Global Financial Crisis is likely to introduce new risks. One could comment that, on balance, these risk are potentially greater than those that these institutions faced during the crisis itself.

The rationale is hard to contest where the forecasted increase in the use of collateral introduces liquidity, correlation and operational risks to a group of market participants that were not threatened with insolvency during the crisis. Critical to this argument is that, without further innovation, many market participants would struggle to manage these new risks in a manner consistent with their tier 1 brethren who have, often over many years, invested in systems designed to automate and facilitate the exchange of margin.

All this said, innovation itself is simply a catch-all term often used to bridge the gap between reality and some hoped for future. Combine this with trendy neologisms like 'FinTech' and create a Silicon Roundabout, and Hey Presto! A panacea for all market 'ills' is born.

If only it were that simple. Innovation itself comes in many different forms…not all of them ultimately desirable or successful. To better understand the demands being made of innovation we should look first at the regulations themselves.

06.

A BIFURCATED WORLD

To simplify matters, it is easier to consider the regulatory universe in two halves. The cleared world and the non-cleared world. It also makes sense to consider those regulations, which impact the non-dealer/MSP community directly, and those that will indirectly prompt changes in behavior. Elsewhere, this has been described in the context of exemption and immunity i.e. simply because an institution is exempt from a regulation does not mean they are immune from it's impact. As we look further into the future, these second order effects become increasingly important.

07.

NEW REGULATIONS

For a number of years succeeding the G20 commitments in Pittsburgh, it was widely believed that the introduction of mandatory clearing would simplify matters for a majority of market participants. The received wisdom being simply that the clearing of OTC contracts would be analogous to clearing Futures and Options and hence would be broadly problem free. More recently, this perspective has changed significantly for three primary reasons.

Firstly, in contrast to Futures and Options, there are multiple different account structure options being offered by clearing houses and clearing brokers for OTC derivatives. Whilst regulations demand that CCPs offer individually segregated accounts, most CCPs are aiming to go one step further by allowing the buyside - historically clients of clearing members - direct access to the clearinghouse itself. Many of these account structures materially alter the collateral process flows and the level of protection in the event of a member default. Whilst the benefits of these new account structures are clear, especially from a risk management standpoint, the complexity they bring to the collateral management process is manifold.

In addition to the complexity around account structures, further operational challenges are being driven by the clearing brokers' efforts to address some of the capital and credit impacts to which they are increasingly subject as a result of Basel III. To avoid funding the retention of liquid assets, (under the Liquidity Coverage Ratio regime) clients are being encouraged to use securities wherever possible for initial margin and recall excess cash rather than leave 'buffers' as was historically the case. In one fell swoop, from an Operations standpoint, the challenge of managing cleared margin is similar to that in the non-cleared space!

The final consideration where cleared margin is concerned is that of liquidity risk. As values of initial margin for cleared activity rapidly grow, the risks of not meeting a margin call increases. The current narrative in the market around this is that collateral management is becoming a front office discipline. It's hard over the medium term to argue against this. The front office is looking for sophisticated tools to forecast initial margin requirements. This is both a complex task and needs to be integrated with the broader collateral management process.

The above illustrates very well the points made above regarding increased risks under the new regime. That is to say, those institutions that are more readily able to manage their collateral will be able to adopt the more tailored account structures at CCPs (and lower risk), and also manage the collateral they may hold with clearing brokers more closely (and avoid costs). In addition, the impact of LCR is perhaps the best example of the 'exempt but not immune' model.

08.

NON-CLEARED MARGINING

As mentioned elsewhere it is not just the cleared world that is changing. Major changes are also occurring in the non-cleared world.

The mandatory exchange of variation margin for all market participants is now a key element of the new regulations. The addition of mandatory maximum thresholds serves to ensure there are no loopholes in the rules. Many institutions today margin all their OTC derivative activity. This said, there are still a number who don't. The net impact of this is that the regulatory requirement (from March 2017) to exchange margin on a daily basis with enforced minimum thresholds represents a challenge to a number of market participants of all sizes and levels of sophistication.

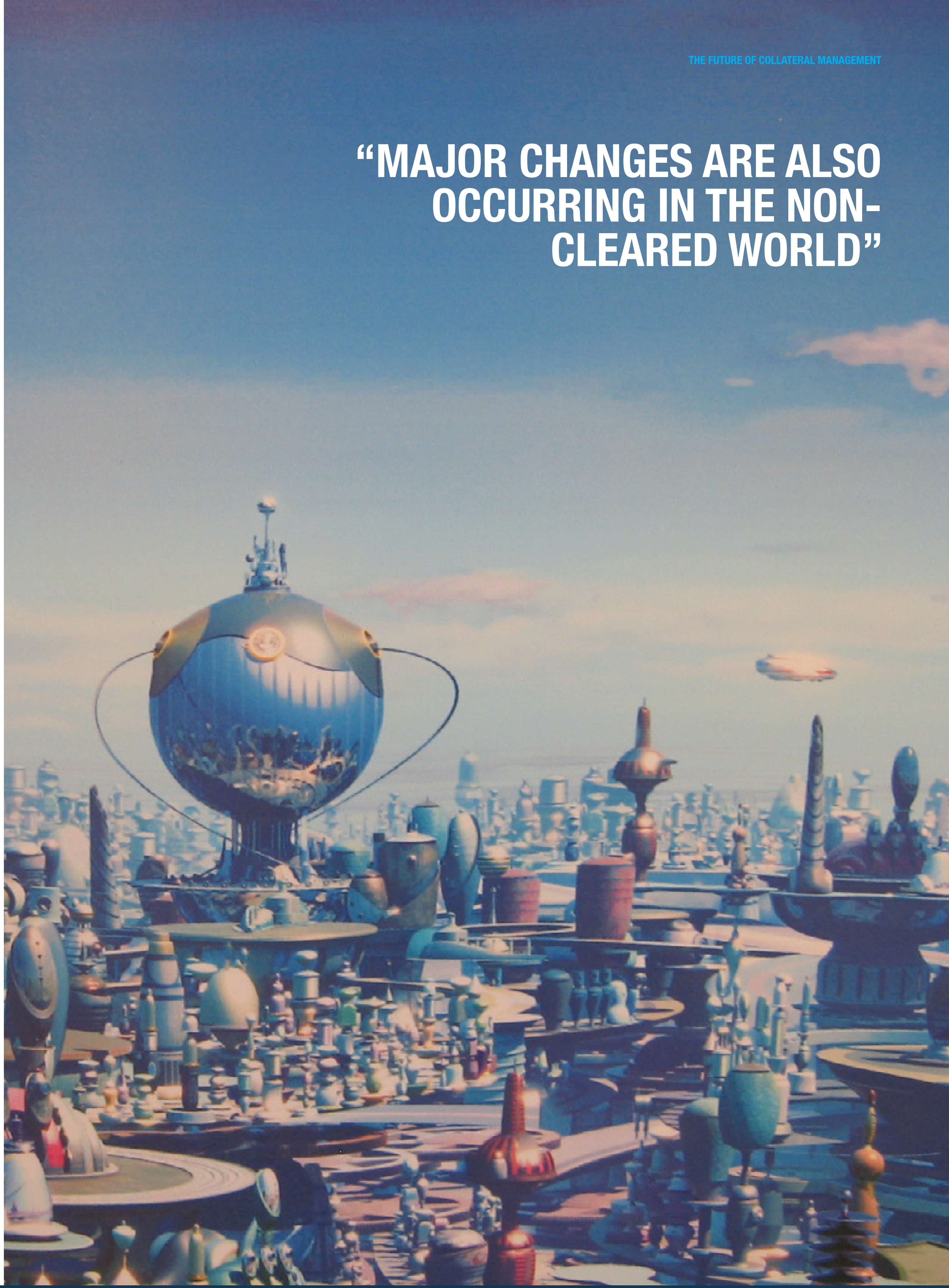
In addition to the daily exchange of variation margin, for a small number of institutions there will also be initial margin to consider. Current forecasts suggest that by 2020 there will be 59 banks which breach the threshold for the exchange of initial margin with an unknown number of buyside firms (https://www.eba.europa.eu/regulation-and-policy/market-infrastructures/draft-regulatory-technical-standards-on-risk-mitigation-techniques-for-otc-derivatives-not-cleared-by-a-central-counterparty-ccp).

The unknown here is just quite how much activity will be supported by vanilla (and hence cleared) OTC derivative transactions - and where there is demand for tailoring, how many institutions will be prepared to pay the increased costs of non-cleared transactions? In any event, the exchange of IM for non-cleared transactions is a clear challenge for those institutions captured by the rules. To understand the nature of the challenge it is helpful to consider the difference between variation margin and initial margin.

Variation Margin is simply the mark-to-market difference on a portfolio. Initial margin is the sum of money that could conceivably be lost over a defined period, post a default. Critically it is a forecast rather than a function of currently observable market values. The calculation of this forecast and the agreement with a counterparty (where their forecast may differ) is a material challenge for those market participants captured by these regulations.

Again, the above illustrates the points previously made. The non-cleared margining rules will again add complexity and operational burden. As has been highlighted elsewhere, the increase in the number of movements alone represents a material increase in operational risk and cost.

In summary, cleared or non-cleared, exempt or immune, the collateral landscape will change dramatically over the course of the next few months and years. Rather than being an expansion of historical challenges, the novelty of the new regulations is fundamentally changing the 'problem statement' as it relates to collateral management.



09.

INNOVATION IN COLLATERAL MANAGEMENT

In reference to the first half of this whitepaper, and in very high level terms, robust, flexible, functionally rich collateral solutions need to be brought to the masses rather than being the reserve of only the largest or most sophisticated market participants. Wherever possible, solutions need to cover all instruments (as bifurcation creates inefficiencies and increases both risk and cost) and priced in a way (and at a level), which reflects the scale of the challenge for those impacted institutions. Put differently, whilst the costs of inefficiency is increasing, solutions still need to be made available at a fee level consistent with the cost appetites of the target companies.

Taking into account all of the above, whilst it is impossible to say definitively what the future of collateral management looks like, the following advancements seem highly likely:

1. **The most effective solutions will be deployed via the cloud:** As the adoption of cloud solutions becomes far more commonplace across all areas of finance, collateral management is very well positioned to be part of that wave. SaaS solutions work most effectively where many people or institutions follow, broadly speaking, the same processes. Collateral management fits this requirement. In common with other SaaS solutions, cloud based collateral management platforms should be functionally rich, far more affordable than on-premise or outsourced equivalents, easier to develop and maintain - with far more connectivity than most market participants would be able to achieve on a standalone basis.

2. **Multi-instrument platforms will prevail:** Where cost, liquidity and complexity is a factor, it is critical that an institution can view its collateral requirements across all instruments; cleared and non-cleared. This will become increasingly clear where the values of cleared margin increase and the costs of inefficient collateral practices between FCMs and their clients grow significantly.

3. **Within very defined parameters collateral will become a front office discipline:** Given the higher values of collateral in circulation, the requirement for pre-trade analytics and collateral optimization is becoming a clear requirement for those organisations with significant, directional portfolios of swaps. A number of tech companies are springing up to address this need already.

4. **The importance of tri-party structures will increase:** Whilst somewhat time consuming to implement, the use of tri-party (in the book entry allocation sense of the term) will grow. In the near to medium term this will be correlated to the growth in the use of Initial Margin.

5. **Competitive advantage delivered to those institutions that get it right:** This competitive advantage will be felt in two ways. In the near to medium term it will manifest itself in terms of P&L (Profit and Loss) (or fund performance). More importantly however, it will be seen most acutely during the next financial crisis. Certain institutions with efficient practices and processes will be able to navigate distressed markets with ease, whilst other firms will struggle both from an operations perspective but also in terms of risk management through liquidity etc.

10.

CONCLUSION

It goes without saying that we will inevitably use tomorrow's tools to solve tomorrow's problems, and that there is always risk when it comes to gazing into the crystal ball and looking into the future.

Within financial markets, there is often an expectation that innovation will bridge the gap between an undesirable future state and one that is more palatable. Very often this expectation is NOT misplaced in an industry that has proven time and again that it can evolve as market practices, opportunities and regulations demand.

Specific to collateral management and based on what we see in the market today, a blend of new technology, new providers and a combination of different solutions (some existing and some new) represents the optimal approach for many market participants to negotiate the new challenges they face.

None of the above will happen overnight. Real innovation, the sort that disrupts and transforms is often an amalgam of multiple strands or initiatives and not always born, directly at least, of consumer demand. To paraphrase Einstein, it needs someone with inspiration and very often an army of people to provide the perspiration!

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