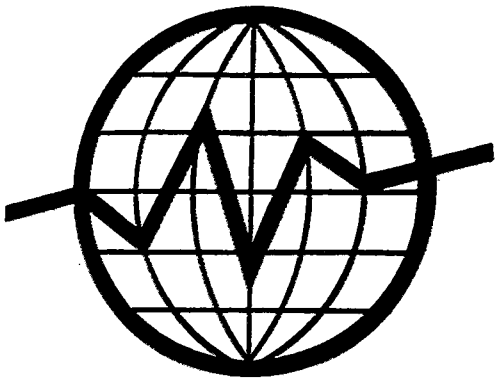
REPORT ON MARGIN



by the Technical Committee of IOSCO

March 7, 1996

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MARGIN

PURPOSE OF DOCUMENT

This document is designed to provide guidance on the use of margin to markets and their regulators that are considering establishing or revising margin requirements.

I. INTRODUCTION

A. Initial margin on equities, paid by purchasers and short sellers, generally functions as a security for a loan (typically given by a broker) and is similar to a down payment required for the purchase of a security.

B. Initial margin on derivatives refers to funds paid as a performance bond by both parties to the contract and is intended to guarantee that a party to a derivatives transaction will perform its obligation under the contract. Initial margin on derivatives is designed to cover future changes in the value of these instruments.

C. Maintenance margin refers to the value (i.e., net liquidating amount) which must be maintained in a margin account at all times after the initial margin requirement, if any, is satisfied.

D. Variation margin refers to funds that are required to be deposited in, or paid out of, a margin account which reflects changes in the value of the relevant instrument.

II. ESTABLISHING MARGIN REQUIREMENTS

A. Margin regulations (with respect to both equity and derivatives margin) may be established by statute, by regulators, or in the rules of exchanges and/or clearinghouses. Margin requirements also may be set by intermediaries (i.e., broker-dealers). While regulators may specify minimum margin requirements, it is important that brokers, exchanges, and clearinghouses retain the flexibility to require higher margin deposits than required by statute or rule in order to respond to unexpected volatility or to obtain additional credit guarantees.

B. The initial margin level for both equities and derivatives can act to establish or control the amount of leverage on the positions.

III. RISKS ADDRESSED BY MARGIN

A. It is generally believed that margin can play an important role, along with other safeguards, in protecting the financial safety and integrity of markets.

B. Where there is margining of equity and/or derivatives trading, margin levels and procedures should be designed to reduce the exposure of market participants and/or the market, including the clearinghouse, to credit, market, and other risks. In the derivatives markets, margin can provide protection to the clearinghouse and market participants against the potential default by a market participant as a result of price movements in individual instruments and changes in market volatility.

C. Margin requirements may be used in combination with other mechanisms to minimize risk to market participants, clearinghouses, and exchanges. Such other risk controls may include: circuit breakers, position limits, price limits, trading halts, capital adequacy, risk management systems, operational standards, and scrip lending limitations.

D. The costs of margin must be considered in light of the benefit of reducing risk. For example, a "cost" of high margin levels could be to reduce the leverage effect associated with such financial instruments that may affect investor interest and liquidity of certain products. Solutions to limiting such potential costs may include cross-margining and the use of a wide range of types of collateral.

IV. SPECIFIC PROVISIONS REGARDING MARGIN

A. Setting Margin Levels

1. Common fundamental elements used to establish initial and maintenance margin levels in both the equity and derivatives markets have been the historic and implied volatility of the price of a particular instrument and the market as a whole.

2. Market authorities may also take into account the price correlation

3. In establishing margin levels at the client level, various client-related elements may be taken into account where necessary, including:

- the level of the client's creditworthiness,
- whether the client is an individual investor or another financial intermediary or large institution,
- the level of the client's overall trading activity, and
- whether the client is a speculator or hedger.

4. Market authorities should reexamine initial and maintenance margin levels periodically, and should take into account current market volatility in deciding whether to revise the margin requirements.

5. Competition between markets should not play any role in the determination of margin levels.

B. Calculation

1. The methods used to calculate margin should be clear and consistent. For example, a growing number of jurisdictions are using options and futures risk-based margining systems.

2. In calculating margin requirements, open positions should be revalued to current market prices at least once a day.

C. Collection and Monitoring

1. Market authorities also should establish clear procedures for margin setting, collection, notification, and monitoring. In order to be effective, margin should be collected by clearly specified times. Members, exchanges and clearinghouses also may have the ability to make intra-day margin calls under certain circumstances.

2. Margin may be deposited in various forms of collateral. The choice of collateral should be based on criteria such as high liquidity and the correlation of the collateral with the relevant instrument. Haircuts (i.e., a calculated reduction from the market value of an asset) may be applied to take into account the risk of a possible reduction in the market value of an instrument deposited as margin between the time of valuation and the time the clearinghouse might have to sell it, such as in case of a member's default.

D. Default

1. In case of customer default, members should ensure that they are able to cover the positions of a defaulted customer in order to remain in good financial standing vis-a-vis the clearinghouse. Provisions regarding customer defaults may include the liquidation of the customer's assets and closing of the account.

2. In the case of a member default, a clearinghouse should be able to cover against the loss and protect the counterparties and, in some instances, the customers of the defaulting member. Provisions for member default may include the application of available margin funds or collateral of the member and other available funds at the clearinghouse, and where applicable, transfer of customer accounts.

V. EXTRAORDINARY CONDITIONS

A. It may be useful to have special provisions for unusual or extreme market conditions, such as the ability to call intra-day margins where this is not part of the general margin scheme, and/or the ability to change the composition of margin. During periods of market stress, there is substantial benefit in jurisdictions with multiple domestic market authorities regulating related markets in coordinating, consulting or sharing information on margin requirements, as such measures may reduce the effects of market disruption.

B. Effective communication between relevant regulators and/or market authorities should be established. It may be formal or informal, involve cross-border communications, and it may be limited to particular circumstances.

VI. CROSS-MARGINING

A. Cross-margining may be defined as the practice of reducing the total margin payment of a market participant by allowing participants who trade in related products and possibly on more than one market (for example, the cash and derivative markets) to recognize reduced risks associated with offsetting open positions (i.e., where a decrease in a position's value in one market is likely to be offset by a gain in a corresponding position's value in another market).

Appendix 1

SUMMARY OF MARGIN SURVEY RESPONSES

Introduction

The following is a summary of WP2 members' margin survey responses. The survey covers margin requirements as they apply to equities and derivatives based on equities. Margin requirements also may apply to non-equity based products; however, they are beyond the scope of this survey. The responses reflect the important role that margin plays in contributing to the efficient operation and risk management of the secondary markets. Although there are differences in margin regulation among WP2 members, both with respect to the types of instruments and the types of investors to which it applies, there are a number of common features.

1. General

1.1 Margin on equities generally functions as a loan, and is similar to a down payment required for the purchase of a security. Margin on derivatives based on equities, on the other hand, represents a performance bond; margin on derivatives is intended to guarantee that a party to a derivatives transaction will perform its obligation under the derivative contract. In general, margin is intended to protect against the effects of default, and is generally based on valuation scenarios.

1.2 Market authorities generally require margin for many derivatives transactions, and often require margin for equity transactions. There are however significant conceptual differences between securities margin and derivatives margin. While most market authorities require margin, they differ in the scope of financial instruments to which margin requirements apply. [See chart in Survey Response 1.1]

1.3 In some countries banks may be allowed to extend credit to their customers on securities and derivatives trades without providing margin. In other countries, margin is required from banks as from other participants. In jurisdictions with a universal banking system (e.g., Germany, Switzerland), securities and derivatives trading is an integral part of banking business. In such jurisdictions, margin requirements apply equally to banks and non-banks for their derivatives transactions.

1.4 While these regulations (with respect to both equity and derivatives margin) often are required by statute, specific margin requirements are found in the rules of the regulators, exchanges, and clearinghouses. In most jurisdictions, broker-dealers, exchanges, and clearinghouses may require margin deposits in

addition to those that are required by statute or rule.

1.5 Firms may provide margin to a clearinghouse either on a gross or a net margining basis. With gross margining, margin is calculated both on the net longs and the net shorts within a given account, without set off between long and short positions. With net margining, the longs and shorts on a given account are set off against each other, and margin is calculated on the net position.

1.6 With respect to the equity market, most market authorities require margin payments from customers as well as financial intermediaries, with some exceptions.

1.7 While some market authorities communicate among each other on a regular basis on margin matters, others communicate only under specific circumstances or during periods of extreme volatility. Communications may be formal or informal. For example, in France, clearinghouses and exchanges communicate on or around the expiration date of certain derivative instruments. In the United States and France, options and futures clearinghouses have entered into agreements for the exchange of information with respect to cross-margining transactions (See Section 6). Market regulators in the United States, Italy, and Japan are in continuous contact with their exchanges and clearinghouses by virtue of the regulatory relationship. In particular, in the United States, the Securities and Exchange Commission ("SEC") and Commodity Futures Trading Commission ("CFTC") have strongly supported exchanges and clearing agencies in the establishment of formal networks of communications. In Australia, exchanges only communicate in times of emergency.

1.8 Margin requirements involve a balancing of the perceived effects of margin in reducing various types of risk and the potential impact of margin on market participants and liquidity. There are two basic approaches to balancing these effects: one view is that margin is essential to the financial safety of markets and the potential cost of margin is outweighed by the benefit of reducing risk; the other view is that margin requirements (especially those required for derivatives transactions) have little, if any, impact on market liquidity, and the potential costs of margin should not curtail the activity of market professionals that are adequately capitalized. Solutions to limiting such potential effects may include cross-margining and the use of a wider range of types of collateral.

This is true also for universal banking systems. But there is no regulation of margin requirements with regard to such loans.

In the futures and options markets, margin is intended to protect participants from price movements in individual instruments and market volatility, such that the cost of liquidating certain positions would be covered by the margin up to a maximum worst-case scenario. By dealing with these risks, margin serves to minimize the risk arising from multiple defaults.

2.2 Market authorities in all WP2 member countries recognize that there is a high price correlation between derivatives and their underlying instruments. In addition, in some jurisdictions, market authorities also believe that there is a correlation between two derivative instruments and have accordingly allowed cross-margining based on that correlation.

2.3 In addition to the operational standards that apply in most markets, market integrity is promoted in many jurisdictions through risk controls, including margin requirements. Other risk controls used to respond to extreme market volatility and manage the risks mentioned above include circuit breakers (Canada, France, Italy, Japan, United States, Spain), position limits (France, Australia, Italy, United States, Germany), price limits (Japan, Mexico, Italy, Germany, Spain), trading halts (France, Mexico, Italy, United States, Germany, Spain), capital adequacy (Australia, United States, France, Mexico, Spain, United Kingdom), and to a certain extent scrip lending limitations (United Kingdom).

2.4 While other risk controls as above do not necessarily affect margin requirements directly or specifically, many market authorities generally intend to minimize risks to the market by designing an appropriate combination of risk controls including margin requirements. Under the unique market conditions in each market, implications of the other risk controls to margin requirement generally are assessed with a view toward promoting financial safety of the markets.

2.5 With respect to customer default, in most jurisdictions only the broker-dealer has a direct relationship with the clearinghouse, and the broker-dealer must cover the positions of a defaulted customer in order to remain in good financial standing vis-a-vis the clearinghouse. Provisions regarding customer defaults sometimes are within the discretion of the broker-dealer, but generally require the liquidation of the customer's assets and closing of the account.

2.6 While differences exist among WP2 members, provisions for member default generally require either the transfer of customer positions, funds, or assets held by such member, or the

liquidation of customers positions, funds, or assets. These provisions also generally require the liquidation of member firm positions, funds, and assets, transfer of accounts, use of available margin funds, and, if necessary, the use of other available funds at the clearinghouse. In most jurisdictions clearinghouses are responsible for obligations of the defaulting member to clearinghouse counterparties, and in some jurisdictions (e.g., France (MATIF SA) and Spain), to customers of the defaulting member.

3. Margin Levels

3.1 As mentioned earlier, margin levels are established either by statute or by the rules of regulators, exchanges and clearinghouses. In many cases, broker-dealers charge their customers higher margin than required by rule or statute. In most cases, the exchanges and clearinghouses have no direct contact with their members' customers, except in the United Kingdom where OMLX, an options and futures exchange under the jurisdiction of the SIB, may carry customer accounts directly, and in Spain where the clearinghouse knows and calculates margin levels for each customer, thereby creating a direct and special relationship between the clearinghouse and its members' customers.

3.2 Many market authorities require both initial and maintenance margin from both members (such as financial intermediaries) and non-members (such as customers of those financial intermediaries) of a clearinghouse for most instruments. Initial margin refers to margin paid at the initial stage of a transaction, and maintenance margin refers to margin required during the stages of a transaction. A common fundamental element in the establishment of margin levels in both the equity and derivatives markets is the importance of the historic volatility of price and market. However, market authorities differ substantially in the way they determine margin. Some calculate margin on a net basis; some calculate margin on a gross basis; and some differ in their calculation depending upon the types of instruments, the type of participants, and whether the margin is initial or maintenance.

3.3 Different types of instruments are subject to different margin requirements. In some jurisdictions, including Canada and the United States, market authorities take into account whether the client is a speculator or hedger, while such distinction is not made in other jurisdictions, including Japan and France. In all jurisdictions customers may be subject to higher margin

distinguish among clearing members in setting margin requirements,[1] those in some other jurisdictions (such as Canada, Italy, the Netherlands, and the United States) distinguish among members based upon their creditworthiness and overall trading activity.

3.4 All jurisdictions reported that competition does not play any role in the determination of margin.

3.5 In many jurisdictions market authorities do not have regularly scheduled periods for margin reviews, in others market authorities reexamine margin periodically (daily, weekly, or monthly). Market authorities look at volatility as a key element in deciding whether to revise the margin requirements.

3.6 Market authorities differ greatly in the methods they use to calculate margin. Some use options pricing models while others do not. Equity options exchanges in a growing number of jurisdictions (such as the Netherlands, Australia, Quebec, Italy, and the United States (SEC)) use the Theoretical Intermarket Margin System ("TIMS") system of accounting. Financial futures and options exchanges in a number of jurisdictions (including Australia, Spain, France (in the near future), the United Kingdom, and the United States (CFTC)) use the Standard Portfolio Analysis of Risk ("SPAN") system. Finally, open positions in the derivatives markets are marked-to-market daily in all jurisdictions.

4. Margin Collection and Monitoring

4.1 Generally, clearinghouses calculate and collect margin from their members and the members collect margin from their customers. Oftentimes the exchanges and clearinghouses determine the methods and means used for calculating and collecting margin.

4.2 Margin collection and notification procedures vary widely: in a number of jurisdictions, margin on futures and options are calculated and collected daily or more frequently in some circumstances (by clearinghouses, exchanges, or broker-dealers); in Japan, they are collected as much as three days after calculation.

4.3 In most jurisdictions, financial intermediaries and their customers are margined separately, but under the same or similar methodology. In some jurisdictions, the margin level applied to financial intermediaries is different from that applied to their customer accounts.

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[1]/ In Germany, the United Kingdom, Japan and France, creditworthiness is important but is not specifically taken into account when establishing margin levels.

4.4 Various types of collateral are permitted by the various market authorities. Relevant factors include the market and who is required to submit margin, e.g., exchange member, clearinghouse member, or public customer. Types of collateral range from cash only, to including domestic, foreign or international currency and securities, equity and/or debt. The choice of collateral permitted is based on criteria such as high liquidity, reduced credit and market risks. Except in Australia and Mexico, where haircuts are not applied, in most other WP2 jurisdictions haircuts range from 0 to 50%. Haircuts aim at taking into account the risk of a possible reduction in the market value of these instruments at the time the clearinghouse might have to sell them in case of a member's default. (See Survey Response for additional information.)

5. Extraordinary Market Conditions

5.1 Except in the Netherlands and Mexico, market authorities in all other WP2 jurisdictions provide special regulations to respond to extreme market conditions. In most cases intra-day margin calls are made that must be satisfied relatively promptly (e.g., one hour). Intra-day margin payments generally are made from customers to broker-dealers and from broker-dealers to clearinghouses. There are no refunds to members of clearinghouses or customers of broker-dealers in case there is excess margin in an account.

In the United States, France, Canada, and Japan, special provisions for extreme market volatility have been activated on various occasions in order to control the risks arising from extreme volatility. For example, exchanges in Japan may change initial margin levels and change the haircuts of collateral.

5.2 The benefit of coordinating or consulting about such rules among relevant domestic market authorities is regarded as important in some jurisdictions to protect market participants from possible defaults. Furthermore, sharing information on structural measures including margin requirements may reduce the effects of market disruption.

6. Cross-Margining

6.1 Cross-margining may be defined as the practice of reducing the total margin payment of a market participant by allowing participants who trade in related products and possibly on more

and options products, or options and futures products.

6.3 Although not prohibited, cross-margining is not practiced in Australia, Spain, Italy, Japan, or Mexico. However, in the jurisdictions where it is practiced, such as the United States, Canada, Germany, the Netherlands, Switzerland, and France, cross-margining, across instruments and/or markets, is subject to certain conditions, limitations and/or specified agreements among regulators. In the Netherlands, market authorities permit offsetting positions to be located outside the country if they have the same underlying value. In Italy, market authorities currently are in the midst of establishing cross-margining procedures for a wider variety of financial instruments.

6.4 In several other countries where the options and futures markets are one, cross-margining is practiced across products.

Appendix 2

1.1 Please indicate below those financial instruments which are traded (T) in your country and those to which margin requirements apply (M).

	ASC	BAWe	CFTC	CNMV	CNV	COB	Consob	CVMQ	MOF	OSC	SEC	SIB	SB	STE
EQUITY														
equities	T/M	T		T	T	T/M*	T/M	T/M	T/M	T/M	T/M	T	T/M	T
stock options	T/M	T/M		T/M		T/M		T/M		T/M	T/M	T/M	T/M	T/M
equity futures	T/M											T/M		
stock index options		T/M		T/M		T/M			T/M	T/M	T/M	T/M	T/M	T/M
stock index futures	T/M	T/M	T/M	T/M		T/M	T/M		T/M	T/M		T/M	T/M	T/M
options on stock index futures	T/M	T/M	T/M			T/M						T/M		
warrants	T/M	T		T	T	T/M**	T/M	T/M		T/M	T/M	T	T/M	T
covered warrants		T			T	T/M**				T/M	T/M	T	T	T
warrants on stock indices		T		T	T	T/M**					T/M	T	T/M	T
NON-EQUITY														
government bonds	T/M	T		T	T	T/M**	T	T/M	T/M		T/M	T	T/M	T
government bond options				T/M				T/M	T/M		T/M	T	T/M	T/M
government bond futures	T/M	T/M	T/M	T/M		T/M	T/M	T/M	T/M			T/M	T/M	T/M
options on government bond futures	T/M	T/M	T/M			T/M	T/M	T/M	T/M			T/M	T/M	T/M
foreign government bonds		T		T		T/M**		T/M	T/M		T/M	T	T/M	T
options on foreign government bonds									T/M		T/M	T		
futures on foreign government bonds			T/M			T/M			T/M			T/M		
options on futures on foreign gov't bonds			T/M			T/M						T/M		
corporate bonds	T/M	T		T	T	T/M**	T	T/M	T/M		T/M	T	T/M	T
options on corporate bonds									T/M		T/M	T		
futures on corporate bonds														
options on futures on corporate bonds														
other debt	T	T		T	T			T/M	T/M		T/M	T	T/M	
options on other debt									T/M		T/M	T		
futures on other debt								T/M	T/M					
options on futures on other debt									T/M					
currency warrants		T				T/M**				T/M	T/M	T	T/M	T
currency futures			T/M			T/M			T/M				T/M	T/M
commodity options			T/M							T/M		T	T/M	T/M
commodity futures	T/M		T/M			T/M			T/M			T/M	T/M	

mers apply only to transactions on the monthly settlement market (Marché à Reglement Mensuel). There are no margin requirements ities market as they have to pay 100% of the current value of the stock at the time of the transaction.

nly to intermediaries. Customers have to pay 100% of the transaction price at the time of the transaction.

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Identify other intermediaries that extend credit in relation to securities transactions in your country but that are not subject to your margin requirements or to those of an entity that is subject to your jurisdiction.

OSC
Banks may lend money to customers for products subject to OSC jurisdiction, but banking lending is under the jurisdiction of the Federal Office of the Superintendent of Financial Institutions.

CNMV
no response

CONSOB
Banks may extend credit but they have direct access only to derivatives market.

CVMQ
Banks and credit institutions may accept securities as a loan guaranty or extend credit in relation to securities transactions but their lending activities are not subject to the CVMQ jurisdiction.

BAWe
Banks also extend credit in relation to securities transactions. However, they are not subject to margin requirements described in this survey.

MOF
Banks also extend credit in relation to securities transactions. However, they are not subject to margin regime described in the survey.

SIB
Banks may lend money to customers and financial intermediaries but are not required to take margin on loans made.

COB
Credit institutions may extend credit to their clients but credit institutions do not have direct access to the market. they must set up specialized subsidiaries to operate on the market.

ASC
no response

CNV
Margin credits only permitted from banks to broker–dealers trading for their own account, on international arbitrage, or in case of accounts receivables pursuant to CNV general provisions. The central bank prohibits credit between broker–dealers & clients. Thus, no margin credit requirements on Mexican market.

SB
no response

STE
Banks & other credit institutions are not subject to the STE's jurisdiction but to that of the Dutch Central Bank.

CFTC
Banks may lend money to customers & financial intermediaries for products subject to CFTC jurisdiction, but bank lending is not subject to CFTC jurisdiction.

SEC
All lending for securities by broker–dealers subject to Regulation T.
Lending by banks is subject to Regulation U.
Lending by non–broker–dealers and non–banks is subject to Regulation G.
Borrowers are subject to Regulation X.

ements established? Are there statutory or other requirements to establish margin levels? If different rationales apply to specify.

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BAWe
Deutsche Börse AG acts as the clearing–house of DTB. It acts as guarantor to all transactions executed on DTB. Margin intended to secure clearinghouse from default of any member. Requirements established by clearinghouse not by statute.

MOF
Margin on equities & derivatives based on equities are established in the Securities and Exchange Law & the rules of the stock exchanges in which they trade. Primary rationale for margin on derivatives is to reduce credit & market risks by covering potential losses due to market volatility (performance bond); primary rationale for margin on equities is to reduce credit risk associated with loan that broker–dealer provides to customer. Secondary rationale for both margin requirements include: protection of investors from unexpected losses by setting minimum margin requirements; ensuring that market functions such as orderly price formation on both cash & derivatives markets are not impaired. In addition, for derivatives, margin is desirable to minimize adverse effects which one market may give to the other & eventually minimize systemic risk in markets as a whole.

COB
Requirements set up to contribute to & strengthen the financial safety of the markets by ensuring that participants can face cost of liquidating portfolio of open positions in assumed worst case change in price of underlying asset or index. Initial and variation margin enable clearinghouse to provide its guarantee of full performance. Margin acts as safety net for participants vis–à–vis clearinghouse, which in turn can bear cost of market participant's default.

ASC
Margin acts as performance bond for futures, to protect clearinghouse from default by clearing member, & protect clearing member from default by customer. For ASX transactions, margin intended to cover adverse market movements against positions held by clearing members. No statutory requirements.

CNV
In short sales, margin gives the lender enough collateral in case the borrower cannot meet his obligations due to variable market conditions. The new equity derivatives market will include CNV margin requirements & emergency margin levels, based on historical & implied volatility & trading. Margin will be intended to reduce counterparty risk on potential losses & to protect investors.

STE
Margin intended to limit risk for customers and intermediaries and to safeguard market as a whole. Also intended to make public aware of risks involved in trading futures & options. Requirements set pursuant to EOE and FTA trading rules.

CFTC
Statutory requirements: Under Futures Trading Practices Act of 1992, contract markets required to file with FRB margin rules setting or changing levels of margin on stock index futures & options. FRB may direct changes to preserve financial integrity of contract market or its clearing system or to prevent systemic risk. Authority to oversee such margin was delegated from FRB to CFTC in 1993. Options on futures margin set by exchanges although CFTC has authority to review methodology. In an April 14, 1993 letter, the CFTC advised relevant exchanges regarding procedures relative to the establishment of or changes in the levels of margin on stock index futures and options. However, pursuant to CEA, except for stock indices, absent an emergency, margin levels for futures contracts are set by exchanges without CFTC review. During emergency, CFTC can set emergency temporary margin levels. Futures margining system designed to measure risk involved in each transaction based on market volatility, historical & implied volatility, & type of trading involved. Because margin respresents price risk (one day market movement), both sides of transaction must deposit margin. In other words, margin represents performance bond.

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CNMV
Reduce counterparty credit risk in relation to market risk, enhance market integrity & limit systemic risk. Requirements for futures and options transactions are a result of the interposition of a clearinghouse.

CONSOB
Equity markets: guarantee fund established to ensure regular & timely settlement in order to eliminate counterparty risk & minimize market risk. At market level, margin established to protect intermediaries from clients' default, and create limit for loans given to customers.
Derivatives: margin established to protect clearinghouse from members' default, & clearing member from customer default. Margin established by Consob.

CVMQ
Margin deposits are for the purpose of assuring performance & guaranteeing that both long & short positions ultimately meet their contractual obligations. Securities margin acts as loan, while futures margin functions as performance bond.
Margin levels are established by the Montreal Exchange and TCO, subject to CVMQ approval.
TCO margin requirements assure that margin collections are sufficient to cover TCO's risk as issuer/guarantor. TCO margin intended to cover potential losses arising from price risk.

SIB
Margin requirments at clearinghouse level are established to protect clearing-houses from members' defaults, & at exchange level to protect exchange members from clients' default. Requirements established by clearing-houses & exchanges, not by statute.

SB
Margin applicable in cases where the settlement of the transaction is either deferred or conditional, to cover market & counterparty risk. In other words, margin represents measures for protection against general credit risks.

SEC
In the equity market, margin acts as limit for loans given to customers by broker-dealers for the purchase of securities. In the derivatives area, margin also acts as performance bond to counteract credit & market risks. Margin regulations were established in 1934 to prevent excessive speculative borrowing, prevent diversion of resources, and protect investors. Pursuant to Securities Exchange Act of 1934, authority to regulate margin was delegated to the FRB. Margin applies to broker- dealers, banks and other lenders as well as borrowers. The FRB in turn delegated the authority to set maintenance margin for equities, & initial & maintenance margin for derivatives to the SROs. In addition, clearing organizations also require their members to deposit margin, pursuant to their contractual agreements with their members.

de not to establish margin requirements? What was the rationale for such a decision?

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curities
er made

BAWe
With regard to DTB, no. There is no clearinghouse for options traded on FSE. These options are different from those traded on DTB & their turnover is negligible. Market participants are protected as follows: the seller of a call option must deposit 30% of stocks underlying trade with Lombardkasse AG. Remaining 70% covered by bond & stocks subject to 10 & 25% haircuts. The seller of a put option must deposit collateral (bonds & stocks, 10 & 25% haircut) of 30% of nominal value of trade at Lombardkasse AG.

COB
No.

STE
No.

ASC
No.

CFTC
See above (1.2).

MOF
No.

CNV
No.

SEC
No.

SIB
No.

SB
Provided forward stock transactions, warrants, & call options are fully covered & pledged to issuing house, no margin requirements will apply.

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1.4 Identify the entity or entities that establish and/or have oversight responsibilities for margin. Specifically, describe the role (if any) played by regulators, markets, clearing organizations, and intermediaries. Do these entities communicate with one another regarding margin requirements on a regular basis or under special circumstances, such as, for example, during periods of extreme volatility? Do these entities coordinate among themselves with respect to various products?

OSC
Margin levels set by SROs subject to regulatory oversight of OSC. Member firms often require higher margin than required. SROs deal with each other regarding amendments. Although never used, systems are in place for communications when required. During extreme market volatility, SROs may change requirements.

CNMV
clearinghouse of each futures & options market sets requirements with CNMV approval. In exceptional cases, clearinghouses may require different margin, if necessary for the safeguard of the market but must inform the market. CNMV must be provided with a rationale. Only the CNMV & clearinghouse for futures & options have oversight responsibility for margin levels.

CONSOB
Derivatives are cleared by CCG which also manages the Guaranty Fund of the equity market. CCG is supervised by Consob & Bank of Italy.
Intermediaries collect margin from their clients & CCG collects daily margin from intermediaries & sends report to Consob in the same day.
Consob & CCG communicate regularly by virtue of regulatory relationship. Consob sets minimum margin requirements for futures & options contracts. CCG sets & collects actual rmargin.

BAWe
clearinghouse establishes margining procedures & requires members to collect margin from their customers.
Margin intended to cover maximum risk in case of liquidation.
clearinghouse only entity with margin requirements. Thus, there is no need for communication and cooperation.

MOF
MOF & relevant exchanges establish & oversee margin levels.
Derivatives: Initial customer margin established by MOF. Maintenance customer margin, & initial & maintenance member margin (for options & futures) are set in exchange rules.
Equities: initial margin established by MOF. Exchanges may set levels higher than those set by MOF for both derivatives & equity margin, but subject to MOF approval.
Margin requirements for various products are independent of each other.

SIB
LCH establishes margin requirements in consultation with exchanges. OMLX clears and margins its own contracts. LCH & OMLX are overseen by SIB. There is wider communication at times of extreme volatility.

COB
SBF establishes & oversees margin for securities markets. Pursuant to authority delegated by SBF, SCMC calculates margin for options market. MATIF SA is competent authority for futures market. Competent margin authorities communicate on or around expiration date of CAC40 index future contract and option on the CAC40 index to exchange information on amount of open positions. SBF, SCMC, & MATIF implement trading halt mechanism where price movement in CAC40 index triggers trading halt in all instruments based on CAC40. Clearinghouses for derivatives based on CAC40 index may then call intra-day margin.

ASC
SFECH & OCH establish & oversee margin requirements.
There is little day to day discussion between clearing organizations in Australia. MOU between SFE & ASX; they consult during periods of extreme volatility.

CNV
CNV sets margin requirements, INDEVAL and brokerage firms supervise margin accounts. CNV is in close communication with other financial authorities.

STE
Margin authorities for FTA & EOE (futures & options markets) are the same. These markets have one compliance department for futures & options that oversee margin levels. EOE & FTA establish margin levels.

CFTC
Relationship between FRB & CFTC & exchanges relative to setting & oversight of margin explained above (1.2). Futures clearinghouses signed market information sharing agreement for the sharing of pay & collect margin deficit & surplus information. OCC also signed the agreement. Such information collected & disseminated daily by BOTCC.
In addition, various groups share trading, financial, intermarket violations, & other information during periods of extreme volatility regarding clearing members. Where cross-margining in various financial products has been approved, close coordination is required among the appropriate financial intermediaries & regulators. CFTC has worked closely with SEC in facilitating cross margining programs among the various clearinghouses.

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SB	SEC
Swiss Banking Commission oversees banks providing services of forward equities transactions & issuing warrants by approving all the banks' rules. For exchange–traded derivatives products, SOFFEX clearinghouse sets the rules. There are regular contacts between SOFFEX & the federal authorities.	Regulation T sets initial margin on short puts and calls on a security, cd, securities index or foreign currency; on long positions on any option; and for other puts and calls, Regulation T sets the margin level as the amount specified by the creditor's SRO. SEC and SROs communicate regularly by virtue of regulatory relationship. Clearing organizations require their members to post margin and to contribute to general clearing fund. SROs communicate with respect to cross–margining and whenever common member in difficulty, generally pursuant to formal agreements.

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1.5 What do you believe is the effect of margin requirements on the market as a whole? Specifically, do you believe there is a balance between the potential loss of liquidity (when market participants curtail activities as a result of margin requirements) and the benefits to the market of loan guarantees or performance bonds?

OSC
Negative effect on liquidity, especially during times of extreme volatility. Because margin rates for equities are so high, they have never been raised.
As for fixed–income market, in June 1994, the bond market experienced extreme volatility, parameters were exceeded & a margin surcharge was put into effect. Analysis by IDA regarding the effect of the surcharge on the bond market is not yet completed.

CNMV
While margin may be discouraging to significant part of market participants, market integrity & adequate margin are sine qua non condition for these participants to operate in the market. However, no important effect on market liquidity because of the extensive presence of government bonds in the portfolios, which are used as margin, directly & indirectly.

CONSOB
The cost of financing margin requirements is less liquidity in the short term, but is countered by more efficient markets in long term.

CVMQ
There is balance between loss of liquidity & benefits to the market, including a reduction of credit, settlement, & systemic risks.

BAWe
99% of margin requirements covered by bonds. Normally, these collaterals belong to the assets of the clearing members & are not traded actively. Thus, potential loss of liquidity negligible. Customers & non–clearing members suffer from loss of liquidity because they deposit margin at General Clearing Member.

MOF
Costs to the market include: potential loss of liquidity, decrease of credit for securities trading, & curtailement of investor base. Margin requirements also bring vital benefits. An appropriate balance must be struck to maximize net effect of margin.

SIB
Margin requirements regarded as benefit, not cost. Adequately capitalized market professionals would not curtail activities because of margin.

COB
High margin levels reduce leverage effect associated to such products and may impact investor interest and liquidity of such products. Solutions to limiting such costs include cross–margining & the use of a wider range of types of collateral. However, margin are essential to financial safety of markets, & the potential costs of margins are outweighed by the benefit of reducing systemic risks.

ASC
SFE believes that there is no evidence of effect of margin on transaction volume. ASX believes that participants who feel that their market activity hampered by margin requirements probably exceeded their financial capacity. Margin requirements impose discipline to cover against adverse market movements.

CNV
No liquidity or opportunity costs because stocks used as collateral may be substituted.

SB
Do not believe that margin result in loss of liquidity. If it did, higher market integrity would outweigh potential loss of liquidity. Clearing members have pledged 160% of collateral needed.

STE
Effect can be negative, but no quantification can be given. We believe that potential gain outweighs potential loss of liquidity due to margin requirements.

CFTC
Costs associated with margin requirements include liquidity & efficiency of markets. Type of collateral used to satisfy margin also affects cost to market participants.

SEC
Potential loss of liquidity weighed against better risk management, the protection of investors, & minimizing risks to the market. Cross–margining was instituted in order to address some of these concerns, by imposing requirements which accurately reflect risk of combined positions, & by limiting the risks while protecting liquidity.

ments intended to protect market participants from risks? In particular, for each class of instruments covered by margin on, identify the type of risks involved, including market, credit, or systemic risks.

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BAWe
DTB clearinghouse uses risk–based margining system and assumes risk for maximum possible losses. DTB clearinghouse calculates projected liquidation costs by comparing current market value of portfolio with potential worst case market value. Worst case market value calculated by using Cox Ross Rubenstein model & historic volatility of underlying. Margin requrirements designed to protect clearinghouse against risk of default of members, including credit or counterparty risks & market risk. Setting up clearinghouse intended to reduce systemic risk.

MOF
Risks related to both derivatives & equities include market, credit, & systemic risks. Margin for derivatives intended to protect investors from market volatility such that cost of liquidating positions is covered by margin. Systemic risks arise when there is a series of defaults. Margin for equities intended to protect broker–dealer from extension of credit & price movements such that loan provided is collateralized by margin.

COB
Margin requirements aim at strengthening safety of financial markets, by covering: market risk so that a participant's default does not impact on clearinghouse; credit risk, or risk of counterparty default. clearinghouse acts as intermediary between market members & removes direct link between buyer & seller, thus limiting systemic risk.

ASC
For SFE products, initial margin & daily mark–to–markets intended to reduce clearinghouse exposure to market & credit risk should clearing member defaults following large price movement.
Initial margin levels set at 99% confidence level.

CNV
Margin requirements intended to protect from possible loss of liquidity due to variable market conditions. Short sale margin covers risk of liquidity of borrower and diminishes the possibility of forfeit of repayment. It is also intended to cover counterparty risk arising from market fluctuations.

STE
Margin requirements relate to market risk for all instruments.
Protect market participants from price movements in individual instruments and market volatility in general.
Margin levels increase as price movements become unfavorable to participant's positions.

CFTC
Margin addresses credit, market, & systemic risks.
Futures markets transfer risk, & futures margin measures that risk based on market volatility & type of trading.
Margin intended to cover most one–day price moves based on historical & implied volatility.
Brokers required to call &/or collect such minimum requirements from customers.

SEC
In both equity & derivatives markets, margin intended to address credit, & market risks. In equity market, margin protects the financial system from the risks of market fluctuations which could be exacerbated by excesive borrowing. In derivatives market, margin protects clearinghouses & their members from potential risk of loss from greatest expected one–day price change in underlying securities.

CONSOB
Equity markets: counterparty or market risk. Margin & Guaranty Fund intended to cover imbalances of insolvent members. At customer level, margin intended to protect bankers, brokers, & other intermediaries from credit loss, & limit speculative trading.
Derivatives: Market Risk. Margin requirements include initial margin (to cover risk of one day price variation) & variation margin (daily mark–to–market) of future positions.

CVMQ
For each class of instruments, margin intended to cover market, credit, & systemic risks. Securities margin acts as loan to meet market & credit risks; futures margin acts as performance bond.

SIB
Risks are the same for all instruments: position risks; market risks and resultant counterparty risks. Margin intended to cover any adverse price movements incurred by clearinghouses in closing out defaulted members' positions. Because of its role as central counterparty, the clearing–house also has a role in protecting against systemic risk. clearinghouses collect margin from their clients for reasons analoguous to those underlying the clearinghouse's collection of margin from its members.

SB
Protect clearinghouse/issuing house from credit & market risks. The existence of clearinghouse for exchange traded derivatives reduces systemic risk substantially.

en financial instruments (e.g., a cash and a derivative product, or two related derivative products) relevant to risk analysis s? If so, please explain both in reference to situations where both products are in the portfolio and where only one product is in

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BAWe
DTB clearinghouse provides several margin classes. Products with the same underlying or risk are assigned to one margin class. The relationship between underlying & the respective derivative instrument is the base of the calculation of margin requirements. For example, in portfolio of two products based on same underlying margin credit & margin requirement added. In portfolio of long & short positions, the basis is the same risk profile for the 2 products & the clearinghouse requires only the higher of the 2 amounts, not their sum.

MOF
Relationship between derivatives & underlying indices is relevant: margin levels for derivatives based on maximum volatility of underlying indices. Absolute price levels, trading volumes of derivatives & underlying markets are additionally taken into account to ensure market functions such as orderly pricing in both derivatives & underlying markets. Where both products in portfolio, positions of related products not considered in calculation of margin.

SIB
Yes. Futures options margins established with reference to observed price movements in those instruments & underlying. If related products, with gains in one correlated to losses on another, less margin may be required. Exchange specilaization & the cross-exchange clearing role of LCH obviates the need for the cross-margining agreements put in place in the United States after 1987.

COB
Relationship betwen cash & derivative products is relevant regarding margin. Margin requirements for derivatives based on maximum price variation of underlying instrument. Relationship between related instruments in different markets also relevant (cross-margining), as well as holding long & short positions where risk is aggregated & lower margin is required.

ASC
Relationship relevant insofar as margin requirements for derivatives based on maximum variation in price of underlying instrument that clearinghouse decides should be covered.

CNV
Yes. A more liquid market can be achieved when risk & proper margin requirements correlate.

SB
Yes. Fully covered positions require no margin. Margin deductions granted for cross-product positions, only if they are in the same portfolio/clearing member overall position.

STE
Yes. If short calls are covered on cash market, then no margin is required. If no position taken on cash market then margin required.

CFTC
Yes. See sections 3.4 & 4.1. Margin levels vary based on various factors. If there are more than one product in a portfolio, & the gains on one are correlated to the losses on another, less margin may be required than in situation where there is only one product in the portfolio.

SEC
Yes. Where portfolio includes an underlying security & its derivative, & where price movements between the two are related, holding a long position in one security & a short one in another will reduce the risk of loss, & thus reduce the required margin. Similarly, with respect to holding positions in both the futures & options market, cross-margining has enabled participants to reduce their margin requirements.

2.3 What other risk controls, e.g., scrip lending limitations, trading halts, price limits, capital adequacy requirements, and position limits affect margin requirements in your country? What roles are margin requirements supposed to play in extraordinary market conditions?

OSC
Circuit breakers designed to reduce market volatility but have never been activated. Clearing members are subject to capital requirements.

CNMV
Margin requirements calculated independently of other risk controls, such as trading halts, capital adequacy, price & position limits. In extraordinary market conditions, trading halts and price limits play a crucial role. Margin requirements are defined to cover losses that may arise if price limits are surpassed. MEFF allowed to make intra-day margin calls in situations of extraordinary market conditions.

CONSOB
No other risk controls directly affect margin requirements, but they complement them.

CVMQ
ME and TCO rules have specifications regarding: trading halts, price limits, capital adequacy requirements, position limits, limits on outstanding uncovered short positions, all of which may have a direct or indirect effect on margin levels.

BAWe
Margin requirements are only position-related, not member- related. Clearing members are subject to certain capital requirements & to supervision of Board of Control. During extraordinary market conditions, clearinghouses may call for additional cash margin. There are position limits for certain contracts. DTB has possibility to halt trading.

MOF
Circuit breakers & price limits play vital role in extraordinary market conditions. In addition, there is strong relationship between price limits & margin. Initial customer margin level designed to cover loss that may arise if price limit reached in market. Scrip lending limitations, circuit breakers, capital adequacy requirements, & financial & operational requirements exist but do not direclty affect margin requirements.

SIB
Risk – based capital requirements set by regulators and SROs provide greater certainly that future margin requirments will be met and complement exchange & clearinghouse controls. In addition, firms are prohibited from effecting off- exchange "contingent liability" transaction with or for private clients; client accounts must be topped up with firm's money to cover for potential shortfall.
No risk controls directly affect margin requirements though they are considered in assessing them. Margin plays same role in extraordinary conditions as in ordinary. Margin taken into account in capital adequacy calculations.

COB
Position limits on MATIF & MONEP; trading halts on securities markets, MATIF, & the MONEP. Risk controls also include minimum capital requirments (higher for clearinghouse members than non-members). In extraordinary market conditions, financial intermediaries & clearinghouses may increase their margin requirements to protect themselves from substantial price fluctuations. See also question 1.5.

ASC
Other risk controls for SFECH include: minimum NTA of A$2M; member contribution to A$100M SFECH fund; capital based position limits; & company check limits.
ASX has minimum capital requirements. Margin requirements not affected by scrip lending facilities, & trading halts not used.

CNV
Trading halts are called when certain pre-established fluctuation limits are reached, such as 5% fluctuation for capital market instruments & 3% for fixed income instruments. For warrants, delta valuation is used for risk control.

SB
Other risk controls do not affect margin requirements, but complement them, & include capital adequacy requirements, adequate back office, & trained staff to assure smooth settlement of transactions.

STE
Other controls do not affect margin requirements. There are no specific provisions during extraordinary market conditions.

CFTC
Other structural measures to address market disruption such as capital requirements, circuit breakers, exchange capital based position limits & clearing fund guarantee deposits are considered in assessing margin.
During extraordinary market conditions, clearing organizations & brokerage firms may make intra-day margin calls for variation margin & require additional margin deposits immediately. The failure to satisfy margin calls may result in the liquidation of positions.

SEC
Capital adequacy requirements, including minimum liquidity standards, play an important role in controlling & minimizing risk. Clearing agencies also subject to certain standards to ensure safeguarding of funds & securities, including requirements that they apply certain operational & financial standards to their members. Finally, during extraordinary market conditions, broker-dealers, exchanges, & clearing agencies may increase their margin requirements to cover themselves against wide fluctuations.

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BAWe
Clearing member default: DTB clearinghouse will: net open positions in all accounts; liquidate collaterals and realize guarantee; refund surplus if any. In case of remaining requirements, utilize retained earnings (DTB funds). Finally, utilize pro-rata enforcement of all guarantees of other members.
Non-clearing member & customer default: deposited collaterals which exceed required margin are liquidated. Afterwards, clearing member responsible.

MOF
Customer default: close positions; appropriate cash & securities in account; claim customer for any unsettled sum.
Member default or anticipated default: Exchange may stop new transactions, or stop delivery of funds or securities. Suspended securities or funds may cover unsettled payments. Other member may be nominated to succeed defaulted member's unsettled transactions. Loss of other member covered by margin, other deposits, & finally by Default Compensation Reserve of the exchange. Same process is followed for equities & derivatives.

SIB
LCH and recognized exchanges have default rules that apply to their respective members in case of default. Part VII of Companies Act 1989 provides additional legal protections. Major customers can be brought within these provisions as designated non-members. Purpose is to allow positions to be closed out rapidly.

COB
Pursuant to CMT (MATIF SA) & CBV (Securities markets & MONEP), clearing member default: registration of all new contracts suspended; positions liquidated, as necessary; customers' positions transferred to other clearing members. Customer default: positions exercised until required margin levels reestablished.

ASC
Members responsible for clients' defaults. As for intermediaries, SFECH will: close out member positions; use margin to meet losses; excess margin used to cover clients' losses; use other securities in account; use member's contributions to fund; use SFE's contributions to fund; use other members' contributions to fund; use insurance component of financial backing.
Pursuant to ASX, member default would require that defaulted member's positions be closed, & their customer accounts be transferred.

CNV
5 days prior to expiration of short sale term, the borrower's account is checked by broker-dealer. Customer is notified if account deficient.
2 days prior to expiration, if account not replenished, then it is liquidated until loan can be fulfilled.
Similarly, if guarantee diminishes below required 130% & customer does not reconstitute guarantee, then account liquidated until guarantee at proper level.

STE
Customer default: open positions closed. If insufficient funds then public order member responsible for clearing contract. If clearing member unable to meet margin requirements, clearing members will have to fund the additional margin through clearing fund which is intended to cover additional risk; if insufficient, clearing members may be asked for additional funds.

CFTC
Customer default: contracts closed out to restore account to proper margin level.
Default by clearing member: clearinghouse must close out or transfer to other clearing members all positions of defaulting member. Then, clearinghouse would fulfill defaulting member's obligations by using margin posted, firm capital, clearing organization's guarantee fund or committed lines of credit, & finally funds collected from other clearing members. Firm's customers are protected by obligation to segregate funds & maintain minimum capital. The segregation rules, which require FCMs to provide 100% reserve against customer obligations at all times, assist in ensuring that in the event of an FCM default, sufficient money will remain in an FCM's customers' margin accounts, which in turn will facilitate the transfer of those accounts to another FCM. In bankruptcy, customers of debtor firm have priority. Firm's assets may be used when needed.

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CVMQ
Member default: TCO has authority to require the transfer of customers' positions to another clearing member; assign margin call to other members. If bankrupt, default handled by Canadian Investor Protection Fund; customer's default: clearing member responsible.

SB
Customer defaults: usual default procedures between banks & customers become effective.
Clearing member default: member's postions & collateral liquidated; member's contribution to guarantee fund used; other members' contributions used; reserves & capital of clearinghouse used.

SEC
Customer default: liquidate positions as necessary. Customers responsible for any losses.
Member default where clearinghouse guarantees services: close out positions & try to make injured participants (if any) whole by using members' clearing fund deposits as needed; the clearing agency's retained earnings or committed credit facilities; or using other members' fund deposits.
When member of option clearing corporation defaults, clearing agency suspends member & converts to cash all margin & clearing fund deposits. Clearing member will close open positions if practicable, or will liquidate the transactions. If funds insufficient to satisfy loss, then clearing agency will charge other members on pro-rata basis for the loss.
Broker-dealer default if it leads to insolvency: apply SIPC provisions, i.e. appoint trustee to liquidate firm and protect customers by transferring accounts to new firms, or satisfying claims.

ppropriate box the equity products listed in Question 1.1 to which the different types of margin apply.

OSC		BAWe		COB	
Customer	Clearinghouse Member	Customer	Clearinghouse Member	customer	Clearinghouse Member
es – no specific used. ures.	same	Stock options; stock index options.	same	Equities traded on monthly settlement market; stock index options & futures, & stock options.	equities; stock index options & futures, & stock options.
	same	stock options; stock index options; stock index futures; options on stock index futures.	same	same	same

STE		CNMV		MOF	
Customer	Clearinghouse Member	Customer	Clearinghouse Member	Customer	Clearinghouse Member
options; stock options; stock futures	same	stock options; stock index futures & options; stock fixed–income futures & options.	same	equities; stock index options; stock index futures.	stock index options; stock index futures
	same	same	same	same	same

ASC		CFTC		Consob	
Customer	Clearinghouse Member	Customer	Clearinghouse Member	Customer	Clearinghouse Member
options; equity s; stock index ns & futures; options ock index futures.	same	stock index futures; options on stock index futures.	same	equities; warrants; stock index futures	same
	same	same	same	stock index futures	same

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	SIB		CNV		SEC	
	Customer	Clearinghouse Member	Customer	Clearinghouse Member	Customer	Clearinghouse Member
Initial	All equity products listed.	same			equities; stock options; stock index options; warrants; covered warrants; warrants on stock indices.	same
Maintenance	same	same			same	same

	CVMQ		SB			
	Customer	Clearinghouse Member	Customer	Clearinghouse Member		
Initial	equities; stock options.	same	equities forward transactions; stock options; stock index options & futures.	stock options; stock index options; stock index futures		
Maintenance	same	same	stock options; stock index options; stock index futures.	same		

l relationships which are permissible or impermissible among various persons or entities regarding margins. For example, can a with members of the public, or only with members of the clearinghouse?

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BAWe
The clearinghouse is responsible for settlement, maintenance of collateral & margin, payment & physical delivery of exchange transactions. The clearinghouse has contractual relationship only with General & Direct Clearing Members but not with Non–Clearing Members or customers.

MOF
Exchanges deal only with their members regarding initial & variation member margin. Member firms deal only with their customers for initial, variation & maintenance customer margin. Third parties' guarantees on customers' margin obligations are impermissible.

SIB
LCH has contractual relationship with its members, but no relationship with their clients, even if a segregated account is opened for their convenience. OMLX has contractual relationship with its members, but also with end client if they open a special customer account.

COB
clearinghouses deal only with their clearing members; clearing members deal only with their customers & non–clearing members with whom they have arrangements.

ASC
SFECH recognizes only its clearing members. Maintains no relationship with their clients.
Although OCH maintains accounts for clients, clearing member ultimately responsible for margin payment.

CNV
Brokerage firm and lender; brokerage firms and borrower; brokerage firm and clearinghouse.

SB
SOFFEX clearinghouse deals only with clearing members.

STE
clearinghouse deals only with its members. Public Order (Correspondent) Member deals with public & must ensure that customers comply with the margin requirements.

CFTC
Absent fraud, CEA does not regulate the form of the agreements between FCMs & customers.
CFTC prohibits FCMs from representing that they will not collect margin, & from using one customer's margin fund to cover for another's. Clearinghouses deal only with clearing members, & members deal only with their customers.

SEC
Clearinghouse can deal only with clearing member pursuant to contractual relationship governed by the Exchange Act. Members deal only with their customers or other non–clearing broker–dealers in compliance with FRB or SRO rules.

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3.3 Is margin calculated based on gross positions or are offsetting positions netted for margin determinations? Please indicate in the appropriate box and explain.

	OSC		BAWe		COB	
	Customer	Clearinghouse Member	Customer	Clearinghouse Member	Customer	Clearinghouse Member
Initial	equities: net futures: net	equities: net futures: net	net	net	net	equities: gross; stk index options & futures, & stk options: net (non-clearing members pay clearing members gross)
Maintenance	equities: net futures: net	equities: net futures: net	net	net	net	Equities: net; stk options & stk index options & futures: net (non-clearing members pay clearing members gross)

	STE		CNMV		MOF	
	Customer	Clearinghouse Member	Customer	Clearinghouse Member	Customer	Clearinghouse Member
Initial	gross except for certain combinations of positions.	net	net within each final customer account; no netting between customers.	same	equities, stock index options, & stock index futures: gross	stock index options & stock index futures: net.
Maintenance	gross except for certain combinations of positions.	net	same	same	equities, stock index options, & stock index futures: net.	stock index options & stock index futures: net.

	ASC		CFTC		Consob	
	Customer	Clearinghouse Member	Customer	Clearinghouse Member	Customer	Clearinghouse Member
Initial	futures: net options: net within each class.	same	net on portfolio basis; no netting between customers.	gross: CME, NYMEX net: other exchanges.	equities: partially net. derivatives: gross.	equities: gross derivatives: net.
Maintenance	same	same	net	gross: CME, NYMEX net: other exchanges.	derivatives: gross	derivatives: net.clearing

SIB		CNV		SEC	
Customer	Clearinghouse Member	Customer	Clearinghouse Member	Customer	Clearinghouse Member
	net	gross	gross	equities: gross options: net	same
	net	gross	gross	same	same

CVMQ		SB			
Customer	Clearinghouse Member	Customer	Clearinghouse Member		
ing of positions ted if TCO & ME it prudent.	offsetting of positions permitted if TCO & ME deem it prudent.	net	net		
ing of positions ted if TCO & ME it prudent.	offsetting of positions permitted if TCO & ME deem it prudent.	net	net		

3.4 What elements are taken into account in calculating margin? For example, are margin levels based on the type of market in which particular instruments trade, or the position a broker–dealer or customer holds in particular instruments? Are they based on the perceived risks associated with the particular conditions of the markets, the specific instruments, and/or the type of transaction? Are they influenced by historical or implied volatility? Are they based upon competitive reasons? What are the significant accounting policies and valuation principles that have or may have a material impact on the implementation or calculation of margin requirements?

OSC

Margin levels differ among markets according to risks. For equities, margin based on market price & whether option eligible; options may not be purchased on margin but may be written (sold); margin for written options depends on whether option covered; for futures, margin depends upon whether client is speculator or hedger, and whether spread position. Historical volatility also important. Competitive reasons play no role.

All securities subject to margin requirements are marked–to–market.

Margin requirements for options are not based on options' pricing models, but on margin required on underlying interest & on whether option is out–of–the–money.

Gains & losses on futures contracts are determined daily (mark–to–market) & based on daily settlement price.

CNMV

Daily margin calculated on gross basis & levels determined through portfolio analysis where risk of a position takes into account all futures & options contracts for which underlying instruments are the same. Calculation takes into account valuation of underlying & implicit volatility, & is based on recognized valuation models.

Initial margin is fixed amount of 10M Pesetas (25M pta for custodian clearing members).

Surety deposits determined by CNMV based on volatility levels & amount of unsettled transactions.

BAWe

Margin intended to cover risks based on worst case scenario, resulting from historic volatility of the underlying. Underlyings divided into 17 margin classes, where possible profits & losses are set off.

Margin requirements for clearing members: sum of proprietary accounts & market making accounts netted to determine margin; accounts for customer positions also netted.

MOF

Although ordinary margin set at same level, the type of instrument is taken into account by exchanges when setting special margin levels, both for equities & derivatives.

Perceived risks as measured by volatility, price levels, trading volumes, & open positions in both derivatives & underlying markets, also are taken into consideration.

Whether position is speculative or for hedging purposes is irrelevant.

Historic volatility essential element as it helps determine price limits.

Margin levels not based upon competitive reasons.

Profits & losses in positions of instruments to which margin apply are evaluated daily on mark–to–market basis.

COB

SBF–monthly settlement market: customer margin is percentage of position depending on collateral used, & is adjusted daily; member margin based on price valuation & liquidation risk. MONEP: Margin requirement based on liquidation value of portfolio, based on historical & implied volatility, assuming most unfavorable price movement of underlying, & the price of the underlying asset. SCMC uses Cox Ross Rubenstein theoretical valuation model. Margin for option portfolio calculated on net basis, & open positions are marked to market daily. MATIF: customer initial margin is set by clearinghouse & varies depending on volatility of underlying instrument. Member margin requirements calculated on net basis; margin collected by non–clearing member calculated on gross basis. Open positions are marked to market daily.

ASC

SFECH currently introducing SPAN where margin based on market volatility; if member has large position compared to net worth, extra margin will be required; initial margin based on price volatility; no hedger/ speculator distinction; margin based on historical volatility; implied volatility is monitored; margin not set for competitive reasons.

ASX & OCH use TIMS, where margin based on historical daily movement in underlying stock or index & taking 3 standard deviations of percentage daily movement as proper level of protection. TIMS consists of premium margin & risk margin.

STE

Margin for general public:
Calls: M=P+%(2S–E)
Puts: M=P+%(2E–S)
with M=margin requirement; P=option premium; S=price of underlying value; E=exercise price; %=margin percentage, determined monthly by EOE & varying from 3% for options on Dutch government bonds, 5% on foreign exchange options, to 10–25% for stock options depending on volatility.

Margin for clearing members options transactions based on TIMS.

For futures, initial margin is fixed amount determined by exchange; variation margin for clearing member is price difference between daily contract marking price & contract price, times unit of trading. If clearing member is the seller & price difference is negative, or clearing member is the buyer & price difference is positive, then clearing corporation pays member variation margin.

Valuation occurs relative to actual market price (average of bid & offer).

Margin requirement system for professionals (including clearing members) is TIMS which is based on theoretical prices.

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SIB

Initial margin levels set at individual contract level. Factors such as implied and historical volatility, liquidity and price-sensitive information also considered. Whether hedging or speculative irrelevant. Margin set at levels appropriate to the protection of risk assumed as central counterparty, then taken as a basis for firms margining clients. SPAN margining system used for LIFFE, IPE, & LCE. Firms may charge their clients higher margin than required. LCH margin set in consultation with exchanges whose contracts are cleared, based on net positions in house and client accounts. LCH independent organization owned by 6 UK banks. OMLX sets own requirements on margin. Competition is not a relevant factor. Contracts are marked to market.

CNV

Margin determined by CNV: collateral for short positions is 150% unless borrower is a credit institution in which case the ratio is 100%. Short sales are marked-to-market daily and market valuation is recognized in profit/loss statement on a monthly basis.

SB

For standardized options, SOFFEX uses "premium plus" principle. Futures contracts on Swiss Market Index initial, spread margin & variation margin are calculated on daily basis. Certain reductions apply for cross-product margining & certain combinations.

CFTC

For firms:
clearinghouses use one of two methods for calculating margin: multiply number of positions or contracts by specific margin amount by contract; use CME's SPAN portfolio-based simulation model, where price volatility & other risk factors are simulated to determine their impact on gains & losses of portfolio. clearinghouse establishes parameters to cover 95% of potential one-day moves based upon historical volatility.
For customers:
Exchanges set minimum margins which FCMs must collect. Margin levels for customers generally higher than for firms. Levels vary according to type of customer & trade involved (whether hedge or speculative position).
Other factors include: access to wire transfer of funds; history in meeting previous margin calls; other accounts or deposits with FCM; customer location; customer net worth. FCM may require customer margin to cover 3-day move. Gross margin collected on omnibus accounts.
Accounting & valuation policies:
SPAN, a risk-based, portfolio margining system, calculates performance bond requirements for complex portfolios of futures & options positions for customers & exchange members. SPAN based on sensitivity analysis of price changes & options volatilities to determine risk associated with portfolio. All futures & commodity options contracts are marked-to-market daily & settled on same-day basis.

February 23, 1996

SEC
Initial margin set by FRB for securities currently stands at 50% of securities' market value. Maintenance margin levels determined by SROs take into account volume, price variation, & turnover. In addition, margin levels may vary for various types of market participants & instruments. Warrants are margined similarly to equities. SRO option margin requirements equal 100% of the premium plus a fixed percentage of the underlying product's value, with certain allowances made for out-of-the-money options. Option Clearing Corporation determines the risk of a member's options positions at the current market level, & at level that may occur due to movements in underlying securities. OCC uses TIMS. TIMS is based on implied & historical volatility in a worst case market scenario, & looks at five known variables: price of underlying, strike price of option, risk-free rate of return, dividend information, & days to expiration. Non-diversified accounts are distinguished from diversified ones.

vels reexamined? What factors are taken into account in varying an established margin level?

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BAWe
Margin levels are reexamined regularly, as well as ad hoc if deemed necessary.

MOF
From time to time in accordance with changes in market conditions, such as volatility, trading volumes, open positions, & especially price limits.

SIB
Regular monthly and quarterly reviews of initial margin levels. Ad–hoc examinations triggered by special market events.

COB
Initial margin levels for futures modified when clearinghouse notices change in volatility of instrument.

ASC
SFECH initial margin monitored daily but reviewed every fortnight based on historical volatility; recent breaches & current economic circumstances.
As for OCH, daily examinations & weekly adjustment
based on market volatility in underlying.

CNV
Brokerage firm oversees margin levels in individual accounts daily.

SB
Margin levels regularly reexamined based on historical & current market situation.

STE
Initial margin levels examined daily.
Margin percentages determined monthly by options exchanges. Market developments are taken into account when varying established margin levels.

CFTC
The exchanges primarily use historical volatility in their margin models, which are reexamined on an as–needed basis in order to accommodate unusual events or circumstances which could impact volatility.

SEC
Irregularly. Initial margin requirements under Regulation T have not been changed in over 20 years. SRO margin requirements were last changed following the 1987 market break in response to increased market volatility.
OCC margin levels change daily, in accordance with the formula. The formula however is changed only in extraordinary market conditions, to change intervals & confidence levels.

3.6 Do margin levels in your country differentiate among classes of market participants or at different stages of a transaction? If so, are these requirements statutory or are they established by exchanges, clearinghouses, or financial intermediaries? Is the methodology also different? Please explain and provide rationales for such distinctions.

OSC
Yes, depending upon creditworthiness of participants with certain institutions not required to pay any margin with SRO member. In futures market, level depends also upon whether participant is hedger or speculator.
The SROs determine minimum margin required, but members may require more from their customers.

CNMV
No.

CONSOB
Yes. In the equity market, at the clearinghouse level, banks are not required to pay margin for each trade. At market level, broker–dealers must collect margin from their customers. In the derivatives market, all members pay same level to clearinghouse. Margin requirements for customers are never less than what intermediary required to pay clearinghouse.

CVMQ
The SROs
determine & notify members
of minimum amount of margin applicable to speculative, hedge & spread positions.
Margin levels may vary according to creditworthiness of market participants.
Members may require higher margin levels than those set by SROs.

BAWe
Levels set by the clearinghouses equal overall. However, clearing members may require customers to deposit higher margin.

MOF
Initial customer margin generally is higher than initial member margin in order to enable member firms to cover variation margin calls triggered by loss in customer's position.
Margin levels set by exchanges.

SIB
Not at clearinghouse level, but investment firm may distinguish among its clients.

COB
No. However, on MONEP only CAC40 index market makers can cross margin position on option on CAC40 index & on futures on CAC40. Only market makers on specific options may cross margin positions on that option & their position on underlying stock. In addition, intermediaries may always require higher margin from their clients than required by the clearinghouse.

ASC
Intermediaries may require from their clients higher margin than required by the clearinghouse.

CNV
Yes. Credit institutions are required by CNV to maintain less collateral than other borrowers.

SB
Yes. In accordance with SOFFEX rules & regulations, clearing members are required to collect from their customers a minimum margin. They may require their customers to deposit higher amounts based on customer's credit ratings.

STE
Yes, because types of business & nature of trading activity different.
In addition, risk based system used for professionals difficult to explain to the general public.
Margin levels set by exchange or clearing corporation, not STE.
Intermediaries may require customers to deposit higher margin.

CFTC
clearinghouses base margin requirements on an analysis of risk factors in the portfolio or a specific margin requirement per contract. Different requirements apply to hedge & speculative positions. In addition, FCMs may charge different customers different margin based on individual assessments of creditworthiness, & the trading strategies which the customers may be using (e.g., speculative vs. hedge).

SEC
The nature of the risk & the creditworthiness as between customers, broker–dealers, & market makers, as well as among each of these categories, generally differs.
Specialists & market makers as professional traders are expected to provide liquidity to the securities in which they make a market. OCC therefore charges them lower margin than other clearing members, & Regulation T only requires them to deposit good faith margin to finance the securities in which they make a market. Furthermore, clearing members, exchanges, & broker–dealers may charge different members & customers different margins.

collect and calculate margin. What process do they follow to: notify participants of margin requirements; collect deposits; the ultimate recipient? How frequently are these various processes undertaken?

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BAWe
clearinghouse collects margin from clearing members who require margin from non–clearing members & customers. Clearing members must disclose calculation methods to non–clearing members & customers upon request. clearinghouse sets clearing members' margin daily.

MOF
Exchanges calculate & collect margin from their members who calculate & collect margin from their customers. Initial customer margin calculated on gross basis & customer notified next business day; customer must pay required deposits by 12:00 a.m. on day after notification. Initial member margin calculated on net basis & member notified on day customer pays initial customer margin. Variation customer margin calculated daily on net basis. Customer must pay deposits on second business day after calculation, by 12:00 a.m. if needed. Exchange calculates variation adjustment daily on net basis. Member must debit profits or credit loss by 3:00 pm on third business day after variation adjustment made. Same process followed for equity & derivatives margin.

COB
See 3.4.
Variation margin calculated daily by clearinghouse at end of day. Clearing members calculate those of customers. Resulting positive or negative variation margin are credited or debited to members' clearing accounts daily. Margin collected daily & must be paid before the opening of next trading day. Initial & variation margin payments to clearinghouses must be made through Banque de France wire transfers.

ASC
SFECH collects margin for SFE transactions. OCH operates pursuant to ASX regulations. ASX: clearinghouse & clearing members pursuant to ASX regulations. Gross margining to the client level. Margin facilities paid & received daily. Variation margin calculated daily by clearinghouse & notified to member. Members calculate customers' margin & send appropriate notifications. Resulting positive or negative variation margin credited or debited to members' clearing accounts daily. Margin collected daily before 10 am next trading day.

STE
Banks &/or brokers collect margin. They are subject to financial standards of options and futures exchanges to which they belong. EOCC collects margin for clearing members. Margin calculated by banks &/or brokers. Compliance department of options & futures exchanges supervise the margin calculation. Margin calculated daily. In calculating margin, positions of market participants in other markets are relevant. Exchange determines how relevant.

CFTC
Clearing organizations collect original & variation margin from FCMs. FCMs collect initial & maintenance margin from their customers. clearinghouses clear only transactions of their members. Clearing members usually have separate customer & proprietary accounts.
Original margin deposits by clearing members constitute performance bonds. Variation margin deposits are cash exchanges between clearing member & clearinghouse to cover changes in mark–to–market gains & losses in commodity positions. After close of market each day the clearinghouse figures the net change in value of futures contracts held in members' accounts. This variation in value must be met by members each morning before the opening of the market. The exchanges set the minimmum initial performance bond a customer must have in his account in order to establish futures position. FCMs may require higher deposits from their customers. When equity in customer account falls below certain minimum level, FCM must call customer for additional funds to restore account to initial level.

February 23, 1996

CONSOB
In the equity market: brokers & dealers collect margin from their customers before executing the order. CCG collects margin for each Guaranty Fund of rolling or account monthly settlement.
Monthly accounting settlement: clearing-house calculates margin daily, notifies member next morning for payment by 12:00 a.m. Margin returned to intermediary after monthly settlement. Rolling settlement: clearinghouse notifies participant of amount of permanent margin owing at beginning of trading activity.
In derivative market: clearing member collects margin for their customers. clearinghouse calculates & collects margin from each member daily. Clearing members must pay by 9:00 next day, & customers must pay before trade executed.

CVMQ
Customers' margins collected by member firms while members' margins collected by SROs.
TCO calculates margin for options & futures. Rules of ME specify how margin must be calculated for other securities.
clearinghouse issues daily to members a Daily Margin Activity Report which shows the amount of margin required to be deposited with the clearinghouse by virtue of the member's position.

SIB
LCH and OMLX collect margin from their member. LCH, recognized clearinghouse and OMLX, recognized exchange, are subject to SIB oversight. Clearing members notified of requirements relating to day X at 7:00 am on day X+1. Their members must confirm that outstanding requirements will be met by 10:00 am. Margin calls made daily, and intra-day if necessary. Members must make equal or higher calls on their customers.

CNV
Brokerage firm must calculate short position and apply specific percentage. Notification may be made by any available telecommunication device.
Deposits may be made electronically.
Process takes place whenever collateral diminishes to 130% or goes below 100% for banks & brokerage firms.
INDEVAL collects margin.
Margin segregated from account of brokerage firm.
INDEVAL and brokerage firms subject to Securities Market Act and provisions issued by CNV.

SB
SOFFEX clearinghouse calculates & collects margin from its members. Margin amount calculated daily & compared to value of collateral held by member in clearinghouse. If new margin amount exceeds the equivalent of collateral held, SOFFEX will charge its members cash account with the Swiss National Bank to cover the shortfall. Members are informed on-line about such transaction.

SEC
Broker-dealers collect & calculate their customers' margin pursuant to Reg T & SRO rules: initial margin must be deposited within 5 business days of the transaction, or sooner if broker requires it;
with respect to maintenance margin which is calculated daily, when account falls below minimum requirement, customer must make deposit promptly, within 7 business days of deficiency, or less if determined appropriate by broker.
Clearing agencies calculate & collect their members' margin daily. Such daily calculations may result in intra-day margin calls, especially for options clearing organizations. OCC conducts daily netting of accounts and daily (or even intra-day) collection of margin when necessary. OCC & ICC developed OASIS, an automated settlement instructions system to notify members of margin deficiencies. OASIS allows settlement banks to review debit and credit instructions as early as 5:00am and to respond on-line.

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BAWe
Proprietary & client accounts are margined separately but under same methodology. There is no margin offset between the accounts.

MOF
Yes. Customer & proprietary accounts are margined separately, but under a similar methodology, except for a differnece of gross or net. However, the levels of margin applied to proprietary & customer accounts are different.

SIB
Yes, but margin calculation is same.

COB
Yes. Clearing members have several accounts for margin: proprietary, market maker, customer, & allocator accounts.
Margin for customer & proprietary accounts are calculated similarly.
See exceptions in 3.6.

ASC
Margined separately, but same process used. Clearing member may require higher margin from client than required by clearinghouse.

CNV
Securities are placed in sub–account of borrower account called guaranty account.

SB
Proprietary accounts are margined equally but separately from customer accounts.

STE
Yes. Professional intermediaries trading for their own accounts have no margin requirements.
The margin requirement is indirect by requiring its clearing members to pay margin to the clearing organization.

CFTC
Yes. Segregation requirements prohibit commingling of funds.
Method for calculating margin similar for customers & for proprietary accounts, but levels of margin are different.

SEC
Yes. In addition, broker–dealer margin for proprietary accounts is calculated as if it were a customer account.

4.3 Identify the types of collateral that may be used as margin deposits. Are there any percentage limitations on the value of any type of collateral that is deposited as margin? How are these haircuts determined? Where acceptable types of collateral and haircuts vary according to the nature of the instrument or the position to be margined, specify and explain rationale. In your experience, has any particular type of collateral used for margin deposits proven too illiquid for such use? Have there been other types of problems with particular types of collateral?

OSC
TSE rules: cash or other immediately available funds; loan value of securities to be deposited; or excess loan value in account or in guarantor's account. TFE rules: cash; securities acceptable under CFA; futures margin receipts. TCO rules: cash, certified check or bank draft; government securities maturing within one year of deposit (90%); letters of credit; bankers' acceptances (85%); underlying interest, underlying interest equivalent, & listed securities other than debt. Listed securities have no value if closing price less than $10; otherwise, marked-to-market daily &50% of daily value applied against total margin required. Only 10% of margin may be covered by any one listed security.

CNMV
Cash & Spanish Government debt: explicit yield type issues: 90% of nominal value, or 80% if market value lower. Implicit yield type issues: 85% of nominal value.
CNMV currently is considering the possibility of using securities as collateral.

BAWe
German government bonds; DM-denominated bearer bonds/debt securities; DM-denominated secured bearer/debt securities; certain other debt securities; cash. Cash 100% valuation; bonds or other securities, 75% of market value.

MOF
Various haircuts apply, depending on volatility, credit risk & liquidity of collateral: cash (100%); listed stocks at domestic exchanges (70%); JASDAQ registered stocks (60%); Japanese government bonds (95%); Japanese local government bonds (85%); corporate bonds of Japanese listed companies (85 or 80%); convertible bonds of JASDAQ companies (70%); foreign treasury & local government bonds (domestically listed) (85%); IBRD & ADB bonds denominated in Yen (90%); Yen-denominated bonds issued by foreign corporations (domestically listed); (85%); beneficial rights of Japanese securities investment trusts (market prices must be available) (85 or 70%).

SIB
For derivatives positions: cash, bank guarantees, government bills and bonds, bank CDs, and equity with certain restrictions. There are haircuts, set on a similar basis to other jurisdictions. No problems with liquidation experienced, or other problems with specific types of collateral.

COB
Securities markets: market members: cash; customers on monthly settlement market: cash, treasury bonds, gold listed, French debt or equity securities, money market funds, unit trust shares, CDS. Securities of the same class as those purchased can not be used as margin.
MONEP: clearing members: cash & French treasury bills; customers: cash, French treasury notes, CAC40 index stocks, stocks underlying options & money market funds.
MATIF: For initial margin deposits clearing members may use cash (French Franc, ECU, Italian Lire, Deutschemark, US Dollar, British Pound), & French & US Treasury bills. Customers may use in addition to above unit trust shares, "obligations assimilables du Tresor", CDs, Italian Treasury bills.
Payment of variation margin is made in cash in currency of contracts.
Haircuts: Cash, no reduction.
MONEP: Treasury bills: 10%; other: 20%.
MATIF: French treasury bills & CDS: 10%. French treasury notes (2-5 year maturity) & US T-bills: 20%; other: 30%.

STE
Collateral deposited by customers: shares of heavily traded companies valued at 70%; medium & small sized companies valued at 60%; gold & silver valued at 60%; government bonds, 95%; other bonds, 90%; foreign exchange, 90%. For clearing members, stocks valued at 80%; government bonds at 95%; other bonds, 90%; convertibles, 80%; precious metals, 70%; foreign exchange, 90%. No problem associated with use of any such collateral.

CFTC
Cash; US treasury securities, subject to certain haircuts (15% at CME); certain equity securities subject to 40% haircuts; letters of credit subject to stringent limitations with respect to amount of margin that may be satisfied with them, & with respect to haircuts applied to them.
Proposals are currently pending to accept Canadian debt securities with haircuts similar to US Treasuries.
Futures clearinghouses that carry 90% of volume, over 80% of margin held in cash or cash equivalent.

ASC
SFECH only accepts A$ cash from clearing members; clearing members may accept from their customers: registered mortgages on real property; stock mortgage; wool lien; letters of credit; shares of debentures listed on ASX; government securities; gold; silver; & bank accepted bills.
OCH accepts cash; securities; Treasury products; & bank guarantees.

CNV
High marketability securities; government bonds; securities issued or endorsed by credit institutions; shares in fixed income fund.
No haircuts applied.

SB
Cash, Third banks' guarantees, & certain bonds, subject to haircuts, i.e., Swiss Federal Government bonds (10%), Cantonal government bonds (15%), bonds of Swiss cities (20%), & bonds of banks/mortgage bonds (20%).

SEC
Customer: Cash and/or securities. SROs allow customers to use "escrow receipts" in lieu of margin on short index call option provided the issuer of the receipt certifies he is in possession of cash &/or securities & will pay SRO member upon request.
OCC accepts cash, government securities (60%), letters of credit, and valued securities (60%).
For the clearing fund, OCC accepts cash, short term government securities (100%), & long term government securities (95%).
NSCC accepts cash, government securities, & irrevocable letters of credit (up to 70% of members' required deposits).

5.1 Have you instituted special margin provisions, such as intra–day margin calculations, for periods of extraordinary market conditions? If so, please describe such rules and explain the rationales for them. Please note when such rules are applied, what effect they have on individual financial instruments or groups of financial instruments, and whether they are statutory or established by exchanges, clearinghouses, or financial intermediaries. Are intra–day variation margin, if any, also paid by the clearinghouse to the firm?

OSC
TSE, TFE, as well as TCO may require additional margin deposit to reflect changes in market price of underlying interest or changes in financial position of clearing member, to protect TSE, its members, or the public. Clients of member firms must provide sufficient funds within reasonable time, or one hour. Payments are one sided.

CNMV
Yes, when price of underlying asset gets outside valuation interval used for daily calculation of margin. Intra–day margin calls are one– sided & charged in addition to the daily margin requirement, in which case trading could be suspended temporarily until margin calls are made.

CONSOB
In the equity market, no. Margin requirements not directly linked to the effective risk positions of each intermediary. In the derivative market, CCG calls intra–day margin in case of extreme price movement or in case a clearinghouse member assumes in the same trading day a number of open positions valued very risky by CCG. Intra–day margin calculated as initial & variation margins taking into account positions of each member in all derivative products valued at current price. Intra–day margin call will be made when intra–day margin on whole position found higher than guaranty already deposited by the member. At market level, clearinghouse members ask their customers for same intra–margin amount CCG requires from them.

BAWe
Intra–day margin calculations & cash calls are possible. Generally, margin calculation takes place at the end of the trading day.

MOF
No intra–day margin calculations for periods of extreme volatility. Exchanges however may in extraordinary conditions change initial margin levels & change haircuts of collateral in both derivative & underlying markets.

SIB
Yes. LCH & OMLX monitor intra–day price movements and make intra–day margin calls as appropriate, generally in time of high volatility. These are operated on a routine basis & would also be used in extraordinary market conditions.

COB
MATIF SA has set up rules. Each futures contract has daily price fluctuation limit. When limit reached, trading is suspended & additional margin call is issued. These payments are one–sided. On MONEP, when CAC40 index goes up or down 120 points, trading on the option is suspended & additional margin based on 250 point variation called by SBF. Intra–day margin calls established by clearinghouses & provide time to assess market participants' financial capacity, & prevent substantial variation margin calls. They limit credit risk born by clearinghouse, & allow for lower margin requirements for usual market conditions.

ASC
At the SFECH, intra–day calculations occur during periods of high volatility; payments are one–sided; no special rules, only standard operating procedures; rationale is to protect clearinghouse & its members from default.
The OCH has intra–day margin calls when market conditions warrant. Payments are one–sided.

CNV
No.

SB
Intra–day margins are foreseen in the rules & regulations of SOFFEX.

STE
No.

CFTC
Routine intra–day margin rules are in place for extreme price moves, both at clearing organizations & at exchanges which can require their members to deposit additional standing margins immediately or risk having their positions liquidated. In addition, under certain exchange rules, whenever exchange official finds it necessary, he/she can require additional margin deposits. Extraordinary margin calls may be met with colateral other than cash.

SEC
Although they have the abilitiy to do so, the FRB & the SROs have not changed margin requirements for equity securities during recent periods of market volatility. Broker–dealers may require customers to deposit additional margin & within a shorter time than mandated by the FRB, whenever they deem it necessary.
OCC may make intra – day margin calls to reflect changes in (1) market price of short option position or underlying security, (2) market price of index, (3) size of clearing member position, (4) value of securities deposited as margin, or (5) financial position of clearing member.

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5.2 Have such rules been activated? If so, describe the circumstances and the impact on the market.

OSC
With the exception of bond margin surcharge, which was activated once, these provisions have not been used. See also question 1.5.

CNMV
No.

CONSOB
Intra-day margin requirements have been collected during times of exterme market volatility.

CVMQ
Yes. Volatility is the main factor that explains the application of the rules concerning intra-day margin calculations.

BAWe
No.

MOF
Yes, during extraordinary market conditions where volatility, price levels, trading volumes, & open positions in both derivative & underlying markets were considered. These margin changes work as risk control measures.

SIB
About 4 calls are made each month on equity option contracts by LCH on a routine basis. Also used in extraordinary conditions. No problem or market impact experienced to date. OMLX has made intra-day calls only in circumstances of extreme market volatility.

COB
On MATIF, 4 times with respect to CAC40 futures (10/16/89, 8/6/90, 1/17/91, & 8/19/91). Each time, trading resumed within one hour. On MONEP, 3 times with respect to CAC40 index option (8/6/90, 1/17/91, & 8/19/91).

ASC
At the SFECH, while there are no rules, intra-day margin have been called without impacting the market.
Intra-day margin have not been necessary under ASX risk-based margining system.

CNV
N/A

SB
No.

STE
No.

CFTC
See 5.1.

SEC
Intra-day margin requirements have been collected during times of market stress when margin has become insufficient. For example, on October 13, 1989, OCC issued intra-day margin call. On October 16, 1989, OCC raised the market interval from 8 to 12 points raising its coverage from 64 to 96 points in the cash market.

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BAWe
Not applicable since there is only one market.

MOF
Price–correlated derivatives & underlying markets considered one from economic point of view. During extraordinary market conditions, coordination desirable as it minimizes systemic risk & adverse effect of one market on the other.

SIB
The current arrangements do not give rise to any difficulties which would suggest need for further coordination in UK.

COB
From economic point of view, cash & derivatives markets must be considered as one. Special margin rules that would be applicable only to option or future market would prove inefficient for maintaining integrity & safety of markets through integrity of clearance & settlement.

ASC
unknown.

CNV
No response.

SB
Not applicable because only one market exists.

STE
Not applicable because only one market exists.

CFTC
To assure effective oversight of related cash & derivatives markets during periods of market disruption. Sharing information regarding cash & derivatives markets on margin requirements, circuit breakers, trading halts, authorities may be able to minimize effects of market disruption.

SEC
Benefits of greater coordination among stock, option, and futures markets became more obvious during October 1987 and 1989 market spikes. Necessary to maintain the integrity of the markets & the money settlement system.

6.1 Is cross-margining permitted in your jurisdiction? If so, please explain the rationale. What has been your experience with cross-margining?

OSC
Yes. Referred to as "margin offsets". Margin offsets allowed when risk of holding security offset by assuming position in related security. For example, margin is offset when holding basket of equities & futures contract on index representing the basket. Eligible products include: capital shares and underlying common shares, options & underlying common shares, convertible securities & underlying common shares, options & underlying common shares, participation units & baskets of underlying equities, participation units & futures index contracts. To date, there have been no significant failures associated with cross-margining.

CNMV
No.

CONSOB
Not for equities & derivatives on equities. Only one market trades in derivatives market, & cross-marigning will be implemented when option on equity will be introduced.
Cross margining between cash & derivatives market difficult because CCG is not counterparty to each trade in the cash market.

CVMQ
Margin for firm & on-floor professional trader are based on each account's uncovered net options, net futures, & net futures options positions. Long & short positions in same contract series are offset. Margin offsets also allowed for customer accounts if deemed prudent.

BAWe
There is only one clearinghouse. Therefore, cross-margining between markets is not applicable.

MOF
No.

SIB
LCH & OMLX do not cross-margin because each keeps direct control of the futures & options position of their members. In order to effectively monitor the offsetting cash market positions they would need to assume much broader responsibilities. Recognition of offsetting positions used for regulatory capital purposes.

COB
MONEP market makers (under SCMC rules): market makers in CAC40 option may cross margin on CAC40 index & position on CAC40 futures contract; market makers also may cross margin positions on equity option & position on underlying stock.
Cross margining intended to adjust margin requirements to actual risk born by market makers.

ASC
It is permitted but there has been no cross-margining between SFECH & OCH.

CNV
No.

SB
There is only one clearinghouse in Switzerland. Therefore, cross-margining only possible on a product basis within this one clearinghouse.

STE
Cross-margining allowed both on cross-product & cross-market basis, subject to certain conditions:
-spread positons in options & straddle positions in futures may not be used for integrated margin calculations. Cross margin calculation only permitted for remaining contracts of long & short positions in options & futures.
-option & future must have reference to same underlying value & must be equal in relation to underlying value.
-variation margin requirement for futures will never be used for off-setting between options & futures.
Experience with cross-margining has been satisfactory.

CFTC
CFTC approved 7 proprietary & 6 non-proprietary cross margining programs between commodity & equity clearing corporations.
Cross-margining only applies to proprietary noncustomer accounts.
CFTC continues to study programs to identify costs & benefits of integrated clearing.

SEC
Following the 1987 market break, the SEC & CFTC worked with securities & futures clearing organizations to develop cross-margining arrangements, in order to reduce market risk thereby reducing overall margin requirements for clearing members. As a result of these arrangements, firms participating in the program have reduced their average daily margin requirements by 64% in 1993.

ns of operation of cross–margining agreements, including a description of how margin requirements are calculated, and how cross-leared and settled. In particular, please describe entities that are acceptable margin depositories and, if any, applicable

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BAWe
N/A.

MOF
N/A

SIB
As noted, exchange specialization & cross–exchange clearing by LCH obviate the need for cross–margining.

SB
no answer

COB
Calculations: for options/underlying stock, theoretical value calculated corresponding to highest debit balance or lowest credit balance of the global position of market maker according to price change hypothesis. When sum is positive, no margin is required.
Calculations for CAC40 options/ CAC40 futures contract was agreed upon by SCMC & MATIF SA. Acceptable margin depositories include MATIF SA for CAC40 option/CAC40 futures contracts, SBF for option/ underlying stock.

ASC
N/A

CNV
N/A

SB
N/A

STE
Cross–margining is permitted as follows: long futures combined with short call options: minimum margin requirement equal to initial margin of pertaining future cumulated with premium of pertaining short call option; short future combined with short put option: minimum margin requirements equal to initial margin of pertaining future cumulated with premium of pertaining short put option. TIMS makes explicit use of cross–margining. Acceptable margin depositories are same as for normal margin requirements.

CFTC
Under the cross–margining programs, a market participant could use a single margin payment to support an intermarket securities option & futures position where price movements on the securities option component tend to be offset by price movements on the futures component. When risk aggregated, required margin is lower. Acceptable margin depositories: banks (including certain offshore banks), trust companies, securities & futures clearinghouses.

February 23, 1996

SEC
5 cross–margining arrangements are currently operating. They all involve OCC on the securities side, & a futures clearing corporation on the futures side. A single margin requirement is calculated by the clearing organizations. OCC maintains control of OCC–cleared options & the futures clearing organization maintains control of futures & options on futures. Margin deposits are held at cross–margining clearing banks in accounts held jointly by OCC & futures clearing organization. Securities pledged as margin are held at OCC–approved depositories. Clearing members must grant OCC & the futures clearing organization cross–liens.

evaluated with a view to possible implementation in your jurisdiction? If cross-marigning has been considered and rejected, ing it? Would any of your laws, such as bankruptcy laws, preclude such a program?

BAWe
N/A

MOF
No.

SIB
N/A

COB
N/A

ASC
N/A

CNV
N/A

SB
N/A

STE
N/A.

CFTC
See 6.1.

SEC
N/A

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6.4 Is cross–margining permitted across jurisdictions? If so, pursuant to which authority and on what terms?

OSC
No.

CNMV
N/A.

CONSOB
N/A

CVMQ
No.

BAWe
N/A

MOF
No.

SIB
N/A

COB
No.

ASC
N/A.

CNV
N/A

SB
N/A

STE
Yes, if offsetting positions have same underlying value, such as Dutch shares traded in New York, or gold traded in foreign markets.

CFTC
No.

SEC
Pursuant to existing arrangements, offsetting positions are located within the United States.

ning provisions applicable at times of extreme volatility? If so, please explain.

BMF
N/A

MOF
No.

SIB
N/A

COB
N/A

ASC
N/A.

CNV
N/A

SB
N/A

STE
No.

CFTC
No.

SEC
Although special cross–margining provisions are not applicable during times of extreme volatility, the benefits of cross–margining were especially evident on October 13 & 16, 1989, where firms deposited $150 milion less margin than they would have been required to without the benefit of the program.