

An Introduction to Securities Lending

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Association of Corporate Treasurers
British Bankers' Association
International Securities Lending Association
London Investment Banking Association
London Stock Exchange
Securities Lending and Repo Committee

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STOCK EXCHANGE

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Mark is also the Chief Executive Officer of Securities Finance Systems Limited. The company provides clients with insights into comparative risk and performance measurement using proprietary riskexplorer and performanceexplorer services. Securities Finance Systems also conducts a wide range of quantitative research projects and benchmarking exercises on behalf of customers.

After graduating from the London School of Economics, Mark Faulkner spent the majority of his career specialising in International Securities Finance. Since 1987, he has held management responsibility at L.M. (Moneybrokers) Ltd., Goldman Sachs, Lehman Brothers and more recently at Securities Finance International Limited.

Whilst occupying these different posts he has gained experience as a lender, borrower, conduit borrower and prime broker. During his career he has worked closely with the UK Inland Revenue and has represented firms at the Securities Lending and Repo Committee and the London Stock Exchange's securities lending committees. Being an independent advisor since 1995 has provided Mark with a unique insight into the operation of the securities financing market.

Mark lives with Jude and their son Archie in Spitalfields, London.

To download a free copy of this book or contact Mark about it please visit: www.spitalfieldsadvisors.com

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Securities lending provides liquidity to the equity, bond and money markets, placing it at the heart of today's financial system. The increase in liquidity reduces the cost of trading, thereby increasing market efficiency and benefiting all. Securities lending markets allow market participants to sell securities that they do not own in the confidence that they can be borrowed prior to settlement. They are also used for financing, through the lending of securities against cash, forming an important part of the money markets. The ability to lend and borrow securities freely underpins the services that securities dealers offer their customers and the trading strategies of dealers, hedge funds and other asset managers. On the lending side, securities lending forms a growing part of the revenue of institutional investors, custodian banks and the prime brokerage arms of investment banks.

This publication aims to describe these markets, with an emphasis towards the United Kingdom, although UK markets are highly international in terms of both participation and securities traded. The intended audience is not market practitioners but others with some interest in securities lending, including trustees of pension or other funds that already lend their securities or might consider doing so, managers of companies whose securities are lent, financial journalists, the authorities and other interested parties.

The idea of a publication arose a year ago in discussions in the Securities Lending and Repo Committee, which brings together market practitioners, the UK authorities and infrastructure providers, with the Bank of England chairing and providing administrative support. At a time of falling share prices, some commentators were drawing links with securities lending and short selling, often revealing some misunderstanding of how the markets actually worked. This is hardly surprising. Securities lending markets are complex, with multiple layers of intermediaries, transaction terms and pricing that can be opaque to those not directly involved in it. Confusing terminology and market jargon does not help (one reason for the glossary). There seemed to be no authoritative publication, written by market practitioners, which described and explained the modern markets for a non-expert. The sponsoring organisations, representing the different players in the market, worked together to fill this gap. They set out to produce an accurate and accessible description of the markets and how they work, who is involved and why.

The Securities Lending and Repo Committee welcome this publication. The National Association of Pension Funds and the Association of British Insurers, as well as the sponsoring organisations have also welcomed it. I would like to thank all those involved in its production.

David Rule
Chairman, Securities Lending and Repo Committee

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Executive Summary

Securities lending – the temporary transfer of securities on a collateralised basis – is a major and growing activity providing significant benefits for issuers, investors and traders alike. These are likely to include improved market liquidity, more efficient settlement, tighter dealer prices and perhaps a reduction in the cost of capital.

The scale of securities lending globally is difficult to estimate, as it is an ‘over the counter’ rather than an exchange-traded market. However, it is safe to say that the balance of securities on loan globally exceeds £1 trillion.

What is securities lending?

Securities lending describes the market practice by which, for a fee, securities are transferred temporarily from one party, the lender, to another, the borrower; the borrower is obliged to return them either on demand or at the end of any agreed term.

However, the word ‘lending’ is in some ways misleading. In law the transaction is in fact an absolute transfer of title (sale) against an undertaking to return equivalent securities. Usually the borrower will collateralise the transaction with cash or other securities of equal or greater value than the lent securities in order to protect the lender against counterparty credit risk.

Some important consequences arise from the nature of securities lending transactions:

- Absolute title over both lent and collateral securities passes between the parties, therefore these securities can be sold outright and ‘on lent’. Both practices are commonplace and an intrinsic part of the functioning of the market.
- Once securities have been acquired, the new owner of them has certain rights. For example, it has the right to sell or lend them on to another buyer and, vote in AGMs.
- The borrower is entitled to the economic benefits of owning the lent securities (e.g. dividends) but the agreement with the lender will oblige it to make (‘manufacture’) equivalent payments back to the lender.
- A lender of equities no longer owns them and has no entitlement to vote. But it is still exposed to price movements on them since the borrower can return them at a pre-agreed price. Lenders typically reserve the right to recall equivalent securities from the borrower and will exercise this option if they wish to vote. However, borrowing securities for the specific purpose of influencing a shareholder vote is not regarded as acceptable market practice.

Different types of securities lending transactions

Most securities loans are collateralised, either with other securities or with cash deposits. Where lenders take securities as collateral, they are paid a fee by the borrower. By contrast, where they are given cash as collateral, they pay the borrower interest but at a rate (the rebate rate) that is lower than market rates, so that they can reinvest the cash and make a return. Pricing is negotiated between the parties and would typically take into account factors such as supply and demand for the particular securities, collateral flexibility, the size of any manufactured dividend and the likelihood of the lender recalling the securities early. For example, fees for borrowing UK FTSE 100 equities against securities collateral ranged from 6-200 basis points per annum and fees for borrowing conventional UK government bonds from 6-40 basis points per annum towards the end of 2003.

As well as securities lending, sale and repurchase (repo) and buy-sell back transactions are used for the temporary transfer of securities against cash. In general, securities lending is more likely to be motivated by the desire to borrow specific securities and repo, and buy-sell backs by the desire to borrow cash – but this boundary is fuzzy. For example, reinvestment of cash collateral has been an integral part of the securities lending business for many years, particularly in the United States, with reinvestment opportunities often driving the underlying securities lending transactions.

Lenders and intermediaries

The supply of securities into the lending market comes mainly from the portfolios of beneficial owners, such as pension and other funds, and insurance companies. Underlying demand to borrow securities begins largely with the trading activities of dealers and hedge funds.

In the middle are a number of intermediaries. The importance of intermediaries in the market partly reflects the fact that securities lending is a secondary activity for many of the beneficial owners and underlying borrowers. Intermediaries provide valuable services, such as credit enhancement and the provision of liquidity, by being willing to borrow securities at call while lending them for term. They also benefit from economies of scale, including the significant investment in technology required to run a modern operation.

Intermediaries include custodian banks and asset managers lending securities as agents on behalf of beneficial owners, alongside the other services provided to these clients. Some specialist securities lending agents have also emerged. Agents agree to split securities lending revenues with lenders and may offer indemnities against certain risks, such as borrower default.

Another category of intermediary is dealers trading as principals. Dealers intermediate between lenders and borrowers, but they also use the market to finance their own wider securities trading activities. They may seek returns by taking collateral, counterparty credit or liquidity risk, for example, by lending securities to a client for a period while borrowing them on an open basis with a risk of early recall by the lender. Through their prime brokerage operations, they also meet the needs of hedge funds and the borrowing of securities to finance their positions has grown rapidly.

For beneficial owners, there are a number of different possible routes into the market. These include using an agent (custodian bank, asset manager or specialist) to manage a lending programme, auctioning a portfolio to borrowers directly, selecting one principal borrower, establishing an 'in-house' operation and lending directly, or some combination of these strategies.

The borrowing motivation

The most common reason to borrow securities is to cover a short position – using the borrowed securities to settle an outright sale. But this is rarely a simple speculative bet that the value of a security will fall so that the borrower can buy it more cheaply at the maturity of the loan. More commonly, the short position is part of a larger trading strategy, typically designed to profit from perceived pricing discrepancies between related securities. For example:

- Convertible bond arbitrage: buying a convertible bond and simultaneously selling the underlying equity short.
- 'Pairs' trading: seeking to identify two companies, with similar characteristics, whose equity securities are currently trading at a price relationship that is out of line with the historical trading range. The apparently undervalued security is bought, while the apparently overvalued security is sold short.
- Merger arbitrage: for example, selling short the equities of a company making a takeover bid against a long position in those of the potential acquisition company.
- Index arbitrage: selling short the constituent securities of an equity price index (e.g. FTSE 100) against a long position in the index future (e.g. FTSE 100 contract on LIFFE).

Short positions also arise as a result of failed settlement (with some securities settlement systems arranging for automatic lending of securities to prevent chains of failed trades) and where dealers need to borrow securities in order to fill customer buy orders in securities where they quote two-way prices.

Not all securities lending is motivated by short selling. Financing drives many transactions – the lender is seeking to borrow cash against the lent securities, whether using repo, buy/sell backs or cash-collateralised securities lending.

Another large class of transactions not involving a short comprises those motivated by lending in order to transfer ownership temporarily, an arrangement which can work to the advantage of both lender and borrower. For example:

- Where a lender would be subject to withholding tax on dividends or interest but some potential borrowers are not. The borrower receives the dividend free of tax, and shares some of the benefit with the lender in the form of a larger fee or larger manufactured dividend.
- Where an issuer offers shareholders the choice of receiving a dividend in cash or reinvesting it in additional securities (scrip) at a discount to the market price, but some funds (e.g. index trackers) are unable to take the more attractive scrip alternative because their holdings would become larger than permitted under investment guidelines. The borrower chooses the scrip dividend alternative and sells the securities in the market. Again, the return is shared with the lender through a larger fee or larger manufactured dividend.

Trading and settlement

The securities lending market is a hybrid between a relationship-based market and an open, traded market. Historically, transactions were negotiated by telephone but increasingly securities are broadcast as available at particular rates using email or other electronic platforms.

Loans may be either for a specified term, or more commonly, open to recall, because lenders typically wish to preserve the flexibility for fund managers to be able to sell at any time.

Settlement occurs on a shorter time frame than outright transactions, so that securities can be borrowed to cover a sale.

In most settlement systems securities loans are settled as 'free of payment' deliveries and the collateral taken is settled quite separately, possibly in a different payment or settlement system, and maybe a different country and time zone. This can give rise to 'daylight exposure', a period in which the lent securities have been delivered but the collateral securities have not yet been received. To avoid this exposure some lenders insist on pre-collateralisation, so transferring the exposure to the borrower.

In the United Kingdom, CREST has specific settlement arrangements for stock lending transactions.

UK Stamp Duty

London Stock Exchange rules require lending arrangements in securities on which UK Stamp Duty/Stamp Duty Reserve Tax (SDRT) is chargeable to be reported to the Exchange. This enables firms to bring their borrowing and lending activity 'on Exchange' making them exempt from Stamp Duty/SDRT under Inland Revenue regulations. Non-Exchange member firms that conduct borrowing and lending activity through a member firm are also eligible for stock lending relief from Stamp Duty/SDRT.

Companies Act 1985

Firms that are engaged in equity stock borrowing or lending in the United Kingdom will need to comply, where appropriate, with the notification requirements applying to notifiable interest in shares as set out in Part VI of the Companies Act 1985.

Transparency in the UK market

CREST provides some time-delayed information on the values of securities financing transactions in the top 350 UK equities. This information was first published in September 2003 and excludes intermediary activity where possible.

Risks and risk management

When taking cash as collateral. A lender taking cash as collateral pays rebate interest to the securities borrower, so the cash must be reinvested at a higher rate in order to make any net return on the collateral aspect of the transaction. Expected returns can be increased by reinvesting in assets with more credit risk or longer maturity in relation to the likely term of the loan, with a risk of loss if market interest rates rise. Many of the large securities lending losses over the years have been associated with reinvestment of cash collateral.

Transaction collateralised with other securities. Added to the risk of errors, systems failures and fraud that are always present in any market, problems can arise from the default of a borrower. Following a default the lender must sell its collateral in the market in order to raise the funds to replace the lent securities. It will lose money if the value of the collateral securities falls relative to that of the lent securities. Generally, the risk of loss is greater if it takes longer to close out these positions, if the collateral or lent securities are wrongly valued, if the markets for these securities are illiquid or if the market prices of the lent and collateral securities do not tend to move together.

UK regulation

Any person conducting stock borrowing or lending business in the United Kingdom would generally be carrying on a regulated activity according to the terms of the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001, and would therefore have to be authorised and supervised under that Act. The stock borrower or lender would, as an authorised person, be subject to the provisions of the Financial Services Authority (FSA) Handbook, in particular the Inter-Professional Conduct chapter; and they would also have to have regard to the market abuse provisions of the Financial Services and Markets Act 2000 and the related Code of Market Conduct issued by the FSA. The FSA Handbook contains rules, guidance, and evidential provisions relevant to the conduct of the firm in relation to the FSA's High Level Standards.

Stock Borrowing and Lending Code

In addition to the prudential standards set by the FSA, market participants have drawn up a Stock Borrowing and Lending Code, which UK-based market participants observe as a matter of good practice. The Code does not in any way replace the FSA's or other authorities' regulatory requirements, nor is it intended to override the internal rules of settlement systems as regards borrowing or lending transactions.

The Securities Lending and Repo Committee (SLRC) produced the Code. The SLRC provides a forum in which structural developments in the stock lending and repo markets can be discussed, and recommendations made, by practitioners, infrastructure providers and authorities. Its terms of reference are shown in Appendix 2.

Many questions are asked about the securities lending industry and Chapter 6 (Frequently asked questions) responds to many of these. They have been grouped into legal, dividends and coupons, collateral and risk management, operational and logistical, corporate governance and lending options for beneficial owners.

Finally, every market has its own jargon, and securities lending is no exception. Appendix 3 is a glossary of terms.

Securities lending is too significant to ignore. It touches the interests of securities investors, companies that issue securities, market intermediaries and the authorities. It is also too central to the efficient running of the modern financial markets to be misunderstood. This book is intended to provide an authoritative introduction to the modern industry.

Chapter 1 What is securities lending?

Securities lending began as an informal practice among brokers who had insufficient share certificates to settle their sold bargains, commonly because their selling clients had mislaid their certificates or just not provided them to the broker by the settlement date of the transaction. Once the broker had received the certificates, they would be passed on to the lending broker. This business arrangement was subject to no formal agreement and there was no exchange of collateral.

Securities lending is now an important and significant business that describes the market practice whereby securities are temporarily transferred by one party (the lender) to another (the borrower). The borrower is obliged to return the securities to the lender, either on demand, or at the end of any agreed term. For the period of the loan the lender is secured by acceptable assets delivered by the borrower to the lender as collateral.

Under English law, absolute title to the securities 'lent' passes to the 'borrower', who is obliged to return 'equivalent securities'. Similarly the lender receives absolute title to the assets received as collateral from the borrower, and is obliged to return 'equivalent collateral'.

Securities lending today plays a major part in the efficient functioning of the securities markets worldwide. Yet it remains poorly understood by many of those outside the market.

Definitions

In some ways, the term 'securities lending' is misleading and factually incorrect. Under English law and in many other jurisdictions, the transaction commonly referred to as 'securities lending' is, in fact...

'a disposal (or sale) of securities linked to the subsequent reacquisition of equivalent securities by means of an agreement.'

Such transactions are collateralised and the 'rental fee' charged, along with all other aspects of the transaction, are dealt with under the terms agreed between the parties. It is entirely possible and very commonplace that securities are borrowed and then sold or on-lent.

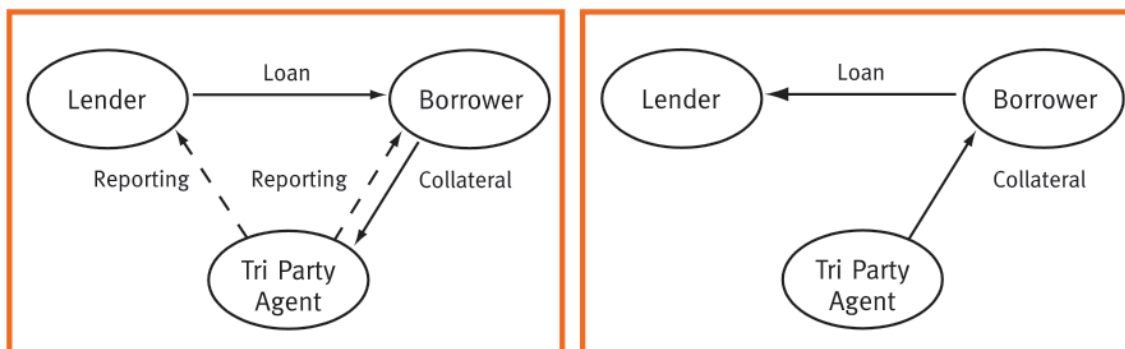
There are some consequences arising from this clarification:

- 1 Absolute title over both the securities on loan and the collateral received passes between the parties.
- 2 The economic benefits associated with ownership – e.g. dividends, coupons etc. – are 'manufactured' back to the lender, meaning that the borrower is entitled to these benefits as owner of the securities but is under a contractual obligation to make equivalent payments to the lender.
- 3 A lender of equities surrenders its rights of ownership, e.g. voting. Should the lender wish to vote on securities on loan, it has the contractual right to recall equivalent securities from the borrower.
- 4 In the United Kingdom appropriately documented securities lending transactions avoid two taxes: Stamp Duty Reserve Tax and Capital Gains Tax.

Different types of securities loan transaction

Most securities loans in today's markets are made against collateral in order to protect the lender against the possible default of the borrower. This collateral can be cash, other securities or other assets.

(a) Transactions collateralised with other securities or assets



Loan Commences

Loan Terminates

Non-cash collateral would typically be drawn from the following collateral types:

- Government Bonds
 - Issued by G7, G10 or Non-G7 governments
- Corporate Bonds
 - Various credit ratings
- Convertible Bonds
 - Matched or unmatched to the securities being lent
- Equities
 - Of specified indices
- Letters of Credit
 - From banks of a specified credit quality
- Certificates of Deposit
 - Drawn on institutions of a specified credit quality
- Delivery By Value ('DBVs')¹
 - Concentrated or Unconcentrated
 - Of a certain asset class
- Warrants
 - Matched or unmatched to the securities being lent
- Other money market instruments

The eligible collateral will be agreed between the parties, as will other key factors including:

- Notional Limits
 - The absolute value of any asset to be accepted as collateral
- Initial margin
 - The margin required at the outset of a transaction
- Maintenance margin
 - The minimum margin level to be maintained throughout the transaction
- Concentration limits
 - The maximum percentage of any issue to be acceptable, e.g. less than 5% of daily traded volume
 - The maximum percentage of collateral pool that can be taken against the same issuer, i.e. the cumulative effect where collateral in the form of letters of credit, CD, equity, bond and convertible may be issued by the same firm

The example in the above diagram shows collateral being held by a Tri Party Agent. This specialist agent (typically a large custodian bank or International Central Securities Depository) will receive only eligible collateral from the borrower and hold it in a segregated account to the order of the lender. The Tri Party Agent will mark this collateral to market, with information distributed to both lender and borrower (in the diagram, dotted 'Reporting' lines). Typically the borrower pays a fee to the Tri Party Agent.

There is debate within the industry as to whether lenders that are flexible in the range of non-cash collateral they are willing to receive are rewarded with correspondingly higher fees. Some argue that they are, others claim that the fees remain largely static but that borrowers are more prepared to deal with a flexible lender and therefore balances and overall revenue rise.

The agreement on a fee is reached between the parties and would typically take into account the following factors:

- Demand and supply
 - The less of a security available, other things being equal, the higher the fee a lender can obtain
- Collateral flexibility
 - The cost to a borrower of giving different types of collateral varies significantly, so that they might be more willing to pay a higher fee if the lender is more flexible
- The size of the manufactured dividend required to compensate the lender for the post-tax dividend payment that it would have received had it not lent the security
 - Different lenders have varying tax liabilities on income from securities; the lower the manufactured dividend required by the lender, the higher the fee it can negotiate²
- The term of a transaction
 - Securities lending transactions can be open to recalls or fixed for a specified term; there is much debate about whether there should be a premium paid or a discount for certainty. If a lender can guarantee a recall-free loan then a premium will be forthcoming. One of the attractions of repo and swaps is the transactional certainty on offer from a counterpart
- Certainty
 - As Chapter 3 explains, there are trading and arbitrage opportunities, the profitability of which revolves around the making of specific decisions. If a lender can guarantee a certain course of action, this may mean it can negotiate a higher fee

¹ See glossary for an explanation of DBVs.

² See Chapter 3 for an explanation of how securities lending can be motivated by the different tax status of borrowers and lenders.

Box 1: Cash flows on a securities loan against collateral other than cash

The return to a lender of securities against collateral other than cash derives from the fee charged to the borrower. A cash flow of this transaction reads as follows:

Transaction date	13th June 2003
Settlement date	16th June 2003
Term	Open
Security	XYZ Limited
Security price	£10.00 per share
Quantity	100,000 shares
Loan value	£1,000,000.00
Lending fee	50 basis points (100ths of 1 per cent)
Collateral	UK FTSE 100 Concentrated DBVs
Margin required	5%
Collateral required	£1,050,000.00 in DBVs
Daily lending income	$£1,000,000.00 \times 0.005 \times (1/365) = £13.70$

Should the above transaction remain outstanding for one month and be returned on 16th July 2003 there will be two flows of revenue from the borrower to the lender.

On 30th June fees of £191.80 ($£13.70 \times 14$ days)

On 31st July fees of £219.20 ($£13.70 \times 16$ days)

Thus total revenue is £411.00 against which the cost of settling the transaction (loan and collateral) must be offset.

NB For purposes of clarity, the example assumes that the value of the security on loan has remained constant, when in reality the price would change daily resulting in a mark to market event, different fees chargeable per day and changes in the value of the collateral required. Open loan transactions can also be re-rated or have their fee changed if market circumstances alter. It is assumed that this did not happen either.

The following table shows the range of lending fees observed for different asset classes in the UK market in December 2003. The majority of transactions are concluded at the lower end of the ranges quoted.

Asset Class	Typical Fee Range (basis points per annum)
UK FTSE 100 equities	6 – 200
UK FTSE 250 equities	10 – 400
Index linked gilts	6 – 43
Non-index linked gilts	3 – 13
UK corporate bonds (investment grade)	5 – 75
UK corporate bonds (sub-investment grade)	20 – 100

Source: www.performanceexplorer.com

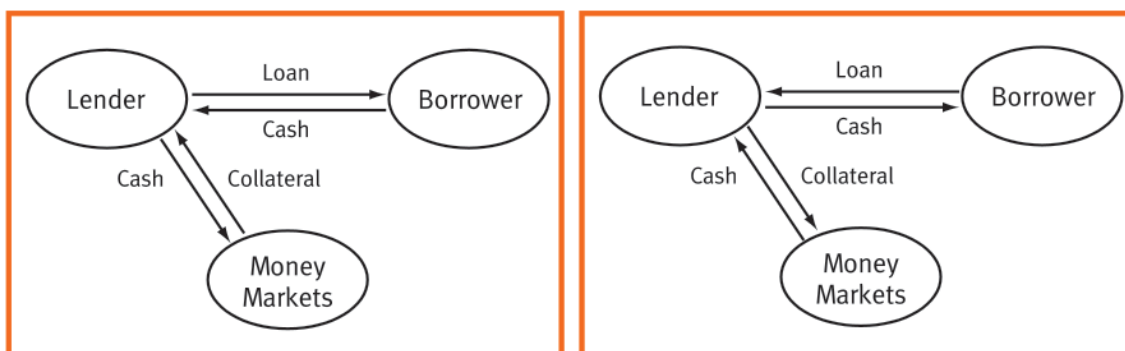
(b) Transactions collateralised with cash

Cash collateral is, and has been for many years, an integral part of the securities lending business, particularly in the United States. The lines between two distinct activities:

- Securities lending and
- Cash reinvestment

have become blurred and to many US investment institutions securities lending is virtually synonymous with cash reinvestment. This is much less the case outside the United States but consolidation of the custody business and the important role of US custodian banks in the market means that this practice is becoming more prevalent. The importance of this point lies in the very different risk profiles of these increasingly intertwined activities.

Transactions collateralised with cash



Loan Commences

Loan Terminates

The revenue generated from cash-collateralised securities lending transactions is derived in a different manner from that in a non-cash transaction. It is made from the difference or 'spread' between interest rates that are paid and received by the lender (see Box 2).

Box 2: Cash flows on a securities loan collateralised with cash

Transaction date	13th June 2003
Settlement date	16th June 2003
Term	Open
Security	XYZ Limited
Security price	£10.00 per share
Quantity	100,000 shares
Loan value	£1,000,000.00
Rebate rate	80 basis points
Collateral	USD cash
Margin required	5%
Collateral required	\$1,718,850.00 (£1,050,000.00 x 1.67)
Reinvestment rate	130 basis points
Daily Lending Income	\$23.87 or £14.58 (\$1,718,850.00 x 0.005 x (1/360))

FX Rate assumed of £1.00 = \$1.637

If the above transaction remains outstanding for one month and is returned on 16th July 2003, there will be two flows of cash from the lender to the borrower. These are based upon the cash collateral, and the profitability of the lender comes from the 50 basis points spread between the reinvestment rate and the rebate rate.

$$\$1,718,850 \times 0.008 \times (1/360) = \$38.20$$

Payments to the borrower:

On 30th June \$534.80 (\$38.20 x 14 days)

On 31st July \$611.20 (\$38.20 x 16 days)

The lender's profit will typically be taken as follows:

On 30th June £204.12 (£14.58 x 14 days)

On 31st July £233.28 (£14.58 x 16 days)

Thus total revenue is £437.40 against which the cost of settling the transactions (loan and collateral) must be offset.

NB For purposes of clarity, this example assumes that the value of the security on loan has remained constant for the duration of the above transaction. This is most unlikely; typically the price would change daily resulting in a mark to market and changes to the value of the collateral required. Open loan transactions can also be re-rated or have their rebate changed if market circumstances alter. It is assumed that this did not happen either.

The marginal increase in daily profitability associated with the cash transaction at a 50 bps spread compared with the non-cash transaction of 50 bps is due to the fact that the cash spread is earned on the collateral which has a 5% margin as well as the fact that the USD interest rate convention is 360 days and not 365 days as in the United Kingdom.

Reinvestment guidelines are typically communicated in words by the beneficial owner to their lending agent, and some typical guidelines might be as follows:

Conservative

- Overnight G7 Government Bond repo fund
- Maximum effective duration of 1 day
- Floating-rate notes and derivatives are not permissible
- Restricted to overnight repo agreements

Quite Conservative

- AAA rated Government Bond repo fund
- Maximum average maturity of 90 days
- Maximum remaining maturity of any instrument is 13 months

Quite Flexible

- Maximum effective duration of 120 days
- Maximum remaining effective maturity of 2 years
- Floating-rate notes and eligible derivatives are permissible
- Credit quality: Short-term ratings: A1/P1, long-term ratings: A-/A3 or better

Flexible

- Maximum effective duration of 120 days
- Maximum remaining effective maturity of 5 years
- Floating-rate notes and eligible derivatives are permissible
- Credit quality: Short-term ratings: A1/P1, long-term ratings: A-/A3 or better

Some securities lending agents offer bespoke reinvestment guidelines whilst others offer reinvestment pools.

Other transaction types

Securities lending is part of a larger set of interlinked securities financing markets. These transactions are often used as alternative ways of achieving similar economic outcomes, although the legal form and accounting and tax treatments can differ. The other transactions include:

(a) Sale and repurchase agreements

Sale and repurchase agreements or repos involve one party agreeing to sell securities to another against a transfer of cash, with a simultaneous agreement to repurchase the same securities (or equivalent securities) at a specific price on an agreed date in the future. It is common for the terms 'seller' and 'buyer' to replace the securities lending terms 'lender' and 'borrower'. Most repos are governed by a master agreement called the TBMA/ISMA Global Master Repurchase Agreement (GMRA)³.

Repos occur for two principal reasons – either to transfer ownership of a particular security between the parties or to facilitate collateralised cash loans or funding transactions.

The bulk of bond lending and bond financing is conducted by repo and there is a growing equity repo market. An annex can be added to the GMRA to facilitate the conduct of equity repo transactions.

Repos are much like securities loans collateralised against cash, in that income is factored into an interest rate that is implicit in the pricing of the two legs of the transaction.

At the beginning of a transaction, securities are valued and sold at the prevailing 'dirty' market price (i.e. including any coupon that has accrued). At termination, the securities are resold at a predetermined price equal to the original sale price together with interest at a previously agreed rate known as the repo rate.

In securities-driven transactions (i.e. where the motivation is not simply financing) the repo rate is typically set at a lower rate than prevailing money market rates to reward the 'lender' who will invest the funds in the money markets and thereby seek a return. The 'lender' often receives a margin by pricing the securities above their market level.

In cash-driven transactions, the repurchase price will typically be agreed at a level close to current money market yields, as this is a financing rather than a security-specific transaction. The right to substitute repoed securities as collateral is agreed by the parties at the outset. A margin is often provided to the cash 'lender' by reducing the value of the transferred securities by an agreed 'haircut' or discount.

³ The Public Securities Association ('PSA') is now called the Bond Market Association ('BMA') and is a US trade association. The International Securities Market Association ('ISMA') is the self-regulatory organisation and trade association for the international securities market.

(b) Buy/sell backs

Buy/sell backs are similar in economic terms to repos but are structured as a sale and simultaneous purchase of securities, with the purchase agreed for a future settlement date. The price of the forward purchase is typically calculated and agreed by reference to market repo rates.

The purchaser of the securities receives absolute title to them and retains any accrued interest and coupon payments during the life of the transaction. However, the price of the forward contract takes account of any coupons received by the purchaser.

Buy/sell back transactions are normally conducted for financing purposes and involve fixed income securities. In general a cash borrower does not have the right to substitute collateral. Until 1996, the bulk of buy/sell back transactions took place outside of a formal legal framework with contract notes being the only form of record. In 1995, the GMRA was amended to incorporate an annex that dealt explicitly with buy/sell backs. Most buy/sell backs are now governed by this agreement.

The table below compares the three main forms of collateralised securities loan transaction.

Characteristic	Securities lending		Repo		Buy/Sell back
	Cash collateral	Securities/other non-cash collateral	Specific securities (securities-driven)	General Collateral (cash-driven)	
Formal method of exchange	Sale with agreement to make subsequent reacquisition of equivalent securities	Sale with agreement to make subsequent reacquisition of equivalent securities	Sale and repurchase under terms of master agreement	Sale and repurchase under terms of master agreement	Sale and repurchase
Form of exchange	Securities vs cash	Securities vs collateral (n.b. often free of payment but sometimes delivery versus delivery)	Securities vs cash (n.b. often delivery versus payment)	Cash vs securities (n.b. often delivery versus payment)	Cash vs securities (n.b. often delivery versus payment)
Collateral type	Cash	Securities (bonds and equities), letters of Credit, DBVs, CDs	Cash	General collateral (bonds) or acceptable collateral as defined by buyer	Typically bonds
Return is paid to the supplier of	Cash collateral	Loan securities (not collateral securities)	Cash	Cash	Cash
Return payable as	Rebate interest (i.e. return paid on cash lower than comparable cash market interest rates)	Fee e.g. standard fees for FTSE 100 stocks are about 6-8 basis points (i.e. 0.06-0.08% pa)	Quoted as repo rate, paid as interest on the cash collateral (lower than general collateral repo rate)	Quoted as repo rate, paid as interest on the cash	Quoted as repo rate, paid through the price differential between sale price and repurchase price
Initial margin	Yes	Yes	Yes	Yes	Possible
Variation margin	Yes	Yes	Yes	Yes	No (only possible through close out and repricing)
Over-collateralisation	Yes (in favour of the securities lender)	Yes (in favour of the securities lender)	No	Possible (if any, in favour of the cash provider)	Possible (if any, in favour of the cash provider)
Collateral substitution	Yes (determined by borrower)	Yes (determined by borrower)	No	Yes (determined by the original seller)	No (only possible through close out and repricing)
Dividends and coupons	Manufactured to the lender	Manufactured to the lender	Paid to the original seller	Paid to the original seller	No formal obligation to return income normally factored into the buy-back price
Legal set off in event of default	Yes	Yes	Yes	Yes	No
Maturity	Open or term	Open or term	Open or term	Open or term	Term only
Typical asset type	Bonds and equities	Bonds and equities	Mainly bonds, equities possible	Mainly bonds, equities possible	Almost entirely bonds
Motivation	Security specific dominant	Security specific	Security specific	Financing	Financing dominant
Payment	Monthly in arrears	Monthly in arrears	At maturity	At maturity	At maturity

Chapter 2 Lenders and intermediaries

The securities lending market involves various types of specialist intermediary which take principal and/or agency roles. These intermediaries separate the underlying owners of securities – typically large pension or other funds, and insurance companies – from the eventual borrowers of securities, whose usual motivations are described in Chapter 4.

A Intermediaries

1. Agent intermediaries

Securities lending is increasingly becoming a volume business and the economies of scale offered by agents that pool together the securities of different clients enable smaller owners of assets to participate in the market. The costs associated with running an efficient securities lending operation are beyond many smaller funds for which this is a peripheral activity. Asset managers and custodian banks have added securities lending to the other services they offer to owners of securities portfolios, while third party lenders specialise in providing securities lending services.

Owners and agents 'split' revenues from securities lending at commercial rates. The split will be determined by many factors including the service level and provision by the agent of any risk mitigation, such as an indemnity. Securities lending is often part of a much bigger relationship and therefore the split negotiation can become part of a bundled approach to the pricing of a wide range of services.

(a) Asset managers

It can be argued that securities lending is an asset management activity – a point that is easily understood in considering the reinvestment of cash collateral. Particularly in Europe, where custodian banks were perhaps slower to take up the opportunity to lend than in the United States, many asset managers run significant securities lending operations.

What was once a back office low profile activity is now a front office growth area for many asset managers. The relationship that the asset managers have with their underlying clients puts them in a strong position to participate.

(b) Custodian banks

The history of securities lending is inextricably linked with the custodian banks. Once they recognised the potential to act as agent intermediaries and began marketing the service to their customers, they were able to mobilise large pools of securities that were available for lending. This in turn spurred the growth of the market.

Most large custodians have added securities lending to their core custody businesses. Their advantages include: the existing banking relationship with their customers; their investment in technology and global coverage of markets, arising from their custody businesses; the ability to pool assets from many smaller underlying funds, insulating borrowers from the administrative inconvenience of dealing with many small funds and providing borrowers with protection from recalls; and experience in developing as well as developed markets.

Being banks, they also have the capability to provide indemnities and manage cash collateral efficiently – two critical factors for many underlying clients.

Custody is so competitive a business that for many providers it is a loss making activity. However, it enables the custodians to provide a range of additional services to their client base. These may include:

Foreign exchange, trade execution, securities lending and fund accounting.

(c) Third-party agents

Advances in technology and operational efficiency have made it possible to separate the administration of securities lending from the provision of basic custody services, and a number of specialist third-party agency lenders have established themselves as an alternative to the custodian banks.

Their market share is currently growing from a relatively small base. Their focus on securities lending and their ability to deploy new technology without reference to legacy systems can give them flexibility.

2. Principal intermediaries

There are three broad categories of principal intermediary:

- Broker dealers
- Specialist intermediaries
- Prime brokers

In contrast to the agent intermediaries, they can assume principal risk, offer credit intermediation and take positions in the securities that they borrow. Distinctions between the three categories are blurred. Many firms would be in all three.

In recent years securities lending markets have been liberalised to a significant extent so that there is little general restriction on who can borrow and who can lend securities.

Lending can, in principle, take place directly between beneficial owners and the eventual borrowers. But typically a number of layers of intermediary are involved. What value do the intermediaries add?

A beneficial owner may well be an insurance company or a pension scheme while the ultimate borrower could be a hedge fund. Institutions will often be reluctant to take on credit exposures to borrowers that are not well recognised, regulated, or who do not have a good credit rating, which would exclude most hedge funds. In these circumstances, the principal intermediary (often acting as prime broker) performs a credit intermediation service in taking a principal position between the lending institution and the hedge fund.

A further role of the intermediaries is to take on liquidity risk. Typically they will borrow from institutions on an open basis – giving them the option to recall the underlying securities if they want to sell them or for other reasons – whilst lending to clients on a term basis, giving them certainty that they will be able to cover their short positions.

In many cases, as well as serving the needs of their own proprietary traders, principal intermediaries provide a service to the market in matching the supply of beneficial owners that have large stable portfolios with those that have a high borrowing requirement. They also distribute securities to a wider range of borrowers than underlying lenders, which may not have the resources to deal with a large number of counterparts.

These activities leave principal intermediaries exposed to liquidity risk if lenders recall securities that have been lent to borrowers on a term basis. One way to mitigate this risk is to use in-house inventory where available. For example, proprietary trading positions can be a stable source of lending supply if the long position is associated with a long-term derivatives transaction. Efficient inventory management is seen as critical and many securities lending desks act as central clearers of inventory within their organisations, only borrowing externally when netting of in-house positions is complete. This can require a significant technological investment. Other ways of mitigating ‘recall risk’ include arrangements to borrow securities from affiliated investment management firms, where regulations permit, and bidding for exclusive (and certain) access to securities from other lenders.

On the demand side, intermediaries have historically been dependent upon hedge funds or proprietary traders that make trading decisions. But a growing number of securities lending businesses within investment banks have either developed ‘trading’ capabilities within their lending or financing departments, or entered into joint ventures with other departments or even in some cases their hedge fund customers. The rationale behind this trend is that the financing component of certain trading strategies is so significant that without the loan there is no trade.

(a) Broker dealers

Broker dealers borrow securities for a wide range of reasons:

- Market making
- To support proprietary trading
- On behalf of clients

Many broker dealers combine their securities lending activities with their prime brokerage operation (the business of servicing the broad requirements of hedge funds and other alternative investment managers). This can bring significant efficiency and cost benefits. Typically within broker dealers the fixed income and equity divisions duplicate their lending and financing activities.

(b) Specialist intermediaries

Historically, regulatory controls on participation in stock lending markets meant that globally there were many intermediaries. Some specialised in intermediating between stock lenders and market makers in particular, e.g. UK Stock Exchange Money Brokers (‘SEMB’). With the deregulation of stock lending markets, these niches have almost all disappeared.

Some of the specialists are now part of larger financial organisations. Others have moved to parent companies that have allowed them to expand the range of their activities into proprietary trading.

(c) Prime brokers

Prime brokers serve the needs of hedge funds and other 'alternative' investment managers. The business was once viewed, simply, as the provision of six distinct services, although many others such as capital introduction, risk management, fund accounting and start up assistance have now been added:

Services provided by prime brokers

Profitable activities	Part of the cost of being in business
Securities lending	Clearance
Leverage of financing provision	Custody
Trade execution	Reporting

Securities lending is one of the central components of a successful prime brokerage operation, with its scale depending on the strategies of the hedge funds for which the prime broker acts. Two strategies that are heavily reliant on securities borrowing are long/short equity and convertible bond arbitrage.

The cost associated with the establishment of a full service prime broker is steep, and recognised providers have a significant advantage. Some of the newer entrants have been using total return swaps, contracts for difference and other derivative transaction types to offer what has become known as 'synthetic prime brokerage'. Again securities lending remains a key component of the service as the prime broker will still need to borrow securities in order to hedge the derivatives positions it has entered into with the hedge funds, for example, to cover short positions. But it is internalised within the prime broker and less obvious to the client.

B Beneficial owners

Those beneficial owners with securities portfolios of sufficient size to make securities lending worthwhile include:

- Pension funds
- Insurance and assurance companies
- Mutual funds/unit trusts
- Endowments

When considering whether and how to lend securities, beneficial owners need first to consider the characteristics of their organisations and portfolio.

1. Organisation characteristics

(a) Management motivation

Some owners lend securities solely to offset custody and administrative costs. Others are seeking more significant revenue.

(b) Technology investment

Lenders vary in their willingness to invest in technological infrastructure to support securities lending.

(c) Credit risk appetite

The securities lending market consists of organisations with a wide range of credit quality and collateral capabilities. A cautious approach to counterpart selection (AAA only) and restrictive collateral guidelines (G7 Bonds) will limit lending volumes.

2. Portfolio characteristics

(a) Size

Other things being equal, borrowers prefer large portfolios.

(b) Holdings size

Loan transactions generally exceed \$250,000. Lesser holdings are of limited appeal to direct borrowers.

Holdings of under \$250,000 are probably best deployed through an agency programme, where they can be pooled with other inventories.

(c) Investment strategy

Active investment strategies increase the likelihood of recalls, making them less attractive than passive portfolios.

(d) Diversification

Borrowers want portfolios where they need liquidity. A global portfolio offers the greatest chance of generating a fit. That said, there are markets that are particularly in demand from time to time and there are certain borrowers that have a geographic or asset class focus.

(e) Tax jurisdiction and position

Borrowers are responsible for 'making good' any benefits of share ownership (excluding voting rights) as if the securities had not been lent. They must 'manufacture' (i.e. pay) the economic value of dividends to the lender. An institution's tax position compared to that of other possible lenders is therefore an important consideration. If the cost of manufacturing dividends or coupons to a lender is low then its assets will be in greater demand.

(f) Inventory attractiveness

'Hot' securities are those in high demand whilst general collateral or general collateral securities are those that are commonly available. Needless to say, the 'hotter' the portfolio, the higher the returns to lending.

Having examined the organisation and portfolio characteristics of the beneficial owner, we must now consider the various possible routes to market.

The possible routes to the securities lending market

(a) Using an asset manager as agent

A beneficial owner may find that the asset manager they have chosen, already operates a securities lending programme. This route poses few barriers to getting started quickly.

(b) Using a custodian as agent

This is the least demanding option for a beneficial owner, especially a new one. They will already have made a major decision in selecting an appropriate custodian. This route also poses few barriers to getting started quickly.

(c) Appointing a third-party specialist as agent

A beneficial owner who has decided to outsource may decide it does not want to use the supplier's asset manager(s) or custodian(s), and instead appoint a third-party specialist. This route may mean getting to know and understand a new provider prior to getting started. The opportunity cost of any delay needs to be factored into the decision.

(d) Auctioning a portfolio to borrowers

Borrowers demand portfolios for which they bid guaranteed returns in exchange for gaining exclusive access to them. There are several different permutations of this auctioning route:

- Do-it-yourself auctions
- Assisted auctions
 - Agent assistance
 - Consultancy assistance
 - Specialist 'auctioneer' assistance

This is not a new phenomenon but one that has gained a higher profile in recent years. A key issue for the beneficial owner considering this option is the level of operational support that the auctioned portfolio will require and who will provide it.

e) Selecting one principal borrower

Many borrowers effectively act as wholesale intermediaries and have developed global franchises using their expertise and capital to generate spreads between two principals that remain unknown to one another. These

principal intermediaries are sometimes separately incorporated organisations, but more frequently, parts of larger banks, broker-dealers or investment banking groups. Acting as principal allows these intermediaries to deal with organisations that the typical beneficial owner may choose to avoid for credit reasons e.g. hedge funds.

(f) Lending directly to proprietary principals

Normally after a period of activity in the lending market using one of the above options, a beneficial owner that is large enough in its own right, may wish to explore the possibility of establishing a business 'in house', lending directly to a selection of principal borrowers that are the end-users of their securities. The proprietary borrowers include broker-dealers, market makers and hedge funds. Some have global borrowing needs while others are more regionally focused.

(g) Choosing some combination of the above

Just as there is no single or correct lending method, so the options outlined above are not mutually exclusive. Deciding not to lend one portfolio does not preclude lending to another; similarly, lending in one country does not necessitate lending in all. Choosing a wholesale intermediary that happens to be a custodian in the United States and Canada does not mean that a lender cannot lend Asian assets through a third-party specialist, and European assets directly to a panel of proprietary borrowers.

Chapter 3 The borrowing motivation

One of the central questions commonly asked by issuers and investors alike is 'Why does the borrower borrow my securities?' Before considering this point let us examine why issuers might care.

Issuers

If securities were not issued, they could not be lent. Behind this simple tautology lies an important point. When Initial Public Offerings are frequent and corporate merger and acquisition activity is high, the securities lending business benefits. In the early 2000s, the fall in the level of such activity depressed the demand to borrow securities leading to:

- A depressed equity securities lending market, meaning:
 - Fewer trading opportunities
 - Less demand
 - Fewer 'specials'
- Issuer concern about the role of securities lending, such as:
 - Whether it is linked in any way to the decline in the value of a company's shares?
 - Whether securities lending should be discouraged?

How many times does an issuer discussing a specific corporate event stop to consider the impact that the issuance of a convertible bond, or the adoption of a dividend reinvestment plan might have upon the lending of their shares.

There is a significant amount of information available on the 'long' side of the market and correspondingly little on the short side. Securities lending activity is not synonymous with short selling. But it is often, although not always, used to finance short sales (see below) and might be a reasonable and practical proxy for the scale of short selling activity in the absence of full short sale disclosure. It is therefore natural that issuers would want to understand how and why their securities are traded.

Reasons to borrow

Borrowers, when acting as principals, have no obligation to tell lenders or their agents why they are borrowing securities. In fact they may well not know themselves as they may be on-lending the securities to proprietary traders or hedge funds that do not share their trading strategies openly. Some prime brokers are deliberately vague when borrowing securities as they wish to protect their underlying hedge fund customer's trading strategy and motivation.

This chapter explains some of the more common reasons behind the borrowing of securities. In general, these can be grouped into: (1) borrowing to cover a short position (settlement coverage, naked shorting, market making, arbitrage trading); (2) borrowing as part of a financing transaction motivated by the desire to lend cash, and; (3) borrowing to transfer ownership temporarily to the advantage of both lender and borrower (tax arbitrage, dividend reinvestment plan arbitrage).

Borrowing to cover short positions

(a) Settlement coverage

Historically, settlement coverage has played a significant part in the development of the securities lending market. Going back a decade or so, most securities lending businesses were located in the back offices of their organisations and were not properly recognised as businesses in their own right. Particularly for less liquid securities – such as corporate bonds and equities with a limit free float – settlement coverage remains a large part of the demand to borrow.

The ability to borrow to avoid settlement failure is vital to ensure efficient settlement and has encouraged many securities depositories into the automated lending business. This means that they remunerate customers for making their securities available to be lent by the depository automatically in order to avert any settlement failures.

(b) Naked shorting

Naked shorting can be defined as borrowing securities in order to sell them in the expectation that they can be bought back at a lower price in order to return them to the lender. Naked shorting is a directional strategy, speculating that prices will fall, rather than a part of a wider trading strategy, usually involving a corresponding long position in a related security.

Naked shorting is a high-risk strategy. Although some funds specialise in taking short positions in the shares of companies they judge to be overvalued, the number of funds relying on naked shorting is relatively small

and probably declining.

(c) Market making

Market makers play a central role in the provision of two-way price liquidity in many securities markets around the world. They need to be able to borrow securities in order to settle 'buy orders' from customers and to make tight, two-way prices.

The ability to make markets in illiquid small capitalisation securities is sometimes hampered by a lack of access to borrowing, and some of the specialists in these less liquid securities have put in place special arrangements to enable them to gain access to securities. These include guaranteed exclusive bids with securities lenders.

The character of borrowing is typically short term for an unknown period of time. The need to know that a loan is available tends to mean that the level of communication between market makers and the securities lending business has to be highly automated. A market maker that goes short and then finds that there is no loan available would have to buy that security back to flatten its book.

(d) Arbitrage trading

Securities are often borrowed to cover a short position in one security that has been taken to hedge a long position in another as part of an 'arbitrage' strategy. Some of the more common arbitrage transactions that involve securities lending are described below.

(i) Convertible bond arbitrage

Convertible bond arbitrage involves buying a convertible bond and simultaneously selling the underlying equity short and borrowing the shares to cover the short position (see Box 3). Leverage can be deployed to increase the return in this type of transaction. Prime brokers are particularly keen on hedge funds that engage in convertible bond arbitrage as they offer scope for several revenue sources:

- Securities lending revenues
- Provision of leverage
- Execution of the convertible bond
- Execution of the equity

Box 3: Worked example of convertible bond arbitrage

Long side

- 5% XYZ Limited convertible bond
- Maturing in one year at US\$1,000
- Exchangeable into 100 non-dividend-paying shares
- Stock currently trading at US\$10 per share

Short side

- A short position of 50 underlying shares at \$10 per share

Pricing inefficiencies between these two related securities can create arbitrage opportunities whether the underlying share price rises or falls. In general, however, the trade will be more profitable if the implied volatility of the share price rises, increasing the value of the call option embedded in the convertible bond.

Unless the issuer defaults, convertible bonds can only fall in value as low as their 'investment value' – what the same company bond would be worth if it were not convertible. In this case, the investment value is assumed to be US\$920.

Bondholders can purchase protection against issuer default using credit default swaps but this element of the transaction is not covered in this example. To keep the example simple, it is also assumed that the convertible trades with a 'delta' of one to the stock (i.e. that the prices of the convertible bond and the share change at the same rate.)

A transaction such as the one outlined above would have the following return dynamics:

No change in share price:

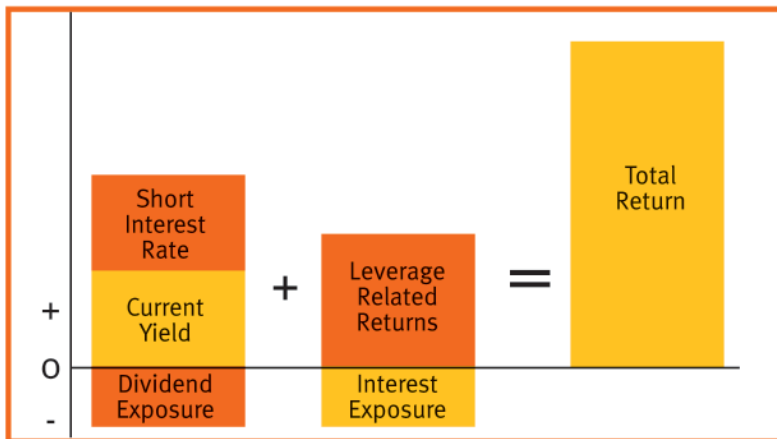
Interest payments on \$1,000 convertible bond (5%)	\$50.00
Interest earned on \$500 short sale proceeds (1.5%)	\$7.50
Fees paid to lender of shares (0.25% per annum)	(\$1.50)
Net cash flow	\$56.00
Annual return	5.60%

25% rise in share price:

Gain on convertible bond	\$250.00
Loss on shorted stock (50 shares @ \$2.50/share)	(\$125.00)
Interest from convertible bond	\$50.00
Interest earned on short sale proceeds	\$7.50
Fees paid to lender of shares	(\$1.50)
Net trading gains and cash flow	\$181.00
Annual return	18.10%

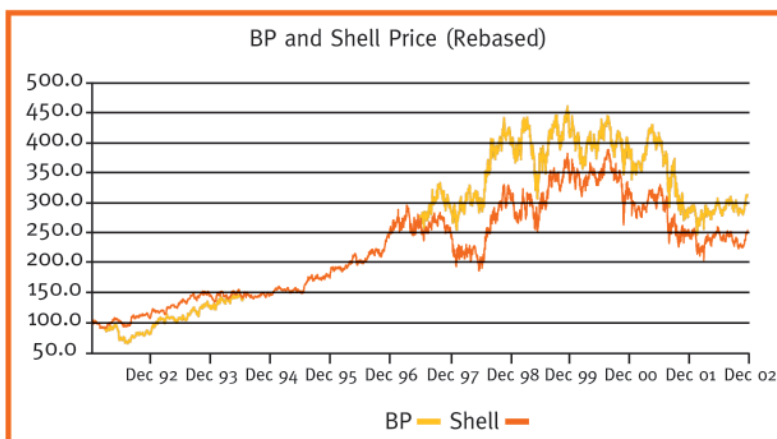
25% fall in share price:

Loss on convertible bond (only falling as low as 'investment value')	(\$80.00)
Gain on shorted stock (50 shares @ \$2.50/share)	\$125.00
Interest from convertible bond	\$50.00
Interest earned on short sale proceeds	\$7.50
Fees paid to lender of shares	(\$1.50)
Net cash flow	\$101.00
Annual return	10.10%

Components of Return**(ii) Pairs trading or relative value 'arbitrage'**

This is an investment strategy that seeks to identify two companies with similar characteristics whose equity securities are currently trading at a price relationship that is out of line with their historical trading range. The strategy entails buying the apparently undervalued security while selling the apparently overvalued security short, borrowing the latter security to cover the short position.

Focusing on securities in the same sector or industry should normally reduce the risks in this strategy. The following chart shows how Shell and BP have traded since 1991. At times it would have been possible to buy one share and sell the other awaiting price realignment.



Source: Securities Finance Systems

(iii) Index arbitrage

In this context, arbitrage refers to the simultaneous purchase and sale of the same commodity or stock in two different markets in order to profit from price discrepancies between the markets.

In the stock market, an arbitrage opportunity arises when the same security trades at different prices in different markets. In such a situation, investors buy the security in one market at a lower price and sell it in

another for more, capitalising on the difference. However, such an opportunity vanishes quickly as investors rush to take advantage of the price difference.

The same principle can be applied to index futures. Being a derivative product, index futures derive their value from the securities that constitute the index. At the same time, the value of index futures is linked to the stock index value through the opportunity cost of funds (borrowing/lending cost) required to play the market. Stock index arbitrage involves buying or selling a basket of stocks and, conversely, selling or buying futures when mispricing appears to be taking place.

(iv) When is an arbitrage possible?

Where the current index futures price (FC) is not equal to the index value (IC) plus the difference between the risk free interest (RF) and dividends (D) obtainable over the life of the contract.

Or whenever the following is not true $FC = IC + (RF-D)$.

Whenever the actual futures price moves away from the above calculated value, i.e. when $FC > IC + (RF-D)$ or $F < IC + (RF-D)$, arbitrage opportunities exist. The difference between the current theoretical actual cost and the futures price is called the basis. It is this difference that creates an arbitrage opportunity.

When $FC > IC + (RF-D)$ a trader can profit by taking the following action:

- Buying a portfolio which is identical to the index value
- Selling index futures

When $FC < IC + (RF-D)$ a trader can profit by taking the following action:

- Going short (selling) a portfolio which is identical to the index value
- Buying index futures

It is here that securities lending plays its role. The ability of a borrower to source a complete portfolio of all the stocks in an index, properly weighted, that will accurately track the performance of the index is a big advantage. Incomplete indices or unbalanced indices open up the possibility of tracking errors occurring whereby the performance of the short cash portfolio deviates from that of the index.

The ability to borrow securities that have a cheaper manufactured dividend obligation is an advantage too. One of the problem areas is when a component (or components) of the index is in high demand ('trading special') and the cost of borrowing rises, thereby reducing the profitability of the transaction. The ability to borrow for a fixed term is also an advantage.

The best sources of securities to support this type of transaction are passive index tracking funds incorporated in countries that have high rates of withholding tax.

Once established, the stock index arbitrage can generate profits should the price of the index and the underlying securities move up or down. The arbitrage opportunity is often short-lived as positions are taken and the price adjusts. As these transactions normally have thin margins, they are often executed in large sizes.

(2) Financing

As broker dealers build derivative prime brokerage and customer margin business, they hold an increasing inventory of securities that requires financing.

This type of activity is high volume and takes place between two counterparts that have the following coincidence of wants:

- One has cash that they would like to invest on a secured basis and pick up yield
- The other has inventory that needs to be financed

In the case of bonds, the typical financing transaction is a repo or buy/sell back. But for equities, securities lending and equity, repo transactions are used.

Tri Party Agents are often involved in this type of financing transaction as they can reduce operational costs for the cash lender and they have the settlement capabilities the cash borrower needs to substitute securities collateral as their inventory changes.

(3) Temporary transfers of ownership

(a) Tax arbitrage

Tax driven trading is an example of securities lending as a means of exchange.

Markets that have historically provided the largest opportunities for tax arbitrage include those with significant tax credits that are not available to all investors – examples include Italy, Germany and France.

The different tax positions of investors around the world have opened up opportunities for borrowers to use securities lending transactions, in effect, to exchange assets temporarily for the mutual benefit of purchaser, borrower and lender. The lender's reward comes in one of two ways: either a higher fee for lending if they require a lower manufactured dividend, or a higher manufactured dividend than the post-tax dividend they would normally receive (quoted as an 'all-in rate').

For example, an offshore lender that would normally receive 75% of a German dividend and incur 25% withholding tax (with no possibility to reclaim) could lend the security to a borrower that, in turn, could sell it to a German investor who was able to obtain a tax credit rather than incur withholding tax. If the offshore lender claimed the 95% of the dividend that it would otherwise have received, it would be making a significant pick-up (20% of the dividend yield), whilst the borrower might make a spread of between 95% and whatever the German investor was bidding. The terms of these trades vary widely and rates are calculated accordingly.

(b) Dividend reinvestment plan arbitrage

Many issuers of securities create an arbitrage opportunity when they offer shareholders the choice of taking a dividend or reinvesting in additional securities at a discounted level.

Income or index tracking funds that cannot deviate from recognised securities weightings may have to choose to take the cash option and forgo the opportunity to take the discounted reinvestment opportunity.

One way that they can share in the potential profitability of this opportunity is to lend securities to borrowers that then take the following action:

- Borrow as many guaranteed cash shares as possible, as cheaply as possible
- Tender the borrowed securities to receive the new discounted shares
- Sell the new shares to realise the 'profit' between the discounted share price and the market price
- Return the shares and manufacture the cash dividend to the lender

Chapter 4 Market mechanics

This section outlines the detailed processes in the life of a securities loan including:

- Negotiation of loan deals
- Confirmations
- Term of loan
- Term trades
- Putting securities 'on hold'
- Settlements, including how loans are settled and settlement concerns
- Termination of loans
- Redelivery, failed trades and legal remedies
- Corporate actions and voting
- UK tax arrangements and reporting of transactions to the London Stock Exchange

Loan negotiation

Traditionally securities loans have been negotiated between counterparts (whose credit departments have approved one another) on the phone, and followed up with written or electronic confirmations. Normally the borrower initiates the call to the lender with a borrowing requirement. However, pro-active lenders may also offer out in-demand securities to their approved counterparts. This would happen particularly where one borrower returns a security and the lender is still lending it to others in the market, they will contact them to see if they wish to borrow additional securities.

Today, there is an increasing amount of bilateral and multilateral automated lending whereby securities are broadcast as available at particular rates by email or other electronic means. Where lending terms are agreeable, automatic matching can take place.

An example of an electronic platform for negotiating equity securities loan transactions is EquiLend, which began operations in 2002 and is backed by a consortium of financial institutions. EquiLend's stated objective is to: 'Provide the securities lending industry with the technology to streamline and automate transactions between borrowing and lending institutions and... introduce a set of common protocols. EquiLend will connect borrowers and lenders through a common, standards-based global equity lending platform enabling them to transact with increased efficiency and speed, and reduced cost and risk.' EquiLend is not alone in this market; for example, SecFinex offers similar services in Europe.

Confirmations

Written or electronic confirmations are issued, whenever possible, on the day of the trade so that any queries by the other party can be raised as quickly as possible. Material changes during the life of the transaction are agreed between the parties as they occur and may also be confirmed if either party wishes it. Examples of material changes are collateral adjustments or collateral substitutions. The parties agree who will take responsibility for issuing loan confirmations.

Confirmations would normally include the following information:

- Contract and settlement dates
- Details of loaned securities
- Identities of lender and borrower (and any underlying principal)
- Acceptable collateral and margin percentages
- Term and rates
- Bank and settlement account details of the lender and borrower

Term of loan, and selling securities while on loan

Loans may either be for a specified term or open. Open loans are trades with no fixed maturity date. It is more usual for securities loans to be open or 'at call', especially for equities, because lenders typically wish to preserve the flexibility for fund managers to be able to sell at any time. Lenders are able to sell securities despite their being on open loan because they can usually be recalled from the borrower within the settlement period of the market concerned. Nevertheless open loans can remain on loan for a long period.

Term trades – fixed or indicative?

The general description 'term trade' is used to describe differing arrangements in the securities lending market. The parties have to agree whether the term of a loan is 'fixed' for a definite period or whether the duration is merely 'indicative' and therefore the securities are callable. If fixed, the lender is not obliged to accept

the earlier return of the securities; nor does the borrower need to return the securities early if the lender requests it. Accordingly, securities subject to a fixed loan should not be sold while on loan.

Where the term discussed is intended to be 'indicative', it usually means that the borrower has a long-term need for the securities but the lender is unable to fix for term and retains the right to recall the securities if necessary.

Putting securities 'on hold' (also known as 'icing')

Putting securities 'on hold' (referred to in the market as 'icing' securities) is the practice whereby the lender will reserve securities at the request of a borrower on the borrower's expected need to borrow those securities at a future date. This occurs where the borrower must be sure that the securities will be available before committing to a trade that will require them.

While some details can be agreed between the parties, it is normal for any price quoted to be purely indicative, and for securities to be held to the following business day. The borrower can 'roll over' the arrangement (i.e. continue to ice the securities) by contacting the holder before gam, otherwise it terminates.

Key aspects of icing are that the lender does not receive a fee for reserving the securities and they are generally open to challenge by another borrower making a firm bid. In this case the first borrower would have 30 minutes to decide whether to take the securities at that time or to release them.

'Pay-to-hold' arrangements

A variation on icing is 'pay-to-hold' where the lender does receive a fee for putting the securities on hold. As such, they constitute a contractual agreement and are not open to challenge by other borrowers.

How are loans settled?

Securities lenders need to settle transactions on a shorter timeframe than the customary settlement period for that market. Settlement will normally be through the lender's custodian bank and this is likely to apply irrespective of whether the lender is conducting the operation or delegating to an agent. The lender will usually have agreed a schedule of guaranteed settlement times for its securities lending activity with its custodians. Prompt settlement information is crucial to the efficient monitoring and control of a lending programme, with reports needed for both loans and collateral.

In most settlement systems securities loans are settled as 'free-of-payment' deliveries and the collateral is taken quite separately, possibly in a different payment or settlement system and maybe a different country and time zone. For example, UK equities might be lent against collateral provided in a European International Central Securities Depository or US dollar cash collateral paid in New York. This can give rise to what is known in the market as 'daylight exposure', a period during which the loan is not covered as the lent securities have been delivered but the collateral securities have not yet been received. To avoid this exposure some lenders insist on pre-collateralisation, so transferring the exposure to the borrower.

The CREST system for settling UK and Irish securities is an exception to the normal practice as collateral is available within the system. This enables loans to be settled against cash intra-day and for the cash to be exchanged, if desired, at the end of the settlement day for a package of DBV securities overnight. The process can be reversed and repeated the next day.

CREST settlement facility for stock lending

CREST also has specific settlement arrangements for stock loans, requiring the independent input of instructions by both parties, who must complete a number of matching fields, including the amount and currency of any cash collateral, together with the percentage value of applicable loan margin. Loans may be effected against sterling, euro or dollar consideration or made free-of-payment.

Immediately after the settlement of the loan, CREST automatically creates a pre-matched stock loan return transaction with an intended settlement date of the next business day. The return is prevented from settling until the borrower intervenes to raise the settlement priority of the transaction. The stock lender may freeze the transaction in order to prevent the stock from returning.

CREST provides full revaluation facilities for all securities out on loan. On the original creation of the return and every night that the loan is open thereafter, it is marked to market against the prevailing CREST offer price. Any deficit or surplus of cash collateral of a stock loan return arising from price fluctuations is corrected by CREST which automatically generates payment instructions between the parties and simultaneously alters the value of the return consideration. Users may opt out of the revaluation process by completing the relevant field of the loan transaction, or by settling loans on a free-of-payment basis.

Termination of the loan

Open loans may be terminated by the borrower returning securities or by the lender recalling them. The borrower will normally return borrowed securities when it has filled its short position. A borrower will sometimes refinance its loan positions by borrowing more cheaply elsewhere and returning securities to the original lender. The borrower may, however, give the original lender the opportunity to reduce the rate being charged on the loan before borrowing elsewhere.

Redelivery, failed trades and legal remedies

When deciding which markets and what size to lend in, securities lenders will consider how certain they can be of having their securities returned in a timely manner when called, and what remedies are available under the legal agreement (see below) in the event of a failed return.

Procedures to be followed in the event of a failed redelivery are usually covered in legal agreements or otherwise agreed between the parties at the outset of the relationship. Financial redress may be available to the lender if the borrower fails to redeliver loaned securities or collateral on the intended settlement date. Costs that would typically be covered include:

- Direct interest and/or overdraft incurred
- Costs reasonably and properly incurred as a result of the borrower's failure to meet its sale or delivery obligations
- Total costs and expenses reasonably incurred by the lender as a result of a 'buy-in' (i.e. where the lender is forced to purchase securities in the open market following the borrower's failure to return them)

Costs that would usually be excluded are those arising from the transferee's negligence or wilful default and any indirect or consequential losses. An example of that would be when the non-return of loaned securities causes an onward trade for a larger amount to fail. The norm is for only that proportion of the total costs which relates to the unreturned securities or collateral to be claimed. It is good practice, where possible, to consider 'shaping' or 'partialling' larger transactions (i.e. breaking them down into a number of smaller amounts for settlement purposes) so as to avoid the possibility of the whole transaction failing if the transferor cannot redeliver the loaned securities or collateral on the intended settlement date.

Corporate actions and votes

The basic premise underlying securities lending is to make the lender 'whole' for any corporate action event – such as a dividend, rights or bonus issue – by putting the borrower under a contractual obligation to make equivalent payments to the lender, for instance by 'manufacturing' dividends. However a shareholder's right to vote as part owner of a company cannot be manufactured. When securities are lent, legal ownership and the right to vote in shareholder meetings passes to the borrower, who will often sell the securities on. Where lenders have the right to recall securities, they can use this option to restore their holdings and voting rights. The onus is on the borrower to find the securities, by borrowing or purchasing them in the market if necessary. This can damage market liquidity, which is a risk that intermediaries manage.

It is important that beneficial owners are aware that when shares are lent the right to vote is also transferred. The SLRC's code of guidance (see Chapter 5) states in section 2.5.4 that lenders should make it clear to clients that voting rights are transferred. A balance needs to be struck between the importance of voting and the benefits derived from lending the securities. Beneficial owners need to ensure that any agents they have made responsible for their voting and stock lending act in a co-ordinated way.

Borrowing securities in order to build up a holding in a company with the deliberate purpose of influencing a shareholder vote is not necessarily illegal in the United Kingdom. However, institutional lenders have recently become more aware of the possibility, and tend not to see it as a legitimate use of securities borrowing.

A number of market bodies, in the United Kingdom and internationally, have been addressing the relationship between securities lending and voting. For example, a recent report by Paul Myners to the UK Shareholder Voting Working Group⁴ made the following recommendation:

'Stocklending is important in maintaining market liquidity but borrowing of shares for the purpose of voting is not appropriate... it is important that beneficial owners are fully aware of the implications for voting if they agree to their shares being lent. In particular, when a resolution is contentious I start from the position that the lender should automatically recall the related stock, unless there are good economic reasons for not doing so.'

4 'A Review of the Impediments to Voting UK Shares', available at www.investmentfunds.org.uk.

Internationally, a working group of the International Corporate Governance Network is currently examining best practices for long-term investors in relation to securities lending and voting. The SLRC is also considering additions to its code in this area.

UK tax arrangements and London Stock Exchange reporting by member firms

London Stock Exchange rules require lending arrangements in securities on which UK Stamp Duty/Stamp Duty Reserve Tax (SDRT)⁵ is chargeable to be reported to the Exchange. This enables firms to bring their borrowing and lending activity 'on Exchange' and to allow them to be exempt from Stamp Duty/SDRT. Firms which are not members of the Exchange but which conduct borrowing and lending through a member firm are also eligible for relief from stock lending Stamp Duty/SDRT. On Exchange lending arrangements are evidenced by regulatory reports that are transmitted to the Exchange by close of business on the day the lending arrangement is agreed.

Prior to entering into a lending arrangement, member firms are required to sign a written agreement with the other party. The Exchange has authorised the following agreements:

- Global Master Securities Lending Agreement
- Master Equity & Fixed Interest Stock Lending Agreement (1996)
- PSA/ISMA Global Master Repurchase Agreement as extended by supplemental terms and conditions for equity repo forming Part 2 of Annex 1 of the agreement

Where an authorised agreement does not cover the circumstances in which a member firm wishes to enter into a lending arrangement, the firm must ensure that the agreement includes provisions equivalent to those contained within the Exchange's rules on lending arrangements in relation to member firm default.

UK Companies Act 1985

Firms that are engaged in equity stock borrowing or lending in the United Kingdom will need to comply, where appropriate, with the notification requirements applying to notifiable interest in shares as set out in Part VI of the Companies Act 1985. Firms that are uncertain about the application of Part VI should seek legal advice.

Transparency in the UK market

CREST provides time-delayed information on the value of securities financing transactions in the top 350 UK equities. This is a subscription service begun in September 2003 following extensive discussion with market participants and the Financial Services Authority. The information it provides pertains to total Stamp Duty Reserve Tax-exempt transactions taking place in each security on a given day and excludes intermediary activity where possible. CREST has provided answers to many frequently asked questions on its website, www.crest.co.uk.

The launch of its securities financing data service coincided with its publication of settlement failure statistics. The London Stock Exchange monitors both and makes public announcements on stock lending activity when it feels it is appropriate.

UK Takeover Panel

If it is proposed that any securities lending should take place during an offer period for a UK company, the Takeover Panel should be consulted to establish whether any disclosure is required and whether there are any other consequences.

⁵ As defined in Section 99 of the Finance Act 1986 and including stock as defined in the Stamp Act 1891.

Chapter 5 Risks, regulation and market oversight

This chapter describes the main financial risks in securities lending, and how lenders usually manage them. It is not a comprehensive description of the various operational, legal, market and credit risks to which market participants can be exposed. Readers seeking a fuller analysis are referred to the relevant sections of, for example, 'Securities Lending Transactions: Market Development and Implications'⁶. The chapter then briefly summarises the UK regulatory framework for securities lending market participants and the role of the UK Stock Lending and Repo Committee.

Financial risks in securities lending are primarily managed through the use of collateral and netting. As described in Chapter 1, collateral can be in the form of securities or cash. The market value of the collateral is typically greater than that of the lent portfolio. This margin is intended to protect the lender from loss and reflect the practical costs of collateral liquidation and repurchase of the lent portfolio in the event of default. Any profits made in the repurchase of the lent portfolio are normally returned to the borrower's liquidator. Losses incurred are borne by the lender with recourse to the borrower's liquidator along with other creditors.

Risks and risk management

When taking cash as collateral

Because of its wide acceptability and ease of management, cash can be highly appropriate collateral. However, the lender needs to decide how best to utilise this form of collateral. As described in Chapter 1, a lender taking cash as collateral pays rebate interest to the securities borrower, so the cash must be reinvested at a higher rate to make any net return on the collateral. This means the lender needs to decide on an appropriate risk-return trade-off. In simple terms, reinvesting in assets that carry one of the following risks can increase expected returns:

- a higher credit risk: a risk of loss in the event of defaults or
- a longer maturity in relation to the likely term of the loan

Many of the large securities lending losses over the years have been associated with reinvestment of cash collateral.

Typically, lenders delegate reinvestment to their agents, (e.g. custodian banks). They specify reinvestment guidelines, such as those set out in Chapter 1. There is a move towards more quantitative, risk-based approaches; often specifying the 'value-at-risk' in relation to the different expected returns earned from alternative reinvestment profiles. Agents do not usually offer an indemnity against losses on reinvestment activity so that the lender retains all of the risk while their agent is paid part of the return.

When taking other securities as collateral

Compared with cash collateral, taking other securities as collateral is a way of avoiding reinvestment risk. In addition to the risks of error, systems failure and fraud always present in any market, problems then arise on the default of a borrower. In such cases the lender will seek to sell the collateral securities in order to raise the funds to replace the lent securities. Transactions collateralised with securities are exposed to a number of different risks:

Reaction and legal risk. If a lender experiences delays in either selling the collateral securities or repurchasing the lent securities, it runs a greater risk that the value of the collateral will fall below that of the loan in the interim. Typically, the longer the delay, the larger the risk.

Mispricing risk. The lender will be exposed if either collateral securities have been over-valued or lent securities under-valued because the prices used to mark to market differ from prices that can actually be traded in the secondary market. One example of mispricing is using mid rather than bid prices for collateral. For illiquid securities, obtaining a reliable price source is particularly difficult because of the lack of trading activity.

Liquidity risk. Illiquid securities are more likely to be realised at a lower price than the valuation used. Valuation 'haircuts' are used to mitigate this risk (i.e. collateral is valued at, for example, 98% or 95% of the current market value). The haircuts might depend upon:

- The proportion of the total security issue held in the portfolio – the larger the position, the greater the haircut
- The average daily traded volume of the security: the lower the volume, the greater the haircut
- The volatility of the security; the higher the volatility, the greater the haircut

6 (BIS/IOSCO, 1999)

Congruency of collateral and lent portfolios (mismatch risk). If the lent and collateral portfolios were identical then there would be no market risk. In practice, of course, the lent and collateral portfolios are often very different. The lender's risk is that the market value of the lent securities increases but that of the collateral securities falls before rebalancing can be effected. Provided the counterpart has not defaulted, the lender will be able to call for additional collateral on any adverse collateral/loan price movements. However, following default, it will be exposed until it has been able to sell the collateral and replace the lent securities.

The size of mismatch risk depends on the expected co-variance of the value of the collateral and lent securities. The risk will be greater if the value of the collateral is more volatile, the value of the lent securities is more volatile, or if their values do not tend to move together, so that the expected correlation between changes in their value is low. For example, in deciding whether to hold UK government securities or UK equities to collateralise a loan of BP shares, a lender would have to judge whether the greater expected correlation between the value of the UK equities and the BP shares reduced mismatch risk by more than the lower expected volatility in the value of the government securities.

Many agent intermediaries will offer beneficial owners protection against these risks by agreeing to return (buy-in) lent securities immediately for their clients following a fail, taking on the risk that the value of the collateral on liquidation is lower.

Securities lending using other securities as collateral: a worked example

This example illustrates one approach to estimating the risk exposure to a lender taking securities as collateral.

Table 1: Summary of ABCs lent and collateral position with Borrower 1

Asset Class	Loan Inventory (£m)	No. of Loan Positions	Collateral Inventory (£m)	No. of Collateral Positions	Gross Margin (£m)
Total	550.0	43	575.0	10	25.0
FTSE 100	100.0	5	75.0	2	-25
FTSE 250	200.0	10			-200
UK 20-Year Bonds			300.0	5	300
UK Cash			100.0		100
US Equities	100.0	15			-100
Japanese Equities	50.0	3			-50
Malaysian Equities	100.0	10			-100
US Long Bonds			100.0	3	100

Source: Barrie & Hibbert

Assume that lender ABC has loaned Borrower 1 a range of equities in the UK, US, Japanese and Malaysian markets. Collateral is mainly in the form of UK gilts at various maturities, sterling cash deposits and US long-dated Treasury bonds. The gross margin is £25m or 4.5% of loan inventory.

Table 2: Data used to drive the analysis

Currency Base: GBP				Correlation Assumptions							
Asset Class	Average Daily Liq (£m)	Asset Risk	Average Stock Residual Risk (% p.a.)	FTSE 100	FTSE 250	UK 20-Year Bonds	UK Cash	US Equities	Japanese Equities	Malaysian Equities	US Long Bonds
FTSE 100	5.80	18%	20%	1.00	0.93	0.38	-0.01	0.70	0.31	0.64	0.26
FTSE 250	1.00	20%	30%	0.93	1.00	0.30	-0.09	0.65	0.37	0.61	0.23
UK 20-Year Bonds	20.00	9%	3%	0.38	0.30	1.00	-0.02	0.09	0.12	0.08	0.12
UK Cash		1%	3%	-0.01	-0.09	-0.02	1.00	-0.04	-0.09	-0.07	-0.02
US Equities	9.40	20%	24%	0.70	0.65	0.09	-0.04	1.00	0.26	0.64	0.68
Japanese Equities	1.40	25%	22%	0.31	0.37	0.12	-0.09	0.26	1.00	0.30	0.13
Malaysian Equities	0.90	34%	29%	0.64	0.61	0.08	-0.07	0.64	0.30	1.00	0.39
US Long Bonds	20.00	14%	5%	0.26	0.23	0.12	-0.02	0.68	0.13	0.39	1.00

Source: Barrie & Hibbert

Table 2 shows the type of data on which a detailed analysis of mismatch risk might be based: the average daily liquidity in each asset class, the volatility of each asset class, the average residual risk on particular securities within each asset class and a matrix of correlations between various asset classes.

Realistic valuations

The first consideration is whether the valuation prices are fair. Assuming the portfolios have been conservatively valued at bid and offer (not mid) prices, then the lender might require some adjustment (haircut) to reflect concentration and price volatility of the different assets. For example, in the case of the sterling cash collateral, the haircut might be negligible. But for the Malaysian equity portfolio, a high adjustment might be sought on the assumption that it would probably cost more than £100m to buy back this part of the lent portfolio. Required haircuts might be based on the average daily liquidity for the asset class, the price volatility of the asset class and the residual risk on individual securities, taken from Table 2.

Table 3: Adjusted collateral and lent portfolio values

Asset Class	Adjusted Loan Inventory (£m)	Adjusted Collateral Inventory (£m)	Net Margin (£m)
Total	557.1	573.3	16.2
FTSE 100	100.7	73.8	-26.9
FTSE 250	203.8		-203.8
UK 20-Year Bonds		299.7	299.7
UK Cash		100.0	100.0
US Equities	100.2		-100.2
Japanese Equities	51.0		-51.0
Malaysian Equities	101.4		-101.4
US Long Bonds		99.8	99.8

Source: Barrie & Hibbert

Table 3 shows how necessary haircuts could affect the valuation. For example, the lent Malaysian equities have been revised upwards to £101.4m. This reflects the lower liquidity and higher volatility of the Malaysian equities, which outweigh the risk reduction brought by diversifying the risk on the lent portfolio. The lender's margin has thus effectively been reduced from £25m to £16.2m or 2.9%.

Risk calculation (post-default)

Using the adjusted portfolios, the lender can then calculate the risk of a collateral shortfall in the event of the borrower defaulting. Broadly, this will need to assess the volatility of each asset class, the correlation between them and the residual risk of securities within them to derive a range of possible scenarios from which probabilities of loss and the most likely size of losses on default can be estimated. Working on the assumption that the lender can realise its collateral and replace its lent securities in a reaction time of twenty days, Table 4 shows the results for the portfolio, together with some sensitivity analysis in case market volatility and liquidity that has been significantly changed. By increasing the volatility assumption or reducing the liquidity assumption, the probability and scale of expected losses increase.

Table 4: Risk analysis for Borrower 1 under different assumptions

Scenario	Probability of Loss on Default	Expected Loss on Default (£m)
Base Case	26%	4.0
Asset Risk Increased by 50%	33%	8.0
Reduce Liquidity by 50%	31%	5.1

Source: Barrie & Hibbert

The final sensitivity is reaction time and Table 5 shows how the probability and expected size of losses decrease if the lender can realise the collateral and replace the lent securities more quickly.

This framework can be used to understand how possible changes in ABC's programme with Borrower 1 might affect the risks. Table 5 summarises some of the possible changes that could be made, in each case leaving the base case portfolio unchanged in other respects.

Table 5: Risk analysis for Borrower 1 under different lending policies

Policy	Probability of Loss on Default	Expected Loss on Default (£m)
Base Case Portfolios	26%	4.0
Reaction Time = 10 days	19%	1.8
Reaction Time = 3 days	5%	0.2
Halve the Concentration (i.e. double the number of securities lent and collateral)	20%	2.7
£10m more in Cash Collateral	15%	1.9
No Malaysian Lending + Reduction in Cash Collateral	17%	1.7
Matched Collateral/Lent Exposure & Concentration + Residual Collateral in Cash	14%	0.7

Source: Barrie & Hibbert

Netting

Netting (set off – see below) is an important element of risk management given that market participants will often have many outstanding trades with a counterpart. If there is a default the various standard industry master agreements for securities lending should provide for the parties' various obligations under different securities lending transactions governed by a master agreement to be accelerated, i.e. payments become due at current market values. So instead of requiring the parties to deliver securities or collateral on each of their outstanding transactions gross, their respective obligations are valued (i.e. given a cash value) and the value of the obligations owed by one party are set off against the value of the obligations owed by the other, and it is the net balance that is then due in cash.

This netting mechanism is a crucial part of the agreement. That is why there is so much legal focus on it: for example, participants need to obtain legal opinions about the effectiveness of netting provisions in jurisdictions of overseas counterparts, particularly in the event of a counterpart's insolvency.

That is also why regulators of financial firms typically expect legal opinions on the robustness of netting arrangements before they will recognise the value of collateral in reducing counterpart credit exposures for capital adequacy purposes. In the United Kingdom, SLRC has a netting sub-group, which, on behalf of subscribing banks, is monitoring an exercise to gather opinions on the legal bases for netting in different jurisdictions.

UK regulation

Any person who conducts stock borrowing or lending business in the United Kingdom would generally be carrying on a regulated activity under the terms of the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001, and would therefore have to be authorised and supervised under that Act. The stock borrower or lender would, as an authorised person, be subject to the provisions of the FSA Handbook, including the Inter-Professional chapter of the Market Conduct Sourcebook. They would also need to have regard to the market abuse provisions of the Financial Services and Markets Act 2000, and the related Code of Market Conduct issued by the Financial Services Authority (FSA). The Conduct of Business Sourcebook requires a beneficial owner's consent to carry on stock lending on its account. The FSA Handbook contains rules, guidance, and evidential provisions relevant to the conduct of the firm in relation to the FSA's High Level Standards.

Stock Borrowing and Lending Code

In addition to the essentially prudential standards set by the FSA, market participants have drawn up a code, the Stock Borrowing and Lending Code. This is a code that UK-based participants in the stock borrowing and lending markets of both UK domestic and overseas securities observe as a matter of good practice. The Code covers matters such as agents, brokers, legal agreements, custody, margins, defaults and close-outs, and confirmations. It is based on the current working practices of leading market practitioners and is kept under regular review. The Code does not in any way replace the FSA's or other authorities' regulatory requirements; nor is it intended to override the internal rules of settlement systems on borrowing or lending transactions. Work is currently in progress to produce a UK Annex to the Code that will consider specific aspects of UK law and practices in the equity stock lending market. The Code is available on the Bank of England's website at www.bankofengland.co.uk/markets/stockborrowing.pdf.

The Stock Borrowing and Lending Code was produced by the Securities Lending and Repo Committee (SLRC), that is a UK-based committee consisting of market practitioners, members of bodies such as CREST, the United Kingdom Debt Management Office, the Inland Revenue, the London Clearing House, the London Stock Exchange and the FSA. It provides a forum in which structural (including legal, regulatory, trading, clearing and settlement infrastructure, tax, market practice and disclosure) developments in the stock lending and repo markets can be discussed, and recommendations made. It also co-ordinates the development of gilt repo and equity repo codes; produces and updates the Gilts Annex to the ISMA/TBMA Global Master Repurchase Agreement (GMRA); keeps under review the other legal agreements used in the stock lending and repo markets; and maintains a sub-group on legal netting. It liaises with similar market bodies and trade organisations covering the repo, securities and other financial markets, both in London and internationally. Minutes of SLRC meetings are available on the Bank of England's website, at www.bankofengland.co.uk/markets/slrc/htm. The SLRC's terms of reference are shown in Appendix 2.

The work of the SLRC complements the work of the various market associations, including, in the securities lending field, the International Securities Lending Association (ISLA). The objectives of ISLA include representing the common interests of securities lenders and assisting in the orderly, efficient and competitive development of the securities lending market. ISLA has helped to produce standard market agreements, including the Overseas Securities Lending Agreement (OSLA 1995 version), the Master Equity and Fixed Interest Securities Lending Agreement (MEFISLA 1999 version) and the Global Master Securities Lending Agreement (GMSLA May 2000).

Chapter 6 Frequently asked questions

The securities lending business is seen by many non-practitioners as difficult to understand and there are many questions asked. Here, we provide answers to some of them.

Legal

1 What do people mean when they talk about transfer of title?

Contracts provide for ownership of lent securities to pass from the lender to the borrower.

A moment's thought about one of the principal motivations for borrowing and lending securities will make the necessity for this clear. Say the borrower needs to borrow securities to cover a short position, i.e. to fulfil a contract it has entered into to sell on the securities. The buyer is expecting the borrower to pass its ownership on settlement of that sale, as is normal in a sale. If the borrower cannot do that, the borrower will not be able to fulfil its contract with that purchaser. In order to enable it to fulfil its contract, the borrower obtains title from the lender and then passes it on to the purchaser, hence 'transfer of title'.

2 What does this mean for the lender?

The lender needs to be aware that it will be transferring ownership of the securities and of the various consequences that flow from this.

First, any transfer taxes applicable to a purchase of securities will be due unless an exemption applies. This will typically be an issue for the borrower on the initial leg of the transaction. But the lender should recognise that the return leg of the transaction (i.e. when the borrower transfers securities back to the lender) may also attract transfer taxes where they are applicable.

Second, the transfer of the lent securities is in legal terms a disposal of them, and the lender needs to establish whether such a disposal will have any consequences. Again this is usually a tax question e.g. are there tax consequences for the lender in disposing of the lent securities?

Third, and very importantly, the obligation of the borrower on the return leg of the transaction is to transfer **equivalent securities** back to the lender, not the **original securities**. In a securities lending transaction, the borrower is **not** 'holding' the securities in trust or in custody on behalf of the lender. The borrower actually owns them, which is to say that the lender has no right to securities that are in the hands of the borrower. Given that the borrower will often have sold on the securities, it is unlikely that the securities would be in the borrower's hands).

Fourth, as the lender will cease to be the owner, it will no longer be entitled to income from the securities, will not receive notice or proceeds of corporate actions, and will lose all voting rights in respect of the securities. The standard documentation sets out contractual mechanisms for putting the owner in a comparable economic position in respect of income and corporate actions. Voting rights are transferred and the lender must recall equivalent securities from the borrower in order to vote.

3 Why is it called securities 'lending' when there is transfer of title?

Because commercially and economically people think of it as lending. Reflecting this, for accounting and capital requirements it is usually treated as a loan.

4 Does it mean that the lender gets exactly the same securities back?

No. The borrower's obligation is to return 'equivalent securities' i.e. from the same securities issue with the same International Securities Identification Number (ISIN). Often it will have sold the original lent securities and has to borrow or purchase securities in the market to fulfil its obligation to the lender.

5 Does the lender have a pledge over the collateral?

No. Under standard market agreements and English law, there is usually a transfer of title to the collateral. If the collateral is cash, all that means is that there is a cash payment by the borrower into the lender's bank account. If the collateral is securities, there is a transfer of title of those securities to the lender.

Many of questions that arise for borrowers in relation to collateral securities also arise for lenders in relation to lent securities.

6 Why are there so many different agreements?

Historically the different tax treatment of securities lending in different jurisdictions has driven the need for

different agreements (such as OSLA – the Overseas Securities Lenders’ Agreement, MEFISLA – the Master Equity and Fixed Income Stock Lending Agreement, and so on). Following tax changes it has generally become possible to use a single document and the GMSLA – the Global Master Securities Lending Agreement, consolidates the various historical documents.

7 If the securities lending is carried out under English Law, but a custodian appoints a sub-custodian in another country, or lends to an entity in another country which does not recognise English Law, what happens when something goes wrong?

Simplifying a bit, there are three elements in the application of law to a securities lending transaction. The first is the contractual law, the second are the home country laws applying to each party, and the third is the law applying to the place where the securities are held.

The contractual law is that which applies to the legal agreement between the parties, which sets out the contractual terms relating to the lending transaction. Most lending agreements are in practice subject to English law, so that any disputes can be settled in the courts of England.

Where a party incorporated in England proposes to conduct a securities lending transaction with a party incorporated in another country, the UK-incorporated party will need to check, normally by obtaining a legal opinion, that the home country law of the other party will allow the contract to be given effect in accordance with its terms. This opinion will normally focus in particular on the close out and netting (set-off) provisions of the legal agreement that apply in the insolvency of either party (see section on netting in Chapter 5). This together with the collateralisation and margin arrangements should keep the risks in conducting such business to acceptable levels.

As regards the law relating to where the securities are held, securities borrowers need to be certain that they have good title to the securities since there is a potential for conflicts of laws or legal uncertainty in this respect. The traditional rule for determining the validity of a disposition of securities is to look to the law of the place where the securities are located (the ‘lex sitae’ or ‘lex situs’ principle). This is, however, difficult to apply if securities are held through a number of intermediaries. The generally preferred approach now is to look to the location of the intermediary maintaining the account into which the securities are credited (the ‘PRIMA’ principle). The EU Collateral Directive as implemented in EU member states applies the PRIMA principle, and there are plans to extend it further through the so-called Hague Convention.

Dividends and coupons

1 What happens if the lender has lent a stock over the dividend period?

The ‘borrower’ of stock makes good to the lender the dividend amount that the lender would have received had it not lent the stock in the first place. This amount is the gross dividend less any withholding tax that the lender would usually incur.

2 Does the lender still receive the dividend or coupon payment?

No. The lender receives from the borrower a ‘manufactured’ dividend or coupon rather than the dividend or coupon itself.

3 Does the lender still receive the (manufactured) dividend or coupon payment on the due date?

Yes, the lender’s account should be credited on the due date by the borrower, even if the borrower has not actually received it.

4 What happens if the lender has loaned a stock over a scrip dividend record date – does it get the relevant cash or stock on the pay date?

The lender should tell the borrower in advance which it would like to receive. Again the borrower must manufacture the cash or stock for the lender even if it is receiving the other.

5 Who organises that?

It is between the borrower and the lender (or its designated agent or custodian).

6 Why do lenders get higher loan rates if they take cash for a scrip dividend?

Usually there is a financial incentive offered by a company to shareholders that take scrip rather than cash. Therefore the borrower can take scrip, sell it to give additional income over the cash amount of the dividend, and may share this with the lender.

1 What is collateral?

Financial instruments given by borrowers to lenders to protect them against default over the term of the loan. Collateral securities are usually marked to market every day. Borrowers are required to maintain collateral with a market value at least equal to the market value of the loaned securities plus some agreed margin 'haircut' (see below).

2 What is a haircut?

'Haircut' or margin is the extra collateral that a borrower provides in order to mitigate any adverse movements in the value of the loan and value of collateral between the mark-to-market date, and the value of liquidated collateral and repurchased loan securities on the default date.

3 How often is the collateral valued?

Usually every day, as with the loaned securities, but it can be more frequent in exceptional circumstances.

4 Is the collateral held in the lender's name or its agent's name?

It should be held in the lender's name, but can be held by an agent to the lender's order if so desired.

5 Is collateral valued at the individual client level or does the custodian value it at a summed level and then allocate the collateral amongst its clients?

Again this can be done either way as desired by lenders and agents.

6 What happens if the borrower defaults?

The lender liquidates the collateral and repurchases the loaned (lost) securities. Any excess should be returned to the borrower or liquidator. Any shortfall should be claimed from the borrower or liquidator.

7 How do lenders get their securities back? How long does it take?

Within the usual settlement cycle for the securities in question (see Chapter 4), after they have been repurchased.

8 Who liquidates the collateral?

Lenders or their agents (if they use them).

9 How do lenders ensure that the liquidation of the collateral is done at market rates?

In a similar manner as they might check on any sales made in the usual course of business. Some agents will indemnify lenders against borrower default, in which case they will return the loaned assets and deal with liquidating the collateral themselves.

10 What happens if market prices rise between the borrower defaulting and cash being made available following the liquidation of the collateral?

Any shortfall should be claimed from the borrower or its liquidator in insolvency. N.B. **Up to** a 48-hour window is available under the OSLA, MEFISLA and GESLA (see the glossary for definitions) depending on whether default takes place within or outside normal business hours. This is extended to 5 days in the new GMSLA.

11 What happens if the markets move such that the collateral held is less than the required collateral amount?

Any shortfall should be claimed from the borrower or its liquidator in insolvency, otherwise more collateral should be sought. If markets are particularly volatile then intra-day marking to market may be appropriate.

12 How often is the collateral topped up (i.e. marked to market and margin called)?

Usually every day or as required.

13 Are the collateral securities and the securities on loan valued at the same time/prices/frequency?

Not always. The collateral and loan securities might be located in different markets and time-zones. Otherwise both valuations should be made at least daily.

14 Is accrued interest included in the calculations of market value for collateral, loans and fees?

The GMSLA provides for the valuation of both securities and collateral to include

- accrued income
- dividend or interest payments declared but not yet due by the issuer
- dividends paid in the form of securities

but not other rights or assets deriving from ownership of the securities or collateral.

15 What happens if a borrower doesn't return a stock when called or at maturity?

The lender may decide to expedite a 'buy-in', whereby it purchases the unreturned stock in the market and invoices the borrower for any costs.

16 Who would pay the overdraft fees if a lender's fund manager had sold stock and the lender had failed to settle the trade because the borrower hadn't returned the stock?

The lender may claim against the borrower for any direct costs incurred. However it should be noted that consequential loss might not be covered. Where the borrower's failure to redeliver securities to the lender causes a larger onward transaction to fail, the norm is for the lender to claim only that proportion of the costs that relate directly to the loaned securities.

17 What is cash reinvestment?

In many cases, particularly in the United States, stock is loaned against cash collateral. Rather than the borrower paying a fee, it receives a rebate (e.g. 0.4%) being the interest rate payable on the cash (e.g. 1%) less the fee (e.g. 0.6%). In such situations the lender, or their agent, has cash and an obligation to pay this rebate to the borrower. The lender therefore reinvests the cash to receive an interest rate (e.g. 1.1%) so that the lender receives the fee plus any reinvestment pick-up (e.g. 0.1%) or less any reinvestment shortfall.

The reinvestment market in the US is aptly described as 'the tail that wags the dog'. The pursuit of income in a fairly mature lending market for US securities means that reinvestment opportunities frequently drive loan transactions that are little more than a method of raising cash.

18 What are the risks attached to cash reinvestment?

There is the chance that the reinvestment rate achieved is less than the rebate rate. This usually happens in rising interest rate environments if the interest rate paid to the borrower is the overnight rate fixed daily and reinvestments are for a fixed period (e.g. one month). So, if short-term rates rise during the time that the reinvestment is fixed, the lender can lose.

Also, reinvestments are sometimes made into investments of lower credit quality to achieve returns. If this instrument defaults on interest payments or is downgraded by rating agencies, it is likely to fall in value. Most reinvestment is made into US Treasury or US Agency mortgage-backed securities, in which cases custodian/banks will usually indemnify lenders in the case of default.

19 What happens if the assets being held as collateral become worthless?

So long as the borrower has not defaulted too, they will substitute, or top-up collateral to the agreed level in the course of the mark-to-market process.

20 What happens if the assets on loan become worthless?

The borrower will ask for collateral back to the agreed level in the course of the mark-to-market process.

21 What is an indemnity?

It is a kind of insurance policy offered to lenders to mitigate risks associated with lending. One of the most commonly offered indemnities is against borrower default. Usually, like insurance policies, they cover specific events and are not a catchall so, as with insurance policies, read the small print!

22 Who offers them?

Usually custodian banks offer indemnities to their lending customers. Third Party Agents obtain them from insurance companies on behalf of lender clients.

23 What strings are attached?

Lenders may be asked to split revenue to give the custodian a larger share, reflecting the value of the indemnity.

24 How important is it to create a set of lending/collateral guidelines before starting to lend rather than accepting the standard terms/guidelines?

For a new lender, an agent's standard terms/guidelines are probably a good place to start. The next step is to consider what is and is not appropriate to accept from the standard terms/guidelines in terms of a risk. It is the client's prerogative to alter these guidelines as they see fit.

Operational and logistical

1 What is the difference between overnight and term loans?

Most loans are transacted on an 'open' or overnight basis. Sometimes lenders are prepared to guarantee that they will maintain the loan over a longer period, but this is fairly rare. In such cases the borrower has certainty that lent securities will not get recalled inside the term of the loan. It is more usual that a hedge fund borrower will obtain term loans from an investment bank, which will have multiple lenders so that if one should recall they can borrow from another.

2 How long are term loans usually on loan for?

A month would be a typical period, but it depends on the nature of the trade underlying the need to borrow.

3 How long does it take to recall a stock?

Recalling should be exactly like buying. If a lender gives an instruction by a specific deadline, then it should receive the stock back within the usual settlement cycle of the market in question.

Corporate Governance

1 Can lenders vote in an AGM/EGM whilst stock is on loan?

No. Stock lending is in one sense a misnomer: it involves the transfer of title, and with that, all voting rights associated with the securities; indeed securities are often borrowed in order to settle an outright sale, so that the securities pass onto another outright owner. But borrowers have a contractual obligation to return equivalent securities to lenders on demand. Lenders therefore treat securities loans as temporary transactions that do not affect their desired holding in a stock. In the case of votes, lenders have the choice whether to recall equivalent securities in order to vote their entire 'desired holding' or to leave stock on loan, forgoing the right to vote. (Although, this does not mean that votes are necessarily 'lost' in aggregate, as the new owner may choose to vote.) If they opt to leave the stock on loan they have no means of controlling or knowing how the current owner might vote. Their decision on recalling the stock boils down to whether the benefits of voting are greater than those of lending. Investors make their own choices. It is worth noting that returns to lenders often increase around key corporate actions.

2 Can lenders recall stock to vote, and does this affect their reputation as lenders?

It is quite common for lenders to retain a buffer when lending stock so they can always go to or vote in an AGM/EGM whilst stock is on loan. However if they wish to vote all their holding, they must recall the lent securities. If a borrower is still holding the stock (i.e. it has not yet been used to fulfil short-sale obligations) lenders may ask them to vote the stock on their behalf.

3 Is it acceptable to borrow stock in order to accumulate a large temporary holding and influence a vote?

Borrowing stock for the purpose of accumulating a temporary holding to influence a vote is not a practice that most market participants regard as acceptable.

The various lending options for beneficial owners

1 Can lenders loan more stocks from a portfolio that has very little trading/turnover rather than a very actively traded portfolio?

Yes, as greater certainty about the stability of the loan is a critical factor for all borrowers.

2 How do custodians decide whose stock they lend if they have many clients that hold a particular stock?

They have allocation algorithms, but no two seem to be the same.

3 What is an exclusive lending relationship?

Where a lender makes available all, or segments of, its assets to a particular borrower or borrowers exclusively.

4 How is this different to going via a custodian?

It can indeed be done via a custodian, which will do all the necessary administration, etc. Unlike in an exclusive relationship, the custodian will usually parcel out loans to borrowers on a stock-by-stock basis, with the 'algorithm' making the allocations between lenders.

5 How long do exclusive arrangements normally last?

There is no standard timeframe but many last one year.

6 How does the custodian make money from securities lending?

Mostly they split the income between lenders and themselves.

7 What fees do they normally charge?

Usually the lender gets between 60% and 90%, but percentages vary.

Appendix 1 A short history of securities lending

Securities lending began with the development of securities trading markets. For example, in the UK market from the 19th century, specialist intermediaries sourced gilts for the jobbers or market makers. Collateral, typically non-cash, passed between the parties at the end of the trading day and offered protection for the lenders. Much of the borrowing facilitated a practice called 'bond washing', whereby tax advantages were exchanged between parties around record and ex-dividend dates. This was the precursor to tax arbitrage. A two-tier market quickly emerged: a security-specific or 'special' market, and a more generic financing or 'general' market.

The 1960s

As the UK and US securities trading markets developed, so did the securities lending markets. Here are some of the key developments that took place in the 1960s:

- The first formal equity lending transactions took place in the City of London
- An active interdealer market developed in the US (back office to back office)
- The increase in general, but particularly block, trading volume in the US equity markets. The settlement system continued to be paper-based and this led to large backlogs of settlement fails and back offices borrowing securities for settlement cover
- US Treasury bond financing expanded – before that the US market had focused on equities

The 1970s

In the 1970s the US market developed and assumed much of the shape that would be recognised today. The UK market would not develop to its present form until deregulation following Big Bang in the 1980s. Here are some of the key developments that took place in the 1970s:

- The establishment of the US Depository Trust Company (DTC) reduced settlement related demand but facilitated an increase in trading activity
- Trading demand from arbitrageurs increased. Strategies included:
 - Convertible bond arbitrage
 - Tax Arbitrage
 - Initial Public Offering (IPO)-related trading
- The US custodian banks began to lend securities on behalf of their clients:
 - Endowments
 - Insurance Companies
 - Pension Funds (amendments to ERISA legislation in 1981 permitted lending in accordance with guidelines)
- Treasury dealers began 'matched book' repo trading – thereby generating borrowing demand
- The US Treasury bond repo market became a key part of the money markets
- The US non-cash 'bonds borrow' market promoted broker-to-bank business:
 - Cash collateral was a problem for banks wishing to avoid capital charges
 - Using long inventory saved the borrowers money
 - Using non-cash collateral reduced their balance sheet when compared to cash
- The use of derivatives and leverage in transactions expanded because returns could be increased and banks were willing to extend the necessary finance
- The creation of 'finders' – specialists that lacked capital but had significant relationships and could find the securities that borrowers needed – emerged
- The first cross border or international securities lending transactions took place
 - Typically offshore from the US or the UK
 - Initially involving experienced traders using trading techniques that had been proven over time in their local markets
 - Several key advantages such as time zone, and a high concentration of international fund management expertise, put the United Kingdom at the centre of international securities lending

The 1980s

Key developments included:

- Cross border securities lending grew rapidly, driven partly by the international expansion of the US broker dealers and custodian banks
- Institutional lending of overseas securities increased because US and UK lenders were willing to expand their programmes from being domestic only
- Increases in the debt of most G10 governments encouraged the growth of government bond lending and repo markets
- Trading demand continued to grow, driven by a variety of strategies:
 - The international derivatives markets expanded, with many derivatives hedging strategies

- requiring short coverage e.g. index arbitrage
 - Tax arbitrage – the tax anomalies available to exploit internationally were numerous
 - Hedge funds were established in significant numbers
- Some institutional lenders began to enter into exclusive lending relationships with borrowers
- Securities settlement systems introduced book entry settlement and were able to process greater volumes:
 - The Group of 30 report by an international group of experts stated that securities lending should be encouraged as a means of expediting efficient settlement
- On May 17th 1982, Drysdale Securities, a minor bond dealer, collapsed. Drysdale had over \$2 billion in US Treasury loans outstanding when it defaulted. Institutional supply temporarily dried up following the Drysdale affair, particularly via the custodians, due to legal uncertainties, the US Government Securities Act of 1986 followed. Other changes included the BMA developing the standardised securities lending legal agreement, a specification of collateral margins, collateralisation of accrued interest and disclosure of borrowers and lenders by custodian banks.
- In the autumn of 1988 Robert Maxwell authorised securities lending transactions from the Mirror Group Newspaper pension fund. It was not until after his death on 5th November 1991 that the consequences of these and subsequent transactions became apparent to the authorities, the market and the pensioners. As the Department of Trade and Industry ('DTI') puts it in a chronology of events on www.dti.gov.uk:

'From November 1988, Mr Robert Maxwell therefore began to make use of the more marketable blue chip shares held by the pension funds and First Tokyo Index Trust as collateral for bank borrowings to the private side; this was described as 'stock lending' to make it appear to be the legitimate practice of lending securities to market makers as part of ordinary share dealing activities. Cash continued to be borrowed from the pension funds by the private side without providing any collateral to the pension funds for these loans.'

The 1990s

Securities lending volumes again rose sharply in most markets throughout the decade. Key developments included:

- Growing demand to borrow securities to support hedging and trading strategies
 - Technological advances, including computer processing power, access to real time price information and automated trade execution made possible new trading strategies, such as statistical arbitrage
 - Further rapid growth in hedge fund assets under management, despite a pause following the collapse of Long Term Capital Management in 1999
 - Investment banks developed global prime brokerage operations to support the activities of hedge fund clients, including securities lending and financing
- The removal of many regulatory, tax and structural barriers to securities lending throughout the world. Some of the major changes and developments in the repo market were driven by the removal of specific legal or regulatory barriers, e.g.
 - 1993 French repo
 - 1996 Japanese repo
 - 1996 UK repo
 - 1997 Italian buy-sell back
 - 1998 Swiss repo
- In 1994 the sharp increase in US short-term interest rates led to losses for many securities lenders that had taken US dollar cash as collateral and were reinvesting it in a variety of money market instruments. In many cases their agents, typically custodian banks, compensated their underlying clients for these losses even though they were not legally obliged to do so. Lessons included improved risk management procedures, better documentation and clear reinvestment guidelines.
- During the Asian crisis in 1997-98, the authorities in a number of countries imposed restrictions on short selling, drawing a link with currency speculation, e.g. Malaysia and Thailand both in August 1997

2000 and beyond

Trends include:

- The market becoming more segmented:
 - Specialist regional players developing
 - Outsourcing developing, e.g. third party securities lending agents
- Tax arbitrage opportunities disappearing as tax harmonisation occurs
- Continuing deregulation and tax changes making possible the establishment of new securities lending markets, e.g. in Brazil, India, Korea, Taiwan
- New transaction types:
 - Equity repo – much more accepted and widespread than in 1990s
 - Contracts for Differences ('CFDs')

- Total return swaps
- Prime brokers using CFDs and total return swaps to allow clients to take positions in equity and bond derivatives rather than the underlying securities ('synthetic prime brokerage')
- Fewer Initial Public Offering ('IPO') and Mergers and Acquisition ('M&A') opportunities in 2002 and 2003 with fewer 'hot' stocks. The rate of growth of equity stock lending slowed but the development of traded credit and corporate bond markets encouraged growth in the fixed income part of the business

Appendix 2 Terms of Reference of the SLRC

The committee will:

- Provide a forum in which structural (including legal, regulatory, trading, clearing and settlement infrastructure, tax, market practice and disclosure) developments in the stock lending and repo markets can be discussed, and recommendations made, by practitioners, infrastructure providers and the authorities.
- Co-ordinate the development of the Stock Borrowing and Lending Code of Guidance. This is a summary of the basic procedures that UK-based participants in stock borrowing/lending of both UK domestic and overseas securities observe as a matter of good practice.
- Co-ordinate the development of the Gilt and Equity Repo Codes of Best Practice. These codes set out standards of good practice for repo. They are drawn up on the basis of practice in existing repo markets in London observed by practitioners and the authorities and are kept under review.
- Produce and update the Gilts Annex to the ISMA/TBMA Global Master Repurchase Agreement (GMRA).
- Liaise, where appropriate, with similar market bodies and trade organisations covering the repo and securities markets, and other financial markets, in London and other financial centres.
- Maintain a sub-group on legal netting and, if required, create other sub-groups to research and manage specific topics.

Discussions between members during the course of meetings will be held to be confidential, although summaries of these discussions will be published, normally within one month of the meeting, at <http://www.bankofengland.co.uk/markets/slrc.htm>

Membership

- The Committee is chaired and administered by the Bank of England.
- The Committee comprises market participants representing the main trade associations involved in the UK and international repo and stock lending markets, (currently International Securities Lending Association; International Securities Market Association; Bond Market Association; European Repo Council, London Investment Banking Association; London Money Market Association; British Bankers' Association), infrastructure providers and the UK authorities.
- Membership of the Committee is to be decided by the Chairman. The Chairman may invite additional ad hoc representatives from 'knowledgeable parties' if thought appropriate.

Appendix 3 Glossary

Every industry has its own business terms. Securities lending is no exception. Here we list the more esoteric terms mentioned in this booklet and some that might be encountered whilst exploring the market. Note that some terms may have different meanings in contexts other than securities lending.

Accrued interest: Coupon interest that is earned on a bond from the last coupon date to the present date.

Agent: A party to a loan transaction that acts on behalf of a client. The agent typically does not take in risk in a transaction. See 'Indemnity'.

All-in dividend: The sum of the **manufactured dividend** plus the fee to be paid by the borrower to the lender, expressed as a percentage of the dividend of the stock on loan.

All-in price: Market price of a bond, plus accrued interest. Generally rounded to the nearest 0.01. Also known as 'dirty price'.

Basis point: One one-hundredth of a percent or 0.01%.

Bearer securities: Securities that are not registered to any particular party and hence are payable to the party that is in possession of them.

Beneficial owner: A party that is entitled to the rights of ownership of property. In the context of securities, the term is usually used to distinguish this party from the registered holder (a nominee, for example) that holds the securities for the beneficial owner.

Benefit: Any entitlement due to a stock or shareholder as a result of purchasing or holding securities, including the right to any dividend, rights issue, scrip issue, etc. made by the issuer. In the case of loaned securities or **collateral**, benefits are passed back to the lender or borrower (as appropriate), usually by way of a **manufactured dividend** or the return of **equivalent securities** or **collateral**.

BMA: The Bond Market Association – is a US-based industry organisation of participants involved in certain sectors of the bond markets. The BMA establishes non-binding standards of business conduct in the US fixed-income securities markets. Formerly known as the Public Securities Association or **PSA**.

Buy-in: The practice whereby a lender of securities enters the open market to buy securities to replace those that have not been returned by a borrower. Strict market practices govern buy-ins. Buy-ins may be enforced by market authorities in some jurisdictions.

Buy/Sell, Sell/Buy: Types of bond transactions that, in economic substance, replicate **reverse repos**, and **repos** respectively. These transactions consist of a purchase (or sale) of a security versus cash with a forward commitment to sell back (or buy back) the securities. Used as an alternative to **repos/reverses**.

Carry: Difference between interest return on securities held and financing costs:

Negative carry: Net cost incurred when financing cost exceeds yield on securities that are being financed.

Positive carry: Net gain earned when financing cost is less than yield on financed securities.

Cash-orientated repo: Transaction motivated by the need of one party to invest cash and the need of the other to borrow. See also 'Securities-orientated repo'.

Cash trade: A non-financing purchase or sale of securities.

Clear: To complete a trade, i.e. when the seller delivers securities and the buyer delivers funds in correct form. A trade fails when proper delivery requirements are not satisfied.

Close-out (and) netting: An arrangement to settle all existing obligations to and claims on a counterpart falling under that arrangement by one single net payment, immediately upon the occurrence of a defined event of default.

Collateral: Securities or cash delivered by a borrower to a lender to support a loan of securities or cash.

Contract for Differences (CFD): An OTC derivative transaction that enables one party to gain economic exposure to the price movement of a security (bull or bear). Writers of CFDs hedge by taking positions in the underlying securities, making efficient securities financing or borrowing key.

Corporate action: A **corporate event** in relation to which the holder of the security must or may make an election or take some other action in order to secure its entitlement and/or to opt for a particular form of entitlement (see also **equivalent**).

Corporate event: An event in relation to a security as a result of which the holder will or may become entitled to:

- a **benefit** (dividend, rights issue etc.); or
- securities other than those which he held prior to that event (takeover offer, scheme of arrangement, conversion, redemption, etc). This type of corporate event is also known as a **stock situation**.

Conduit borrower: See **intermediary**.

Custodian: An entity that holds securities of any type for investors, effecting receipts and deliveries, and supplying appropriate reporting.

Daylight exposure: The period in the day when one party to a trade has a temporary credit exposure to the other due to one party having settled before the other. It would normally mean that the loan had settled but the delivery of **collateral** would settle at a later time (although there would also be exposure if settlement happened in reverse). The period extends from the point of settlement of the first side of the trade to the time of settlement of the other. It occurs because the two sides of the trade are not linked in many settlement systems or settlement of loan and **collateral** take place in different systems, possibly in different time zones.

Deliver-out repo: 'Standard' two-party repo, where the party receiving cash delivers bonds to the cash provider.

Delivery-by-value (DBV): A mechanism in some settlement systems (including CREST) whereby a member may borrow or lend cash overnight against **collateral**. The system automatically selects and delivers **collateral** securities, meeting pre-determined criteria to the value of the cash (plus a margin) from the account of the cash borrower to the account of the cash lender and reverses the transaction the following morning.

Distributions: Entitlements arising on securities that are loaned out, e.g. dividends, interest, and non-cash distributions.

DVP (Delivery-versus-payment): The simultaneous delivery of securities against the payment of funds within a securities settlement system.

ERISA: The Employee Retirement Income Security Act, a US law governing private US pension plan activity, introduced in 1974 and amended in 1981 to permit plans to lend securities in accordance with specific guidelines.

Equivalent (securities or collateral): A term meaning that the securities or **collateral** returned must be of an identical type, nominal value, description and amount to those originally provided. If, during the term of a loan, there is a **corporate action** in relation to the loaned securities, the lender is normally entitled to specify at that time the form in which he wishes to receive **equivalent** securities or **collateral** on termination of the loan. The legal agreement will also specify the form in which **equivalent** securities or **collateral** are to be returned in the case of other **corporate events**.

Escrow: See **Tri Party**.

Fail: The failure to deliver cash or **collateral** in time for the settlement of a transaction.

Free-of-payment delivery: Delivery of securities with no corresponding payment of funds.

G7: The Group of Seven, i.e. US, France, Japan, United Kingdom, Germany, Italy and Canada.

G10: The Group of Ten, i.e. US, France, Japan, United Kingdom, Germany, Italy, Canada, the Netherlands, Sweden and Switzerland.

General Collateral (GC): Securities that are not '**special**' (see below) in the market and may be used, typically, to collateralise cash borrowings. Also known as '**stock collateral**'.

Gilt-Edged Securities (Gilts): United Kingdom government bonds.

Gilt-Edged Securities Lending Agreement (GESLA): see **Master Gilt Edged Securities Lending Agreement**.

Global Master Securities Lending Agreement (GMSLA): The Global Master Securities Lending Agreement has been developed as a market standard for securities lending of bonds and equities internationally. It was drafted with a view to complying with English law.

Gross-paying securities: Securities on which interest or other distributions are paid without any taxes being withheld.

Haircut: Initial margin on a **repo** transaction. Generally expressed as a percentage of the market price.

Hedge fund: A leveraged investment fund that engages in trading and hedging strategies, frequently using leverage.

Hot/hard stock: A particular security that is in high demand in relation to its availability in the market and is thus relatively expensive or difficult to borrow.

Hold in custody: An arrangement under which securities are not physically delivered to the borrower (lender) but are simply segregated by the lender in an internal customer account.

Icing/putting stock on hold: The practice whereby a lender holds securities at a borrower's request in anticipation of that borrower taking delivery.

Indemnity: A form of guarantee or insurance, frequently offered by agents. Terms vary significantly and the value of the indemnity does also.

Interdealer broker: Agent or intermediary that is paid a commission to bring buyers and sellers together. The broker's commission may be paid either by the initiator of the transaction or by both counterparts.

Intermediary: A party that borrows a security in order to on-deliver it to a client, rather than borrowing it for its own in-house needs. Also known as a **conduit borrower**.

International Securities Lending Association (ISLA): A trade association for securities lending market practitioners.

ISMA: The Zurich-based International Securities Market Association is the self-regulatory organisation and trade association for the international securities market. ISMA sets standards of business conduct in the global securities markets, advises regulators on market practices and provides educational opportunities for market participants.

London Investment Banking Association (LIBA): The principal trade association in the UK for firms active in the investment banking and securities industry. LIBA members are generally borrowers and intermediaries in the stock lending market.

Manufactured dividends: When securities that have been lent out pay a cash dividend, the borrower of the securities is in general contractually required to pass the distribution back to the lender of the securities. This payment 'pass-through' is known as a manufactured dividend.

Margin, initial: Refers to the excess of cash over securities or securities over cash in a **repo/reverse repo, sell/buy-buy/sell**, or securities lending transaction. One party may require an initial margin due to the perceived credit risk of the counterpart.

Margin, variation: Once a **repo** or securities lending transaction has settled, the variation margin refers to the band within which the value of the security used as collateral may fluctuate before triggering a **margin call**. Variation margin may be expressed either in percentage or absolute currency terms.

Margin call: A request by one party in a transaction for the initial margin to be reinstated or to restore the original cash/securities ratio to parity.

Mark-to-market: The act of revaluing the securities **collateral** in a **repo** or securities lending transaction to current market values. Standard practice is to mark to market daily.

Market value: The value of loan securities or **collateral** as determined using the last (or latest available) sale price on the principal exchange where the instrument was traded or, if not so traded, using the most recent bid or offered prices.

Master Equity and Fixed Interest Stock Lending Agreement (MEFISLA): This was developed as a market standard agreement under English law for stock lending prior to the creation of the **Global Master Securities Lending Agreement**. It has a legal opinion from Queen's Counsel and has been mainly, but not exclusively, used for lending UK securities excluding **gilts**.

Master Gilt Edged Stock Lending Agreement (GESLA): The Agreement was developed as a market standard exclusively for lending UK gilt-edged securities. It was drafted with a view to complying with English law and has a legal opinion from Queen's Counsel.

Matched/Mismatched book: Refers to the interest rate arbitrage book that a **repo** trader may run. By matching or mismatching maturities, rates, currencies, or margins, the **repo** trader takes market risk in search of returns.

Net paying securities: Securities on which interest or other distributions are paid net of withholding taxes.

Open transactions: Trades done with no fixed maturity date.

Overseas Securities Lenders' Agreement (OSLA): The Agreement was developed as a market standard for stock lending prior to the creation of the **Global Master Securities Lending Agreement**. It was drafted with a view to complying with English law and has a legal opinion from Queen's Counsel. Intended for use by UK-based parties lending overseas securities (i.e. excluding UK securities and **gilts**), it has since become the most widely used global master agreement.

Pair off: The netting of cash and securities in the settlement of two trades in the same security for the same value date. Pairing off allows for settlement of net differences.

Partialling: Market practice or a specific agreement between counterparts that allows a part-delivery against an obligation to deliver securities.

Pay-for-hold: The practice of paying a fee to the lender to hold securities for a particular borrower until the borrower is able to take delivery.

Prime brokerage: A service offered to clients – typically hedge funds – by investment banks to support their trading, investment and hedging activities. The service consists of clearing, custody, securities lending, and financing arrangements.

Principal: A party to a loan transaction that acts on its own behalf or substitutes its own risk for that of its client when trading.

Proprietary trading: Trading activity conducted by an investment bank for its own account rather than for its clients.

PSA Public Securities Association: The former name of the **BMA**.

Rebate rate: The interest paid on the cash side of securities lending transactions. A rebate rate of interest implies a fee for the loan of securities and is therefore regarded as a discounted rate of interest.

Recall: A request by a lender for the return of securities from a borrower.

Repo: Transaction whereby one party sells securities to another party and agrees to repurchase the securities at a future date at a fixed price.

Repo rate: The interest rate paid on the cash side of a **repo/reverse** transaction.

Repo (or reverse) to maturity: A repo or reverse repo that matures on the maturity date of the security being traded.

Repricing: Occurs when the market value of a security in a **repo** or securities lending transaction changes and the parties to the transaction agree to adjust the amount of securities or cash in a transaction to the correct margin level.

Return: Occurs when the borrower of securities returns them to the lender.

Revaluation ('reval'): See **Repricing**.

Reverse Repo: Transaction whereby one party purchases securities from another party and agrees to resell the securities at a future date at a fixed price.

Roll: To renew a trade at its maturity.

Securities-orientated repo trade: Transaction motivated by the desire of one counterpart to borrow securities and of the other to lend them. See also **Cash-orientated repo trade**.

Shaping: A practice whereby delivery of a large amount of a security may be made in several smaller blocks so as to reduce the potential consequences of a **fail**. May be especially useful where **partialling** is not acceptable.

Specials: Securities that for several reasons are sought after in the market by borrowers. Holders of special securities will be able to earn incremental income on the securities by lending them out via **repo**, **sell/buy**, or securities lending transactions.

Spot: Standard non-dollar **repo** settlement two business days forward. This is a money market convention.

Stock situation: See **corporate event**.

Substitution: The practice in which a lender of general **collateral** recalls securities from a borrower and replaces them with other securities of the same value.

TBMA/ISMA Global Master Repurchase Agreement (GMRA): The market-standard document used for **repo** trading. The GMRA, whose original November 1992 version was based on the **PSA** Master Repurchase Agreement, was revised in November 1995 and again in October 2000.

Term transactions: Trades with a fixed maturity date.

Third-party lending: A system whereby an institution lends directly to a borrower and retains decision-making power, while all administration (settlement, **collateral**, monitoring and so on) is handled by a third party, such as a global **custodian**.

Tri Party: The provision of **collateral** management services, including **marking to market**, repricing and delivery, by a third party. Also known as **escrow**.

Tri Party Repo: Repo used for funding/investment purposes in which the trading counterparts deliver bonds and cash to an independent **custodian** bank or central securities depository (the 'Tri Party **Custodian**'). The Tri Party **Custodian** is responsible for ensuring the maintenance of adequate **collateral** value, both at the outset of a trade and over its term. It also marks the **collateral** to market daily and makes **margin calls** on either counterpart, as required. Tri Party Repo reduces the operational and systems barriers to participating in the **repo** markets.

Reference sources

The web contains a lot of information on securities lending. A simple Google search on 'securities lending' finds 580,000 results.

All of the major practitioners have sections of their websites dedicated to securities lending, repo, prime brokerage, etc.

Below, we list in alphabetical order, some of the websites that could prove to be useful reference sources:

ABI	www.abi.org.uk
Bank of England	www.bankofengland.co.uk
Barrie & Hibbert	www.barrhibb.com
BBA	www.bba.org.uk
BIS	www.bis.org
BMA	www.bondmarkets.com
CREST	www.crest.co.uk
DTI	www.dti.gov.uk
FSA	www.fsa.gov.uk
IOSCO	www.iosco.org
ISLA	www.isla.co.uk
ISMA	www.isma.org
LSE	www.londonstockexchange.com
NAPF	www.napf.co.uk
PASLA	www.paslaonline.com
RMA	www.rmahq.org
Securities Finance Systems	www.performanceexplorer.com
Spitalfields Advisors	www.spitalfieldsadvisors.com

An Introduction to Securities Lending

Securities lending provides liquidity to the equity, bond and money markets, placing it at the heart of today's financial system. The increase in liquidity reduces the cost of trading, thereby increasing market efficiency and benefiting all.

Securities lending markets allow market participants to sell securities that they do not own in the confidence that they can be borrowed prior to settlement. They are also used for financing, through the lending of securities against cash, forming an important part of the money markets. The ability to lend and borrow securities freely underpins the services that securities dealers offer their customers and the trading strategies of dealers, hedge funds and other asset managers. On the lending side, securities lending forms a growing part of the revenue of institutional investors, custodian banks and the prime brokerage arms of investment banks.

This publication aims to describe these markets, with an emphasis towards the United Kingdom, although UK markets are highly international in terms of both participation and securities traded. The intended audience is not market practitioners but others with some interest in securities lending, including trustees of pension or other funds that already lend their securities or might consider doing so, managers of companies whose securities are lent, financial journalists, the authorities and other interested parties.