

# Good, Bad or Inevitable?

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## **The Introduction of CCPs in Securities Lending**

A White Paper on the issues, opportunities and implications for the securities lending industry.

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## Preface

The potential for introduction of Central Counterparty (CCP) services in the securities lending markets has been under discussion for a number of years. During 2009 those discussions became a reality and CCPs in the United States and in Europe have launched securities lending facilities in collaboration with electronic trading platform providers.

While these are significant early stage developments, broad adoption of CCP services in the securities lending industry remains some way off. Indeed, debate on the merits of CCP services continues throughout the industry. To date, the opposing arguments have resembled ships passing in the night, with a lack of independent analysis and little resolution.

The objective of this white paper is to provide independent analysis to the arguments for and against industry-wide adoption of CCPs. This is not an academic paper –rather, the intent is to bring a practical, business-driven approach to analysis of the opposing arguments. The paper draws on discussions with representatives of key securities lending market participants, CCPs active in securities lending and regulatory authorities. Where appropriate the paper references material drawn from the extensive range of technical analyses relevant to CCP facilities in securities lending markets.

This is a critical time for the securities lending industry as markets begin to recover from the credit crisis, transparency and risk management become imperatives, short-selling and related lending practices come under unprecedented scrutiny and institutional investors re-examine the opportunities and risks inherent in securities lending. The authors believe that time is no longer on the industry's side and that the adoption of CCP services merits serious and timely evaluation in the context of developing securities lending markets.

## Executive Summary

Central Counterparty (CCP) services have been introduced on both sides of the Atlantic, linked to electronic trading platform initiatives, but are some distance from broad adoption in securities lending and discussion continues throughout the industry on the merits of CCPs.

The introduction of CCPs in securities lending is in close alignment with the drivers of change in the industry: increased attention to counterparty risk, tougher regulatory requirements in terms of capital allocation and balance sheet usage, new awareness of the costs to end users inherent in securities lending and regulatory concern over systemic risk and market supervision. CCPs do not directly drive improvements in market transparency and price formation but are supportive of electronic trading platforms through broadening trading market participation and providing post-trade anonymity.

Despite the demanding and product specific requirements of securities lending, CCPs are able to deliver the fundamental benefits for which they are designed, namely counterparty risk mitigation and improved operational efficiency. Optimisation of the CCP model in securities lending will require significant industry consultation and flexibility in application.

Proposed regulatory changes have made inevitable the broad adoption of CCPs in securities lending. Notably, proposed changes to capital adequacy guidelines in Basel III would present significant challenges to the existing securities lending business model and would inhibit growth in the industry. The broad adoption of CCPs in securities lending is not only inevitable but provides a major opportunity to reduce systemic risk, increase participant earnings and reduce the industry's cost structure, while providing a foundation for sustained growth. Broad adoption of CCPs will contribute to growth in both electronic trading platform business and in bilateral OTC securities lending as the business will become less resource intensive allowing both to flourish in a growing marketplace.

This paper is targeted at a number of parties. The findings should be of interest to firms looking:

- To generate incremental returns through a wider distribution network;
- For a more efficient market where they can achieve more with fewer resources;
- To reduce balance sheet and capital utilised in the conduct of securities finance business;
- To reduce overall industry risk whilst improving market efficiency;
- To be strategic thinkers looking towards the future rather than remaining rooted in the past.

While considerable uncertainty remains around the specifics of CCP adoption in securities lending, the introduction of CCPs presents an opportunity for competitive advantage, particularly to Agent Lenders and Principal Borrowers able to work with Beneficial Owners and End Borrowers to optimise their participation and to transfer significant lending volumes from a bilateral to a centrally cleared environment. Substantial use of CCPs can sit comfortably alongside bilateral business allowing the overall market volume to grow without placing unnecessary burdens on firm resources. The securities lending industry needs to be proactive in determining the optimal CCP configuration and working with CCP providers to achieve broad implementation.

## Introduction

Securities lending has often been described as a “back-office” or operational function. Certainly, the origins of organised securities lending in the 1970s owes more to expediting settlement and the development of an ancillary custodial service and less to an investment management or trading market discipline. Responding to the securities industry’s accelerating demand for borrowed securities to cover settlement failures and to support investment strategies involving short-selling, custodian banks commenced the development of organised lending programs which developed into key revenue generating divisions supported by significant operational, administrative and business resources.

In understanding the current dynamics of the securities lending markets and the debate over the introduction of CCP facilities, it is important to contrast the development of securities lending as an arrangement between the custodian banks (as well as a limited number of direct lenders) and the leading broker-dealers with the investment and trading led development of equities, fixed income and other securities markets. Securities lending still comprises primarily a series of bilateral relationships rather than a marketplace as is standard in equity, fixed income and derivatives markets.

To a degree, securities lending has moved toward recognition as an investment management discipline. A number of institutional investors have recognised lending as a significant source of alpha revenue generation and worked with custodian agents and third-party agents to develop lending programs geared toward their specific investment objectives and disciplines. This positive development has accelerated following evidence of lack of awareness of and involvement in the detail of lending programs by some beneficial owners demonstrated in the 2008-9 fallout from the credit crisis, particularly related to cash reinvestment programs. The industry is currently experiencing heightened beneficial owner awareness and involvement which is expected to bring securities lending closer to broad alignment with investment management disciplines and heightened awareness of trading practices in securities lending.

If securities lending programs in general have moved toward investment management disciplines, trading itself has remained essentially a series of bilateral arrangements between agent lenders and major broker-dealers. These arrangements have been influenced by factors not found in other trading markets, including “ratio lending”, the linkage between take-up of GC (general collateral or readily available securities) and availability of Specials (or hard to borrow securities).

The continuing emphasis on bilateral arrangements between agent lenders and major broker-dealers (essentially the prime brokers) shapes the characteristics of the current trading market and exerts a profound influence on the debate over development of CCP facilities in securities lending.

## Change in the Securities Lending Marketplace

There is no question that Securities Lending has developed into a major global market with linkages to securities and derivatives markets worldwide. At year-end 2009, lendable equity assets were estimated at \$ 5.3 trillion globally, with an estimated \$700 billion on loan. While still substantial, these numbers reflect a reduction of almost 50% from the lending market peaks experienced in 2007.

Change has come slowly to the securities lending market which has always been regarded as “different”. Electronic trading platforms have been introduced in the US (Quadrisev) and in Europe (SecFinex) and have made headway in their respective markets. However, bilateral relationships between the custodian agents and the prime brokers continue to dominate the trading aspects of securities lending, contributing to a number of generally recognised deficiencies when compared to other markets:

1. The absence of a central order book and of centralised transaction reporting leads to a **lack of transparency**, affecting beneficial owners and end borrowers. *Pricing is inefficient* and reflects high intermediary costs resulting from the necessity of manual search and maintenance of multiple counterparty credit arrangements.
2. Given the thousands of beneficial owners supplying securities and the thousands of end user hedge funds and proprietary traders borrowing securities, the bilateral trading focus of the current market for securities lending results in a **concentration of counterparty exposure** among a limited number of major prime brokers and agent lenders. Generally, such a pronounced lack of diversification is of increasing regulatory concern, best evidenced by the recent moves focused on penalising large counterparty exposure through extra capital provisioning. The market has evolved into a structure which is viewed by some as oligopolistic in nature.
3. The lack of a central market place for securities lending contributes to high operational and technology costs in the industry. Operational functions such as collateral valuation and maintenance, administration of recalls and returns, monitoring and processing of corporate actions can reasonably be expected to be more cost-efficient in a centralised market environment rather than in a series of parallel processing environments. Even with the increased use and penetration of external vendor reconciliation services, there is no doubt that increased standardisation and availability of “golden” figures from a CCP can be expected to **lead to improved operational and reconciliation processes**.
4. Securities lending is an OTC business on a global scale, with limited direct oversight of trading markets. **Regulatory oversight** is particularly difficult to accomplish in a diffused trading market with no central data repository. In times of market stress this difficulty in monitoring securities lending transactions has contributed to regulators’ decisions to impose blanket restrictions on securities short selling activities and can be expected to influence further regulatory controls.
5. **Business volumes have decreased substantially** from the heights reached in 2007 with an estimated fall by as much as 50%. This has added pressure for market participants and contributed to the focus for many firms to cut back rather than invest for the future.

If change has always come slowly to securities lending, a series of differing but related factors is now driving an accelerated demand for change in the industry.

First, a result of the credit crisis has been a reappraisal of the risks and rewards inherent in securities lending. Beneficial owners are increasingly focused on maximising the intrinsic value of earnings from securities lending and aware of the risks inherent in generating large volumes of lending in order to receive cash for reinvestment purposes. This renewed focus on intrinsic earnings argues in favour of a transparent, competitive marketplace with efficient pricing and best execution standards.

Second, a further result of the credit crisis, exacerbated by the Lehman default, is an increased focus on counterparty risk. Concerns over the measurement and management of counterparty risk are broad and global in nature, with particular scrutiny of risks arising from OTC businesses including derivatives, repurchase transactions and securities financing. The Bank for International Settlements (BIS) Consultative Document “Strengthening the resilience of the banking sector” , issued in December 2009, is explicit: “The risk coverage of the capital framework will be strengthened....the strengthened counterparty capital requirements are designed to increase incentives to move OTC derivative exposures to central counterparties and exchanges”.

Third, broker-dealers and investment banks are operating under increasingly stringent capital and balance sheet limitations. Securities financing transactions (which can involve significant usage of firms’ resources) face significant capital costs and balance sheet management issues and these are likely to become even more onerous through the pending changes to Basel II referred to above and any future changes to capital rules. A return to pre-crisis levels of securities lending would place major strains on many borrowers’ balance sheets, capital usage and counterparty risk capacity.

Fourth, the credit crisis has generated global concern over systemic risk in financial markets, particularly in relation to Over the Counter (OTC) markets. At the same time, the practice of short-selling has come under increased scrutiny globally, with restrictions on short –selling (both covered and naked short-selling) imposed at different times in a range of markets and market segments. Development of centralised trading and clearing facilities for securities lending provide a framework for more effective regulatory supervision and a basis for documentation of borrower compliance with short-selling rules. This is consistent with the approach that regulators take across multiple bank business lines.

In the following sections we examine the extent to which the introduction of CCPs to the securities lending markets is in alignment with the fundamental drivers of change in the industry, as well as the practical implications for the industry’s key constituents.

## The CCP Paradigm

The use of Central Counterparty (CCP) facilities has become widespread in equities, repo and exchange-traded options and futures markets worldwide. In these markets a close alignment between a centralised marketplace (an exchange or alternative trading platform) and a related CCP or CCPs is standard practice and considered to be an optimal market arrangement. Indeed, certain of the characteristics of CCPs that are at odds with traditional securities lending are entirely in line with existing beneficial owner activity in their other investment sectors.

On a global basis, regulators are pushing toward increased use of centralised clearing, particularly in relation to OTC derivatives products. For example, a recently released European Commission Consultation Paper on Derivatives and Market Infrastructures proposes mandatory use of CCP's for "standardised derivatives contracts". For instruments not classified as "standardised derivatives contracts", the paper supports more stringent capital allocation and collateral haircut requirements as defined under the proposed revisions to Basel II.

CCP facilities are not unique to centralised market structures. Potentially relevant to the securities lending marketplace is the application of CCP facilities to OTC market structures. For example, launched in 1999, the LCH.Clearnet Swapclear service for OTC interest rate swap (IRS) transactions now clears approximately one third of the global IRS market with *more than US \$ 200 trillion in bilaterally arranged notional trades outstanding*.

### Purpose and functionality of a CCP

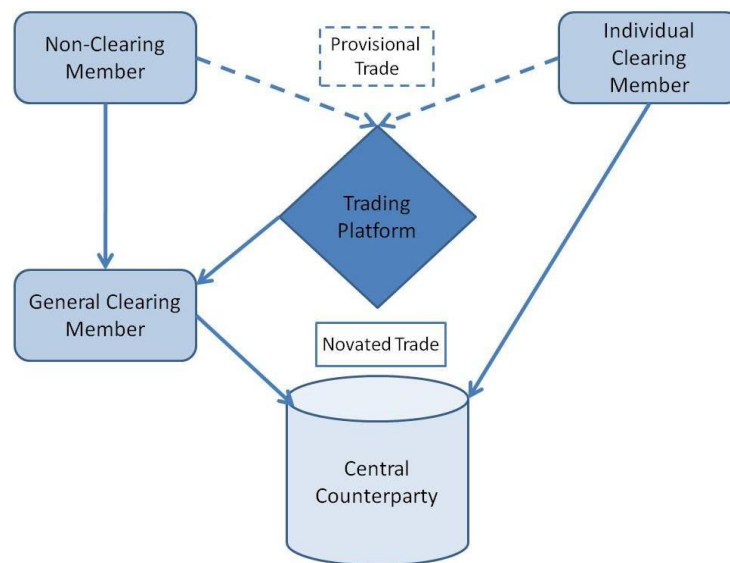
A CCP serves two primary functions; first (and foremost) the centralisation and mitigation of counterparty risk and second, the improvement of operational efficiency in post-trade processes. To achieve these objectives a CCP interposes itself between buyer and seller in each accepted transaction, becoming the seller to every buyer and the buyer to every seller. In this context the terms "buyer" and "seller" refer to the CCP member firms involved in the transaction, not to the end buyer and seller or to other intermediaries in the transaction. Hence, in the securities lending context, the question of whether an Agent Lender (or potentially a Beneficial Owner) becomes a Clearing Member (and a counterparty of the CCP rather than counterparty of a General Clearing Member/Clearing Member) becomes critically important, requiring individual analysis of the relevant Beneficial Owner, Agent Lender and potential General Clearing Member/Clearing Member circumstances.

While CCPs deploy differing processes to accept transactions presented by member firms, the CCPs currently offering securities lending services all utilise *novation*, a process by which a contract is created between the presenting member firms, replacing a provisional (prior to acceptance) trade and immediately transferred to the CCP. In the European context, CCPs typically offer three classes of membership: *General Clearing Members*, able to clear their own/client trades and offer clearing services to Non-Clearing Members, *Individual or Direct Clearing Members* able to clear their own /client trades and *Trading or Non Clearing Members* who clear through the services of and under the responsibility of a General Clearing Member. In the US model, a *Clearing Member* is able to clear for its own/client accounts and on behalf of non-member

firms, under its responsibility. Figure 1 (below) illustrates the novation process in the European model, involving a transaction between an Individual Clearing Member and a Non Clearing member (under the responsibility of a General Clearing Member). The provisional trade created through the trading platform is replaced by a novated trade immediately on acceptance by the CCP.

The result of this process is the creation of two trades: (1) between the Individual Clearing Member as buyer and the CCP as seller, (2) between the General Clearing Member as seller and the CCP as buyer. In parallel a trade is automatically created between the Non Clearing Member and the General Clearing Member under the terms of their clearing agreement.

Figure 1. CCP Novation Process



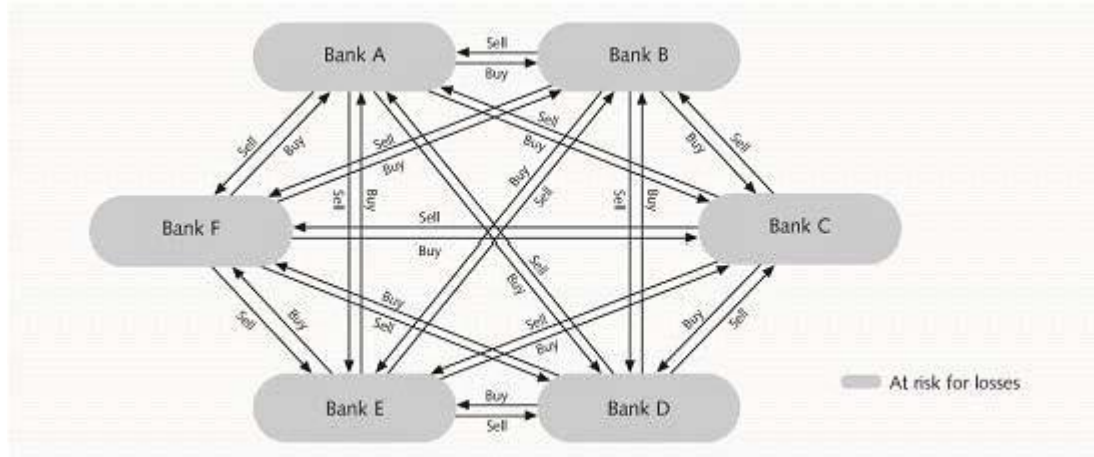
## CCP Risk Management

In a CCP market model the centralisation of counterparty risk offers key structural advantages. First, CCPs are able to apply multilateral netting as opposed to the bilateral netting arrangements applicable in OTC settlement markets, significantly reducing gross risk exposure. Through becoming the counterparty to each member firm's transaction, a CCP is able to offset all a member firm's buy and sell transactions, effectively "netting" all the positions which would arise in a bilateral netting arrangement. Second, in addition to optimising netting potential, the CCP model reduces systemic risk by eliminating the potential for contagion in the event of default by a Clearing Member. This is achieved through the multilateral netting process isolating the defaulting member's exposure to a single position with the CCP, against which the CCP holds margin collateral and the defaulting member's guarantee fund contribution.

Fig 2 (below) illustrates the treatment of counterparty risk in a bilateral OTC market, without centralised clearing, contrasted with the treatment of counterparty risk in a CCP environment (Figure 3).

Figure 2. Risk Management under a Bilateral OTC Model

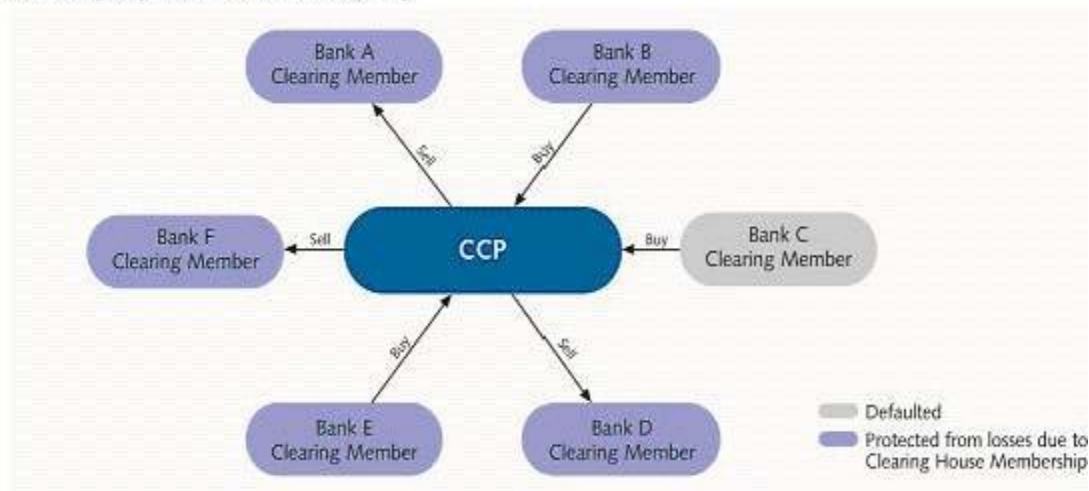
**Counterparty Risk – Bilateral Settlement**



OTC Derivatives: The default of firm A in an OTC derivative transaction has a possible contagion effect. It does not only affect firm F, it leaves all connected trading counterparties from firm A to F potentially at risk.<sup>1</sup>

Figure 3. Risk Management under a Central Clearing (CCP) Model

**Counterparty Risk – Central Clearing**



In the example given, the CCP stands in between firms A to F in the transactions. If firm C defaults, positions are closed out or transferred to other members. The effect of default is contained, there is no contagion.<sup>2</sup>

<sup>1</sup> Source: World Federation of Exchanges

<sup>2</sup> Source: World Federation of Exchanges

## CCP Risk Mitigation

In order to mitigate the risk of loss from counterparty default, CCPs deploy highly structured risk management programs, typically including the following elements:

### *Membership Requirements and Member Monitoring*

CCPs establish membership criteria based on minimum capital requirements, credit ratings or a combination of financial criteria. Additionally, membership requirements involve assessment of applicants' operational readiness and compliance with CCP standards.

An advantage of the centralised structure relates to a CCP's ability to monitor member firms positions across the range of markets cleared by the CCP and to promptly initiate actions to increase collateral requirements or to unwind positions in distress situations.

### *Margin Requirements*

CCPs apply margin requirements against all accepted transactions, comprising *initial* margin and *variation* margin. Initial margin is calculated to cover risk under normal market conditions, with variation margin covering subsequent market movements relating to positions and related collateral.

Variation margin is calculated on at least a daily basis, with intra-day and real-time monitoring increasingly employed.

Margin requirements apply to both Clearing Members (representing Lender and Borrower) in a novated securities lending transaction, as the CCP guarantees both return of the loaned securities and the related collateral. Margin requirements (additional collateral) should not be confused with the collateral requirement (principal collateral) agreed between the lender and borrower in a securities lending transaction.

### *Guarantee Fund Requirements*

CCPs require member firms to maintain individual contributions to a Guarantee Fund (or Clearing Fund), calculated to cover exposure to significant default beyond a defaulting member's available margin collateral.

## CCP Lines of Defence

A CCP's multi-level defence against counterparty default would normally be applied as follows in a default situation:

Figure 4 CCP Lines of Defence

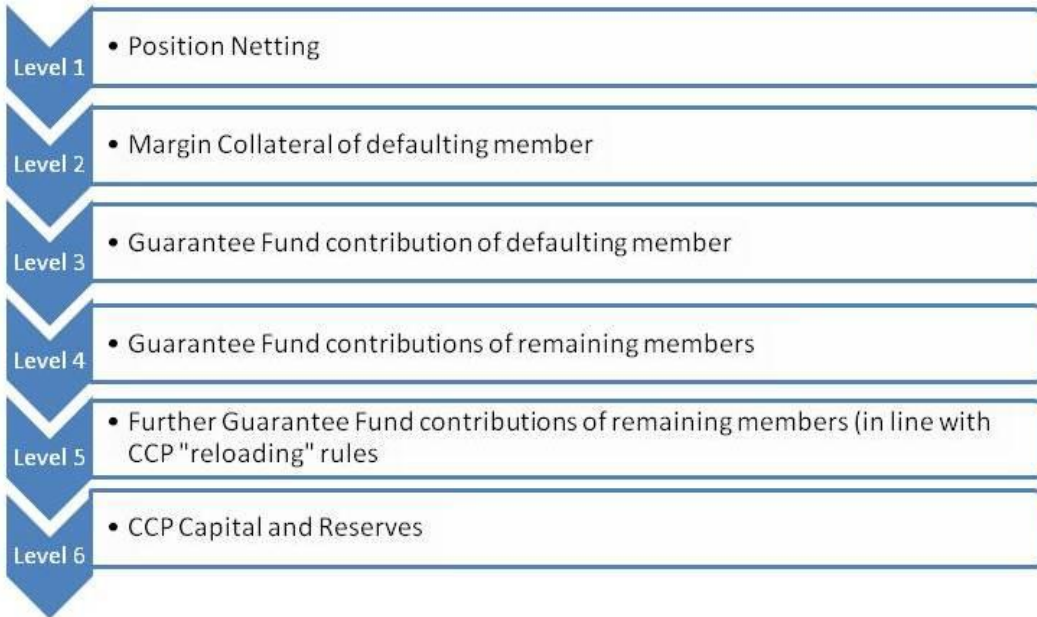


Figure 4 (above) depicts the principal lines of defence deployed by CCPs against the risk of counterparty default. It should be noted that there is some degree of variation between the CCPs. For example, Eurex Clearing deploys a CCP Reserve Fund and SIX x-clear deploys 50% of CCP free reserves, both as a fourth line of defence (prior to application of Guarantee Fund contributions of remaining members).

CCPs are single purpose entities, formed specifically to provide clearing services. Default of clearing members is rare and a CCP default has never occurred. Under the proposed BIS changes to Basel II, banks' collateral and mark to market exposures to CCPs (and exchanges) meeting the criteria of CPSS/IOSCO will qualify for a 0% risk weight (currently under discussion-potentially increased to a 1-3% risk weight), reflecting the regulators' preference for and confidence in the use of CCPs in mitigating counterparty risk.

## CCP Post-Trade Services

As a result of their central position in the marketplace, CCPs are well placed to reduce post trade complexity through acting as a hub-link and by standardising processes. In the trade settlement process, CCPs are able to utilise automated linkages to Central Securities Depositories (CSDs) and International Central Securities Depositories (ICSDs) and to operate on an efficient net settlement basis.

## CCPs in Securities Lending

In common with derivative asset classes, securities lending presents a series of challenges (and opportunities) to the introduction of CCP facilities. In this section we examine the unique requirements relevant to CCPs in securities lending, the extent to which CCPs are currently meeting or are planning to meet those requirements and in Appendix 1 provide profiles for the CCPs active in securities lending.

### CCP Development in the US market

In the United States, securities lending CCP services are currently provided by the Options Clearing Corporation (OCC). From 1993, OCC has operated a Stock Loan Program, clearing loans arranged by members on a bilateral basis and received as matched transactions from the DTC. From January, 2009 OCC has provided a CCP service to the AQS Stock Lending Market. AQS is an electronic securities lending trading platform owned by Quadriserv. AQS offers trading in loans related to more than 5,000 equity, ETF, index and ADR instruments.

As of June 2010, through the OCC *combined* Stock Loan Program and AQS Securities Lending Market Program some 1200 transactions are processed daily, with 6900 contracts outstanding valued at \$12 billion. The transaction volume transmitted by AQS to OCC is actually in the region of 1500 including rerates and other relevant transactions. There are 65 Clearing Members in the combined program as well as 18 non-clearing members in the AQS market.

Key features of the OCC Stock Loan Program and AQS Stock Lending Market CCP facilities are summarised in Appendix 1.

### CCP Development in the European Markets

In Europe, the electronic securities lending trading platform SecFinex has partnered with LCH.Clearnet for the Belgian, French, Dutch and Portuguese markets and with SIS x-clear for the UK, Austria, Denmark, Finland, Germany, Norway, Sweden and Switzerland. SecFinex offers a Private (bilateral negotiation) market, an Order (anonymous bid/offer) market and an Auction (by invitation) market for Asian, European, UK and US equities loans. In June 2010 the SecFinex trading market posted aggregate offers in excess of EUR 5 billion, aggregate bids in excess of EUR 2 billion and average loans outstanding in excess of EUR 400 million.

Additionally, Eurex Clearing is currently developing a securities lending CCP service designed to support the bilateral OTC market and has partnered with Quadriserv to support a planned Euro AQS trading platform.

Key features of the LCH.Clearnet CCP service for the SecFinex market, of the SIS x-clear CCP service for SecFinex and of the planned Eurex Clearing bilateral OTC service are summarised in Appendix 1.

# The Requirements

## 1. Market Structure

As noted in the Introduction to this paper, the securities lending marketplace demonstrates a relatively complex participant structure, with (at least) four major constituents: (A) the Beneficial Owners, many of whom lend through agents but some of whom lend directly through affiliated entities, (B) the Lending Agents (custodian banks and third-party providers), (C) the Principal Borrowers (the Prime Brokers and other sell-side firms) and the End Borrowers (principally Hedge Funds and sell-side firms' proprietary trading desks). Additionally, the US market in particular features specialist market-makers and broker-dealer firms active on both sides of the market. The CCPs presently offering securities lending clearing operate market structures which essentially maintain the roles of the four key market constituents. It should be noted that only Clearing Members become counterparties to the CCP and benefit from the CCPs low risk weighting, making the selection of access method to the CCP critical for Beneficial Owners and Agent Lenders.

Figure 5 (below) illustrates the broad market structure applicable to a CCP supported securities lending market.

Figure 5 CCP Market Structure

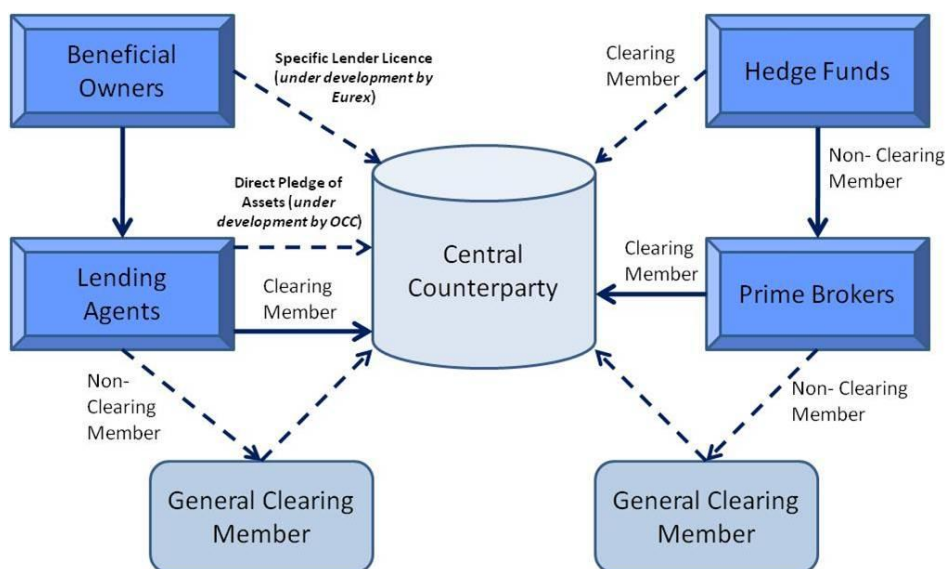


Figure 5 (above) illustrates the choices presented to market participants in a CCP supported securities lending market.

**Beneficial Owners** are generally expected to rely on Agent Lenders to provide access to CCPs as an integral part of the lending service. However, the proposed Eurex Clearing service to the bilateral OTC market anticipates offering a *Specific Lender Licence*, available only to Beneficial Owners (although Agent Lenders would operate on behalf of Specific Lender licence holders). Holders of Specific Lender Licences will not be required to provide margin nor contribute to the CCP's Guarantee Fund provided that the Specific Lender Licence holder maintains collateral received against securities loans within the CCP.

**Agent Lenders** (both custodian and third-party agents) have the choice of becoming Clearing Members, with direct access to the CCP, or of accessing the CCP through a General Clearing Member (Clearing Member in the US). In practice, the majority of the major Agent Banks are likely to operate through affiliated entities extending existing CCP participation to the securities lending service, thus benefiting from the CCPs' low risk weighting.

**Principal Borrowers** (major prime brokers/ broker-dealers) are likely to already be CCP members through securities trading business lines and are expected to extend or add memberships to cover securities lending and benefiting from the CCPs' low risk weighting.

**End Borrowers** are expected to access securities lending CCPs, in most cases, through their prime brokerage relationships. In some instances the end borrowers may acquire Non Clearing Member status, allowing direct trading access under a General Clearing Member (US Clearing Member) responsibility. However, major Hedge Funds meeting CCP membership requirements may be expected to take Clearing Member status on a direct basis.

It should be noted that the favourable treatment proposed under Basel II revisions for counterparty credit exposures within a CCP environment (0% risk weighting) apply to Clearing Members only (as they contract direct with the CCP). Thus in order to benefit from this treatment, market participants must become a Clearing Member. This will inevitably impact market participants' decisions on whether to access a CCP directly or through a General Clearing Member/Clearing Member.

## 2. Critical Functionality

Unlike the purchase or sale of equities or fixed income securities where the clearing function is completed and final within a few days, securities loans are extended term transactions (almost entirely of open duration) with a series of ongoing obligations through the life of the loan and a "closing" as well as an "opening" transaction. As the counterparty to all member transactions, the CCP must treat all open loans as "pending contracts" until the closing transaction and effectively guarantee performance against the obligations of the loan.

Figure 6 (below) depicts the key functionality required from CCPs in securities lending. CCPs are positioned to offer guaranteed payments in respect of collection of increased collateral, of (manufactured) dividends and of loan fees /rebates. This ability represents an enhancement to market practice and a potential benefit to agent lenders that contractually fund clients irrespective of counterparty settlement and beneficial owners whose lenders apply actual settlement accounting.

Figure 6 Key Functionality for CCPs in Securities Lending



The key difference under the CCP model is that factors marked \* are guaranteed by the CCP

### 3. Operational Efficiency

While the ongoing loan performance guarantee is a significant commitment, the potential to centralise the operational processes required to service that commitment represents a major opportunity to create post-trade efficiencies. The extent to which a CCP provides post-trade services beyond the minimum level required to meet the CCP's performance guarantee may be considered optional but has significant implications for CCP's potential to improve the general operational efficiency of the securities lending marketplace.

In the US securities lending market, collaboration between the CCP (Options Clearing Corporation), the electronic trading platform (Quadrisev AQS), the Central Securities Depository (DTC) and the dominant US order routing and "books and records" system (SunGard's Loanet) has produced an integrated link facilitating loan initiation and modification, settlement, mark to market processing and transaction reporting. The automated processing provided through the Loanet collaboration means that loans executed through AQS/OCC are subject to the same straight through processing (STP) treatment as OTC executions, creating significant efficiencies for users. Additionally, a further development from Loanet will allow access to the AQS electronic trading platform directly from the Loanet application (alongside order routing capabilities), facilitating consistent treatment of AQS/OCC and OTC business throughout the pre-trade, trade and post-trade lifecycle.

### 4. The Securities Lending CCP Providers

There are currently three CCPs active in the securities lending markets and one in development. Options Clearing Corporation (US), LCH Clearnet and SIS x-clear in Europe all are operating live CCPs. Eurex is developing CCP functionality for European markets. Appendix 1 profiles each of the CCPs.

## CCPs: the Value Proposition in Securities Lending

In this section we examine the principal arguments for the introduction of CCP services in the securities lending market and where applicable the contra arguments, review the value proposition for the key market constituents and analyse the fit with the fundamental drivers of change in the securities lending industry.

### Arguments For and Against CCPs

#### 1. Mitigation of Counterparty Credit Risk

One fateful week in mid-September 2008 saw an actual borrower default (Lehman) and an agent lender (AIG, acting as agent for AIG principal entities) need rescuing by the US government. That same week also saw several other leading prime brokerage organisations extremely stressed and there were real concerns that other defaults would follow shortly thereafter. The first action of many market participants was to reduce the number of counterparty relationships they dealt with and to cut lines for those relationships where they did continue. While on the face of it this seems a reasonable approach, upon further examination it seems counter-intuitive. How can the right approach to reducing counterparty risk simply be to concentrate exposure to a smaller group of entities? Only firms that had eliminated Lehman risk prior to its default could make a claim to knowing which firms could be considered “safe” counterparties that they could continue to trade with.

In the reduced counterparty scenario, it is likely that the percentage of a firm’s securities lending business each remaining counterparty represented would be an increase over the pre-Lehman period, reinforcing the concentration risk. This is inconsistent with common practice whereby when firms merge, existing credit lines are not aggregated. Rather, the new credit line would be less than the sum of the two previous lines. In that way the new merged entity would represent a reduced percentage of the overall business exposure, even where the larger firm could be considered “stronger”.

The two approaches – one concentrating risk, the other attempting to reduce firm risk, are at odds with each other.

The CCP takes a different approach. By widening the universe across the larger community and ensuring transaction level margining, CCP usage allows firms to indirectly increase their counterparty network and mutualise the risk across a wider audience.

The proposed modifications to Basel II, published by the Bank for International Settlements (BIS) and likely to be fully adopted by the G13 member countries refer specifically to “exposures arising from derivatives, repos and securities financing activities” and state “the strengthened counterparty capital requirements are designed to increase incentives to move OTC derivative exposures to central counterparties and exchanges”.

In the securities lending context, use of a qualified CCP allows for replacement of bilateral counterparty credit risk with the equivalent of AAA risk for all Clearing Member exposures.

Some Agent Lenders have argued in favour of bilateral credit exposures on the basis that the ability to select counterparties on a bilateral basis allows them to deal only with counterparties they consider credit worthy while CCP membership creates an (indirect) exposure to names they may not consider credit worthy. This

argument is unconvincing for two reasons: first, under the bilateral model credit exposure has been increasingly concentrated with a limited number of major counterparties and renewed market growth will be difficult to accommodate within this model while the degree of concentration runs contrary to accepted risk dispersal theory. Second, CCPs are specifically designed to mutualise and mitigate risk, as explained in the *CCP Paradigm* section of this paper. CCPs deploy (typically) six lines of defence against a Clearing Member default and, in contrast to a bilateral arrangement, are structured to actively manage risk exposure to Clearing Members and to take clearly defined remedial action as soon as a Clearing Member fails to meet margin or other commitments. For this reason qualified CCPs are treated as AAA rated entities for counterparty risk purposes.

Introduction of CCPs to securities lending provides an opportunity to convert significant amounts of bilateral credit exposure to the equivalent of AAA rated exposure. Counterparty credit lines are a scarce resource and credit line utilisation has been a hot topic for both lenders and borrowers for many years, exacerbated by the Lehman default. CCPs allow participants to reduce credit line utilisation and have the opportunity to benefit from increased trading opportunities. There are three areas where CCPs bring value to this aspect of every firm's business and a fourth that applies to borrowers.

- Better use of existing credit lines. As the CCP becomes the zero (or close to zero) risk weighted counterparty to all novated transactions, no credit lines are used. This leaves credit availability for transactions that are agreed bilaterally or to be used by other business lines of the firm.
- In a bilateral environment where credit lines are full, firms would simply cease trading. The CCP scenario gives market participants the ability to continue to trade.
- Where no credit lines exist – either as a result of a specific choice not to engage in trading, or where firms have no relationship, users of CCPs can trade.
- Where firms have traditionally been essentially borrowers, the opportunity to become lenders with a single (or few) CCPs as counterparty, with little or no balance sheet or capital costs, offsetting collateral necessary for borrowing activity and capturing an additional revenue spread on top becomes compelling.

## 2. Capital Allocation and Balance Sheet Usage

The proposed revisions to Basel II referred to above present major challenges to the current securities lending business model. Appendix 2 illustrates the scope of the proposed changes to Basel II relevant to securities lending and includes a hypothetical example of potentially significantly increased Capital Allocation requirements for securities lending transactions.

The introduction of CCPs to the securities lending market provides an opportunity to convert significant amounts of bilateral credit exposure to a 0% (or close to 0%) risk weighted environment, with a significant positive impact on Clearing Members' capital adequacy. As illustrated in Appendix 2 this positive impact is likely to be significantly greater given the implementation of Basel III in its proposed form. While the example presented in Appendix 2 is necessarily hypothetical (as advanced approaches require knowledge of the individual circumstances of firms making the calculations), it is illustrative of the extent to which Basel III can be expected to challenge the current securities lending model. There is no question that regulators want to see as much bilateral exposure as possible moved to CCP environments and the Basel III proposals are supportive of that objective. The move toward a 0% (or at most 1-3%) risk weight may eliminate the effect of

differing exemptions to risk weight allocation models granted by regulators, reducing resulting regulatory arbitrage and potentially increasing acceptance of the CCP model .

Similarly, the introduction of CCPs to securities lending potentially offers significant advantages to Clearing Members in terms of balance sheet usage, with the potential to record amounts receivable /payable to a CCP on a net basis (this is after the position and margin netting carried out by the CCP), freeing balance sheet capacity for use in increased securities lending or other business activities.

It should be noted that, in the US market, broker-dealers ability to offset receivables against payables on securities loans novated to a CCP for financial reporting purposes is dependent on confirmation of extension of Financial Accounting Standards Board ( FASB) Accounting Standards Codification section 815-10-45 (formerly FASB Interpretation No.39) to include securities loans in addition to repurchase agreements and derivative transactions.

Securities lending contracts are generally not considered as derivative instruments under FASB definitions. However Quadriserv has advanced the case, in a written submission to the FASB, that when securities lending transactions are cleared through a CCP operating a master netting agreement, resulting receivables and payables should be treated in the same way as payables/receivables associated with derivative instruments and be similarly eligible for offset in financial reporting.

There are two generally voiced objections to the capital adequacy and balance sheet utilisation advantages of a move to CCPs in securities lending. The first relates to the typically slow progress in the implementation of regulation; objectors point to the lengthy implementation process for Basel II. The authors' understanding is that Basel III is likely to receive the approval of G13 members, be welcomed by national regulators and implemented in a relatively fast-track manner. For example, in Europe it is anticipated that Basel III may be enacted through modification of the Capital Risk Directive (CRD) rather than through new legislation at member state level.

Second, objectors point out that the supply side of securities lending is driven by institutional investors, many of whom are not subject to Basel II regulation and are therefore not affected by capital allocation and balance sheet utilisation requirements. Agent Lenders similarly may be little if at all affected and the major beneficiaries are the broker-dealers operating on the demand side of the market.

Additionally, lenders typically benefit from Agent Bank indemnity against a shortfall in collateral in the event of borrower default, making the mitigation of counterparty credit risk through a CCP structure (reviewed above) less relevant to them as well. This objection takes us into complex and sometimes uncharted territory.

First, it is not clear that those institutional investors currently unaffected by capital adequacy/balance sheet regulation will remain in that position indefinitely. Solvency II (the updated regulatory requirements for insurance companies operating in the EU) is moving on a path similar to Basel II and it is expected that elements of the Basel II risk weighting regime will be included in insurance industry regulation, notably the increased risk weighting for exposure to large financial institution counterparties. Second, it is not clear that Agent Banks issuing indemnities to lenders against a shortfall in collateral are currently allocating capital against these liabilities. With the increased regulatory focus on capital adequacy and the significantly greater demands of Basel III it is even less clear that this will remain the case. Third, even in the event that capital

allocation/balance sheet advantages apply primarily to the demand side broker-dealers, the additional demands of Basel III are likely to challenge and to potentially make financially unworkable the present securities lending business model, to the detriment of all market participants.

### **3. Trading, Transparency and Pricing**

A major cause of confusion in the discussion around the introduction of CCPs to securities lending is a tendency to treat centralised marketplaces (the electronic trading platforms) and centralised clearing (the CCPs) as pretty much the same thing. In securities and derivatives trading centralised marketplaces and centralised clearing are often aligned to create an efficient business model. However, centralised clearing also efficiently supports bilateral marketplaces in fixed income, interest rate swap (IRS) and, more recently, credit default swap (CDS) markets.

In the authors' opinion, improvements in market transparency, price formation, pre-trade transparency and the potential for best execution are driven by the introduction of electronic trading platforms, not directly through the introduction of centralised clearing.

However, CCPs potentially bring improvement to market competitiveness through facilitating broader participation under Clearing Member responsibility. Additionally, CCPs are able to bring post-trade anonymity to the trading process. In many securities and derivatives markets a combination of electronic trading platform and CCP is regarded as the optimal trading model.

In the securities lending marketplace, the authors expect CCPs to both accelerate the growth of electronic trading platforms and to facilitate major change in the bilateral OTC market. Indeed, the OCC already supports both bilateral (OCC members) and AQS electronic trading platform business; in Europe, SecFinex offers a Private (bilateral /negotiated) market as well as the Order (anonymous bid/offer market). The Eurex Clearing CCP model currently in concept phase is designed to service the bilateral securities lending market. The inclusion of the full spectrum of market participants into price formation will inevitably lead to more efficient market pricing.

Two areas of securities lending offer particular opportunity for application of the CCP model. First, a clear opportunity would be for firms to increase their use of CCPs in the run up to reporting periods or to switch significant balances to CCPs over short periods of time when balance sheet utilisation is at its most critical – quarter ends and year-ends. While a useful application, this has limited overall value, is not a sustainable business model for CCPs and would not be viable on its own. Second, exclusive portfolio arrangements form a very useful application for CCP models. The beneficial owner has already selected the borrower and the fee rate that the borrower will pay. For the life of the exclusive, the credit line utilisation is in effect a wasted resource for lenders and borrowers. Where trading platforms can provide the ability for “locked” trades which in effect give a bilateral twist to the trade execution and then give up the trade to a CCP, exclusives are an obvious candidate for CCP activity. Indeed, it could be that the advantages CCPs bring to the borrower side might even translate into higher exclusive bids, to the benefit of agents and beneficial owners.

### **4. Systemic Risk and Regulatory Supervision**

The credit crisis has generated global concerns over systemic risk in financial markets, particularly in relation to Over the Counter (OTC) markets. Regulatory initiatives worldwide are focused on restructuring OTC derivatives trading within centrally organised markets supported by central clearing. In addition to the

perceived level of systemic risk inherent in OTC markets, regulators are concerned that the diffused nature of OTC business inhibits supervisory monitoring of market activity. The introduction of CCPs in securities lending directly addresses the mitigation of systemic market risk and provides a basis for improved regulatory monitoring.

Short-selling remains controversial and is subject to global scrutiny. Bans on short-selling have been imposed periodically in a range of markets and market segments, with adverse results for securities market participants and for the securities lending industry. The introduction of centralised market structures (through electronic trading platforms) provides an opportunity to implement effective monitoring and lessen concerns over short-selling as a market practice. While electronic trading platforms are the driver here, CCPs play a key supporting role, facilitating broader market participation and bringing post-trade anonymity to the market.

### **5. A More Liquid Market**

A wide community of borrowers and lenders all able to deal with each other through the credit mitigation afforded by CCP use would inevitably lead to a more liquid market. The current market dynamics can be likened to an hour glass with the top section filled with the assets of thousands of beneficial owners, the bottom section representing the thousands of end user borrowers and the grains of sand (the securities themselves) being squeezed through a narrow, constraining middle section comprised of very few agent lenders and prime brokers. These constraints are overwhelmingly down to two reasons: credit concerns and bilateral relationships. The former can be addressed through the utilisation of a CCP where assets can flow more freely from beneficial owners through to end borrowers. The latter is a valid choice, but in itself does not exclude the utilisation of a CCP for some parts of a firm's securities lending activity.

It is often said that beneficial owners have no interest in CCPs as they seldom, if ever raise the subject. This is hardly surprising given that CCPs are largely an inter-professional market mechanism enhancing the market infrastructure. In the same way, beneficial owners do not demand interoperability amongst depositories or the use of book entry rather than physical certificate settlements. These organisations have an expectation that their professional service providers act in the clients best interests and the wider best interests of an optimal market structure that will provide a platform for continued operation.

The broad introduction of CCP services has the potential to facilitate the requirements of both beneficial owner and dealer communities. First, the broader and more liquid market place facilitated by CCP backing for electronic trading platforms responds to beneficial owners' demand for improved risk adjusted returns from lending. Second, as discussed at a Roundtable session during the recent International Securities Lending Association (ISLA) conference, securities lending represents a resource-heavy business in terms of balance sheet and capital usage. Without structural changes, the discussion group predicted a reduction of the overall business size and the migration of similar economic exposure to less resource intensive transaction alternatives.

### **6. CCPs and Certainty of Payment**

The use of CCPs would eliminate the intra-day risk that is the sole purpose behind one day pre-pays that are a requirement for large segments of the agency lending community. This would represent a useful cost saving for borrowers and eliminate the risk borrowers carry for this uncollateralised counterparty exposure.

The obligations defined by CCPs for loan recalls results in the imposition of automatic buy-ins within specified tolerances laid out by each of the CCPs. While there can be no doubt that this could result in some pain for market participants, the certainty of execution would be another important step towards improved market discipline.

With respect to income payments and other entitlements, agents today are often are in the situation where they are funding beneficial owners while awaiting payment from borrowers. CCPs eliminate this waiting period by debiting the borrower and crediting the lender using the “golden position” maintained by the CCP.

## **7. Industry-wide Operational and Technology Costs**

Securities lending is regarded as a relatively high cost industry. In the bilateral trading market a lack of standardisation, with the maintenance of multiple parallel but differing arrangements between participating firms adds to operational and technology costs. The introduction of CCPs to securities lending provides a significant opportunity to address costs- from maintenance of multiple counterparty credit assessments through trading to operational processes. CCPs are positioned to offer cost-effective straight-through processing, acting as a hub-link, and provide efficient net settlement through automated linkages to Central Securities Depositories (CSDs) and International Central Securities Depositories (ICSDs).

Post-trade operational functions such as loan and collateral mark to market, processing of corporate actions and billing of fees and rebates can be more efficiently handled in a centralised environment.

In the authors’ opinion, the efficiency and cost-effectiveness of operational and technology processes will have a key impact on the pace of movement to the CCP model in securities lending. As noted in the *CCPs in Securities Lending* section of this report, collaboration in the US between the CCP (Options Clearing Corporation), the electronic trading platform (Quadrisev AQS) the Central Securities Depository (DTC) and the dominant US order routing and books and records processing system (SunGard’s Loanet) has produced an integrated link, effectively extending STP processing efficiencies developed for the OTC bilateral market to the AQS/OCC market. . This degree of industry co-operation is a positive move toward greater efficiency in securities lending operations and technology. In the European markets, with multiple CCP services (and competing CCPs in several markets) industry co-operation will be vitally important to secure effective interoperability between CCPs and optimise cost-effectiveness in operations for industry participants.

A securities trading continuum that commences with automated cash market execution through STP short covering in a risk-contained, resource efficient environment is a desirable outcome for the industry. Such conditions currently exist for other financial products yet in today’s equities markets, securities lending is the missing link in the process.

## **8. Cost/benefit issues inherent in adopting the CCP Model**

Over the past ten to fifteen years many firms have looked at securities lending as a cost or service centre – an integral part of a larger picture that generates profits elsewhere rather than as a stand-alone profit centre. Securities lending is a critical part of the prime brokerage product, but for most investment banks it is the PB product itself that is the primary driver behind lending to hedge funds. Where firms are principally driven by proprietary trading, the profit is intended to be made in that area and borrowing securities is driven by cost-effectiveness considerations rather than the need to make a profitable spread. This subtle change in attitude

has meant that the focus for many securities lending desks has been on allocating internal costs and resources to other areas.

The use of CCPs would therefore benefit either the firm at large or the larger business line of prime brokerage rather than securities lending directly. The value of improved capital treatment and balance sheet impact resulting from CCP usage by the securities lending groups may not accrue to their direct benefit, yet it is the securities lending groups that would be required to undertake the not insignificant changes necessary for wide scale CCP implementation.

The recent environment has meant that the focus has often been on reducing costs or on a limited capacity / desire to take on new projects. The implementation of large scale usage of CCPs requires some change of practice for front, middle and back office operations and prevailing business priorities have not included many new projects or taking on additional costs. This is a short term view that can be seen as obvious and practical– too much work, not enough staff and a clear preference for reducing costs rather than adding them.

Yet at the same time, financial services firms can look back and find numerous examples of new process adoption and the absorption of additional costs that became the corner stone to their ability to dramatically improve return on firm resources and increase volumes exponentially in subsequent years. “Invest now in order to reap future benefits” should be the mantra of those firms looking to be the leading providers in future.

This complex intra-firm cost/benefit situation requires the intervention of Senior Management in order to drive enterprise wide strategic decision making in support of the broad adoption of CCPs.

Further, critics of CCPs in securities lending point to the costs associated with CCP transaction fees and margin provision for both lender and borrower. CCP transaction fees and margin related costs do represent new costs, however, potentially substantial financial benefits are derived through the introduction of CCPs in securities lending.

Financial benefits are driven by (a) release of capital allocated to bilateral counterparty exposures , generating capital to support additional bilateral securities lending or redeployment to other business activities, (b) reduction of balance sheet usage through netting of CCP related receivables/payables , increasing Tier 1 capital ratios and making capital available to support increased bilateral securities lending or other business activities, (c) reduction of costs related to securities lending operations and technology through utilisation of CCP hub-link facilities and centralised operational processes, (d) increased market volumes resulting from broader market participation, increased counterparty credit and balance sheet capacity.

It is beyond the scope of this paper to define a CCP related financial projection for each class of market participant, much less for individual lenders or borrowers. However, it is clear that a broad move to CCP facilities in securities lending would bring potentially substantial financial benefits to the industry. ETFs provide an interesting microcosm of the potential impact of electronic trading platforms and CCP. ETF borrowing and lending is often inhibited by a lack of liquidity. According to July data from SunGard Astec Analytics, AQS activity accounts for more than 50% of lending traded volume for 144 of 805 US ETFs for which

ASTEC holds data. For a further 43 ETFs, AQS trading volume accounts for a third or more of total volume. The specific reasons for the outsized market share in this asset class are not clear, but the cumulative results are a powerful signal of the potential benefits available to users.

This provides an opportunity to rethink aspects of the current securities lending model, which may be unsustainable following introduction of the proposed Basel amendments. Even without the introduction of further amendments, it is clear that the capital and balance sheet impact of securities lending has had more focus in the past two years than ever before. Market participants will be forced to shift trading towards structures that are more capital and balance sheet friendly and without structural change, securities lending risks losing market share.

### **9. Agent and Beneficial Owner Issues**

There must be an acknowledgement that agents would have to engage with their underlying beneficial owner clients to identify, address and make changes to their bilateral documentation in order to participate in CCPs. Examples of amendments would include the elimination of one day pre-pays and the requirement for agents to hold a minimum of 100% (or higher) collateral. These requirements were put in place in order to eliminate intra-day risk and to ensure adequate collateralisation. The CCP risk structure eliminates the need for these features. The effort required to implement these changes will vary based on agents' individual businesses, but it should be recognised as substantial for most if not all agent lenders. The work in this area should not be underestimated, yet it is a near certainty that some beneficial owners will be caught within future regulatory nets for capital reserves and agents will be forced into taking action for at least these entities. Further, the issue of capital reserves for agent indemnification remains a subject that has garnered growing regulatory interest and as other, higher priority items clear regulators' radar screens, the subject may come to the forefront.

Additionally, there remains a lack of clarity around how Beneficial Owners will participate in the CCP model, with questions related to whether collateral is held by the CCP and if so whether it will be segregated and pledged to the Agent Lender or Beneficial Owner, and whether margin collateral held by the CCP can be similarly treated. A general assumption has been that Agent Banks would work through (General) Clearing Members, in some cases their own organisation but it may be advantageous for an Agent Bank to participate as a Clearing Member or for a Lender to participate directly. The Eurex Clearing model proposed for bilateral securities lending offers direct Lender participation under a Specific Lender licence, with potential exemption from margin requirements.

## CCPs: Conclusions and Recommendations

### US Market Place

The US securities lending marketplace has a number of features which are supportive to the development of a securities lending CCP. First and foremost, the US is the single largest and most active equity lending market. Loans can be considered overnight loans that are rolled over on a daily basis. There is a huge universe of market participants actively involved in securities lending, and many of these firms are active as both borrowers and lenders, increasing the value of offsetting of positions. Further, there are fewer variables in terms of dividend rates, collateral and post-trade processing. All of these factors point to a more straightforward implementation of CCPs and a considerable community of organisations that stand to benefit from large scale implementation. The further economic buy-in to AQS from a number of market participants and interested parties means that there are vested interests in the success of the business that can help direct volumes to the trading platform and therefore through to the CCP.

The fact that the OCC already operates a securities lending CCP to support options market makers means that there is a baseline of business that provides a viable operating model. The existing flows should provide some market participants with a firm-level incentive to add conventional securities lending flows to the CCP activity.

### European Markets

The European CCP environment is more fragmented and complex. Securities lending volumes are spread across a large number of markets with many counterparties in different legal jurisdictions. Often these counterparties include smaller firms that have unique access to local market supply or individual demand. Credit approval can be more difficult to achieve and even when successful, absolute lines may be small. Dividend withholding taxes complicate income processing and would require CCPs to adapt and provide innovative solutions. Traditional securities lending collateral profiles are far more variable across bilateral relationships in Europe than is the case in the US. Historically firms have been largely one directional in that the majority of entities are either borrowers or lenders. Borrowers have been reluctant to divert resources from client business to low margin intermediary business. All of these issues play a part in the slow penetration of CCPs to date in Europe.

Yet at the same time they also speak to the potential value wider CCP usage would bring to the market. Rather than book, monitor, administer and collateralise trades across multiple counterparties across numerous different markets, concentrated activity within one or a small number of CCPs would smooth operational processes. Further, the combination of trading platforms and CCPs gives some firms a low impact way of expanding their distribution of assets to borrowers. The credit intermediation aspect of CCPs could help revolutionise and level the playing field for smaller organisations across many of the local European markets by giving them access to borrow securities or distribute long positions to firms where trading would otherwise not be possible or economically practical. The introduction of two- way business would add value in balance sheet and collateral offset terms as well as new income opportunities.

## Leveraging the CCP Infrastructure

The combination of trading platform and CCP in its basic form is designed to augment and enhance rather than replace the bilateral securities lending market. Indeed, it is a commonly held view that the combined fixed income repo and bond lending businesses could only have reached its current size with the contemporaneous introduction of trading platforms and CCP. Yet the possibilities extend beyond conventional securities lending. An example of the potential extension of the infrastructure can be seen today with cash funding. AQS clearing members are able to lend securities against the CCP guarantee and receive cash as collateral, to be used for general treasury funding purposes. The position of the cash borrower and securities lender can then be netted on a position and risk basis against all of the other open CCP positions. This is a logical next step for such facilities and it should be easily accommodated within each of the trading platform/CCP structures.

## The Global Challenge

Nevertheless, for both the US and Europe the challenge remains to capture the attention and interest of agent lenders and their beneficial owner clients. Unlike the fixed income repo markets, the equity securities lending business will always be largely reliant on agents and their clients for the breadth and depth of supply across the globe. This requires further industry engagement, changes to some aspects of the CCP services, acceptance that capital and balance sheet rules will change and a willingness of industry participants and stakeholders to consider new business practices and processes. Without the resource efficiencies that CCPs could bring to the securities lending marketplace it is apparent that the industry will be limited in its capacity to exceed the market peaks experienced in 2007.

*The following section summarises the authors' specific findings and recommendations in respect of broad adoption of CCP services by the securities lending industry.*

1. The broad usage of CCPs in securities lending is inevitable for at least a proportion of the business, given the regulatory preference for centralised clearing and the proposed amendments to capital adequacy under Basel III.
2. The mitigation of counterparty risk, capital allocation and balance sheet usage advantages of CCP adoption are substantial under current regulations, pending amendments to those regulations, and potentially even more important under Basel III. Without broad use of CCPs, capital and balance sheet restrictions will not support growth in securities lending and it may not be possible to sustain the economics of the current business model.
3. CCPs will support the growth of both electronic trading platforms and the bilateral OTC market for securities lending, contributing to market transparency and increasing liquidity by allowing broader direct participation. The more efficient usage of firm resources will allow increased activity to occur without stretching resources beyond the breaking point and ensure that return on capital and return on balance sheet utilisation is enhanced.
4. Securities lending requirements present challenges but these challenges can be met by CCPs through industry consultation and CCP model flexibility.
5. CCPs offer certainty of payment, eliminating the need for one day pre-pays and improving the collection process for dividends and fees/rebates.

6. CCPs offer significant scope for reduction in operational and technology costs in securities lending over time.
7. Changes to the current securities lending model will be required to maximise the benefits of CCP usage. For example, the value of Agent Lender indemnification for transactions under a CCP model warrants serious review.
8. Competitive advantage is available to Agent Lenders and to Principal Borrowers able to transition significant amounts of bilateral securities lending business to CCP environments, thereby freeing capital and balance sheet resources for increased securities lending or other business activities. Principal borrowers may display a preference for business with lending Agents able to transact through a CCP model. This will involve a willingness to re-define the securities lending business model where appropriate and to be pro-active in facilitating participation of Beneficial Owners and End Borrowers in the CCP market model. The securities lending industry needs to be proactive in determining the optimal CCP configuration and working with CCP providers to achieve broad implementation. Agent Lenders need to proactively work with Beneficial Owners to convey the potential benefits of the CCP business model and to determine the most suitable options for Beneficial Owner participation.
9. Trade Associations must take a leadership role in identifying the issues and help take the industry forward. Inevitably some market sectors and some firms within each sector will be more willing and able to take a leading role. Nevertheless, trade associations are invaluable in identifying issues, opportunities and helping shape industry best practice.
10. Regulatory influence with respect to capital, balance sheet usage and liquidity provisioning has historically focused entirely on banking institutions. It is clear that the regulatory net will widen to include other financial institutions possibly including insurance companies and pension funds. This will promote further usage of CCPs for these organisations as well.

## About the Authors

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Andrew Howieson is an Independent Consultant in London focused on global capital markets, with expertise in European clearing and settlement, European exchanges/MTF's, crossing networks and dark pools, securities lending and global custody. Andrew established a European presence for Tabb Group, a research and consulting firm, authoring a widely acknowledged paper on European clearing and settlement issues and co-authored a paper on European Equity Markets Structure. Previously, Mr. Howieson was the Managing Director of EsecLending (Europe) Ltd and a consultant to PDQ Enterprises, focused on facilities for algorithmic trading. He headed Corporate Strategy and Business Development for State Street and formed a state of the art electronic fixed income exchange. Mr. Howieson's prior career included operations and internal audit management assignments for global financial institutions in Europe and Asia and he was based in the US for 15 years.

### Roy Zimmerhansl



Roy Zimmerhansl is the owner of FinTuition and Zimmerhansl Consulting Services as well as Editor-in-chief of GSL.tv and ISJ.tv magazines. During almost 30 years in the securities industry, Roy has held senior positions across a range of market leading organisations including proprietary trading firms, prime brokers, custodian banks and a central depository. Roy's consulting business advises firms on strategic planning, business structuring and marketing for the securities finance business, and has developed a specific niche in the growing ETF financing area.

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## Appendix 1: CCPs Active in Securities Lending

CCP & Functionality	Options Clearing Corporation (OCC) (US markets):  (1) Stock Loan, (2) AQS SL program	LCH Clearnet (Europe)	SIX x-clear (Europe)	Eurex Clearing AG (Europe)
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CCP Structure				
Membership: -General Clearing Member -Individual Clearing Member -Trading Member / Non-clearing	<ul style="list-style-type: none"> <li>✓ Clearing Member</li> <li>✓ Non Clearing Member (NCM)</li> </ul>	<ul style="list-style-type: none"> <li>✓ (GCM)</li> <li>✓ (ICM)</li> <li>✓ (TM)</li> </ul>	<ul style="list-style-type: none"> <li>✓ (GCM)</li> <li>✓ (ICM)</li> <li>✓ (NCM)</li> </ul>	<ul style="list-style-type: none"> <li>✓ (GCM)</li> <li>✓ (DCM)</li> <li>✓ (NCM)</li> </ul> <p>Note: Specific Lender Licence (Beneficial Owners only)</p>
Minimum Capital Requirement	\$2.5mm (net capital)	GCM: EUR 25-37.5 million, depending on number of members cleared. ICM: EUR 25 million	N/A-ratings based approach	10% of total average margin requirement over either 30 or 250 days. GCM: EUR 175 million minimum. DCM: EUR 17.5 million. Specific Lender Licence: no requirement.
Guarantee Fund contribution/commitment	\$150,000 or formula (6 % total daily margin based on open interest, monthly). Current total \$3 billion approximately.	Fund designed to cover default exposure from highest uncovered risk in clearing system.  Contribution pro-rata on monthly	Determined monthly on basis of average 3 day gross exposure in previous 3 months, per trading place.	2% of average total margin requirement over either 30 or 250 days. GCM: EUR 5 million minimum. DCM: EUR 1 million minimum.

		basis.		
CCP capital	\$45-50 million	Euros 135mm (estimated)	CHF 50mm, plus reserves	EUR 97 million total core capital
Markets covered	US	Belgium, France, Holland, Portugal	UK, Austria, Denmark Finland Germany, Norway, Sweden, Switzerland	Phase 1: UK, Germany , Switzerland , Phase2: France, Netherlands, Belgium , Italy, Spain, Ireland, Denmark, Finland, Norway, Sweden, Phase 3: USA, Eastern Europe, Asia, Latin America (selected countries

<b>CCP Functionality</b>				
Contract receipt	(1)DTC (matched),(2) AQS (matched)	SecFinex (matched & locked)	SecFinex (matched & locked)	Bilateral (from counterparties/ 3d party service providers), matched or unmatched.
Contract assignment	Novation	Novation	Novation	Novation
Contract types	Open term and Fixed term.	Open term	Open term	Open term and Fixed term.
Principal Collateral accepted	Cash	Cash	Cash, Securities	Cash , Securities
Collateral location (Principal collateral)	CCP In development with AQS: facility for Agent Banks to pledge collateral direct to segregated account at CCP	Lender	CCP account at CSD	Cash collateral: Lender Securities collateral: Lender (Via tri-party collateral managers- title transfer or pledge) or CCP a/c at Clearstream Bank or SIX SIS
(Manufactured) Dividend collection	Guaranteed (2)	Not at present. Planned for subsequent phase.	Guaranteed	Guaranteed
Other Corporate Actions supported	DTC Income Tracking system	Not at present. Planned for subsequent phase.	✓ All supported	✓ All supported

Returns	✓	✓	✓	✓
Recalls	✓	✓	✓	✓
Partials	✓	Not at present. Planned for subsequent phase.	✓	✓
Re-rates	✓	Not at present. Planned for subsequent phase.	✓	✓
Fee/rebate collection	Guaranteed (2)	Guaranteed	Guaranteed	Guaranteed

<b>CCP Costs (does not include costs related to trading platforms or Clearing Member charges)</b>				
Transaction	\$1.00 per side by transaction (rebate possible)	1.5 basis point (incremental annualised rate) daily on trade value, both sides	1.5 basis point (incremental annualised rate) daily on trade value, both sides	Under evaluation
Margin	Inter-market offsets, flexible collateral policy	Determined by algorithm	Determined by algorithm	Determined by algorithm
Settlement	OCC pays DTC fees	Euros 1.0 per instruction	Euros 1.5 approximately	Home market settlement via CSD (equities)/ICSD (bonds)

<b>Risk Management</b>				
Member Monitoring process	Continuous risk monitoring	Continuous risk monitoring	Continuous risk monitoring	Continuous risk monitoring
Margin allocation	OCC STANS risk management system	SPAN liquidation risk algorithm, real-time	Real-time, based on contractual obligations	Real time, based on contractual obligations
Margin collateral	Cash, securities	Cash, securities	Cash, securities	Cash, securities
Margin call timing	Daily, intra-day in stressed conditions	Daily, intra-day in stressed conditions	Real time	Daily, intra-day in stressed conditions
Cross margining	✓ OCC options, futures and cash positions	No	✓ SIX cash products	✓ Eurex clearing products



<b>Operational Support</b>				
External Linkages	Quadriserv Loanet DTC	SecFinex Euroclear Bank	SecFinex CSD links, sub- custodian to CSD links	3d Party Flow Providers, CBF/SIX SIS/Euroclear UK& I plus further CSDs (equities), CBL/Euroclear Bank (bonds) for settlement
Settlement	DVP at DTC	DVP at Euroclear Bank	DVP/DVD	DVP at CBF/SIX SIS/Euroclear UK & I plus further CSDs (equities) and ICSDs (bonds)
<b>Status</b>	Live from July 1993. AQS live from May 2009	Live from June 2009	Live from April 2010	Industry consultation in progress- finalisation of concept phase

## Appendix 2: Potential impact on securities lending of Proposed BIS changes to Basel II

<b>Key proposals in 5 areas:</b>
1. The quality, consistency and transparency of the capital base will be raised
2. The risk coverage of the capital framework will be strengthened:
<i>a. An additional VaR treatment is required based on a 12 month period of additional financial stress (e.g. 2007-8)</i>
<i>b. Increased haircut minima for non-cash collateral</i>
<i>c. Exposures to large financial entities will attract a multiplier of 1.25 when calculating capital requirements</i>
<i>d. Banks' collateral and mark to market exposures to CCPs and exchanges meeting the criteria of CPSS/IOSCO will qualify for a 0% risk weight</i>
3. A supplementary leverage ratio to the Basel II risk based framework will be introduced
4. Measures will be introduced to promote the build up of capital buffers
5. A global minimum liquidity standard will be introduced for internationally active banks

<b>Proposed Minimum Regulatory Haircuts for Collateral</b>			
		<b>Haircut %</b>	
<b>Issue Rating</b>	<b>Residual Maturity</b>	<b>Sovereigns</b>	<b>Other Issuers</b>
AAA to AA-/A-1	<1 year	0.5	1
	>1 year <5 years	2	5
	> 5years	4	8
A+ to BBB-/A-2/A-3/P-3 and unrated bank securities	<1 year	1	2
	>1 year <5 years	3	6
	> 5years	6	12
-BB to BB+	all	15	Not eligible
Main index equities		15	
Other equities		25	
UCITS/Mutual Funds	Highest haircut applicable to any component equity		
Cash (same Currency)		0	

Source: BIS Consultative Document "Strengthening the resilience of the banking sector", issued December 2009

<b>Potential effect on securities lending</b>
<b>1. Current Capital Allocation calculation (without collateral):</b>
Capital= (0.08) x (Risk Factor) x (Amount at Risk)
Firm lends £ 10 million nominal value shares to firm B, which is assessed at credit quality step 3 or 50% weighting (scale of 1-15, but most SL exposures fall between steps 2 and 5).

<b>Lender Capital Requirement: <math>0.08 \times \text{£ } 10,000,000 \times 50\% = \text{£}400,000</math></b>
If the loan is novated to a CCP the 50% risk weighting becomes 0%
<b>Lender Capital Requirement: <math>0.08 \times \text{£}10,000,000 \times 0\% = \text{£}0</math></b>

<b>2. Current Capital Allocation calculation (with collateral):</b>
Using Comprehensive Standardised approach:
Capital = $0.08 \times \text{New Exposure} \times \text{RW (50\%)}$
New Exposure (Enew) = $[(E+h)-(C-h-fxh)]$ , where E is the unweighted exposure, h is the volatility haircut and fxh is the FX haircut if any).
Assuming 105% collateralisation by a borrower and volatility/haircut of 5%:
Enew = $10.5 - (10.5 - 0.525) \text{ m} = \text{£ } 525,000$
<b>Capital = <math>\text{£}525,000 \times 50\% \times 8\%</math>                      Lender Capital Requirement = <math>\text{£}21,000</math></b>
From the borrower perspective:
Enew = $(10.5 + 0.525) \text{ m} - (10 - 0.5) \text{ m} = \text{£}1,1525 \text{ m}$
<b>Capital = <math>\text{£}1,525\text{m} \times 50\% \times 8\%</math>                      Borrower Capital Requirement = <math>\text{£}61,000</math></b>

<b>3. Capital Allocation under proposed changes to Basel II:</b>
(assuming 15% haircut/variation margin and collateral of 105%, not including proposed additional 25% large financial institution risk weighting )
<b>Lender exposure = <math>(10.0 + 15\%) \text{ m} - (10.5 - 15\%) \text{ m} = \text{£}2,575\text{m}</math> Lender Capital Requirement = <math>\text{£}103,000</math></b>
<b>Borrower Exposure = <math>(10.5 + 15\%) \text{ m} - (10.0 - 15\%) \text{ m} + \text{£}3,575\text{m}</math> Borrower Capital Requirement = <math>\text{£}143,000^3</math></b>

<sup>3</sup> Source: Examples based on information provided by SecFinex Ltd.

# Good, Bad or Inevitable?

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## **The Introduction of CCPs in Securities Lending**

A White Paper on the issues, opportunities and implications for the securities lending industry.

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