

View from the top

How has collateral management and collateral optimisation developed over recent years, and what are the trends for the future?

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SLT: How has collateral management changed since the financial crisis?

Paul Wilson: The market crisis and subsequent events have thrown risk mitigation of counterparty risk by the use of collateral management into the spotlight. The first trend has been the use of collateral by a broader base of users as well as a broader use of collateral in different scenarios.

The most evident changes have been in the broader use of tri-party to support the collateral process and exponential growth of collateral in support of OTC derivative transactions. In all instances, we have seen greater customisation and parameterisation in the collateral eligibility schedules across the board, as users look to set collateral parameters to more detailed and granular levels.

The industry is becoming more complex given the broader use of collateral. Collateral users are looking to maximise the effectiveness of collateral, via the use of a combination of optimisation and re-use tools, as balance sheet and capital costs increase. The demands on collateral providers to stay ahead of the curve is becoming more challenging as the markets and users demand greater levels of granularity, like quicker optimisation tools.

The regulatory environment is also driving changes to the business and operating environment. Regulations like Dodd Frank, EMIR and Basel III need to be understood and solutions developed to accommodate them. This is particularly evident in both the derivatives market and the US tri-party repo market where the changes evolving from the Federal Reserve sponsored

Tri-Party Repo Infrastructure Reform Taskforce are being implemented.

Olivier de Schaezen: Collateral management has clearly emerged from the crisis as a pillar of strength within the new financial market landscape. With the unsecured market drying up and regulators pushing banks to increase the term of their funding activities, many institutions are looking to optimise their collateral management capabilities in order to secure their business and remain competitive in such a volatile and fast-changing environment. Thus, collateral management has already increased in importance.

We're also seeing a new trend in how cash investors with term liabilities are massively turning to the repo markets to secure their investments. With this decision comes the requirement of man-



aging collateral on a bigger scale. Many firms are naturally channelling this responsibility to professional triparty collateral managers, such as Euroclear Bank. The entry of corporate treasuries within the triparty service environment is clear recognition of the resilience and dependability of triparty solutions when it comes to investing excess cash. This trend is significantly changing the composition of the repo markets, where corporates and money-market funds are overtaking commercial banks as cash providers.

Another trend that will soon have a substantial impact on collateral management follows from new regulations, including the Dodd-Frank bill in the US and the European Market Infrastructure Regulation in Europe. The OTC derivatives market will undergo a major transformation, with exchanges attracting a significant amount of this business. This shift will inevitably have collateral management implications and increase the challenges of managing collateral efficiently.

Olivier Laurent: Since the financial crisis, counterparty risk being a major concern, the need for collateral has risen. In March 2010, ISDA produced a market review of OTC Derivative Bilateral Collateralisation practices: 78 per cent of derivatives are collateralised (73 per cent if we considered only buy-side counterparties). Since the crisis the usage of ISDA with CSD annex has been systematised.

Martin Wingate: Collateral management has seen significant change post-financial crisis. On the one hand by firms increasing volume of collateralised trades to secure transactions and ensure risk management and compliance – ISDA Margin Survey 2011 shows that 70 per cent of OTC exposure is now collateralised vs 59 per cent and 30 per cent in 2007 and 2003 respectively.

On the other hand – regulators are set to implement changes over the next 12-18 months which will have a considerable, operational, legal and commercial impact on the OTC derivatives market, the result of which will be that market participants will have to post more collateral and face collateral calls more frequently from a broader spectrum of counterparties – with trades collateralised with high-liquid instruments.

During the Lehman crisis, many buy-side clients never recovered the independent collateral they had pledged. Post-crisis, firms have started to insist that independent collateral is held at a segregated, highly-rated tri-party agent.

Collateral management systems need to cater for separate independent and variation margin calls and provide the ability to reflect segregated collateral.

Tri-party involvement in the collateral management process is evolving further as regulation to clear derivative transactions at a central counterparty (CCP) develops. CCPs will all require independent collateral from each clearing member with the ability to make intra-day variation margin calls. Firms will need to be able to compare their own exposure calculations to those that the CCP uses to ensure complete transparency.

COLLINE fully supports intra-day margin calls and is the only collateral management solution that has CCP functionality already in use.

Gilbert Scherff: There is certainly much more focus on the legal aspect of the industry, as well as a drive towards optimising and automating the collateral process.

Pascal Morosini: As the leading collateral agent in Europe with €600 billion under management, we have seen a drastic change in the approach of our customers towards collateral management. It is no longer considered as a back office function but has now the attention of every boardroom and senior management.

This is a critical function by which a firm could optimise the usage of its collateral but also reach priority source of liquidity as well as new source of liquidity. We see more and more firms making sure that they have access to central bank liquidity, whether it is the FED or central banks in the Eurozone or outside of the Eurozone including in the Asia Pacific region.

On the other hand, since we have launched a partnership with the Brazilian CSD Cetip to in-source the collateral management for their OTC derivative business, we have been approached by several market infrastructures wanting to offer collateral management to their customers but without the systems to do so and with little budget to develop it.

So collateral management since the crisis is gaining a great deal of attention especially since unsecured business is drying up and regulations are bringing additional pressure pushing for more secured business. We can say that the scope of collateral management has widened but also that it finally got the attention it deserves.

Philippe Rozental: In the past two or three years, the different controls related to collateral management have been increased and fine-tuned. Different alerting systems have been implemented, especially for the counterparty exposure follow up. The haircut requirements by counterparties has changed on some types of equity or bonds. It has become more and more difficult to use bonds or equity to be used as collateral.

Jane Milner: Collateral management has been propelled to centre stage as the importance of collateral from a risk mitigation perspective became apparent. Financial services firms now realise that they need firm controls around the collateralisation process and that the risks involved in the collateral process must also be properly managed. More recently, collateral management is being discussed as a way to increase liquidity and hold down the cost of doing business.

SLT: Is collateral management now considered a business where profits can be made rather than just a risk mitigation strategy?

Rozental: In most cases, not. However the collateral combined with cash reinvestment activities could be a profit generator for the players

Morosini: Well, it has always been both, it is just that compared to other types of investments or products, the spreads were lower. But the spreads have always been there, especially in repo and securities lending as a financing tool. But it is true that most of the time these days the first priority is risk mitigation, quality of the assets, pricing, haircuts and concentration criteria far more than pre-crisis.

We have seen new customers rushing to put agreements in place in order to protect securities lending transactions by setting up a guarantee in the form of securities to protect a business that was done on a partial or fully unsecured basis. The trading of collateral remains lucrative but cannot be compared with pre-crisis P&L: firms have more difficulties to refinance their less liquid assets and the flight to quality we have seen since the crisis is pushing revenue targets down.

Wilson: First and foremost, collateral management is a risk mitigation tool. But within this model the efficient use, re-use and optimisation of collateral is paramount. Maximising the efficiency of collateral and reducing the cost of collateral provision can be a way in which “profits” can be made by way of reduced financing costs.

de Schaezen: Collateral management will predominantly remain a strong risk mitigation business practice that will be increasingly necessary to sustain financial market confidence and resilience. It is here to stay. The growing demand for and the different challenges associated with managing collateral to meet a broader range of needs will surely create new opportunities for collateral management service providers with experience and know-how.



For example, firms active in derivatives may need to manage collateral transformations to ensure compliance with central counterparty requirements, an aspect of doing business which will challenge many firms. At Euroclear Bank, we are currently helping our triparty collateral management clients to design efficient collateral management solutions for their underlying clients to meet these new types of collateral demands.

Laurent: Collateral Management Agent is a service provided by securities services departments (position reporting, handling of margin calls, reconciliation and dispute resolution, collateral transformation). It is a relatively low profit margin activity for those firms, but would strictly be risk mitigation strategy for investment firms, and a mixture of the two for brokers.

Wingate: Running collateral management as a cost-centre is not a new concept. Funding of collateral has always impacted a firm's P&L but as the volume of collateral pledged has grown and cost of funding cash increased, opportunities to optimise collateral usage have developed. With some firms now having billions of USD of collateral outstanding, what was once an almost immaterial cost is fast becoming key to profitability. As is the ability to rehypothecate held assets but transparency regarding where assets are is becoming key.

Scherff: Collateral management is mainly risk mitigation. By optimising the collateral process one can lower costs but keep in mind collateral management is a cost centre not a profit centre.

Milner: While it is not being seen as a profit centre per se, it is true to say that the trading aspect of collateral management is now considered more of a front-office role, and the number of desks dedicated to collateral trading has increased. In addition, pro-active collateral management is certainly seen as a way of minimising collateral costs, thereby increasing the profitability of the underlying trading activity. There is also an opportunity for the sell side in providing more collateral management-related services, tri-party arrangement, liquidity provision, collateral upgrades, outsourcing, etc.

SLT: How has collateral optimisation affected the market?

Wingate: Or has the market impacted collateral optimisation?

The increasing cost of funding collateral has led firms to optimise it and larger firms now have dedicated collateral optimisation operations in place - analysing the firm's asset base and selecting the best (often the cheapest but increasingly the

most efficient) collateral to deliver. Also, the type of collateral is now being factored into the pricing of derivative trades, with businesses looking to use CVA swap curves in their valuations.

To further assist funding and reduce risk, banks have become even more selective about the collateral they accept, increasingly declining lower-rated securities in favour of more liquid AAA Governments or cash. Ironically, this increase in demand for better quality collateral contributes to the increase in cost of funding.

At the other end of the spectrum, firms are looking harder for opportunities to rehypothecate previously under-utilised esoteric collateral.

Technology plays a large part in optimisation as the collateral management system can calculate the optimum collateral to pledge for a specific client, based on configurable rules and parameters such as cost, efficiency and client acceptability.

Milner: The optimal assignment of assets to collateral obligations is now an imperative due to three factors: increased collateral requirements, rigour around the definitions of eligible collateral, and increased capital requirements. But while there is certainly a drive for greater collateral optimisation, particularly from the sell side, optimisation means different things to different people. It is not possible to group all of the different interpretations together when considering the impact on the market.

At this point I would say that it is more a case of seeing a lot more discussion about how to achieve optimisation, rather than clear results from its implementation. Full optimisation is still the holy grail that many are seeking, rather than being something that is out there and fully operative.

Wilson: The demand for collateral optimisation from our clients has increased. We have developed and implemented Global Longbox and External Longbox as part of our Global Collateral Engine initiative to help clients better leverage our existing robust optimisation tools. The key components of our overall service offering are helping our clients reduce their financing costs and source new funding. Optimisation was perceived as a siloed function. But today, it is viewed as an enterprise wide activity.

de Schaetzen: With the growing need for collateral, collateral managers are constantly looking to optimise increasingly scarce collateral resources. Optimal and dynamic collateral allocations are vital, but this is not enough. In Europe, the fragmentation of collateral resources is a real issue that collateral managers confront every day.

Euroclear Bank, in partnership with domestic agents, is improving collateral mobility across Europe and beyond by putting in place a structure that moves collateral seamlessly between various domestic markets and Euroclear Bank's triparty platform. Moreover, firms using the services of domestic CSDs that are part of the Euroclear group for their financing needs will be able to manage collateral within those domestic market CSDs through a triparty collateral management service. This is the case at Euroclear UK & Ireland today. Clients of Euroclear's ESSES platform, covering the Belgian, Dutch and French markets, will be able to manage their collateral needs for open market operations by the end of this year. In 2012, the ESSES and Euroclear Bank collateral management platforms will become fully interoperable, enabling clients to avail and optimise their use of collateral across multiple systems. All in all, the potential pool of collateral at Euroclear is €22 trillion.

Laurent: Optimisation lowers the cost of implementation of collateral management as risk mitigation strategy. It gains in importance and benefit when haircuts are high or increasing. It mitigates the deleveraging impact of posting collateral.

Scherff: Liquidity is getting more expensive in combination with a volatile market this has an impact on the daily process of the bank (keep Basel III in mind)

Morosini: The collateral movements to optimise the collateral allocation making sure it is at the right place at the right time has a cost and also puts pressure on collateral givers on a daily basis. This is for the simple reason that these days any piece of collateral is used and optimised because it is also becoming a scarce resource. On top of that, most of the collateral receivers change their eligibility criteria more frequently than pre-crisis, adding an additional stress on collateral givers to make sure they have the right quality to comply with these new criteria.

We can see this in our collateral management engine: the movements of collateral have also increased due to these eligibility changes and optimisation needs across different contracts and counterparties. We also receive more requests for sample forecast reports. This helps the collateral givers to have an idea if some of the assets they hold in other collateral locations are eligible with the network of counterparties they have in our Global Liquidity Hub.

Every little piece of collateral has to be financed or used to cover various types of exposures such as repo, lending, OTC derivatives loans, allocation to central banks and other type of structured transactions. Certainly new regulations and liquidity measures imposed by regula-



tors have an impact on the way the collateral is allocated and optimised, we see regular requests to tweak the collateral allocation to comply with new liquidity regimes modifying the allocation between prime and non-prime assets.

Rozental: Most players are looking how to optimise the use of cash through different cash reinvestments programme that has been developed internally or in collaboration with service providers

SLT: Have the sovereign debt crises in Europe and potential problems with US ratings changed the way you look at different types of collateral?

Milner: The perception of 'quality' collateral has certainly changed over the recent times – and there has been a good deal of collateral schedule updates taking place. One direct impact of recent activity has been to increase the focus on the stress testing requirements of a collateral system in order to predict the impact of potential downgrades.

Wilson: We act as a tri-party agent and it is our clients who determine what securities and what parameters they wish to have in place for each of their counterparties. Eligibility schedules tend to be dynamic and automatically cater for changes in ratings.

de Schaetzen: Reacting to rating changes is an essential part of the role triparty agents play in the management process. At Euroclear Bank, we receive feeds directly from the major rating agencies, which means that we can immediately update collateral positions should the rating change for a specific issue. Securities falling below the rating floor, as defined in the underlying agreement between the two counterparties, will automatically become ineligible as collateral. AutoSelect, our collateral management algorithm, will then select alternative eligible collateral to cover the transaction and return the ineligible asset to the collateral giver. This automated collateral substitution process can occur within an hour of receiving notification of the rating change since AutoSelect runs almost every hour during the business day.

As a result of the sovereign debt crisis, we have seen repo counterparties making changes to eligible collateral profiles by eliminating specific sovereign issuers. Some sovereign issuers, such as Greece, have virtually disappeared from the collateral pool used in the repo market. This trend has been confirmed by the most recent ICMA repo survey.

Laurent: Some organisations do apply haircuts on sovereign. Others don't. It is pretty hard to find a consensus right now, especially right after the

S&P downgrade on US debt. Knowing that CME announced earlier in August they have increased the haircut that applies to US government debt posted as collateral, we could easily infer it will tangibly impact collateral management rules.

Wingate: Yes. Many firms have placed acceptability restrictions on debt issued by the PIIGS countries (Portugal, Ireland, Italy, Greece and Spain) – many simply unable to accept it.

Firms are increasingly using concentration and correlation rules to ensure portfolio diversification and minimise risk. (For example, an Irish bank pledging Italian debt as collateral is less desirable from a credit risk perspective than an Irish bank pledging AAA-rated security with no correlation to the Euro debt crises). Where firms are declining PIIGS debt, collateral pledgers are sometimes faced with having to offer higher quality collateral such as cash or AAA rated securities – again increasing the demand and associated funding cost.

Although US treasuries may still be regarded as perfectly acceptable collateral firms are now looking to increase the haircut of the collateral in light of the fact that US has lost its AAA rating.

COLLINE currently maintains acceptability criteria such as asset class, correlation and concentration rules and ratings and tenor based haircuts, so preventing a collateral analyst from agreeing collateral that conflicts with a firm's internal credit policy, and report on discrepancies.

Scherff: An agreed collateral acceptability in the master agreement has to be updated more often. Also in the pricing of a treasury deal changes happen more often also on the back of the accepted collateral.

Morosini: As a market infrastructure, we have strict risk management guidelines reflecting our conservative approach towards business and the responsibility we have in the financial market. With our principal role hat on, we have strict guidelines for both our treasury business and our securities lending business with minimum rating set at A+ combined with other concentration criteria and exclusion criteria.

The European debt crisis and the US rating change pushed us to reinforce some concentration criteria but overall we did not change our criteria but reinforced our liquidation procedure. With our collateral agent role hat on, we reinforced our rating selection process to make sure we considered any changes happening on the market.

So far we must admit that very few collateral receivers have changed their collateral eligibility criteria or excluded some countries as long as they are investment grade. Although we see

more and more collateral receivers willing to use equities as collateral, we cannot say that the market has yet digested the fact that government bonds are maybe no more a point of reference for being the most secured assets.

Actually, people start to realise that if the single A range were exhausted, very few countries in the AA range would remain before reaching the AAA range. We don't think that a deep exercise on which collateral alternative to AA and AAA government bonds has yet started within the most conservative organisations.

SLT: What effect do you feel the emergence of CCPs will have on collateral management?

Wilson: The use of central counterparties (CCPs) for vanilla derivatives is changing the way the buy and sell side view collateral management. The level of complexity for buy and sell side clients is changing. There is an ever increasing need for collateral management services to provide holistic solutions across CCP and non CCP cleared derivatives, across bilateral repo as well as a need to provide collateral transformation in order to assist clients in meeting their obligations to the CCP. Regulation will change the way collateralisation of non vanilla derivatives occurs.

de Schaetzen: The emergence of CCPs will have considerable effect on collateral management. For many years now, CCPs have given their members the opportunity to pledge securities as collateral for margin management purposes. Some CCPs are working with triparty agents to help their members optimise their collateral usage. More recently, CCPs in Europe, such as LCH.Clearnet, have expanded their repo products to include repos in collateral baskets. This innovative service is intrinsically linked to collateral management as the selection, transfer and management of the collateral is outsourced to triparty collateral management platforms.

In the securities lending markets, the business case for CCPs has still to be confirmed, but progress is being made and new providers of non-cash securities lending solutions are coming to the market. These providers are also leveraging triparty collateral management platforms.

And, of course, CCPs will play a crucial role in the derivatives business. As derivatives trading moves from the OTC market to exchanges, there is little doubt about the future importance of efficient collateral management to manage derivative trade exposures. New regulations will only increase the demand for and use of collateral.



All these trends confirm the increasingly central role that collateral management will have in our future financial markets. This will be most evident in the evolution of triparty services as an integrated part of the CCP collateral management process.

Laurent: CCP for OTC products (and more precisely new regulations for OTC products) will increase collateral and margin requirements. Collateral related services such as enhancement & segregated accounts will be needed. Collateral quality will also be something to look at, since strong eligibility constraints will occur.

Wingate: Clearing derivative trades through CCPs was a requirement introduced by regulators to reduce counterparty risk post financial-crisis. However the impact of this on firms is that the collateral departments will be faced with an increase in the number of processes involved: more agreements, more margin calls – more costs, and firms are turning to technology to facilitate these demands.

A contributing factor to the perceived increase in volumes will be the requirement for firms to use more than one CCP (as no one CCP clears all products) and some counterparties can't clear through CCPs. Both these factors will result in bilateral relationships remaining.

Clearing derivatives through CCPs will further increase margin-call activity with the emergence of intra-day calls. Bi-lateral calls between counterparties have historically only ever been subject to one margin call per day.

The amount of collateral that firms need to pledge will further increase as CCPs will all require independent (up-front) collateral in addition to variation margin. At present under a bilateral agreement, interbank and pension fund relationships do not typically pledge independent collateral. As CCPs evolve the associated increase in funding requirements will make collateral optimisation even more key.

If the trade is not centrally cleared firms will face more rigorous margin and capital requirements by the regulator – to further discourage bi-lateral collateral relationships.

Further complications arise when clearing members act as brokers – they not only face CCPs on behalf of themselves but as they are clearing trades on behalf of their clients they also need to call associated collateral from them. Therefore from a broker's perspective the ability to provide efficient post-trade reporting and clearing services to the client remain key.

Scherff: It creates the danger of a complex black box calculation of margin. One can not

check margin calculation of the CCP. Also the accepted collateral for a CCP in combination with Basel III could be an issue.

Morosini: A big effect - actually it has already started. We see, for example, in our tri-party collateral management service a lot of business now flowing to CCPs, such as margining for on exchange derivatives but also for OTC derivatives and repos essentially. The collateral basket trading such as the LCH GC baskets or the Eurex GC Pooling are linked to our collateral management engine and we are now talking of business peaking at the €200 billion mark. We are also very supportive of the Eurex CCP lending initiative that will also change the way securities lending is done where again the efficiency of triparty collateral management will play a major role.

Rozental: Banks and services providers will enhance their collateral management services to support more sophistication in needs and better reactivity. They will also have to provide their client a full cross-margining service to cover their risk.

Milner: A move to CCPs will have a significant impact on the collateral management as a whole, although it will kick in for some products sooner than others. Rules for margining will be governed by the CCP, and the type of bi-lateral margin 'negotiations' that takes place now will be a thing of the past. In addition, most CCPs will have a conservative view on acceptable collateral, and the move to CCPs will therefore increase the cost of collateral on the underlying trades and reduce liquidity in the market. The effect will be felt most keenly in the OTC derivatives market, where mandatory clearing for vanilla trades will significantly increase overall collateral requirements for all market participants.

SLT: Is collateral management being consolidated across the business or is it still operated on a silo basis for each business area?

Scherff: There is overlap but due to legal structures, many silo structures still exist. Also to avoid disputes on securities lending and borrowing exposure one would avoid combining this with CSA collateral management.

Morosini: In a recent study we conducted with Accenture across 16 universal and investment banks, we found out that most of the collateral fragmentation is internal and due to business silos. As a market infrastructure, we believe in interoperability and we will also continue addressing market fragmentation on a global basis to provide an efficient usage of collateral across time zones.

Addressing internal fragmentation and the very territorial attitude some could have towards "their" collateral will be naturally challenged by organisations as regulations and as the need for better collateral optimisation increases. We have already seen many firms adapting a group wide approach towards collateral management, exploiting all the collateral pools available within a group across different entities in different countries. We believe that the executive management of firms will more and more decide that collateral is a priority resource for liquidity management and quickly see decisions giving power to liquidity and collateral managers to mobilise collateral across the firm breaking any existing silos.

Wilson: Some firms are still operating on a silo basis but we have seen others create a centralised funding solution across all financing functions, to maximise the internal optimisation of collateral and funding.

de Schaetzen: Over the past few years, many firms have understood the benefits of managing all of their collateral needs under the responsibility of a single team. Growing demand for collateral when collateral resources are becoming scarce is driving firms towards the same conclusion: centralise the collateral management function.

From its place in the corner of the trading floor, collateral management is now a strategic discipline for many institutions. Triparty collateral management agents are continuously broadening the array of services on offer to make it as easy as possible for clients to outsource their collateral management needs for multiple types of transactions. Thus, clients can access triparty services for their repo and securities lending activities alongside services for open market operations with central banks and derivatives – all from the same service provider.

However, the situation within the banking sector is imbalanced in that some banks have invested in strong and scalable collateral management capabilities, working closely with triparty agents, while others will need to quickly build or outsource this function to remain competitive in such a fast-moving market.

Laurent: With the emergence of the new regulation, we think that some synergies should be found across different business area (third-party custody accounts with middle-office function)

Wingate: Historically, business lines within financial institutions developed at different times creating silos for each business. However as firms began to consolidate their collateral assets to improve liquidity and reduce funding, synergies between the ISDA derivative, GMRA repo



and GMSLA securities lending business processes became apparent, leading to a desire to process them together for operational efficiency.

COLLINE's flexible workflow focuses on these synergies and makes it possible to consolidate the collateral management operational process onto a common platform where a firm's entire collateral inventory can be accessed.

Dispensing of silos means that master netting (one call per counterparty across all business areas), which is not a new concept but one that has in the past been difficult to achieve across silos, can now be achieved – reducing calls and associated activity.

COLLINE master netting functionality enables increased client service by allowing convenience margining.

Using a single collateral management platform also provides credit risk managers with an accurate and consolidated counterparty risk profile across asset classes – without the need for them to collate information from multiple systems, which also facilitates consistent management and client reporting.

If ISDA, GMRA and GMSLA collateral agreements are all managed out of COLLINE by one department then why not consolidate these three margin calls into one master call? That is the next challenge for bilateral agreements and something COLLINE is equipped to support.

Rozental: Today the trend today is to consolidate collateral across different asset classes and different business entities.

Milner: We are seeing a big drive to remove the silos in a bid to enhance collateral optimisation. However, this can be a rather slow process because it may require organisational changes that take time. This will, of course, also have a significant impact on the technology solutions used. Some point solutions can handle collateral management for specific silos, but not many can support the cross-product approach that is required for an enterprise-wide solution.

SLT: How important is automation and technology within collateral management?

Wilson: Technology and automation are critical to keep in step with all regulatory and client demand changes. Our Global Collateral Engine provides an end to end, enterprise wide collateral management solution to our clients. We see greater globalisation of collateral, greater demand for optimisation tools and consistent with this we have developed the afore mentioned Global Longbox and External Longbox func-

tionality to enable our clients to more effectively manage their holistic collateral requirements. We have also been developing more tools to streamline the onboarding process and improve the speed and ability to provide greater customisation and granularity. Automating collateral management or outsourcing to a tri-party agent removes the administrative burden of managing many day to day operational issues. It enables a broader oversight of risk and credit and facilitates the use of more sophisticated collateral testing, therefore increasing volume without an increase in head count.

de Schaezen: The complexities inherent in efficient collateral management, particularly as the range of transactions requiring collateral continues to expand, demand expert use of technology to automate and standardise as many processes as possible. With the growing volumes of collateral movements we conduct everyday, automation is essential to fulfill our obligations to clients while giving clients the room to grow their business with us even further.

Moreover, the substantial investment required to build state-of-the-art collateral management facilities is pushing more and more firms to outsource the function to a neutral agent. As a result, these firms will be able to focus on more added-value and profit-oriented aspects of their business.

Laurent: Automation is crucial for reconciliation. State-of-the-art pricing systems are also essential to value complex OTC products

Wingate: Firms will be unable to meet market initiatives and/or new regulatory requirements, such as those in the Dodd Frank bill, without using technology to automate the existing processes which are largely manual and subject to human error.

Inefficiencies in the collateral management process impact a firm's exposure in the event of a counterparty default, funding, P&L, reputation risk and regulatory compliance – these can be addressed by automated workflows with audited and controlled processes.

As volumes increase, there's a danger of risk transference where in trying to mitigate counterparty risk, institutions create operational, reputational and regulatory risk because they have inadequate technology in place.

A high degree of automation can be quickly achieved when implementing COLLINE's considerable STP capabilities, which minimises risk. STP allows for data quality and completeness checks – enabling the collateral team to automate the majority of processes and concentrate on exceptions that require personal attention.

The collateral management process requires data from many sources - but one of the challenges has always been to quickly and accurately collate this data to produce a margin requirement.

COLLINE supports multiple data feeds from internal and external sources that can be scheduled to run at set times (when complete: the earlier the better, on a daily or intra-day basis). Margin calls can be automatically sent as soon as possible to ensure your call is given priority in the event of a default. It's even possible for the collateral manager to send calls from an iPhone. Once the calls are sent, COLLINE's flexible workflow controls the rest of the margin call process and the integrated dashboard displays the real-time status of each call.

Scherff: Collateral management remains a very manual process, but if you want to optimise your collateral you have to automate.

Morosini: We have offered triparty collateral management since 1992 with the launch of the first European triparty repo service. Since then we did not stop enriching our system with new features up to the point that it has now become one of the most sophisticated collateral management systems on the market.

Offering real-time collateral allocation, substitutions, margin calls, re-hypothecation and settlement is something you cannot develop from one day to another. The more risk managers look at modelling their business the more demanding they are in terms of eligibility criteria such as concentration criteria on a multiple of asset classes, sectors, countries, ratings etc. Collateral givers are willing to have their collateral optimised and according to their rules and priority allocation, following their business settlement flows.

Without automation you just cannot do a proper job. We cannot imagine that any collateral management service these days could only allow for same currency, monthly margin calls, no dividend or coupon while allocated and no substitutions and re-hypothecation rights, this would not satisfy any current market players. With new regulations, collateral optimisation, allocation across time zones and different settlement systems, you have no option than being automated and technology driven.

Rozental: This is key for a good collateral management, specially to monitor intra-day exposure cross asset classes including OTC, managing collateral substitution during the day, capacity to process very detailed reports for risk and regulators... It's also important to have the capacity to optimise cash accounts among the different custodians. To achieve those objectives, the technology is really important.



Milner: Having appropriate technology to address the new enterprise collateral management requirements is key. As previously indicated, the breaking down of specialist collateral management product silos, the move to proactive management of collateral, and the drive for asset optimisation all require systems to support extended functionality that is over and above what many point solutions can do today. Further automation of processes such as electronic margin call messaging and dispute management also require technology support. Most firms recognise that investment in robust and flexible solutions is necessary in order to fulfill the new collateral challenges in today's market.

SLT: Are you seeing an increase in the use of standardised collateral management agreements in the emerging markets of Eastern Europe and South America?

Wingate: Helen Nicol, director of COLLINE at Lombard Risk sits on the ISDA collateral working group, which is encouraging standard agreements (Credit Support Annexes). Standard CSAs will remove ambiguity in collateral management terms and streamline related process. Once the market has agreed on the format, it's expected that emerging markets will adopt the new 'Standard CSA'.

The European Repo Council has also looked at standardising the GMRA repo document which should be adopted by emerging markets.

COLLINE's flexible collateral agreement business rules enable standard AND non-standard agreements to be supported.

Morosini: Yes, we see more customers willing to sign standard agreements such as the GMRA and GMSLA or the ISDA without any issues. On top, they have no problem signing our collateral management service agreement (CMSA) as the business is already more international and across continents. We have a privileged partnership now with Cetip, one of the Brazilian CSDs, to provide collateral management services to them and their customers to cover OTC derivatives contracts. This was done with both industry contracts and local contracts but with standard international terms and conditions.

Rozental: Not really among our current clients however this could happen in the future

Wilson: We see collateral agreements in these markets contracted under US or UK law. We also see an increasing need for local jurisdic-

tional requirements that involves the use of collateral "locally" and under local law giving rise to substantial research and due diligence in order to ensure that collateral can be perfected under local law.

Milner: As a solution provider, it is important that SunGard maintains support for market standard agreements and incorporates any changes as they arise. Our customers are successfully using our solutions to manage business in the emerging markets in Eastern Europe and South America. However, we are not in the best position to comment on the prevalence of use of standard paper.

SLT: What do you think the future holds for collateral management?

Wilson: We are very positive about the outlook. Over the last few years, there has been a positive increase in the use of collateral across derivatives, securities and repo. But there has been a considerable divergence in client requirements as customisation has become commonplace.

Clients are increasingly looking across their balance sheet to identify alternative forms of collateral that can be used for financing. In February we announced the ability to accept physical gold on behalf of lender clients as collateral to satisfy securities lending and repo obligations.

de Schaetzen: The future for effective collateral managers will be bright, as collateral management has now become closely integrated with liquidity management. In the future, clients will select the service providers that demonstrate superior collateral management skills. Service providers, on the other hand, must offer a one-stop service to help clients cover exposures arising from multiple types of transactions and help clients pool collateral held in various locations.

Laurent: With global leaders aiming to reduce systematic risks, we believe collateral management will become more tightly regulated.

Wingate: It is clear that collateral management is now a key focus area for financial institutions.

There is increased scrutiny both from the business and regulators on inefficient processes so we can expect to see more rapid change and development in these areas.

We talked about optimisation, CCP and master netting above and we can expect to see ISDA standardising collateral agreements (CSAs) and hopefully the ERC and ISLA will follow suit.

ISDA are also finalising procedures to govern the way firms resolve margin call disputes (ISDA Dispute Resolution Protocol - DRP). Firms will have to adhere to the DRP and technology will play its part here too.

COLLINE has a dedicated "Dispute workflow" to support the DRP

Margin calls are generally communicated to clients via email but because of ever-increasing volumes and the desire for more automation, Electronic Messaging instead of email looks to be the way the market is heading.

COLLINE has been designed and developed to support Electronic Messaging once the market is ready to go-live.

Scherff: We are going to see further automation, the growing importance of CCPs and liquidity optimisation

Milner: I think we are still in the relatively early days of big changes in the collateral management space as more firms adopt an enterprise wide approach in order to hold down collateral costs and minimise the impact of additional collateral demands on liquidity. Many of the large sell-side firms have been focusing on this area for some years, but now this challenge is at the forefront of the minds of the management at many different types of financial market participants. No doubt there will be many more roundtables, conference sessions and internal projects as firms seek to overcome these challenges and adjust to increased demand for effectively managed collateral.

Morosini: We have been offering collateral services since 1992 and for the first time we believe that we are at the crossroads of something big for the secured financing industry. Our collateral under management continues to grow exponentially - needless to say, the crisis has accelerated a trend that was already on the up side. Regulations and the CCP franchise will continue driving the growth of collateral management but now not just in Europe or in the US but on a global scale. The recent European and US debt crisis and the stock exchange massive fall are not helping restore trust amongst market participants. This is unfortunate because the lack of trust will continue and increase costs; but fortunately, it will push collateral even more to the centre of any future financial transactions going forward. How you manage and optimise your collateral, where your collateral is located and how quick you can mobilise it will be the key for a sustainable business for many firms from now on. **SLT**