

# **Taiwan Futures Exchange Principles for Financial Market Infrastructure**

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## **Disclosure Report**

**(CCP)**

Responding institution: Taiwan Futures Exchange Corporation

Jurisdiction(s) in which the FMI operates: Taiwan

Authority(ies) regulating, supervising or overseeing the FMI: the Securities and Futures Bureau of the Financial Supervisory Committee

The date of this disclosure is 2023.6.1

This disclosure can also be found at <http://www.taifex.com.tw/>

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## **I. Executive Summary**

This report has been prepared by the Taiwan Futures Exchange Corporation (“TAIFEX”) based on its role as a central counterparty (CCP) that Clearing Department (“TAIFEX Clearing”) performs clearing and settlement services for exchange-traded derivative and over-the-counter (OTC) derivative in Taiwan.

Upon its establishment in 1997, the TAIFEX had been granted 2 separated licenses for concurrently serving as a futures exchange and clearing house. TAIFEX Clearing provides central clearing and settlement services for clearing trades matched on TAIFEX and accepted over-the-counter (“OTC”) eligible transactions executed by counterparties outside of TAIFEX. TAIFEX has a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its services. From legal basis point of view, TAIFEX's clearing services are based on the Futures Trading Act (“the Act”), Standards Governing the Establishment of Futures Clearing Houses (“the Standards”), Regulations Governing Futures Clearing Houses (“the Regulations”), Operating Rules of the Taiwan Futures Exchange Corporation (“the Rules”), Taiwan Futures Exchange OTC Derivative Clearing Rules (“the OTC Rules”), and Taiwan Futures Exchange Corporation OTC Derivative Clearing Enforcement Rules (“the Enforcement Rules”). In addition, TAIFEX was designated as the OTC derivatives clearing house by Financial Supervisory Commission (“FSC”) pursuant to Article 3(2) of the Act on June 24, 2019. TAIFEX has committed to the development of Taiwan's derivatives market. It is our corporate mandate that we commit to invigorate derivatives market while serving the real economy in Taiwan. TAIFEX keeps abreast with the trendy development of global markets.

TAIFEX Clearing fully supports the work of the Committee on Payments and Market Infrastructures (“CPMI”) and International Organization of Securities Commissions (“IOSCO”) to promote market transparency and comprehensive disclosures set out in the Principles for Financial Market Infrastructures (“PFMI”): Disclosure framework and Assessment methodology.

TAIFEX Clearing provides central clearing and settlement services for clearing trades matched on TAIFEX and accepted OTC eligible

transactions executed by counterparties outside of TAIFEX. Pursuant to the Act, Standards Governing the Establishment of Futures Clearing Houses, and Regulations Governing Futures Clearing Houses as the legal basis, TAIFEX is thus licensed and established to be the derivatives exchange and clearing house concurrently in Taiwan. Pursuant to the Rules and the OTC Rules, TAIFEX Clearing conducts its clearing business to become legal counterparty to every buyer and every seller of a transaction that TAIFEX Clearing accepts for clearing.

From regulatory perspective, TAIFEX Clearing is directly regulated by the Securities and Futures Bureau (“SFB”) of FSC.

In this report, TAIFEX Clearing assesses its compliance with each of the 24 principles published by CPMI-IOSCO in April 2012 and supplemented in October 2014, and to the Disclosure Framework and Assessment Methodology implemented in December 2012. This report provides details in accordance with the “PFMI: Disclosure Framework and Assessment Methodology,” to demonstrate its compliance. Unless otherwise specified, this report is current as of the end of May 2023.

The framework of TAIFEX Clearing is founded on a strong legal basis and a robust corporate governance framework. It is capable of managing legal, credit, liquidity and operational risks, and its services incorporate measures that can adequately assess and monitor clearing members' credit risks and the market's liquidity risks. TAIFEX Clearing adopts the marked-to-market approach to calculate gains, losses and required margins on members' open positions. It has standardized margin calling procedures in order to lower members default risks.

To protect traders' interests, clearing members are required to account for their own capital separately from clients' collaterals. In the event that a clearing member undergoes bankruptcy, liquidation or business suspension, clients' collaterals and outstanding positions can still be ported to another clearing member. In terms of operational risks, TAIFEX Clearing has comprehensive risk management policies in place to ensure total control. It maintains its assets and those of clearing members with the utmost prudence. TAIFEX Clearing has established open and fair criteria for its clearing membership. It engages clearing

members in active communication to deliver service efficiency and transparent information.

As a systemically important financial market infrastructure (“FMI”), TAIFEX Clearing establishes a sound and robust and comprehensive system for risk management to perform its responsibility to stably provide its clearing services. To conduct the credit, liquidity, operational, and other risks to which it is exposed, TAIFEX Clearing has equipped with an effective risk management framework incorporated into its organization including:

- Real-time risk monitoring;
- Credit and liquidity risk management;
- Initial margin and variation margin collection;
- Profound safeguard system.

Details of risk management practices are elaborated in more detail in each related principle.

## **II. Summary of major changes since the last update of the disclosure**

This is an update to TAIFEX Clearing’s disclosure made in accordance with Principle 23 "Disclosure of rules, key procedures, and market data" for FMIs after the Disclosure Framework and Assessment Methodology was announced by CPMI-IOSCO in December 2012. In relation to the previous edition updated in September 2022, TAIFEX Clearing updated its disclosure in June 2023. Major changes in this update to TAIFEX Clearing from last disclosure are as follows :

- On September 15, 2022, the Commodity Futures Trading Commission (CFTC) issued No-Action Relief to TAIFEX for its swaps central clearing services.
- On December 16, 2022, TAIFEX has been recognized as a Tier 1 third-country central counterparty (TC-CCP) by the European Securities and Markets Authority (ESMA), and the recognition decision will be applied from December 31, 2022.

In addition to the above changes, this document contains some additions and revisions to the previous document in association with the minor revisions to TAIFEX Clearing's new practices.

### **III. General background of TAIFEX Clearing**

#### **General description of TAIFEX and the markets it serves**

In December 1995, the Futures Market Promotion Panel was assembled with the support of the Competent Authority and the public for the purpose of developing a local futures market. TAIFEX's preparatory office was established one year later in December 1996. In March 1997, the Act passed legislative procedures and gave TAIFEX a legal basis on which to operate. On July 21, 1998, TAIFEX was officially opened for business and launched its first instrument - TAIEX Futures. Over the next few years, TAIFEX introduced a number of index futures including Electronic Sector Index Futures, Finance Sector Index Futures and Mini-TAIEX Futures.

In December 2001, TAIFEX made its first entrance into options with the introduction of TAIEX Options, which provided market participants with a broader range of hedging instruments. In January 2003, Taiwan's first non-index instrument - the Equity Option was launched.

In the area of commodity-based products, TAIFEX introduced US dollar-denominated Gold Futures on March 27, 2006. In consideration of market needs and the preferences and trading habits of domestic investors, TAIFEX launched New Taiwan Dollar (NTD)-denominated Gold Futures on January 28, 2008. To provide investors in the spot market for gold with more diverse trading and hedging instruments, TAIFEX launched NTD-denominated Gold Options on January 19, 2009. TAIFEX went on to launch Single Stock Futures on January 25, 2010, providing investors in the stock market with still better hedging instruments and reduced tracking error. In response to Taiwan's flourishing offshore RMB market, TAIFEX launched two USD/RMB FX Futures contracts on July 20, 2015, making standardized FX derivatives available to the market. These products allow investors to

formulate more diverse trading strategies and give them greater flexibility in their utilization of funds.

On December 21, 2015, TAIFEX introduced TOPIX futures based on the leading stock index of JPX to Taiwan investors, which is the first time for TAIFEX to list a foreign equity index futures. The launch of TOPIX futures provides investors with more diversified trading strategies and marks an important step in the internationalization of Taiwan futures market. In 2016, following the launch of USD/RMB FX Options on June 27 2016, TAIFEX launched EUR/USD FX Futures and USD/JPY FX Futures on November 7, 2016, to meet investors' diverse trading needs and invigorate the market development.

On May 15 2017, TAIFEX launched after-hours trading session, which enables investors to manage their risks outside of the regular trading hours of Taiwan, giving investors access to the underlying market right in Europe and the US trading hours. TAIFEX after-hour session, extending trading hours to 19 hours, successfully boosts the competitiveness of the Taiwan futures market. The launch of after-hours trading session coincides with DJIA Futures and S&P 500 Futures, which have further enhanced our sustainable development and competitiveness.

TAIFEX further diversified our FX hedging channels by introducing GBP/USD FX Futures and AUD/USD FX Futures on 22 January 2018. To diversify product offerings, TAIFEX tapped into the energy market by launching the NTD-denominated Brent Crude Oil Futures on 2 July 2018. To offer investors a more diverse range of trading and hedging choices, TAIFEX launched two new products, Nasdaq-100 Futures and TPEX 200 Index Futures, on 1 October, 2019.

To boost the growth of the Taiwan futures market, TAIFEX launched F4G TIP TW ESG Index Futures and TIP Taiwan Bio Futures on 8 June, 2020. On 23 November 2020, TAIFEX launched FTSE® 100 Index Futures, which enables TAIFEX to further expand its product line into the European market.

On 28 June, 2021 TAIFEX launched Mini Electronics Futures to cater for rising demand from retail investors. On 6 Dec, 2021, TAIFEX introduces Mini Finance Futures in an effort to strengthen small-sized product line-up. To heighten market demand for industry-specific risk

management tools, TAIEX launched two new products, Semiconductor 30 Futures & Shipping and Transportation Sector Futures on 27 June 2022.

On November 9, 2022, TAIEX launched bi-weekly contracts for TAIEX Options (TXO) and Mini-TAIEX Futures (MTX). The TXO and MTX bi-weekly contracts are listed every Wednesday and expire on the second Wednesday from the listing date.

Following G20 Leaders' commitments to reform OTC derivatives markets in response to the financial crisis in 2008, central clearing of standardized OTC derivatives is the consensus among Leaders in order to enhance market transparency and lower systemic risks of OTC derivatives market.

To comply with the decision of clearing standardized OTC derivatives agreed by the G20 Leaders, as aforementioned, the President of Taiwan promulgated the amendment of the Act on January 16, 2019 to include swap contract and other types of contracts into futures trading scope in Article 3 of the Act.

To align with the amendment of Article 3 and Article 49 of the Act, the FSC announced partial amendment to the Regulations Governing Futures Clearing Houses as stated on June 24, 2019. The key points of these amendments are as follows:

- In accordance with the amendment of Article 3 of the Act, the businesses of a futures clearing house shall include the clearance for OTC derivatives trading, and a futures clearing house shall submit the following documents to the FSC and obtain the approval before commencing its business.
- In accordance with the amendment of Article 49 of the Act, the futures clearing houses shall determine and implement the order of financial safeguards mechanism in which the various sources of reserve funds being drawn upon to compensate for an event of default in the futures market, and a futures clearing house shall containing the above particulars and enter into a futures clearing and settlement contract with its clearing members.
- In accordance with the amendment of Article 49 of the Act, the



futures clearing house shall deposit NTD 500 million compensation reserve fund for the first time and the requirement shall not apply when the compensation reserve fund deposit amount equals to 1.5 times the authorized capital amount or allocated operating capital amount. It is also stipulated that the compensation reserve fund shall be deposited separately in different accounts based on the futures trading in the exchange-traded derivatives market and OTC derivatives market.

- Besides, in accordance with the amendment of Article 3 of the Act, futures trading conducted outside futures exchanges within the scope of futures trading for which central clearing is required by the provisions of the Competent Authority, central clearing shall be performed in accordance with the Act at a futures clearing house designated thereby. In consistence with the amendment to Regulations Governing Futures Clearing Houses, TAIEX Clearing was designated by FSC as a futures clearing house of OTC derivatives' mandatory clearing, and TAIEX Clearing should promote schedule of performing central clearing.

The amendments of the central clearing mechanism to the OTC derivatives trading would provide the legal basis and advance the market for OTC derivatives transactions, harmonize Taiwan's financial safeguards mechanism with international norms, and furthermore strengthen risk management mechanism of Taiwan futures market.

Pursuant to the rule amendments as the legal basis, TAIEX Clearing obtained the license to be as the designated CCP to conduct OTC central clearing services for, but not limited to, Interest Rate Swaps (IRS) and Non-Deliverable Forwards (NDF) in Taiwan.

### General Background of the FMI – Cleared Products

TAIEX Cleared Products		
Markets	Category	Products
ETD Derivatives Market	Equity Index Futures	TAIEX Futures
		Mini-TAIEX Futures
		Electronics Sector Index Futures

TAIFEX Cleared Products		
		Mini Electronics Sector Futures
		Finance Sector Index Futures
		Mini Finance Sector Futures
		Non-Finance Non-Electronics Sub-Index Futures
		Taipei Exchange Stock Index Futures
		TPEX 200 Futures
		F4G TIP TW ESG Futures
		TIP Taiwan BIO Futures
		TOPIX Futures
		DJIA Futures
		S&P 500 Futures
		Nasdaq-100 Futures
		FTSE® 100 Futures
		Shipping and Transportation Sector Futures
		Taiwan Semiconductor 30 Futures
	Equity Index Options	TAIEX Options
		Electronics Sector Index Options
		Finance Sector Index Options
	Equity Futures	Single Stock Futures
		ETF Futures
	Equity Options	Single Stock Options
		ETF Options
	FX Futures	USD/CNT FX Futures
		USD/CNH FX Futures
		EUR/USD FX Futures
		USD/JPY FX Futures
		GBP/USD FX Futures
		AUD/USD FX Futures
	Commodity Futures	TAIFEX Gold Futures
		TAIFEX NT Dollar Gold Futures
		Brent Crude Oil Futures
	Commodity Options	Gold Options
	OTC Derivatives Market	Interest Rate Swap
Non-Delivery Forward		New Taiwan Dollar Non-Deliverable Forward (to be launched in H2 2023)

## General Background of the FMI – Statistics

Category		Details
Listed Derivatives	Equity Index Futures	<a href="https://www.taifex.com.tw/enl/eng7/tradingVolume">https://www.taifex.com.tw/enl/eng7/tradingVolume</a>
	Equity Index Options	
	Equity Futures	
	Equity Options	
	FX Futures	
	FX Options	
	Commodity Futures	
	Commodity Options	

TAIFEX Clearing was incorporated in accordance with the Act primarily to provide a centralized marketplace for futures trading, while in the meantime making sure that the market operates fairly and in-line with the public interest. As a result, building a more efficient, cost-effective and competitive trading environment that conforms to public interests has become TAIFEX Clearing's ongoing target.

In the future, TAIFEX Clearing will strive to perfect its current practices and keep up with world trends by devoting greater efforts to product development, system reform, and market education. Furthermore, TAIFEX Clearing will engage in global interaction on a larger scale with the objective of becoming a world-class futures exchange, bringing a more prosperous future to Taiwan's financial market.

### **General organization of TAIFEX**

Being an FMI, TAIFEX was established as a futures exchange organized as a company pursuant to the Act. TAIFEX's shareholders consist of futures, securities, banking, and securities/futures-related institutions, with each type of institution holding a twenty-five percent stake. Each shareholder must be approved by the Competent Authority, and no individual shareholder's holdings are permitted to exceed five percent of TAIFEX's total outstanding shares.

TAIFEX's Articles of Incorporation were created in accordance with the Company Act in Taiwan. The company has one Chairperson and one President. The Chairperson represents the company to the outside world, whereas the President manages the company's affairs according to the Chairperson's instructions and the Board' ("Board") resolutions. The company has appointed two Vice Presidents to assist the President, and two Assistant Vice President to support certain requirements. TAIFEX also has various departments established, each run by one manager and one to two deputy managers. The management is assigned clear, segregated responsibilities and authorities to carry out its tasks, and details regarding corporate governance have been disclosed on the company's website and in annual reports. The Board is the executive decision-making unit within TAIFEX; it comprises fifteen directors and five supervisors. Board meetings are convened and chaired by the Chairperson. At least one-quarter of director and supervisor positions are held by non-shareholders with relevant expertise; half of them are appointed by the Competent Authority while the rest are chosen by the Board, subject to the Competent Authority's approval. The non-shareholder experts that the Competent Authority appoints as directors satisfy the requirements of independence and professionalism. TAIFEX's Internal Audit Office reports directly and regularly to the Board and provides effective internal supervision. In this way and in combination with external supervision from the Competent Authority, TAIFEX is deemed to have exercised adequate corporate governance to support the stability of its financial system and protect the interests of the public and stakeholders.

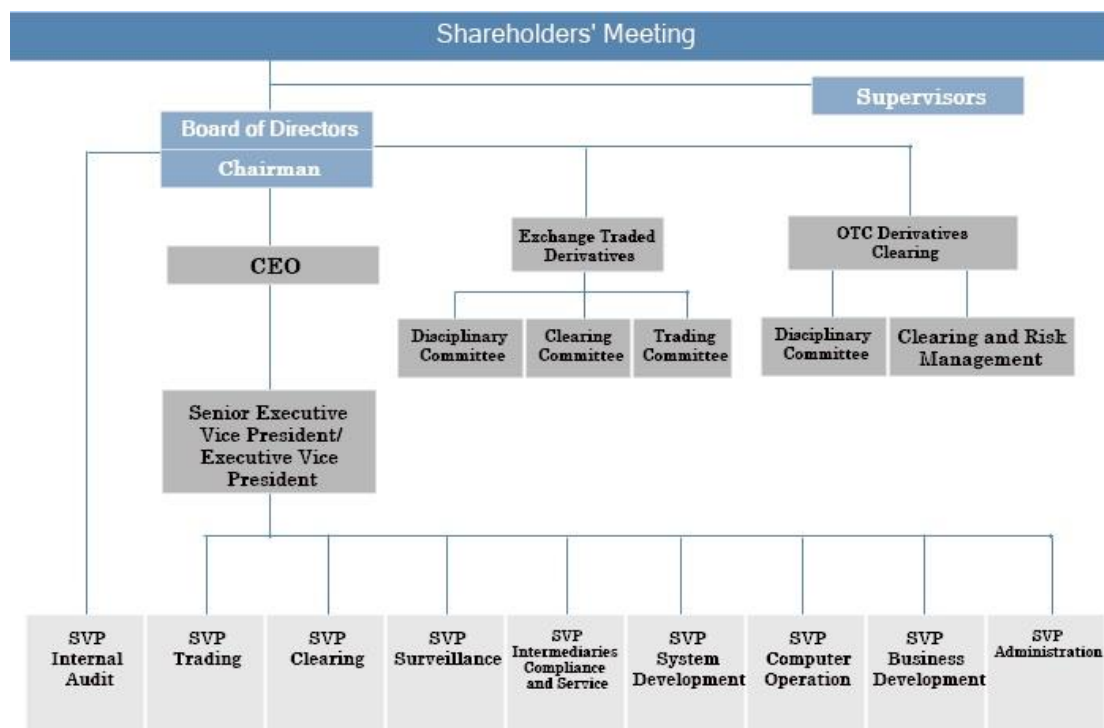
TAIFEX is composed of eight departments along with Internal Audit Office.

- Trading Department is in charge of formulating and amending trading related rules and regulations, matching orders, posting prices, compiling trading statistics, supervising TAIFEX's participating firms, and maintaining market order.
- Clearing Department is in charge of formulating and amending clearing-related rules and regulations, supervising clearing members and settlement banks, handling clearing and risk

management operations, and administrating the default funds and clearing margins.

- Surveillance Department is in charge of market surveillance operations, as well as analysis and verification of related cases.
- Intermediaries Compliance and Service Department is in charge of maintaining rules and regulations related to FCM and clearing-member compliance issues, monitoring their internal audit operations, examining the financial and business practices of these firms, and providing training to their compliance staff.
- System Development Department is in charge of planning, developing and maintaining application systems, FCM management systems, company website and related systems, and controlling the system-development process.
- Computer Operation Department is in charge of operating and managing computer facilities, and disseminating futures trading information.
- Business Development Department is in charge of product development, international cooperation, business planning, and legal affairs.
- Administration Department is in charge of planning, recruiting and administration of human resources, handling general affairs, managing corporate assets, formulating and implementing office documentation rules, overseeing fund utilization and management, planning and executing budgets, and preparing and reporting financial statements.
- Internal Audit Office is in charge of planning and executing internal audit operations, reviewing the operations of respective departments, and evaluating the achievement of annual performance targets.

## TAIFEX Organizational Structure



### The Board of Directors

Name	Current Position
Mr. Tzu-Hsin Wu	Chairman, Taiwan Futures Exchange Corporation
Mr. Chien-Lung Chou	CEO, Taiwan Futures Exchange Corporation
Dr. Her-Jiun Sheu	Invited Professor, Department of Finance, Ming Chuan University
Dr. Shih-Chuan Tsai	Professor , Graduate Institute of Management, National Taiwan Normal University
Mr. Sherman H. M. Lin	Representative , Taiwan Stock Exchange Corporation
<u>Mr. Han-Chiang Chu</u>	<u>Representative , Taiwan Depository &amp; Clearing Corporation</u>
Mr. Philip Chen	Representative , Taipei Exchange
<u>Jan-Lin Wei</u>	<u>Representative , Taiwan Financial Holdings Co., Ltd.</u>

Name	Current Position
Ms. Hsiao-Ling Chou	Representative , Yuanta Futures Co., Ltd.
Dr. June Hong Yang	Representative , Fubon Securities Co., Ltd.
Dr. Paul C. D. Lei	Representative , Taiwan Cooperative Bank
Mr. I-Yung Mai	Representative , KGI Futures Co., Ltd.
<u>Ms. Pei-Chun Chen</u>	<u>Representative , Mega Securities Co.,Ltd.</u>
<u>Mr. Chung-Tao Chia</u>	<u>Representative , Capital Futures Corporation</u>
Mr. Kuan-Chen Lin	Representative , President Securities Corporation

As of May, 2023

### Supervisors

Name	Current Position
Mr. Wei-yuan Chiang	Representative , SinoPac Securities Corp.
Mr. Michael Yuan-Jen Hsu	Representative , Hua Nan Futures Co., Ltd.
Mr. Wei-Wen Hsu	Representative , Union Bank of Taiwan
Dr. San-Lin Chung	Distinguished Professor, Department of Finance, National Taiwan University
Dr. Shang-Jyh Liu	Honorary Chair/Adjunct Professor , School of Law , National Yang Ming Chiao Tung University; Chairman, TAIWAN Technology Law Institute

As of May, 2023

### **Legal and regulatory framework**

TAIFEX plays the role of both an exchange and clearing house in Taiwan. From a CCP perspective, TAIFEX Clearing serves both the exchange-traded market and the OTC derivative market pursuant to the

Act and its Rules and the OTC Rules. The SFB of the FSC serves as the direct authority of TAIFEX. The SFB is responsible for supervising both securities and futures markets. The FSC is the ultimate financial authority in Taiwan. The FSC granted TAIFEX Clearing as a qualifying CCP (QCCP) in November 2020 and the SFB, as delegated by the FSC, maintains supervision to oversee TAIFEX Clearing compliance with supervisory regulations based on the PFMI on an ongoing basis.

General Background of the FMI – Regulatory Framework

Product		Competent Authority
Listed Derivatives	Equity Index Futures	SFB <a href="https://www.taifex.com.tw/enl/eng7/tradingVolume">https://www.taifex.com.tw/enl/eng7/tradingVolume</a>
	Equity Index Options	
	Equity Futures	
	Equity Options	
	FX Futures	
	FX Options	
	Commodity Futures	
	Commodity Options	
IRS		SFB
NDF		SFB

**System design and operations**

TAIFEX Clearing serves as a futures clearing institution, and plays the role of a CCP to settle transactions between futures buyers and sellers. Participants in TAIFEX Clearing's clearing and settlement services are required to sign settlement agreements separately with TAIFEX Clearing and attain membership status. Depending on the markets involved, TAIFEX Clearing offers three different membership statuses for exchange-traded derivative market: individual clearing member, general clearing member, and special clearing member and two different membership statuses for OTC derivative market: individual



clearing member and general clearing member. Stringent financial requirements have been imposed on these membership statuses to ensure that only the financially strong may undertake these roles. A clearing member's role includes clearing transactions for futures commission merchants and its clients and helping them manage risk. Their existence produces a multi-layered risk framework that enables risk sharing. All clearing members are bound to comply with TAIFEX Clearing's policies and announcements.

It has been clearly outlined in the Rules, the OTC Rules, Operational Key Points of Clearing and Settlement for Futures Commission Merchants and Clearing Members, and other policies that futures commission merchants and clearing members must deposit and withdraw clearing margins within the timeframes specified by TAIFEX Clearing, and must follow TAIFEX Clearing's instructions on margin calls, position adjustments, settlement etc. Timing and rules of the settlement process have been outlined for all listed instruments, and are published on TAIFEX's website for public access.

All futures trading in Taiwan is subject to advanced margin collection (pre-margin). In exchange-traded derivative market, futures brokers are required to collect margins or premiums from traders in the amounts specified by TAIFEX Clearing before accepting trade orders. As well, required initial margin must be collected from clearing members prior to submitting transaction for clearing. To manage futures trading risks, open positions are marked to market at the current market price or the settlement price to calculate real-time gains/losses, and therefore determine the adequacy of current margins. After marking to market, clearing members with insufficient margin will be margin called and are required to place additional margin within the given time. After marking to market, traders with insufficient margin will be margin called by the futures commission merchant and will be required to increase margin account balances to the required level within the given time. Failure to do so will force the futures commission merchant to reject further orders from the trader, and close out the trader's outstanding positions.

As per OTC derivative transaction, the clearing margin deposited by the clearing member must not be lower than the amount required by TAIFEX Clearing before submitting a proprietary transaction or client

transaction to TAIFEX Clearing for clearing. Trade is affirmed by direct transaction between the counterparties or via brokerage by IDBs (inter-dealer brokers). Executed trade details are affirmed via an approved trade affirmation platform then the details are sent to TAIFEX Clearing to make assumption of liabilities.

The clearing of OTC transactions are conducted on each business day during the intraday hours of 09:00 to 17:00. Particularly, upon receipt of an eligible new transaction from a clearing member, TAIFEX Clearing calculates the amount of initial margin and variation margin required to cover the entire portfolio of the that clearing member, including both the new transaction and all existing cleared transactions. TAIFEX Clearing will clear the new trade as deposited collateral by the Clearing member is at least equal to the required amount.

TAIFEX Clearing is responsible for clearing, settling and guaranteeing delivery of confirmed transactions, therefore ensuring the reliability of futures instruments. In addition to providing clearing members with better services, TAIFEX Clearing is also dedicated to the maintenance of market stability and security.

#### IV. Principle-by-principle summary narrative disclosure

##### **Principle 1 : Legal basis**

An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

##### ***Summary Narrative***

**Key consideration 1:** *The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.*

##### **Material aspects and relevant jurisdictions**

TAIFEX concurrently serves as a futures clearing institution, and plays the role of a Central Counterparty (CCP) for exchange-traded derivatives and OTC derivatives markets in Taiwan. Its duties as a futures clearing house include clearing, settlement and guaranteeing for performance of exchange-traded derivatives and OTC derivatives transactions, market supervision, clearing margin management, and resolving of settlement defaults; all of which have been clearly stated in the Act, the Regulations Governing Futures Clearing Houses and TAIFEX's clearing policies.

TAIFEX Clearing is governed by the Act, the Regulation Governing Futures Clearing Houses and relevant rules and regulations of TAIFEX Clearing.

The Act is promulgated by the President of Taiwan and relevant rules and regulations are either set out or approved by FSC, which is the Competent Authority of financial markets as a whole in Taiwan. The Rules and the OTC Rules of TAIFEX are approved by the FSC and legally binding as they are compiled by TAIFEX Clearing and its clearing members.

TAIFEX Clearing serves as a clearing institution, and plays the role of a CCP for futures, which by definition in the Act include both the exchange-traded derivatives (ETD) and OTC derivatives in Taiwan. Its duties as a CCP include:

1. Clearing and settling of executed futures trades;
2. Guaranteeing delivery of futures contracts;
3. Market supervision;
4. Collection and management of collateral;
5. Default management.

The clearing and settlement services provided by TAIFEX Clearing do not extend beyond domestic borders.

### **Legal basis for each material aspect**

TAIFEX's domestic futures clearing services are founded on a clear legal basis, for example: TAIFEX is a limited liability company incorporated in accordance with the Company Act; it has been licensed by the competent authority under the Act to perform futures clearing services. As a futures clearing institution, TAIFEX is bound to comply with the Act, Standards Governing the Establishment of Futures Clearing Houses, and Regulations Governing Futures Clearing Houses when conducting futures clearing business.

Participants in TAIFEX's futures clearing and settlement services and clearing operations of OTC derivatives are required to sign settlement agreements separately with TAIFEX, attain membership status and comply with TAIFEX's policies, rules, announcements and agreement terms before partaking in said services.

**Key consideration 2:** *An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.*

### **Open and defined legal basis**

Prior to any addition (amendment) of the Rules, Market Regulations, the OTC Rules, and the Enforcement Rules, TAIFEX Clearing would arrange public hearings and market surveys to gather opinions from businesses and market participants. In addition, a Trading Committee and a Clearing Committee consisting of industry and academic representatives have been assembled to conduct discussions with the

Board to make sure the additions (amendments) are clear, unambiguous and compliant with laws. TAIFEX Clearing has an obligation to report to the Competent Authority any changes made to its Articles of Incorporation or other policies. Currently, TAIFEX Clearing does not have any rules, procedures or contractual terms that are not consistent with any laws and regulations.

The laws and regulations governing TAIFEX Clearing's business operations as a QCCP are clear and understandable to market participants. The Act and other related regulations are available on FSC's website and other public sources. In accordance with the laws and regulations that recognize TAIFEX Clearing as a QCCP, TAIFEX Clearing must comply all legal arrangements on an ongoing basis to be qualified as a QCCP. All TAIFEX Clearing rules fully satisfy and are consistent with all laws and regulations governing TAIFEX Clearing. Currently, TAIFEX Clearing does not have any rules, procedures or contractual terms that are not consistent with any laws and regulations

**Key consideration 3:** *An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.*

#### **Legal basis for each material aspect**

Prior to implementing any laws or policies that are relevant to the clearing of exchange-traded derivatives and OTC derivatives, TAIFEX Clearing would notify the market through correspondences and announcements, and publish detailed terms on the Law Source Retrieving System of Stock Exchange and Futures Trading (<http://www.selaw.com.tw/>) for public access.

In addition to communicating on its own, TAIFEX Clearing also engages the Chinese National Futures Association to disseminate relevant information and produce informative documents for the market. Additionally, information on clearing services is published on TAIFEX's website.

**Key consideration 4:** *An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under*

*such rules and procedures will not be voided, reversed, or subject to stays.*

### **Enforceability of rules, procedures and contracts**

All rules, procedures and contracts enforced by TAIFEX Clearing are subject to review by TAIFEX's Trading, Clearing Committee for exchange-traded derivatives market and Clearing and Risk Committee for OTC derivatives market (whose members comprise experts from academia and industry participants) and the Board, and are subject to approval by the Competent Authority. Participants in TAIFEX's futures clearing and settlement services and clearing operations of OTC derivatives are required to sign settlement agreements separately with TAIFEX, attain membership status and comply with TAIFEX Clearing's policies, rules, announcements and terms of the agreement before services commence. For this reason, TAIFEX Clearing's rules, procedures and contracts are highly enforceable within the local jurisdiction.

### **Degree of certainty of rules and procedures**

The Act provides the legal basis for TAIFEX Clearing's activities as a CCP, and for any rules, procedures and contracts established to govern its activities. This legal basis ensures certainty that actions taken are not voided, reversed or subject to stays.

**Key consideration 5:** *An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.*

### **Cross-border supervision**

Currently, TAIFEX Clearing's clearing and settlement services are confined only to its own instruments listed for trading and OTC derivatives for clearing, which do not extend beyond domestic borders. As a result, no legal conflicts may arise from cross-border settlements.

## **Principle 2 : Governance**

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

### ***Summary Narrative***

**Key consideration 1:** *An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.*

According to Article 2 of the Regulations Governing Futures Clearing Houses, a futures clearing house has the responsibility to clear, settle and guarantee delivery of futures.

### **Robust financial regulation framework**

TAIFEX Clearing places high value on the security of the futures market. In addition to the measures stated in the Act and Regulations Governing Futures Clearing Houses, TAIFEX Clearing adopts the practice of trial-calculation of gains and losses during trading hours, and simulation of participants' margin accounts in real time. Participants whose margin balances falling below the required level will be notified by margin call during trading hours.

Furthermore, TAIFEX Clearing has ISO-compliant procedures in place to govern daily risk management, clearing and financial practices. These procedures have been designed to ensure both the security and efficiency of its services.

TAIFEX Clearing's financial stability is founded on a robust clearing membership system, where clearing members are required to join TAIFEX Clearing in bearing settlement obligations. In order to bear this burden, strong financial support is essential, and TAIFEX Clearing draws its support from clearing margins, the default fund contributed by clearing members, its own reserves, and the default funds from non-defaulting clearing members which is subject to the cap amount. In case the cap amount is insufficient, TAIFEX Clearing shall fulfill the remaining clearing and settlement obligation.

All internal governance documents of TAIFEX Clearing are reviewed and audited periodically on an ongoing basis to ensure all documents are accurate and fully compliant with relevant laws and regulations. FSC and TAIFEX Internal Audit whereupon conduct exams to satisfy such purpose.

**Key consideration 2:** *An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.*

### **Corporate governance planning**

According to Article 22 of TAIFEX's Articles of Incorporation, TAIFEX is governed by its Board, which consists of fifteen directors and five supervisors, each serving a renewable term of three years. Pursuant to the Act, at least a quarter of TAIFEX's directors and supervisors must be non-shareholders with relevant expertise. TAIFEX complies with legal requirements by having four non-shareholder directors and two supervisors on its Board. Their main responsibilities are to supervise corporate governance practices and conduct regular evaluation on the design and effectiveness of internal control system. Through monthly Board meetings, the Board is regularly informed of the TAIFEX's financial status, thus enabling them to offer guidance and recommendations where appropriate. In addition, TAIFEX has an Internal Audit Office created directly under the Board to supervise financial and business audits on various departments.

Currently, futures clearing in Taiwan is performed by TAIFEX Clearing as a concurrent service, for which TAIFEX Clearing has assembled financial management, clearing, risk management, OTC derivatives clearing and OTC derivatives risk management teams to perform member services, clearing and settlement, and risk management operations, respectively.

TAIFEX also set up Clearing Committee and OTC Derivatives Clearing and Risk Management Committee to review members' financial status, business activities, uses of clearing margins, and contributions and uses



of the clearing and settlement fund.

### **Disclosure of corporate governance**

Information regarding TAIFEX's organizational structure and responsibilities of its Board of Directors, committees and departments have been disclosed on the TAIFEX website. All legal bases for the abovementioned structure and responsibilities can be found on the "Law Source Retrieving System of Stock Exchange and Futures Trading."

**Key consideration 3:** *The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly.*

### **Roles and duties of the Board of Directors**

The Board of Directors is the ultimate decision-making authority within TAIFEX, and Article 27 of TAIFEX's Articles of Incorporation gives the Board of Directors the decision-making authority over the company's business activities. With the exception of items that require shareholders meeting resolutions pursuant to the Company Act, all other decisions can be made by the Board of Directors.

According to Article 28 of TAIFEX's Articles of Incorporation, Board meetings are convened by the Chairperson except for the first meeting of a new Board, which shall be convened by the director who receives the highest number of votes within candidates. All directors must be notified of the convention of Board meetings with a detailed agenda at least three days in advance. However, meetings can be held at a shorter notice in the event of an emergency.

According to Article 29 of TAIFEX's Articles of Incorporation, a Board

resolution is passed only with the presence of more than half of the directors, and with more than half of those present voting in favor, unless otherwise specified in the Company Act.

Directors who are unable to attend meetings personally may appoint another director in writing to attend on their behalf. However, one director may only represent one other director.

Pursuant to Article 178 of the Company Act, shareholders cannot vote, or appoint proxies to vote, on any agendas that present conflicting interests, if doing so may compromise the Company's interests. Paragraph 2, Article 180 of the Company Act also specifies that the number of voting rights held by parties who are prohibited to vote under Article 178 do not count towards total voting rights represented in the meeting, for the purpose of the resolution made.

According to Article 40 of Regulations Governing Futures Clearing Houses, directors, supervisors, committee members and persons of equivalent status in a futures clearing institution are required to recuse themselves from making decisions that involve a conflict of interests.

### **Performance evaluation**

According to Article 15 of TAIFEX's Articles of Incorporation, shareholders meetings are held once a year within six months after the end of a financial year. Shareholders meetings are convened by the Board in compliance with the Company Act.

At the end of each accounting period, the Board of Directors is bound by Article 228 of the Company Act to prepare the following reports and forward them for review by the supervisor thirty days before an annual general meeting:

1. Business report;
2. Financial statements;
3. Earnings appropriation or loss reimbursement proposal.

Furthermore, Paragraph 1, Article 230 of the Company Act requires the Board of Directors to present the abovementioned reports for acknowledgment during an annual general meeting.

**Key consideration 4:** *The board should contain suitable members with*

*the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).*

### **Directors' and supervisors' eligibility**

According to Paragraphs 1 and 2, Article 33 of Regulations Governing Futures Clearing Houses, directors and supervisors of a clearing house must not exhibit any one of the conditions mentioned in Paragraph 1, Article 28 of the Regulations; furthermore, they must possess one of the qualifications listed below:

1. At least 2 years of experience working in a futures institution, in an equivalent position of manager or higher.
2. A total of 5 years of experience or above working in a futures, securities or financial institution, in an equivalent position of manager or higher.
3. A total of 5 years of experience or above in an administrative or managerial role that involves futures, securities or finance, and having been assigned an equivalent position of mid-level officer or above.
4. Having graduated from a local or foreign college or holds an equivalent degree, with adequate proof that the party possesses futures-related knowledge and is capable of managing a futures business.

Where the director or supervisor is a corporate entity, the above rules shall apply to the representative or authorized person of the corporate entity.

TAIFEX's directors and supervisors are elected according to Article 36 of the Act and TAIFEX's director and supervisor election policies. Each director and supervisor serves a term of three years and may be re-elected or reappointed at the end of the term.

TAIFEX has a total of fifteen directors. In order to encourage diversity of opinion within the organization, the Act requires at least one-quarter of the Board to comprise non-shareholders with relevant expertise. Half of these non-shareholder experts are appointed by the Competent Authority while the other half are chosen by Board

members, subject to the Competent Authority's approval.

**Key consideration 5:** *The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.*

### **Roles and responsibilities of the management**

According to Article 34 of TAIFEX's Articles of Incorporation, TAIFEX managers may refer to the President, Senior Vice Presidents, Assistant Vice Presidents, committee members, heads of department and any person acting in a representative capacity.

The President's responsibilities are to execute the Chairperson's instructions and the Board of Directors' resolutions, and oversee the company's business activities in accordance with TAIFEX's Articles of Incorporation and relevant laws.

Responsibilities of Senior Vice Presidents:

1. Assist the President in managing the company's business activities.
2. Perform duties as delegated by the President.
3. Co-ordinate work efforts and demarcate areas of responsibility with other departments.
4. Assume the responsibilities of the President during his/her absence.

Responsibilities of Assistant Vice Presidents are the same as items 1, 2 and 3 of Senior Vice Presidents.

Responsibilities of department heads:

1. Develop business plans and work schedules, and implement accordingly once they are approved.
2. Propose and implement improvements within delegated authorities.
3. Assign tasks among employees and offer supervision and guidance.
4. Conduct performance appraisal, issue rewards and administer disciplinary actions to employees.
5. Develop policies and interpret legal requirements that according to

delegated authorities.

6. Circulation and approval of internal documents.
7. Approval of regular department activities.
8. Any other tasks assigned.

Responsibilities of deputy managers:

1. Assist the department head in managing department affairs.
2. Assume the responsibilities of the department head during his/her absence.
3. Act within the authority delegated by the department head.

### **Experience, skills and integrity**

TAIFEX's President is nominated by the Chairperson to the Board, and is appointed with the support of more than half of the total Board members. The same applies to any subsequent dismissal. TAIFEX's Senior Vice Presidents, Assistant Vice Presidents, chief auditor, and department heads are nominated by the President to the Chairperson, and are appointed with the support of more than half of the total Board members. The same applies to any subsequent dismissal.

To ensure that senior management positions are assumed by employees with the required skills, the Company has complied with Paragraph 1, Article 34 of Regulations Governing Futures Clearing Houses, where no person who meets the conditions described in Paragraph 1, Article 28 of the Act shall serve as a manager of a futures clearing house. In addition, the manager candidate must satisfy one of the following qualifications:

1. At least two years of experience working in a futures institution, in an equivalent position of manager or higher.
2. A total of three years of experience or above working in a futures, securities or financial institution, in an equivalent position of manager or higher.
3. A total of five years of experience or above in an administrative or managerial role that involves futures, securities or finance, and having been assigned an equivalent position of mid-level officer or

above.

4. A total of five years of experience or above working in a futures, securities or financial institution, in an equivalent position of deputy manager or higher.
5. Having graduated from a local or foreign college or holds an equivalent degree, with adequate proof that the party possesses futures-related knowledge and is capable of managing a futures business.

In addition, performance appraisals of personnel graded deputy manager and above are conducted by the President and are approved by the Chairperson. Performance appraisals of the President, the chief auditor and the Internal Audit Office are completed by the Chairperson.

To dismiss the TAIFEX President, a proposal must be raised by the Chairperson and be approved by the Board of Directors with more than half of Board members voting in favor of the decision. To dismiss a Senior Vice President, an Assistant Vice President, the chief auditor, a department head or a deputy manager, the proposal must be raised by the President to the Chairperson and be approved by the Board of Directors with more than half of Board members voting in favor of the decision.

**Key consideration 6:** *The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.*

### **Risk management framework**

The risk management framework adopted by TAIFEX Clearing has been developed based on Regulations Governing Futures Clearing Houses. TAIFEX Clearing's responsibilities include clearing, settlement, and guaranteeing for performance of exchange-traded derivatives and OTC derivatives transactions. At the same time, TAIFEX Clearing has implemented internal control policies under

which the Board of Directors, management and employees shall work together to achieve the following objectives:

1. Sound and efficient operations
2. Reliable financial reporting
3. Regulatory compliance

Operations mentioned above are measurable using indicators such as profitability, performance targets and asset security. TAIFEX Clearing has also identified risk factors that are relevant to its operations, and adopted processes to assess likely impact should any risk materialize. Results of such assessments are helpful towards designing, revising and executing necessary controls to mitigate risks. In the event of an emergency situation, TAIFEX Clearing will continue operations according to its emergency response regulations to ensure the financial stability of the futures market as a whole.

TAIFEX Clearing reviews its internal control systems annually. Processes that are considered outdated or impractical will be revised to ensure the effectiveness of the risk management framework.

#### **Authority and level of independence of risk management and audit personnel**

TAIFEX has an Internal Audit Office created directly under the Board of Directors. It conducts internal audits according to relevant laws and TAIFEX's Articles of Incorporation, and is responsible for developing internal controls within the company, supervising risk management, clearing margins and the default funds, and reporting to the company's supervisors and Board of Directors on such matters.

**Key consideration 7:** *The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.*

#### **Identification and consideration of stakeholder interests**

TAIFEX's Board of Directors comprises representatives from clearing

members, and shareholders and non-shareholders with relevant expertise. These representatives are directly involved in the decision making of TAIFEX's organization, policies and future strategies therefore making sure that stakeholders' interests are well-accommodated.

With regards to identifying and resolving conflicts of interest, TAIFEX complies with Paragraphs 2 and 4, Article 206 of the Company Act, which requires any director who has a personal interest in a matter under discussion at a Board meeting to explain to the Board the nature of such personal interest. Furthermore, directors are not allowed to vote, whether on their own or on behalf of others, in any agenda where their personal interests conflict with that of the company.

### **Information disclosure**

Major decisions of the Board such as stock listing, trade suspension or termination of futures contracts are subject to approval by the Competent Authority, and must be announced to the market prior to implementation. Other material decisions of the Board are disclosed in annual reports.

### **Principle 3 : Framework for the comprehensive management of risks**

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

#### ***Summary Narrative***

**Key consideration 1:** *An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.*

#### **Risks that arise within or are borne by the FMI**

According to Article 3, Article 9, and Article 45, the duties of TAIFEX



include providing clearing services for the future market, futures products, and OTC derivatives. TAIFEX Clearing's operations are prone to a number of risks, the most significant of which include market risk, liquidity risk, credit risk, counterparty risk, business risk, financial risk and management risk.

**FMI's risk management policy**

TAIFEX Clearing currently adopts the following policies and procedures for identifying, measuring, monitoring and managing risk:

1. TAIFEX Clearing is required under Articles 15 and 16 of the Act to outline procedures in its Rules of the Taiwan Futures Exchange Corporation for purposes such as monitoring suspicious activities, handling and penalizing defaults, responding to contingencies, and managing risk in both normal and extreme market conditions for exchange-traded derivatives market. TAIFEX Clearing may publish information regarding any irregular futures trading activities it has discovered during market surveillance. Appropriate actions may be taken against futures trading that presents serious concern to market order.
2. According to Articles 47 and 48 of the Act, a futures clearing house is required to outline procedures in its Rules for purposes such as monitoring the futures market, handling and penalizing defaults, responding to contingencies and managing risk. TAIFEX Clearing may take appropriate actions against clearing members that default on settlement obligation.
3. According to Article 95 of the Act, the Competent Authority is required to establish market surveillance guidelines for the purpose of protecting public interest and maintaining market order. TAIFEX has established the "Regulations Governing Market Trading Surveillance" and "Rules Governing Surveillance of Market Positions" in accordance with Article 5 of "Criteria Governing Oversight of Futures Trading" for the purpose of market surveillance.

TAIFEX Clearing currently adopts the following policies and procedures for managing risks:

1. The definition and treatment of abnormal futures trading have been

outlined in the "Regulations Governing Market Trading Surveillance" to maintain fairness of futures trading and prevent unlawful manipulative acts. Standards for warnings and the limitation of events likely to affect market order have been imposed under "Rules Governing Surveillance of Market Positions" to regulate the position limit standards on futures traders, futures commission merchants and clearing members. These standards are established for maintaining futures market order and security. Furthermore, position monitoring regulations have been stipulated in Chapter 7 of the OTC Rules to control the position centralization risks of clearing members and implement related handling procedures for clearing members that reach the position concentration standards, in order to maintain order in the OTC derivatives market and ensure market well-being.

2. The clearance and settlement of futures trading and OTC derivatives clearing, unless otherwise approved by the Competent Authority, shall be executed by a clearing member with its futures clearing house. To reduce the risk of clearing and settlement default, TAIFEX Clearing has implemented the "Criteria for Clearing Membership" as the first line of defense and "Procedural Guidelines for Clearing Members Unable to Maintain Conformance with Clearing Member Standards" and Chapter 2 Clearing Members of the Enforcement Rules as the basis for reviewing and monitoring clearing members' eligibility. If a clearing member fails to perform its clearing and settlement obligation, the futures clearing house shall appropriate the funds as compensation in the various sources specified in Article 49 of the Act. If a clearing member exhibits any act of default set out in Article 101 of the Rules and Article 53 of the OTC Rules, it may take appropriate actions according to Chapter 12 - "Disposition of Defaults by Clearing Members" of the Rules or Chapter 9 - "Default Management" of the OTC Rules.
3. Article 97-1 of the Act requires all futures exchange, futures clearing house and futures enterprises to establish financial and operational internal control systems. TAIFEX Clearing has incorporated risk management procedures as part of its internal control system.
4. TAIFEX Clearing has implemented a number of risk controls as

part of its internal control system, and utilized a risk management system to help identify, measure, monitor and manage risks. The following is a description of such controls:

Exchange-traded derivatives market

(1) Intra-day position control: Futures positions held by clearing members as well as gains and losses are monitored in real-time during intraday hours. Appropriate measures are taken to keep positions levels within legal requirements.

A. Basis of operations: Articles 5, 6 and 7 of Taiwan Futures Exchange Corporation Rules Governing Surveillance of Market Positions for exchange-traded derivatives.

B. Operating procedures: Every day during trading hours, TAIFEX Clearing monitors margin requirements of new positions by monitoring the system, and trial-calculates clearing members' profits and losses using the trading system (for futures and options), Standard Portfolio Analysis of Risk (SPAN®), and the clearing system both during and post trading periods to evaluate the adequacy of clearing members' margin account balances. If the remaining margin balance of a clearing member is below the margin requirement, TAIFEX Clearing issues an intraday margin call to the member.

(2) Margin requirements and adjustment:

A. Exchange-traded derivatives: Margins are primarily set at a level sufficient to cover two-day losses within a 99% level of confidence; this serves as a security to delivery for both the buyer and the seller.

a. Basis of operations: Taiwan Futures Exchange Corporation Methods and Standards for Receipt of Clearing Margins; Articles 116 and 117 of the Rules.

b. Operating procedures: TAIFEX utilizes the trading statistics management system to recalculate margin standards and SPAN® parameters after market close. If the simulated margin level differs from the actual margin balance to a certain degree, TAIFEX Clearing may

proceed to adjust its margin requirements.

According to Article 43 of the Regulations Governing Futures Commission Merchants and Article 53 of the Rules: Futures commission merchants shall collect in full the margins or premiums required by the regulations of the various futures exchanges before it is allowed to accept futures trading orders.

TAIFEX Clearing requires all margins to be placed in advance; in a futures trade, both the buyer and the seller are required to place cash margins before placing trade orders, which reduces traders' default risks.

- (3) Settlement pricing: Settlements are priced according to the trading rules to ensure accuracy of transaction data.
- A. Basis of operations: Taiwan Futures Exchange Corporation trading rules for various instruments.
  - B. Operating procedures: Every day after market close, TAIFEX Clearing announces the settlement price and open positions for each listed instrument through the trading system (futures and options).
- (4) Limiting new positions: TAIFEX Clearing may no longer allow clearing members adding new position. Clearing members may specify in their brokerage agreements to: limit trading activities if the futures commission merchant is found to have violated rules.
- A. Basis of operations: Article 6-1 and 7 of Rules Governing Surveillance of Market Positions.
  - B. Operating procedures: When any irregularity is found in financial condition, open positions of clearing members, TAIFEX Clearing is authorized under Article 6-1 and 7 of Taiwan Futures Exchange Corporation Rules Governing Surveillance of Market Positions to impose limits on the member's new positions. When a clearing member imposes limits on new positions of its futures commission merchant, such decision must be advised to TAIFEX Clearing via fax or telephone so that controls may be implemented by

TAIFEX's surveillance personnel.

(5) Reviews: TAIEX Clearing conducts regular reviews on clearing members' margin balances, open positions and financial health, and directs special attention to those that present financial, business or credit risks.

A. Basis of operations: Taiwan Futures Exchange Corporation Rules Governing Surveillance of Market Positions.

B. Operating procedures: Every day after market close, TAIEX will inquire via its surveillance system and clearance system and print out reports to monitor concentration of open positions, members with highest open positions, exposures to futures commission merchants, additional margin collected, and members' maintenance margins. TAIEX Clearing will also check the level of adjusted net capital (ANC) and liquidity ratio reported by each member to determine its credibility and financial status. The above information is then consolidated into a "After-market Clearing Member Risk Analysis" report and forwarded for discussion during "Inter-department Meetings."

(6) Disposition of Defaults by Clearing Members:

Exchange-traded derivatives: Defaults by clearing members are handled according to procedures with the emphasis on protecting futures traders' interests and securing TAIEX Clearing's debt entitlements.

A. Basis of operations: Chapter 12 of the Rules.

B. Operating procedures: TAIEX Clearing will resort to the following measures in the event that a clearing member defaults or is rendered unable to fulfill its settlement obligations to TAIEX Clearing:

a. Assemble a Default Action Team.

b. Suspend clearing and settlement services to the defaulting member.

c. Dispose of the defaulting clearing member's positions

and margin funds.

- d. Utilize the default fund.
- e. Conduct a full assessment on the defaulting member's asset status.
- f. Initiate audit of the defaulting clearing member.
- g. Pursue protective measures with respect to TAIFEX Clearing's statutory rights.

#### OTC derivatives market

(1) Intra-day position control: Includes margin check of transactions submission for clearing and the notification of margin shortfalls.

- A. Basis of operations: Article 26, Article 31, and Article 38 of the OTC Rules.
- B. Operating procedures: TAIFEX checks the margins of the transactions submitted by clearing members on a daily basis. If the margin is sufficient, TAIFEX will accept the submitted transactions for clearing. If the margin is insufficient, TAIFEX will not accept the submitted transactions for clearing. Additionally, the clearing system conducts marking to market for clearing members both during and post trading periods. If the remaining margin balance of a clearing member is below the margin requirement, TAIFEX will issue margin call to the member.

(2) Margin collection operation:

A. Initial margin

Used to cover the expected loss caused by price fluctuations in the next 5 days for proprietary accounts of clearing members or in the next 7 days for client accounts.

B. Variation margin/mark-to-market differences

Used to cover losses caused by net present value changes after marking to market of clearing member's positions on the day or in the previous working day.

C. Liquidity risk margin

Used to cover the possible losses caused by insufficient market

liquidity to clearing member accounts.

D. Additional margin

TAIFEX may collect an additional margin from clearing members based on the market situation or the clearing member's position or credit status and other situations deemed necessary by TAI FEX.

- a. Basis of operations: Article 31, Article 32, and Article 33, Article 34, and Article 35 of the OTC Rules.
- b. Operating procedures: Before submitting a proprietary transaction or client transaction to TAI FEX for clearing, the clearing margin deposited by the clearing member may not be lower than the amount required by TAI FEX. Additionally, TAI FEX calculates intra-day and end of day clearing margin for each business day. The margin includes the initial margin requirement, variation margin / mark-to-market differences, liquidity risk margin, and additional margin.

(3) Valuation curve formulation: Used for the valuation of the cleared transactions calculated daily and the basis for margin calculations according to related operations in the OTC Rules.

A. Basis of operations: Article 37 of the OTC Rules.

B. Operating procedures: When TAI FEX handles the valuation of OTC products daily, the reasonability of the product prices must be verified and usable market price information must be selected. However, if no market price information is available, clearing members must provide quotations or handle the matter through interpolation.

(4) Reviews: TAI FEX Clearing conducts regular reviews on clearing members' margin balances, positions and financial status, and directs special attention to those that present financial, business or credit risks.

A. Basis of operations: Article 33 and Article 45 of the OTC Rules.

B. Operating procedures: TAI FEX calculates the position

concentration of clearing members at the end of each day. TAIFEX will send notice to clearing members that exceed the position concentration standards of TAIFEX to be mindful of positions, collect additional margin, or implement other necessary measures to maintain market integrity or the soundness of the OTC derivatives market.

(5) Limiting new positions: TAIFEX Clearing may no longer allow clearing members submitting new transactions according to the regulations.

A. Basis of operations: Article 56 of the OTC Rules.

B. Operating procedures: For defaults caused by financial factors of the clearing members, TAIFEX shall suspend the defaulting clearing member to submit new transactions.

(6) Disposition of Defaults by Clearing Members: Defaults by clearing members are handled according to procedures with the emphasis on protecting customer interests and securing TAIFEX Clearing's debt entitlements.

A. Basis of operations: Chapter 9 of the OTC Rules.

B. Operating procedures: TAIFEX Clearing will resort to the following measures in the event that a clearing member defaults or is rendered unable to fulfill its settlement obligations to TAIFEX Clearing:

a. Convene the Default Management Group.

b. Suspend clearing and settlement services to the defaulting member.

c. Position transfer for the defaulting clearing member.

d. Hedging of defaulting clearing members' positions.

e. Auction for the defaulting clearing member's positions.

f. Utilize the default fund.

g. Conduct a full assessment on the defaulting member's asset status.

h. Initiate audit of the defaulting clearing member.

i. Pursue protective measures in respect of TAIFEX



Clearing's statutory rights.

5. Clearing members are obligated to deposit clearing and settlement funds according to Chapter 13 - "Clearing and Settlement Funds" of the Rules and Chapter 8 - "Clearing and Settlement Fund" of the OTC Rules. Clearing members are also required to increase its deposits to the clearing and settlement fund within the period of time specified by TAIFEX, if any of the conditions mentioned in Article 108 of the Rules or Article 49 of the OTC Rules occurs.
6. According to Chapter 15 - "Market Surveillance and Emergency Measures" of the Rules and Chapter 10 - "Emergency Measures" of the OTC Rules, TAIFEX shall immediately adopt measures to safeguard market order, trading fairness and clearing operation security if the market encounters any one of the situations described in Article 116 of the Rules or Article 66 of the OTC Rules.

**Review of risk management policies, procedures and systems**

TAIFEX Clearing reviews its operating procedures based on analyzes of prevailing risks. It utilizes a risk management system to monitor clearing members' margin balances, open positions and financial health, and directs special attention to those that present financial, business or credit risks.

TAIFEX Clearing regularly reviews the policies, procedures and systems that participants have adopted to manage risks, and supervises flexible adjustments to their policies, procedures and system parameters depending on the prevailing market condition.

1. TAIFEX Clearing recalculates margin standards for each listed instrument every day after trading hours. If the simulated margin level differs from the actual margin balance by a certain degree, TAIFEX Clearing may proceed to adjust its margin requirements. TAIFEX Clearing also monitors margin parameters on a daily basis to determine whether adjustments are needed.
2. In addition to estimating the required default fund amount on a quarterly basis, TAIFEX Clearing also takes the initiative to assess potential default risks of open positions based on current trading activities and price fluctuations, thereby making sure that potential risks are adequately covered by the default fund. Adequacy of the

default fund is also subject to ad-hoc review in whatever circumstances deemed necessary (e.g. occurrence of a significant event in the market).

TAIFEX Clearing follows its "Internal Control Self-assessment Policy" and assesses the effectiveness of its risk management policies, procedures and systems on a regular basis. TAIFEX Clearing also attempts to identify any part of its risk management policies that have become outdated or impractical over time, and assesses likely impacts. These assessments help TAIFEX Clearing adjust its risk management policies, systems, internal controls and regulations in time to accommodate new risks.

**Key consideration 2:** *An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.*

### **Pre-margins and incentives**

1. The collection method for margins used by TAIFEX is the pre-margin mechanism. The buyer and seller in exchange-traded derivatives market must deposit margins to conduct transactions. The transaction parties of the OTC derivatives market shall deposit margins before submitting transactions for clearing.  
As an incentive for upfront placement of clearing margins, TAIFEX Clearing offers to pay time deposit rates on cash that members place as clearing margins.
2. TAIFEX Clearing has developed a robust financial safeguard system where clearing members and TAIFEX Clearing are jointly responsible for settlement and transaction delivery. Source of fund for the financial safeguard system includes clearing members' clearing margins, the TAIFEX Clearing compensation reserve fund, clearing members' contributions to the default fund, and common bonds that are allocated among the non-defaulting clearing members. These, in aggregate, provide strong support to ensure the soundness and success of the market in the event of default.
3. TAIFEX has designed incentives according to the payment order

for default handling, auctions, and OTC default funds. TAIFEX has established the OTC derivatives default fund payment order according to the participation of non-default clearing members in auctions, in order to encourage market participants to participate in default auctions and manage the risks of default losses.

4. In the event where a clearing member undergoes bankruptcy, dissolution, business suspension or default upon its clearing and settlement obligations, TAIFEX Clearing is authorized to transfer such clearing member accounts and the related accounts of futures traders to another member who has executed a succession agreement with the default member. If necessary, TAIFEX Clearing may also order to have the accounts transferred to another member with whom no such agreement has been signed. Clearing members that refuse to accept the above mentioned accounts may be subject to penalties such as fines, revocation of member status, or other actions deemed necessary.
5. In an effort to protect futures traders, TAIFEX has established the "Taiwan Futures Exchange Corporation Rules for Encouraging Reporting of Unlawful Activities on the Futures Market" in which traders are given incentives to report illegal conduct in the futures market.
6. TAIFEX has a Disciplinary Committee consisting of clearing member representatives, scholars, and experts in place to enforce the discipline of the market. The committee exists to supervise compliance and self-discipline among futures commission merchants and clearing members, and provides opinion for cases that violate against laws.

**Provision of information**

1. In addition to making SPAN<sup>®</sup> parameters available for download at specific times of the day, TAIFEX Clearing will also generate new SPAN<sup>®</sup> parameters for futures commission merchants whenever the market exhibits volatility above a certain level. And, aiming to assist market participant in measuring their liquidity risk exposure, TAIFEX Clearing publishes the liquidity indicator information for options and futures contracts on its website. By selecting contract month and strike price, etc., users are able to

obtain certain contract's liquidity indicator as a reference.

2. TAIFEX implements the review operations of Clearing Members Position Concentration Report after market close on a daily basis. TAIEX will remind clearing members that exceed the position concentration standards of TAIEX to be mindful of positions, collect additional margin, or implement necessary measures to protect market order or market well-being. Clearing members are asked to be aware of relevant risks.

### **Control measures**

1. TAIEX Clearing convenes daily inter-department meetings to discuss various issues such as current day's market movements, members' clearing margin balances, and maintenance margin of high-risk traders. Each day, TAIEX Clearing generates a list of traders who have suffered massive losses in the current day and traders who may likely suffer massive losses in the following day, and submits the list for discussion during inter-department meetings. For high-risk traders, TAIEX Clearing will remind the respective clearing members to escalate risk management, and follow up on their responses during the next day's meeting.
2. As a sound risk management practice, clearing members and futures commission merchants are required to monitor and manage customers' positions. In the exchange-traded derivatives market, below are TAIEX Clearing's controls over open positions held by clearing members.

#### **Exchange-traded derivatives market**

- (1). Adjusted net capital (ANC): ANC is the position management criteria generally adopted by global futures exchanges and is computed in accordance with the rules prescribed by the Competent Authority.
- (2). Clearing margin limit: The number of newly increased contracts of each clearing member shall be limited by its excess margin deposits.
- (3). Concentration Risk: If the ratio of the risk exposure for the open positions or the sum of open positions for each options series to

total market positions of each clearing member reaches a certain level, TAIFEX Clearing may require additional clearing margins.

- (4). Losses on open positions: The percentage of the loss on the net open positions of each clearing member to its adjusted net capital shall not exceed the prescribed level.

#### OTC derivatives market

(1) Clearing margin limit: The OTC derivatives transactions which newly submitted for clearing from a clearing member is capped by the total excess margins of such clearing account.

(2) Concentration Risk: If the ratio of the sum of required margin requirement for all clearing accounts of a clearing member to the total required margin requirement for all clearing accounts of all clearing members of each clearing member reaches a certain level, TAIFEX Clearing may require additional clearing margins.

#### 3. Surveillance of Market Positions:

According to the "Rules Governing Surveillance Of Market Positions" and Article 44 and Article 45 of the OTC Rules, TAIFEX stipulated the alarm and restriction standards for clearing members and position concentration standards to conduct market monitoring. Emergency measures will be adopted according to the situation to maintain market order and security.

#### 4. Regular review of the risk management system:

TAIFEX Clearing regularly reviews the policies, procedures and systems that participants have adopted to manage risks, and supervises flexible adjustments to their policies, procedures and system parameters depending on the prevailing market condition.

- (1). TAIFEX Clearing recalculates margin standards for each cleared product every day after trading hours. If the simulated margin level differs from the actual margin balance by a certain degree, TAIFEX Clearing may proceed to adjust its margin requirements. TAIFEX Clearing also monitors margin parameters on a daily basis to determine whether adjustments

are needed.

- (2). In addition to estimating the required default fund amount on a quarterly basis, TAIFEX Clearing also takes the initiative to assess potential default risks of open positions based on current trading activities and price fluctuations, thereby making sure that potential risks are adequately covered by the default fund. Adequacy of the default fund is also subject to ad-hoc review in whatever circumstances deemed necessary (e.g. occurrence of a significant event in the market).

**Key consideration 3:** *An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.*

### **Clearing and settlement risks between TAIFEX Clearing and clearing members**

To participate in clearing and settlement, a party must first register as a clearing member of TAIFEX Clearing. In order to prevent defaults by clearing members, TAIFEX Clearing has established the criteria for clearing membership, separately for exchange-traded derivatives market and OTC derivatives market, which imposes various financial requirements for clearing members of different scopes of operations. Members' financial structures are reviewed on a daily basis to ensure that they continue to satisfy the eligibility requirements. Members that fail to meet the Criteria for Clearing Membership may be instructed to provide explanations and improvement plans, or be reported to the Competent Authority for an official audit. The above measures are intended to gain more insight into clearing members' financial and business performances, which TAIFEX Clearing may keep track and offer guidance where applicable.

### **Custody risk arising from TAIFEX Clearing and settlement banks**

To facilitate transfers of cash margin, TAIFEX Clearing and all clearing members are required to open margin accounts at a settlement bank. Clearing members and their settlement banks are required to sign

separate agreements with TAIFEX Clearing, and settlement banks are bound to act according to TAIFEX Clearing's instructions when facilitating margin payments and receipts between clearing members and TAIFEX Clearing. TAIFEX Clearing and clearing members are prone to the custody risk that arises due to cash margins placed at settlement banks.

TAIFEX Clearing chooses only settlement banks that satisfy certain financial and credit requirements, and with extensive experience in settling securities transactions or futures margins. All banks that TAIFEX Clearing extends banking relationships with are under the supervision of the Banking Bureau of FSC, and are entirely covered by Central Deposit Insurance. All settlement banks are required to implement internal controls, internal audits, accounting controls, operating procedures, levels of approval authorities and any other systems demanded by TAIFEX Clearing or the Competent Authority as part of their business policies.

According to Article 3.2.2 of the Enforcement Rules, TAIFEX shall enter into agreements with the settlement bank and other institutions with which TAIFEX opens margin accounts to establish the following terms and conditions:

1. Where TAIFEX freezes or transfers funds and securities in a clearing member's OTC derivatives clearing margin account in accordance with Article 54, Paragraph 3, Subparagraph 3 and Article 56, Paragraph 1, Subparagraph 2 of the OTC Rules, the settlement bank and other institutions shall proceed according to TAIFEX's instructions.
2. Where the information is needed for it to conduct business, TAIFEX may require settlement banks or other institutions to provide details of clearing members' OTC derivatives clearing margin accounts, and the settlement banks or other institutions shall provide assistance as appropriate.

According to Article 3.2.3 of the Enforcement Rules, the agreements signed by clearing members with the settlement bank and other institutions with which TAIFEX opens clearing margin accounts shall include the following terms and conditions:

1. Where TAIFEX freezes or transfers funds and securities in the clearing member's OTC derivatives clearing margin account in accordance with Article 54, Paragraph 3, Subparagraph 3 and Article 56, Paragraph 1, Subparagraph 2 of the OTC Rules, the clearing member agrees that the settlement bank and other institution will proceed according to TAIFEX's instructions.
2. The clearing member agrees that the settlement bank or other institution may provide details of the clearing member's OTC derivatives clearing margin accounts with TAIFEX at TAIFEX's request.
3. A copy of the contract will be sent to TAIFEX for filing purposes.

The aforesaid provisions to be included in an agreement may be provided in the form of commitment letter to TAIFEX if the OTC derivatives clearing margin account is opened by a clearing member, who is one of the settlement banks and other institutions designated by TAIFEX, at its own financial institution.

TAIFEX Clearing conducts regular assessments to determine whether settlement banks have the financial strength and credit status to protect assets entrusted by TAIFEX Clearing and the clearing members.

### **Related risks derived from TAIFEX and OTC derivative providers**

#### 1. Affirmation Platform

- (1) According to Article 23 of the OTC Rules and Article 4.1.1 of the Enforcement Rules, TAIFEX accepts transactions for clearing. The counterparties in each transaction shall submit the transaction for clearing through an approved trade affirmation platform announced by TAIFEX and complete the affirmation procedure before submitting the transaction for clearing.
- (2) According to Article 4.1.2 of the Enforcement Rules, TAIFEX will not be responsible for the accuracy, immediacy, integrity of transaction data transmission, delay, inability to transmit, completeness, any other damage, or other incidents that can be attributed to the trade affirmation platform arising from problems in the transaction transmission process.

#### 2. Compression Service Provider



- (1) According to Article 8.3.2 of the Enforcement Rules, the clearing member participating in compression shall follow the procedure specified by the compression service provider and apply through compression service provider by the deadline announced by TAIFEX. Clearing member and client participating in compression shall enter into agreements with the compression service providers as appropriate, and must agree that TAIFEX may provide position details on the clearing accounts participating in compression to the compression service providers.
- (2) According to Article 8.3.4 of the Enforcement Rules, TAIFEX is not responsible for the compression performance or efficiency or any other service provided by the compression service providers.

**Liquidity risks arising from TAIFEX Clearing and other securities related institutions**

TAIFEX Clearing, Taiwan Stock Exchange Corporation (TWSE), Taipei Exchange (TPEX) and any institution that provides centralized trading of securities or futures are prone to liquidity risks in the event of a major settlement default, local or foreign crisis, or malfunctions in the trading system. This is especially true if the occurrence is capable of causing high volatility and provoking a chain reaction that would compromise the discipline and security of the market.

TAIFEX Clearing may engage local or foreign institutions in information exchange, technological cooperation, joint investigation and other collaborative arrangements for the purpose of cross-market surveillance. TAIFEX Clearing has signed an Articles for Cross-market Information Exchange and Crisis Management with TWSE, TPEX and Taiwan Depository and Clearing Corporation (TDCC), in which the four parties have agreed to the following:

1. Active reporting:

Any party that discovers any of the following occurrences capable of compromising the safety of TWSE, TPEX and the futures market shall immediately inform all other parties to the Articles. Occurrences subject to common reporting:

- (1). Major political or economic events, local or foreign.
- (2). Major settlement default.
- (3). Malfunction or disruption of trading system.
- (4). Abnormal trading activities of material consequences.

2. Request for confidential information:

Parties to the Articles may request from each other information that they have or control, and is immediately available, for the purposes and to the extent permitted under the Articles.

3. Crisis management and monitoring of abnormal transactions across different markets:

A cross-market crisis management team has been assembled to resolve major cross-market incidents involving securities firms or futures commission merchants. A cross-market monitoring team has been assembled to facilitate contact and coordination in the event of a major trading incident.

**Key consideration 4:** *An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.*

**Scenarios that the FMI may be unable to provide critical operations and services**

TAIFEX Clearing has implemented preventive measures and response procedures to react to any possible emergencies capable of disrupting the market or TAIFEX Clearing's operations. These protocols help minimize damages should a disaster occur, and therefore ensure the safety of the trading and clearing process.

An emergency situation includes:

1. Market-wide incidents:

Natural disasters, accidents, settlement defaults, merchants' or clearing members' defaults, trade or clearing system malfunctions, intranet virus infections, and communication disruptions that affect the entire futures market and TAIFEX as a whole.

2. Emergencies and incidents that are specific to a department.

Once a crisis management action is activated, all departments are bound to provide relevant information and report to the Competent Authority in manners that comply with TAIFEX's Emergency Response Committee Foundation and Operating Guidelines.

**Recovery and resolution plan**

1. TAIFEX Clearing's response procedures for major disasters and system malfunctions

(1). Basis of operations: TAIFEX Clearing has implemented a Business Continuity Plan (BCP) based on the existing "Information Security Management Directions for the Executive Yuan and its Subordinate Agencies" , "ISO27001" and "ISO22301" to guide its Business Continuity Management (BCM). The BCP serves to prevent disruption of key business activities, and incorporates a comprehensive set of response and recovery procedures to minimize disruption and damages in the event of natural disaster, accident, malfunction or malicious conduct. In addition to ISO 27001, TAIFEX is also ISO 22301 (Business Continuity Management System, BCMS) certified, which it specifies the requirements for a management system to protect against, and reduce the likelihood of and ensure business recovers from disruptive incidents.

(2). Response guidelines for emergency and abnormal situations:

A. Pre-incident

Step 1: Establish a reporting network

Step 2: Prepare emergency response manuals

Step 3: Segregate areas of responsibility and assemble task forces

Step 4: Rehearse on a regular and ad-hoc basis

B. During an incident

Step 1: Execute emergency response procedures and file reports

Step 2: Notify the crisis handling meeting convener to hold meetings and make decisions

Step 3: Issue press releases through the spokesperson and report to the Competent Authority

C. Post-incident

Step 1: Conduct reviews after the state of emergency has been dismissed

Step 2: File an "Emergency Response Report"

Step 3: Circulate the "Emergency Response Report" to the Chairperson and retain for future reference

(3). The BCP is subject to practice drill and testing on a yearly basis to ensure that it continues to be effective, and that all personnel involved are familiar with their roles and procedures.

2. Responses to interruptions or malfunctions of the OTC clearing system

(1) Basis of operations: Handled in accordance with the emergency measures listed in chapter 15 of the Enforcement Rules.

(2) Response to interruptions or malfunctions of the OTC clearing system are as follows:

In the event of an interruption or malfunctioning to the clearing system that affects TAIFEX's normal clearing operation, TAIFEX may change the times in the clearing process and notify the clearing members. Under such circumstances, if TAIFEX remains unable to resolve the malfunctioning or interruption before the scheduled clearing date, the clearing process will be postponed, and the clearing members will be notified.

(3) Responses to missing data of the OTC clearing system are as follows:

After TAIFEX eliminates causes of system malfunction or

disruption, if the data in the computer memory of the TAIFEX is fully intact, transactions submitted for clearing shall remain valid in the current business hour. If data in the computer memory of the TAIFEX is lost in part or in whole, transaction that the submission is incomplete for clearing shall be void and shall notify clearing members to resubmit transaction for clearing.

3. Operating procedures in the event of major default by a clearing member that may cause TAIFEX Clearing to default.

(1). Exchange-traded derivatives market

A. Basis of operations: Proceed according to the procedures described in Chapter 12 、 13 and 15 of TAIFEX Clearing's Operating Rules.

B. Actions in the event of major default by a clearing member:

- a. Assemble a Default Action Team.
- b. Suspend the defaulting clearing member's clearing and settlement operations.
- c. Dispose of the defaulting clearing member's positions and margin funds.
- d. Utilize the default fund.
- e. Conduct a full assessment on the defaulting member's asset status.
- f. Initiate audit of the defaulting member.
- g. Pursue protective measures with respect to TAIFEX Clearing's statutory rights.

TAIFEX has stipulated the recovery plan in Chapter 12 、 13 and 15 of TAIFEX Clearing's Operating Rules. During the cooling off period, if the ETD prefunded financial safeguard resources are still insufficient to cover losses due to defaults, cap amounts of non-defaulting clearing members and the funds of TAIFEX may be used to cover the shortfall. At the end of the cooling off period, clearing members and TAIFEX should replenish prefunded financial resources. When TAIFEX defaults or

is insolvent, the TAIFEX shall liquidate all open positions of clearing members through netting (close-out netting).

(2). OTC derivatives market

- A. Basis of operations: Proceed according to the procedures described in Chapter 9 of the OTC Rules.
- B. Operating procedures: TAIFEX Clearing will resort to the following measures in the event that a clearing member defaults or is rendered unable to fulfill its settlement obligations to TAIFEX Clearing:
  - a. Establish default management group (DMG)
  - b. Suspend clearing and settlement services to the defaulting member.
  - c. Position transfer for the defaulting clearing member.
  - d. Hedging of defaulting clearing members' positions.
  - e. Auction for the defaulting clearing member's positions.
  - f. Utilize the default fund.
  - g. Conduct a full assessment on the defaulting member's asset status.
  - h. Initiate audit of the defaulting clearing member.
  - i. Pursue protective measures with respect to TAIFEX Clearing's statutory rights.

TAIFEX has stipulated default handling measures in Chapter 11 of the Enforcement Rules, which includes measures for handling default by clearing members, protection of non-defaulting clients of defaulting clearing member, risk avoidance transactions, auctions, division of default losses, and net amount settlement.

#### **Principle 4 : Credit risk**

An FMI should effectively measure, monitor, and manage its credit exposure to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two largest participants and their affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions. All other CCPs should maintain, at a minimum, total financial resources sufficient to cover the default of the one participant and its affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions.

#### ***Summary Narrative***

**Key Consideration 1:** *An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both.*

#### **Exchange-traded derivatives market**

##### **Financial safeguard resources and source of funding**

According to Article 49 of the Act and the Rules, TAIFEX has established financial safeguard resources in the Exchange-traded derivatives market. TAIFEX's financial stability is founded on a robust clearing membership system, where clearing members are required to join with TAIFEX in bearing settlement obligations. In order to bear this burden, strong financial support is essential, and TAIFEX draws its support from clearing margins, the clearing and settlement fund contributed by clearing members, its own reserves, and the common bond from non-defaulting clearing members which is subject to the cap

amount. In case the cap amount is insufficient, TAIFEX shall fulfill the remaining clearing and settlement obligation. Below are descriptions of each of the measures taken to address credit risks.

1. Pre-margin: Futures contracts are traded in margins, and since settlement defaults are possible by both the buyer and the seller, both sides are required to deposit cash margins. To minimize traders' default risks, TAIFEX requires cash margins to be deposited in advance of any futures transactions.
2. Clearing margin: Clearing members are required to deposit clearing margins depending on the number of positions they hold in their own accounts or on behalf of customers.
  - (1) Intra-day margin calls: According to the "Operational Key Points of Clearing and Settlement for Futures Commission Merchants and Clearing Members," TAIFEX will issue margin calls during trading hours to clearing members in the event that the margin balance of a clearing member does not meet the minimum margin requirement.
  - (2) The post-trading margin calls: According to the "Operational Key Points of Clearing and Settlement for Futures Commission Merchants and Clearing Members," clearing members whose margin balances (for proprietary and customers' positions) fall below the minimum margin requirement after trading hours are required to increase the margins to the required level before the given due time.
3. Clearing and settlement fund: Clearing members are required to make the following contributions to the clearing and settlement fund.

(1) The base clearing and settlement fund

	<u>Individual Clearing Member</u>	<u>General Clearing Member</u>	<u>Special Clearing Member</u>
<u>Initial contribution</u>	<u>20% of paid-up capital or capital fund, subject to a</u>	<u>NTD 40 million</u>	<u>NTD 40 million</u>



	<u>maximum of NTD 40 million</u>		
<u>After operations for one full year</u>	<u>upper limit reduced to NTD20 million</u>	<u>NTD30 million</u>	
<u>For every consigned futures commission merchant</u>	<u>Not applicable</u>	<u>NTD 3 million</u>	
<u>For every new branch office of its contracted futures commission merchant</u>	<u>Not applicable</u>	<u>NTD 1 million</u>	
<u>For every consigned IB or every new branch office of the IBs</u>	<u>NTD 1 million</u>	<u>Not applicable</u>	

(2) Contributions to be paid to the clearing and settlement fund: In order to ensure that the clearing and settlement fund amount is sufficient to cover the default risk of outstanding positions in the futures market, TAIFEX estimates the potential loss from defaults of clearing members using stress tests, and periodically calculates the clearing and settlement fund required for the top one values for the estimated loss of clearing members. All clearing members are required to contribute to the clearing and settlement fund based on the amount computed by TAIFEX subsequent to engaging in clearing and settlement operations and it shall be shared based on

the ratio of the average daily required clearing margin of each clearing members to the average daily required clearing margin of all the clearing members in the last three months.

4. Compensation Reserve Fund: TAIFEX has been contributing 20% of its settlement income on a quarterly basis since operations began. However, TAIFEX is not required to make further provisions once the reserves accumulate to an amount equal to TAIFEX's paid-up capital or 1.5 times the capital funds.
5. Common Bond: If a default remains unsatisfied after the above funds are applied, TAIFEX will invoke the common bond rule, in which the residual balance of the unsatisfied default will be proportionally allocated among the non-defaulting clearing members by respective required contributions to clearing and settlement fund out of all clearing members and is subject to the cap amount. In case the cap amount is insufficient, TAIFEX shall fulfill the remaining clearing and settlement obligation.

### **Credit risk management system**

TAIFEX has implemented a credit risk management system to address credit risks that arise in relation to payment, clearing and settlement. Below is a description of the framework:

1. Criteria for Clearing Membership: TAIFEX applies more stringent standards on clearing members than it does on futures commission merchants, and the standards vary depending on which business items the members apply to perform.
  - (1) Individual Clearing Members: This membership status is for futures commission merchants who wish to clear and settle their proprietary trades and transactions brokered through their brokerage businesses. It requires a minimum paid-up capital of NTD 200 million of the futures commission merchant. Institutions that concurrently operate as futures commission merchants are required to provide dedicated capital funds of at least NTD 80 million for the business. The following financial covenants apply for this membership status:

A. Shareholders' equity ÷ paid-up capital  $\geq$  80%;

- B. For futures commission merchants with paid-up capital or capital funds equal to or above NTD 200 million: adjusted net capital ÷ margins on open positions  $\geq$  20%. For concurrent futures commission merchants with capital funds of at least NTD 100 million but less than NTD 200 million: adjusted net capital ÷ margins on open positions  $\geq$  25%. For concurrent futures commission merchants with capital funds less than NTD 100 million: adjusted net capital ÷ margins on open positions  $\geq$  30%, and must have obtained irrevocable credit limits for futures settlement for at least NTD 60 million from the settlement bank.
- C. Current assets ÷ current liabilities  $\geq$  100%. TAIFEX may require additional clearing margins if  $120\% >$  current assets ÷ current liabilities  $\geq$  100%.
- D. (Total liabilities - traders' equity) ÷ shareholders' equity  $\leq$  80%.
- (2) General Clearing Members: This membership status allows a futures commission merchant to clear and settle its proprietary trades, transactions brokered through its brokerage business, and transactions of other futures commission merchants. A minimum paid-up capital or capital funds of NTD 400 million is required for this membership status. The following financial covenants apply for this membership status:
- A. Shareholders' equity ÷ paid-up capital  $\geq$  80%;
- B. adjusted net capital ÷ margins on open positions  $\geq$  20%.
- C. Current assets ÷ current liabilities  $\geq$  100%.
- D. (Total liabilities - traders' equity)  $\leq$  shareholders' equity.
- (3) Special Clearing Members: This membership status applies to financial institutions that have been specially permitted by the competent authority to perform futures settlement. These members may only clear and settle transactions for other futures commission merchants. Minimum capital funds of NTD 400 million need to be dedicated for the service. The following financial covenants apply for this membership status:

- A. Shareholders' equity ÷ paid-up capital  $\geq$  100%;
- B. adjusted net capital ÷ margins on open positions  $\geq$  20%.
- C. Current assets ÷ current liabilities  $\geq$  100%.
- D. (Total liabilities - traders' equity)  $\leq$  shareholders' equity.

## 2. Margin system

- (1) Pre-margin: Futures contracts are traded in margins, and since settlement defaults are possible by both the buyer and the seller, both sides are required to deposit margins. To minimize traders' default risks, TAIFEX requires margins to be deposited in advance of any futures transactions.
- (2) Clearing margins: TAIFEX collects clearing margins from clearing members based on the gross margining method. According to this method, the positions under each clearing member's account will be margined on a gross basis.
- (3) Margin requirement: TAIFEX calculates clearing margin levels according to Taiwan Futures Exchange Corporation Methods and Standards for Receipt of Clearing Margins on a daily basis, then compares whether current margin levels are sufficient to cover prevailing market risks.
- (4) Margin adjustments: TAIFEX may adjust margin requirements if the level of required margin, calculated after the close of trading each day, differs from the amount of margins collected by more than a certain percentage. Once margin adjustment is announced, the new margin level will take effect from the effective date (one business day after the date of announcement, after trading hours).

## 3. Marking to market

- 1. Intraday real-time calculation of gains and losses: To ensure transaction security within the market, TAIFEX adopts the practice of trial-calculating gains and losses on an intraday basis utilizing market prices. Clearing members who have actual margin balances falling below the required balance will receive margin call immediately from TAIFEX during trading hours.
- 2. Daily settlement price: TAIFEX determines the daily settlement

price for each contract so that futures commission merchants and clearing members may calculate gains and losses on traders' open interest.

3. The post-trading margin calls: According to the "Operational Key Points of Clearing and Settlement for Futures Commission Merchants and Clearing Members," clearing members whose margin balances (for proprietary and customers' positions) fall below the minimum margin requirement after trading hours are required to increase the margins to the required level before the given due time.

4. Exposure monitoring

(1) Adjusted net capital (ANC): The position management criteria are commonly used by foreign futures exchanges and clearing houses. Calculation of ANC has been defined by the competent authority.

(2) Clearing margin: The amount of new positions that a clearing member may undertake is capped by the excess amount of clearing margins placed with TAIFEX.

(3) Concentration risk: If the ratio of the risk exposure for the open positions or the sum of open positions for each options series to total market positions of each clearing member reaches a certain level, TAIFEX Clearing may require additional clearing margins.

(4) Losses on open interest: Losses on clearing member's net open interest are capped at a certain percentage of its adjusted net capital.

5. Safeguard system: comprising clearing margins, clearing members' contributions to the clearing and settlement fund, TAIFEX's compensation reserve fund, and the common bond from non-defaulting clearing members which is subject to the cap amount. In case the cap amount is insufficient, TAIFEX shall fulfill the remaining clearing and settlement obligation. These, in aggregate, provide strong support to maintaining market discipline and guaranteeing settlement in the event of default.

**OTC derivatives market**

**OTC financial safeguard resources and source of funding**

According to Article 49 of the Act, the OTC Rules, and the Enforcement Rules, TAIFEX has established OTC financial safeguard resources in the OTC derivatives market. The sources of the OTC financial safeguard resources fund include clearing margins, the OTC compensation reserve fund contributed by TAIFEX, the OTC derivatives default fund contributed by clearing members, and the pro rata ratio of additional contribution on clearing members specified by TAIFEX. If the OTC financial safeguard resources are still insufficient to cover losses due to clearing member defaults, the net payable amounts of non-defaulting clearing members, voluntary deposits of clearing members, the final collateral of TAIFEX may be used. The details are as follows:

1. Pre-margin: TAIFEX uses the pre-margin system for margin collection to reduce the risk of trader defaults. Before a clearing member submits a proprietary transaction or client transaction to TAIFEX for clearing, TAIFEX may require that the clearing member pay a pre-margin so that the excess margins for the clearing accounts are sufficient to pay required clearing margin on newly added cleared transactions.
2. Clearing margin: Refers to the margin deposited by a clearing member at TAIFEX to fulfill their settlement obligations.

Credit exposures covered by the TAIFEX clearing margin include:

- (1) Current risk exposures: TAIFEX calculates the variation margin/mark-to-market differences. The net present value of transactions are recalculated according to the latest market price and daily mark to market, in order to cover the daily changes to income.
- (2) Future risk exposures: The interest rate and exchange rate fluctuations used to calculate the clearing contract valuation in the last 5 years by TAIFEX are used to estimate initial margins that are calculated as the expected loss at a 99.5% confidence interval and the expected losses during the stress period chosen by TAIFEX that at least covers net present value changes over 5 business days for proprietary clearing accounts and 7 business days for client clearing accounts of the clearing member. TAIFEX may calculate and charge an additional liquidity risk

margin based on PV01, which is the change in net present value as a result of a 0.01% change in interest rates, in excess of the threshold that TAIFEX sets for the corresponding period.

Furthermore, to avoid setting the margin amount too low due to fluctuations in the underlying asset price, leading to the inability to cover the risks related to sudden increases in fluctuation of the underlying asset price, anti-procyclicality margin considerations are included. Apart from adjusting the fluctuation factors through the EWMA, the lower limit for underlying asset price fluctuations has been stipulated to cover the margin required for risk fluctuation calculations.

TAIFEX conducts intraday, end of day, and ad hoc calculations of required clearing margin, and issues margin deposit notifications to clearing members.

- (1) Intraday margin deposit notification: At 12 PM every business day, or when major market changes occur, TAIFEX uses the intraday valuation to calculate the results. If the clearing margin balance of a clearing account is lower than the required clearing margin, TAIFEX will issue a margin deposit notification for the shortfall to the clearing member.
- (2) End-of-day margin deposit notification: During daily clearing, TAIFEX will handle the end of day margin collection and payment notification in the next business day according to the end of day valuation results.
  - A. The payment/deposit is to be made without notice based on the clearing margin cash balance, variation margin and mark-to-market differences of the account. Where there is a shortfall, TAIFEX will notify the clearing member to make a deposit.
  - B. Where the clearing margin balance on a clearing account is lower than the required clearing margin, TAIFEX will notify the clearing member to make a deposit according to the amount of the shortfall.
- (3) Ad hoc margin deposit notification: Where the clearing margin balance on a clearing account is lower than the required clearing

margin after the ad hoc valuation calculation based on market conditions, TAIFEX will issue a margin deposit notification for the shortfall to the clearing member.

3. OTC derivatives default fund: Clearing members must contribute to the OTC derivatives default fund as shown in the table below.

(1) The base OTC derivatives default fund

	<u>Individual Clearing Member</u>	<u>General Clearing Member</u>
<u>Pre-start up deposit</u>	<u>NTD20 million.</u>	<u>NTD30 million.</u>

- (2) Contributions to be paid to the OTC derivatives default fund: In order to ensure that the OTC derivatives default fund amount is sufficient to cover the default risk of OTC market positions, TAIFEX estimates the potential loss from defaults of clearing members using stress tests, and periodically calculates the clearing and settlement fund required for the top 2 total values for the estimated loss of clearing members. All clearing members are required to contribute to the OTC derivatives default fund based on the amount computed by TAIFEX subsequent to engaging in clearing operations of OTC derivatives.

4. OTC compensation reserve fund: TAIFEX made an one-time provision of NTD500 million after startup and has contributed 20% of its settlement income on a quarterly basis. However, TAIFEX is not required to make further provisions once the reserves accumulate to an amount equal to TAIFEX's paid-up capital or 1.5 times the capital funds.
5. Sharing of losses among non-defaulting clearing members according to the specified ratio: The pro rata ratio and pro rata amount cap of contributions by non-defaulting clearing members stipulated by TAIFEX when the three aforementioned amounts are insufficient to cover default losses.
6. Recovery and Resolution Plan (RRP): If the OTC financial safeguard resources are still insufficient to cover losses due to



defaults, the net payable amounts of non-defaulting clearing members, voluntary deposits of clearing members, and the funds of TAIFEX may be used to cover the shortfall.

**Credit risk management system**

TAIFEX has implemented a credit risk management system to address credit risks that arise in relation to OTC derivatives market payment, clearing and settlement. Below is a description of the framework:

1. Criteria for Clearing Membership: TAIFEX clearing members are limited to financial institutions, and the standards vary depending on which business items the members apply to perform.

(1) Individual Clearing Member: Refers to the handler of clearing operations for proprietary OTC derivatives. The financial standard is a minimum paid-in capital of NTD2 billion. The financial structure requirements are as follows:

<u>Item</u>	<u>Types of financial institutions</u>	<u>Financial structure requirements</u>
<u>capital adequacy ratio</u>	<u>Bank</u>	<u>≥ 10.5%</u>
	<u>Insurance enterprise</u>	<u>≥ 200%</u>
	<u>Securities firm</u>	<u>≥ 200%</u>
	<u>Bills finance company</u>	<u>≥ 8%</u>
	<u>A subsidiary under the Financial Holding Company Act, its financial holding company or a foreign financial holding company</u>	<u>≥ 100%</u>
<u>Adjusted net capital</u>	<u>Futures commission merchant that currently operates as a leverage</u>	<u>The adjusted net capital shall not be less than 30% of the total</u>

	<u>transaction merchant</u>	<u>amount of customer margins required for the open positions of futures traders.</u>
<u>Net worth ratio</u>	<u>Insurance enterprise</u>	$\geq 3\%$

(2) General Clearing Member: Refers to the handler of clearing operations for proprietary and client OTC derivatives. The financial standard requires a minimum paid-in capital of NTD8 billion. The financial structure requirements are as follows:

<u>Item</u>	<u>Types of financial institutions</u>	<u>Financial structure requirements</u>
<u>capital adequacy ratio</u>	<u>Bank</u>	$\geq 10.5\%$
	<u>Securities firm</u>	$\geq 200\%$
<u>Adjusted net capital</u>	<u>Futures commission merchant that currently operates as a leverage transaction merchant</u>	<u>The adjusted net capital shall not be less than 30% of the total amount of customer margins required for the open positions of futures traders.</u>

## 2. Margin system

(1) Pre-margin: TAIFXE uses the pre-margin system for margin collection to reduce the risk of trader defaults. Before a clearing member submits a proprietary transaction or client transaction to

TAIFEX for clearing, TAIFEX may require that the clearing member pay a pre-margin so that the excess margins for the clearing accounts are sufficient to pay required clearing margin on newly added cleared transactions.

- (2) Margin requirement: TAIFEX calculates clearing margin levels according to the OTC Rules on a daily basis, then compares whether current margin levels are sufficient to cover prevailing market risks.

### 3. Marking to market

- (1) Intraday margin deposit notification: At 12 PM every business day, or when major market changes occur, TAIFEX uses the intraday valuation to calculate the results. If the clearing margin balance of a clearing account is lower than the required clearing margin, TAIFEX will issue a margin deposit notification for the shortfall to the clearing member.

- (2) End-of-day margin deposit notification: During daily clearing, TAIFEX will handle the end of day margin collection and payment notification in the next business day according to the end of day valuation results.

A. The payment/deposit is to be made without notice based on the clearing margin cash balance, variation margin and mark-to-market differences of the account. Where there is a shortfall, TAIFEX will notify the clearing member to make a deposit.

B. Where the clearing margin balance on a clearing account is lower than the required clearing margin, TAIFEX will notify the clearing member to make a deposit according to the amount of the shortfall.

- (3) Ad hoc margin deposit notification: Where the clearing margin balance on a clearing account is lower than the required clearing margin after the ad hoc valuation based on market conditions, TAIFEX will issue a margin deposit notification for the shortfall to the clearing member.

### 4. Exposure monitoring

- (1) Clearing margin limit: The number of newly increased contracts

of each clearing member shall be limited by its excess margin deposits.

(2) Concentration Risk: Clearing member position concentration is based on the ratio of the sum of required margin requirement for all clearing accounts of a clearing member to the total required margin requirement for all clearing accounts of all clearing members. For those who meet the specific standard, TAIFEX may adopt the following measures:

A. Warning standard: If the position concentration of a clearing member reaches 15%, and the required margin requirement meets TAIFEX's standard, TAIFEX shall notify the clearing member to be aware of their position concentration.

B. Disposition standard: For clearing members whose position concentration reaches 20% and required clearing margin reaches a certain level, apart from notifying the clearing members of the position concentration, TAIFEX will collect additional margin or adopt other necessary measures to maintain market integrity or the soundness of the market.

5. OTC financial safeguard resources and recovery and handling measures: The sources of the fund include clearing margins, the OTC compensation reserve fund contributed by TAIFEX, the OTC derivatives default fund contributed by clearing members, and the pro rata ratio of additional contribution on clearing members. If the OTC financial safeguard resources are still insufficient to cover losses due to defaults, funds may be acquired from the net payable amounts of non-defaulting clearing members, voluntary deposits of clearing members, and the final collateral of TAIFEX, in order to maintain the settlement operations and market safeguard in the event of defaults.

**Key Consideration 2:** *An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.*

**Source and types of credit risk**

Credit risk includes risk of clearing member's default and default of

banks in which the default fund or clearing margins are held in custody.

Clearing members' credit risk may include:

1. The possibility that futures merchants or customers may default on settlement obligations, thereby causing the clearing member to be unable to fulfill its settlement obligations to TAIFEX, to the extent that it may impair the entire futures market or OTC market.
2. The possibility that clearing members may default on their settlement obligations to TAIFEX, to the extent that it may impair the entire futures market or OTC market.

### **Management of credit risks arose from clearing member**

TAIFEX calculates the clearing margin levels of exchange-traded derivatives and OTC derivatives transactions according to Taiwan Futures Exchange Corporation Methods and Standards for Receipt of Clearing Margins and the OTC Rules on a daily basis, then compares whether current margin levels are sufficient to cover prevailing market risks. Descriptions of the risk management tools used by TAIFEX are as follows:

1. Exchange-traded derivatives market
  - (1) Daily monitoring and clarification of credit risks
    - A. Pre-margin: TAIFEX uses the pre-margin system for margin collection to reduce the risk of trader default. The buyer and seller must deposit the margin to conduct trading.
    - B. Intraday calculation of gains and losses: To ensure transaction security within the market, TAIFEX Clearing adopts the practice of trial-calculating gains and losses on an intraday basis utilizing market prices. Clearing members who have actual margin balances falling below the required balance will receive margin call from TAIFEX Clearing during intraday hours.
    - C. End of Day margin calls: Clearing member's margin balances fall below the minimum margin requirement after settlement cycle is required to increase the margins to the

required level before the given due time.

D. Controls over clearing members' open positions, including:

(i) Clearing margin limit: The number of newly increased contracts of each clearing member shall be limited by its excess margin deposits.

(ii) Concentration Risk: If the ratio of the risk exposure for the open positions or the sum of open positions for each options series to total market positions of each clearing member reaches a certain level, TAIFEX Clearing may require additional clearing margins.

(iii) Losses on open positions: The percentage of the loss on the net open positions of each clearing member to its adjusted net capital shall not exceed the prescribed level.

(2) Regularly review the clearing member's financial status on a daily and monthly basis

A. Review the adjusted net capital and liquidity ratio of clearing members on a daily basis.

B. Review the futures commission merchant monthly transaction reports, monthly accounting reports, income and expenditure statement, and monthly financial ratio statement on a monthly basis.

2. TAIFEX Clearing may take the following measures when a clearing member exhibits abnormal financial, business or credit status in exchange-traded derivatives market:

(1) Adjust the amount of clearing margins

(2) Issue multiple intraday margin calls

(3) Order liquidation of futures contracts in whole or in part

(4) Suspend its handling of clearing and settlement business other than for disposal of existing transactions.

(5) Any other measures necessary to maintain market order or to protect futures trading.

By monitoring daily market activities, margin maintenance, and

clearing members' ANC ratio, open interest, and risk exposure etc., TAIFEX produces "After-market Clearing Member Risk Analysis" reports and raises them for discussion in "Inter-department Meetings" as a means of managing risks and taking appropriate measures.

3. OTC derivatives market

(1) Daily monitoring and clarification of credit risks

- A. Pre-margin: TAIFEX uses the pre-margin system for margin collection to reduce the risk of trader default. Both parties must deposit the margin to submit transactions for clearing.
- B. Intraday calculation of gains and losses: At 12 PM every business day, TAIFEX uses the intraday valuation to calculate the results. If the clearing margin balance on a clearing account is lower than the required clearing margin, TAIFEX will issue a margin deposit notification for the shortfall to the clearing member. When major market price changes occur, TAIFEX will issue a margin deposit notification for the shortfall to the clearing member according to the ad hoc valuation of the market, where the clearing margin balance on a clearing account is lower than the required clearing margin after the calculation above.
- C. End of Day margin calls: During daily clearing, TAIFEX will handle the end of day margin collection and payment notification in the next business day according to the end of day valuation results.
  - (i) The payment/deposit is to be made without notice based on the clearing margin cash balance, variation margin and mark-to-market differences of the account. Where there is a shortfall, TAIFEX will notify the clearing member to make a deposit.
  - (ii) Where the clearing margin balance on a clearing account is lower than the required clearing margin, TAIFEX will notify the clearing member to make a deposit according to the amount of the shortfall.

- D. Controls over clearing members' open positions, including:
- (i) Clearing margin limit: The number of newly increased contracts of each clearing member shall be limited by its excess margin deposits.
  - (ii) Concentration Risk: For clearing members whose ratio of the sum of required margin requirement for all clearing accounts of a clearing member to the total required margin requirement for all clearing accounts of all clearing members, apart from notifying the clearing members of the position concentration, TAIFEX will collect additional margin or adopt other necessary measures to maintain market integrity or the soundness of the market.
- (2) Regularly review the clearing member's financial status on a monthly and semi-annual basis according to Article 13.1.1 of the Enforcement Rules as follows:
- A. Financial report: Review monthly reports of clearing members on a monthly basis.
  - B. Capital adequacy: Review the financial structure related to the declared businesses of clearing members on a semi-annual basis.
- (3) Monitor the potential credit risks of major events in real time: According to Article 13.1.1 of the Enforcement Rules, the clearing member shall report major business changes, including the inability to maintain the clearing membership, capital reductions exceeding a certain level, suspension or termination of operations, concerns regarding the occurrence of defaults, and other major incidents that affect the financial structure.
4. According to Article 33, 45, 66 and 67 of the OTC Rules, the TAIFEX may collect an additional margin from clearing members based on the market situation or the clearing member's position or credit status and other situations deemed necessary by the TAIFEX; the calculation and collection method shall be separately prescribed by the TAIFEX. If the positions of clearing members reach the



position concentration standard, TAIFEX may adopt the following measures:

- (1) Notify the clearing member to pay attention to its positions.
- (2) Impose additional margin.
- (3) Other necessary measures to maintain market integrity or the soundness of the market.

In summary, the measures related to margin management during trading hours, after-hours, or calculated dynamically, position management, daily settlement, and market pressure testing and analysis, established by TAIFEX, strengthens risk monitoring and alarms through pre-margin collection, daily marking to market, and margin calls.

### **Selection of settlement banks**

A default by the bank in which the settlement fund and clearing margin of TAIFEX are deposited in custody may render TAIFEX unable to withdraw the settlement fund or clearing margin for their intended purposes. For this reason, TAIFEX selects custodian banks for its settlement fund and clearing margin based on the criteria specified in Letter No. Financial-Supervisory-Securities-Futures-1060047163 issued by the competent authority on December 8, 2017, and Letter No. Taiwan-Futures-Clearing-10603011770 issued by TAIFEX on December 29, 2017. Detailed criteria are listed below:

### **Selection standard of settlement banks**

1. Financial qualifications: The selection conditions are stipulated according to the net value, capital adequacy ratio, liquidity, and profitability of the domestic financial institution.
2. Business experience: Must possess experience related to book-entry transfers in the securities market or collection and payment of futures related margins.
3. Credit status: Rated above the long- and short-term securities investment grade by international and domestic credit rating agencies.

4. Operational qualifications: Operations and services provided to clearing members and TAIFEX.
5. Price competitiveness: Provide the interest rate for the custodian accounts of TAIFEX, overdraft and loan interest rates, and securities custodian fee.
6. Crisis management abilities: Provide backups for online functions and response measures for network interruptions.

#### **Periodic review of the settlement bank qualifications**

1. For local banks (including Taiwanese subsidiary of a foreign bank):
  - (1) The common equity ratio, tier 1 capital ratio, and capital adequacy ratio must not be lower than the minimums mentioned in Article 5 of Regulations Governing the Capital Adequacy and Capital Category of Banks.
  - (2) The liquidity coverage ratio of domestic banks must comply with Article 3 of the Standards for Bank Liquidity Coverage Ratios.
  - (3) The long-term credit rating must comply with Article 5 of TAIFEX's funds allocation guidelines.
2. For a Taiwanese branch of a foreign bank, the head office must have attained the following credit rating:
  - (1) The short-term credit rating must comply with the criteria specified in Letter No. Financial-Supervisory-Securities-Futures-1060047163 issued by the competent authority on December 8, 2017
  - (2) The long-term credit rating must comply with Article 5 of TAIFEX's funds allocation guidelines.

TAIFEX deposits clearing and settlement funds and clearing margins in multiple banks as a means to diversify the credit risk of settlement banks. TAIFEX currently utilizes 8 banks for transaction clearing, which includes 7 local banks and 1 foreign bank. There are 5 settlement banks for the OTC derivatives market, which are all local banks.

**Key Consideration 3:** *A payment system or SSS should cover its*

*current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the system.*

**TAIFEX does not have a DNS or a DNS SSS to guarantee settlement**

[This key consideration is not applicable to CCPs]

**Key Consideration 4:** *A CCP should cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources (see Principle 5 on collateral and Principle 6 on margin). In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains.*

**Coverage of current and future risk exposures of each participant**

1. Margin system

(1). Pre-margin

TAIFEX uses the pre-margin system for margin collection to

reduce the risk of trader default. The buyer and seller in the futures market must deposit the margin for the new position to conduct trading. The transaction parties of the OTC derivatives market shall provide margins for the new position before submitting for clearing.

(2). Required margin

A. Exchange-traded derivatives market

Current exposure based on mark-to-market and potential future exposure based on analysis of historical price movements which margin will be collected. For exchange-traded derivatives, the required margins are primarily set at covering two-day price volatility within a 99% level of confidence and includes anti-procyclical effects of margins. If a major market event occurs, TAIFEX Clearing would also flexibly raise the required margin to avoid margin calls and defaults. The amount of margins that clearing members have deposited above the required margin of open positions is known as excess margins. Excess margins can be treated as additional margin that clearing members have deposited to cover future price variations.

B. OTC derivatives market

a. Initial margin: For proprietary accounts and client accounts of clearing members, initial margins are calculated as the expected loss at a 99.5% confidence interval that at least covers net present value changes over a certain period and the expected loss given TAIFEX's chosen stress period. The aforesaid certain period refers to five business days for proprietary accounts of clearing members; and seven business days for client accounts of clearing members.

b. Liquidity risk margin: TAIFEX may require additional liquidity risk margin for the cleared transactions of clearing members' proprietary account and each client account respectively when the change in net present value as a result of a basis point change in interest rates or exchange rates, in excess of the threshold that TAIFEX sets for the corresponding maturities.

c. Additional margin on long weekends/holidays: TAIFEX may calculate additional margin for long weekends/holidays sufficient to cover potential fluctuation risks in cleared transactions during long weekends/holidays according to the clearing member accounts.

2. Contributions to the default fund

TAIFEX has established separate clearing and settlement funds for the exchange-traded derivatives market and OTC derivatives market.

According to Article 3 of TAIFEX's "Regulations Governing Clearing Member Deposits to the Clearing and Settlement Fund Following Clearing and Settlement Operations" and Article 10.1.1 of the Enforcement Rules, the amount of additional clearing and settlement funds to be deposited by clearing members as a whole after the carrying out of clearing and settlement operations shall be the amount by which the total clearing and settlement fund exceeds the base clearing and settlement fund. TAIFEX Clearing adopts the practice of performing quarterly calculations to review the amount the various funds need to cover default risks associated with the futures market's open positions and OTC clearing members in different markets. In addition, TAIFEX Clearing also takes the initiative in monitoring trade activities and price variations to measure the risks of default associated with futures market's open positions and OTC member positions.

3. Stress testing scenarios used for determining adequacy of financial resources

(1). Stress testing of required margins

Every day after market closes, for early warnings purposes, TAIFEX Clearing performs a stress test to estimate the amount of losses clearing members may endure and margin calls for the next business day. Based on results of stress tests, TAIFEX Clearing lists the accounts that may suffer major losses and monitor those accounts or clearing members during trading hours and followed up on margin calls on next business day. Clearing members may be contacted by phone if necessary to

prevent default.

TAIFEX monitors the stress tested margin call accounts during trading hours. The amount of new positions that a clearing member may undertake is capped by the excess amount of clearing margins placed with TAIFEX. TAIFEX issues margin calls during trading hours to clearing members in the event that the margin balance of a clearing member does not meet the minimum margin requirement. The margin requirement is discretionary according to the amount of new positions that a clearing member may undertake.

Stress test scenarios are designed to simulate extreme market conditions given the recent changes in market price, volatility and position. The parameters of stress tests are adjusted according to market conditions.

(2). Stress testing of default fund

A. Exchange-traded derivatives market:

In order to ensure that the clearing and settlement fund is sufficient to cover default risks for outstanding positions in the futures market, TAIFEX uses historical scenarios for stress testing to estimate any single clearing member that are likely to suffer the largest potential losses as total clearing and settlement fund. With the exception of during the cooling-off period, at the beginning of January, April, July, and October of each year, the TAIFEX shall calculate the amount that each clearing member is required to deposit to the clearing and settlement fund. All clearing members shall contribute to the clearing and settlement fund and it shall be shared based on the ratio of the average daily required clearing margin of each clearing members to the average daily required clearing margin of all the clearing members in the last three months.

B. OTC Derivatives Market:

TAIFEX adopts historical scenarios and hypothetical scenarios for stress testing to estimate the two largest total values of possible losses for clearing members, which is used as the OTC clearing and settlement fund total. The amount of additional

OTC derivatives default funds to be contributed by clearing members as a whole shall be divided among the clearing members according to the ratio of the average daily required clearing margin of each clearing members to the average daily required clearing margin of all the clearing members in the last three months.

### **Additional financial resources**

Apart from clearing members' clearing margins and the clearing and settlement fund mentioned above, TAIFEX reserves compensation reserve funds for Taiwan's futures market and OTC market. The compensation reserve funds have been established separately for the exchange-traded derivatives market and the OTC derivatives market. TAIFEX Clearing made an initial provision of NTD 500 million to the compensation reserve fund at startup, and has contributed 20% of its total clearing income on a quarterly basis thereafter. To date, TAIFEX Clearing's compensation reserve fund has amassed to NTD 1.5 billion for the futures market, which accounts for 38% of the pre-paid financial safeguard resources. According to Article 49 of the Act and Article 58 of the OTC Rules, in case a clearing member fails to perform its clearing and settlement obligation, the defaulted clearing member's paid clearing margin shall be used first to cover the default.

If that is insufficient, it shall apply the defaulting member's contribution to the default fund, TAIFEX Clearing's compensation reserve fund, the other clearing members' contributions to the default fund, and amounts to be borne by the other clearing members in proportions determined by TAIFEX Clearing.

Furthermore, NTD 8.2 billion of short-term credit facilities have been obtained from settlement banks to meet market emergencies, as required by the Competent Authority.

Overall, TAIFEX Clearing possesses adequate financial resources to cover all stress scenarios, including the default of clearing members at their highest credit exposure under extreme market conditions.

### **Supporting reasons and corporate governance**

According to Article 55 and Article 38 of the Act, Article 26 of the Regulations Governing Futures Clearing Houses, Article 36 and Article

37 of the Articles of Incorporation of TAIFEX, TAIFEX has established the Clearing Committee for the exchange-traded derivatives market. For the OTC derivatives market, TAIFEX has established the Clearing and Risk Management Committee for OTC derivatives vested with the authority to manage financial resources and review uses of members' clearing margins. The Committee may also recommend clearing margin adjustments to the Board depending on the market's overall risks, and supervise contributions, custody and uses of the default fund.

According to Article 108 of the Rules and Article 49 of the OTC Rules, clearing members that exhibit any of the following are required to make additional contributions to the default fund within the timeframe specified by TAIFEX Clearing. The amount of the contribution is to be determined by the Clearing Committee, and effected with Board' resolution:

1. Irrevocable execution of assets by a court;
2. Dishonor of any issued bills due to insufficient funds where there is no record of cancellation of the dishonored bill;
3. A substandard rating under the TAIFEX's Guidelines for Early Warning of Operational Risk of Futures Commission Merchants and clearing members, or occurrence of consecutive losses and owner's equity lower than 60 percent of paid-in capital; not applicable to OTC derivatives.
4. A substandard rating for internal auditing where improvements have not been made after guidance and reassessment; not applicable to OTC derivatives.
5. Likelihood of an increase in market risk under the provisions of the internal control system of a clearing member or its mandating futures commission merchant, or inability to practically implement provisions of its internal control system;
6. Material violations of laws or regulations or bylaws of TAIFEX Clearing, resulting in multiple instances of sanctions being imposed by the Competent Authority or TAIFEX Clearing without improvement;
7. When the default fund is insufficient to cope with perceived market risk, the TAIFEX Clearing may adjust the default fund



requirements for all clearing members;

8. Other severe unforeseen incidents or upon instructions of the Competent Authority.

**Key Consideration 5:** *A CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing. A CCP should have clear procedures to report the results of its stress tests to appropriate decision makers at the CCP and to use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and assumptions. On at least a monthly basis, a CCP should perform a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining the CCP's required level of default protection in light of current and evolving market conditions. A CCP should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a CCP's participants increases significantly. A full validation of a CCP's risk-management model should be performed at least annually.*

### **Stress testing**

Regarding the exchange-traded derivatives market and the OTC derivatives market, TAIFEX uses stress testing to estimate the default amount to use as the total clearing and settlement fund. TAIFEX has established separate clearing and settlement funds for the exchange-traded derivatives market and OTC derivatives market, and to ensure that the clearing and settlement fund is sufficient to cover potential defaults in the markets, TAIFEX takes the initiative in assessing adequacy of the clearing and settlement fund whenever it believes there is increased risk of defaults in the market. The sufficiency of the fund shall be tested periodically, as explained below:

#### Exchange-traded derivatives market

1. Conduct Stress Testing on daily basis

To ensure that the clearing and settlement fund (default fund) is adequate to cover the default risk of open interest in the futures market, TAIFEX constructs a stress test to estimate the required amount by calculating any single ETD market clearing member that is likely to suffer the highest losses under a stress scenario on daily basis.

2. Evaluate sufficiency/adequacy of default fund on monthly basis

TAIFEX takes the initiative to assess the required default fund on a monthly basis to evaluate stress-testing scenarios and the potential default risks, thereby making sure that potential risks are adequately covered by the default fund. When the clearing and settlement fund is insufficient to cope with market risk, the TAIFEX shall review the total clearing and settlement fund and report the amount to the competent authority for approval and recordation. TAIFEX also reviews the model and parameters, determines the total clearing and settlement fund and reports the amount to the competent authority for approval on an annual basis.

3. Reallocate default fund contribution by risk exposure on quarterly basis

With the exception of during the cooling-off period, at the beginning of January, April, July, and October of each year, the TAIFEX shall calculate the amount that each ETD clearing member is required to deposit to the clearing and settlement fund. Adjustments to the default fund are allocated among ETD clearing members according to the ratio of the average daily required clearing margin of each ETD clearing member to the average daily required clearing margin of all the ETD clearing members in the last three months.

OTC Derivatives Market

1. Conduct Stress Testing on daily basis

To ensure that the default fund is sufficient to cover potential defaults in the OTC market, TAIFEX calculates the potential defaulting losses for OTC clearing members through daily stress tests.

## 2.Evaluate sufficiency/adequacy of defund fund on monthly basis

TAIFEX takes the initiative to assess the required default fund on a monthly basis to evaluate stress-testing scenarios and the potential default risks, thereby making sure that potential risks are adequately covered by the default fund. When the default fund is insufficient to cope with market risk, the TAI FEX shall review the total default fund and report the amount to the competent authority for approval and recordation. TAI FEX also reviews the model and parameters, determines the total default fund and reports the amount to the competent authority for approval on an annual basis.

## 3.Reallocate defund fund contribution by risk exposure on quarterly basis

Except for the cooling-off period, at the beginning of January, April, July, and October of each year, TAI FEX shall calculate the amount of additional OTC derivatives default funds required to be deposited by each clearing member. Adjustments to the default fund are allocated among OTC clearing members according to the ratio of the average daily required clearing margin of each OTC clearing member to the average daily required clearing margin of all the OTC clearing members in the last three months.

## **Review and validation**

For the exchange-traded derivatives market and the OTC derivatives market, TAI FEX adopts the practice of performing quarterly and daily after-market calculations to determine the amount of clearing margins and clearing and settlement funds needed to separately cover default risks associated with the open positions in the exchange-traded derivatives market and clearing member positions in the OTC market. In addition, TAI FEX takes a pro-active approach to review the appropriateness of its existing models and scenarios, and estimate default risk of open interest in exchange-traded derivatives market and positions in the OTC market based on trade volume, price volatility and other stress test parameters on a monthly basis, thereby making sure that the risks are adequately covered by the clearing margins and clearing and settlement fund.

When the company reports the total amount of the clearing and

settlement fund to the competent authority every year, TAIFEX will fully review the stress test model and suitability of the scenarios and parameters concurrently, in order to maintain the risk bearing ability of the clearing and settlement fund.

**Key Consideration 6:** *In conducting stress testing, a CCP should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.*

### **Description of stress test**

#### **Exchange-traded derivatives market**

TAIFEX Clearing constructs stress test scenarios using historical events as adopted by futures exchanges around the world, and estimates stress levels based on the stress presented during the historical event.

Below are descriptions on the scenarios, models, parameters, and assumptions used in a stress test analysis:

1. Parameters on price volatility for stress tests

TAIFEX Clearing constructs stress test scenarios using historical events as adopted by futures exchanges around the world, and estimates price volatility based on the level of volatility presented during the historical event. When applying stress tests on clearing members' gains/losses, TAIFEX Clearing adopts scenarios of extreme but possible volatility on the price of futures and options as the basis for clearing members' stress tests.

2. Estimating gains/losses for each trading account

The possible gains/losses that each clearing member may be prone to are estimated by summing up trading accounts' gains/losses on open positions, after considering the risk-

mitigating effects of a trading account.

3. The adequacy of the default fund is assessed based on any single clearing member that presents the highest losses under stress scenarios

(1) Central Counterparties such as Chicago Mercantile Exchange (“CME”) defines the total size of default fund based on total amount of the two clearing members that present the highest losses under stress scenarios.

(2) IOSCO recommends setting the amount of the default fund based on the greatest possible losses estimated from a number of stress test scenarios.

When evaluating the adequacy of TAIFEX Clearing's default fund, any single clearing member that presents the highest losses is used for determining the size of the default fund.

4. Description of the calculation procedures

(1) Estimate gains/losses on open positions given extreme but possible price changes.

(2) A trading account presents risks of default if the sum of losses for the trading account and the account's initial margin is negative.

(3) A clearing member's possible losses are equal to the sum of estimated trading account defaults.

(4) The amount for the potential default given a rise in price is calculated as any single clearing member that is likely to suffer the greatest losses.

(5) The amount for the potential default given a fall in price is calculated as any single clearing member that is likely to suffer the greatest losses.

(6) Take the higher between losses given a rise and fall in price to estimate the default fund.

### **OTC derivatives market**

After referencing the methods of international organizations and

clearing institutions, TAIFEX adopted the Historical Stress Scenarios and Hypothetical Scenarios for stress testing to analyze the response of the OTC market during major events, in order to ensure that TAIFEX financial resources are sufficient to defend against exposure in extreme but possible situations. The stress test models and parameters are periodically reviewed. Below are descriptions on the scenarios, models, parameters, and assumptions used in a stress test analysis:

1. Stress test parameters

- (1) Historical Stress Scenarios: The interest rate and exchange rate fluctuations of major past events and changes to the yield curves are used for stress testing.
- (2) Hypothetical Scenarios: The following scenarios are used for hypothetical scenario analysis with the CFTC Supervisory Stress Test of Clearinghouses as reference.

	<u>Situation 1</u>	<u>Situation 2</u>	<u>Situation 3</u>	<u>Situation 4</u>
<u>Interest rate price</u>	<u>Increase</u>	<u>Increase</u>	<u>Decrease</u>	<u>Decrease</u>
<u>Exchange rate price</u>	<u>Increase</u>	<u>Decrease</u>	<u>Increase</u>	<u>Decrease</u>

Apart from the 4 basic scenarios above, additional considerations include yield curve changes and events that have occurred in other countries, or possible future scenarios should be considered to configure other theoretical scenarios.

2. Estimating gains/losses for each account

TAIFEX conducts stress testing at the end of each day. The losses for each clearing member is estimated according to the outstanding balance of proprietary accounts and client accounts based on the stress testing. The possible losses for each clearing member is estimated.

3. Assessing the adequacy of the OTC derivatives default fund

According to the suggestions of international OTC clearing institutions and IOSCO, the adequacy of the default fund is assessed based on the total of the two clearing members that present the highest losses under stress scenarios.

#### 4. Description of the calculation procedures

- (1) The losses for each clearing member is estimated according to the outstanding position balance of proprietary accounts and client accounts based on the stress testing.
- (2) The expected uncollateralized loss (EUL) of each account is calculated with the stress testing profit/loss value and collateral balance of each account. When EUL is negative, the account possesses risks of default.
- (3) TAIFEX then sums up the EUL result of all potential default accounts of each clearing member to estimate possible losses each clearing member may be prone to.
- (4) The total loss for the two largest clearing members was estimated under stress testing.
- (5) The largest value of the calculated results described above will be used as the total amount for the OTC derivatives settlement fund.

To ensure that the OTC derivatives default fund is sufficient to cover potential defaults, TAIFEX Clearing is required to perform timely assessments based on a number of factors such as the size of the market, the variety of instruments, asset prices, and volatility. As a conservative approach, TAIFEX Clearing takes the initiative in assessing adequacy of OTC derivatives default fund whenever it believes there is increased risk of defaults in the market.

**Key Consideration 7:** *An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.*

## **Allocation of credit loss**

### **Exchange-traded derivatives market**

In case a clearing member fails to perform its clearing and settlement obligation, the futures clearing house shall first apply the defaulting clearing member's clearing margin to cover the default. If that is insufficient, it shall apply the defaulting member's contribution to the default fund, the compensation reserve fund of the futures clearing house, the other clearing members' contributions to the default fund, and amounts to be borne by the other clearing members in proportions determined by the clearing house, as stipulated in Paragraph 1, Article 49 of the Act.

In the event that a clearing member fails to fulfill settlement obligations and the amount of default cannot be covered after exhausting available resources of reserve funds as the defaulting clearing member's clearing margin, the defaulting member's contribution to the clearing and settlement fund, the compensation reserve fund of the futures clearing house described in Paragraph 1, Article 49 of the Act and in the order under Paragraph 1, Article 105 of the Rules, other clearing members shall share the loss according to Item 4 other clearing members' contributions to the clearing and settlement fund and Item 5 cap amount of the same paragraph. The other clearing members shall deposit the clearing and settlement funds based on the ratio of the amount of the clearing member's required contribution to the clearing and settlement fund to the total amount of all other clearing members' required contributions to the clearing and settlement fund on the business day immediately preceding the first day of the cooling-off period set out in paragraph 3 of the same article.

According to Paragraph 2, Article 105 of the Rules, the cap on the apportioned levies referred to in the preceding paragraph shall be determined as follows: when a single clearing member defaults during the cooling-off period (the period of 20 trading days beginning from the date on which a default by a single clearing member occurs), the cap shall be 150% of other clearing members' respective required contributions to the default fund on the business day immediately preceding the first day of the cooling-off period; when multiple clearing members default during the cooling-off period, the cap shall be 300%



of other clearing members' respective required contributions to the default fund on the business day immediately preceding the first day of the cooling-off period. Any shortfall after the jointly apportioned levies on other clearing members shall be appropriated from the TAIFEX Clearing.

All clearing members are required to pay their share of the losses according to the procedures and timeframe notified by TAIFEX Clearing in writing. Clearing members who refuse to follow procedures or pay their share of the loss may have clearing and settlement services suspended or terminated by TAIFEX Clearing.

#### OTC derivatives market

According to Article 58 of the OTC Rules, TAIFEX Clearing shall first apply the defaulting clearing member's clearing margin to cover the default losses. If it is insufficient, TAIFEX shall apply the default clearing member's OTC derivatives default fund, TAIFEX's OTC derivatives compensation reserve fund, non-clearing member's OTC derivatives default fund at the ratio and amount specified by TAIFEX (referred to below as additional deposit amount).

According to Article 10.2.1 and Article 11.5.2 of the Enforcement Rules, TAIFEX shall decide the payment order according to the following matters for the OTC default fund and additional margin of non-default clearing members:

1. The risk ratio of contracts in each product category in the portfolio of each non-defaulting clearing member to contracts in all product categories on the business day preceding default.
2. Non-defaulting clearing member participating in auctions:
  - (1) A compulsory auction participant who did not make a bid or whose bid was lower than the reserve price
  - (2) A compulsory auction participant who made a bid higher than or equal to the reserve price and lower than the winning bid
  - (3) A compulsory auction participant who made the winning bid or a bid higher than or equal to the winning bid
  - (4) A non-compulsory auction participant

The maximum additional deposit amount of non-default clearing members shall be handled according to the following regulation:

1. If only one clearing member defaults during the cooling-off period, then the limit is 150% of the OTC derivatives default fund to be deposited by the clearing member on the business day before the start of the cooling-off period.
2. If multiple clearing members default during the cooling-off period, then the limit is 300% of the OTC derivatives default fund to be deposited on the business day before the start of the cooling-off period.

Cooling-off period means the period of 20 trading days beginning from the date on which a default by a single clearing member occurs. If a different clearing member defaults before the end of the cooling-off period, then the new end of the cooling-off period is 20 business days from the day the last clearing member defaulted.

For clearing members who do not comply with the additional deposit amount, TAIFEX may suspend its clearing operations or terminate its clearing participant agreement.

### **Replenishment of financial resource**

#### Exchange-traded derivatives market

According to Article 110 of the Rules, TAIFEX Clearing, on the last day of the cooling-off period, shall recalculate the total clearing and settlement fund and the amount of clearing and settlement fund contributions required to be deposited by clearing members. After clearing members' contributions to the clearing and settlement fund are used under Paragraph 1, Article 49 of the Act and Article 109 of the Rules, clearing members are required to replenish the default fund based on the amounts required to be deposited as recalculated within the period of time specified by TAIFEX Clearing.

According to TAIFEX Clearing's Apportionment Procedures for Managing Default by Clearing Members, the amount recovered by the Exchange from the defaulting clearing member shall be indemnified in the following order, after deducting all expenses:

1. Amount paid by TAIFEX Clearing according to Subparagraph 6, Paragraph 1, Article 105 of the Rules of the TAIFEX Clearing.
2. Amount apportioned among the clearing members according to Subparagraph 5, Paragraph 1, Article 105 of the Rules of the TAIFEX Clearing.
3. Amount of default fund paid by the clearing members according to Subparagraph 4, Paragraph 1, Article 105 of the Rules of the TAIFEX Clearing.
4. Amount of compensation reserve fund paid by TAIFEX Clearing according to Subparagraph 3, Paragraph 1, Article 105 of the Rules of the TAIFEX Clearing.

#### OTC derivatives market

Pursuant to Article 60 of the OTC Rules, TAIFEX Clearing shall calculate the total required amount of the OTC derivatives default fund and contributions to be made by clearing members on the last day of the cooling-off period. After the OTC derivatives default fund is utilized during a cooling-off period in accordance with Article 58, Paragraph 1, Subparagraph 4, clearing members must replenish the contribution amount notified by TAIFEX Clearing within the specified period.

Pursuant to Article 64 of the OTC Rules, TAIFEX will seek compensation from defaulting clearing members for funds, interest and necessary overheads used to cover losses in accordance with these Rules.

Amounts recovered from the defaulting clearing member minus expenses must be used to make repayments in following order:

1. The amount paid by TAIFEX in accordance with Article 63.
2. The amount paid by clearing members in accordance with Article 62.
3. The amount paid by clearing members in accordance with Article 61.
4. The amount shared by clearing members in accordance with Article 58, Paragraph 1, Subparagraph 5, recovered in reverse order.

5. The amount of clearing member's OTC derivatives default fund used in accordance with Article 58, Paragraph 1, Subparagraph 4, recovered in reverse order of the utilization order.
6. The amount of TAIFEX's OTC Derivatives Compensation Reserve Fund used in accordance with Article 58, Paragraph 1, Subparagraph 3.

### **Principle 5 : Collateral**

An FMI that requires collateral to manage its or its participant's credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.

#### *Summary Narrative*

**Key Consideration 1:** *An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.*

#### **Acquisition of low-risk collaterals approved by the Competent Authority**

##### Exchange-traded derivatives market

The margin for clearing members and traders may be paid for in cash (NTD or foreign currencies announced by TAIFEX) or securities announced by TAIFEX, in order to ensure liquidity.

Use of securities in lieu of cash margin is governed by TAIFEX's "Guidelines for Futures Commission Merchants and Clearing Members Conducting Operations in Relation to the pledging of securities as Margin Collateral." For futures merchants and clearing members placing securities as margins, the placed securities shall not exceed 50% of the clearing margin. The types of securities that can be placed as margin are determined by TAIFEX and announced once approved by the competent authority. Currently, TAIFEX Clearing only allows securities that are held by sizable investors or those that exhibit relatively lesser risk to be placed as margins. Shares, for example, are allowed only if they meet the internationally accepted "blue chip"

criteria.

For exchange-traded derivative market, TAIFEX Clearing has publicly announced to accept the following securities as margin:

1. Underlying assets of any stock futures and options traded through TAIFEX, any constituent stocks of the FTSE TWSE Taiwan 50 Index, and beneficial certificates of Yuanta/P-shares Taiwan Top 50 ETF.
2. Book-entry central government bonds.
3. Foreign currency-denominated international bonds traded at Taipei Exchange (TPEX) according to Article 3 of its Rules Governing Management of Foreign Currency Denominated International Bonds.

#### OTC derivatives market

According to Chapter 7 of the Enforcement Rules, clearing members and their clients can deposit the margin in cash (NTD or foreign currencies announced by TAIFEX) or central government bonds or other securities announced by TAIFEX, in order to ensure liquidity. Currently, the currencies that TAIFEX announced to be eligible cash collateral are NTD and USD, and the security that TAIFEX announced to be eligible security collateral is only Taiwan central government bonds.

According to article 7.3.1 of the OTC Enforcement Rules, the percentage of bonds in a clearing member's clearing account that can be posted as margin collaterals out of the required clearing margin for the account is 100%, unless otherwise stated by the competent authority or TAIFEX.

**Key Consideration 2:** *An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.*

#### Method of verification

Margins placed in the form of securities are valued every day by applying designated haircut rate; their equivalent margin values are

determined at the lower of traders' open positions and the discounted value.

Securities that TAIFEX Clearing accepts as margin are entirely traded on stock exchanges, the money market and OTC securities market such as electronic bond trading system of Taipei Exchange. Their market prices are determined by the rules of the respective markets.

### **Haircutting practices**

Given the price risks associated with securities, most exchanges and clearing institutions around the world apply haircuts on securities that have been placed as margins, in order to mitigate the effect of price fluctuations and ensure that futures contracts for exchange-traded derivatives market are adequately covered by margins at all times. For exchange-traded derivatives market, haircuts for acceptable collaterals have been clearly disclosed in TAIFEX Clearing's Methods and Standards for Receipt of Clearing Margins.

For OTC derivatives market, TAIFEX classifies the Taiwan central government bonds into 4 groups according to their remaining maturity. The haircut is the value-at-risk, at a confidence level of 99.5%, expected to be able to cover price volatility over a certain period of time for the past 5 years. The certain period of time refers to the estimated days to liquidate the securities based on daily trading volume. TAIFEX may take into account liquidity risk to adjust haircut rates. TAIFEX reviews and publishes haircut rates regularly on a quarterly basis. TAIFEX may adjust haircut rates as needed in response to larger changes in market prices or exchange rates.

**Key Consideration 3:** *In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.*

### **Stable and conservative collateral haircut**

Currently, securities that TAIFEX Clearing accepts as margins are limited only to book-entry central government bonds, approved stocks and international bonds. Their haircuts are determined on the following grounds:

1. Book-entry central government bonds

According to foreign stock exchanges and clearing institutions, the haircut for government bonds (typically government bonds with 5-10 years maturity or longer) ranges between 0-30%. Due to the fact that government bonds are less prone to cyclical, credit and liquidity risks, TAIFEX Clearing has set its haircut at 5% for government bonds as do the five stock exchanges presented for comparison. This haircut is applied to the market price or theoretical price of the valued security as at the preceding day to determine margin coverage.

For OTC derivatives market, TAIFEX classifies the Book-entry central government bonds into 4 groups according to their remaining maturity, adopts the preceding rules to calculate haircut rates, and publishes them on the website on a quarterly basis.

2. Stocks (Not applicable to OTC derivatives market)

According to the rules of foreign stock exchanges and clearing institutions, the haircut for stocks ranges between 0-50%. Since most of the world's major stock exchanges have set the haircut at 30%, and given the fact that the local stock market caps single-day gain/loss at 10%, TAIFEX Clearing has also set its haircut at 30% for stocks placed as margin. In addition, the local stock market has been relatively stable in recent years, and only very few stocks exhibited consecutive losses at the maximum limit. This haircut covers the spot market for 3 days of consecutive loss at the maximum limit, which is considered adequate for majority of stress scenarios.

3. International bonds (Not applicable to OTC derivatives market)

According to foreign stock exchanges and clearing institutions, the haircut for foreign bonds ranges between 2-15%. Since most of the world's major stock exchanges have set the haircut at 10%, TAIFEX Clearing also announces its haircut at 10% for international bonds placed as margin.

**Key Consideration 4:** *An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.*

### **Avoidance of concentration risk**

Most foreign stock exchanges and clearing institutions have set limits on how much one type of security can be placed as a margin for the purpose of risk diversification. TAIFEX Clearing has taken a more conservative approach with regards to international bonds due to the instrument's relatively low liquidity, by stating that no more than 20% of a particular issue of international bonds can be placed as margin. If any subsequent repayments are made to the bonds, the 20% maximum shall apply to the remaining principal. For stocks, the level of concentration is capped at 10% as this percentage is commonly used by domestic and foreign stock exchanges and clearing institutions to govern the trade volume of a particular stock relative to the number of outstanding stocks issued. No concentration limit is imposed on government bonds given the relative low risks of this security.

**Key Consideration 5:** *An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.*

TAIFEX Clearing currently does not accept cross-border collateral

**Key Consideration 6:** *An FMI should use a collateral management system that is well-designed and operationally flexible.*

### **Collateral management system design**

#### **Exchange-traded derivatives market**

The ETD collateral management system is part of the ETD clearing system. TAIFEX uses the ETD clearing system to manage collateral accounts and process deposit, withdrawal, substitution, and liquidation of collateral instantly through Interbank Remittance System(cash margin), S.M.A.R.T(stock and international bond), and Central Government Securities Settlement System(central government bond). Besides, TAIFEX maintains the ETD clearing system for its ETD clearing members to check their collateral held by TAIFEX at any time.

1. Interbank Remittance System (cash margin):



TAIFEX and participants use the Interbank Remittance System built by Financial Information Service Company(FIS) to deposit, withdraw cash from margin accounts.

## 2. S.M.A.R.T (stock and international bond)

Taiwan Depository & Clearing Corporation builds S.M.A.R.T system for their participants to handle securities depository business. TAIFEX as the participants of Taiwan Depository & Clearing Corporation transfers stocks and international bonds posted as collateral through the S.M.A.R.T system.

## 3. Central Government Securities Settlement System (central government bond)

The “Central Government Securities Settlement System” (hereinafter referred to as the “CGSS”) is a computer network built by the Central Bank to effect real-time interbank transfers of securities. The transferring of central government bonds, which is posted as collateral between clearing members and TAIFEX, is handled by clearing banks using the CGSS network.

### 1. Timely Deposit

ETD clearing members deposit cash and non-cash collateral through Interbank Remittance System, S.M.A.R.T, or CGSS into TAIFEX ETD clearing margin accounts, then apply to TAIFEX and fill in the relevant account details via clearing system. After TAIFEX confirms the deposit information, TAIFEX renews the cash amount and non-cash collateral margin in clearing margin balance instantly.

### 2. Batch Withdrawal

When ETD clearing members apply to TAIFEX to withdraw cash or non-cash collateral, the clearing system timely checks the balance of total clearing margin after withdrawal shall not be less than the required clearing margin.

Upon application approval, TAIFEX transfers the cash and non-cash collateral through Interbank Remittance System, S.M.A.R.T,

or CGSS into the ETD clearing margin account designated by the ETD clearing member. Daily batches for withdraw is:

- (1) Cash collateral: daily four times at 9:00am, 11:00 am, 2:00pm and 2:45pm.
- (2) Non-cash collateral: daily three times at 9:00am, 11:00 am and 2:00pm.

### 3. Timely Substitution

ETD clearing members can substitute the collateral through deposit and withdrawal process. Besides, TAIFEX will notify the clearing members to withdraw and make replacement with other eligible collateral when the following scenarios happen:

- (1) Stock: beginning from the fifth business day before the stock issuer conducts a book closure as a result of capital reduction or statutory consolidation.
- (2) Central government bond: beginning from the fifth business day before the maturity date of the bond.

### 4. Liquidation

When the clearing member defaults, according to the article 104 of the Rules, TAIFEX may open a default handling account with a clearing member that has engaged in a succession agreement with the defaulting clearing member and liquidate proprietary positions held by the defaulting clearing member and the defaulting futures commission merchant.

Stock can be liquidated at Taiwan Stock Exchange while international bonds and central government bonds can be liquidated at Taipei Exchange, and in either case the cash can be transferred to the margin accounts in a reasonable time period. Liquidation period of the stocks and central government bonds is T+2 days while that for international bonds is T+3 days.

### 5. Reuse of collateral

Cash collateral can only be maintained in the form of demand deposit or time deposit in accounts opened with settlement banks by TAIFEX. Besides, TAIFEX maintains a margin management system to record the daily cash collateral balance and accrued interest in settlement banks.

TAIFEX records accrued interest of each member's proprietary and client clearing accounts daily and makes interest payments semiannually. Clearing members could check their accrued interest on the Web portal after TAIFEX's confirmation.

And non-cash collateral is not allowed to be reused.

### **Flexibility**

Depending on whether the exchanged traded derivatives market trader has made third-party arrangements with their futures commission merchants, traders' securities that have been placed as margin are maintained either in the futures commission merchant's account or in TAIFEX's margin account:

1. Where the trader does not agree to use securities to secure other traders' positions:
  - (1). Stocks and international bonds: The trader can place securities into TAIFEX Clearing's margin account, which is categorized according to futures commission merchants and managed with a separate set of ledgers, using the TDCC system. Balances maintained in this account can be used to secure the trader's positions.
  - (2). Government bonds: The futures trader is required to open a government bond account in a settlement bank to facilitate transfers of government bonds.
2. Where the trader agrees to use securities to secure other traders' positions:
  - (1). The trader shall place securities into the futures commission merchant's margin account (with separate ledger maintained by the futures commission merchant) using the TDCC system, and have the futures commission merchant transfer securities into

TAIFEX Clearing's margin accounts created for various clearing members to secure members' positions (excluding positions held by traders who do not agree to the third party arrangement).

- (2). The futures commission merchant must become a depository member before accepting traders' placement of stocks and international bonds, and apply for system networking for real-time display and control of the trader's security balance.
- (3). The futures commission merchant must open a government bond account before accepting traders' placement of government bonds. This account enables real-time display and control of the trader's security balance.

#### OTC derivatives market

Collateral management system is part of the OTC clearing system. TAIFEX uses the OTC clearing system to manage collateral accounts and process deposit, withdrawal, substitution, and liquidation of collateral instantly through the Interbank Remittance Service (cash margin) and Central Government Securities Settlement System (government bond) handled by settlement banks. Besides, TAIFEX maintains the OTC clearing system and Web portal for its OTC clearing members to check their collateral held by TAIFEX at any time.

#### 1. Timely Deposit

OTC clearing members deposit cash or government bonds through Interbank Remittance Service or Central Government Securities Settlement System into TAIFEX OTC clearing margin accounts, then apply to TAIFEX and fill in the relevant account details via Web portal. After TAIFEX confirms the deposit information, TAIFEX renews the cash amount and non-cash collateral margin in clearing margin balance instantly.

#### 2. Batch Withdrawal

When OTC clearing members apply to TAIFEX to withdraw cash and bonds, the web portal timely checks the balance of total

clearing margin after withdrawal shall not be less than the required clearing margin. The same rule applies to the OTC clearing system when TAIFEX confirms the withdrawal application.

Upon application approval, TAIFEX transfers the cash and non-cash collateral through Interbank Remittance System or CGSS into the OTC clearing margin account designated by the OTC clearing member. Daily batches for withdrawal are:

(3) Cash collateral: daily two times at 11:00am and 2:00pm

(4) Non-cash collateral: daily two times at 11:00am and 2:00pm

3. Timely Substitution

OTC clearing members can substitute the no-cash collateral through deposit and withdrawal process.

Where OTC clearing members deposit central government bonds, the clearing members are to complete a withdrawal starting on the fourth business day preceding a maturity date or installment date. The clearing member is not to post such bonds as margin collaterals.

4. Liquidation in a short period of time

Pursuant to article 54 and 55 of OTC Rules, when an OTC clearing member defaults, TAIFEX has the right to suspend withdrawal of the clearing member's margin, and use cash or funds from disposal of securities of the clearing member's clearing account to meet payment obligations within the same clearing account.

The central government bonds can be liquidated at Taipei Exchange, and the cash can be transferred to the margin accounts in a reasonable time period.

5. Reuse of collateral

Cash collateral can only be maintained in the form of demand deposit or time deposit in accounts opened with settlement banks by TAIFEX. Besides, TAIFEX maintains a margin management

system to record the daily cash collateral balance and accrued interest in settlement banks.

TAIFEX uses a clearing system to record accrued interest of each member's proprietary and client clearing accounts daily and makes interest payments semiannually. Clearing members could check their accrued interest on the Web portal after TAIFEX's confirmation.

And non-cash collateral is not allowed to be reused.

### **Principle 6 : Margin**

A CCP should cover its credit exposures to its participants for all products through an effective margin system that is risk-based and regularly reviewed.

#### ***Summary Narrative***

**Key Consideration 1:** *A CCP should have a margin system that establishes margin levels commensurate with the risks and particular attributes of each product, portfolio, and market it serves.*

The margin model of TAIFEX is mainly used to cover market price fluctuations for future clearing. Anti-procyclicality margin factors are included to consider counter-effects of risk on the margin of the entire investment portfolio. Therefore, descriptions of the exchange-traded derivatives market and OTC derivatives market margin models are as follows:

#### **Margin model for the Exchange-traded derivatives market**

1. Includes future market price fluctuation risks

TAIFEX measures the adequacy of its clearing margins by observing the price volatility of each listed instrument over a period of time, and sets them at an amount that covers two-day price change within a 99% level of confidence. The initial and maintenance margin requirements are further determined based on this amount.

2. Includes anti-procyclicality margin factors

(1) The price risk coefficient includes long-term samples:

In response to procyclicality changes, when calculating the price risk coefficient for various contracts, TAIFEX included 10-year long-term samples in order to reflect the risk of price changes caused by prospective cycles.

(2) Minimum price risk coefficient:

To avoid the risk of setting margin requirements at levels too low to cover a sudden increase in risk following a period of excessively low price volatility, TAIFEX has imposed minimum risk factors for each instrument listed for trading and included anti-procyclicality margin measures, so that the clearing margins are adequate to cover a certain level of risk volatility at all times.

3. Calculated margin from a portfolio perspective

TAIFEX collects margins from clearing members using the Standard Portfolio Analysis of Risk (SPAN) approach. SPAN measures risk from a portfolio perspective; it utilizes a standardized definition of the sixteen risk scenarios, a variety of parameters and models to estimate risk mitigation effects between different instruments, and therefore allows calculation of the margin amount needed to cover portfolio risks.

4. Additional margin for long holidays

In order to cover long holiday periods in Taiwan (such as: Lunar New Year) in which fluctuations in international markets can cause fluctuation risks in the futures market after the long holiday, TAIFEX will generally collect additional margin before the holiday to cover the risk, and return the margin after the holiday.

**Margin model for the OTC derivatives market**

1. Includes future market price fluctuation risks

Taifex referred to other international CCPs to use five years for a historical sample period with EWMA volatility scaled historical returns. TAIFEX calculates changes in interest and exchange rates used in valuation curves for clearing in the last five years.

In addition to the past five-year data, stress data (beyond past five years) are also considered to prevent sudden changes in required

initial margin when stress events are applied to or removed from the market rate fluctuations during the past five-year period.

For client accounts and proprietary accounts of clearing members, initial margins are calculated as the expected loss at a 99.5% confidence interval that at least covers net present value changes over 5 business days for proprietary accounts and 7 business days for client accounts and the expected loss given TAIFEX's chosen stress period.

About the appropriate weights assigned to stressed observations, TAIFEX referred to the Article 28 (Procyclicality) of ESMA regulatory technical standards on requirements for central counterparties, assigning at least 25 % weight to stressed observations. The most recent samples (past five-year samples) are weighted most highly by TAIFEX while the most distant samples (stress samples) contribute little in order to reflect current market environment. TAIFEX conducts daily back-testing of the initial Margin model and completes an annual review of margin methodology to ensure appropriate weights.

2. Includes anti-procyclicality margin factors

To avoid setting the margin amount too low due to fluctuations in the underlying asset price, leading to the inability to cover the risks related to sudden increases in fluctuation of the underlying asset price, the margin model for OTC derivatives shall include anti-procyclicality margin considerations. Apart from adjusting the fluctuation factors through the EWMA, the lower limit for underlying asset price fluctuations has been stipulated to cover the margin required for risk fluctuation calculations.

3. Calculated margin from a portfolio perspective

TAIFEX uses the OTC derivatives portfolios of the clearing accounts as the risk assessment basis. It uses the Historical Simulation Approach to account for the cross-product discounts in the account and the mutual impact of interest rate and exchange rate risks, to calculate the margins required for each clearing account.

4. Liquidity risk margin

Considering the liquidity of the OTC derivatives is worse than the



exchange-traded derivatives market, for proprietary accounts and client accounts of clearing members, TAIFEX may calculate and charge an additional liquidity risk margin based on PV01, which is the change in net present value as a result of a 0.01% change in interest rates, in excess of the threshold that TAIFEX sets for the corresponding period.

The rules regarding the aforesaid additional liquidity risk margins to be charged within and over the thresholds for different periods will be established by TAIFEX after clearing members provide the bid/ask spreads and related data as required by TAIFEX.

5. Additional margin for long holidays

In order to cover long holiday periods in Taiwan (such as: Lunar New Year:) in which fluctuations in international markets can cause fluctuation risks in the OTC derivatives market after the long holiday, TAIFEX will generally collect additional margin before the holiday to cover the risk, and return the margin after the holiday.

**Key Consideration 2:** *A CCP should have a reliable source of timely price data for its margin system. A CCP should also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable.*

**Source of price information**

Exchange-traded derivatives market

For exchange-traded derivatives, its margin system obtains price information entirely from TAIFEX's trading system and the third party. All price information in margin system is verified through proper procedures before it is transmitted through the trading system and the third party. Where pricing data is not available, TAIFEX uses pricing data of relevant underlying in respective markets for price estimation.

TAIFEX Clearing's role as a CCP thus enables it to obtain timely and reliable price data. TAIFEX validates the pricing data on daily basis and conducts system testing activities along with annual system testing drills. If there is a need to compare the reliability and accuracy of pricing services offered by a third party, TAIFEX Clearing will compare its first-hand price information with the pricing provided by the third party.

### OTC derivatives market

The valuation information used by TAIFEX includes benchmark interest rates and exchange rates (such as: Taipei Interbank Offered Rates (TAIBOR) published by the Bankers Association of the Republic of China) and the bid/ask price and transaction price of major OTC derivative brokers.

Where the pricing data are not available, TAIFEX supplements the data in the following methods. (1) by interpolation (2) by the market data that TAIFEX asks clearing members to provide. If the pricing data are supplemented by the aforementioned method, TAIFEX will confirm whether the price estimation results are appropriate before the price estimation adopted.

### **Stipulate comprehensive procedures and valuation models**

The margin levels for the exchange-traded derivatives market are calculated based on: actual deal price of the instrument, actual deal price of the underlying securities at TWSE or other securities exchange, and quoted price of the instrument in question. The margin levels for OTC derivatives are calculated based on benchmark index, actual deal price and quoted price. This price information adequately reflects changes in market conditions.

### **Handling procedures and models for the inability to obtain information**

#### 1. Price information is obtained from multiple sources as backup

The valuation information for TAIFEX OTC derivatives use the bid/ask price and transaction price of multiple brokers and market data. The multiple information sources can reduce the occurrence of worthless information from a single source. However, when information cannot be obtained or is missing from the multiple information sources described above, TAIFEX will adopt an interpolation method or ask the clearing members to provide the quotation information.

## 2. Interpolation method for the valuation Curve

If some of the price information for the OTC derivatives period is missing or cannot be obtained, TAIFEX will adopt price interpolation measures depending on the missing information (such as: linear interpolation and cubic spline interpolation), in order to use available market price information to supplement the missing price information.

## 3. Quotation provided by clearing members.

When the majority of price information for OTC derivatives is missing or cannot be obtained, and interpolation is not possible, TAIFEX will ask the clearing members to provide the quotation. TAIFEX will remove the highest and lowest 25% of the quotations and use the middle 50% of the information to supplement the missing information.

**Key Consideration 3:** *A CCP should adopt initial margin models and parameters that are risk-based and generate margin requirements sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default. Initial margin should meet an established single-tailed confidence level of at least 99 percent with respect to the estimated distribution of future exposure. For a CCP that calculates margin at the portfolio level, this requirement applies to each portfolio's distribution of future exposure. For a CCP that calculates margin at more-granular levels, such as at the subportfolio level or by product, the requirement must be met for the corresponding distributions of future exposure. The model should (a) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the CCP (including in stressed market conditions), (b) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products, and (c) to the extent practicable and prudent, limit the need for destabilising, procyclical changes.*

### **Initial margin model**

## Exchange-traded derivatives

TAIFEX Clearing uses a margin model to calculate the amount of clearing margins required. With the amount of required clearing margin derived, a ratio of 135% is then applied to determine the amount of initial margin. Take futures products as an example, clearing margin calculation = futures price  $\times$  value per index point  $\times$  risk coefficient.

The margin model adopts the simple moving average approach (SMA) to calculate average returns ( $\mu_n$ ) and standard deviation ( $\sigma_n$ ) over the sample period. These results are used to estimate value at risk (VaR) for various sample groups (30-day, 60-day, 90-day, 180-day, and 2,500-day), and to calculate the margin amount that is sufficient to cover two-day price volatility within a 99% level of confidence (single-tailed).

Margin model - the SMA approach assumes daily price changes to be normally distributed, while returns at various timings are independent and identically distributed. With regards to the sampled period, TAIFEX Clearing avoids bias on samples collected within a short timeframe, which could lead to frequent changes in margin requirements, or bias on samples collected within a long timeframe, as the required margin would not be able to reflect the current situation.

TAIFEX Clearing takes a balanced approach of estimating margin requirements using 30-day, 60-day, 90-day, 180-day, and 2,500-day average VaR or maximum VaR and adopts the SPAN model for measuring risk from a portfolio perspective and the risk mitigation effect across different products when calculating margin requirements.

In addition to SMA approach, Exponentially Weighted Moving Average (EWMA) and SMA for Maximum Drawdown are used to calibrate the volatility parameter of the model.

## OTC derivatives market

During and at the end of each business day, TAIFEX calculates changes in interest and exchange rates used in valuation for clearing in the last five years. For proprietary accounts and client accounts of clearing members, initial margins are calculated as the expected loss at a 99.5%

confidence interval that at least covers net present value changes over 5 business days for proprietary clearing accounts and 7 business days for client clearing accounts, the expected loss given TAIFEX's chosen stress period, and the effects between risks related to cross-product, interest rates and exchange rates.

For proprietary accounts and client accounts of clearing members, TAIFEX may calculate and charge an additional liquidity risk margin based on PV01, which is the change in net present value as a result of a 0.01% change in interest rates, in excess of the threshold that TAIFEX sets for the corresponding period.

The rules regarding the aforesaid additional liquidity risk margins to be charged within and over the thresholds for different periods will be established by TAIFEX after clearing members provide the bid/ask spreads and related data as required by TAIFEX.

### **Closure and sample period**

When sampling data for the margin model, TAIFEX Clearing avoids basing its calculations solely on samples collected within a short timeframe, which could lead to frequent changes in margin requirements, or solely on samples collected within a long timeframe, as the required margin would not be able to reflect the current situation.

In the event where a clearing member undergoes bankruptcy, liquidation, business cessation or fails to fulfill settlement obligations, TAIFEX is authorized under Article 54 of the Act to transfer the member's and its clients' accounts to another clearing member that had previously signed an obligation transfer agreement with the distressed member. Where it is deemed necessary, TAIFEX Clearing may appoint a non-contractual member as transferee to assume the liability and responsibility of the defaulting member. In the event where TAIFEX is required to close positions held by the defaulted clearing member, TAIFEX will close the member's outstanding positions as early as possible to minimize impact on the stability of the market.

Exchange-traded derivatives market

TAIFEX Clearing takes a balanced approach of estimating margin requirements covering two-day price change within a 99% level of confidence using 30-day, 60-day, 90-day, 180-day, and 2,500-day average VaR or maximum VaR.

#### OTC derivatives market

The interest rate and exchange rate fluctuations of the stress periods in the last 5 years and selected by TAIFEX are used to estimate initial margins that are calculated as the expected loss at a 99.5% confidence interval that at least covers net present value changes over 5 business days for proprietary clearing accounts and 7 business days for client clearing accounts.

#### **Cyclical and wrong way risk**

##### Exchange-traded derivatives market

To avoid the creation of risk by reducing margins to excessively low levels due to lessened price volatility, resulting in margins being set too low to cover a sudden increase in risk, TAIFEX Clearing has imposed minimum risk factors and the look-back period of ten years for exchange-traded derivatives as a more conservative approach towards calculating clearing margins.

Based on the estimated margin requirements, TAIFEX Clearing sets an initial margin level and a maintenance margin level as a double security to prevent sudden price changes that may give rise to inadequate equity in traders' accounts to cover market risks.

Furthermore, the extent of gains and losses is capped for every type of instrument to limit downside risks during periods of irrational market behavior.

##### OTC derivatives market

In order to include anti-procyclicality and reduce specific downside risks in the margin models, apart from adjusting the fluctuation factors through the EWMA, the lower limit for underlying asset price fluctuations has been stipulated to cover the margin required for risk

fluctuation calculations.

In order to prevent the volatility and subsequently the margins from dropping too low at times, TAIFEX introduced a volatility floor at approximately the level of the lowest observed value of implied volatility period in recent history. Taifex chooses 10-years back average 5-day volatility to be a volatility floor.

**Key Consideration 4:** *A CCP should mark participant positions to market and collect margin at least daily to limit the build-up of current exposures. A CCP should have the authority and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.*

Exchange-traded derivatives market

Multiples for TAIFEX Clearing's margin structure are: initial margin: maintenance margin: clearing margin = 1.35: 1.035: 1.

After periodic and ad hoc marking to market, TAIFEX collects variation margins from clearing members every day. Clearing members that have account margin balance lower than the required clearing margin will be margin called and are required to place additional margin within the given time.

After marking to market, traders that have account margin balance lower than the maintenance margin level will be called by the futures commission merchant and will be required to increase margin account balances to the initial margin level within the given time.

According to "Taiwan Futures Exchange Operational Key Points of Clearing and Settlement for Futures Commission Merchants and Clearing Members," clearing members that receive margin calls from TAIFEX Clearing during trading hours are required to deposit at least the requested amount of cash into TAIFEX Clearing's clearing margin account opened with the settlement bank within 1 hour. If a clearing member is found to have maintained an inadequate margin after TAIFEX Clearing closes the market, the clearing member would be required to transfer fresh funds into TAIFEX Clearing's clearing margin account before the end of banking hours (3:30 pm) on the current day. If a clearing member were to miss the margin deadline,

TAIFEX Clearing may impose a penalty according to Article 102 of the Rules. If a clearing member defaults on settlement due to financial reasons, TAIFEX Clearing may dispose any open positions and margins held by the defaulted member according to Article 103 of the Rules.

#### OTC derivatives market

After daily regular marking to market and for collecting the variation margins from clearing members, the margin payment notification times for intraday and end of day are 12 PM on the day and 8:30 AM of the next day, respectively. The clearing member shall transfer the margin to the clearing margin account opened by TAIFEX in the settlement bank before 3:30 PM of the same day and 11 AM of the next day, respectively.

Additionally, in the event of massive fluctuations in market prices, TAIFEX will issue margin payment notices ad-hoc to clearing members with insufficient margins. The clearing member must transfer fresh funds into TAIFEX Clearing's clearing margin account opened with the settlement bank within 2 hour after receiving a margin call from TAIFEX Clearing. If a clearing member fails to deposit the clearing margin within the specified period, TAIFEX Clearing may impose a penalty according to Article 54 of the OTC Rules. If a clearing member defaults on settlement due to financial reasons, TAIFEX Clearing may dispose any open positions and margins held by the defaulted member according to Article 55 of the Rules.

**Key Consideration 5:** *In calculating margin requirements, a CCP may allow offsets or reductions in required margin across products that it clears or between products that it and another CCP clear, if the risk of one product is significantly and reliably correlated with the risk of the other product. Where two or more CCPs are authorised to offer cross-margining, they must have appropriate safeguards and harmonized overall risk-management systems.*

#### Margin estimation for portfolios

Exchange-traded derivatives



TAIFEX Clearing adopts the SPAN<sup>®</sup> system to calculate margins that each clearing member is required to maintain on open positions. In addition, traders' portfolios are assessed on an account-by-account basis to determine the maximum VaR of the following trading day, which lead to calculations of traders' margin requirements.

The SPAN<sup>®</sup> system also takes into account the risk mitigation effect across different products when calculating margin requirements. For example: A long position in one index futures and a short position in another index futures may have margin requirements reduced by up to 50%, leaving room to accommodate possible changes in correlation between the two instruments.

With regards to cross-margining, TAI FEX Clearing currently collects margins only on instruments traded over TAI FEX, and does not take into account margins that traders have placed for positions held with other CCPs.

### **Cross-margining**

#### Exchange-traded derivatives

The SPAN system that TAI FEX Clearing has adopted was developed by CME. This system is implemented in many foreign futures exchanges. CME notifies every exchange that adopts the SPAN system whenever there is a change to the calculation, thereby ensuring the integrity of this system.

When calculating margin requirements using SPAN, TAI FEX Clearing recognizes risk mitigation only for index instruments within the same portfolio. Furthermore, TAI FEX Clearing has adopted a more conservative approach by reducing margin requirements by up to 50% to accommodate possible changes in correlation. With regards to Price Scan Range (“PSR”), TAI FEX Clearing has imposed minimum values on the price risk factor to prevent margin requirements from dropping to excessively low levels over a period of low volatility, and therefore ensure adequate margin coverage to accommodate sudden changes in volatility.

## OTC derivatives market

TAIFEX views all instruments of a clearing account as an investment portfolio. After accounting for the risk mitigation effects of various instruments, the margin required for the clearing account is calculated using the Historical Simulation Approach.

## Methodology

TAIFEX Clearing currently does not have a cross-margining system.

**Key Consideration 6:** *A CCP should analyse and monitor its model performance and overall margin coverage by conducting rigorous daily backtesting – and at least monthly, and more-frequent where appropriate, sensitivity analysis. A CCP should regularly conduct an assessment of the theoretical and empirical properties of its margin model for all products it clears. In conducting sensitivity analysis of the model’s coverage, a CCP should take into account a wide range of parameters and assumptions that reflect possible market conditions, including the most-volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices.*

## **Back testing and sensitivity analysis**

### Exchange-traded derivatives market

TAIFEX Clearing assesses risk coverage of its margin model using the penetration back testing respectively for SMA · EWMA and SMA for Maximum Drawdown approach on daily basis with one year sampling period. TAIFEX calculates the clearing margin penetration rates for each product. In order to calculate each product’s initial margin penetration ratio, the penetration test begins by applying a multiplier (1.35) to clearing margins collected by TAIFEX Clearing to derive the initial margin; this initial margin is then compared to actual changes in contract value at the same time. If actual price changes exceed the initial margin, the margin would be considered to have been penetrated.

Penetration ratio is measured as the ratio of penetration numbers to total observations of one year sampling period. If the penetration ratio is below 1%, the margin model is conformed to a 99% level of confidence. If the penetration ratio is higher than 1%, the model does not perform as expected, TAIFEX would review the parameters and assumptions of the margin model.

TAIFEX Clearing monitors model performance by regularly reviewing its minimum price risk coefficient, and anti-procyclicality margin measures, in order to prevent margin requirements from dropping to excessively low levels over a period of low volatility, and therefore ensure adequate margin coverage to accommodate sudden changes in volatility.

In terms of sensitivity analysis, TAIFEX conducts varying different parameters and assumptions to analyze the penetration test of current margin model on monthly basis. If the penetration ratio of the current margin model is higher than 1%, TAIFEX would review the parameters of the margin model and further assess the sensitivity analysis of penetration test results to decide whether to adjust the parameters related to the margin model when necessary. The penetration test analyzes not only the daily price volatility, but also whether the current margin level is adequate to cover two-day price changes.

Furthermore, TAIFEX Clearing reviews and adjusts margin requirements quarterly for stock-related instruments to cover price volatility of the underlying stock.

Currently, all regularly analyzed results are approved according to internal procedures or reported to Competent Authority.

#### OTC derivatives market

Similar to exchange-traded derivatives, TAIFEX Clearing assesses risk coverage of its margin model using the penetration test. TAIFEX Clearing conducts daily back testing of the initial margin model by calculating and comparing initial margin amount to profit and loss for each house account looking back 5 days and for each client account looking back 7 days of the risk coverage, provided that all cleared

contracts were held for a continuous period of 5 or 7 clearing days, respectively.

Based on empirical analysis of penetration ratio, it has to be maintained below 0.5%, which conformed with the goal of 99.5% confidence interval to cover 5-day holding period for house positions and 7-day holding period for client positions.

If the historical initial margin is insufficient to cover the loss on an account, one exceedance will be recorded. If the number of exceedances exceeds the initial margin confidence level over a specific period of time, TAIFEX Clearing will evaluate the source of back-testing exceedances and recalibrate the initial margin model parameters (e.g. lookback period and confidence level) and scenarios when necessary.

Currently, all regularly analyzed results are approved according to internal procedures or reported to Competent Authority.

Similar to the back testing method for margins in the exchange-traded derivatives market, penetration testing is used as the assessment standard for risk coverage capabilities of margin model performance. TAIFEX uses back testing on a daily basis to review whether the initial margin requirement is sufficient to cover the actual 5-day losses of proprietary accounts and 7-day losses of client accounts. If the actual loss exceeds the initial margin requirement, with a confidence level of 99.5%, the back test penetration rate should be lower than 0.5%. If the penetration rate is higher than 0.5%, TAIFEX will review and adjust the parameters related to the margin model when necessary.

The back testing of margins covers sensitivity analysis, which includes the analysis of the average penetration value and maximum penetration value of the margins during the back testing period, the average value and maximum value of the margin penetrating amount ratio against the initial margin requirement, and the consecutive days of margin penetration.

**Key Consideration 7:** *A CCP should regularly review and validate its margin system.*

Exchange-traded derivatives market

TAIFEX Clearing regularly assesses the appropriateness of its existing margin structure and the adequacy of its minimum price risk factor and volatility floor. In addition, TAIFEX Clearing also conducts daily reviews on whether the current margin requirement adequately and quarterly reviews of margin rate requirement for single stock contracts. TAIFEX also checks daily whether the parameters of the SPAN margin need to be adjusted in a timely manner.

TAIFEX's margin methodology would be reviewed on an annual basis by the Clearing Committee with whose members comprise experts from academia and industry participants, or more frequently if there are any major changes. Any material revisions or adjustments to margin methodology are also subject to review by the board of directors, and the approval of the FSC before announcement to the public.

#### OTC derivatives market

TAIFEX reviews the adequacy of the parameters related to the margin according to the results of the daily back tests. If the penetration rate is higher than 0.5%, TAIFEX will review and adjust the parameters related to the margin model when necessary.

TAIFEX's margin methodology are reviewed and validated by the OTC Derivatives Clearing Operations and Risk Management Committee (whose members comprise independent experts from academia and industry participants) on an annual basis.

Moreover, the calculation method, risk coverage days, and level of confidence for the margin of OTC derivatives are clearly stated in Section 1, Chapter 6 of the Enforcement Rules. Relevant revisions shall be reported to the OTC Derivatives Clearing Operations and Risk Management Committee and the Board of Directors. The revisions shall then be reported to the Financial Supervisory Commission Securities and Futures Bureau for approval before implementation, which shall be announced in the market.

## **Principle 7 : Liquidity risk**

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.

### *Summary Narrative*

**Key Consideration 1:** *An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other entities.*

### **TAIFEX Clearing's liquidity risk management framework**

TAIFEX Clearing's liquidity risk is mainly attributable to the risk of clearing members defaulting, causing a shortfall in short-term liquidity.

The goal of TAIFEX Clearing's liquidity management practice is to maintain adequate level of cash and cash equivalents to ensure that clearance and settlement activities are carried out properly. TAIFEX Clearing has imposed haircuts on all securities pledged as margin collateral, while at the same time making sure that such securities are adequately liquid. Agreements have been signed with settlement banks to acquire short-term credit limits, giving TAIFEX Clearing adequate financial flexibility.

TAIFEX Clearing has developed a management framework for measuring and monitoring liquidity risks. Functionality of this framework is explained below:

#### **Exchange-traded derivatives market**

##### **1. Pre-margin system**

TAIFEX Clearing requires margins to be placed in advance for both the trading of exchange-traded derivatives and the clearing of OTC derivatives. Since margins are collected in full prior to each transaction, TAIFEX Clearing is able to minimize risk of liquidity

shortfall should a clearing member default on its obligations.

2. Margin deposit method

The margin for clearing members and traders may be paid for in cash (NTD or foreign currencies announced by TAIFEX) or securities announced by TAIFEX, in order to ensure liquidity.

TAIFEX Clearing's exchange-traded derivatives are mostly denominated in NTD, and cash margins are also placed in NTD. For futures that are denominated in foreign currencies, traders may arrange with their futures commission merchants to place cash margins in NTD and have the futures commission merchant perform currency exchange on their behalf. This gives TAIFEX Clearing the ability to realize gains and losses of contracts denominated in any currency, and hence is not prone to currency liquidity risks.

3. Use of the clearing margin is limited to bank deposits: According to TAIFEX's funds allocation guidelines, clearing margins can only be maintained in the form of demand deposit or time deposit in accounts opened with settlement banks by TAIFEX.

4. Deposit method for client margin accounts opened by futures commission merchants:

Futures commission merchants are only allowed to place customers' margin deposits in the form of highly liquid assets, namely demand deposits, time deposits and book-entry central government bonds

According to Article 6 of the Directions Concerning the Utilization and Management of Customer Margin Accounts by Futures Commission Merchants enforced by FSC, a futures commission merchant shall place deposits received from customer margin accounts in the form of demand deposits, unless the futures commission merchant has agreed otherwise with the customer to allow placement of time deposits. In addition, time deposits and demand deposits need to be allocated in a manner that allows adequate liquidity, and futures commission merchants have the responsibility to assign dedicated personnel to monitor the liquidity and security of the allocation.

Pursuant to Letter No. Financial-Supervisory-Securities-Futures-1040016866 issued by FSC on February 19, 2016, futures commission merchants are now allowed to place NTD deposits received from customer margin accounts in the form of book-entry central government bonds, subject to a maximum of 50% and only under the condition that the margin had been placed for the trading of domestic futures.

### OTC derivatives market

#### 1. TAIFEX adopted the pre-margin system

Before a transaction is submitted to TAIFEX for clearing, the clearing member shall deposit margin in advance so that the excess margins for the clearing accounts are sufficient to pay required clearing margin on newly added cleared transactions.

TAIFEX may require additional liquidity risk margin for the cleared transactions of clearing members' proprietary account and each client account respectively when the change in net present value as a result of a basis point change in interest rates, in excess of the threshold that TAIFEX sets for the corresponding maturities, in order to effectively manage liquidity risks.

#### 2. Margin deposit method

Clearing members and their clients can deposit the clearing margin and client margin in NTD or foreign currencies announced by TAIFEX or central government bonds or other securities announced by TAIFEX, in order to ensure liquidity. Based on securities prices calculated by TAIFEX in the payment of the margin, a haircut rate is the value at risk expected to be able to cover price volatility over a certain period of time. Apart from reviewing and announcing haircut rates regularly every quarter, TAIFEX may adjust haircut rates as needed in response to larger changes in market prices or exchange rates.

The percentage of securities in a clearing member's clearing account that can be posted as margin collaterals out of the required clearing margin for the account ("collateral ratio") is 100%, unless otherwise stated by the competent authority or TAIFEX.



3. Use of the clearing margin is limited to bank deposits: According to Article 40 of the OTC Rules and TAIFEX's funds allocation guidelines, clearing margins can only be maintained in the form of demand deposit or time deposit in accounts opened with settlement banks by TAIFEX.

Apart from the management structure for the exchange-traded derivatives market and OTC derivatives market mentioned above, TAIFEX has implemented other measures to manage liquidity risks from market participants.

1. Contributions to the Default fund by TAIFEX Clearing's clearing members

TAIFEX has established separate clearing and settlement funds for the exchange-traded derivatives market and OTC derivatives market. The fund shall be paid in cash unless otherwise stated, in order to ensure the liquidity to pay for default losses.

According to the Act, the Rules and the OTC Rules, every clearing member is required to contribute a certain sum to the Default fund to participate in TAIFEX Clearing's clearance and settlement service and clearing for OTC derivatives.

TAIFEX Clearing allocates the default fund in the following ways in accordance with Regulations Governing Futures Clearing Houses: (1) Bank deposit, (2) Purchase of treasury bills and government bonds (capped at 50% of default fund balance), and (3) Other uses approved by FSC.

Practically, the clearing and settlement fund ensures liquidity for fixed bank deposits.

TAIFEX Clearing calculates and reviews the adequacy of its default fund at least once a year based on the market size. All findings are reported to and acknowledged by the Competent Authority. The adequacy of the settlement fund is assessed using stress tests. The size of the clearing and settlement funds for the exchange-traded derivatives market and OTC derivatives market must be able to cover any single clearing member and the total of the two clearing members that present the highest losses under stress scenarios,

respectively.

In the event that a clearing member defaults and the member's margin balance is inadequate to cover the amount of the default, TAIFEX Clearing is entitled under Paragraph 1, Article 49 of the Act to utilize the following resources of reserve funds as the defaulting clearing member's clearing margin, the defaulting member's contribution to the default fund, the compensation reserve fund of the futures clearing house, the other clearing members' contributions to the default fund, and amounts to be borne by the other clearing members in proportions determined by the clearing house.

## 2. TAIFEX Clearing's short-term credit agreement with the settlement bank

In Letter No. (87)-Taiwan-Finance-Securities-VII-28330 issued by Securities and Futures Commission, Ministry of Finance on April 15, 1998, TAIFEX Clearing was advised to obtain as much credit limit from its settlement banks as possible to cover risks of the entire exchange-traded derivatives market or OTC derivatives market in the event of an emergency.

TAIFEX Clearing has made short-term credit arrangements with multiple settlement banks; its current credit limit amounts to approximately NTD 8.2 billion.

In the exchange-traded derivatives market or OTC derivatives market, If a clearing member encounters an emergency event such as a default, and the amount of the default could not be fully covered using the defaulting member's clearing margin, TAIFEX Clearing is authorized under Article 49 of the Act to utilize various resources at its disposal to cover the amount of default of the defaulting member.

To avoid market-wide liquidity risk being caused by a delay in fund transfer or process during an emergency event, TAIFEX Clearing may draw working capital from short-term credit limits from settlement banks. These credit limits are unsecured and short-term (overdraft) in nature, renewable after 1 year.

The balance may also be drawn in other currencies for margin of TAIFEX foreign currency-denominated instruments (e.g. USD,

CNY, JPY etc.).

According to Article 49 of the Act, the amount drawn shall be used to cover the amount of default of the defaulting member. The sum of principals borrowed plus interest is then repaid to the settlement bank according to the terms of the credit agreement.

A bank needs to possess sufficient capacity to be able to serve as a settlement bank of TAIFEX Clearing.

A bank needs to possess sufficient capacity to be able to serve as a settlement bank of TAIFEX Clearing. TAIFEX Clearing monitors common equity ratios, tier 1 capital ratios, capital adequacy ratios, and liquidity coverage ratios of its settlement banks on a regular basis; in addition, settlement banks' credit ratings are also reviewed regularly to ensure the security of customers' funds.

In addition to liquidity risk management framework that has adopted for exchange-traded derivatives mentioned above, TAIFEX Clearing also introduces liquidity risk margin for OTC derivatives to reduce liquidity risk of liquidating OTC derivatives of defaulting clearing member.

In summary, TAIFEX Clearing faces liquidity risk mainly due to the default of its clearing members. TAIFEX Clearing has liquid resources including clearing margins, default fund, compensation reserve fund, and short-term credit from settlement banks at its disposal to meet liquidity risks. The size of liquid resources is sufficient to cover clearing members that suffer the highest losses. The above liquid resources are mostly placed in the form of demand deposits and time deposits, offering high liquidity that assures financial security and stability of the entire market. In addition, TAIFEX Clearing has implemented robust management practices on the use of liquid resources and prevention of liquidity risks.

**Key Consideration 2:** *An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.*

**Ascertaining, measuring and monitoring settlement activities and**

## cash flow

### Exchange-traded derivatives market

TAIFEX Clearing monitors clearing members' margins every day and in real time to make sure that they are not prone to liquidity risks. TAIFEX Clearing adopts the practice of trial-calculating gains and losses using actual or hypothetical prices at certain trading hours and whenever the market exhibits high volatility, and monitoring adequacy of members' margin accounts in real-time. Members who have actual margin balance falling below the required balance will be immediately margin called during trading hours.

Clearing members that receive margin call via TAIFEX Clearing's computer system during trading hours are required to notify the settlement bank within the specified deadline and deposit cash margins no lesser than the amount advised into TAIFEX Clearing's clearing margin account.

According to Article 7, Paragraph 2 of the "Operational Key Points of Clearing and Settlement for Futures Commission Merchants and Clearing Members," clearing members whose margin balances fall below the required level (for proprietary and customers' positions) after trading hours are required to place additional margin before the given due time.

### OTC derivatives market

TAIFEX starts building the intraday valuation curve and the end-of-day valuation curve at 11:00 am and 4:00 pm, respectively, every business day. TAIFEX then builds the ad-hoc valuation curve according to market conditions.

Where the clearing margin balance on a clearing account is lower than the required clearing margin after the valuation calculation, TAIFEX will issue a margin deposit notification for the shortfall to the clearing member. The clearing member shall meet the margin standards of TAIFEX's margin requirement within the stipulated period.

For the futures market and OTC market, TAIFEX has established the financial management team to manage margin deposits and fund usage. It allocates the funds appropriately and configures the fixed

deposits as long and short term. The team observes and assesses the capital flow required for clearing and dynamically conducts fund allocation, in response to the liquidity requirements for clearing.

**Key Consideration 3:** *A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or multiday settlement, of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions.*

[This key consideration is not applicable to CCPs]

**Key Consideration 4:** *A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments, and meet other payment obligations on time with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme, but plausible market conditions.*

#### **Adequacy of liquid resources**

1. TAIFEX Clearing maintains adequate liquid resources for several currencies:
  - (1). TAIFEX Clearing's instruments are mostly denominated in NTD, while cash margins are also placed in NTD. For futures

denominated in foreign currencies, TAIFEX Clearing requires clearing margins to be placed in the foreign currency at the time the trade instruction is accepted by futures commission merchant or clearing member. However, if wire transfer cannot be completed in time to meet the foreign currency margin call, a clearing member may place the margin using NTD or another foreign currency accepted by TAIFEX Clearing, and have TAIFEX Clearing perform currency exchange on the member's behalf. Traders may enter into agreements with their futures commission merchants to place margins in NTD, and have the futures commission merchant perform currency exchange on their behalf.

In terms of the OTC derivatives market, clearing members and their clients can deposit the clearing margin and client margin in NTD or foreign currencies announced by TAIFEX or central government bonds or other securities announced by TAIFEX. If the clearing margin in the clearing account of the clearing member is insufficient, and in the event that the fund transfer cannot be completed within the time limit, or force majeure, or the clearing member defaults, TAIFEX may handle the exchange settlement on behalf of the clearing member.

As a result, TAIFEX Clearing has the ability to realize gains and losses of contracts denominated in any currency. There are no concerns regarding the adequacy of liquid resources in any currency, and hence TAIFEX Clearing is not prone to currency liquidity risk.

- (2). TAIFEX Clearing has made short-term unsecured credit arrangements with multiple settlement banks. For the purpose of supporting trading of CNY exchange rate futures, TAIFEX Clearing is permitted under Letter No. Taiwan-Central-FX-V-1040022531 issued by the Central Bank on June 18, 2015 to borrow CNY currency from domestic banking units (DBU). As a result of this announcement, credit limits granted by settlement banks can now be used to draw CNY funds in addition to USD funds.

## 2. TAIFEX Clearing collects clearing margins from clearing members

based on total outstanding contracts:

TAIFEX Clearing requires margins to be placed in advance (pre-margin system). With the exception of special portfolio positions and spread positions, TAIFEX Clearing calculates the required amount of clearing margins on a market-wide basis. Positions of different accounts cannot be offset against each other except for proprietary futures traders. In other words, margin requirement is calculated by TAIFEX Clearing based on outstanding positions held in all accounts of the same clearing member.

3. Yearly review of the size of the clearing and settlement fund and financial safeguard resources

TAIFEX maintains complete financial safeguard resources to support the liquidity gap created when a clearing member defaults. The losses incurred when clearing members do not fulfill their clearing obligations, the clearing margin contributed by clearing members shall cover the losses. If the margin is insufficient, TAIFEX may use sources of funds, including the clearing and settlement fund, compensation reserve fund deposited by TAIFEX, and shared funds between clearing members, to cover the losses.

TAIFEX has established separate financial security protection resources for the exchange-traded derivatives market and OTC derivatives market. The descriptions are as follows.

(1) Exchange-traded derivatives market

A. Total Clearing and settlement fund:

The calculations use the stress test method. The size of the Clearing and Settlement fund must be able to cover clearing members that suffer the highest losses under stress scenarios. The total clearing and settlement fund shall be reviewed at least once a year according to market scale. The amount that the total default fund exceeds the base default fund by should be paid by all clearing members. According to Article 4 of the TAIFEX "Regulations Governing Clearing Member Deposits to the Clearing and Settlement Fund Following Clearing and Settlement Operations", all clearing members shall continue clearing and settlement fund payments and it

shall be shared based on the ratio of the average daily required clearing margin of each clearing members to the average daily required clearing margin of all the clearing members in the last three months.

B. Compensation Reserve Fund:

In order to increase clearance capacity and better guarantee delivery of futures contracts in Taiwan, TAIFEX made a NTD500-million one-time provision for the compensation reserve fund in 2016, which increased total reserves to NTD1.5 billion and offered better assurance to the market's security and stability.

C. Sharing of losses among clearing members:

According to Paragraph 2, Article 105 of the Rules, the cap on the apportioned levies shall be determined as follows: when a single clearing member defaults during the cooling-off period, the cap shall be 150% of other clearing members' respective required contributions to the default fund on the business day immediately preceding the first day of the cooling-off period; when multiple clearing members default during the cooling-off period, the cap shall be 300% of other clearing members' respective required contributions to the default fund on the business day immediately preceding the first day of the cooling-off period.

(2) OTC derivatives market

A. OTC derivatives default fund total:

The calculations use the stress test method. The size of the OTC derivatives default fund must be able to cover the total of the two clearing members that present the highest losses under stress scenarios. The OTC derivatives default fund total shall be reviewed at least once a year according to market scale. When the total OTC derivatives default fund exceeds the base OTC derivatives default fund, all clearing members shall contribute additional funds. According to Article 10.1.2 of the Enforcement Rules, the amount of



additional OTC derivatives default funds to be contributed by clearing members as a whole shall be divided among the clearing members according to the ratio of the average daily required clearing margin of each clearing members to the average daily required clearing margin of all the clearing members in the last three months.

B. OTC compensation reserve fund:

In order to maintain adequate clearance capacity and better guarantee delivery of futures contracts in Taiwan, TAIFEX made a NTD500-million provision for the compensation reserve fund, and will increase total reserves each quarter to NTD1.5 billion, in order to offer better assurance to the market's security and stability.

C. Sharing of losses among clearing members:

According to Paragraph 2, Article 58 of the OTC Rules, the cap of sharing losses shall be determined as follows: when a single clearing member defaults during the cooling-off period, the cap shall be 150% of other clearing members' respective required contributions to the OTC derivatives default fund; when multiple clearing members default during the cooling-off period, the cap shall be 300% of other clearing members' respective required contributions to the OTC derivatives default fund.

**Risk profile and systemic importance in multiple jurisdictions**

TAIFEX's clearing service only covers futures trades and OTC derivatives within domestic borders, and does not involve multiple jurisdictions.

**Key Consideration 5:** *For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding*

*arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transaction with) the relevant central bank. All such resources should be available when needed.*

### **Size and composition of qualifying liquid resources**

TAIFEX Clearing's qualifying liquid resources consist mainly of the following:

1. Clearing margins contributed by clearing members
2. Securities pledged as margin collateral by clearing members
3. Clearing members' contribution to the default fund
4. The compensation reserve fund of TAIFEX
5. TAIFEX Clearing's short-term unsecured credit agreements with settlement banks.

### **Availability and coverage of qualifying liquid resources**

TAIFEX Clearing's liquid resources are mostly placed in the form of demand and time deposits. Time deposits may be terminated at any time to fund TAIFEX Clearing's demand deposit account if needed.

For this reason, TAIFEX Clearing does not have difficulties liquidating its liquid resources, and given the fact that all TAIFEX Clearing margins are placed in the base currency, there are no concerns regarding currency conversion.

In the futures market or OTC market, if a clearing member encounters an emergency event such as a default, and the amount of the default could not be fully covered using the defaulting member's clearing margin, TAIFEX Clearing is authorized under Article 49 of the Act to utilize various resources at its disposal to cover the amount of default of the defaulting member.

To avoid market-wide liquidity risk being caused by a delay in fund transfer or process during an emergency event, TAIFEX Clearing may

engage settlement banks in short-term unsecured borrowing arrangements and draw from the credit limit that offers the quickest disbursement or the best interest rate to meet short-term funding needs.

TAIFEX's short-term unsecured borrowing arrangements with settlement banks may also be drawn in other currencies for margin of TAIFEX's foreign currency-denominated instruments (e.g. USD, CNY, JPY etc.).

**Key Consideration 6:** *An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as part of its liquidity plan.*

#### **Size and composition of supplemental liquid resources**

If liquidity shortage remains even after all qualifying liquid resources such as clearing margin, default fund and compensation reserve fund have been used up, TAIFEX Clearing may proceed to utilize the following supplemental liquid resources. The availability of qualifying liquid resources plus supplemental liquid resources should be sufficient to meet TAIFEX Clearing's liquidity needs. TAIFEX Clearing's supplemental liquid resources consist of the following:

1. In the event that a clearing member defaults and the amount of default cannot be fully covered using resources of reserve funds as the defaulting clearing member's clearing margin, the defaulting member's contribution to the default fund, the compensation reserve fund of the clearing house, and the other clearing members' contributions to the default fund described in Paragraph 1, Article 49 of the Act, TAIFEX Clearing may request other clearing members to share the loss at prescribed percentages.

2. TAIFEX shareholders' equity totaled NTD 29.9 billion at the end of 2022.

### **Availability of supplemental liquid resources**

#### Exchange-traded derivatives market

According to TAIEX Clearing's Responsibility Breakdown and Procedures for Handling Default by Clearing Members, in the event that a clearing member fails to fulfill settlement obligations and the amount of default cannot be covered after exhausting available resources of reserve funds as the defaulting clearing member's clearing margin, the defaulting member's contribution to the clearing and settlement funds, the compensation reserve fund of the clearing house described in Paragraph 1, Article 49 of the Act and Paragraph 1, Article 105 of the Rules, other clearing members shall be instructed to share the loss according to item 4 other clearing members' contributions to the clearing and settlement fund and item 5 cap amount of the same paragraph.

The other clearing members shall deposit the clearing and settlement funds based on the ratio of the amount of the clearing member's required contribution to the clearing and settlement fund to the total amount of all other clearing members' required contributions to the clearing and settlement fund on the business day immediately preceding the first day of the cooling-off period set out in paragraph 3 of the same article.

#### OTC derivatives market

According to Article 58 of the OTC Rules, the futures clearing house shall first apply the defaulting clearing member's clearing margin to cover the default losses. If it is insufficient, TAIEX shall apply the default clearing member's OTC derivatives default fund, OTC compensation reserve fund, non-clearing member's OTC derivatives default fund at the ratio and amount specified by TAIEX (referred to below as additional deposit amount).

TAIEX shall decide the payment order according to the following matters for the OTC default fund and additional margin of non-default

clearing members:

1. The risk ratio of contracts in each product category in the portfolio of each non-defaulting clearing member to contracts in all product categories on the business day preceding default.
2. Non-defaulting clearing member participating in auctions:
  - (1) A compulsory auction participant who did not make a bid or whose bid was lower than the reserve price
  - (2) A compulsory auction participant who made a bid higher than or equal to the reserve price and lower than the winning bid
  - (3) A compulsory auction participant who made the winning bid or a bid higher than or equal to the winning bid
  - (4) A non-compulsory auction participant

The maximum additional deposit amount of non-default clearing members shall be handled according to the following regulation:

1. If only one clearing member defaults during the cooling-off period, then the limit is 150% of the OTC derivatives default fund to be deposited by the clearing member on the business day before the start of the cooling-off period.
2. If multiple clearing member default during the cooling-off period, then the limit is 300% of the OTC derivatives default fund to be deposited on the business day before the start of the cooling-off period.

Cooling-off period means the period of 20 trading days beginning from the date on which a default by a single clearing member occurs. If a different clearing member defaults before the end of the cooling-off period, then the new end of the cooling-off period is 20 business days from the day the last clearing member defaulted.

For clearing members who do not comply with the additional deposit amount, TAIEX may suspend its clearing operations or terminate its clearing participant agreement.

**Key Consideration 7:** *An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand*

*and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.*

### **Use of liquidity providers**

1. TAIFEX Clearing's liquidity providers are mainly the settlement banks. TAIFEX Clearing has made short-term unsecured credit arrangements with multiple settlement banks; its current credit limit amounts to approximately NTD 8.2 billion.
2. All settlement banks are chosen through a selection process, where meetings are held to evaluate financial capacity, IT processes, relevant experience, and credit standing of each candidate. Only those that pass assessment can be appointed as settlement banks for TAIFEX Clearing.
3. All TAIFEX Clearing settlement banks are participants of the Central Bank's "Foreign Currency Clearance Platform," which enables them to deliver "same-day, full-sum wire transfer" that greatly reduces funding time, cost and risks.

### **Reliability of liquidity providers**

TAIFEX Clearing's settlement banks consist entirely of credit worthy, sizable banking institutions from Taiwan and abroad. TAIFEX Clearing is able to utilize at any time its demand and time deposits placed at settlement banks, and may draw at any time from the unsecured short-term credit facilities that settlement banks have granted to TAIFEX Clearing. These short-term credit facilities are renewed on a yearly basis.

**Key Consideration 8:** *An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.*

TAIFEX Clearing's payments and settlements are entirely completed by clearing members and settlement banks without involving the Central Bank.

**Key Consideration 9:** *An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressure in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers, and linked FMIs), and where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.*

### **Stress test program**

TAIFEX assesses the required balance of the clearing and settlement funds for the exchange-traded derivatives market and OTC derivatives market on a quarterly basis. These assessments are consolidated into an annual report that is subsequently reported to the competent authority. Adjustments to the clearing and settlement fund are allocated among clearing members according to their share of the trading activity.

Meanwhile, TAIFEX also takes the initiative to assess potential default risks of open futures positions and OTC market clearing member positions based on current trading activities and price fluctuations, thereby making sure that potential risks in the market are adequately

covered by the clearing and settlement fund.

### **Uses of stress test result**

#### **Exchange-traded derivatives market**

The calculation method is based on the total open positions in the market. TAIFEX constructs stress test scenarios using historical events as adopted by futures exchanges around the world, and estimates price volatility based on the level of volatility presented during the historical event.

When applying stress tests on clearing members' gains/losses, TAIFEX adopts scenarios of extreme but possible volatility on the price of futures and options as the basis for clearing members' stress tests. Take the higher between largest losses for the potential default given a rise and fall scenarios to estimate the total clearing and settlement fund. The amount of additional clearing and settlement funds to be contributed by clearing members as a whole shall be divided among the clearing members according to the ratio of the average daily required clearing margin of each clearing members to the average daily required clearing margin of all the clearing members in the last three months.

#### **OTC derivatives market**

Based on the accounts, TAIFEX adopts historical stress scenarios and hypothetical scenarios for stress testing to estimate the two largest total values of possible losses for clearing members, which is used as the OTC clearing. The largest value from each scenario shall be used as the OTC default fund total. The amount of additional clearing and settlement funds to be contributed by clearing members as a whole shall be divided among the clearing members according to the ratio of the average daily required clearing margin of each clearing members to the average daily required clearing margin of all the clearing members in the last three months.

### **Adequacy review of liquidity resources**

Apart from quarterly assessments of the clearing and settlement fund



balance, TAIFEX conducts daily stress tests to review the larger possible losses to clearing members, the clearing margin of the clearing member, TAIFEX's clearing and settlement fund, and compensation reserve fund to assess potential liquidity needs.

### **Review and validation**

TAIFEX Clearing assesses the required balance of the default fund on a quarterly basis. These assessments are consolidated into an annual report that is subsequently acknowledged by the chief executive and reported to the Competent Authority. Capital management meetings and Clearing Committee meetings are held on a monthly basis to discuss the use of funds. TAIFEX Clearing maintains good lines of communication with industry participants, and holds regular discussions with clearing members regarding TAIFEX Clearing's clearing services. All establishment and amendment of regulations is communicated to industry participants and enacted with their support.

**Key Consideration 10:** *An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event so that it can continue to operate in a safe and sound manner.*

### **Same-day settlement**

If a clearing member fails to fulfill its settlement obligations, TAIFEX is vested under Article 49 of the Act to cover the shortfall using liquid resources. Article 101 to Article 105 of the Rules, Article 52 to Article 65 of the OTC Rules, and Chapter 11 of the Enforcement Rules clearly outline the means of handling clearing members' defaults. It also has an emergency response manual that lays out procedures in the event that a

clearing member fails to fulfill its settlement obligations to TAIFEX Clearing, to an extent capable of disrupting the futures market and OTC market as a whole.

TAIFEX Clearing's margins, default fund and liquid resources are placed in the form of highly liquid assets such as cash and central government bonds. These assets can be settled and paid on the same day as the withdrawal.

According to Article 57-1 of the Rules and Article 19 of the OTC Rules, when the margin equity of the principle is negative or the client margin account is less than the required amount and cannot be supplemented within the specified period, the futures commission merchant or clearing member should cover the inadequacy with their own funds, in order to support the same-day completion of clearing obligations.

### **Replenishment of liquidity resources**

The amount of clearing and settlement funds that have been used up may be reimbursed according to TAIFEX's "Regulations Governing Clearing Member Deposits to the Clearing and Settlement Fund Following Clearing and Settlement Operations", Chapter 8 of the OTC Rules, and Chapter 10 of the Enforcement Rules

According to Article 49, Paragraph 3 of the Act, claims can be made against the defaulting clearing member to cover any drawing made on non-defaulting members' contributions to the default fund, as well as compensation reserve fund of TAIFEX Clearing and losses shared proportionally by other clearing members.

TAIFEX Clearing maintains good lines of communication with market participants and holds regular discussions with clearing members regarding TAIFEX Clearing's clearing services. Establishment and amendment of all regulations are communicated to industry participants and enacted with their support. Participants are also regularly briefed on TAIFEX Clearing's clearing services operations and related planning.

**Principle 8 : Settlement finality**

An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.

***Summary Narrative***

**Key Consideration 1:** *An FMI's rules and procedures should clearly define the point at which settlement is final.*

**Point of settlement finality**

The Rules, the OTC Rules, the Enforcement Rules, Operational Key Points of Clearing and Settlement for Futures Commission Merchants and Clearing Members, and other policies have laid out detailed procedures for margin placement, margin call, and final settlement etc. that futures commission merchants and clearing members must follow.

The final settlement date for all instruments cleared by TAIFEX Clearing, including index futures and options, stock futures and options, exchange rate futures and options, gold futures and options, NTD-denominated gold futures, interest rate swaps and non-deliverable forwards, shall proceed as stated in the relevant rules of the respective contract.

**Key Consideration 2:** *An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.*

**Intraday final settlement on the rights transfer date or real-time final settlement****Exchange-traded derivatives market**

Currently, NTD-denominated gold futures and gold options can either be settled in cash or using gold inventory according to "Taiwan Futures Exchange Operational Key Points of Clearing and Settlement for Futures Commission Merchants and Clearing Members" and "Taipei Exchange Rules on Registration and Trading of Gold Inventory."

All other instruments traded over TAIFEX such as index futures, stock futures and options have the final settlement date set as the same day as the final clearing date. All settlement procedures including bank entries must be completed in real-time before the specified intraday time without delay.

#### OTC derivatives market

When performing daily settlement on each business day, TAIFEX according to Article 7.1.1 and 7.1.2 of the OTC Enforcement Rules, calculates the settlement amounts for the proprietary accounts and client accounts of clearing members, including the end-of-day mark-to-market difference and price alignment amounts, end-of-day variation margins and price alignment interests, payable or receivable amount of interest on a cleared transaction for the following business day and other payable amounts stipulated by TAIFEX for the next business day.

TAIFEX will conduct clearing and settlement collection at 8:30 AM on the next business day. If it continues to be insufficient, TAIFEX will send a margin deposit notification. The clearing member shall transfer the amount before 11 AM to complete clearing processes. According to Article 53 of the OTC Rules, TAIFEX shall deem a clearing member as being in default on the occurrence of failure to pay the clearing margin within the deadlines.

**Key Consideration 3:** *An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.*

#### **Clearing/settlement time and rules**

TAIFEX performs settlement at maturity in accordance with the Act, Regulations Governing Futures Clearing Houses, the Rules, the OTC Rules, the Enforcement Rules, Operational Key Points of Clearing and Settlement for Futures Commission Merchants and Clearing Members, and terms of the settlement agreements it has signed with clearing members for futures or clearing agreements for OTC derivatives.

TAIFEX Clearing has relevant rules and procedures in place for markets it serves. The rules and procedures specified the point when transfer instructions become irrevocable for clearing members based on TAIFEX Clearing's Rules and the OTC Rules. Settlement instructions to TAIFEX Clearing may not be revoked after completion.

**TAIFEX has stipulated the clearing obligations deadline for payment of the margins by clearing members.**

The contractual agreements between TAIFEX Clearing and its settlement banks provide specific instances and conditions, such as a correction of errors, where settlement instructions can be amended or revoked. The settlement instruction in question would be revoked via fax with verbal and/or written communications involving such settlement bank and clearing member.

In the exchange-traded derivatives market, when events listed in Paragraph 1, Article 58 of the Rules occur to the principle, the futures commission merchant will be deemed as defaulted and it shall be reported to TAIFEX.

In the OTC derivatives market, when events listed in Article 3.3.7 of the Enforcement Rules occur to the client of the clearing member, the client will be deemed as defaulted and it shall be reported to TAIFEX. Moreover, according to Article 10 of the OTC Rules, the clearing member is still required to fulfill its settlement obligations to TAIFEX.

## **Principle 9 : Money settlements**

An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.

### ***Summary Narrative***

**Key Consideration 1:** *An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.*

The Central Bank of Taiwan performs clearing services for the following:

1. Check clearance.
2. Check clearance proceeds payable/receivable.
3. Net proceeds payable/receivable from electronic payment or securities clearance.

According to the Directions for the Central Bank of the Republic of China (Taiwan) to Govern Electronic Interbank Funds Transfer and Settlement, the Central Bank of Taiwan's counterparties include that of check clearing houses, electronic payment clearing houses, and securities clearing houses. The term "securities" in a securities clearing house includes bills, bonds, equity stocks etc. Since TAIFEX Clearing does not meet any of the clearance services mentioned above, TAIFEX Clearing currently does not involve the central bank for settlement.

**Key Consideration 2:** *If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.*

### **Liquidity risk of settlement assets**

TAIFEX engages settlement banks for money settlement. The settlement assets are limited to cash in NTD or foreign currencies, and shall have high liquidity. A settlement bank needs to possess sufficient

capacity to be able to serve as a settlement bank of TAIFEX Clearing. TAIFEX Clearing monitors common equity ratios, tier 1 capital ratios, capital adequacy ratios, and liquidity coverage ratios of its settlement banks on a regular basis; in addition, settlement banks' credit ratings are also reviewed regularly to ensure the security of customers' funds.

**Key Consideration 3:** *If an FMI settles in commercial bank money, it should monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity, and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks.*

### **Reliability of the settlement bank**

TAIFEX Clearing's settlement banks consist entirely of state-owned and private commercial banks with the upper-most credit ratings and asset size in the nation. The criteria for a settlement bank include:

1. Primary indicators: Financial eligibility, business experience and credit status, operational qualifications, price competitiveness, and ability to respond to a crisis.
2. Secondary indicators: Computer testing and consent from clearing members to serve as a settlement bank.

TAIFEX Clearing's annual review of the financial standing of each settlement bank is conducted by inspecting the following according to the Competent Authority's orders regarding the criteria for banks where futures commission merchants open customer margin accounts, the Standards for Bank Liquidity Coverage Ratios, and TAIFEX Clearing's fund utilization guidelines:

1. common equity ratio
2. tier 1 capital ratio
3. capital adequacy ratio
4. liquidity coverage ratio

## 5. credit rating

Credit ratings of TAIFEX Clearing's settlement banks are reviewed on a regular basis. TAIFEX Clearing also assesses deposit balances, loan portfolios, and deposit-to-load ratios of its settlement banks on a monthly basis to ensure risk diversification, and uses a variety of measures to monitor compliance.

TAIFEX Clearing places margins in all of its settlement banks to achieve risk diversification. Margins are placed entirely in cash at settlement banks for high liquidity. Should one of its settlement banks encounter a credit risk or liquidity risk event, TAIFEX Clearing is able to quickly transfer cash margins to other settlement banks. Even if a settlement bank causes losses to TAIFEX Clearing due to a risk event or error, TAIFEX Clearing can still make a proportional claim from the Central Deposit Insurance Corp.

Furthermore, TAIFEX Clearing reviews the credit ratings of its settlement banks on a regular basis, and follows the resolution made by its capital management team that no more than the maximum of total clearing margins can be placed in any single settlement bank.

**Key Consideration 4:** *If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.*

### **Reliability of settlement process**

According to TAIFEX Clearing's policies, every settlement process must be completed within one hour there has never been an incident of default by any settlement bank.

**Key Consideration 5:** *An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.*



### **Legal agreements between TAIFEX Clearing and settlement banks**

Below are terms of the Futures Clearing Service Fund Transfer Agreement and OTC Clearing Service Fund Transfer Agreement that TAIFEX Clearing has signed with its settlement banks:

1. The settlement bank shall process book-entry transfers of clearing margins according to the clearing margin transfer statement and relevant computer data produced by TAIFEX Clearing. The settlement banks shall assigned dedicated departments and personnel to process book-entry transfer and manage communication with TAIFEX Clearing.
2. If a clearing member or customer has insufficient balance in its clearing margin account to execute the abovementioned book-entry transfer, the settlement bank shall collect all remaining balance in the account first and make continuous efforts to debit the account until the amount in question is collected in full. (Not applicable to OTC derivatives market)
3. When TAIFEX Clearing has insufficient balance in its clearing margin account, the settlement bank shall extend credit to TAIFEX Clearing according to the credit agreement.
4. The settlement bank must produce computer files containing the outcome of its book-entry transfers within the prescribed deadline on the deal date. If the settlement bank does not complete transactions within the specified time but fails to notify TAIFEX Clearing of the delay, the settlement bank would still be deemed to have completed TAIFEX Clearing's book-entry transfer instructions.
5. Any outcome of book-entry transfer and any electronic media presented by the settlement containing details of amounts received shall be construed as irrevocable commitments to pay TAIFEX Clearing.
6. The settlement bank shall be held responsible for any overdrawn amount, duplicate debit or dispute that are due to errors committed by the settlement bank. Similarly, TAIFEX Clearing and clearing members shall be held responsible for any overdrawn amount, duplicate debit or dispute caused by errors contained in TAIFEX

Clearing's statements or computer files.

7. The settlement bank shall perform margin account services and book-entry transfer services for the benefit of TAIFEX Clearing outside normal banking hours.

The settlement bank's agreements with various clearing members shall contain the following terms; TAIFEX Clearing must be notified in writing of any agreement that does not contain the following terms:

1. The clearing member shall authorize the settlement bank to collect funds from the member's or its customers' clearing margin accounts when instructed to do so by TAIFEX Clearing. (Not applicable to OTC derivatives market)
2. If the clearing member has insufficient balance in its clearing margin account to make a payment, the settlement bank shall collect all the remaining balance in the account and make continuous efforts to debit the account until the amount in question is collected in full. (Not applicable to OTC derivatives market)
3. In the event that the clearing member fails to fulfill its clearance or settlement obligations to the domestic futures or OTC derivatives market, the settlement bank shall dispose of the fund balance in the clearing margin account as instructed by TAIFEX Clearing.
4. Balances maintained in customers' clearing margin accounts that the clearing member has opened under the settlement bank may be drawn only by way of fund transfer.
5. The clearing member agrees for the settlement bank to provide account information to TAIFEX Clearing upon request.

**Principle 10 : Physical deliveries**

An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries.

***Summary Narrative***

**Key Consideration 1:** *An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.*

According to the Article 91 of the Rules, for futures trading contracts to be settled by physical delivery upon expiration, the clearing member shall, pursuant to the TAIFEX Clearing's notice, complete settlement procedures as provided below:

1. Where the underlying are payable, the underlying or vouchers therefore shall be delivered within the delivery period and in accordance with the types of deliverable underlying as prescribed by the TAIFEX Clearing.
2. Where the underlyings are receivable, the underlyings or vouchers therefor shall be collected after the settlement price has been paid without error.

To effect physical delivery of futures trading contracts, the TAIFEX Clearing may, through the centralized securities depository enterprise or other institutions, carry out receipt/delivery procedures of the deliverable underlyings by book-entry transfer or other means.

Currently, for NTD-denominated gold futures and gold options, traders have the choice to convert into TPEX gold deposits upon maturity.

With regards to the physical delivery and conversion of NTD-denominated gold futures or gold options into TPEX gold inventory, TAIFEX Clearing has clearly outlined in its "Rules on Conversion of NTD-Denominated Gold Futures and Gold Options to TPEX Gold Inventory at Maturity" the settlement procedures, buyer's obligation to deliver settlement proceeds, seller's obligation to deliver gold, and actions to be performed by TAIFEX Clearing, futures commission merchants and clearing members, which include:

1. Process trader's request to convert matured futures or options into gold inventory (to be performed by futures commission merchants and clearing members)
2. Reporting trader's conversion of matured futures or options into gold inventory (to be performed by futures commission merchants and clearing members)
3. Allocation of inventory and calculation of settlement proceeds at maturity
4. Collection/payment of proceeds
5. Book-entry transfer of gold receivable by the buyer

The abovementioned "Rules on Conversion of NTD-denominated Gold Futures and Gold Options to TPEX Gold Inventory at Maturity" have both been published on TAIFEX Clearing's website for easy access and compliance by market participants.

**Key Consideration 2:** *An FMI should identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments or commodities.*

**The risks and costs associated with the storage and delivery of physical instruments**

Gold inventory converted from NTD-denominated gold futures or gold options is stored according to TAIFEX Clearing's "Rules on Conversion of NTD-denominated Gold Futures and Gold Options to TPEX Gold Inventory at Maturity," using TAIFEX Clearing's special account opened with TDCC. During settlement, TAIFEX Clearing would notify TDCC to perform a book-entry transfer of gold balance from its account into the buyer's account as advised by the clearing member. This practice enables sound identification, supervision and management of settlement risks and costs.

Fees and costs payable by clearing members for participating in the settlement and clearance service have been outlined in "Taiwan Futures Clearing Service Fee Schedule." and Chapter 12 - "Clearing Service Fees and Connection Fees" of the Enforcement Rules.

**Principle 11 : Central securities depositories**

A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues and minimise and manage the risk associated with the safekeeping and transfer of securities. A CSD should maintain securities in an immobilized or dematerialized form for their transfer by book entry.

***Summary Narrative***

**Key Consideration 1:** *A CSD should have appropriate rules, procedures, and controls, including robust accounting practices, to safeguard the rights of securities issuers and holders, prevent the unauthorised creation or deletion of securities, and conduct periodic and at least daily reconciliation of securities issues it maintains.*

**Safeguarding the rights of securities issuers and holders**

[This principle is not applicable to CCPs]

**Prevention of the unauthorized creation or deletion of securities**

[This principle is not applicable to CCPs]

**Periodic reconciliation of securities issues**

[This principle is not applicable to CCPs]

**Key Consideration 2:** *A CSD should prohibit overdrafts and debit balances in securities accounts.*

[This principle is not applicable to CCPs]

**Key Consideration 3:** *A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry. Where appropriate, a CSD should provide incentives to immobilise or dematerialise securities.*

[This principle is not applicable to CCPs]

**Key Consideration 4:** *A CSD should protect assets against custody risk through appropriate rules and procedures consistent with its legal framework.*

[This principle is not applicable to CCPs]

**Key Consideration 5:** *A CSD should employ a robust system that ensures segregation between the CSD's own assets and the securities of its participants and segregation among the securities of participants. Where supported by the legal framework, the CSD should also support operationally the segregation of securities belonging to a participant's customers on the participant's books and facilitate the transfer of customer holdings.*

[This principle is not applicable to CCPs]

**Key Consideration 6:** *A CSD should identify, measure, monitor, and manage its risks from other activities that it may perform; additional tools may be necessary in order to address these risks.*

[This principle is not applicable to CCPs]

**Principle 12 : Exchange-of-value securities systems**

If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transaction), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

*Summary Narrative*

**Key Consideration 1:** *An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs.*

TAIFEX Clearing currently does not adopt exchange-of-value settlement, as settlement obligations of existing TAIFEX Clearing instruments are not linked to any other obligations.

**Principle 13 : Participant-default rules and procedures**

An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

***Summary Narrative***

**Key Consideration 1:** *An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following default.*

Exchange-traded derivatives**Participant-default rules and procedures**

Chapter 12 of the Rules outlines the method of which clearing member's default is handled. According to Article 101 of the Rules, where any of the following circumstances exists in respect of a clearing member, TAIFEX Clearing shall consider that clearing member in default:

1. Failure to pay the clearing margin within the deadline specified by regulations;
2. Failure to fulfill settlement obligations within the specified time period;
3. Violation of provisions of the clearing and settlement contract.

Where a clearing member is in default under any of the circumstances enumerated in the preceding paragraph, then TAIFEX Clearing, in addition to handling the matter under the provisions of this Chapter, may make any additional necessary disposition against the clearing member pursuant to the provisions of the clearing and settlement contract.

According to Article 103 of the Rules, where a clearing member is in default due to financial factors, TAIFEX Clearing may take the following measures:

1. Suspend the defaulting clearing member's clearing and settlement operations and report the matter in writing to the Competent Authority.
2. Notify all clearing members and futures commission merchants



through TAIFEX Clearing's online information system.

3. Check the defaulting clearing member's clearing margin balance, bank account balance, operating bond, default fund, and other assets and immediately pursue protective measures in respective of the statutory rights.
4. Dispose of the defaulting clearing member's positions and margin funds.
5. Conduct an audit of the defaulting clearing member and an investigation and analysis of the incident.

According to Article 104 of the Rules, where a clearing member is in default due to financial factors, TAIFEX Clearing may dispose of positions and margin in that clearing member's account by the following means:

1. Halt all trading between the defaulting clearing member and its mandating futures commission merchant; provided, this restriction shall not apply to trading for the purpose of liquidating existing positions;
2. Freeze or transfer funds and securities in the defaulting clearing member's clearing margin account;
3. Pursuant to the provisions of Article 54 of the Act, open a default handling account with a clearing member that has engaged in a succession agreement with the defaulting clearing member and liquidate proprietary positions held by the defaulting clearing member and the defaulting futures commission merchant;
4. A futures commission merchant that has engaged in a succession agreement with the defaulting futures commission merchant shall, at the instructions of TAIFEX Clearing, liquidate open positions of the defaulting customer.

A defaulting futures commission merchant shall submit itemized trading statements for all of its customers to the succeeding futures commission merchant. In the event the defaulting futures commission merchant refuses to hand over the itemized trading statement, TAIFEX Clearing may liquidate all customer positions of the defaulting futures commission merchant.

Non-defaulting clients of the defaulting clearing member and defaulting futures commission merchant shall liquidate their positions

or apply to have their positions transferred to another futures commission merchant. Where a customer fails to do so within 5 days, the succeeding futures commission merchant may liquidate all open positions in that customer's account.

A non-defaulting mandating futures commission merchant shall select another clearing member and enter into an agreement mandating that clearing member to handle clearing and settlement, and shall not resume trading until after notifying TAIFEX Clearing of the execution of the agreement.

### **Procedures for clearing member's default**

TAIFEX Clearing has implemented a set of "Clearing Member Default Resolution Procedures" that calls for the following actions if a clearing member defaults:

1. Conduct special audit; the scope of audit shall cover:
  - (1) Reasons for the breach of settlement obligation.
  - (2) Positions and margin balances held by clearing members under the names of other futures commission merchants and futures traders.
  - (3) Clearing member's financial status.
  - (4) Whether the person-in-charge or any employee has violated law.
2. Take count of assets owned by the clearing member and take legal actions immediately to secure debts.
3. Report the default case to the Competent Authority.
4. Announce the default case to the market.
5. Arrange a default resolution meeting.
6. Verify actions to be taken by the defaulted clearing member and the succeeding clearing member.
7. Utilize the default fund.
8. Stop the defaulted clearing member from taking further positions.
9. Terminate clearing and settlement services to the defaulted member.
10. Report findings of the default case to the Competent Authority.

### **Use of financial resources and the utilization procedure**

According to Article 49 of the Act, Article 105 of the Rules and Apportionment Procedures for Managing Default by Clearing Members, in case a clearing member fails to perform its clearing and settlement obligation, TAIFEX Clearing shall first apply the defaulting clearing member's clearing margin to cover the default. If that is insufficient, it shall apply the defaulting member's contribution to the default fund, the compensation reserve fund of the futures clearing house, the other clearing members' contributions to the default fund, and amounts to be borne by the other clearing members in proportions determined by the clearing house.

In the event that a clearing member fails to fulfill settlement obligations and the proportion of contribution according to TAIFEX regulations as the defaulting clearing member's clearing margin, the defaulting member's contribution to the clearing and settlement fund, the compensation reserve fund of the futures clearing house, and the other clearing members' contributions to the clearing and settlement fund described in Paragraph 1, Article 49 of the Act and in the order under Paragraph 1, Article 105 of the Rules, clearing members shall share the loss according to item 4 other clearing members' contributions to the clearing and settlement fund and item 5 cap amount of the same paragraph. The other clearing members shall deposit the clearing and settlement funds based on the ratio of the amount of the clearing member's required contribution to the clearing and settlement fund to the total amount of all other clearing members' required contributions to the clearing and settlement fund on the business day immediately preceding the first day of the cooling-off period set out in paragraph 3 of the same article.

According to Paragraph 2, Article 105 of the Rules, the cap on the apportioned levies referred to in the preceding paragraph shall be determined as follows: when a single clearing member defaults during the cooling-off period (the period of 20 trading days beginning from the date on which a default by a single clearing member occurs), the cap shall be 150% of other clearing members' respective required contributions to the default fund on the business day immediately

preceding the first day of the cooling-off period; when multiple clearing members default during the cooling-off period, the cap shall be 300% of other clearing members' respective required contributions to the default fund on the business day immediately preceding the first day of the cooling-off period. Any shortfall after the jointly apportioned levies on other clearing members shall be appropriated from the TAIFEX Clearing.

Members who refuse to follow procedures or pay their share of the loss may have clearing and settlement services suspended or terminated by TAIFEX Clearing.

#### OTC derivatives market

In order to ensure the operational security of OTC derivatives clearing and avoid the impact of defaults, TAIFEX has established the OTC Default Management Group, procedures related to default handling, OTC financial security protection resources, and order of compensation and settlements. It has established default handling mechanisms that fully reflect market examples.

When a clearing member defaults due to financial factors, according to Chapter 9 - "Default Handling" of the OTC Rules and Chapter 11 of the Enforcement Rules, TAIFEX reserves the right to adopt necessary measures to manage the losses and liquidity issues caused by defaults, in order to maintain the daily clearing operations of TAIFEX.

#### **Establish Default Management Group**

According to Article 52 of the OTC Rules, TAIFEX shall establish an OTC Default Management Group (DMG). Members include clearing member representatives with the expertise in cleared transaction risk management, trading and/or hedging, and TAIFEX personnel. The DMG must serve as an advisory unit for TAIFEX to manage clearing member defaults, conduct defaults fire drills, and provide recommendations for the following matters:

1. Hedging strategy for the defaulting clearing member's positions.
2. Auction method for the defaulting clearing member's positions.

3. Other matters relating to default management.

According to Article 3 of Rules of the Taiwan Futures Exchange OTC Derivatives Clearing Default Management Group, TAIFEX may establish DMG for each product class. Each DMG shall consist of six members appointed as described below with the approval of TAIFEX's board of directors.

1. Five clearing member representatives are to be appointed by TAIFEX out of individuals with at least two years' experience in trading, hedging, and risk management for the relevant product.
2. One TAIFEX representative to be proposed by the president and nominated by the Chairman of the board of directors.

According to Article 2 of Rules of the Taiwan Futures Exchange OTC Derivatives Clearing Default Management Group, The roles and responsibilities of the Default Management Group ("DMG") are as follows:

1. To provide advices for defaulting clearing members' positions:
  - (1) Matters about hedging strategies for a defaulting clearing member's positions, selection of hedging counterparties, and terms and execution of transactions.
  - (2) Matters such as position composition of an auction portfolio, and auction rules, date, and time.
  - (3) Matters relating to default management and loss control procedures, including VMGH.
2. To provide advice for TAIFEX's default management process.
3. To participate in TAIFEX's default fire drills.

TAIFEX is arranging to set up DMG. After DMG is established, TAIFEX will conduct a default fire drill on an annual basis. Besides, TAIFEX will also have a discussion with DMG about the fire drill framework and potential approach.

According to Article 11.1.5 of the OTC Enforcement Rules, the DMG shall participate in regular default fire drills conducted by TAIFEX on an annual basis. TAIFEX will notify the timetable and scope for each default fire drill prescribed in the preceding paragraph to the clearing members and the DMG. TAIFEX basically holds regular fire drills at the moment, and will consider carrying out unscheduled drills in the

future.

According to Article 2 of Organizational Rules of the Taiwan Futures Exchange OTC Derivatives Clearing and Risk Management Committee, the TAIFEX OTC Derivatives Clearing and Risk Management Committee will review the annual default fire drill plans and results.

### **Handling of Defaults Caused by Financial Factors**

According to Article 55 of the OTC Rules, where a clearing member is in default due to financial factors, TAIFEX Clearing may take the following measures:

1. Suspend the defaulting clearing member's centralized clearing and settlement operations and report the matter in writing to the Competent Authority.
2. Suspend the defaulting clearing member's withdrawal of cash margin or negotiable securities.
3. Notify clearing members and make an announcement to the market.
4. Check the defaulting clearing member's margin balance, bank account balance, operating bond, OTC derivatives settlement fund, and other assets and immediately pursue protective measures in respective of the obligatory rights.
5. Convene the Default Management Group to handle cleared transactions and margins of the defaulting clearing member.
6. Conduct an audit of the defaulting clearing member and an investigation and analysis of the incident.

### **Handling Cleared Contracts and Margins of the Defaulting Clearing Member**

According to Article 56 of the OTC Rules, in the event that a clearing member defaults due to financial reasons, TAIFEX may take the following actions and dispose of the clearing member's cleared transactions and margin in the following manner:

1. Suspension of a defaulting clearing member's ability to submit new transactions.
2. Either freeze or transfer funds and securities in the defaulting

clearing member's OTC derivatives clearing margin account.

3. The cash or funds from the disposal of securities of the defaulting clearing member's clearing account will be utilized to meet payment obligations within the same clearing account.
4. Port non-defaulting client's cleared transactions and margins from defaulting clearing member to another clearing member selected by the non-defaulting client, or the succeeding clearing member with an agreement with the defaulting clearing member.
5. Hedge cleared transactions in the defaulting clearing member's proprietary account and individual client accounts that were not ported.
6. Auction cleared transactions in the defaulting clearing member's proprietary account, individual client accounts that were not ported, and hedging transactions in Subparagraph 5.

After the cash or securities of the aforementioned client clearing account are disposed by TAIFEX and found to be insufficient to cover the payable amount, TAIFEX may dispose of the cash and securities in the proprietary account of the defaulting clearing member to cover the amount.

Clearing members who comply with the conditions stipulated by TAIFEX shall participate in the auction according to Item 6, Paragraph 1.

### **Auction**

According to Article 11.4.2 of the OTC Enforcement Rules, Non-defaulting clearing members who, within sixty business days preceding the date of default, hold products identical with those in an auction portfolio announced by TAIFEX are to participate in the auction ("compulsory auction participants").

Clearing members who are non-compulsory auction participants may apply to TAIFEX to participate in an auction on a voluntary basis.

Defaulting clearing members may not participate in auctions.

When TAIFEX conducts auctions for cleared transactions of a defaulting clearing member according to Article 57 of the OTC Rules, the following measures shall be taken in the absence of bids or in the

situation where TAIFEX rejects bids:

1. Announce auction failure and re-auction a part or all of the defaulting clearing member's cleared transactions.
2. Invite non-defaulting clearing members to agree the loss allocation method for defaulting cleared transaction(s).

If TAIFEX deems the clearing contract of the defaulting clearing member is unable to be handled through auctions or an agreement cannot be reached with the clearing member according to Item 2 of the aforementioned Paragraph, TAIFEX shall discuss the case with the Default Management Group to conduct multi-sided early termination of the clearing contract.

The cleared transactions designated by TAIFEX, as described above, are as follows:

1. Cleared transactions of defaulting clearing member that failed to be auctioned.
2. Cleared transactions held by the non-defaulting clearing member which have equal but opposite terms to the cleared transactions in the preceding subparagraph.
3. Cleared transactions executed between the non-defaulting clearing member and TAIFEX for the purpose of hedging the cleared transactions in subparagraph 1.
4. Other cleared transactions TAIFEX deems necessary to be designated.

### **Default Fund Juniorization and the Cap of Member Assessment Shared by Clearing Member**

According to Article 58 of the OTC Rules, TAIFEX may use the following funds in the order below when a clearing member fails to fulfill its clearing and settlement obligations:

1. The defaulting clearing member's clearing margin.
2. The defaulting clearing member's OTC derivatives default fund.
3. The OTC Derivatives compensation reserve fund.
4. Other clearing member's contributions to the OTC derivatives default fund.
5. The pro rata ratio and pro rata amount cap of additional contributions on other clearing members shall be prescribed by



TAIFEX.

The deposit amount of other clearing members described above shall be handled according to the following regulation:

1. If only one clearing member defaults during the cooling-off period, then the cap is 150% of the OTC derivatives default fund to be deposited by the clearing member on the business day before the start of the cooling-off period.
2. If multiple clearing member default during the cooling-off period, then the cap is 300% of the OTC derivatives default fund to be deposited on the business day before the start of the cooling-off period.

Cooling-off period in the preceding paragraph means the period of 20 trading days beginning from the date on which a default by a single clearing member occurs. If any other clearing member defaults before the end of the cooling-off period, then the new end of the cooling-off period is 20 business days from the day the last clearing member defaulted.

**Contributions to make up the shortfall after utilization of OTC derivatives settlement funds**

According to Article 60 of the OTC Rules, TAIFEX shall calculate the total required amount of the OTC derivatives default fund and contributions to be made by clearing members on the last day of the cooling-off period.

For the OTC derivatives default clearing fund contributed to by the clearing member, after it is used during the cooling-off period according to Item 4, Paragraph 1, Article 58 of the OTC Rules, the fund shall be replenished within the stipulated period with the amount requested by TAIFEX.

**Default losses to be covered by using net deposits of non-defaulting clearing members**

According to Article 61 of the OTC Rules, when the fund stipulated in

Items 1 to 5, Paragraph 1, Article 58 of the OTC rules is insufficient to cover the default losses of the clearing member, the difference shall be covered by the daily positive amount of cash receivable from each clearing account.

The aforementioned net positive amount of cash receivable refers to the positive net amounts of the clearing accounts of each clearing member within the calculation period set by TAIFEX. The amount is calculated by multiplying the positive amount with the ratio stipulated by TAIFEX above.

### **Voluntary payment of funds by clearing members to cover default losses**

According to Article 62 of the OTC Rules, when the fund stipulated in Items 1 to 5, Paragraph 1, Article 58 of the OTC Rules plus the net amounts of cash receivables mentioned above of the clearing accounts is insufficient to cover the default losses of the clearing member, TAIFEX shall notify the clearing member to provide funds (voluntary payment of funds) to cover the losses.

### **Default losses covered by TAIFEX**

According to Articles 58, 61, and 62 of the OTC Rules, the insufficient amount after payment shall be covered by TAIFEX.

According to Article 64 of the OTC Rules, the defaulting clearing member shall compensate TAIFEX for the amounts, interests, and necessary fees covered by TAIFEX for defaulting clearing member handling, as stated in this chapter.

Amounts recovered from the defaulting member, net of expenses, shall be used to make the following repayments in the order presented:

1. The amount paid by TAIFEX according to Article 63 of the OTC Rules.
2. The amount paid by clearing members according to Article 62 of the OTC Rules.
3. The amount paid by clearing members according to Article 61 of the OTC Rules.
4. The amount shared by clearing members according to Subparagraph 5, Paragraph 1, Article 58 of the OTC Rules,

recovered in reverse order.

5. The amount of OTC derivatives default fund used in accordance with Subparagraph 4, Paragraph 1, Article 58 of the OTC Rules, recovered in reverse order of the utilization order.
6. The amount of TAIFEX's OTC Derivatives Compensation Reserve Fund used in accordance with Subparagraph 3, Paragraph 1, Article 58 of the OTC Rules.

### **Close-out Netting**

According to Article 65 of the OTC Rules, in the event of TAIFEX's payment default, the affected clearing member may apply for Close-out netting in writing (which does not require approval), and TAIFEX shall terminate all cleared transactions with such clearing member and any other cleared transactions that could offset the cleared transactions of the affected clearing member. Additionally, TAIFEX may terminate all cleared transactions with all clearing members.

In the event of TAIFEX's insolvency, TAIFEX shall promptly notify the clearing members and, based on a written request from the clearing members or TAIFEX's own authority, terminate all cleared transactions of all clearing members through close-out netting.

After the cleared transactions are terminated through close-out netting, TAIFEX will calculate the termination value for each clearing member's clearing accounts.

When conducting a close-out netting process, TAIFEX calculates the termination value for each clearing member's individual client clearing account and its proprietary clearing account separately. The termination value for each clearing account is the sum of the positive values of the receivables of the clearing member for all the terminated cleared transactions (expressed as positive values) and the payables of the clearing member for all the terminated cleared transactions (expressed as negative values), and the positive and negative values of other receivables and payables in the clearing account. If the net amount after such calculation is positive, TAIFEX shall pay that amount to the clearing member. If the net amount is negative, the clearing member shall pay the absolute value of the net amount to TAIFEX. This calculation may be done separately for each clearing member's own proprietary clearing account and its individual client clearing accounts.

TAIFEX's payment default event refers to the following three situations occurring consecutively where TAIFEX fails to make payment within the deadline due to reasons beyond its control, such as power supply interruption, computer system failure, communication transmission equipment failure, natural disasters, riots, war, or other force majeure events:

1. TAIFEX fails to pay clearing margin, clearing funds, or other receivables of the clearing member.
2. The clearing member sends a written notice of payment reminder, and after five business days from the delivery date have passed, payment has not been completed.
3. TAIFEX has not completed payment within the deadline in the previous clause, and the clearing member sends a written reminder, and after five business days from the delivery date have passed, payment has not been completed.

TAIFEX's insolvency event refers to any of the following situations:

1. TAIFEX's assets are insufficient to offset its debts.
2. The board of TAIFEX passes a resolution to suspend, cease, dissolve, apply for statutory reorganization under bankruptcy law, or declare bankruptcy.
3. TAIFEX is ordered by the competent authority to suspend, revoke, or terminate its business license.
4. TAIFEX's creditor files a bankruptcy petition against the company under the Bankruptcy Act. However, this does not apply to cases where the petition is clearly unreasonable or has an improper purpose.

TAIFEX stipulates certain timelines for collection of clearing margin, settlement amounts, OTC default fund, etc. for both TAIFEX and clearing members, and the related rules are as follows:

- 1.For the collection of clearing margin: Chapter 6 (Margin) of the OTC Enforcement Rules.
- 2.For the payment and withdrawal of settlement amounts: Chapter 7 (Clearing and Settlement) of the OTC Enforcement Rules.
- 3.For OTC the payment and withdrawal of settlement amounts: Chapter 10 (Default Fund) of the OTC Enforcement Rules.

Both TAIFEX and clearing members are subject to the rules as mentioned above. For example, according to Article 7.2.3 of the OTC Enforcement Rules, Where a clearing member requests to withdraw clearing margin by 11:00 am, TAIFEX will start processing the withdrawal requests at 12:00 pm on the same day, and transfer the funds to the OTC clearing margin account designated by the clearing member. When a request is made by 2:00 pm, TAIFEX will start processing the withdrawal requests at 3:00 pm on the same day, and transfer the funds to the OTC clearing margin account designated by the clearing member. When determining the above-mentioned rules, TAIFEX takes into account the rules of ETD markets and the international practice of other CCPs..

**Key Consideration 2:** *An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.*

### **Preventive measures and resolution procedures**

TAIFEX has established preventative handling procedures related to possible defaults by clearing members. Default handling procedures have been stipulated in the emergency and abnormal situation handbook to define the scope of responsibilities and mission teams of each department. Relevant reporting procedures have been established to ensure that the competent authority, securities related organizations, and market can understand the situation and formulate response measures in a timely manner.

The TAIFEX emergency and abnormal situation handbook is given to all internal employees to ensure that all employees are familiar with default handling procedures. Emergency and abnormal situation drills are implemented periodically and irregularly to fully prepare the employees, so that when a clearing member default occurs, TAIFEX can continue to fulfill its clearing obligations.

#### 1. Preventive measures

- (1) The Trading Department is responsible for handling incidents of out-trades and settlement defaults reported by futures

commission merchants. Out-trades and defaults that exceed a certain level are reported in writing to the Intermediaries Compliance and Service Department, whereas defaults of extremely large amounts are referred to the Surveillance Department for inter-market reporting. In which case, an "Inter-market Information Exchange Form" would have to be completed according to the inter-market reporting guidebook and acknowledged by the accountable manager before it is forwarded to the Surveillance Department.

- (2) Based on clearing members' financial and business strength, the Intermediaries Compliance and Service Department assesses clearing members' business risks using a variety of risk indicators. Clearing members that trigger an alert in one of the risk indicators may be subjected to on-site audit depending on severity.
- (3) During trade hours, TAIFEX Clearing performs real-time monitoring of clearing members' margin maintenance ratios and margin requirements given the size of orders placed. The department may call clearing members for additional margin if necessary, and performs stress tests every day after the market closes to assess risk levels. The focus of the stress test is to evaluate each clearing member's value at risk in the following business day.
- (4) Every day after the market closes, the Surveillance Department will invite TAIFEX Clearing, Trading Department and Intermediaries Compliance and Service Department into an "Inter-department Meeting" to review current day's top losing traders list, next day's market-wide traders VaR estimate, clearing members' risk analysis, non-clearing members' ANC ratio, and whether futures commission merchants have reported any trader with a negative equity. These meetings are also used to resolve actions that are deemed necessary for effective management of market risks.

## 2. Basis of operations and procedures

### (1) Basis of operations

#### A. Exchange-traded derivatives market

- a. Taiwan Futures Exchange Corporation Regulations Governing Market Trading Surveillance.
- b. Risk Alert Rules for Futures Commission Merchants and Clearing Members.
- c. Taiwan Futures Exchange Corporation Rules for Auditing Futures Commission Merchants and Clearing Members.
- d. Taiwan Futures Exchange Corporation Regulations Governing Procedures for Special Audits and Provision of Guidance to Futures Commission Merchants and Clearing Members.
- e. The Rules, Chapter 12 - Disposition of Defaults by Clearing Members.
- f. Apportionment Procedures for Managing Default by Clearing Members.
- g. Taiwan Futures Exchange Corporation Procedures for Suspension or Termination of a Futures Commission Merchant and Clearing Member.

B. OTC derivatives market

- a. Default handling in Chapter 9 of the OTC Rules.
- b. Default handling in Chapter 11 of the Enforcement Rules.

(2) Procedures

- A. If any clearing member fails to fulfill settlement obligations to TAIFEX Clearing to the extent that may disrupt the entire futures or OTC market as a whole, a command center that consists of directors from Trading Department, TAIFEX Clearing, Surveillance Department, Intermediaries Compliance and Service Department, System Development Department, Computer Operation Department, Administration Department, and Business Development Department will be assembled to resolve the issue. In which case, the head of TAIFEX Clearing will serve as the convener of the command center, while meetings are hosted by the Chairman or the CEO.
- B. TAIFEX Clearing will suspend all clearance and settlement services to the defaulted clearing member, and report the incident to the Competent Authority in writing.
- C. If the incident requires use of the default fund, TAIFEX

Clearing is responsible for approval of default fund use.

- D. The Trading Department will suspend all transaction activities of the clearing member and the futures commission merchants it serves, except for trade orders issued to close outstanding positions.
- E. TAIFEX Clearing then makes an announcement to the market on the incident.
- F. TAIFEX Clearing notifies the Competent Authority, clearing members, futures commission merchants and information providers in writing about the business suspension that the defaulted clearing member is undergoing.
- G. TAIFEX Clearing and other relevant departments will dispatch personnel to guide the defaulted clearing member through closure of proprietary and customer positions, and transfer of customer positions to the succeeding clearing member.
- H. Regarding defaults in the OTC derivatives market, the clearing department shall transfer the cleared transactions and margin of the non-defaulting clients of the defaulting clearing member to another chose clearing member or clearing members who have signed a succession agreement with the defaulting clearing member. The OTC Default Management Group is convened to hedge the risks from or auction the defaulting proprietary positions or non-porting client positions of defaulting clearing members.
- I. TAIFEX Clearing and other relevant departments will dispatch personnel to freeze or transfer clearing margins held by the defaulted clearing member.
- J. To secure TAIFEX Clearing's debt entitlements, the Administration Department will prepare adequate collateral and accompany the Business Development Department to a court of law to apply for provisional seizure of securities, time deposits, real estate, bank deposits, safety deposit boxes and any valuable property of the defaulted clearing member.
- K. The Intermediaries Compliance and Service Department will notify the Securities and Futures Investors Protection Center to assist in protecting traders' interests.



## **Procedures for clearing member's default**

### Exchange-traded derivatives

The internal operating procedures for clearing member defaults stipulated by TAIFEX ("Clearing Member Default Resolution Procedures") in order to ensure that the responsible units comply with the laws and regulations and implements the handling procedures when a clearing member default occurs:

1. Conduct special audit; the scope of audit shall cover:
  - (1) Reasons for the breach of settlement obligation.
  - (2) Positions and margin balances held by clearing members under the names of other futures commission merchants and futures traders.
  - (3) Clearing member's financial status.
  - (4) Whether the person-in-charge or any employee has violated law.
2. Take count of assets owned by the clearing member and take legal actions immediately to secure debts.
3. Report the default case to the Competent Authority.
4. Announce the default case to the market.
5. Arrange a default resolution meeting.
6. Verify actions to be taken by the defaulted clearing member and the succeeding clearing member.
7. Utilize the default fund.
8. Stop the defaulted clearing member from taking further positions.
9. Suspend cleared transactions of the defaulting clearing member.
10. Terminate clearing and settlement services to the defaulted member.
11. Report findings of the default case to the Competent Authority.

### OTC derivatives market

1. Preventive Measures for responding to the default of a clearing member:
  - (1) The Clearing Department shall monitor the margin retention rate and the margins necessary for clearing transaction

contracts of clearing members during trading hours. Where necessary, it may request clearing members to pay arrears.

(2) The Clearing Department shall calculate the concentration level of clearing members based on the concentration criteria. For clearing members that exceed the concentration criteria, the Clearing Department shall notify clearing members to pay attention to their positions, collect additional margins, or execute other necessary measures to maintain market order or protect the healthy development of the market.

(3) The Clearing Department shall review whether clearing members continue to meet the qualifications set by the Company based on the basic information, material changes in business operations, customer clearing business information, financial report, and financial structure information. It shall also learn about the financial or business operations of the clearing member to obtain early warning for potential future risks.

(4) The Clearing Department may collect additional margins from clearing members based on market conditions, positions or credit conditions of the clearing member, or other conditions deemed as necessary by TAIFEX.

2. Basis of operations and response procedures of default management procedures:

(1) Basis of operations:

A. Article 31, Article 33, Article 38, Article 45, Article 55, and Article 56 of the OTC Rules.

B. Article 6.1.3, Article 6.1.5, Article 6.2.1, Article 6.2.2, Article 6.2.3, Article 9.2, and Article 13.1.1 of the OTC Enforcement Rules.

(2) Response procedures:

A. If a clearing member fails to perform clearing and settlement obligations to the Company and affects the normal operations of clearing and settlement in over-the-counter clearing operations, the Clearing Department shall suspend the centralized clearing operations of the clearing member and report to the competent authority with an official letter.

- B. The Clearing Department shall notify the Surveillance Department to send notifications to four parties.
- C. The Clearing Department shall suspend the withdrawal of the cash deposit or securities of the defaulting clearing member, and suspend the submission of transaction contracts by the defaulting clearing member for centralized clearing operations.
- D. The Clearing Department shall notify all clearing members and make an announcement to the market.
- E. The Clearing Department shall conduct an inventory of the balance of margins, balance of bank deposits, business security deposit, OTC clearing and settlement fund, and other properties of the clearing member. The Administration Department and the Business Development Department shall take measures to secure creditor rights.
- F. The Clearing Department shall freeze or transfer the funds and securities in the OTC settlement security deposit account of the defaulting member.
- G. The Clearing Department shall assemble the OTC Default Management Team to process the clearing contracts and margins of the defaulting clearing member.
- H. The Clearing Department shall transfer the clearing contracts and margins of the non-defaulting customers of the defaulting clearing member to another clearing member chosen by the customer or a clearing member that has signed a succession contract with the defaulting clearing member.
- I. The Clearing Department shall execute hedging transactions with the clearing account of the defaulting clearing member and the clearing contracts of the clearing accounts of customers that have not yet been transferred.
- J. The Clearing Department shall auction the clearing account of the defaulting clearing member and the clearing contracts of the clearing accounts of customers that have not yet been transferred and hedging transactions.

- K. The funds obtained after the disposal of the cash of securities in the clearing accounts of the defaulting clearing member shall be used to pay for the payables of the clearing accounts.
- L. If the OTC clearing and settlement fund must be utilized, the Clearing Department shall organize related matters for the utilization of the clearing and settlement fund.
- M. The Intermediaries Compliance and Service Department shall conduct special audits on the defaulting clearing member and it shall investigate and analyze the incident. Where necessary, the Department may inquire and request related information from the defaulting clearing member or notify the defaulting clearing member to provide explanations.

**Key Consideration 3:** *An FMI should publicly disclose key aspects of its default rules and procedures.*

TAIFEX Clearing has specified in Chapter 12 of the Rules and Chapter 9 of its OTC Rules detailed procedures for resolving clearing members' default, including: definition of clearing members' default, available actions, methods for disposing positions and margins held in clearing members' accounts, and available defensive resources. These details have been announced on TAIFEX's website as a means of disclosure to all market participants.

**Key Consideration 4:** *An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.*

### **Rehearsal of emergency response and procedures**

#### Exchange-traded derivatives market

According to TAIFEX's "Business Continuity Plan" , TAIFEX shall conduct regular and unscheduled drills. These tests have exercised several procedures as the following:

1. Check the defaulting clearing member's clearing margin

balance, bank account balance, operating bond, clearing and settlement fund, and other assets.

2. Suspend the defaulting clearing member's clearing and settlement operations.
3. Freeze or transfer funds and securities in the defaulting clearing member's clearing margin account.
4. Convene an emergency response meeting.
5. Pursue protective measures in respect of the obligatory rights.
6. Waterfall scheme to compensate for the default.
7. Conduct an audit of the defaulting clearing member and an investigation.

#### OTC derivatives market

According to Article 11.1.5 of the Enforcement Rules, TAIFEX will notify the timetable and scope for each default fire drill prescribed in the preceding paragraph to the clearing members and the DMG. Upon receiving such notification from TAIFEX, the clearing members shall dispatch their representatives to participate in the default fire drill.

TAIFEX is arranging to set up DMG. After DMG is established, TAIFEX will conduct a default fire drill on an annual basis. Besides, TAIFEX will also have a discussion with DMG about the fire drill framework and potential approach.

According to Article 11.1.5 of the OTC Enforcement Rules, the DMG shall participate in regular default fire drills conducted by TAIFEX on an annual basis. TAIFEX will notify the timetable and scope for each default fire drill prescribed in the preceding paragraph to the clearing members and the DMG. TAIFEX conducts regular default fire drills and, when necessary, implements unscheduled drills depending on the occasion.

According to Article 2 of Organizational Rules of the Taiwan Futures Exchange OTC Derivatives Clearing and Risk Management Committee, the TAIFEX OTC Derivatives Clearing and Risk Management Committee will review the annual default fire drill plans and results.



**Principle 14 : Segregation and portability**

A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions.

***Summary Narrative***

**Key Consideration 1:** *A CCP should, at a minimum, have segregation and portability arrangements that effectively protect a participant's customers' positions and related collateral from the default or insolvency of that participant. If the CCP additionally offers protection of such customer positions and collateral against the concurrent default of the participant and a fellow customer, the CCP should take steps to ensure that such protection is effective.*

**Protecting customers from default of the participant (clearing member) and fellow customers**

To protect futures customers' interests, the Act specifies that customers' margins must be deposited separately from TAIFEX Clearing and futures commission merchants' assets. The Act also requires customers' assets to be deposited separately from each other.

**Legal basis for segregation and transfer of assets**

1. According to Article 51 of the Act, the clearing margin collected by TAIFEX Clearing shall be deposited separately from its own assets. The creditors of a futures clearing house, the financial institution holding the clearing margins, or clearing members, unless otherwise provided by the Act, shall not attach or claim any rights on such clearing margins. A futures clearing house shall separately deal with the clearing margins between proprietary and brokerage accounts that it collects from its clearing members.
2. According to Article 54 of the Act, TAIFEX Clearing may, in case a member is bankrupt, dissolved, suspended for business or defaulted upon its clearing and settlement obligation, transfer such member's account and the related accounts of futures traders to another member who has executed a succession agreement with the defaulting member. Where it is deemed necessary, TAIFEX

Clearing may appoint a non-contractual member as transferee to assume the liability and responsibility of the defaulting member.

3. According to Article 70 of the Act, a futures commission merchant shall open an exclusive customer margin/premium account in a banking institution designated by the Competent Authority, and shall deposit its futures customers' margins or premiums into such an exclusive account. The said account shall be segregated from the account of the futures commission merchant's own assets.

**The client protection rules for segregation and transfer of client assets stipulated by TAIFEX protect customers from participants' (clearing members') defaults**

In order to implement the Act regulations related to the segregation and transfer of trader assets, TAIFEX has clearly stipulated client asset separation, transfer arrangement, and other client protection measures in the Rules. The descriptions for the exchange-traded derivatives market and OTC derivatives market are as follows:

1. Exchange-traded derivatives market

- (1) To protect futures customers' interests, the Act specifies that customers' margins must be deposited separately from TAIFEX Clearing and futures commission merchants' assets. The Act also requires customers' assets to be deposited separately from each other. According to the Regulations Governing Futures Commission Merchants stipulated by the competent authority, a futures commission merchant shall not exercise overdrafts on funds or securities in customer margin accounts, nor create any security interests or other rights thereupon, nor divert them to serve as another client's margin, premiums, clearing and delivery fees, commissions, or processing fees, or to cover insufficient funds of other clients.
- (2) As a means of enhancing management over customers' margin accounts, the competent authority has established a set of Guidelines on Use of Customers' Margin Accounts for Futures Commission Merchants that require all futures commission merchants to deposit futures customers' margins and premiums into



separate accounts opened at designated financial institutions. In addition, the agreement of customers' margin accounts shall be reported to the competent authority for recordation.

- (3) TAIFEX has stipulated rules related to position transfers for non-defaulting members in Chapter 12 of the Rules. It states when clearing members default due to financial factors, the client positions of the defaulting clearing member may be transferred to other clearing members who have signed an undertaking contract with the clearing member, in order to complete the position transfer operations for non-defaulting clients.

## 2. OTC derivatives market

### (1) Segregation

Regarding segregation, the self-owned assets and margin deposits of the Taifex, clearing members, and clients are stored separately. The interests of each entity will not be influenced due to events such as defaults.

### (2) Portability

Regarding Portability, once the clearing member defaults:

- A. In the event that a clearing member defaults due to financial reasons, TAIFEX may take the following actions and dispose of the clearing member's cleared transactions and margin in the following manner: Suspension of a defaulting clearing member's ability to submit new transactions.

Either freeze or transfer funds and securities in the defaulting clearing member's OTC derivatives clearing margin account. The cash or funds from disposal of securities of the defaulting clearing member's clearing account will be utilized to meet payment obligations within the same clearing account.

- B. Port non-defaulting client's cleared transactions and margins from defaulting clearing member to another clearing member selected by the non-defaulting client, or the succeeding clearing member with an agreement with the defaulting clearing member. The final payment for auctioned positions (separately

grouped from defaulting positions) will be returned to non-defaulting clients to safeguard their rights.

- (3) According to Article 51 of the Act, and as stated in Chapter 3 of the OTC Rules and Chapter 3 of the Enforcement Rules related to the quarantine and protection of individual client margins, the clearing member margin and the assets of TAIFEX shall be deposited separately. The proprietary margin and client margins of a clearing member shall also be deposited separately. The OTC client margin account shall be separated from the proprietary assets of the clearing member. The clearing member may not overdraw, apply a guarantee, or exercise other rights over the deposits or securities deposited by the clearing member or the client in the OTC derivatives client margin account, and may not divert the funds to cover the margins, clearing fees, commission, processing fees, or shortfall of other clients.
- (4) According to Article 54 of the Act, and as stated in the transfer rules for positions and margins in Chapter 9 of the OTC Rules and Chapter 11 of the Enforcement Rules, if the clearing member defaults due to financial factors, TAIFEX shall transfer the positions and margins of the non-defaulting clients of the defaulting clearing member to other clearing members specified by the non-defaulting client. The defaulting clearing member shall handle the transfer according to the instructions of the non-defaulting client.
- (5) According to article 3 and 11 of the OTC Enforcement Rules, clearing members must separately open proprietary and individual client accounts and record the positions, margins and other account details each day. If a clearing member was default, TAIFEX can instruct those non-defaulting clients to transfer their position and margin to another clearing member.

**Key Consideration 2:** *A CCP should employ an account structure that enables it readily to identify positions of a participant's customers and to segregate related collateral. A CCP should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts.*

**Client collaterals shall be deposited separately and quarantined**

**and protected**

Descriptions of the exchange-traded derivatives market and OTC derivatives market are as follows:

1. Exchange-traded derivatives market

(1) Regulations for separate deposit of client collaterals

A. According to the Act, TAIFEX Clearing shall separately deal with the clearing margins between proprietary and brokerage accounts that it collects from its clearing members. In practice, TAIFEX Clearing has implemented the Rules and the OTC Rules that require clearing members to set up segregated "Proprietary Clearing Margin Accounts" and "Customer Clearing Margin Accounts" with a settlement bank through which all proprietary and customer margin transfers with TAIFEX Clearing shall be carried out.

B. In addition, futures commission merchants are required to open "Customer Margin Accounts" in a financial institution designated by the clearing member for margin payment and collection purposes. Futures commission merchants that engage in proprietary futures trading are also required to open a "Proprietary Margin Account" in a financial institution designated by the clearing member. The design of the account structure ensures that customer positions and collateral are clearly identified and segregated from clearing member its own positions and collateral and TAIFEX Clearing's funds.

(2) Client collaterals shall be quarantined and protected

Futures merchants may not overdraft, set guarantees, or exercise other rights over the deposits or negotiable securities in the client clearing margin account of the trader, and may not divert the funds to cover the margins, premiums, clearing fees, commission, processing fees, or shortfall of other clients.

2. OTC derivatives market

(1) Regulations for separate deposit of client collaterals

A. For the deposit, payment, and disposal of funds and securities

between TAIFEX and clearing member, TAIFEX may open margin accounts with settlement banks or other institutions, in order to segregate margins of clearing member and assets of TAIFEX.

B. TAIFEX has established the OTC Rules to state that clearing members shall open the "OTC proprietary clearing margin account" and "OTC client clearing margin account" in the settlement bank or other institution specified by TAIFEX. The proprietary margin and client margins shall be deposited and paid for separately.

C. Clearing member shall open "OTC Derivatives Client Margin Account" with institutions designated by the Competent Authority for client margin deposits and the margin shall be deposited separately from proprietary assets.

(2) Client collaterals shall be quarantined and protected

Clearing member may not overdraw, apply a guarantee, or exercise other rights over the deposits or securities deposited by the clearing member or the client in the OTC derivatives client clearing margin account, and may not divert the funds to cover the margins, clearing fees, commission, processing fees, or shortfall of other clients.

**Account structure that enables it to readily identify positions of a participant's (clearing member's) customers and to segregate related collateral**

TAIFEX Clearing has employed an account structure that enables it to readily identify positions of a participant's (clearing member's) customers and to segregate related collateral based on the exchange-traded derivatives market and OTC derivatives market, which are described below:

1. Exchange-traded derivatives market

(1) TAIFEX has established client statements to report the client margin account balance and equity of individual client accounts to TAIFEX on a daily basis. When a futures commission merchant accepts futures trading brokerage orders, the payments shall be made through the customer's margin account.

- A. Current regulations require futures commission merchants shall set up an itemized account record for each customer, including direct (individual) customer accounts and omnibus customer accounts, and on a daily basis shall calculate the balance of cash and securities on deposit in each customer's margin account and changes of the actual marginable value of securities and prepare an itemized statement for each customers' margin account, and furthermore shall report the owner equity balance and the total equity value in the principal's Customer Margin Account to the TAIFEX Clearing.
  - B. When a futures commission merchant accepts futures trading brokerage orders, the payments shall be made through the customer's margin account. All withdrawals shall be made through bank transfer, and a detailed and accurate record and receipt shall be prepared as proof of payment.
  - C. The futures customer shall transfer the securities deposited as margin that a futures commission merchant receives or delivers during futures trading into the TAIFEX Clearing's segregated margin account. However, where the futures customer agrees that the futures commission merchant or clearing member may utilize the securities to offset the margin required for the positions carried by the clearing member, the futures customer shall transfer the securities into the futures commission merchant's segregated margin account.
- (2) TAIFEX has established client statement for positions and securities used as margins in direct (individual) and combined client accounts. Changes in the client account positions and margins are recorded daily.
- A. The futures customer shall transfer the securities deposited as margin that a futures commission merchant receives or delivers during futures trading into the TAIFEX Clearing's segregated margin account. However, where the futures customer agrees that the futures commission merchant or clearing member may utilize the securities to offset the

margin required for the positions carried by the clearing member, the futures customer shall transfer the securities into the futures commission merchant's segregated margin account.

- B. When performing futures clearance and settlement services, TAIFEX Clearing prepares an Itemized Table for each trading account so as to effectively confirm positions composition of futures trading in direct (individual) customer accounts or in omnibus customer accounts. In terms of margin management, although clearing members' margin levels are monitored based on total positions held by each clearing member, TAIFEX Clearing still maintains an itemized account record for each futures customer, including direct (individual) customer accounts and omnibus customer accounts, and on a daily basis calculate the balance of securities on deposit in each customer's margin account and changes of the actual marginable value of securities.

## 2. OTC derivatives market

(1) Clearing member must separately prepare statements for individual clients and record the positions, margins and other account details each day. Client centralized clearing by clearing members shall be handled through OTC derivatives client margin accounts.

- A. The OTC Rules and the Enforcement Rules of TAIFEX stipulate that clearing member must separately open proprietary and individual client account and record the positions, margins and other account details each day.

- B. Clearing member shall open "OTC Derivatives Client Margin Account" with settlement banks designated by the Competent Authority for client margin deposits. When a clearing member is entrusted by a client to conduct clearing, the OTC client margin account shall be used to handle the deposit, collection, and disposal of client payments and securities. The funds within the account can only be transferred and cannot be withdrawn as cash. Clearing member shall provide details of the account for auditing purpose by the Competent Authority or TAIFEX if necessary.

- C. When clearing members use securities as margins for clients, the securities shall be deposited in TAIFEX, and the securities shall be used to pay the required clearing margin for the client's clearing account.
- (2) TAIFEX has established separate statements for individual clients, which record the positions and margins of the individual clients on a daily basis.
- A. For the handling of OTC derivatives clearing, TAIFEX separately establishes clearing member proprietary accounts and individual client accounts according to the account information and daily clearing types reported by the clearing member. The number and specifications of the cleared transactions and the payable amount of the clearing contract are recorded daily. The client clearing accounts should clearly state whether an agreement between the clearing member and the client exists, where the margins deposited by client will be paid to TAIFEX in full. The margins and funds in the individual clearing accounts must be separated.
- B. Regarding the management of margins, TAIFEX controls the margin standard for each clearing account for all clearing accounts of the clearing member. Before a clearing member submits a proprietary transaction or client transaction to TAIFEX for clearing, TAIFEX may demand that the clearing member pay a pre-margin so that the excess margins for the clearing accounts are sufficient to pay required clearing margin on newly added cleared transactions. When the clearing margin in accounts of clearing members is lower than the required clearing margin, TAIFEX shall make margin calls for the shortfall. The margins and funds in the individual clearing accounts of clearing members must be separated.
- C. TAIFEX established the margin account in the settlement bank. Information about margin accounts will be disclosed immediately on TAIFEX Web-Portal. Customers can check their account information in our system. The margin of the clearing member and the proprietary assets of TAIFEX are deposited separately. The margin statements are established

separately according to the clearing member's proprietary account and individual client accounts to record the margin amount, types, and quantities for clearing members on a daily basis and for clearing members to check the balance.

In summary, TAIFEX Clearing has the capability to quickly identify positions and margins of a participant's (clearing member's) customers in direct (individual) customer accounts or in omnibus customer accounts and to segregate related collateral. TAIFEX may, when a clearing member defaults, dispose of its non-defaulting client's positions into the OTC default account when TAIFEX determines that the client's positions poses too great a risk to TAIFEX or the client involves any other management material event which may cause a default deemed by TAIFEX. It depends on market conditions (commodity volatility, liquidity, economic indicator, etc.). The defaulting clearing Member is responsible to notify the customers.

**Key Consideration 3:** *A CCP should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participant's customers will be transferred to one or more other participants.*

### **Rules on account transfer**

Both the Competent Authority and TAIFEX Clearing have implemented rules and procedures to protect customers from adverse impacts such as bankrupt, dissolved, suspended for business, or defaulted upon its clearing and settlement obligation of futures commission merchants. TAIFEX Clearing is empowered by law to transfer customers' accounts to another functioning futures commission merchant as below:

1. According to Article 54 of the Act, a futures clearing house may, in case a member is bankrupt, dissolved, suspended for business or defaulted upon its clearing and settlement obligation, transfer such member's account and the related accounts of futures traders to another member who has executed a succession agreement with the defaulting member. Where it is deemed necessary, TAIFEX Clearing may appoint a non-contractual member as transferee to assume the liability and responsibility of the defaulting member.



A clearing house may impose a monetary penalty, void the membership, or take other necessary measures upon a member who refuses to accept the succession as referred to in the preceding Paragraph.

2. Article 75 of the Act also states that, the Competent Authority may, in case a futures commission merchant is bankrupt, dissolved, suspended, or is required by acts or regulations to cease to accept trading orders from futures traders, order it to transfer the relevant accounts of its futures traders to another futures commission merchant with whom it has a succession agreement. The futures commission merchant, unless with justified reason and approved by the Competent Authority, shall within two business days of receiving the transfer order from the Competent Authority, transfer the balance of the segregated customer margin/premium account and statements of the futures traders to the designated futures commission merchants.

Regarding the participants' (clearing members') defaults caused by financial factors, the measures adopted by TAIFEX for the exchange-traded derivatives market and OTC derivatives market are described as follows:

1. Exchange-traded derivatives market

(1) According to Article 103 of the Rules, TAIFEX Clearing may take the following measures:

- A. Suspend the defaulting clearing member's clearing and settlement operations and report the matter in writing to the Competent Authority.
- B. Notify all clearing members and futures commission merchants through the TAIFEX Clearing's online information system.
- C. Check the defaulting clearing member's clearing margin balance, bank account balance, operating bond, default fund, and other assets and immediately pursue protective measures in respect of the statutory rights.
- D. Dispose of the defaulting clearing member's positions and margin funds.

- E. Conduct an audit of the defaulting clearing member and an investigation and analysis of the incident.
- (2) According to Paragraph 1, Article 104 of the Rules, TAIFEX Clearing may dispose of positions and margin in that clearing member's account by the following means:
- A. Halt all trading between the defaulting clearing member and its mandating futures commission merchant; provided, this restriction shall not apply to trading for the purpose of liquidating existing positions.
  - B. Freeze or transfer funds and securities in the defaulting clearing member's clearing margin account.
  - C. Pursuant to the provisions of Article 54 of the Act, TAIFEX open a default handling account with a clearing member that has engaged in a succession agreement with the defaulting clearing member and liquidate proprietary positions held by the defaulting clearing member and the defaulting futures commission merchant.
  - D. A futures commission merchant that has engaged in a succession agreement with the defaulting futures commission merchant shall, at the instructions of the TAIFEX Clearing, liquidate open positions of the defaulting customer.
- (3) And, according to Paragraph 3, Article 104 of the Rules, Non-defaulting customers of the defaulting clearing member and defaulting futures commission merchant shall liquidate their positions or apply to have their positions transferred to another futures commission merchant. Where a customer fails to do so within five days, the succeeding futures commission merchant may liquidate all open positions in that customer's account. A non-defaulting mandating futures commission merchant shall select another clearing member and enter into an agreement mandating that clearing member to handle clearing and settlement, and shall not resume trading until after notifying the TAIFEX Clearing of the execution of the agreement.

## 2. OTC derivatives market

- (1) According to Article 55 of the OTC Rules, TAIFEX may adopt the

following measures:

- A. Suspend the defaulting clearing member's clearing operations and report the matter in writing to the competent authority.
  - B. Suspend the defaulting clearing member's withdrawal of margin.
  - C. Notify clearing members and make an announcement to the market.
  - D. Check the defaulting clearing member's margin balance, bank account balance, operating bond, OTC derivatives default fund, and other assets and immediately pursue protective measures in respective of the statutory rights.
  - E. Convene the Default Management Group to handle cleared transactions and margins of the defaulting clearing member.
  - F. Conduct an audit of the defaulting clearing member and an investigation and analysis of the incident. The relevant information will be requested from the defaulting clearing member or a request for an explanation will be submitted if necessary.
- (2) According to Article 56 of the OTC Rules, TAIFEX may dispose of positions and margin in that defaulting clearing member's account by the following means:
- A. Suspension of a defaulting clearing member's ability to submit new transactions.
  - B. Either freeze or transfer funds and securities in the defaulting clearing member's OTC derivatives clearing margin account.
  - C. The cash or funds from the disposal of securities of the defaulting clearing member's clearing account will be utilized to meet payment obligations within the same clearing account.
  - D. Port non-defaulting client's cleared transactions and margins from defaulting clearing member to another clearing member selected by the non-defaulting client, or the succeeding clearing member with an agreement with the defaulting clearing member.
  - E. Hedge cleared transactions in the defaulting clearing member's proprietary account and individual client accounts that were not ported.

- F. Auction cleared transactions in the defaulting clearing member's proprietary account, individual client accounts that were not ported, and hedging transactions described above.
- (3) According to Article 11.2.1 and Article 11.2.2 of the Enforcement Rules, clearing members who have been suspended from clearing operations by TAIFEX for financial reasons shall transfer cleared transactions and clearing margins of non-defaulting clients who have agreed to transferring to the succeeding clearing member and have the succeeding clearing members to perform the clearing obligations to TAIFEX.
- Where non-defaulting clients of defaulting clearing members instruct to transfer their cleared transactions and clearing margins to other clearing members designated by the non-defaulting clients, the defaulting members shall follow the instructions.
- Clearing members, following the rules above, shall enter into client clearing agreements with the clients before applying to TAIFEX for the porting of the cleared transactions and clearing margins of the clients. In addition, such clearing members shall submit a porting application to TAIFEX by 17:00 on the second business day after the default. The receiving clearing member shall have a sufficient clearing margin in the client's clearing account. Besides, client accounts applying for porting that have received a margin call notice from TAIFEX shall make up the shortfall before submitting an application.
- (4) According to article 11.2.1 of the OTC Enforcement Rules, Non-defaulting clients of defaulting clearing members are instructed to transfer their cleared transactions and clearing margins to other clearing members designated by the non-defaulting clients, the defaulting members shall follow the instructions. TAIFEX cannot be aware of any legal impediments that could prevent successful porting of client accounts. However, according to article 51 of Futures Trading Act, the creditors of a futures clearing house, the financial institution holding the clearing margins, or clearing members, unless otherwise provided by this Act, shall not attach or claim any rights on such clearing margins.

**Key Consideration 4:** *A CCP should disclose its rules, policies, and*

*procedures relating to the segregation and portability of a participant's customers' positions and related collateral. In particular, the CCP should disclose whether customer collateral is protected on an individual or omnibus basis. In addition, a CCP should disclose any constraints, such as legal or operational constraints, that may impair its ability to segregate or port a participant's customers' positions and related collateral.*

**Disclosure of separate account treatment**

The procedures and regulations that TAIFEX, clearing member and futures commission merchants follow when handling customers' cash/security margins have been published on TAIFEX's website for public access, such as the segregation and portability of a clearing member's customers' positions, disposing of positions and margin in the defaulting clearing member's clearing margin account by TAIFEX, the creditors of a futures clearing house, the financial institution holding the clearing margins, or clearing members, shall not attach or claim any rights on such clearing margins, etc.

**Disclosure regarding customers' protection**

Measures adopted by TAIFEX Clearing, clearing member and futures commission merchants to protect customers' margins, and response measures taken to address various situations that may affect customers' interests, are published on TAIFEX's website for public access.

**Principle 15 : General business risk**

An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialize. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

***Summary Narrative***

**Key Consideration 1:** *An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash*

*flows, or unexpected and excessively large operating expenses.*

### **Supervision and governance of general business risks**

TAIFEX Clearing has a robust management and control system in place to identify, monitor and manage general business risks. Its internal control policies have been designed to coordinate the Board, the management and employees into accomplishing the following goals with reasonable assurance:

1. Sound and efficient operations.
2. Reliable financial reporting.
3. Regulatory compliance.

Operations mentioned above are measurable using indicators such as profitability, performance targets and asset security. TAIFEX Clearing has also identified risk factors that are relevant to its operations, and adopted processes to assess likely impact should any risk materialize. Results of such assessments are used to draw up an extensive business plan to design, revise and execute necessary controls to mitigate such risks. In addition, TAIFEX Clearing also established emergency measures to ensure that it can continue operating under the stressed situation, to maintain the financial stability of the futures market.

To provide the management team and the Board a comprehensive and timely risk profile that TAIFEX Clearing exposes to, the following procedures are adopted.

1. Financial risks: Before the 10th calendar day of each month, TAIFEX Clearing is required to submit to the Competent Authority its financial statements for the previous month, and report budget execution on a quarterly basis to allow the Competent Authority to better monitor TAIFEX Clearing's income and expenses. TAIFEX Clearing complies with the Competent Authority's instructions and makes provision for special reserves from after-tax earnings on a yearly basis to reimburse previous losses or to provide additional share capital.
2. Risk of malfunction to the trading/clearing system:
  - (1) Exchange-traded derivatives futures market:

According to Article 10 of the Rules, futures commission merchants and their principals shall not request compensation when normal operations are obstructed by interrupted transmissions or malfunctions of trading information and facilities provided by TAIFEX Clearing.

(2) Over-the-counter OTC derivatives market:

According to article 11 of Taiwan Futures Exchange OTC Derivatives Clearing Agreement, Force Majeure. Party A(TAIFEX) shall not be liable for any loss or damage suffered by Party B(Clearing member) due to force majeure events such as market emergency, changes in applicable laws or regulations, any order from the competent authority, disruption or malfunction of computer system or communications facilities, war, strike, natural disasters or events caused by human behavior.

3. Business risks involving loss of profit or capital due to inappropriate strategies or decisions, negative reputation, and fraud: TAIFEX formulates the operating plan for the following year annually. The plan is approved by the Board of Directors and then reported to the competent authority. The competent authority shall review, evaluate, and assess the results of the operating plan before the end of each year.

TAIFEX Clearing draws up annual business plans, which were approved by the board and reported to the Competent Authority. The result of the execution of the business plan is reviewed, assessed, and rated by the Competent Authority by the end of each year.

TAIFEX Clearing scrutinizes its internal control systems once a year. Processes that are considered outdated or impractical will be revised to ensure effective management of risks associated with clearance, settlement, margins, and general business activities.

**Key Consideration 2:** *An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its*

*general business risk profile and the length of time required to achieve a recovery of orderly wind-down, as appropriate, of its critical operations and services if such action is taken.*

### **Sufficient liquidity net assets**

TAIFEX Clearing has maintained shareholders' equity (including common capital, statutory reserves, special reserves and unappropriated earnings) at a level that far exceeds the capital requirements imposed by the Competent Authority. It has liquid net assets funded by equity that sufficiently cover more than six months of operating expenses, and most of the liquid net assets are held in highly liquid form such as cash, cash equivalents, and time deposits with more than 3 months tenor (representing more than 90% of liquid net assets). In the unlikely situation of a general business loss, these assets can be utilized promptly to sustain TAIFEX Clearing's operation and service.

According to Article 13 of the Regulations Governing Futures Clearing Houses, TAIFEX Clearing shall report to the competent authority the monthly accounting summary, assets and liabilities statement (balance sheet), and statement of comprehensive income for the previous month within the first ten days of each month.

**Key Consideration 3:** *An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.*

### **Recovery or resolution plan**

TAIFEX Clearing is an exchange that concurrently operates as a clearing house. It was established with the approval of the Competent Authority. TAIFEX Clearing's primary mission is to facilitate the sound development of the futures market and to maintain the orderly transaction of the market in the best public interest and fairness of the



market. Given the fact that TAIFEX Clearing is the only one of its kind in Taiwan, its establishment and dismissal are highly regulated by the Competent Authority. Decisions such as change in capital, transfer of entire or major businesses or assets, and merger/dissolution may proceed only with the approval of the Competent Authority. It has been stated in TAIFEX's Articles of Incorporation, that the Company is required to report to the Competent Authority immediately of the following occurrences:

1. The suspension, resumption, or cessation of business.
2. The execution, amendment, or termination of the contact for use of the centralized futures exchange market entered into between the members or futures commission merchants and the futures exchange.
3. Events which shall be reported to the FSC in accordance with Article 39 of the Act.
4. Entering into any cooperation agreement or memorandum with a foreign exchange, self-regulatory institution, or other institution.
5. Other events which shall be reported to the FSC for review and recordation under the Act or other rules of the competent authority.

Furthermore, as a response to market changes and crises, TAIFEX Clearing has "Emergency response manual" and "Business continuity plan" in place to guide various activities such as reporting of significant events or occurrences, repair of information system, activation of backup system, and system recovery. Both "Emergency response manual" and "Business continuity plan" are revised and rehearsed on a regular basis.

TAIFEX has formulated handling procedures and measures for possible emergencies in the market that may significantly impact normal OTC clearing operations, disrupt or break the computer systems or communication equipment, or cause major defaults among clearing members in Chapter 10 - "Emergency Response Measures" of the OTC Rules, and Chapter 11 - "Default Handling" and Chapter 15 - "Emergency Response Measures of the Enforcement Rules, in order to ensure the security of OTC clearing.

## **Resources**

1. Financial: TAIFEX Clearing has liquid net assets that amount to more than 6 months of current operating expenses.
2. TAIFEX Clearing has set aside the compensation reserve fund to meet its maximum liability in the event that a clearing member fails to fulfill clearing and settlement obligations.

In addition, TAIFEX Clearing's capital is entirely issued in ordinary shares, and is not required to hold equity under international risk-based capital standards. Issuance of higher risk capital such as bonds is subject to the Competent Authority's approval.

**Key Consideration 4:** *Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.*

## **High quality liquid net assets**

According to Article 16 of the Regulations Governing Futures Clearing Houses, TAIFEX shall propose a special earnings reserve according to the after-tax earnings surplus each year. The purpose of the reserve is to compensate for losses or maintain the net asset flow of those approved by the FSC, in order to maintain operations and services after normal operational losses.

More than 90% of TAIFEX Clearing's current assets are held in the form of time deposits with more than 3 months tenor, while the remainder is kept in the form of cash and cash equivalents. All of which are high quality and highly liquid assets that TAIFEX Clearing may utilize to meet current and expected operating expenses under various scenarios, including adverse market conditions.

Banks in which the above assets are held are required to satisfy TAIFEX Clearing's financial criteria and credit rating standards on an ongoing basis (see Principle 16 - "Custody and investment risks").

**Key Consideration 5:** *An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors*

*and updated regularly.*

### **Share capital**

The shareholder's equity of TAIFEX at the end of 2022 was NTD 29.9 billion, which is far superior to the requirements imposed by the Competent Authority. In order to strengthen its risk bearing capabilities and financial protection mechanisms, TAIFEX regularly distributes earning surpluses as new shares, expanding the scale of capital every year and ensuring the security of the financial market. TAIFEX Clearing reports its financial status and major business activities to the Board on a monthly basis to give the board timely insights into TAIFEX Clearing's operations.

### **Capital increase procedures**

Any plan to increase capital would need to be passed by TAIFEX's Board and shareholders, and would require the approval of the Competent Authority.

## **Principle 16 : Custody and investment risks**

An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.

### ***Summary Narrative***

**Key Consideration 1:** *An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.*

### **Supervision and management of custodians**

To ensure they are protected to the fullest, TAIFEX Clearing places its own assets and the assets of clearing members in the custody of institutions where effective accounting practices, custodian procedures and internal controls have been soundly implemented.

According to Article 14 of the Regulations Governing Futures Clearing Houses, TAIFEX shall not loan the clearing and settlement fund to others or use the fund for other purposes. The use of the fund is limited to the following:

1. Bank deposits.
2. Purchasing treasury bond and government bond.
3. Other purposes approved by FSC.

The fixed deposits, treasury bills, and government bonds obtained by TAIFEX according to the above regulation shall be in the custody of the bank with which a custody contract has been signed.

According to Article 15 of the Regulations Governing Futures Clearing Houses, the Compensation Reserve Fund deposited by TAIFEX shall be deposited in different accounts in banks approved by the FSC for management and operations. TAIFEX shall not loan the Compensation Reserve Fund to others or use the fund for other purposes. The use of the fund is limited to the following:

1. Bank deposits.

2. Purchasing treasury bond and government bond.

3. Other purposes approved by FSC.

The fixed deposits, treasury bills, and government bonds obtained by TAIFEX according to the above regulation shall be in the custody of the bank with which a custody contract has been signed. The items shall not be distributed and stored, reported as missing, or the contracts shall not be terminated. The deposited items and their custody certification shall not be defined with guarantees, and shall not be withdrawn or transferred with FSC approval.

According to Article 23 of the Regulations Governing Futures Commission Merchants, the funds of the futures merchant that are not related to management and operational needs shall not be loaned to others or transferred for other purposes, unless approved by the FSC. The use of the fund is limited to the following:

1. Bank deposits

2. Purchase of government bonds or financial bonds.

3. Purchase of treasury bills, negotiable certificates of deposit, commercial paper, or other short-term notes and bills approved by the FSC.

4. Other purposes approved by the FSC.

Financial institutions which TAIFEX Clearing borrows from and deposits funds into must comply with the following financial criteria and credit rating requirements set by TAIFEX Clearing:

1. Banks and bills financing companies that hold custody, make use or guarantee the Company's proprietary capital must maintain credit rating above a certain level.

2. Securities investment trust companies with which proprietary capital is utilized must satisfy the two standards below:

(1). Ranking among the top 50% of all investment trust companies in terms of the size of domestic non-private equity funds managed.

(2). The total size of managed funds must amount to NTD 20 billion or more.

TAIFEX Clearing holds capital management meetings regularly to

select counterparties and to diversify funds at various financial institutions. Use of capital in the upcoming week is planned one week in advance to ensure sound execution. All banks that TAIFEX Clearing deals with are supervised by the Banking Bureau, and are covered under the central deposit insurance scheme. All settlement banks are required to implement internal controls, internal audits, accounting controls, operating procedures, levels of approval authorities and any other systems demanded by TAIFEX Clearing or the Competent Authority as part of their business policies.

**Key Consideration 2:** *An FMI should have prompt access to its assets and the assets provided by participants, when required.*

### **Safety and immediacy of funding**

TAIFEX Clearing's capital guidelines and settlement bank management procedures impose stringent requirements on the financial health and credit status for all financial institutions it deals with. TAIFEX Clearing requires clearing margins to be deposited only in the form of demand deposit or time deposit at a settlement bank, therefore funds are immediately accessible should any market participant default.

**Key Consideration 3:** *An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.*

### **Management of asset exposure**

TAIFEX Clearing monitors the financial status of its settlement banks on an ongoing basis. The credit rating of each settlement bank is reviewed on a regular basis, while the performance of financial institutions, guarantors and funds that it involves with are also subject to review. TAIFEX Clearing follows the resolutions made by its capital management team that no more than the maximum total of 50% clearing margin can be placed in any single settlement bank.

**Key Consideration 4:** *An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims*

*on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.*

### **Investment strategy**

Regulations Governing Futures Clearing Houses, the Rules, the OTC Rules and TAIFEX Clearing's capital guidelines have introduced clear policies on how TAIFEX Clearing may utilize, invest and manage its proprietary capital, and clearing margins and the default funds contributed by clearing members. Details of these policies have been fully disclosed.

TAIFEX Clearing may allocate available capital in the form of time deposits, NCD, treasury bills, guaranteed short-term notes, government bonds, bank debentures, domestic bond funds, domestic money market funds, domestic equity funds, domestic exchange-traded funds, domestic index funds, domestic balanced funds, and other financial products. All of which should be subject to prior planning and analysis, as well as approval from the Board and the Competent Authority before execution.

Contributions of exchange-traded derivatives market to the default fund (including OTC clearing member's contributions to the OTC derivatives default fund) can only be allocated in the form of bank deposits, treasury bills, government bonds, and other uses approved by FSC. Clearing margins can only be held in the form of time deposit in omnibus deposit accounts opened with settlement banks.

Financial institutions, which TAIFEX Clearing borrows from and deposits funds into, must comply with the financial criteria and credit rating requirements set by TAIFEX Clearing.

### **Risk characteristics of invested assets**

TAIFEX Clearing has a "capital management team" in place that pays constant attention to changes in the economic and financial environment. The team projects and plans weekly capital utilization based on interest rate, exchange rate or share price changes.

It convenes capital meetings regularly to review capital allocation by

instrument category, investment horizon, counterparty financial institution and fund holding position before planning for next month's allocation. TAIFEX Clearing chooses its counterparties based on the amount of investment limits assigned and utilized, and diversifies capital allocation where possible to minimize risks.

As a result, all investments of TAIFEX Clearing capital are carefully planned to achieve safety, quality income and high liquidity, and are therefore less susceptible to adverse price impacts. In addition, given the fact that clearing margins and the default fund are deposited in the form of deposits at institutions with strong financial backgrounds and credit ratings, there is virtually no liquidity risk.

### **Principle 17 : Operational risk**

An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.

#### ***Summary Narrative***

**Key Consideration 1:** *An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.*

#### **Identify operational risk**

TAIFEX Clearing understands the importance of a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks. As a result, TAIFEX Clearing has policies and plan to identify, monitor, and manage operational risks. Sources of operational risks may



arise from failure in internal operations and systems, human error, and external events. The prudent Business Continuity Management Policy and operational risk management framework in place as the tools TAIFEX and TAIFEX Clearing rely on. Internal factors are mostly management-related, such as organizational strategies and goals, internal communication, supervision and review, employee quality and discipline etc. All associated risks can be identified through measures such as annual business planning, audits, and employee performance appraisal. Given the status of current operations, occurrence of abovementioned events is relatively low. In terms of impacts from external factors such as natural disasters and external parties, TAIFEX Clearing has an emergency response manual in place that outlines responses for various situations including fire, earthquake, theft, bank crisis, member's default, data transmission error, and malfunction of carrier's network.

### **Operational risk management**

TAIFEX Clearing has robust internal control practices, ISO procedures, self-examination and risk assessment systems in place. In an attempt to reduce operational risks, TAIFEX Clearing has established clearing and settlement guidelines in its Operational Key Points of Clearing and Settlement for Futures Commission Merchants and Clearing Members and the Enforcement Rules to guide procedures such as: deposit and withdrawal of margin, margin call, settlement at expiration, foreign exchange settlement agent services for margin, settlement service billing, position management, contract adjustment, and process timing. TAIFEX Clearing has implemented standardized workflows as part of its internal ISO procedures, thereby ensuring the stability of its business operations. To ensure consistent quality in daily operations, TAIFEX Clearing has outlined in its "Documentation Procedures" a set of standardized guidelines to control how documents are prepared, reviewed, approved, implemented, amended, updated, distributed, abolished and followed.

### **Policies, procedures and controls**

TAIFEX Clearing is responsible for overseeing the development and

risks of the market, which is why it has implemented risk control and security surveillance systems, and conducts regular inspections to make sure that every procedure is properly managed. The goals, procedures and control points of each major operation have been outlined in TAIFEX Clearing's "Internal Control System" and "Internal Audit Implementation Rules." These documents can be used to evaluate the completeness and appropriateness of Company's existing controls, and effectively reduce risk of operations. With regards to the human resources policy, TAIFEX's ISO procedures have implemented standardized processes such as: employment agreements, employee training manuals, resignation procedures, and disciplinary policy to minimize the risks associated with staff transfer and attrition. With regards to fraud prevention, TAIFEX Clearing has purchased loyalty insurance for employees involved with cash disbursement, financial management, procurement and market surveillance, and implemented a "Gift Purchase and Distribution Management Procedure" to guide its procurement processes.

### **Supervision and reporting**

The goals, procedures and control points of each major operation have been outlined in TAIFEX Clearing's "Internal Control System" and "Internal Audit Implementation Rules." These documents can be used to evaluate the completeness and appropriateness of Company's existing controls, and effectively reduce risk of operations. TAIFEX Clearing's internal control system and internal audit practices are revised on a yearly basis to accommodate changes in the internal/external environment, new regulations and new business strategies, and are implemented with Board' approval. To ensure effective execution of internal control, each department is required to conduct monthly self-assessments according to the Internal Self-assessment Guidelines, and adjust current practices to conform with new operational and regulatory requirements. Detailed reports of these exercises are presented to the Internal Audit Office for review on a monthly basis. The Internal Audit Office carries out internal audits according to the yearly audit plan. All audit reports are presented to the Board for review on a quarterly basis and filed with the Competent Authority. Overall execution is considered satisfactory.

**Key Consideration 2:** *An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.*

**Roles, responsibilities and framework**

TAIFEX has an Internal Audit Office established directly under the Board. The office is responsible for planning and executing audits on the Company's business activities and annual targets. The office prepares a Declaration of Internal Control to explain effectiveness, efficiency and compliance of current operations and management practices, and presents it to the Board and the Competent Authority on a regular basis.

**Review, audit and testing**

TAIFEX Clearing 's internal control system and internal audit practices are revised on a yearly basis to accommodate changes in the internal/external environment, new regulations and new business strategies, and are implemented with Board' approval. To ensure effective execution of internal control, each department is required to conduct monthly self-assessments according to the Internal Self-assessment Guidelines, and adjust current practices to conform with new operational and regulatory requirements, which are verified by the Internal Audit Office.

**Key Consideration 3:** *An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.*

**Main goals**

TAIFEX Clearing's risk management policy has been established for the purpose of developing robust and comprehensive risk management framework and procedures throughout TAIFEX Clearing that would support the stability and security of the clearing system.

TAIFEX has passed ISO27001 and ISO22301 certification and

established the data security management system. TAIFEX continues to strengthen data security management and identify the risks and threats facing operations, in order to prevent destructive events affecting operations and ensure that the system can be recovered.

### **Policy principles**

TAIFEX Clearing employs a team of professional and experienced personnel to develop a clearing system that promotes fair, just and open trading. It also implements standard operating procedures to ensure that all processes are completed properly, modifies outdated procedures when needed and implements continuous improvements, protective and corrective measures in the event of quality incidents. At the same time, TAIFEX Clearing strives to deliver better services and excellence by introducing new products and clearing systems that meet trader needs more closely.

**Key Consideration 4:** *An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.*

### **Expansion of system capacity**

1. Trading and clearing are the two main computer systems used in TAIFEX Clearing's clearing and settlement services. The TAIFEX Electronic Trading System (TAIFEX ETS) as well as OTC derivatives clearing system are in-house developed and maintained, whereas the exchange-traded derivatives clearing system is outsourced to TDCC. The trading and clearing systems are connected via network for data transmission. Futures commission merchants and securities firms that are licensed to perform futures services will connect themselves to TAIFEX Clearing and TDCC to create their own front/back-office systems. The following concerns have been taken into consideration when designing hardware and software for computer systems:
  - (1). Trading system: TAIFEX hosts a central server that connects to all users. Each futures commission merchant is given the freedom to develop their own terminals using TCP/IP protocol.

After in-house development of electronic trading system TAIFEX has been monitoring capacity utilization using a variety of indicators to ensure that there are adequate resources to meet extreme situations and future growth and to provide a basis for future hardware expansion. Data such as TWSE historical trade volumes and deal percentages are also taken under consideration.

- (2). Exchange-traded derivatives clearing system: Securities firms that concurrently engage in futures services may simply install an additional multiprotocol switch to their existing TDCC lease line to be able to connect with the TDCC server and futures clearing server, and thereby saving the cost of leasing an additional line. Ever since TAIFEX Clearing outsourced its clearing system to TDCC, the clearing system has undergone several capacity expansions and performance upgrades to accommodate increases in business volume and the introduction of new services, and the expanded capacity of the trading system. Constant adjustments are being made to improve the quality and performance of test environment for trading and clearing systems.
  - (3). OTC derivatives clearing system: With an in-house built OTC derivatives clearing system, TAIFEX has been monitoring capacity utilization using a variety of indicators to ensure that there are adequate resources to meet extreme situations, to achieve future growth and to provide a basis for further hardware expansion.
2. TAIFEX as a whole continues to gather information relating to the technology, structure and hardware used by exchanges worldwide, and has adopted three indicators to monitor utilization of system resources:
- (1). Alert: Usage of resources above the alert level will trigger enhanced monitoring and a series of appropriate measures such as activation of backup capacity or adjustment of system structure, so that resource utilization can be reduced to a safe level (below the alert level) before it becomes critical. In other words, when available system resources have dropped to the

alert level, system administrators will begin analyzing the patterns that gave rise to the increased use of resources and make adjustments accordingly. Once adjustments have been made, resource utilization will be continuously monitored until it falls back to within a safe level.

- (2). Warning: Usage of resources above the warning level will trigger emergency measures such as activation of backup capacity or adjustment of system structure, so that resource utilization can be reduced to a safe level (below the alert level) before it becomes critical.
- (3). Critical: The critical level represents a state where, if no drastic restrictions are placed on the use of resources, the system will be unable to operate once trading activity peaks, causing market disruption. System resource utilization is calculated as the sum of utilization of the operating system and the application system.

**Key Consideration 5:** *An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.*

### **Hardware security**

1. To protect the information assets of TAIFEX as a whole from damage, whether due to internal or external negligence, intentional or accidental actions, TAIFEX has established an Information Security Policy that serves as the fundamental guideline in its information security measures. This policy provides employees with appropriate guidance, and also signifies the executive management's commitment to information security.
2. By conducting appropriate risk assessment, TAIFEX is able to analyze potential risks associated with its information assets, and mitigate such risks to acceptable levels with appropriate controls. At the same time, employees are instructed to comply with intellectual property rights regulations, the Personal Information Protection Act and terms and conditions agreed with customers while performing their duties.

3. The following describes the scope of the Information Security Policy; management guidelines and implementation plans are developed based on this policy by various departments, and are assessed on a regular basis:
  - (1). Personnel: Applies to TAIFEX's permanent and contract staff, and any contractor or third party that makes use of TAIFEX's information resources.
  - (2). Application system: The policy covers the following information systems used within TAIFEX: trading system, monitoring system, website, firewall/IDS, media reporting system, post-market information system, knowledge management system, domain name server, e-mail system, real-time quotation system, real-time quotation server, office automation system, backup order entry system, and other relevant information systems.
  - (3). Hardware: mainframes, workstations, servers and personal computers of all kinds.
  - (4). Network and facilities: local area networks within TAIFEX's offices and server rooms, and connections to the Internet or leased data lines of designated units as well as related network equipment.

### **Information security**

1. To protect the information assets of TAIFEX as a whole from damage, whether due to internal or external negligence, intentional or accidental actions, TAIFEX has established an Information Security Policy that serves as the fundamental guideline in its information security measures. This policy provides employees with appropriate guidance, and also signifies the executive management's commitment to information security.
2. The Information Security Policy embodies all measures that have been taken to ensure business continuity, reduce losses and increase investment returns. At TAIFEX, information security concerns all personnel, processes and equipment that involve information, such as computers, system users and operating

procedures.

3. The Information Security Policy has the following features:
  - (1). Confidentiality: Ensuring that only authorized personnel may access information, and that information is not leaked to the outside when being processed, transmitted or stored.
  - (2). Integrity: Ensuring that information and system configurations are protected against malicious tampering that may compromise data and system integrity while data is being transmitted, stored or processed.
  - (3). Availability: Ensuring that information is available to authorized users when needed.
4. TAIFEX has assembled an Information Security Panel that comprises an Information Security Management Review Committee, an Information Risk Prevention Team, an Information Security Execution Team, and an Information Security Audit Team to support its Information Security Policy. The position of Chief Information Security Officer is held by the Vice President of the IT Planning Department and IT Operations Department. The position is responsible for coordinating information security policy promotions, supervising information security management items, delegating and coordinating information security responsibilities, dispatching information security resources, supervising the implementation of information security protection, reviewing and supervising information security incidents, and approving the annual information security management maintenance plan. The Information Security Panel consists of members assigned from each department. Its members list is updated regularly to reflect personnel changes.

**Key Consideration 6:** *An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme*



*circumstances. The FMI should regularly test these arrangements.*

### **Objectives of the business continuity plan**

TAIFEX has implemented preventive measures and response procedures to react to any possible emergencies that could disrupt the futures market or TAIFEX's operations. These protocols help minimize damages should a disaster occur, and therefore ensure the security of the trading and clearing process.

### **Design of business continuity plan**

TAIFEX has implemented a Business Continuity Plan (BCP) based on the existing "Information Security Management Directions for the Executive Yuan and its Subordinate Agencies", "ISO27001" and "ISO22301" to guide its Business Continuity Management (BCM). The BCP serves to prevent disruption of key business activities, and incorporates a comprehensive set of response and recovery procedures to minimize disruption and damages in the event of natural disaster, accident, malfunction or malicious conduct. The BCP is subject to practice drill and testing on a yearly basis to ensure that it continues to be effective, and that all personnel involved are familiar with their roles and procedures.

#### 1. Scope of emergency/incident

##### (1). Market-wide incidents:

Major natural disasters, accidents, settlement defaults, merchant defaults, trading or clearing system malfunctions, intranet virus infection, and communication disruptions that affect the entire futures market and TAIFEX.

##### (2). Department-specific emergencies/incidents:

- A. Business emergencies and incidents.
- B. Financial emergencies and incidents.
- C. Hardware/software emergencies and incidents.

#### 2. Scope of daily preventive measures

##### (1). Compile a comprehensive list of emergency situations that the

company is likely to encounter, prepare an Emergency Response Manual that addresses the identified situations and disseminate it to all employees through every possible means.

- (2). Enhance internal defenses; outline areas of responsibility for each department; raise employees' awareness and responsiveness to emergency situations.
  - (3). Establish an emergency reporting system that enables communications with internal and external parties.
  - (4). Familiarize employees with situations that they are likely to encounter within their respective departments; backup critical files on a timely basis to ensure rapid recovery in the event of an emergency.
  - (5). Develop habits of backing up data.
  - (6). Maintain a secondary site system with capacity sufficient to support the market even under extreme scenarios.
  - (7). Develop systematic practices that allow a convener to hold crisis handling meetings and coordinate inter-department support in times of need.
  - (8). Continually disclose material information pertaining to the local market.
  - (9). Maintain contacts with and direct attention to other markets and exchanges around the world.
  - (10). Perform regular and unscheduled practice drills to test and improve effectiveness of existing response measures.
3. Response procedures in case of emergencies/incidents
- (1). Respond in a calm manner; the department head shall actively contact with and ensure employees' safety.
  - (2). Without compromising personal safety, staff should carry important business files if instructed to evacuate.
  - (3). Reporting and handling procedures:
    - A. Staff are required to assess the situation, follow the procedures set out in TAIFEX's Business Continuity Plan, and report to the department head. An Emergency Response Report should

also be filled out.

- B. If the situation deteriorates to the point where procedures outlined in the Business Continuity Plan are no longer considered adequate or appropriate, the department head may inform the crisis handling meeting convener to hold a meeting to decide a suitable response.
- C. The convener of the crisis handling meeting notifies TAIFEX's spokesperson to issue statements to the media.
- D. The manager, deputy manager and all relevant staff will be put on standby to respond to situations as needed.
- E. In situations where a department encounters a major, exceptional event, or if the company is warned by the media or investors of a risk concern sufficient to cause extreme market volatility, the related department will assess the extent of the likely impact and report to upper management immediately, while at the same time preparing press releases for the spokesperson and notifying the Competent Authority if deemed necessary.

#### 4. Post-incident operations

- (1). Once the situation is resolved, all departments will gather to discuss and record all relevant facts and actions into an Emergency Response Log, to be circulated along with the Emergency Response Report to the Chairman.
- (2). Based on the discussions, further amendments are made to TAIFEX's Business Continuity Plan for guidance in the event of future occurrences.

TAIFEX's Business Continuity Plan has identified several "Inter-market Reporting Contacts" with which TAIFEX may exchange documents such as Inter-market Information Exchange Form, Inter-market Information Reporting Form, Confidential Information Inquiry Form, and Confidential Information Progress Form. Furthermore, TAIFEX has a Domestic Public Relations Process that guides dissemination of press releases to media contacts.

### **Secondary Site**

TAIFEX operates a secondary site capable of providing real-time backup of trading and clearing systems, and next-day backup of the surveillance system. In the event that the primary system encounters a total malfunction due to natural disaster or force majeure, the secondary site is able to restore trading activities in the market within 1 hour.

If an emergency occurs, the affected department will accompany the Computer Operations Department to determine the scope of impact and to decide whether to recover the primary system or to activate the secondary site.

### **Review and testing**

TAIFEX conducts the "National Key Infrastructure Protection Drill" according to the instructions of the Office of Homeland Security, Executive Yuan, in order to maintain key operations and meet operational goals when facing different threats or disasters.

TAIFEX's business continuity management is guided by its Business Continuity Plan. Execution of this plan is rehearsed annually on a regular and unscheduled basis to serve as guidance for future improvements. Incidents are reviewed and discussed once the state of emergency has been rescinded. The results of these discussions provide the basis for future amendments to the Business Continuity Plan.

**Key Consideration 7:** *An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.*

### **Risks to the FMI's own operations**

In order to support the electronic trading system employed by the domestic futures market, TAIFEX Clearing has commissioned the Taiwan Depository and Clearing Corporation (TDCC) to develop and

maintain its clearing system. Clearing operations between TAIFEX Clearing and clearing members are completed via closed private network to ensure the highest level of security and efficiency. TDCC also defines futures commission merchants' (clearing members') transmission interfaces and the communication protocols for transmitting data with TAIFEX Clearing, including the clearing server specifications, the interface functionality, the format of messages transmitted etc. These specifications provide futures commission merchants (clearing members) with the fundamental guidelines for developing their computer systems.

TAIFEX handles the clearing operations of OTC derivatives and signs contracts with institutions that provide a trading contract submission platform (Affirmation Platform). TAIFEX has stipulated the responsibilities of TAIFEX related to the accuracy, timeliness, integrity, transmission delays, or inability to transmit and other issues of the information submitted to the Affirmation Platform in the Enforcement Rules. Regarding compression service providers, TAIFEX has stipulated the responsibilities of TAIFEX related to the position compression effects, efficiency, or other related services provided by the compression service provider in the Enforcement Rules.

### **Risks posed to other FMIs**

Currently, TAIFEX Clearing is the only futures clearing house in the domestic futures market as a whole, and TAIFEX Clearing only performs clearing services for products traded over TAIFEX and for clearing of OTC derivatives transactions, such as NTD interest rate swap transaction. It is not involved in any cross-border clearance or mutual offset arrangement, and nor is it interdependent with another FMI. TAIFEX Clearing has a robust set of internal control practices, ISO procedures, "Emergency Response manual," and "Business Continuity Plan" that covers an extensive range of operational risk events and helps the Company respond to market changes and crises. As a result, the TAIFEX 's clearing operations are considered adequately managed and present no risk to other FMIs.

**Principle 18 : Access and participation requirements**

An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

***Summary Narrative***

**Key Consideration 1:** *An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.*

**Participation criteria and requirements**

All direct and indirect participants of TAIFEX Clearing are required to comply with the Act, Regulations Governing Futures Commission Merchants, the Rules, the OTC Rules, the OTC Enforcement Rules, and the eligibility criteria for clearing members. Regarding the eligibility rules for futures merchants and clearing members, the relevant information has been disclosed on the TAIFEX website. The clearing membership eligibility summary and laws and regulations for participation in the market are provided in Chinese and English, in order to provide a fair and open route to market participation.

The eligibility criteria mentioned above have been established in a fair and open manner based on rational risk assessments, without being overly strict and burdensome. By ensuring consistent financial strength, business performance and risk management capacity across participants, TAIFEX is able to maintain top efficiency in its clearing operations and optimal risk management capacity, and thereby provide services to direct and indirect participants in a fair and open manner.

**Key Consideration 2:** *An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavor to set requirements that have the least restrictive impact on access that circumstances permit.*

## **Justification and rationale of participation criteria for exchange-traded derivatives**

### Exchange-traded derivatives market

TAIFEX Clearing offers three types of clearing memberships in the exchange-traded derivatives market: Individual Clearing Member, General Clearing Member, and Special Clearing Member. Financial requirements and scope of business for all three memberships have been specified in TAIFEX Clearing's Criteria for Clearing Membership; an abstract of the criteria is presented below:

#### 1. Individual Clearing Member

(1). Scope of Business: This membership status is for futures commission merchants who wish only to clear and settle their proprietary trades and transactions brokered to their own customers.

#### (2). Financial criteria:

A. Requires minimum paid-in capital of NTD 200 million. Institutions that concurrently operate as futures commission merchants are required to provide designated operating funds of at least NTD 80 million for the business.

#### B. Financial structure:

a. Owner's equity ÷ paid-in capital  $\geq$  80%

b.

i. For dedicated futures commission merchants with paid-in capital or designated operating funds equal to or above NTD 200 million: adjusted net capital ÷ total client margins required for outstanding positions  $\geq$  20%

ii. For concurrent futures commission merchants with designated operating funds of at least NTD 100 million but less than NTD 200 million: adjusted net capital ÷ total client margins required for outstanding positions  $\geq$  25%

iii. For concurrent futures commission merchants with designated operating funds less than NTD 100 million: Adjusted net capital ÷ total client margins required for

outstanding positions  $\geq 30\%$ , and must have obtained irrevocable line of credit dedicated for margin clearing purposes for at least NTD 60 million from the settlement bank.

- c. Current assets  $\div$  current liabilities  $\geq 100\%$ . TAIFEX may require additional clearing margins if  $120\% >$  current assets  $\div$  current liabilities  $\geq 100\%$ .
- d. (Total liabilities - futures traders' equity)  $\div$  owner's equity  $\leq 80\%$
- e. Obtain a credit rating report within two years.

### (3). Clearing and Settlement Fund

- A. Before carrying out clearing and settlement operations, the clearing member shall make a deposit to the clearing and settlement fund equal to 20 percent of its paid-in capital or designated operating funds, but the amount shall be limited to a maximum of NTD 40 million.
- B. After the clearing member has carried out clearing and settlement operations for one full year, the upper limit on the amount deposited to the clearing and settlement fund shall be reduced to NTD 20 million, and the clearing member shall make deposits to the clearing and settlement fund by the method and in the amount prescribed by this Corporation.
- C. Each time the clearing member consigns an introducing broker or each time such an introducing broker establishes an additional branch, the clearing member shall make an additional clearing and settlement fund deposit of NTD 1 million with this Corporation.

## 2. General Clearing Member

- (1). Scope of Business: This membership status allows a futures commission merchant to clear and settle its proprietary trades, transactions of its brokerage customers, and transactions of other futures commission merchants.

### (2). Financial criteria:

- A. Minimum paid-in capital or designated operating funds of



NTD 400 million are required for this membership status.

B. Financial structure:

- a. Owner's equity  $\div$  paid-in capital  $\geq$  80%
- b. adjusted net capital  $\div$  total client margins required for outstanding positions  $\geq$  20%
- c. Current assets  $\div$  current liabilities  $\geq$  100%
- d. (Total liabilities - futures traders' equity)  $\leq$  owner's equity

(3). Clearing and Settlement Fund

- A. Before carrying out clearing and settlement operations, the clearing member shall deposit NTD 40 million with this Corporation.
- B. After the clearing member has carried out clearing and settlement operations for one full year, the amount deposited to the clearing and settlement fund shall be reduced to NTD 30 million, and the clearing member shall make deposits to the clearing and settlement fund by the method and in the amount prescribed by this Corporation.
- C. For each additional futures commission merchant consigning the clearing member to handle clearing and settlement operations, the clearing member shall make a clearing and settlement fund deposit of NTD 3 million with this Corporation before accepting consignment.
- D. For each additional branch established by a consigning futures commission merchant, or for each additional futures trading introducing broker consigned by the clearing member or for each additional branch established by such introducing broker, the clearing member shall make a clearing and settlement fund deposit of NTD 1 million with this Corporation.

3. Special Clearing Member

- (1). Scope of Business: This membership status applies to financial institutions that are not futures commission merchants but have been specially permitted by the Competent Authority to perform futures settlement for other futures commission merchants.

(2). Financial criteria:

A. Minimum designated operating funds of NTD 400 million need to be dedicated for the service.

B. Financial structure:

a. Owner's equity ÷ paid-in capital  $\geq$  100%

b. adjusted net capital ÷ total client margins required for outstanding positions  $\geq$  20%

c. Current assets ÷ current liabilities  $\geq$  100%

d. (Total liabilities - futures traders' equity)  $\leq$  owner's equity

(3). Clearing and Settlement Fund

A. Before carrying out clearing and settlement operations, the clearing member shall deposit NTD 40 million with this Corporation.

B. After the clearing member has carried out clearing and settlement operations for one full year, the amount deposited to the clearing and settlement fund shall be reduced to NTD 30 million (CAD 1.3 million), and the clearing member shall make deposits to the clearing and settlement fund by the method and in the amount prescribed by this Corporation.

C. For each additional futures commission merchant consigning the clearing member to handle clearing and settlement operations, the clearing member shall make a clearing and settlement fund deposit of NTD 3 million (CAD 130,000 ) with this Corporation.

D. For each additional branch established by a consigning futures commission merchant, the clearing member shall make a clearing and settlement fund deposit of NTD 1 million (CAD 43,000 ) with this Corporation.

OTC derivatives market

The OTC derivatives market clearing membership of TAIFEX is divided into individual clearing members and general clearing members. The OTC clearing membership applications are limited to

those engaged in derivative trading or handling derivative financial instruments approved by the competent authority, and OTC clearing member applicants shall be financial institutions legally registered in Taiwan.

After referring to the relevant regulations of foreign Exchanges (e.g. CME Group, LCH Group, Eurex, HK OTC Clear, SGX, JSCC and KRX) on the eligibility criteria for clearing membership and ‘Margin Requirements for Non-centrally Cleared Derivatives’ published by Basel Committee on Banking Supervision (BCBS), and analyzing average nominal principal of IRS, FX Swap and NDF in Taiwan, then TAIFEX formulates the required paid-in capital amounts and amounts of OTC derivatives default fund pre-clearing deposits.

The detailed financial and operating rules are stipulated in the OTC Enforcement Rules. The content is as follows:

1. Individual Clearing Member

(1) Scope of Business: Handles clearing operations of proprietary trades.

(2) Financial criteria:

A. Required minimum paid-in capital of NTD 2 billion. However, exception applies to those described in Article 2.1.3 of the OTC Enforcement Rules, and the guarantee and commitment letters issued by a clearing member’s parent or holding company should guarantee its performance of such clearing member’s obligation and relevant responsibilities to handle clearing and settlement. If the clearing member is a branch established within the territory of the R.O.C. (Taiwan) by a foreign financial institution according to the law, the required minimum paid-in capital of the head office is equivalent to NTD 2 billion or above.

B. Financial structure

a. If the clearing member is a bank, its Capital Adequacy Ratio shall not be less than 10.5%.

b. If the clearing member is an insurance enterprise, its Risk Based Capital Ratio shall equal or exceed 200% and Net

Worth Ratio shall not be less than 3%.

- c. If the clearing member is a securities firm, its Regulatory Capital Adequacy Ratio shall equal or exceed 200%.
  - d. If the clearing member is a bills finance company, its Capital Adequacy Ratio shall not be less than 8%.
  - e. If the clearing member is a futures commission merchant that concurrently operates as a leverage transaction merchant, its adjusted net capital shall not be less than 30% of the total amount of customer margins required for the open positions of futures traders.
  - f. If the clearing member is a subsidiary of a financial holding company prescribed in the "Financial Holding Company Act," the capital adequacy ratio of such a group capital adequacy ratio calculated and reported by a financial holding company or foreign financial holding company shall not be lower than 100%.
  - g. If the clearing member is a subordinate company prescribed in the "Company Act," the financial structure of such controlling company shall meet the provisions of Items 1 to 5 of this subparagraph according to the type of business to which it is attributed.
  - h. If the clearing member is a branch established within the territory of the R.O.C. by a foreign financial institution according to the law, the financial structure of the head office shall meet the provisions of Items 1 to 5 of this subparagraph according to the type of business to which it is attributed.
- C. OTC derivatives default fund:
- a. Clearing members are required to contribute to TAIFEX the OTC derivatives Default Fund of NTD 20 million prior to engaging in clearing operations of OTC derivatives.
  - b. Clearing members are required to contribute to the OTC derivatives Default Fund based on the amount computed by TAIFEX subsequent to engaging in clearing operations

of OTC derivatives.

## 2. General Clearing Member

(1) Scope of Business: Handles clearing operations of proprietary and client trades.

(2) Financial criteria:

A. Required minimum paid-in capital of NTD 8 billion.

B. Financial structure:

a. If the clearing member is a bank, its Capital Adequacy Ratio shall not be less than 10.5%.

b. If the clearing member is a securities firm, its Regulatory Capital Adequacy Ratio shall equal or exceed 200%.

c. If the clearing member is a futures commission merchant that concurrently operates as a leverage transaction merchant, its adjusted net capital shall not be less than 30% of the total amount of customer margins required for the open positions of futures traders.

C. OTC derivatives default fund:

a. Clearing members are required to contribute to TAIFEX the OTC derivatives Default Fund of NTD 30 million prior to engaging in clearing operations of OTC derivatives.

b. Clearing members are required to contribute to the Default Fund based on the amount computed by TAIFEX subsequent to engaging in clearing operations of OTC derivatives.

### **Minimum restrictions on market participation**

The purpose of this classification system is to have financially sound futures commission merchants and eligible financial institutions serving as key barriers against market risks. A clearing member's role not only includes cleared transactions for market participants, but also helps them control risks. Their existence produces a multi-layered risk framework that enables risk sharing. In addition, no applicable

derivatives regulations permit unreasonable discrimination among participants. Eligible participants own the right to apply for membership; TAIFEX Clearing does not impose any burden or competition that is not necessary or appropriate.

### **Disclosure of criteria**

The participation criteria has been announced to the public, thereby giving all existing and potential clearing members full knowledge of the criteria. Exchange-traded derivatives clearing membership rule and regulations are mainly stipulated under Taiwan Futures Exchange Corporation Criteria for Clearing Membership and Taiwan Futures Exchange Corporation Clearing Member Application Procedures. OTC derivatives clearing membership rule and regulations are mainly stipulated in Chapter II of the OTC Enforcement Rules. The participation criteria are revised as needed to conform with the current regulatory requirements and market conditions. Amendment will be published upon approval.

**Key Consideration 3:** *An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.*

### **Compliance monitoring**

TAIFEX continues to review the financial and operational statuses of clearing members, and formulates review measures. Routine audits or case audits are routinely conducted for clearing members. If faults or rule violations are found during the audits, TAIFEX shall send representatives to conduct special audits and provide assistance. The clearing member audit results are reported to the competent authority on a monthly basis.

In accordance with Article 14.1.2 of the OTC Enforcement Rules, routine audit means an audit of financial, business, and internal audit activities. The scope of routine audits of OTC derivatives market is based on Principles Governing Establishment of Internal Control

Systems of OTC Derivatives Clearing (the “OTC Internal Control Systems”), which is formulated by TAIFEX.

### **Suspension and orderly exit**

#### **Exchange-traded derivatives market**

- (1). According to Article 103 of the Rules, TAIFEX Clearing may take the following actions if a clearing member defaults due to financial reasons:
  - A. Suspend the defaulting clearing member's clearing and settlement operations and report the matter in writing to the Competent Authority.
  - B. Notify all clearing members and futures commission merchants through the TAIFEX Clearing's online information system.
  - C. Check the defaulting clearing member's clearing margin balance, bank account balance, operating bond, default fund, and other assets and immediately pursue protective measures in respect of the statutory rights.
  - D. Dispose of the defaulting clearing member's positions and margin funds.
  - E. Conduct an audit of the defaulting clearing member and an investigation and analysis of the incident.
- (2). According to Article 10 of TAIFEX Clearing's "Criteria for Clearing Membership," if any of the following circumstances exists with respect to a clearing member, TAIFEX Clearing may terminate its clearing membership, and handle the matter pursuant to Article 54 of the Act:
  - A. A relevant authority has cancelled the clearing member's company registration or dissolved the clearing member.
  - B. The Competent Authority has issued a disposition canceling the clearing member's operations permit.
  - C. The clearing member has been pronounced bankrupt by a final court ruling.
  - D. The clearing member fails to perform clearing and settlement

obligations.

- E. The clearing member violates a law or regulation or continues to fail to comply following imposition of an administrative disposition by the Competent Authority based on a law or regulation.
- F. The clearing member violates the Articles of Incorporation or the Rules of TAIFEX, the Guidelines for the Consignment Contract, or other rules or regulations, where the circumstances are serious.
- G. The clearing member's clearing or settlement practices violate good faith and integrity in a manner sufficient to harm others.
- H. The clearing member is unable to maintain compliance with TAIFEX Clearing's clearing member criteria and, following an inquiry by TAIFEX Clearing and the setting of a deadline for improvement, the clearing member fails to implement improvements or continues to fall short of criteria after implementing improvements.

#### OTC derivatives market

1. According to Article 55 of the OTC Rules, in the event a clearing member is in default due to financial factors, TAIFEX Clearing may take the following measures:
  - (1) Suspend the defaulting clearing member's clearing operations and report the matter in writing to the Competent Authority.
  - (2) Suspend the defaulting clearing member's withdrawal of margin.
  - (3) Notify clearing members and make an announcement to the market.
  - (4) Check the defaulting clearing member's margin balance, bank account balance, operating bond, OTC derivatives default fund, and other assets and immediately pursue protective measures in respect of TAIFEX's statutory rights.
  - (5) Convene the Default Management Group to handle cleared transactions and margins of the defaulting clearing member.
  - (6) Conduct an audit of the defaulting clearing member and an



investigation and analysis of the incident.

2. Pursuant to Article 9 of the OTC Rules, TAIFEX Clearing may terminate its clearing agreement, and handle the matter according to Article 54 of the Act:

- (1) A relevant authority has revoked the clearing member's company registration or dissolved the clearing member.
- (2) The Competent Authority has issued an instruction revoking the clearing member's operation license.
- (3) The clearing member has been pronounced bankrupt by a final court ruling.
- (4) The clearing member fails to perform clearing and settlement obligations.
- (5) The clearing member violates a law or regulation or continues to fail to comply following imposition of an administrative instruction by the Competent Authority based on a law or regulation.
- (6) The clearing member violates the Articles of Incorporation or the Rules of TAIFEX, or other rules or regulations, where the circumstances are deemed severe by TAIFEX.
- (7) The clearing member's clearing or settlement practices violate good faith and integrity in a manner sufficient to harm others.
- (8) The clearing member is unable to maintain compliance with TAIFEX's clearing member criteria and, following an inquiry by TAIFEX and the setting of a deadline for improvement, the clearing member fails to implement improvements or continues to fall short of criteria after implementing improvements.

## **Principle 19 : Tiered participation arrangements**

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements

### *Summary Narrative*

**Key Consideration 1:** *An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.*

### **Tiered participation arrangements**

#### Exchange-traded derivatives market

TAIFEX participant levels can be distinguished thus:

1. Direct participants: Clearing members.
2. Indirect participants: Customers of clearing members including, but not limited to, futures commission merchants, futures introducing brokers, banks, insurance companies, bills finance companies, securities firms and futures traders.

TAIFEX adopts an account structure that requires disclosure on the traders' end, which gives TAIFEX full knowledge of indirect participants' account information, positions, and margin levels.

Under the "Futures Commission Merchant Traders Equity Reporting System," futures commission merchants and clearing members are required to report every trader's margin equity amount, total equity value and balance of deposits in customer's margin account to TAIFEX Clearing on a daily basis. This practice provides effective protection over customers' margin accounts equity and prevents the risk of misuse of customers' margins.

#### OTC derivatives market

TAIFEX participant levels can be distinguished thus:

1. Direct participants: Clearing Members, including Individual Clearing Members (for clearing proprietary positions only) and

General Clearing Members (for clearing both proprietary and client positions).

2. Indirect participants: Clients (financial institutions that are legally allowed to trade OTC derivatives)

TAIFEX adopts an OTC derivatives clearing account structure that requires disclosure on the clients' end, which gives TAIFEX full knowledge of indirect participants' account information, positions, and margin levels.

Clearing members shall establish separate proprietary and client clearing accounts. When opening the proprietary and client accounts, clearing member shall file the clearing account information for the proprietary and individual client account with TAIFEX. All subsequent changes to the information must also be reported.

Clearing members must record the positions, margins and other account details each day for proprietary and individual client accounts.

The clearing member shall open separate OTC derivatives proprietary clearing margin accounts and OTC derivatives client clearing margin accounts in the designated settlement bank or other institutions to deposit the proprietary margin and client margin separately and to handle deposits. Clearing members may not overdraft, set guarantees, or exercise other rights over the deposits or negotiable securities in the OTC derivatives client clearing margin account, and may not divert the funds to cover the margins, clearing fees, commission, processing fees, or shortfall of other clients.

TAIFEX can search for the position status and account opening information of clients of clearing members through the clearing system. TAIFEX may assess the dependence and influence between clearing members and their clients according to the position scale and account opening information of the clients.

### **TAIFEX Clearing is able to monitor major risks of tiered participation**

Exchange-traded derivatives market

In the exchange-traded derivatives market, TAIFEX has been

monitoring futures traders' and futures commission merchants' trade volume, open positions and concentration levels and fluctuations in accordance with "Regulations Governing Market Trading Surveillance," and has set position limits for futures traders, futures commission merchants and clearing members in accordance with "Rules Governing Surveillance of Market Positions." In the OTC derivatives market, Article 45 of the OTC Rules illustrates the principle for position concentration of clearing members and the actions TAIFEX may take, including but not limited to collect additional margin, to maintain market order and to mitigate systematic risk.

For effective control of business risk, in the exchange-traded derivatives market, futures commission merchants are required to report to TAIFEX Clearing their adjusted net capital and the ratio of the adjusted net capital to the total amount of client margins required for the open positions of futures traders on a daily and monthly basis. In addition, TAIFEX Clearing monitors futures commission merchants' financial health on a daily and monthly basis, and has various alerts in place to highlight potential distress. In the OTC derivatives market, as TAIFEX Clearing calculates and monitors the margin levels of both direct and indirect participants on a daily basis, TAIFEX Clearing possesses sufficient information and is capable to monitor major risks of tiered participation.

TAIFEX Clearing collects information on indirect participants for the purpose of carrying out clearance and surveillance activities under the Act, "Regulations Governing Futures Clearing Houses", the Rules and the OTC Rules that it has implemented under the Act. The collection of information is also a legal duty imposed by the Act.

#### OTC derivatives market

TAIFEX is able to monitor major risks of tiered participation in OTC markets.

TAIFEX implements the following control measures for managing position risk of CM's clients (including all types of indirect

participants) on TAIFEX:

TAIFEX is able to monitor major risks of tiered participation in OTC markets.

The position concentration standards have been stipulated in Article 45 of the OTC Rules, Article 9.1 and Article 9.2 of the OTC Enforcement Rules.

TAIFEX manages the concentration risk through position concentration surveillance. For TAIFEX clearing members, position concentration is calculated based on the ratio of the sum of required margin for all clearing accounts of a clearing member to the total required margin for all clearing accounts of all clearing members. In addition, TAIFEX will disclose the position concentration information of proprietary and client accounts.

### **Control measures for client's position risk**

Based on position concentration of clearing members, TAIFEX sets out position concentration standards as follows:

1. Warning Standard: The position concentration of a clearing member reaches 15%, and the required margin reaches NT\$2 billion.
2. Disposition Standard: The position concentration of a clearing member reaches 20%, and the required margin reaches NT\$2 billion.

TAIFEX may notify the clearing member to monitor position concentration when the position concentration standard is reached. In addition, TAIFEX may call for additional margin from the clearing member if the position concentration of the clearing member reaches the "Disposition Standard". The additional margin will be imposed based on the percentage of the required margin. Please refer to the table below for details:

<u>Interval</u>	<u>Position Concentration</u> ( % )	<u>Additional Margin Charge(%)</u>
-----------------	--	------------------------------------

<u>1</u>	<u><math>20\% \leq \square &lt; 30\%</math></u>	<u>5%</u>
<u>2</u>	<u><math>30\% \leq \square &lt; 40\%</math></u>	<u>10%</u>
<u>3</u>	<u><math>40\% \leq \square &lt; 50\%</math></u>	<u>15%</u>
<u>4</u>	<u><math>50\% \leq \square &lt; 60\%</math></u>	<u>20%</u>
<u>5</u>	<u><math>60\% \leq \square</math></u>	<u>25%</u>

For clearing members who exceed the position centralization standard, TAIFEX may adopt the following measures to maintain clearing security:

1. Notify the clearing member to pay attention to its positions.
2. Impose an additional margin.
3. Other necessary measures to maintain market integrity or the soundness of the OTC derivatives market.

### **Control measures for Clients' large loss**

#### **1. Calculation of Clearing Member's Large Loss**

TAIFEX calculates the Large Loss at the end of each business day for each account of the clearing member.

#### **2. Clearing Member's Threshold for Large Loss Warning**

If the amount of large loss for an account of the clearing member reaches or exceeds 50 million and the large loss ratio is  $\geq 50\%$ , the clearing member should be notified to pay attention to the risk and understand their financial condition.

1. Calculation of Clearing Member's Large Loss  
TAIFEX calculates the Large Loss at the end of each business day for each account of the clearing member.

### **Control measures for CM's operational risk**

Regarding operational risk management for clearing members, the

clearing members shall submit the financial reports within the period stipulated by TAIFEX. The content shall include the monthly report, semi-annual report, and annual report. The financial structure information shall be reported in the second quarter of the accounting year or within 3 months after the end of the year according to the industry. TAIFEX is therefore monitoring the financial status of clearing members. According to Article 13.1.1 of the Enforcement Rules, the clearing member shall report major business changes, including the inability to maintain the clearing membership, capital reductions exceeding a certain level, suspension or termination of operations, concerns regarding the occurrence of defaults, and other major incidents that affect the financial structure.

#### **Disposition measures for defaulting clients by clearing members**

In the event of client default, the clearing member is still obligated to fulfill its obligations to TAIFEX on behalf of the defaulting client in accordance with Article 10 of TAIFEX OTC Rules. The clearing member may take the following measures against the defaulting client:

1. Suspend the client's submission of new transactions.
2. Suspend the client's withdrawal of margin.
3. Transfer the cleared transactions of the client to CM's proprietary account.
4. Take other measures which are agreed upon in the client clearing agreement.

**Key Consideration 2:** *An FMI should identify material dependencies between direct and Indirect Participants that might affect the FMI.*

#### **TAIFEX Clearing is able to identify interdependencies between direct and indirect participants**

##### Exchange-traded derivatives market

Through clearing system, TAIFEX Clearing is able to check traders' account status and positions maintained with futures commission merchants and clearing members, and use this information to identify interdependency between clearing members and market participants.

### OTC derivatives market

TAIFEX can search for the position status and account opening information of clients of clearing members through the clearing system. TAIFEX may assess the dependence and influence between clearing members and their clients according to the position scale and account opening information of the clients..

**Key Consideration 3:** *An FMI should identify Indirect Participants responsible for a significant proportion of transactions processed by the FMI and Indirect Participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.*

### **TAIFEX Clearing is able to identify risks of indirect participants that have significant positions**

#### Exchange-traded derivatives market

Using the surveillance system and the clearing system, TAIFEX Clearing is able to check for any concentration of exposure of indirect participants each day and rank clearing members by the size of open positions they hold in both the exchange-traded and OTC derivatives markets.

In the exchange-traded derivatives market, TAIFEX systems can generate an itemized table of futures trading positions, rank traders by open positions, generate a list of traders whose open positions and marked-to-market losses are of greater concern to the market and identify indirect participants that are prone to the impact. Position limits have been imposed on futures traders, futures commission merchants and clearing members in accordance with "Rules Governing Surveillance of Market Positions" as part of the risk management practice. TAIFEX performs daily monitoring to identify indirect participants that exhibit high trade volumes or values relative to direct participants. If any futures trader holds outstanding positions that exceed the prescribed limit, TAIFEX may take necessary actions according to "Rules Governing Surveillance of Market Positions" to



maintain discipline and security within the market.

#### OTC derivatives market

TAIFEX manages the OTC derivatives market clearing operations according to the separate proprietary accounts and client accounts of the clearing member. TAIFEX records the daily positions and margins of the accounts and handles the clearing operations. It can identify the value of the positions, margins, and collaterals of the direct and indirect participants, and manage the risks created by indirect participant trading.

**Key Consideration 4:** *An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.*

#### **TAIFEX Clearing is able to monitor risks arising from tiered participation arrangement**

##### Exchange-traded derivatives market

TAIFEX Clearing conducts daily monitoring of risks that arise from futures traders, futures commission merchants and clearing members, and calls regular surveillance/supervision meetings to discuss its findings. In addition, market surveillance reports are analyzed and reviewed collectively on a monthly basis to monitor risks arising from the tiered participation arrangement.

TAIFEX Clearing convenes daily "Inter-department Meetings" to discuss risks associated with participants of the tiered participation structure. If a futures commission merchant fails to improve risk management after being instructed to do so by TAIFEX Clearing, and has been considered to pose serious risks to market discipline during the inter-department meeting, the meeting participants may recommend the following actions against the futures commission merchant and implement them upon approval:

1. Increase clearing margins to the maintenance and initial margin levels for the clearing member.
2. Order to liquidate part or all of the trader's open positions.

3. Order futures commission merchants or clearing members to liquidate their positions or their customers' trading, in whole or in part.
4. Restrict the number of trades executed or positions held by futures traders.
5. Stop the futures commission merchant from transacting further except for orders that are placed to liquidate open positions.
6. Restrict the number of trading orders futures commission merchants may accept or positions they may hold.
7. Dispatch specialists to inspect the futures commission merchant's financial and business health, and follow up with further guidance.

#### OTC derivatives market

TAIFEX monitors the risks arising from clearing members and their clients daily, and monitors and manages the position centralization and high losses of clearing members, in order to control the major risks of multi-level participation.

TAIFEX monitors the centralization of clearing member positions daily. For clearing members who exceed the centralization standards, TAIFEX shall adopt the following measures:

1. Notify the clearing member to pay attention to its positions.
2. Impose an additional margin.
3. Other necessary measures to maintain market integrity or the soundness of the OTC derivatives market.

TAIFEX inspects the large loss list for clearing accounts and the proportion of the large losses compared to collateral daily. It also monitors the positions and margins of the clearing accounts with high losses. If necessary, TAIFEX will notify the clearing members by phone in order to prevent the occurrence of defaults.

**Principle 20 : FMI links**

An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.

***Summary Narrative***

**Key Consideration 1:** *Before entering into a link arrangement and on an ongoing basis once the link is established, an FMI should identify, monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report.*

TAIFEX Clearing is the only futures clearing institution in Taiwan. It is not involved in cross-border clearance and hence does not depend on other FMIs and is not exposed to the risks of linked arrangements.

**Key Consideration 2:** *A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link.*

**Legal basis for links**

TAIFEX may sign co-operative agreements with the foreign futures exchange in order to list New Taiwan Dollar denominated futures contracts on the foreign futures exchange (below, "international cooperative products"). This legal basis has been founded in Item 7, Article 6 of Regulations Governing Futures Exchanges and Item 7, Article 7 of Regulations Governing Futures Clearing Houses. Any signature or amendment to any such agreement is subject to the approval of the Competent Authority. The Competent Authority in Taiwan has also announced separate policies to govern participants' rights and obligations, whereas the two exchanges have developed policies and rules to accommodate the collaborative arrangement, giving international cooperative products the complete legal framework in their respective jurisdictions.

**Key Consideration 3:** *Linked CSDs should measure, monitor, and manage the credit and liquidity risks arising from each other. Any credit extensions between CSDs should be covered fully with highquality*

*collateral and be subject to limits.*

[This key consideration is not applicable to CCPs]

**Key Consideration 4:** *Provisional transfers of securities between linked CSDs should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final.*

[This key consideration is not applicable to CCPs]

**Key Consideration 5:** *An investor CSD should only establish a link with an issuer CSD if the arrangement provides a high level of protection for the rights of the investor CSD's participants.*

[This key consideration is not applicable to CCPs]

**Key Consideration 6:** *An investor CSD that uses an intermediary to operate a link with an issuer CSD should measure, monitor, and manage the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary.*

[This key consideration is not applicable to CCPs]

**Key Consideration 7:** *Before entering into a link with another CCP, a CCP should identify and manage the potential spill-over effects from the default of the linked CCP. If a link has three or more CCPs, each CCP should identify, assess, and manage the risk of the collective link arrangement.*

### **Default of linked CCP**

TAIFEX Clearing does not have links with any other CCP, and hence does not identify or manage potential spill-over effects.

### **Multi-party links (three or more CCPs)**

TAIFEX Clearing does not have multi-party links with other CCPs,

and hence does not identify or manage potential spill-over effects.

**Key Consideration 8:** *Each CCP in a CCP link arrangement should be able to cover, at least on a daily basis, its current and potential future exposures to the linked CCP and its participants, if any, fully with a high degree of confidence without reducing the CCP's ability to fulfil its obligations to its own participants at any time.*

**Exposure and coverage of exposures**

TAIFEX Clearing is the only futures clearing institution in Taiwan. It does not engage in cross-border clearance or depend on other FMIs, and hence is not required to cover potential exposures of any linked CCP.

**Risk management**

TAIFEX Clearing does not make provision to any settlement fund that covers linked CCP defaults.

**Key Consideration 9:** *A TR should carefully assess the additional operational risks related to its links to ensure the scalability and reliability of IT and related resources.*

[This key consideration is not applicable to CCPs]

**Principle 21 : Efficiency and effectiveness**

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

***Summary Narrative***

**Key Consideration 1:** *An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products clearing, settled, order recorded; and use of technology and procedures.*

**Methods of satisfying the needs of participants and the market**

TAIFEX Clearing is a systemically important CCP in Taiwan and is a highly regulated FMI that is designed to meet the needs of participants and the market it serves. TAIFEX Clearing offers prudent clearing and settlement services for both exchange-traded derivatives and OTC derivatives, which are elaborated in “III. General Background of the FMI” of this report. The clearing and risk management practices have been developed thoroughly by the management to satisfy the market's needs. Furthermore, TAIFEX Clearing obtains opinions from the market participants to provide a basis for ongoing improvements.

TAIFEX has established a Clearing Committee for the exchange-traded derivatives market and a Clearing and Risk Committee for the OTC derivatives market that assist TAIFEX in consultation and policy-making in ways that conform to the market's needs. TAIFEX is dedicated to serving its clearing members and market. When developing new policies, TAIFEX Clearing invites representatives from clearing members and the Chinese National Futures Association to express opinions and thoughts, so that the new policy can be better adjusted to meet the market's needs.

TAIFEX Clearing conducts quarterly interviews with individual clearing members to understand the challenges they face when promoting businesses under the current clearing system; members' opinions are consolidated and reported to TAIFEX's management as a reference of the direction of future system amendments.

TAIFEX Clearing holds clearing member seminars each year, during which members are invited to express their opinions on perceived flaws of the current system and the types of improvements that could be made to the system to meet market needs.

**Key Consideration 2:** *An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum services levels, risk-management expectations, and business priorities.*

### **Goal setting**

TAIFEX's corporate mandate is to invigorate futures trading while serving the real economy. TAIFEX Clearing has clearly defined goals and objectives that are measurable and achievable, which are established to lower systemic risk through a comprehensive risk management framework governed by relevant bylaws in line with service levels arrangements. TAIFEX Clearing sets clear performance indicators each year to measure the performance of new policies to maintain financial health and enhance risk management practices. Regular meetings are held to review, track and ensure the achievement of performance indicators.

TAIFEX Clearing's clearing services involve the clearing and settlement for futures trading in general and providing a guarantee for the performance of the futures contracts.

In addition to providing clearing members with better services, TAIFEX Clearing is also dedicated to expanding the scope of its clearance service and enhancing the risk management framework for the stability and security of the market.

**Key Consideration 3:** *An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.*

### **Assessment of efficiency and effectiveness**

It is essential to TAIFEX Clearing to prioritize the efficiency and effectiveness of the risk management framework, clearing services provided to clearing members, and the market. In addition to hosting

annual clearing member seminars, TAIFEX Clearing also visits clearing members on a quarterly basis to exchange opinions regarding existing and upcoming systems and policies. This enables the TAIFEX Clearing to identify clearing members' needs and areas where improvements can be made. TAIFEX Clearing holds annual executive conferences for clearing members. These conferences are hosted by TAIFEX senior executives and provide an excellent opportunity to learn the challenges faced by clearing members, which have proven to be very helpful in the reform of the clearing system.



**Principle 22 : Communication procedures and standards**

An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.

***Summary Narrative***

**Key Consideration 1:** *An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.*

**Communication procedures**

The futures trading system has been created within an exclusive network that is isolated from the Internet. This configuration was made to prevent improper access, use and leaks of users' information. All futures commission merchants and clearing members that connect to the system need to have their source IP, socket port and password verified before access.

The futures market clearing system uses a four-in-one integrated network as its connection interface. VPN equipment between connected users and TDCC are used for encryption at the communication layer, which creates a private VPN environment that ensures the security of transmitted data.

The OTC derivatives market clearing system uses an exclusive integrated network as the connection interface platform to ensure the security of data transmissions.

**Communication standards**

The trading system uses the TCP/IP protocol and TMP, FIX4.2, and FIX4.4 formats to transmit data, whereas the clearing system uses TCP/IP among other international protocols for communication.

**Principle 23 : Disclosure of rules, key procedures, and market data**

An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be public disclosed.

*Summary Narrative*

**Key Consideration 1:** *An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.*

**Rules and procedures**

The orderly transaction of domestic futures trading is governed by the Act. TAIFEX has established and stipulated the Rules, various market regulations for futures clearing operations, the OTC Rules and the Enforcement Rules according to the Act. These regulations act as the basis for the trading market, futures merchants, futures trade contracts, futures merchant entrusted trading orders, futures merchant proprietary trading orders, clearing, margins and premiums, position restrictions, default handling for clearing members, clearing funds, trade processing fees and clearing processing fees, and market monitoring and emergency response measures.

**Disclosure**

For the stipulation of laws and regulations, TAIFEX shall fully discuss the proposal with the clearing member and seek the opinions of the Clearing Committee, OTC Derivatives Clearing and Risk Management Committee, and the Chinese National Futures Association. The proposed laws and regulations shall be reported to the competent authority for approval or announced and implemented according to their responsibilities. TAIFEX has implemented seminars and public hearings for futures merchants, clearing members and market participating financial institutions as channels for promoting

government policies and communicating opinions. TAIFEX has publicly disclosed the laws and regulations in Chinese and English to improve the understanding of the regulations by the futures merchants, clearing members, and market participating financial institutions. The TAIFEX website can be used to search for laws and regulations related to futures.

**Key Consideration 2:** *An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participant's rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.*

### **Rights and obligations of participants**

#### Exchange-traded derivatives market

Systems of TAIFEX, as a whole, have been designed and are operated according to TAIFEX's Futures Market Usage Contract, Contract for Computer Connection to the Centralized Futures Exchange Market, Directions for Clearing and Settlement Operations by Mandated Clearing Members and other relevant rules and subordinate rules. All systems are meant to fully and efficiently support TAIFEX Clearing to convey the design concepts and operational aspects of its systems to futures commission merchants, clearing members and their information providers through means such as computer connections, seminars, conferences, and regulatory announcements.

Participant's rights and obligations are governed and disclosed in TAIFEX's Futures Market Usage Contract, Contract for Computer Connection to the Centralized Futures Exchange Market, Directions for Clearing and Settlement Operations by Mandated Clearing Members, Criteria for Clearing Membership, and other relevant rules, which are available on TAIFEX's website.

#### OTC derivatives market

The design and operation of the TAIFEX clearing system are based on the TAIFEX OTC Derivatives Clearing Connection Agreement, the Enforcement Rules, and other related regulations. All systems are meant to fully and efficiently support TAIFEX to convey the design

concepts and operational aspects of its systems to clearing members and their information providers through means such as computer connections, seminars, conferences, and regulatory announcements.

Participant's rights and obligations are governed and disclosed in the TAIFEX OTC Derivatives Clearing Connection Agreement, the Enforcement Rules, and other relevant rules, which provide information on the rights and obligations.

**Key Consideration 3:** *An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.*

### **Education and awareness**

In order to provide clearing members with a better understanding of TAIFEX Clearing's regulations, procedures as well as their own rights and obligations, TAIFEX Clearing organizes regular clearing member seminars and Clearing Committee meetings and conducts quarterly visits to the clearing members every year. Informational activities are also held where needed. Clearing members may clarify queries regarding laws or other issues via TAIFEX's website, mailbox, or by contacting department staff.

**Key Consideration 4:** *An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes.*

### **Disclosure of service fee standards**

Information such as exchange fees, clearing fees, settlement fees, position adjustment fees, position transfer fees is disclosed on TAIFEX's website. All service fees have been implemented with the approval of the Competent Authority; the same applies to any subsequent amendments. Changes in service fees are published on TAIFEX's website once they are approved by the Competent Authority. Informational activities may be arranged if necessary to convey changes to futures commission merchants and the public.

The type, rate, and amount of all fees that TAIFEX Clearing charges to clearing members and futures commission merchants comply with Article 113 of the Rules, Article 68 of the OTC Rules, Chapter 12 - "Clearing Service Fee and Connection Processing Fee Standards" of the Enforcement Rules, Exchange Fee Standards, Clearing Service Fee Standards, and other relevant rules.

**Key Consideration 5:** *An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.*

### **Disclosure**

According to the CPSS-IOSCO, an FMI's disclosure framework should include details such as the FMI's name, the name of the Competent Authority, the record date, website address, contact method, summaries, the FMI's overall description (including organizational structure, market, services, and key business figures), a summary of discrepancies with the previous disclosure, detailed descriptions for each principle, and attachments where appropriate.

TAIFEX Clearing has made disclosures in accordance with the CPSS-IOSCO PFMI disclosure framework.

TAIFEX Clearing has disclosed on its website, both in Chinese and English, information regarding the products it offers, market data, trading system, the clearing service, relevant rules, regulations, and related statistics.

**Principle 24 : Disclosure of market data by trade repositories**

A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs.

*Summary Narrative*

**Key Consideration 1:** *A TR should provide data in line with regulatory and industry expectations to relevant authorities and the public, respectively, that is comprehensive and at a level of detail sufficient to enhance market transparency and support other public policy objectives.*

[This principle is not applicable to CCPs]

**Key Consideration 2:** *A TR should have effective processes and procedures to provide data to relevant authorities in a timely and appropriate manner to enable them to meet their respective regulatory mandates and legal responsibilities.*

[This principle is not applicable to CCPs]

**Key Consideration 3:** *A TR should have robust information systems that provide accurate current and historical data. Data should be provided in a timely manner and in a format that permits it to be easily analysed.*

[This principle is not applicable to CCPs]

## **V. List of publicly available resources**

### **Legal Rules and Regulations**

1. Futures Trading Act
2. Standards Governing the Establishment of Futures Clearing Houses
3. Regulations Governing Futures Clearing Houses
4. Taiwan Futures Exchange Corporation Contract for Clearing and Settlement of Futures Trading
5. Taiwan Futures Exchange Corporation Articles of Incorporation
6. Criteria Governing Oversight of Futures Trading
7. Taiwan Futures Exchange Corporation Rules Governing Surveillance of Market Positions
8. =
9. Taiwan Futures Exchange Corporation Methods and Standards for Receipt of Clearing Margins
10. Regulations Governing Futures Commission Merchants
11. Trading Rules and Contracts of Various Instruments Traded Over TAIFEX
12. Taiwan Futures Exchange Corporation Criteria for Clearing Membership
13. Taiwan Futures Exchange Operational Key Points of Clearing and Settlement for Futures Commission Merchants and Clearing Members
14. Taiwan Futures Exchange Corporation Regulations Governing Clearing Member Deposits to the Clearing and Settlement Fund Following Clearing and Settlement Operations
15. Taiwan Futures Exchange Corporation Guidelines for Futures Commission Merchants and Clearing Members Conducting Operations in Relation to the pledging of securities as Margin

## Collateral

16. Guidelines for Futures Trading by Overseas Chinese and Foreign Nationals
17. Taiwan Futures Exchange Corporation Rules for Auditing Futures Commission Merchants and Clearing Members
18. Taiwan Futures Exchange Corporation Regulations Governing Procedures for Special Audits and Provision of Guidance to Futures Commission Merchants and Clearing Members
19. Apportionment Procedures for Managing Default by Clearing Members
20. Taiwan Futures Exchange Corporation Procedures for Suspension or Termination of Futures Commission Merchant and Clearing Member Operations
21. Taiwan Futures Exchange Corporation Futures Market Usage Contract
22. Taiwan Futures Exchange Corporation Contract for Computer Connection to the Centralized Futures Exchange Market
23. Taiwan Futures Exchange OTC Derivative Clearing Rules
24. Taiwan Futures Exchange OTC Derivative Clearing Enforcement Rules

## **Publications**

1. Taiwan Futures Exchange Corporation Annual Report
2. Taiwan Futures Bi-Monthly Journal
3. Journal of Futures and Options