

**REGULATORY APPROACHES
TO THE VALUATION AND PRICING OF
COLLECTIVE INVESTMENT SCHEMES**



OICU-IOSCO

**Report by the Technical Committee
of the
International Organization of Securities Commissions**

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INTRODUCTION

Background

The IOSCO Technical Committee Working Group on Investment Management (WG5) agreed at its February 1998 meeting in Melbourne that the topic of regulatory approaches to the valuation of Collective Investment Schemes (CIS¹) and pricing of CIS interests was worth pursuing. This topic was proposed as a new mandate for WG5 and was subsequently endorsed by the IOSCO Technical Committee during its March 1998 Hong Kong meeting.

Previous work done

Valuation and pricing of CIS interests is an important issue and has been considered by the Technical Committee previously in two papers, namely, “The Principles for the Regulation of CIS” and “The Principles for the Supervision of Operators of CIS”.

Principle 7 of “The Principles for the Regulation of CIS” states that:

“The regulatory regime must provide a system for valuation of CIS assets, pricing of interests and procedures for entry to and exit from a CIS which are fair to existing investors as well as to investors seeking to purchase or redeem interests. It is a fundamental principle that the price of interests in a CIS be calculated according to the net asset value of the CIS which must be determined on a regular basis in accordance with accepted accounting practices used on a consistent basis.”

Principle 3 of “The Principles for the Supervision of Operators of CIS” states that:

“Supervision of an operator should seek to ensure that all the property of a CIS is fairly and accurately valued and that the net asset value of the CIS is correctly calculated.”

¹ “CIS” is defined in the “Principles for the Regulation of Collective Investment Schemes” - Report on Investment Management of the Technical Committee of IOSCO, July 1995. That is “an open-ended collective investment scheme that issues redeemable units and invests primarily in transferable securities or money market instruments.” It excludes schemes investing in property/real estate, mortgages or venture capital.

INTRODUCTION

Objectives of the new Valuation Mandate

The objectives of the mandate given to WG5 were:

- to obtain a greater understanding of the jurisdictional differences and regulatory approaches to the valuation of CIS and pricing of CIS interests; and
- in particular, to gain an understanding of the extent and type of enforcement of jurisdictional rules relating to the valuation and pricing of CIS interests.

It was agreed that the development of an understanding of the jurisdictional differences and the development of regulatory responses, especially in the case of mispricing or poor valuations, would facilitate the coordination of regulation of investment management. It would also promote the interests of market integrity and investor protection in the investment management field.

Scope and Methodology

WG5 agreed during its February 1998 meeting in Melbourne that as a first step, a questionnaire should be developed and circulated to members for discussion. The Securities and Futures Commission of Hong Kong (SFC) volunteered to take up the project and, with the above objectives in mind, prepared a draft questionnaire, which was considered by members at the June 1998 WG5 meeting held in Rome. Members commented on the draft questionnaire and requested, where relevant and appropriate, that questions raised by the IOSCO Emerging Markets Committee Working Group on Investment Management be incorporated into the draft questionnaire.

The Questionnaire was finalized (see **Appendix A**) and circulated to members in July 1998. To facilitate discussion, the SFC also undertook to prepare an analysis of the responses to the Questionnaire. This paper is a summary of the responses provided by the member agencies².

Where possible, terminology used has been standardized in accordance with past papers. Definitions are re-stated in relevant footnotes.

² A total of 17 member jurisdictions have responded.

SUMMARY OF CONTENT

SECTION 1 - IMPORTANT GUIDING PRINCIPLES IN CIS VALUATION

The analysis demonstrates that member jurisdictions adopt a variety of approaches to the valuation of CIS and pricing of CIS interests. A number of fundamental guiding principles are identified which transcend jurisdictional boundaries. These are set out in Section 1 of this paper. It should be emphasized that this paper is not intended to seek consensus on the best valuation approach but rather to identify and understand jurisdictional differences.

SECTION 2 - REGULATORY APPROACHES TO VALUATION OF CIS INTERESTS

Whilst there are common guiding principles in CIS valuation, it is recognized that different regulatory approaches are adopted by different member jurisdictions. Section 2 of this paper summarizes the different regulatory approaches to CIS valuation and provides a non-exhaustive list of factors that members consider for fair valuation. This section summarizes the responses to the following questions:

- *who* determines the valuation criteria
- *where* are the rules set out
- *what* are the valuation rules for different types of instruments
- *how often* are CIS valued

In drawing upon the experience of member jurisdictions, it is interesting to note that one of the comments in relation to this section is that the valuation regulations should provide the CIS industry with the *flexibility* they need to fairly and accurately value the wide array of securities in the CIS portfolios. It is important to take into consideration the different factors prevailing under different circumstances and any approach adopted should seek to balance the interests of different categories of investors.

SUMMARY OF CONTENT

SECTION 3 - REGULATORY APPROACHES TO PRICING OF CIS

Section 3 summarizes the different regulatory approaches to methods of CIS pricing (ie. forward vs. historical pricing) and the disclosure requirements in respect of:

- valuation methods of CIS interests
- pricing methods of CIS

SECTION 4 - CONTROLS FOR PRICING OF CIS

Section 4 analyses the rules on pricing controls designed to identify any errors, omissions or misplacement of assets.

SECTION 5 - CIS VALUATION OR PRICING ERRORS

This section identifies the common reasons for errors and discusses the requirements for reporting to the regulator and corrective and compensation actions.

SECTION 6 - WAY FORWARD

Apart from providing a better understanding of individual members' approaches to the regulation of CIS valuation and pricing, it is hoped that this paper would serve as a preliminary basis for a meaningful discussion amongst members and where appropriate, for the development of further guidelines.

1. IMPORTANT GUIDING PRINCIPLES IN CIS VALUATION

The principles for valuation and pricing of CIS noted in the previous work of WP5 are echoed in member jurisdictions' responses to the Questionnaire. The most frequently cited important guiding principles for valuation of CIS and pricing of CIS interests include:

- Valuation to be determined in good faith;
- CIS to be valued on a per unit/share basis based on the CIS's asset value, net of allowable fees and expenses previously disclosed to investors, divided by the number of outstanding units/shares;
- Incoming, continuing and outgoing investors to be treated equitably such that purchases and redemptions of CIS interests are effected in a non-discriminatory manner;
- CIS to be valued at regular intervals³ appropriate to the nature of scheme property;
- CIS to be valued in accordance with its constitutive and offering documents;
- Valuation methods to be consistently applied (unless change is desirable in the interests of investors);
- Valuation and pricing basis adopted to be disclosed to investors in the CIS offering documents.

³ Some jurisdictions require a CIS to be valued each day for which its price is published, or on each stock exchange trading day, while others only require valuation on regular intervals. Please see Section 2.4 of this paper for details.

2. REGULATORY APPROACHES TO CIS VALUATION: *Who, Where, What and How.*

The following sub-sections examine different regulatory approaches to CIS valuation by analyzing replies to four basic questions: *Who, Where, What and How*. These are then followed by a discussion of other issues of general interest such as permitted sources of data, write-downs/ write-offs of portfolio assets, different classes of units/shares.

2.1 *Who determines the (day-to-day) valuation criteria within the legal framework?*

The following table summarizes the responses. Most member jurisdictions cited CIS as the primary determinant for valuation. *NB: Although some member jurisdictions cited more than one determinant for CIS valuation, for the purposes of this question, only the primary determinant is tabled.*

	CIS/CIS Operator	Securities Regulator
Australia		
Brazil		
Canada		
France		
Germany ⁴		
Hong Kong		
Italy	5	
Japan		
Jersey		
Luxembourg		
Mexico		
Netherlands		
Portugal		
Spain		
Sweden		
Switzerland		
U.K. (OEICs ⁶)		
U.K. (unit trusts)		
U.S.A.		

⁴ In Germany, CIS valuation is primarily determined by its "Investment Companies Act of 1970".

⁵ In conformity with valuation criteria established by the Bank of Italy.

⁶ "OEICs" stands for open-ended investment companies.

2.2 Where are the rules set out?

The following table depicts the places where the criteria for CIS valuation are set out in different jurisdictions. Most jurisdictions use a combination approach but it is most common for regulators to issue regulations or guidelines for CIS valuation, in conjunction with rules set out in the Law or CIS scheme rules.

Legend:

- (1) The Law
- (2) Regulations/ Guidelines/ Accounting Standards issued by the Regulator
- (3) CIS Scheme Rules⁷
- (4) CIS Prospectus⁸
- (5) CIS Annual Audited Report
- (6) Industry Association

	(1)	(2)	(3)	(4)	(5)	(6)
Australia						
Brazil						
Canada						
France						
Germany						
Hong Kong						
Italy						
Japan						
Jersey						
Luxembourg						
Mexico						
Netherlands						
Portugal						
Spain						
Sweden						
Switzerland						
U.K. (OEICs)						
U.K. (unit trusts)						
U.S.A.						

⁷ "Scheme Rules" as defined in IOSCO CIS Principles - rules that govern the operation of a CIS as laid down in the constituting documents of the CIS, and, in the case of an investment company, includes matters referred to in the investment company's instruments of incorporation, by-laws and any standing provisions.

⁸ "Prospectus" as defined in IOSCO CIS Principles - a formal written offer document offering units or shares in a CIS.

2.3 What are the valuation rules for different categories of securities?

2.3.1 Listed Securities

	Market Value	Remarks
Australia	(*)	(*) Allow but do not require the use of net market value. Where net market values are not applied, should use acquisition cost, ie. (i) non-current assets must not be recorded in excess of recoverable amount and may be revalued; (ii) marketable securities which are current assets may also be revalued; and (iii) inventories which are not marketable securities (for years ending on or after 30 June 1999 - which are not financial instruments) must be valued at the lower of cost and net realizable value.
Brazil		Use average price of the day of the exchange on which the security is most traded.
Canada	(*)	(*) No rules for listed securities. However, as best practices - <i>securities traded</i> on the V-date will be valued at the last quoted sales price; <i>securities not traded</i> on the V-date should be valued within the range of closing bid and ask prices.
France		May elect either opening, mid-closing or average price. May only change basis if there are justifiable reasons.
Germany		Use current market price quoted by the Stock Exchange.
Hong Kong		Either daily opening, mid, closing or average price.
Italy		Use closing price of the exchange. Where securities are listed in multiple exchanges, use price of the market in which the majority of the shares are traded. For foreign securities, CIS operator should indicate the valuation time for price quoted.
Japan		Use closing price of the stock exchange. Where the closing price is not available, use closing price of the last dealing day.
Jersey		Use published offer, bid, or mid-market price.
Luxemb'g	✓	Use last available price on the exchange.
Mexico	✓	<i>Equities</i> - use closing or last quoted price on the exchange. <i>Debt issued on a Discount Basis</i> - use average purchase price or yield at the stock exchange, or use acquisition cost <i>Other Debt</i> - use closing or last quoted price at stock exchange.
Netherlands	✓	In an active market (e.g. listed), market value would be deemed as the "fair value".
Portugal	✓	Use last quotation price in the last 90 calendar days. If the securities are quoted simultaneously in two or more stock exchanges, use lowest quotation obtained. Other valuation basis is allowed if approval from the regulator is obtained.
Spain	✓	Use closing price. Where the closing price does not exist, use last closing price or the average price of the day. There are also special rules for fixed income securities.
Sweden	✓	Use closing price at the stock exchange consistently.
Switzerland	✓	Normally use latest quoted market price. If not available, then use mid or bid price.
UK (unit trust)	✓	Use best available market bid and offer prices on the most appropriate market in a standard size plus/ less dealing costs.
UK(OEICs)	✓	Use mid-market price.
U.S.A.	✓	Use last quoted sales price usually. For securities which have multiple listings, use last sales price from the exchange on which the security is principally traded. Use last sales price from other exchanges only when there is no trade reported on the principal exchange on the valuation day.

Listed Securities

In summary, the majority of members use the last quoted sales price for listed securities, while some allow some flexibility to use bid, mid-market, or average prices for the particular day. Generally speaking, a CIS which wishes to alter its valuation basis would require regulatory approval and be required to justify the change.

2.3.2 Unlisted/ Unquoted Securities

Nearly all members required the valuation of unlisted or unquoted securities to be made on the basis of the securities' "realizable" value. In some jurisdictions, this term is defined in greater detail: for example, in the Netherlands, it is the amount for which the asset or liability could be traded in an arm's length transaction between a knowledgeable and willing buyer and seller. In a few cases, unlisted or unquoted securities may be valued at cost.

The table on the following page depicts the valuation basis for unlisted/unquoted securities by member jurisdictions:

Unlisted/ Unquoted Securities

	Valuation Basis for Unlisted/ Unquoted Securities
Australia	Same as for listed securities.
Brazil	The CIS may define the valuation criterion for unquoted securities, which must be stated on the notes to the CIS accounts. Unlisted securities may not form part of the CIS.
Canada	No rules for unlisted/unquoted securities. However, best practices for securities with a resale restriction imposed calls for estimation of "fair value" - amount CIS could reasonably expect to receive upon realization.
France	Value at fair value (value at which the security would be traded) for which the CIS operator is responsible for ensuring its accuracy.
Germany	Use current market value deemed adequate on the basis of careful assessment and consideration of the overall circumstances. For <i>unlisted/unquoted bonds</i> , use market comparables minus a discount for limited marketability. <i>Money market instruments</i> shall be valued at market rates.
Hong Kong	Valued at cost subject to adjustments for market comparables, independent appraisals by professionals, or any other information from independent sources.
Italy	Valued according to their presumptive selling market value.
Japan	<i>Non-listed stocks</i> are valued at quotation price. <i>Non-listed public or corporate bonds</i> are value at acquisition price.
Jersey	Shall be determined on a regular basis by a professional approved by the custodian as a qualified to value such investments.
Luxembourg	Valued at last available price, or if such price is not representative of the fair value, they are valued prudently and in good faith on the basis of their reasonably foreseeable sales prices by the CIS operator or its delegates.
Mexico	Valued at cost price (without any adjustment).
Netherlands	Valued at "fair value" (defined as: amount for which an individual asset or liability could be traded between a knowledgeable and willing buyer and a knowledgeable and willing seller in an arm's length transaction). This should be defined in greater detail in the notes to the accounts.
Portugal	<i>Equities</i> - valued at the lowest of: issuing price, acquisition price, or balance

	sheet price; <i>Bonds</i> - nominal value or acquisition price; Other valuation basis is allowed if approval from the regulator is obtained.
Spain	Value according to estimated realization value. Other valuation basis is allowed if approval from both the regulator and the custodian is obtained.
Sweden	No specific rules.
Switzerland	Use price which will probably be obtained through a diligent sale at the time of valuation - ie. "fair value" determined in good faith. <i>Money market instruments</i> shall be valued at market rates.
U.K. (unit trusts)	Value at the CIS operator's reasonable estimate of a buyer's/seller's price plus/less dealing costs.
U.K. (OEICs)	No specific rule on this.
U.S.A.	<i>Unlisted securities</i> : Use bid-asked prices quoted by broker-dealers, the financial press, published inventory lists or pricing services. The CIS operator may choose any of several methods utilizing either bid prices alone or the mean of bid and asked prices. Use of asked prices alone is normally not acceptable. Any method selected must be consistently applied. Generally, quotations should be obtained from several sources to verify the validity of the quotations. <i>For unquoted securities</i> : Must be valued at fair value as determined in good faith by the board of directors of the CIS.

2.3.3 Units/ Shares in Collective Investment Schemes

Over half of the member jurisdictions use the last published price in valuing interests in other collective investment schemes. As a matter of prudence, some jurisdictions will further specify that the published price used shall be the redemption price or the realization price of the CIS.

	Last Published Price	Other Valuation Basis for Valuation of Interests in Other CIS
Australia		Same as for listed securities.
Brazil	✓	
Canada	✓	No rules for valuation of other CIS. However, best practices calls for the use of the last available quoted price.
France	✓	
Germany	✓	Redemption price as publicly quoted.
Hong Kong	✓	Either daily opening, mid, closing or average price.
Italy		No specific criteria.
Japan	✓	Use standard price of the last day which can be known on the calculation day. When the standard price is not known, then the purchase price is used. When both the selling and buying quotation price of purchase price are announced, they are valued at the lower price.
Jersey	✓	
Luxembourg	✓	
Mexico	✓	
Netherlands		Not specified.
Portugal	✓	Use last redemption price available.
Spain	✓	
Sweden		No specific rule on this.

Switzerland	✓	Same as for listed securities. For offshore funds without daily valuation, valuation would be based on NAV with appropriate discounts/premiums
U.K. (unit trusts)	✓	Use most recent maximum issue price less any expected discount/ minimum redemption price plus/less dealing costs.
U.K. (OEICs)		No specific rule on this - therefore should use mid-market price.
U.S.A.	✓	Use last quoted sales price.

2.3.4 Derivatives (futures/ options)

Where investment in derivatives is allowed, generally speaking derivatives should be valued at the current market price, ie. the net value on closing out the position on the valuation day.

	Valuation Basis for Futures	Valuation Basis for Options
Australia	Same as for listed securities.	
Brazil	Daily marked-to-market	Option premiums are valued at market price. When the option is exercised, the premiums will become part of either the acquisition cost or the sales cost, depending on whether it is a call or a put. If the option is not exercised, the premium will be expensed.
Canada	Net value on closing out, unless daily limits are in effect, in which case current market value of the underlying interest will be used.	Valued at current market value or current market value that would have the effect of closing out the position.
France	Marked-to-market	
Germany	Paid margins plus any valuation profits and losses.	Current market value deemed adequate on the basis of careful assessment and consideration of the overall circumstances.
Hong Kong	Marked-to-market but no specific rules	
Italy	Consider cashflows of margins	Valued at current price
Japan	Valued at settlement price or the standard price for determining the margin requirement	<see response from Japan for details>
Jersey	No specific rules	
Luxembourg	No specific rules	
Mexico	Derivatives is not allowed	
Netherlands	No specific rules	Derive fair value from value of comparable quoted options, taking into account other factors such as interest rates and volatility.
Portugal	Use market price or quotation	
Spain	Use market price	
Sweden	No specific rules	
Switzerland	Use latest market prices	

U.K. (unit trusts)	Net value on closing out	If it's not a contingent liability - value at best available market bid and offer price plus/less dealing costs Written option - where the premium has become part of the CIS, a deduction of the net value of the premium receivable.
U.K. (OEICs)	No specific rules	
U.S.A.	No specific rules but securities for which market quotations are readily available must be valued at their current market value; securities for which market quotations are not readily available must be valued at fair value as determined in good faith by the board of directors of the CIS.	

2.3.5 Forward Contracts, Warrants, Other Types of Instruments (e.g. Swaps and Repurchase Agreements)

	Valuation Basis for Forward Contracts	Valuation Basis for Other Derivatives (e.g. swaps and repurchase agreements)
Australia	No specific rules (except for forward foreign currency contracts - see 2.3.6) and except as noted for listed securities.	Same as for listed securities, ie. allow but do not require the use of market value, except for current assets which must use the lower-of-cost and realization value.
Brazil	Priced according to current market quotations and yield curves.	No specific rules.
Canada	<same as for futures>	<i>Swaps and Repos</i> - investment not yet allowed
France	Marked-to-market	
Germany	Paid margins plus any valuation profits and losses.	<i>Warrants</i> - depend on whether they are listed or non-listed and apply those rules accordingly <i>Swaps</i> - use current market value. <i>Repo (seller)</i> - use current market price of underlying securities plus the money received for the sold securities minus the agreed amount of repo liability. <i>Repo (holder)</i> - value only the underlying securities receivable
Hong Kong	Marked-to-market but no specific rules	
Italy	Consider differentials between spot and forward rates	<i>Listed warrants</i> - apply rules for listed securities <i>OTC warrants</i> - apply rules for options <i>Repos</i> - the portfolio does not change while spot liquidity changes according to changes of forward liquidity. The difference between the two prices is spread throughout the life of contract, as a yield <i>Securities lending</i> - the portfolio does not change and revenues are spread through out the life of contract, as a yield
Japan	Consider market interest rates	<i>Warrants</i> - use final market price of calculation day <i>Other instruments</i> - consider market interest rates
Jersey	No specific rules	
Luxembourg	No specific rules	
Mexico	Investment in forward contracts is not allowed	<i>Warrants</i> - value at a price representative of the closing or last quoted price at the stock exchange. <i>Swaps</i> - not allowed; <i>Repo</i> - no specific rules
Netherlands	Based on market comparables.	
Portugal	Use market price or quotation	<i>Warrants</i> - use market price or quotation <i>Interest rate swaps</i> - use market price adjusted daily. <i>FX swaps</i> - only the premium or discount recognized in the CIS account <i>Repo</i> - consider value of underlying securities and difference between spot and forward rates

Spain	<i>If listed</i> - use closing market price; <i>If not</i> - use average bid/offer prices supplied by counterpart	If listed - use closing market price If not - use average bid/offer prices supplied by counterpart
Sweden	No specific rules	
Switzerland	Use latest market prices.	<i>Swaps</i> - use latest market prices <i>Repos</i> - not yet allowed
U.K. (unit trusts)	Net value on closing out at the best available terms plus/minus dealing costs	<i>Warrants</i> - valued at best available market bid/offer prices on the most appropriate market plus/less dealing costs. <i>Swaps and Repos</i> - investment not allowed
U.K. (OEICs)	No specific rules	<i>Warrants</i> - No specific rules <i>Swaps and Repos</i> - investment not allowed
U.S.A.	No specific rules but securities for which market quotations are readily available must be valued at their current market value; securities for which market quotations are not readily available must be valued at fair value as determined in good faith by the board of directors of the CIS.	

Forward Contracts, Warrants, Other Types of Instruments (e.g. Swaps and Repurchase Agreements)

Generally speaking, these securities are valued at market value, determined by the net value on closing out the position on the valuation day. Particular rules apply to particular instruments in some cases.

2.3.6 Exchange Rates for Translation of FX Transactions and Any Rules on How Exchange Rates are Sourced

Those jurisdictions that have specific rules in this area use an exchange rate quoted by a specified bank, usually the jurisdiction's central bank, or require an average of the exchange rates available on the valuation day.

The table on the following page depicts the valuation rules for exchange rates for translation of foreign exchange transactions by member jurisdictions:

Exchange Rates for Translation of FX Transactions and Any Rules on How Exchange Rates are Sourced

	Valuation Basis for Exchange Rates
Australia	Transactions are translated at the exchange rate on the transaction date and any monetary terms are translated at the spot rate at the balance date. Costs or gains on entering into hedging transactions are brought to account over the duration of the contracts. Except where net market values are used, costs and gains and exchange differences on transaction hedging the purchase or sale of goods or services are deferred and included in measurement of the purchase or sale.
Brazil	No specific rules. Domestic funds are not allowed to invest abroad, except for depository receipts of Brazilian corporations and shares of Mercosul countries
Canada	No specific rules.
France	Marked to market, in accordance rules determined by the CIS operator, taking into account general accounting rules, commentary by professional association, as endorsed or approved by the regulator. In practice, daily official exchange rates, published by the Banque de France, have to be used by CIS for the valuation of translation of foreign currencies.
Germany	Subject to disclosure only.

Hong Kong	No specific rules.
Italy	According to appropriate rates provided by the Bank of Italy.
Japan	Take the average of buying and selling rates of telegraph trading price for customer announced by the Tokyo Mitsubishi Bank or Citibank on the calculation day
Jersey	At appropriate bid or offer rate depending upon whether the currencies would have to be sold or purchased to arrive at the translated balance in the base currency
Luxembourg	No specific rules
Mexico	Determined by the Central Bank of Mexico, from average closing rates operated by private banks
Netherlands	No specific rules
Portugal	Answer did not specify
Spain	Determined by the Central Bank of Spain
Sweden	Securities and other financial instruments denominated in foreign currency shall be translated at closing rates.
Switzerland	Transactions are translated at the exchange rate on the transaction date and any monetary terms are translated at the spot rate at the balance date. Costs or gains on entering into hedging transactions are brought to account over the duration of the contracts. Except where net market values are used, costs and gains and exchange differences on transaction hedging the purchase or sale of goods or services are deferred and included in measurement of the purchase or sale.
U.K. (unit trusts)	Use average of the highest and lowest rates quoted at the conversion time, or a different rate if the Custodian agrees
U.K. (OEICs)	No specific rules
U.S.A.	No specific rules but generally, use bid-asked prices quoted by dealers, the financial press, or pricing services. The CIS operator may choose any of several methods utilizing either bid prices alone or the mean of bid and asked prices. Use of asked prices alone normally is not acceptable. The CIS operator may use a variety of sources or switch sources depending on its determination of the reliability of information from a source. Occasionally, the CIS operator will value exchange rates at fair value as determined in good faith by the board of directors of the CIS if it believes that the available market quotes are not reliable.

2.4 How often are CIS required to be valued?

All jurisdictions require CIS to be valued regularly. This is in accordance with the IOSCO CIS Principles. However, they differ in terms of minimum required frequency as shown in the following table. The most common valuation frequency is daily. It is further noted that, although some jurisdictions permit CIS to be valued monthly, the average CIS in those jurisdictions may be valued much more frequently.

	Daily	Weekly	Bi-Monthly	Monthly	Not specified
Australia					✓ ⁹
Brazil	✓				
Canada	✓ ¹⁰	✓			

⁹ At regular intervals appropriate to the nature of the CIS

¹⁰ Daily valued if derivatives are used but weekly permitted (with a few monthly valued CIS grandfathered)

France	✓ 11		✓		
Germany	✓				
Hong Kong				✓ 12	
Italy		✓ 13			
Japan	✓				
Jersey			✓	✓ 14	
Luxembourg			✓	✓ 15	
Mexico	✓				
Netherlands	✓				
Portugal	✓				
Spain	✓				
Sweden	✓ 16				
Switzerland			✓ 17		
U.K.			✓ 18		
U.S.A.	✓ 19				

2.5 Who is responsible for CIS valuation?

Most jurisdictions rely on the CIS Board of Directors or CIS manager as ultimate responsible entities for CIS valuation, although delegation of the valuation function to third parties is also permitted. Some jurisdictions place equal reliance on the CIS and custodian²⁰ alike (as depicted in Column 3) while others rely on the custodian to check for reasonableness of the CIS valuation only.

	CIS / CIS Operator (1)	Custodian primarily (2)	Both (1) + (2)	Other Parties (specify)	Minimum Qualification Standards
Australia				CIS compliance committee, and CIS auditor	Registration as Dealer
Brazil					Look at experience, area of specialization, professional record
Canada					Nil.

¹¹ For CIS > FRF500 million only

¹² In Hong Kong, most funds are valued daily, and if not weekly. However, the max. allowable is mthly.

¹³ As a common practice, CIS in Italy are valued daily.

¹⁴ Jersey “recognized CIS” ~ at least bi-monthly; “non-recognized CIS” ~ at least monthly.

¹⁵ Luxembourg “UCITS” ~ at least bi-monthly; “non-UCITS” ~ at least monthly.

¹⁶ Swedish CIS are valued currently and often daily.

¹⁷ For Switzerland, most funds are valued daily.

¹⁸ Required to be re-valued if the price has moved by more than 2% since the last valuation.

¹⁹ Valued daily on each day where there is sufficient trading in its portfolio securities such that the NAV of the interests might be materially affected. Valuation is not required if there are no subscriptions or redemptions or on customary holidays.

²⁰ “Custodian” as defined in IOSCO CIS Principles, which Includes a trustee or depository but not a sub-custodian.

France					Check that the firm is well organized, has sufficient technical and human resources
Germany					Obtain a banking license (>DM 5m paid-up capital, reliable and competent, inspected annually)
Hong Kong				Checked by custodian	Nil, except those incidental to obtaining approval as CIS operator.
Italy				Checked by custodian	Nil, for valuation functions.
Japan					CIS operator must have internal system to carry out its operation faithfully.
Jersey					Adequate records to be kept in Jersey.
Luxemb'g	✓				Possess necessary infrastructure, experience and expertise to perform.
Mexico				Independent organizations or individuals	Must have expertise and be independent of CIS/ CIS operators.
Netherlands	✓				Expertise requirements.
Portugal	✓			Checked by custodian	Nil
Spain	✓			Checked by custodian	Nil, other than those incidental to obtaining approval as CIS operator.
Sweden	✓			Checked by custodian	Nil
Switzerland	✓				Obtain a license, minimum capital of CHF 1 million. The CIS Management company must also pass a fit and properness test and satisfy other suitability rules.
U.K.	✓			Checked by custodian	Must pass IMRO's Training and Competence requirements
U.S.A.	✓			Checked by auditor	Nil, but the CIS Board of Directors must be comprised of at least 40% 'disinterested persons'.

Other issues of general interest:

2.6 Permitted Sources of Data

Over 1/3 of the jurisdictions²¹ do not have specific rules on permissible data sources. The majority of those jurisdictions that have specific rules have separate requirements for listed versus unlisted/ unquoted securities. Understandably, more jurisdictions have specific rules for listed securities as these can be readily defined. Few jurisdictions have specific rules for unlisted/unquoted securities (aside from the guiding principle that CIS operators must be able to justify the valuation).

Notably, the U.K. has specific and detailed rules on permitted data sources but such guidance is designed with flexibility. Although the U.S. has no specific rules, the CIS operator must satisfy itself in good faith that valuations are fair, reliable, of high quality and verifiable. Also, "matrix pricing" - use of prices

²¹ Jurisdictions (7 out of 17) which do not have specific rules on permitted data sources include: Australia, Brazil, Canada, Italy, Luxembourg, Sweden, and U.S.A.

obtained from sample securities that share similar characteristics - is permitted under certain circumstances.

	Data Source for Listed Securities	Data Source for Unlisted/ Unquoted Securities
France	The CIS operator must be able to justify any CIS valuation ~ usually provided by database (Reuters etc.). If not, it is expected to use at least two brokers/dealers or two credit institutions.	
Germany	Prices of an authorized exchange.	CIS and Custodian have to demonstrate a current market value is used after careful assessment and consideration of the overall circumstances.
Hong Kong	Automatic price feed or other independent pricing source.	CIS operator must be able to justify the valuation, and where necessary, seek independent confirmation from a suitably qualified person.
Italy	As a matter of practice, prices of an authorized exchange.	~ not specified ~
Japan	Set by the industry association.	
Jersey	Automatic price feed or other independent pricing source.	CIS operator must be able to justify the valuation, and where necessary, seek independent confirmation from a suitably qualified person.
Mexico	Prices from the Mexican Stock Exchange.	~ not specified ~
Netherlands	Independent pricing source.	CIS operator must be able to justify the valuation
Portugal	Prices from stock exchanges (official bulletin or electronic means)	Must disclose valuation basis in the fund documentation and notify the regulator.
Spain	Based on market value provided by official sources.	<i>Exchange rates</i> - from the Central Bank of Spain. <i>Unlisted Securities</i> - CIS operator to estimate daily the realization value following methodology issued by the regulator and according to maximum reliability criteria. <i>OTC derivatives</i> - counterpart to supply bid/offer prices.
Switzerland	Automatic price feed or other independent pricing source.	Value at fair value, with independent brokers' confirmation where possible.
U.K.	Data to be up-to-date, from a reputable source, with the reliability kept under review & doubtful prices followed-up.	
U.S.	No specific rules but the CIS operator must satisfy itself in good faith that valuations are fair, reliable, of high quality and verifiable. Also, "matrix pricing" - use of prices obtained from sample securities that share similar characteristics - is permitted under certain circumstances.	

2.7.1 Write downs/ Write offs of Assets and the Roles of independent parties in valuing illiquid or suspended assets

Most jurisdictions²² (two-thirds) do not have specific rules on write-downs or write-offs of CIS assets, perhaps because it is perceived that the CIS operator is in the best position to exercise judgment on this issue within the bounds of established accounting standards or practices. General accepted accounting principles and concepts of prudence and materiality also require write downs/ write offs of CIS assets in order to reflect their fair value.

Member jurisdictions that have rules/ guidelines issued on write-down or write-offs of assets are as follows:

²²

Jurisdictions (12 out of 17) which do not have specific rules on write downs/ write offs of assets include: Australia, Brazil, Canada, France, Germany, HK, Italy, Japan, Jersey, Luxembourg, Sweden, and U.K.

	Rules
Mexico	Securities not redeemed or paid off at their maturity date, must be valued zero, except mortgage bonds are valued at 50% of their book value, until the write-off of the asset is decided or the recovery is made.
Netherlands	A portfolio asset must be written down when a decrease in value is not expected to be temporary. If the decrease in value is expected to be temporary and the book value exceeds the fair value, the fair value has to be mentioned in the notes to the accounts, with an explanation of the company's expectation that the book value can be realized in the future.
Portugal	(1) Whenever an issuer is about to default its obligation in paying interest or principal, the asset's value in the CIS portfolio must mirror such fact. If there is no chance to receive any principal or interest, then the asset must be written-off; (2) the CIS operator is responsible for the evaluation of assets remaining in this situation; (3) it is part of the custodian's duties to oversee the CIS operator's asset valuation process, assuring the respect for legal provisions and fund scheme rules; (4) the independent auditor must give his opinion about the CIS asset valuation in general, and particularly, those that are illiquid or suspended.
Spain	(1) CIS is obliged to write-off immediately those assets whose solvency is extremely deteriorated as soon as this is known; (2) if more than 90 days have passed since the maturity of assets, CIS must re-classify them as "defaulted investments". CIS is obliged to write down these assets following the criteria provided by the regulator (regarding the percentage to be reduced in terms of the period passed since maturity); (3) the custodian must ensure that the valuation criteria used by the CIS operator are in accordance with the regulations in force and methodologies regarding the valuation of OTC derivatives and unlisted securities; (4) the auditor annually provides opinion on the valuation criteria used.
Switzerland	Any material price fluctuation of CIS assets should be reflected in the NAV. In an actual case, the CIS operator wrote down a bankrupt deposit in the CIS NAV, segregated that doubtful asset from the CIS portfolio, and granted investors a claim should the asset be recovered.
U.S.A.	Any impairment that would necessitate the writing down or writing off of a portfolio security generally will be reflected in the market value or fair value of the security. In addition, the CIS board of directors is responsible for continuously reviewing the appropriateness of the method used in valuing each security in the CIS portfolio, including whether the method accurately reflects any changes in the financial situation of the security.

2.7.2 Role of Independent Parties in Providing Advice on the Valuation of Illiquid/ Suspended Assets

Over half of the member jurisdictions would utilize independent auditors to check on the valuation during the course of the CIS's routine audit.

In particular, in the U.S., independent auditors play a significant role in CIS valuation, although the auditor's view would not substitute for the judgment of the CIS operator. Auditors would review all information considered by the CIS operator, and assess and review the consistency in the procedures established.

2.8 Rules on Apportionment of Assets/Liabilities amongst Different Classes of Shares/Units

About 40% of member jurisdictions²³ do not allow different classes of shares/units within a CIS. For those who do allow different classes, these exist to differentiate between “*income/dividend-paying/distribution*” shares/units versus “*re-investing*” shares/units whose income stream is automatically re-invested into the CIS. Another reason is to segregate different types of clientele based on their preferred fee structure (e.g. some may pay a high entrance fee but low management fee; others may pay a low entrance fee but have high on-going management fees and exit costs). Different classes may also exist to offer investors a choice of methods to pay for distribution costs or to allow the CIS to use alternative distribution channels more efficiently.

Most jurisdictions have rules designed to ensure fair treatment both of members of the same class and of different classes. To that end, some members require that only assets/liabilities directly attributable to a particular class are allowed to be applied to that class. Others emphasize clear disclosure about how each class is valued to investors.

The following table summarizes the rules for apportionment of assets and liabilities amongst different classes of units/ shares for jurisdictions which permit different classes of shares/ units.

Rules on Apportionment of Assets/Liabilities amongst Different Classes of Shares/Units

	Rules for Apportionment of Assets and Liabilities Amongst Different Classes of Units/ Shares <i>- for member jurisdictions which permit different classes only</i>
Australia	Subject to fair treatment for both members of the same class and different classes.
Canada	Subject to clear disclosure about how each class is valued in the prospectus and scheme rules. In addition, the risk of “spill-over” of liabilities from one class to another class must be highlighted.
France	“Capitalization” versus “Dividend Paying” units/shares. Single NAV for the CIS, divided into two categories on a pro-rata basis. Asset management fees are not allowed to vary depending on clientele.
Hong Kong	Subject to clear disclosure about how each class is valued. Only assets/liabilities directly attributable to a particular class are allowed to be applied to that class.
Jersey	Subject to clear disclosure about how each class is valued in the prospectus and scheme rules. Only assets/liabilities directly attributable to a particular class are allowed to be applied to that class.

²³

Jurisdictions (7 out of 17) which do not allow different classes of units/shares within a CIS are: Brazil, Germany, Italy, Mexico, Portugal, Spain, and Sweden.

Luxembourg	Subject to clear disclosure about how each class is valued. Only assets/liabilities directly attributable to a particular class are allowed to be applied to that class. Assets/ liabilities not directly attributable to a particular class is allocated to all classes in equal parts or, if the amounts so justify, pro-rata to NAV. Upon payment of dividends in any class, the NAV is reduced by the amount of dividends.
Netherlands	Subject to clear disclosure about how each class is valued. Proportional entitlement of net assets subject to terms and conditions in the scheme rules.
Switzerland	Subject to clear valuation rules. CIS operator must demonstrate that the valuation techniques are appropriate and any “co-mingling” of assets/liabilities can be excluded.
U.K. (Unit trusts)	“Income units” - income allocated periodically to investors. “Accumulation units” - income credited periodically to the capital account (re-invested). The difference in the manner of CIS valuation and division of income must be disclosed in the scheme rules.
U.K. (OEICs)	Greater variety of share classes - “Income units” , “Net or Accumulation units”, “Currency Share Classes” . The difference in the manner of CIS valuation and division of income must be disclosed in the scheme rules.
U.S.A.	Multiple class arrangement permitted to offer investors a choice of methods to pay for distribution costs. The rule permits a CIS generally to allocate income, gains and losses, and CIS-wide expenses, based on the ratio of class-NAV to CIS-NAV. Expenses that are incurred in different amounts by different classes may be allocated to each class as incurred.

3. REGULATORY APPROACHES TO CIS PRICING AND DISCLOSURE REQUIREMENTS FOR VALUATION AND PRICING

3.1 *Historical vs. forward pricing?*

“Forward pricing” refers to the pricing method whereby the purchase and redemption of CIS units/shares are effected at the current NAV next computed after receipt of the purchase or redemption request ie. the price of the unit/share would be unknown to the investor at the time of placing the request. Forward pricing is intended to address the problem of riskless trading by CIS insiders and the dilution of CIS assets that could occur under a system of historical pricing.

“Historical pricing”, on the other hand, is the pricing method whereby investors purchase or redeem units/shares based on the last calculated NAV of the CIS. In a rising market, investors and favored customers could purchase shares based upon the previous day’s lower price, redeem their shares the next day, and be assured of riskless profits. These riskless profits would lead to a dilution of the remaining shareholders’ holdings.

In general, most jurisdictions (65%²⁴) permit both historical and forward pricing (and some have different pricing methods for different types of CIS) although forward pricing (22%²⁵) is the normal industry practice. There is no jurisdiction which allows historical pricing only. The use of historical pricing would most likely have to be justified only if the risks of abusive trades by insiders and resulting dilution of CIS interests are minimized. In certain jurisdictions, historical pricing is restricted to money market or other non-volatile funds. In several jurisdictions, a permanent change in the pricing method would be subject to additional rules.

Because of the potential for abuses and arbitrage arising from the use of a historical pricing method, generally speaking, a forward pricing method is preferable.

²⁴ Jurisdictions (11 out of 17) which allow both historical and forward pricing are: Australia, Brazil, France, Germany, Hong Kong, Jersey, Luxembourg, Portugal, Spain, Switzerland, and U.K.

²⁵ Jurisdictions (4 out of 17) which commonly allow forward pricing only are: Canada, Japan, Sweden and U.S. Also, 3 jurisdictions did not specify in their answers re: permissibility of historical vs. forward pricing.

3.2 Disclosure to investors

3.2.1 Do Jurisdictions require Valuation Methods for Different Types of Assets be disclosed? If so, where?

Regulators hold divergent views on the disclosure requirements for valuation methods of different types of assets. Some require disclosure to investors be made at the point of entry via the prospectus (about 1/3) as opposed to having the valuation methods for different types of assets set out in the scheme rules (about 45%). Others (11%) require disclosure in both the prospectus and the scheme rules. Moreover, some require disclosure in the CIS annual accounts or in special reports to investors. Only two jurisdictions (11%) do not require any form of disclosure.

Generally speaking, members support the principle that valuation methods, as a matter of best practice, should be disclosed to investors, in a form in which they will reasonably come to the investors' attention. This information is seen as important for making a reasonable and informed investment decision.

	Prospectus (1)	Scheme Rules (2)	Both (1) and (2)	Other Documentation (specify)
Australia	✓			
Brazil				Notes to the accounts only.
Canada		✓		CIS full prospectus in addition (available to investors upon request).
France		✓		CIS annual report in addition.
Germany			✓	
Hong Kong		✓		Notes to the accounts
Italy		✓		
Japan				No requirement for disclosure.
Jersey			✓	
Luxemb'g			✓	
Mexico	✓			
Netherlands			✓	CIS annual report in addition.
Portugal		✓		
Spain	✓			Quarterly report to investors in addition.
Sweden			✓	
Switzerland			✓	
U.K.	✓			
U.S.A.	✓			Notes to the Financial Statements in the CIS semi-annual and annual reports.

3.3.2 Do Jurisdictions require Pricing Methods for Different Types of Assets be disclosed? If so, where?

Most jurisdictions require disclosure (either specific or general disclosure) for pricing methods for different types of assets as depicted in the following table.

	Prospectus	Scheme Rules	Other Documentation (specify)	Other Remarks (*)
Australia	(*)			(*) Not a specific requirement but generally expect valuation methods of underlying assets to be disclosed in Prospectus.
Brazil		✓		
Canada	✓	✓		
France	(*)			(*) Disclose conditions of subscriptions and redemptions only (not the specific pricing method)
Germany	✓	✓		
Hong Kong	(*)			(*) Disclose conditions of subscriptions and redemptions only (not the specific pricing method). Permanent change in pricing method only effected after 1-month prior notice to investors.
Italy		✓		
Japan	✓			
Jersey	✓			
Luxemb'g	✓	✓		
Mexico	✓			
Netherlands	✓	✓		
Portugal		✓		Change in pricing methods require regulatory approval.
Spain	✓	✓	Quarterly report to investors.	Change in pricing methods require regulatory approval and notice to investors.
Sweden	✓			
Switzerland	✓	✓		Disclose general principles only. Permanent change in pricing method requires changing the scheme rules.
U.K.	✓			Disclose basis for switching pricing methods as well.
U.S.A.	✓			Notes to the Financial Statements in the CIS semi-annual and annual reports.

4. CONTROLS FOR PRICING OF CIS

Rules for pricing controls?

4.1 Pricing controls are designed to identify and rectify any errors, omissions or misplacement of assets. Most jurisdictions (83%) require periodic audit (semi-annual and annual reports). In addition, some jurisdictions require regular reconciliation. The U.K. has the most detailed rules on pricing controls.

	Regular Reconciliation	Periodic Audit re: pricing	Remarks (*)
Australia	(*)	✓	(*) No specific rules on pricing controls. However, expect these to be set out in the CIS compliance plan, and monitored by the CIS operator.
Brazil		✓	Semi-annual and annual audit.
Canada		✓	Annual audit.
France	(*)	✓	Audit CIS at least twice a year. (*) Pricing controls are a component of internal controls. There must be an internal control programme reviewed by the regulator, to be carried out independently of the asset management team. The regulator conducts site inspections.
Germany	✓	✓	Daily reconciliation.
Hong Kong	✓	✓	At least monthly reconciliation and reviewed against parameters set out by the regulator
Italy			No specific rules on pricing controls. However, the depositary checks compliance of CIS in valuing units; external auditors shall provide their opinion on the conformity of the financial statement of CIS.
Japan			No specific rules on pricing controls.
Jersey	✓	✓	At least monthly reconciliation
Luxemb'g		✓	Custodian to check pricing. In practice, the Custodian has more particularly the duty to verify that the calculation method complies with the law and the management regulations and that it is applied consistently and systematically.
Mexico	✓	✓	Daily reconciliation + weekly report to the regulator
Netherlands	✓	✓	Plus quarterly report to the regulator
Portugal	✓		-
Spain		✓	Plus regular site inspections by the regulator
Sweden		✓	-
Switzerland	✓	✓	Daily reconciliation + annual report to regulator and disclosure to investors
U.K.	(*)	(*)	(*) Detailed guidance issued by the regulator on minimum pricing controls which include: <i>Review of delegates; Reconciliation of debtors and cash with trustees; Cut-off; Recognition of income; Review of tax position; Justification of dealing charges; Review of price and valuation components against benchmarks; Reconciliation of units with Register</i>
U.S.A.	✓	✓	Daily reconciliation + annual audit of the CIS

5. CIS VALUATION/ PRICING ERRORS

Common Reasons for CIS Valuation or Pricing Errors

5.1 Valuation and pricing errors do happen despite efforts to ensure fair pricing at all times. It is important to distinguish between isolated instances of technical/clerical valuation errors and errors resulting from weaknesses in internal controls and repeated errors of the same nature. Common reasons cited for CIS valuation errors may be grouped under various headings as follows:

Clerical/ Technical errors

- Data input errors
- Mis-feed of information from data source providers
- Inaccurate description of security
- Change in securities quotation number
- Securities not supported by price feed

Mis-calculation of Corporate actions (e.g. rights and dividend payments)

- Lack of notification, untimely receipt or inappropriate recording
- Uncertainty of prices following announcement of corporate actions in foreign securities

Difficulties in Securities valuation

- Valuation of complex, illiquid securities and non-listed assets
- Over and under provision for writing down of assets
- Lack of information or inaccurate assessment of security or market factors
- Uncertainty about the “fair market price” for securities traded on several exchanges
- Difficulty in valuing complex derivative instruments

Inadequate Systems controls

- Corruption of valuation systems (e.g. loss of formula, macros on spreadsheets)
- Incorrect updating of shares in issue from previous valuation point
- When a change in valuation systems takes place (e.g. changes in the currency of denomination)

Failure to Reconcile Records

- Unreconciled discrepancies in security positions between the CIS records and Custodian’s records

Poor Communication

- Delays in communication of transactions on volatile instruments
- Late information concerning prices of securities (e.g. convertible bonds issued by foreign companies or dividends obtained)

Fees/ Expenses

- Misunderstanding or unclear specification of performance fees
- Miscalculation of accrued interests and expenses

Deliberate Wrong-doing

- Fraud/ negligence of CIS operator
- Assets being misappropriated

How are pricing errors addressed?

5.2 Materiality Benchmarks for Reporting to the Regulator & Benchmarks for Investors' Compensation

The use of market-based valuation for settling the price of CIS interests does not guarantee that the price will reflect the true underlying value of the CIS's assets. Depending on the volatility of the market for the particular securities, the timeliness of the information used in a NAV calculation, and the reliability of the information source, the calculation derived may vary from the true underlying value. Therefore, it seems to be accepted, by both industry and regulators, that it is only material pricing errors that need to be addressed.

Half of the member jurisdictions do not have specific rules for materiality levels in triggering a need to report to the regulator or compensation to investors. Some jurisdictions require all errors to be reported and compensated. Other jurisdictions have specific rules in using 0.5% of NAV as a benchmark level for materiality as outlined in the following table. Several jurisdictions have also waived the requirement for compensation where compensation to an individual investor does not exceed an absolute amount; the rationale is that the compensation amount should at least be enough to cover banking and administrative charges. If compensation is payable, it is important for the CIS operator to notify affected investors so that they can exercise their rights. Regulators should consider publishing guidelines to the industry on how pricing errors should be addressed.

Please see the table on the following page for details on materiality benchmarks for different jurisdictions.

Materiality Benchmarks for Reporting to the Regulator & Benchmarks for Investors' Compensation

	Benchmark for Reporting	Benchmark for Compensation	Remarks (*)
Australia	Not specified		-
Brazil	Not specified		-
Canada	Not specified		-
France	Usually 0.5% of NAV	Not specified*	*Each case examined on a case-by-case basis, but 0.5% of NAV used previously
Germany	All	All*	* Unless compensation amount < payment cost
Hong Kong	0.5% of NAV	0.5% NAV *	* Unless decided other wise by the custodian. Also, where the loss is to the CIS operator, no compensation is paid, or if total loss to each individual is < HK100.
Italy	Not specified		-
Japan	Not specified		-
Jersey	0.5% of NAV	0.5% NAV *	* Unless decided other wise by the custodian. Also, where loss is to the CIS operator, no compensation is paid , or if the total loss to each individual is < GBP10.
Luxemb'g	All	All*	* Except where total loss to an individual is less than US\$30 or equivalent, as these would likely to be absorbed by banking charges.
Mexico	Not specified		-
Netherlands	Not specified		-
Portugal	All	All*	* Where the CIS is over-valued and redeeming investors got a higher price, the CIS operator (ie. not the investor) must re-pay the CIS.
Spain	Not specified	All	-
Sweden	Not specified		-
Switzerland	Not specified*	Not specified*	* Rules currently under review.
U.K.	0.5% NAV*	0.5% NAV (#)	*Quarterly return by the custodian to the regulator on all errors >0.5% and errors < 0.5% where a CIS operator's pricing controls were considered inadequate. (#) unless decided other wise by the custodian on the basis of inadequate controls.
U.S.A.	Not specified*	0.5% NAV (#)	* A CIS typically would not report a pricing error to the regulator unless the error is required to be reflected in the financial statements filed with the regulator. (#) These are voluntary standards which suggest that compensation should be paid if: (a) errors >0.5% of NAV; (b) error >US\$0.01 per share; and (c) total amount to individual investor > US\$10.

5.3 **Circumstances Requiring Enforcement Actions**

Frequently cited circumstances inviting further investigations or enforcement actions from the regulator are:

- Small but repeated pricing errors of the same unresolved reasons
- Single important pricing error
- Investor complaints
- Evidence shows that valuation procedures are not being observed
- CIS shows unusual yield patterns
- If CIS operators do not have adequate oversight or have not reviewed procedures to determine pricing deviation

The above is intended to be a non-exhaustive list of circumstances. Whether actions will be taken depends on the seriousness and persistent nature of the valuation errors, and are usually reviewed on a case-by-case basis.

5.4 **Safeguards and Dispute Resolution Mechanisms**

The following is intended to be a non-exhaustive list of safeguards against pricing problems, and also dispute resolution mechanisms. It is noted that some of these are country-specific and hence may not be applicable to all jurisdictions.

Justification by CIS Operator with Advice from Professionals

- The CIS operator to justify the CIS pricing with external, independent sources
- The CIS operator to justify the CIS pricing with comparable third-party transactions
- Custodians and auditors to give opinions
- A CIS's internal complaints handling procedure and compliance plans

Regulatory/ Investor Actions

- Investor may lodge complaint with the regulator
- The CIS operator may be required to disclose its past pricing problems in the prospectus or financial statements
- The regulator may take enforcement actions against the CIS operator depending on the severity of the case (e.g. fines, issuing warnings, temporary or permanent removal of licenses, additional conditions imposed on the license, or order cease trading in CIS interests)
- Private arbitration
- Civil action for compensation

6. THE WAY FORWARD

Overall, there is a broad range of regulatory approaches to the valuation of CIS and pricing of CIS interests. Some jurisdictions have very prescriptive rules and regulators are actively involved in decisions determining fair CIS valuation and pricing. Others would leave it to the CIS/ CIS operator to judge the best valuation approach in consultation with professionals, within parameters set by the regulator.

Despite the differences, it is important to note the commonality in the guiding principles. Different regulatory approaches are just different means to meet the same end. In examining the different approaches, it is advisable for regulators to take into account the following factors:

- the best interests of all incoming, outgoing, and existing investors;
- the system of check and balances within the CIS framework;
- accountability for valuation errors;
- transparency to investors;
- the role of the regulator in providing guidance to the industry which are pragmatic, effective, consistent and up-to-date; and
- the need to balance the above with flexibility to the market especially in complex valuation situations.

Regulators and industry need to exercise particular vigilance to minimize pricing errors and, where they occur and are material, to correct them promptly. An error results either in the investor suffering a loss and paying too much for their investment or not receiving the correct amount for their redemption, or the fund suffering a loss by paying out too much for the redemption or not receiving enough for a subscription. In any case, such errors damage investor confidence in the industry. Therefore, regulators should consider publishing or reviewing any existing guidance on pricing errors.

It is not intended that members should reach a consensus, based on this summary paper, on what should be considered as “best practices” in relation to the pricing of CIS and valuation of CIS interests. It is hoped that the comparison tables set out in this paper would serve as a useful reference for members to draw on the experience of others and serve as the basis for a meaningful discussion of CIS valuation and pricing, the fairness of which is indispensable for the continued growth of the international fund management industry.

IOSCO Technical Committee Working Group on Investment Management

**Questionnaire on Regulatory Approaches to
the Valuation of CIS and Pricing of CIS Interests**

The following are responses from:

[Name of Regulator, Date]

Overview

1. What are the most important guiding principles for valuation of CIS and pricing of CIS interests in your jurisdiction?

Valuation

- 2a. Who determines the valuation criteria of a CIS? Is it the securities regulator, the self-regulatory organization, or the CIS? [added from the questionnaire prepared by the IOSCO Emerging Markets Committee]
- 2b. Where are the rules set out?
3. What are the valuation rules (if any) of the following for your jurisdiction?
 - a. for listed securities
 - b. for unlisted/unquoted securities
 - c. for units/shares in collective investment schemes
 - d. for derivatives (futures/ options)
 - e. for forward contracts
 - f. for warrants
 - g. for other types of instruments such as swaps and repurchase agreements
 - h. exchange rates for translation of transactions in foreign currencies, and any rules on how such exchange rates are sourced.
4. How often are CIS portfolios required to be valued?
5. Who is responsible for CIS valuation in your jurisdiction? Are there any minimum qualification standards to be met?
6. Are there any rules or guidelines on permitted sources of data used in valuing the assets of CIS?

7. Are there any guidelines on the write downs/write offs of portfolio assets? What are the roles of auditors/trustees/depositories or other parties in providing independent audit/advice/confirmation on the valuation of illiquid assets or assets subject to suspension?
8. Are different classes of units/shares (e.g. with different fee structures or different clientele) within a CIS allowed in your jurisdiction? If yes, are there any rules on the apportionment of assets and liabilities amongst different classes of units/shares for valuation purpose?
9. Are valuation methods for different types of assets required to be disclosed in the offering document or other documentation of a CIS?

Pricing

10. What are the types of pricing methods allowed in your jurisdiction?
 - a. historical versus forward pricing
 - b. bid/offer pricing versus NAV pricing
11. Are pricing methods required to be disclosed in the offering document or other documentation of a CIS?

Controls for Pricing of CIS

12. Are there any rules for pricing controls (e.g. regular reconciliation, periodic audit) in your jurisdiction for CIS operators?

Valuation/ Pricing Errors

13. What are some of the common reasons for valuation errors (leading eventually to CIS pricing errors)?
14. Are there any rules for addressing pricing errors in your jurisdiction on:
 - a. materiality benchmarks for reporting to the regulator
 - b. benchmark for requiring compensation to investors and rules on compensation
 - c. circumstances requiring enforcement action to be taken
 - d. dispute resolution mechanism available in the event of pricing error?