FINANCIAL SECTOR ASSESSMENT PROGRAM

CHILE

ASSESSMENT OF OBSERVANCE OF THE CPSS-IOSCO PRINCIPLES FOR FINANCIAL MARKET INFRASTRUCTURES

DETAILED ASSESSMENT REPORT OF COMDER, CONTRAPARTE CENTRAL S.A

MAY 2016

This report was prepared in the context of a standards assessment mission in Chile during August 3-7 and September 21-October 2, 2015, overseen by the Finance & Markets Global Practice, World Bank and the Monetary and Capital Markets Department, IMF.

THE WORLD BANK GROUP
FINANCE & MARKETS GLOBAL PRACTICE

CONTENTS

GLOSSARY

ABIF	*Asociación de Bancos e Instituciones Financieras de Chile* (association of banks and financial institutions)
BCP	Business Continuity Plan
BCCh	*Banco Central de Chile* (Central Bank of Chile)
BCS	*Bolsa de Comercio de Santiago* (Santiago Stock Exchange)
BDDC	*Base de Datos de Derivados Cambiarios del BCCh* (foreign exchange derivatives database of the Central Bank of Chile)
BIA	Business Impact Analysis
CCP	Central Counterparty
CLF	The market-recognized convention for the Chilean UF
CLP	Chilean Peso
CSD	Central Securities Depository
CPMI	Committee on Payments and Market Infrastructure
CPSS	Committee on Payment and Settlement Systems
DCV	*Depósito Central de Valores* (central securities depository)
DNS	Deferred Net Settlement
DVP	Delivery versus Payment
EMIR	European Market Infrastructure Regulation
EWMA	Exponentially Weighted Moving Average
FLI	*Facilidad de Liquidez Intradía* (intraday liquidity facility)
FMI	Financial Market Infrastructure
FX	Foreign Exchange
IOSCO	International Organization of Securities Commission
IMF	International Monetary Fund
IRR	Internal Rate of Return
ISO	International Standards Organization
KC	Key Consideration
LBTR	*Liquidación Bruta en Tiempo Real* (real time gross settlement)
MOF	Ministry of Finance
MOU	Memorandum of Understanding
NCG	*Norma de Carácter General* (general rule)
NDF	Non-delivery Forward
OLA	Operational Level Agreement
PFMI	Principles for Financial Market Infrastructures
PS	Payment System
QCCP	Qualifying Central Counterparty
RBI	*Red Bancaria Interconectada* (interconnected bank network)
RTGS	Real time gross settlement
RTO	Recovery Time Objective
SBIF	*Superintendencia de Bancos e Instituciones Financieras* (superintendence of banks and financial institutions)
SCL	*Sistema de Compensación y Liquidación* (clearing and settlement systems)
SGI	*Sistema de Gestión Integral* (comprehensive management system)
SLA	Service Level Agreement
SSS	Securities Settlement System
SVS	*Superintendencia de Valores y Seguros* (superintendence of securities and insurance)
SWIFT	Society for Worldwide Interbank Financial Telecommunication

TR	Trade Repository
UF	Unidad de Fomento
VAR	Value-at-Risk
WBG	World Bank Group

I. EXECUTIVE SUMMARY

1. **Chile has fairly developed payment, clearing, and settlement infrastructures.** Sistema LBTR is the Central-Bank operated real-time (interbank) gross settlement (RTGS) system, and the backbone of the national payments system, where final payments originating from the various markets are settled. Sistema LBTR is owned and operated by the Central Bank. The RTGS is not the only high-value funds transfers system in Chile: ComBanc S.A. operates as a net clearing system for participating banks (hereinafter ComBanc). *CCLV Contraparte Central S.A* – CCLV, a subsidiary of the Santiago Stock Exchange, clears and settles exchanged-traded debt securities, and also acts as a central counterparty for equities (cash market) and exchange-traded derivatives. More recently, ComDer, Contraparte Central S.A (hereinafter "ComDer") was established as a central counterparty for over-the-counter derivatives. As the only authorized central securities depository in Chile, *Deposito Central de Valores* (DCV) holds all securities that are object of public offering and facilitates the transfer of these securities between its depositors.

2. **Sistema LBTR is largely compliant with the Principles for Financial Market Infrastructures (PFMI), and is sound from an operations perspective.** It is subject to comprehensive risk management, including credit, liquidity, and operational. Clear and transparent risk-management policies, procedures, and systems allow measuring, mitigating, and managing the range of risks that arise in the system's operations and from its participants. All transactions settled in Sistema LBTR are deemed final and irrevocable.

3. **However, some areas of improvement for Sistema LBTR have been identified and are summarized below.** In particular, Sistema LBTR is exposed to some legal risk in that there is no explicit coverage of irrevocability and finality of payments at the level of statutory legislation. The urgency of this issue of concern is diminished in light of the special insolvency procedures of the Banking Law and the general normative powers of the BCCh in the field; however, these would not apply should non-banks be allowed to participate in the system. This issue impacts negatively settlement finality, and could have potential repercussions on credit and settlement risk. As for collateral in general and for the provision of liquidity into the Sistema LBTR in particular, the lack of express recognition of enforceability of repos might also jeopardize the soundness of system, although also this risk might be deemed to be reduced by the understanding of repos agreements under general principles of law. Sistema LBTR should establish mechanisms for the regular review of its efficiency and effectiveness vis-à-vis the needs of its participants. As the operator of the LBTR, the Central Bank could consider recommending that non-banks – provided that these comply with risk-based criteria – be allowed as participants in light of ensuring fair and open access to a critical infrastructure.

4. **ComBanc has been also assessed as sound from a (financial, operational) risk management perspective.** In providing real-time clearing services for twenty participating banks, ComBanc relies on bilateral and multilateral credit limits to manage its participants' credit risk vis-à-vis each other, combined with collateral requirements to cover 1.15 times each participant's maximum credit exposure. Payments are considered final and irrevocable once these are cleared in ComBanc. In case of failure of one or more members, ComBanc has set out two extraordinary settlement processes. Operational risk management is grounded in the General Risk Policy and the General Operational Risk Policy.

5. **Additional steps to improve compliance of ComBanc with the PFMI are warranted, especially with regard to governance arrangements and management of investments risk.** First, ComBanc is exposed to the same type of (potential) legal risk as the

Sistema LBTR. With regard to governance, comprehensive governance arrangements should include procedures to review the Board's performance, and clear policies for the recruitment and termination of senior management. Combanc could consider diversifying its investment portfolio – i.e. invest in securities other than those issued by its shareholder banks. Broader, yet still risk-based, participation criteria should be allowed. Finally, ComBanc should address gaps in transparency.

6. **DCV ensures the safekeeping and efficient transfer of securities.** The assessment has found that the relevant legal and regulatory framework minimizes custody risk. At the operational level, securities holdings of customers are held in segregated accounts, either omnibus or at the level of the final beneficial owner. More than 96% of securities (in terms of value) held at DCV are dematerialized and this percentage has been growing over the years as legacy paper-based securities mature.

7. **Nonetheless, DCV should improve compliance with the PFMI in a few areas.** The area of biggest concern for DCV is general business risk. To date, DCV has not developed a recovery plan in connection with general business losses, and was found to hold liquid net assets sufficient to cover less than three months of operating expenses (as opposed to a minimum of 6 months prescribed by the PFMI). Although for the most part the company incorporates international standards and best practices with regard to governance, there is no formal mechanism to review its board performance. DCV should take a comprehensive approach to defining and addressing the various types of risks it faces: currently, although all such risks are de facto managed, DCV general risk management policy is focused on operational risk.

8. **No serious issues of concerns were identified with regard to the operation of CCLV as a securities settlement system.** On the other hand, there are gaps in the company's governance arrangements that include: (i) the lack of a formal mechanism for reviewing the performance of the board, which it shares with the Santiago Stock Exchange as the holding company of CCLV, (ii) roles and responsibilities of senior management are not defined and documented at the level of the subsidiary (i.e. at the level of CCLV), and; (iii) no independent reporting line exists for the risk management function. The lack of a detailed plan for its financial recovery also raises concerns that could become serious if not addressed in a timely fashion.

9. **CCLV as a central counterparty incorporates international standards in its risk management practices; issues of concern only arise as a result of the lack of coverage of segregation and portability in the legal framework.** Although CCLV rules and contracts provide the mechanism for the segregation and portability of positions, and these arrangements are implemented in practice, in light of the gaps in the legal framework the relevant standards cannot be met. It is worth noting that FMIs in general – including CCLV – do not have access to central bank liquidity in the payments system (i.e. the intraday liquidity facility). As a result, CCLV must resort to other liquidity providers before first exhausting the collateral provided by the delayed/defaulted participant(s). Authorities should consider costs vs. benefits of providing FMIs with access to intraday liquidity facilities.

10. **ComDer was established as a response of the banking system to the exponential growth of the over-the-counter (OTC) derivatives market and to achieve compliance with international standards and G20 expectations.** In practice, ComDer was designed to abide by international best practices and observes most of the Principles. ComDer risk management practices are robust in general terms. In particular, ComDer uses good and conservative

practices with regard to collateral, e.g. it accepts only cash and debt securities issued by the Central Bank or the National Treasury as collateral, marks collateral and participant positions to market daily, and applies conservative haircuts that also incorporate crisis scenarios thus reducing the need for pro-cyclical adjustments.

11. **However, ComDer has yet to fine-tune some aspects of its operations, namely its stress test programme.** In addition, as noted above for CCLV, ComDer does not have access to routine Central Bank credit either; as a result, it must resort to its liquidity providers before first exhausting the collateral provided by the delayed/defaulted participant(s). Collateral in securities – although highly liquid – may not be readily available (within one or two hours), at least in part because ComDer uses a model of electronic pledge. Also, the same considerations that were made above with regard to the lack of legal underpinning of segregation and portability of positions and collateral apply to ComDer too, however, in this case and for the time being, the risk is not very material as long as ComDer only clear positions from direct participants.

12. **Authorities' powers are clearly defined with no overlap. However, when assessed at the jurisdictional level, there are a few gaps in the observance of the Responsibilities of Authorities**. Observance is affected mainly by the following elements: i) with regard to payment systems, the Central Bank, though it has the necessary powers and the resources / processes in place, has not defined a comprehensive oversight policy for systemically important payment systems, while the *Superintendencia de Bancos e Instituciones Financieras* (SBIF) as the supervisor of ComBanc relies on the supervision framework set out for *Sociedades de Apoyo al Giro* which does not take into consideration the specific features and risk profile of ComBanc as a FMI; ii) although numerous steps are being taken in the direction of adopting the PFMI, there is no uniform recognition of the PFMI across authorities in Chile, and; iii) cooperation among authorities is efficient, but there are no effective procedures to ensure timely access to BBCh data on foreign exchange derivatives by other authorities.

13. **In the context of this PFMI assessment, it is worth noting that there is no recognized trade repository (TR) in Chile, nor the legal and regulatory framework to cover TRs exist; therefore a formal assessment of TRs was not undertaken.** At the international level, concerns about systemic risks in OTC derivatives markets have led to important changes in international standards and a G20 reform agenda to improve transparency that contemplates – among other things – mandatory reporting to TRs of all OTC derivatives contracts. The Central Bank operates a database (*Base de Datos de Derivados Cambiarios*, BDDC) where foreign exchange derivatives transactions are reported by banks, other financial institutions and certain non-financial entities, and publishes aggregate-level data. However, this infrastructure does not currently qualify as a TR. A plan of action to remove the existing barriers – legal and technological – to developing a TR function will enable Chilean authorities to meet international expectations and best practices in the global derivatives markets.

II. INTRODUCTION

14. The Central Bank of Chile (*Banco Central de Chile*, BCCh) and Chile's Ministry of Finance, in their letter of January 9th, 2015, requested the World Bank to undertake a stand-alone Review of Standards and Codes (ROSC) module of the Principles for Financial Market Infrastructures (PFMI) of the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commission (IOSCO).

15. A World Bank Group (WBG) team consisting of Jose Antonio Garcia (Senior Payment System Advisor and Team Leader), Corina Arteche (Senior Payment System Specialist), Maria Chiara Malaguti (Senior Legal Advisor) – supported remotely by Maria Teresa Chimienti (Payment System Specialist) - visited Chile from August 3-7 and from September 21-October 2, 2015 to assess Chile's FMIs.[1] On the side of local authorities, the team included Catherine Tornel (Senior Economist) and Maria Jose Meléndez (Economist) from the BCCh, and Bernardita Palacios (Capital Markets Advisor) from the Ministry of Finance.

16. A total of five financial market infrastructures (FMIs) were assessed as part of this ROSC, although one of these operates both as a central counterparty (CCP) and as a securities settlement system (SSS) for different segments of the exchange-traded securities market, and as a result a total of six FMI assessments were produced by the team. In addition, the Responsibilities of Authorities for FMIs were assessed.

17. The main tool used by the assessment was the CPSS-IOSCO Assessment Methodology for the Principles for Financial Market Infrastructure and the Responsibilities of Authorities". Each of the FMIs and Chilean authorities – the *Banco Central de Chile* (BCCh), the *Superintendencia de Valores y Seguros* (SVS) and the *Superintendencia de Bancos e Instituciones Financieras* (SBIF) – completed a self-assessment for the PFMI and the Responsibilities of Authorities, respectively. On this basis, the WBG team and the local team conducted detailed interviews with senior and mid-level managers of all the respective institutions, and prepared the assessment reports.

18. In addition to the self-assessments, other sources of information included the applicable laws and regulations, as well as each FMI's main policies and internal documents (e.g. detailed policies, and processes and procedures for certain key areas) which were shared by the FMIs with the assessors, and other information available at each FMI's website (e.g. statistics). The WBG and local teams also met with a number of users of these FMIs, including two large commercial banks and two brokers-dealers that are not part of local bank-lead conglomerates.

III. OVERVIEW OF THE PAYMENT, CLEARING AND SETTLEMENT LANDSCAPE

19. Chile has a fairly developed payment, clearing and settlement infrastructure comprising:

- Two systemically important payment systems – a Central Bank-operated real-time gross settlement system (*Sistema LBTR*), and a privately-owned clearinghouse for high-value interbank payments (ComBanc)
- A central securities depository (CSD) for government and corporate securities (*Depósito Central de Valores S.A.* – DCV)
- A securities settlement system (SSS) for debt securities and money market instruments, that also acts as a central counterparty (CCP) for corporate equities (*CCLV Contraparte Central S.A* - CCLV). Starting July 30th, 2015 CCLV also acts as a CCP for certain exchange-traded derivatives.
- A CCP for over-the counter (OTC) derivatives (ComDer).

[1] T. Khiaonarong and F. Wendt (IMF), and D. Delort and G. Srinivas (WBG) acted as peer-reviewers.

20. In addition, the BCCh operates a database (*Base de Datos de Derivados Cambiarios*, BDDC) in which foreign exchange (FX) derivatives transactions are reported by banks and other financial institutions, and certain non-financial institutions.

21. The assessment report covers the Responsibilities of central banks, market regulators, and other relevant authorities for the above-mentioned financial market infrastructures.

a. ComDer

22. ComDer is the result of a project that was initiated in 2011. At that time, the Chilean banking industry, following G-20[2] and CPMI-IOSCO recommendations, among others, decided to create a CCP for the OTC derivatives market in order to align the Chilean financial market infrastructures with new international standards and best practices.

23. The OTC derivatives market in Chile continues to grow and currently it is estimated that notional amounts of non-delivery forwards (NDFs) on foreign currency and interest rate swaps have reached approximately US$300 billion, nearly 70% of which is represented by interest rate swaps. Main actors in the OTC derivatives market are commercial banks, which concentrate approximately 95% of the total notional amount.

24. ComDer, Contraparte Central S.A was licensed by the SVS in June 2015, and started clearing derivatives transactions on July 30th, 2015. Its ownership structure is as follows: IMERC OTC, participated by 17 commercial banks, owns 99.9%, while the Association of Banks and Financial Institutions of Chile (ABIF) owns the remaining 0.1%. Within IMERC, ownership shares were assigned on the basis of the estimated activity of these 17 banks in the OTC derivatives market in previous years. Ownership shares are revised every three years.

25. There are currently 14 direct participants in ComDer, which at the same time are ComDer shareholders, as noted earlier. All such participants are banks licensed in Chile and concentrate the bulk of transactions in the OTC derivatives market.[3] While other banks licensed in Chile are expected to join shortly, some others appear to be bounded by laws/regulations (e.g. Dodd-Frank Act and EMIR) that are in principle applicable to their parent jurisdiction but that, as a result of consolidation, affect their operations globally.[4] Although foreseen in ComDer's rulebook, at present there are no indirect participants. While participation of foreign entities (i.e. not licensed as financial entities in Chile) in ComDer is not explicitly allowed nor forbidden in laws or regulations, it is the opinion of ComDer that only those entities licensed in Chile may become direct participants.

26. In a first stage, ComDer is clearing and settling NDFs for CLP-USD and CLF-USD with maturities up to one year.[5] Both contracts are settled in Chilean pesos. Also, in this first stage ComDer is only accepting direct participants, although the approved rulebook already

[2] G20 Leaders agreed in 2009 to a comprehensive reform agenda for these markets, to improve transparency, mitigate systemic risk, and protect against market abuse. To achieve these objectives, the G20 agreed that: (i) all OTC derivatives contracts should be reported to trade repositories (TRs); (ii) all standardized contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties (CCPs); (iii) non-centrally cleared contracts should be subject to higher capital requirements and minimum margining requirements should be developed.

[3] At present, in Chile there are 19 banks that are either locally incorporated or licensed as subsidiaries, plus 4 other banks that are licensed as local branches of foreign banks.

[4] For some banks that are local subsidiaries of global banks with headquarters in the US or the EU, clearing through ComDer may be costly due to legal and regulatory restrictions, i.e. Dodd-Frank Act and EMIR.

[5] CLP is the market convention for the Chilean Peso, while CLF is the market convention for the Chilean Unidad de Fomento or "UF", which is a unit of account indexed to inflation in use in Chile since the mid-1980s.

provides for indirect participation. It is envisaged that for a second stage, most likely during 2016, ComDer will also clear interest rate swaps and other instruments and will begin accepting indirect participants.

27. As of mid-October ComDer was clearing an average of nearly 100 contracts per day (both legs). Daily cleared amounts averaged USD 1.7 billion in October. By October 16th the notional amount accrued in ComDer was USD 55 billion. ComDer has estimated that the total number of contracts that are eligible to be cleared and settled with the FMI are about 216 daily contracts worth about USD 100 billion. Hence, in its first months of operations ComDer is already absorbing approximately 50% of the market.

28. In addition to CCP services, ComDer's technological platform is also enabled to provide TR services. However, at present, TRs are not regulated in Chile, and this functionality of ComDer's technological platform is not yet been exploited.

b. Regulatory, supervisory and oversight framework

29. The BCCh is the regulator of payment and settlement systems in Chile. BCCh's regulatory and oversight powers are grounded in its Organic Law (art. 3) and the Compendium of Financial Norms (CFN, chapters III.H III.J). The BCCh is also the regulator of the foreign exchange market. The BCCh is the overseer (and operator) of the Sistema LBTR.

30. Supervision of ComBanc and other privately-owned retail payment infrastructures is delegated to the banking supervisory agency (*Superintendencia de Bancos e Instituciones Financieras*, SBIF), based on article 82 of the BCCh Organic Law, and articles 12 and 75 of the Banking Law.

31. The securities regulator, *Superintendencia de Valores y Seguros* (SVS), is the regulator and supervisor of CSDs, SSSs, and CCPs. The objectives, functions, powers, and organization of the SVS are spelled out in its Organic Law (Law 3.583 of 1980). The legal basis for the operation of CSDs and SSSs in Chile are provided under Law 18.876 and Law 20.345, respectively. Consistently with its statutory powers and the laws mentioned above, the SVS supervises DCV, CCLV, and ComDer. However, Law 20.345 requires that any changes to the rulebooks of CCLV and ComDer be approved by the SVS also with the binding opinion of the BCCh and after hearing the opinion of the SBIF.

32. In addition to the applicable laws, the SBIF and SVS issue general rules (*Normas de carácter general*, NCG) to the FMIs under their regulatory purview. In a few cases, NCGs have been issued jointly to reflect the fact that in some of the FMIs supervised by the SVS some of the participants are banks.

33. The main instance of domestic cooperation among financial sector authorities is provided by the Financial Stability Council (*Comité de Estabilidad Financiera* – CEF). In addition, bilateral cooperation domestically and internationally is facilitated through memoranda of understanding (MoU).

c. Summary of major changes and reforms

34. The most relevant changes and reforms in recent years derive from the enactment of Law 20.345. Recent changes, partly in response to this law and to international trends and developments, included the creation of ComDer, and CCLV becoming a CCP for equities and more recently for exchange-traded derivatives. Chilean financial sector authorities expect to undertake further reforms based on the outcomes of this CPSS-IOSCO PFMI ROSC.

IV. SUMMARY ASSESSMENT

a. Summary assessment of observance of the principles

35. In general terms, ComDer is a robust and sound FMI. It has adopted international best practices and standards with regard to corporate governance, risk management, efficiency and transparency, and fully observes many of the PFMIs.

36. There are two principles that are assessed as "broadly observed" and three others that are assessed as "partly observed". It should be noted that in several cases, the gaps or shortcomings identified are related to the fact that ComDer started clearing derivatives contracts only on end-July 2015, and hence the FMI has yet to fine tune some details of its operations.

37. The principles that are assessed as "broadly observed" or "partly observed" and the reasons for assigning the correspondent rating are described below:

- Principle 1 (legal – partly observed): ComDer's rulebook and the contracts with its participants provide the mechanism for the segregation and portability of positions. The legal framework applicable to securities clearing and settlement systems does not provide a legal underpinning to segregation and portability of positions and collateral. Hence, although segregation of positions and collateral is achieved in practice, there is no legal certainty that these arrangements will be upheld in a court of law if contested. This issue is not extremely relevant at the moment considering that there are no indirect participants in ComDer, although participation by the latter is envisaged at some point during 2016. On the other hand, as the provisions for FMI recovery and resolution contained in Law 20.345 date back to 2009, it is also recommended to ensure that these provisions remain aligned with best international practice, in particular with recent work of the FSB and CPMI-IOSCO.

- Principle 2 (governance – broadly observed): ComDer has clear objectives with regard to preserving financial stability and incorporates best practices in its governance arrangements. As of November 2015, a formal document for its corporate governance had not yet been approved by the board.[6] Lines of responsibility and accountability are clear in general. Also as of November 2015, the risk management function was reporting to the CEO only.[7] Finally, at the level of the board, no mechanisms are in place to review performance of the board as a whole or at the level of individual board members.

- Principle 7 (liquidity risk – partly observed): ComDer does not have access to routine credit from the BCCh, in particular the intraday liquidity facility (the "FLI") used as part of the Sistema LBTR. This situation forces ComDer to rely on its liquidity providers before first exhausting all collateral already provided by the delayed/defaulting participant. Collateral in securities, even if highly liquid ones, may take some time to be liquidated as ComDer uses a model of electronic pledge rather than outright ownership transfers (see principle 16). On a different matter, all collateral held at ComDer is cash or highly liquid securities. Largely based on this argument, ComDer has not yet launched a stress testing program to assess the sufficiency of its

[6] This was approved in January 2016.
[7] However, in March 2016 the board established a separate reporting line of the Head of the Risk Management department directly to the board and to the Risk Management Committee.

liquid resources under stressed market conditions. This is nevertheless required by the PFMIs.

- Principle 14 (segregation and portability – partly observed): ComDer's rulebook and the contracts with its participants provide the mechanism for the segregation and portability of positions. The legal framework applicable to securities clearing and settlement systems does not provide a legal underpinning to segregation and portability of positions and collateral. Hence, although segregation of positions and collateral is achieved in practice, there is no legal certainty that these arrangements will be upheld in a court of law if contested. Additionally, there is no procedure in place to obtain consent from the direct participant(s) to which positions and collateral are to be ported. These issues are not extremely relevant at the moment considering that there are no indirect participants in ComDer, although participation the latter is envisaged at some point during 2016.

- Principle 23 (disclosure - broadly observed): Although ComDer prepared a recent self-assessment based on the CPSS-IOSCO Assessment Methodology (not available to the public), it has not yet completed the CPSS-IOSCO Disclosure Framework for FMIs.

Table 1
Ratings Summary of the Principles

Assessment category	Principle
Observed	Principles 3, 4, 5, 6, 8, 9, 13, 15, 16, 17, 18, 20, 21 and 22
Broadly observed	Principles 2 and 23
Partly observed	Principles 1, 7 and 14
Not observed	
Not applicable	Principles 10, 11, 12, 19, and 24

b. Recommendations for ComDer

Table 2 Prioritized list of recommendations			
Principle	**Issue of concern or other gap or shortcoming**	**Recommended action and comments**	**Time frame for addressing recommended action**
1 and 14	Although segregation and portability of positions and collateral is provided for in ComDer's rules and its technological platform is prepared to support the implementation of such rules, there is no legal certainty that these arrangements will be upheld in a court of law if contested.	Even if at present ComDer does not have indirect participants, as this is already foreseen for a second stage it is recommended that provisions on segregation and portability of positions and collateral (covering explicitly both indirect settlement members and customers) be included in the relevant laws.	High priority (authorities to begin discussing the legal necessary changes within the next 3-6 months)
7	ComDer has not yet launched a stress testing program to assess the sufficiency of its liquid resources.	ComDer should develop and implement with high priority a program to test the sufficiency of its liquidity resources under stressed market conditions.	High priority (in the next 3-6 months)
1	The provisions for FMI recovery and resolution contained in Law 20.345 date from 2009, and may therefore need to be reviewed in light of best international practice developed in recent years	Authorities to analyze how to better align the provisions for FMI recovery and resolution contained in law with best international practice, in particular with recent work of the FSB and CPMI-IOSCO.	In a defined timeline (<1 year).
2	No mechanism to review board performance in place	A mechanism to evaluate the performance of the board as a whole and the performance of individual board members needs to be developed	In a defined timeline (<1 year)

Table 2 Prioritized list of recommendations			
Principle	**Issue of concern or other gap or shortcoming**	**Recommended action and comments**	**Time frame for addressing recommended action**
		and formally approved as part of the board's procedures.	
	The risk-management department reports directly to the CEO and has no direct access to the board or the risk management committee	The Head of the risk management department should have a separate, direct reporting line to the risk management committee of the board (similar to that of the audit department to the audit committee).	In a defined timeline (<1 year). *Addressed in March 2016.*
	Currently, some important board procedures, including the identification and handling of conflicts of interests, are not documented (only a draft document has been produced so far).	ComDer's board should approve a ComDer's Corporate Governance document as soon as possible. This document should reflect with a reasonable level of detail the procedures for the functioning of the board, including the identification and management of conflicts of interest.	In a defined timeline (<1 year). *Addressed in January 2016.*
7	ComDer does not have access to routine credit from the BCCh, in particular to the FLI used as part of the Sistema LBTR. This situation forces ComDer to rely on its liquidity providers before first exhausting all collateral already provided by the delayed/defaulting participant. Also, in the event of a delay/default, securities posted by that participant may take one hour or	Access to the FLI could give ComDer an additional (and reliable) line of defense to deal with a settlement member delay/default before using the funds from its own credit lines with liquidity providers. In other words, ComDer could automatically repo the securities it holds as collateral of the delayed/defaulting member to obtain liquid funds promptly, before using its own lines of credit. Alternatively, through the	In a defined timeline (<1 year – for BCCh and other authorities to make an analysis of FMIs gaining access to the FLI. Actual legal and regulatory changes are likely to take more time to materialize.)

Table 2 Prioritized list of recommendations			
Principle	**Issue of concern or other gap or shortcoming**	**Recommended action and comments**	**Time frame for addressing recommended action**
	more to be liquidated, regardless of those securities being highly liquid/marketable. This is because securities are pledged at the DCV (i.e. they remain in the account of the owner), and for ComDer to get hold of those securities they must be transferred to ComDer's own account. Then, ComDer needs to sell them or repo them in the market via a broker-dealer.	FLI ComDer could have a reliable and expedite means to replenish its liquid resources. Granting liquidity to ComDer or other FMIs is currently not permitted by the legal framework. Hence, the BCCh and other financial authorities in Chile should discuss within a defined timeline the desirability, in terms of benefits and costs, of ComDer (and other relevant FMIs) gaining access to the FLI, and proceed with the necessary legal and regulatory changes.	
14	The direct participant(s) to which positions and collateral are ported is not obliged to accept those positions, and there is no procedure in place to obtain consent.	ComDer should clarify in its rules the way in which it will obtain consent of the participant(s) to which positions and collateral are to be ported.	In a defined timeline (changes to be ready before indirect participants are allowed at ComDer)
23	ComDer has not completed the CPSS-IOSCO Disclosures Framework for FMIs	ComDer to complete the CPSS-IOSCO Disclosure Framework for FMIs and make it available to the general public through its website or other proper means. This should be updated at a minimum every two years.	In a defined timeline (<1 year)
3	Risk of non-performance of liquidity providers is not specifically addressed in the Business Impact Analysis (BIA).	Even if the risk of non-performance of liquidity providers is dealt with in practice by requiring potential providers to meet a number of requirements and through the diversification of	In the normal course of business

Table 2 Prioritized list of recommendations			
Principle	**Issue of concern or other gap or shortcoming**	**Recommended action and comments**	**Time frame for addressing recommended action**
		these providers, ComDer should include this specific risk in its BIA, and measure the probability of materialization of this risk, its impact and expected outcome.	
4	According to the rulebook (annex 6) the purpose of the settlement guarantee fund is to cover losses in the event of a default of direct participants. It does not explicitly provide for losses not fully covered by initial margin caused by a default of an indirect participant.	This issue is not a high priority at present given that at present there are only direct participants in ComDer. In the event ComDer does allow participation of indirect participants (planned for a second stage), the rules of the settlement guarantee fund should be modified accordingly.	In the normal course of business (but changes to be ready before indirect participants are allowed at ComDer)
6	Initial margin methodology is based on a 99% confidence interval (singled tail), which is the maximum allowed by NCG 258	In line with international practice of CCPs for OTC derivatives, ComDer should consider adopting a 99.5% confidence interval for is initial margin methodology.	In the normal course of business
15	Costs related to operational losses, fraud, claims and investment losses have not been estimated to determine the adequateness of the amount of liquid net assets needed to continue operations as a going concern	In addition to the amount of liquid net assets funded by equity allocated by ComDer to continue operations as a going concern in the event it does not obtain any revenues for a six-month period, ComDer should also estimate the potential costs related to operational losses, fraud, claims and investment losses, and on this basis determine whether that amount of liquid net assets is still sufficient.	In the normal course of business

Table 2 Prioritized list of recommendations			
Principle	**Issue of concern or other gap or shortcoming**	**Recommended action and comments**	**Time frame for addressing recommended action**
17	Contracts, SLAs and OLAs with critical external service providers need to be reviewed in light of best international practice	ComDer to ensure that its contracts, SLAs and OLAs with critical external service providers are consistent with best international practice. For this purpose ComDer may take as a basis the CPSS-IOSCO Assessment Methodology for the Oversight Expectations Applicable to Critical Service Providers.	In the normal course of business
21	Regular feedback mechanisms with ComDer participants have not been established.	ComDer should implement formal feedback mechanisms with its participants.	In the normal course of business
	There is a risk that some participants, mainly those are subsidiaries of global banks with headquarters in the US or the EU, may not find ComDer useful unless it is regarded as a QCCP (i.e. they may no longer be able to clear through ComDer due to legal and regulatory restrictions, i.e. Dodd-Frank Act and EMIR).	In the medium-term, it is highly likely that ComDer will need to obtain a number of certifications, in particular being designated a QCCP to ensure that its members – especially banks with headquarters in the US and the EU – may continue to fully benefit from it (e.g. including lower capital requirements for exposures to the CCP).	In the normal course of business

V. DETAILED ASSESSMENT

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.	
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.**
Description	*Material aspects and relevant jurisdictions* Principles on finality, on protection of collateral arrangements against insolvency, on novation, as well as on segregation and portability of positions and posted collateral are all material aspects for ComDer. Law 20.345, in addition to regulating clearing and settlement, also imposes that the administrator of a clearing and/or settlement system for securities be authorized as a *Sociedad Administradora*, and, as such, be subject to specific requirements as a *Sociedad Administradora*. In this context, ComDer needs to comply both with the requirements established as a CCP (as the operator of the system) and as a settlement system. *Legal basis for each material aspect* Law 20.345 on clearing and settlement systems for financial instruments clearly regulates all relevant aspects as for finality, recognition of novation, and protection against insolvency. Article 29 states that a securities clearing and settlement system may use the collateral posted to it based on what established in its rulebook, without any need of intervention from judicial authorities. Law 20.345 contains a satisfactory description of "novation" (final bilateral compensation by the CCP against any participant and with effects against third parties) although this is not expressly mentioned as such. Specific rules are established in Chapter II of Law 20.345 for a CCP to sufficiently manage the risk connected with its activities as the sole legal counterparty to all participants in the securities settlement system. Regarding default arrangements, the minimum features of the measures CCPs must include in their rulebook are described in section VI of SVS regulation 258 (NCG 258 "Minimum elements of credit and liquidity risk management for entities clearing and settling financial instruments"). Articles 16-19 of Law 20.345 describe the processes for the recovery of CCPs, while section V describes the resolution process for all types of "entities that clear and settle financial instruments" (articles 33-37). The Law does not contain any provision on segregation and portability. Although these are covered by agreement, no statutory provision exists to that extent.

Key consideration 2	**An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.**
Description	ComDer's rules, procedures and contracts are clear and understandable, and have not been contested by its participants (as of the date of the assessment ComDer had been in operation only for two months though). The main set of rules, the rulebook, was approved by the SVS (also with the binding opinion of the BCCh and after hearing the opinion of SBIF). This provides an acceptable level of assurance to ComDer and its participants that the rules and procedures are consistent with applicable laws and regulations. Any changes to the rules and procedures also require the approval of the SVS and BCCh. Laws and regulations and the rulebook itself specify the minimum contents of the contracts between ComDer and its participants, between direct settlement members and indirect settlement members (at present there are no indirect settlement members. These are planned for a second phase).
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.**
Description	The rules and procedures are contained in ComDer's rulebook and other documents that are disclosed to stakeholders. These documents include all relevant topics for the operation of the ComDer as a CCP, including access and exclusion criteria, the various membership types, the rights and obligations of the ComDer as the operator, the rights and obligations of settlement members, a detailed explanation of the operational model, including the use of margin/collateral, limits, definition of a participant default and its consequences.
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.**
Description	*Enforceability of rules, procedures and contracts* ComDer's rulebook, which also includes model contracts with direct and indirect participants, was approved by the SVS, BCCh and SBIF and its provisions are therefore fully enforceable in Chile. *Degree of certainty for rules and procedures* All key rules and provisions in the rulebook are based on laws (especially Law 20.345) and on NCGs issued by the SVS (some issued jointly with SBIF). The only relevant jurisdiction for ComDer is Chile (see KC5). There is no precedence of a ComDer rule, procedure or action being revoked by any other competent authority (as of the date of the assessment ComDer had been in operation only for two months though).

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.**
Description	At present the only relevant jurisdiction for ComDer is Chile. ComDer only operates in local markets and with local participants, i.e. locally licensed banks. Participation of foreign entities (i.e. not licensed as financial entities in Chile) in ComDer is not explicitly allowed nor forbidden in laws or regulations, it is the opinion of ComDer that only those entities licensed in Chile may become direct participants. Hence, ComDer does not intend to authorize any foreign participant as a direct clearing member. Although provided for as a possibility in its rulebook, for the time being ComDer does not accept cross-border collateral.
Key conclusions	The legal framework applicable to securities clearing and settlement systems provides a legal underpinning for most of the material aspects for the operation of a CCP, such as novation, settlement finality, protection against insolvency, and regulation and oversight of FMIs. However, it does not provide a legal underpinning to segregation and portability of positions and collateral.
Assessment of Principle 1	**Partly observed.**
Recommendations and comments	Although segregation and portability of positions and collateral of indirect participants is provided for in ComDer's rulebooks and the technological platform is prepared to implement these provisions, there is no legal certainty that these arrangements will be upheld in a court of law if contested. Even if at present ComDer does not have indirect participants, as this is already foreseen for a second stage it is recommended that provisions on segregation and portability of positions and collateral (covering explicitly both indirect settlement members and, if applicable at a later stage, customers) be included in the relevant laws with high priority. It is also recommended to ensure that the provisions for FMI recovery and resolution contained in Law 20.345 remain aligned with best international practice, in particular with recent work of the FSB and CPMI-IOSCO.

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.	
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**
Description	ComDer's mission – as declared in its annual report 2014 – is to provide clearing and settlement services as a CCP at competitive costs, applying international standards and best practices to the management of financial, operational and business risks, as well as to the internal management of the organization. ComDer's rulebook states the main objectives of the organization, which include risk mitigation, safety, timeliness of clearing and others in connection with the clearing and settlement of OTC-traded derivatives. ComDer's overarching risk management document "Risk Management Policy Framework" states that one of the key objectives of the organization is to contribute to reducing and/or mitigating systemic crises that could endanger the stability of financial markets. ComDer has defined 6 strategic focus areas (these were approved by ComDer's board of directors in April 2014): • Provide a robust risk management model to participants • Promote usage of high-quality services provided by ComDer • Mitigation of operational risks: quality, continuity and safety • Mitigation of financial risks in the event of a participant default • Ensure compliance of laws and regulations that are relevant to CCPs • Transparency and timely communication to regulators, participants and the market at large For each of these focus areas, measure and achievable objectives have been laid down. To ensure that these objectives are achievable, they have been linked to and aligned with the organization's processes.
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.**
Description	*Governance arrangements* ComDer's governance arrangements are based on the applicable legal framework (e.g. joint-stock companies law, securities markets law, etc.) and applicable regulations, as well as its by-laws and approved rulebook. The organization is ruled by a board of directors, with four board committees (risk management, audit, disciplinary and default management) and a CEO ("Gerente General") reporting directly to the

	board. Below the CEO there are 3 senior managers ("Gerentes"), plus a legal advisor and an Auditor General, the latter with a direct reporting line to the audit committee of the board and a secondary reporting line to the CEO. On an annual basis, ComDer holds a General Shareholders Assembly to report on the activities performed throughout the year. ComDer also holds an annual participants' meeting. ComDer began operations in late July 2015. As of November 2015, the internal document entitled "ComDer Corporate Governance" had yet to be approved by the board.[8] *Disclosure of governance arrangements* Currently, most of ComDer's internal regulations are available to its owners and participants only via a microsite with restricted access ("WebPortal"). On the other hand, ComDer's by-laws and annual reports are publicly available in its website. ComDer also intends to publish in its website its document on Corporate Governance once it is approved by the board.
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.**
Description	*Roles and responsibilities of the board* The general roles and responsibilities of the board are stated in ComDer's by-laws. A more detailed description of these roles and responsibilities, including the board's procedures for its functioning, has been prepared as part of the "ComDer Corporate Governance" (section 4.6). The latter document also contains the procedures to be followed in relation to conflicts of interest for board members. ComDer has established four committees. The composition, functions and procedures of each of these committees are outlined in Section 9 of ComDer's rulebook. These committees are as follows: • Risk management committee: to identify, measure and control risks in ComDer, propose mitigation actions, and assess and propose improvements to the risk management framework to the board. This committee has 5 members, 3 of which are designated by ComDer's participants and the rest by the board of directors (the latter two cannot be themselves board members). The members of the committee elect a chairperson form amongst themselves.

[8] This approval occurred in January 2016.

	Currently, members designated by participants are senior risk officers from participant banks. • Audit committee: its role is to oversee the observance of the rulebook and the implementation, application and ongoing improvement of the system of internal controls. This committee is made-up of three members of the board of directors. • Disciplinary committee: its main role is to propose to the board the sanctions to be applied to participants in connection with infringements to the rulebook and other applicable rules. This committee is made-up of three members of the board of directors. • Default management committee: its role is to assess and decide on the course of action with regard to the outstanding clearing orders of a defaulting party, and to designate the entity that will implement the corresponding plan. This committee is made-up of 7 members, including the CEO and the Risk Management Manager, the chair of the audit committee, the legal advisor, and three external Senior Finance Managers (or equivalent post) that will represent the participants (except the defaulting party or parties). *Review of performance* Currently none of ComDer's internal documents make an explicit reference to mechanisms to review performance of the board.[9]
Key consideration 4	**The board should contain suitable members with the appropriate skills and incentives to fulfill its multiple roles. This typically requires the inclusion of non-executive board member(s).**
Description	ComDer's board of directors comprises a total of 9 members. Article 14 of ComDer's by-laws states that "*The personal characteristics of each candidate shall prevail in the designation of board members, specifically with regard to professional background and suitability for the position*". ComDer is also observant of the provisions established in Law 18.046 (article 35), regarding the minimum requirements (e.g. appropriate skills, experience, integrity) and the impediments for an individual to become a board member. Law 20.345 also contains provisions on the designation of board members of securities clearing and settlement entities. Board members are elected by the shareholders assembly for a three-year period. Every three years there is a new election of all nine board positions. Current board members may be re-elected indefinitely. Board members are remunerated, and are entitled to an additional stipend for their participation as members of the audit or disciplinary committees. The company was formally incorporated in July 2013 and of the board

[9] Subsequently to the preparation of this assessment, ComDer notified that the board intends to carry out an annual self-assessment in the last quarter of 2016.

	members that were elected then eight remain in their posts. The remaining member was elected in mid-2015. The by-laws allow for the designation of independent directors - defined as those individuals that are not also directors, senior managers or otherwise have any contractual relationship with any of ComDer's shareholders. There is no minimum or maximum number of independent directors. In practice, the criterion that ComDer applies for all nine directors is that they cannot be staff members of shareholders. At present, the board is made-up of three directors that are also directors of banks, and six other directors that do not have any contractual relationship with banks.
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.**
Description	*Roles and responsibilities of management* The roles and responsibilities of management are currently stated in the document "ComDer Organizational Structure". This document outlines the general organization of the company, and describes in detail the objectives, roles and responsibilities of each of the department heads (i.e. CEO, Risk Management, Operations, Projects and IT), and their respective staff, up to the most junior level of the organization. The draft "ComDer Corporate Governance" document describes the various "internal" committees" (i.e. committees made-up of ComDer staff, including senior management) of the organization. The organization has defined a total of 26 processes (including business and management processes). All 26 processes have been assigned a process owner (section 9 of "ComDer Organizational Structure"). Likewise, ComDer has defined 4 overarching management processes, each with its owner. Performance of individual managers and other staff is evaluated on the basis of the performance of the processes they are responsible for. *Experience, skills and integrity* Required experience and skills are described in the document "ComDer Organizational Structure". Current senior management consist of highly experienced individuals in FMIs, as all of the senior management team members had previously held similar positions in a high-value payments system (i.e. ComBanc). Integrity of all staff is verified through interviews and independent checks as part of the hiring process. With regard to removal of management, the by-laws only specify that the CEO may be removed with the vote of at least seven board members.

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.**
Description	*Risk management framework* ComDer has a "Risk Management Policy Framework" approved by the board. This framework is based on ISO 31.000:2009 for all the risks identified throughout the document. The risks management processes that conform this framework are: context, evaluation of risks (identification, analysis and assessment of risk), treatment of risks, acceptance of risks, monitoring and communication of risks. The Risk Management Policy Framework states that ComDer has defined its risk tolerance on the basis of "a very low tolerance for credit, liquidity, general business, legal, operational, custody and investment risks". The responsibility for risk management lies on the Risk Management Committee of the board, and ultimately on the board itself. The role of this committee is to identify, measure and control risks in ComDer, propose mitigation actions, and assess and propose to the board improvements to the risk management framework. The risk management policy framework is then approved on an annual basis by the board (this policy is considered "Level 1" policy, requiring approval from the board and the CEO). *Authority and independence of risk management and audit functions* The main objectives of the Risk Management Department are the design, development and implementation of risk management systems for ComDer's business. In addition to the manager, this department has a deputy manager and two professionals hired as analysts. As of November 2015, the risk management department was reporting to the CEO, who in turn reported to the Risk Management Committee of the board. [10] The audit department reports to the Audit Committee of the board, and has a secondary ("functional") reporting line to the CEO. The main objectives of this department are to ensure the organization has a robust audit plan that focuses on the key risks, and propose measures to improve controls, in particular as regard security of information and the physical infrastructure as a whole. With the exception of the Auditor General and a deputy, auditing functions are outsourced.

[10] Subsequently, in March 2016, the board established a separate reporting line of the Head of the Risk Management Department to the board and the Risk Management Committee.

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.**
Description	*Identification and consideration of stakeholder interests* ComDer was built by initiative of participants in financial markets, essentially commercial banks. Currently, the shareholders and participants in ComDer coincide, which ensures to a large extent that the interests of participants and those of the organization are aligned. As mentioned in KC 2.3, three out of five members of the risk management committee of the board designated by the participants. In addition, ComDer has developed and approved the document "Stakeholders' Needs and Expectations", which describes and provides for the interest of primary (i.e. participants, regulators, vendors, ComDer staff members) and secondary (community, media, etc.) stakeholders. *Disclosure* Decisions made by the board are communicated to regulators. "Major decisions" are disclosed by the SVS in its website through the "*Hechos Relevantes*" microsite. Likewise, some important decisions are disclosed in the annual report, which is a public document. Board decisions are reflected in minutes, which are made available to board members, Risk Management Committee members and few other selected parties via ComDer's WebPortal (restricted access).
Key conclusions	ComDer has clear objectives with regard to preserving financial stability and incorporates best practices in its governance arrangements. Lines of responsibility and accountability are clear in general. At the level of the board, no mechanisms are currently in place to review performance of the board as a whole or at the level of individual board members. The roles and responsibilities of management are clearly documented. There is a clearly documented risk management framework. The interests of participants and other stakeholders are duly taken into account. Risk management and audit are given an important role through independent committees that report directly to the board. The heads of these two departments also have independent reporting lines to the board and their respective committee. At the time of the assessment it has also been identified that: i) some key board procedures, including the identification and handling of conflicts of interests, were documented only in draft form; and, ii) there was no

	independent reporting line of the risk-management function to the board and/or the risk management committee.[11]
Assessment of Principle 2	**Broadly observed.**
Recommendations and comments	As part of ComDer's Corporate Governance, a mechanism to evaluate the performance of the board as a whole and the performance of individual board members should be included.[12]

[11] By March 2016, these two shortfalls had been fixed: board procedures were formally approved by the board in its January 2016 meeting, and a separate reporting line of the Head of the Risk Management Department to the board and the risk management committee was established by the board in its March 2016 meeting.
[12] Subsequently to the assessment, ComDer has notified that the board intends to carry out an annual self-assessment in the last quarter of 2016.

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.	
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.**
Description	*Risks that arise in or are borne by the FMI* The Risk Management Policy Framework identifies the following risks: credit, liquidity, general business, legal, operational, custody and investment. ComDer classifies these risks in two groups: those associated with financial stability and continuity objectives (counterparty credit risk and liquidity risk) and those that are specific to ComDer as a business organization (custody and investment risk, operational risk, general business risk and legal and regulatory risk). *Risk management policies, procedures and systems* ComDer has a number of policies on the various risks faced by the organization. These are derived from the overarching Risk Management Policy Framework, which is based on ISO 31.000 (see KC 2.6). These policies are approved on an annual basis by the board. Specific policies approved so far include on credit and liquidity risks, on operational risks, on financial investments and custody, on quality assurance, on outsourcing and vendors, on information security, on human resources, on compliance, on felony prevention, on administration and on financial management. A number of detailed procedures have been developed on the basis of some of the aforementioned policies. These include on management of non-financial risks, on management of financial risks, on the usage of tools for assessing counterparty credit risk, on the usage of tools for assessing liquidity risk, on the treatment of financial risks, on the monitoring and review of financial risks, on communication of financial risks, on management of delay events, and on management of default events. A specific procedure also exists for cyber threats, including virus/malware, hacking, etc. ("*Evaluación y tratamiento de riesgos de seguridad de la información*"). Risk management systems used by ComDer include Calypso as the core clearing and settlement engine and risk management system, Aranda for incident management, Ventana for operational risk and audit, and Wizspro for the monitoring of defined business and management processes. Calypso provides the capacity to ComDer to have an integrated view of its financial exposures by allowing the aggregation of all such exposures across the organization.

	Review of risk management policies, procedures, systems In general, risk management policies, procedures and systems are reviewed on an annual basis by the Risk Management Committee, which makes a statement on the adequateness of such policies and procedures and recommends changes, if any, to the board, which gives final approval. To this end, in the last quarter of each year the Risk Management Committee presents a formal report to the board with its opinion on the effectiveness of the risk management system at ComDer. The risk management policy framework is then approved on an annual basis by the board (this policy is considered "Level 1" policy, requiring approval from the board and the CEO). Proposals for improvement come from a number of feedback mechanisms, like internal audit, interactions with users or requests from regulators. In most cases the proposals are assessed initially by the Risk Management Department, the Operations Department and/or the Projects and Technology Department, and are then presented to the Risk Management Committee.
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.**
Description	ComDer provides on-line, real-time information to participants on their net positions and their margin positions. Mark-to-market values of positions and collaterals are updated daily. A number of statistical reports are also made available to participants via WebPortal, together with educational documents on risk management. At the level of incentives, these are associated mainly with initial margin requirements, the size of each participant's contribution to the settlement guarantee fund and allocation of losses in the event of a default. In this regard, the initial margin and individual contributions to the settlement guarantee fund are proportional to the risks participants pose to ComDer. The key provisions contained in ComDer's rulebook with regard to the risks posed by participants are embedded in the Calypso clearing, settlement and risk management platform. Therefore, this system provides information, alerts, makes automatic margin calls, forbids further acceptance of new clearing orders, and has other features that allow for the effective management and containment of risks (see principles 4-7, 13).
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.**
Description	*Material risks* These risks have been identified in the document "Assessment and Treatment of Risks to Business Continuity".

	The material risks identified include the disruption of custodian and securities transfer services provided by the central securities depository (i.e. DCV), cash settlement services provided by the Sistema LBTR of the BCCh, and problems with service provided by telecom and/or software vendors that could endanger the continuous provision of ComDer services. The risk of non-performance of liquidity providers is not specifically identified in the document mentioned earlier. ComDer does identify the risk of not having enough financial resources to provide its CCP services (impact of this event considers only the ordinary settlement process and the usage of the settlement guarantee fund, but not on the delay/default management procedures where liquidity providers would be required to perform). In practice, however, ComDer does address the risk of liquidity provides by imposing strict requirements for their selection (article 153 of the rulebook) and through diversification of providers (see below). ComDer does not pose risks to the DCV or the Sistema LBTR as it is merely a user of such services and uses the applications and communications means provided by those FMIs. *Risk management tools* To identify, measure and address the risks arising from interdependencies ComDer uses a methodology based on ISO 27005:2011. Hence, in the document "Assessment and Treatment of Risks to Business Continuity" ComDer has mapped the various risks of interdependencies and others reflecting the probability that such risks materialize, impact and expected outcome. Control activities to address/mitigate all risks with a high impact are also identified in each case. Moreover, with regard to other FMIs and critical telecom networks ComDer has developed a "Response Plan in the event of failure of External Components to the System": To address risks of interdependencies with other FMIs, ComDer will become part of the business continuity group led by the BCCh and as part of this will be involved in periodical continuity tests involving all FMIs in Chile. In parallel, ComDer is planning to undertake such tests bilaterally with DCV. Although not specifically identified in its risk matrices, as mentioned earlier, the risk of non-performance of liquidity providers is dealt by means of diversification with four such providers (see principle 7). The effectiveness of these (and other) risk management tools is assessed through the comprehensive risk management system (SGIR). The Risk Management Committee reviews and validates the effectiveness of these tools. Normally it does so on a monthly basis.

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.**
Description	*Scenarios that may prevent an FMI from providing critical operations and services* ComDer has identified scenarios that may potentially prevent it from providing its critical operations and services through a detailed business impact analysis (BIA) reflected in the document "Assessment and Treatment of Risks to Business Continuity". Among others, ComDer has identified catastrophic events like multiple defaults. Although not documented in its BIA, ComDer has also identified risks such as some participants - mainly those are subsidiaries of global banks with headquarters in the US or the EU - not being able to clear OTC derivatives through ComDer due to legal and regulatory restrictions, i.e. Dodd-Frank Act and EMIR. These potential scenarios are mentioned in its 2014 annual report. *Recovery or orderly wind-down plans* ComDer has created detailed plans for recovery. These include recovery from operational disruptions, for addressing unbalanced positions and replenishing financial resources (see KC 4.7 and KC 7.10), and also from a situation in which its capital falls below the regulatory minimum. For the latter, ComDer has a "Recovery Plan in the event of Insufficient Capital" (see principle 15). In this last regard, Law 20.345 (articles 16-19) specifies the procedures to be followed in case the capital of a clearing and settlement entity falls below a minimum threshold. An orderly wind-down plan is to be activated if the mechanisms described in the business continuity plan and the financial recovery plan do not allow ComDer to avoid bankruptcy. In such an event, ComDer will work together with regulators and participants to try to wind-own its operations as smoothly as possible.
Key conclusions	ComDer has a robust framework for the comprehensive management of risks. Moreover, it has a comprehensive Risk Management Policy Framework, based on ISO 31.000, that describes the procedures and controls to identify, measure, treat, oversee and review the risks faced by the organization. ComDer has also identified risks of interdependencies through a BIA. Risks, associated mitigation measures, scenarios and recovery plans are reviewed regularly, at least on an annual basis.

Assessment of Principle 3	**Observed.**
Recommendations and comments	Even if the risk of non-performance of liquidity providers is dealt with in practice by requiring diversification of these providers, ComDer should include this specific risk in its BIA, and measure the probability of materialization of this risk, its impact and expected outcome.

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.	
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.**
Description	ComDer has developed a "General Policy for Credit and Liquidity Risks". This policy contains the general guidelines and practices to be followed for risk management purposes, its appetite with regard to credit risk, and describes the processes for the management of credit risk. It also clarifies roles and responsibilities. Section VI ("Rules") of this Policy states that the framework must be revised at least on an annual basis. The ComDer rulebook details the risk management framework, including for credit risk. The rulebook, in a number of annexes, describes the methods for calculating the various elements of ComDer's credit risk management model. This model includes the following elements: • Strict participation requirements • Daily margin requirements • Certain limits to participants' exposures • Monthly or more frequent contributions to the settlement guarantee fund • Real-time controls for assessing the adequacy of collateral posted by participants • ComDer's own resources
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.**
Description	ComDer identifies sources of credit risk on the basis of its Risk Management Framework (based on ISO 31.000). This framework requires that the following steps be performed in an ongoing basis: establish context, assessment of risks (identification, analysis and measurement/valuation of risk), treatment of risks, and monitoring and communication of risks. The main source of credit risk for ComDer is a participant default (i.e. non-payment of a net debit position), or a combination of participant defaults.

	Participant exposures are measured and monitored on an ongoing basis. ComDer credit exposure to its participants in its role as a CCP is the sum of current exposure plus potential future exposure. Hence, participants must cover 100% of this exposure by posting collateral to ComDer. The adequacy of collateral for a participant's net positions is verified in real-time. ComDer has established the following limits for participant exposures (section 6.1.4 of the rulebook). New clearing orders are no longer accepted by ComDer for settlement if these limits are not observed: • At all times, a participant must maintain a "calibrated estimated risk indicator" (i.e. initial margin adjusted by a factor that reflects the performance of the underling VaR model – see KC 4.5 and 4.6) that does not exceed 30% of that participant's capital • For each new clearing order entered by a participant, "excess collateral" (i.e. still not used for previous clearing orders) available in that participant's margin account should cover the order's initial margin requirement in an incremental manner and its fair value, in case the latter is negative. This is verified in real-time through the "Headroom Check" tool. ComDer may also establish additional limits based on the net notional or a number of risk sensitivity measures (ComDer rulebook paragraph 148). At least on an annual basis, the Risk Management Committee requires from management all relevant information to assess the overall effectiveness of the risk management model and associated tools. Results are informed to the board of directors
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.**
Description	Not applicable.
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.
Description	*Coverage of current and potential future exposures to each participant* ComDer covers its current and potential future exposures to each participant through its margin system, consisting of initial margin and variation margin. Financial resources used to cover these exposures are essentially cash in Chilean pesos and short-term government securities (see principle 5), and are readily available to ComDer: cash is transferred to the ComDer account at the Sistema LBTR of the BCCh, while securities are pledged irrevocably to ComDer at the DCV. The margin system is calculated using VaR at 99% single tail confidence level, covering the latest 5 years/1251 business days (see principle 6 for additional details). Variation margin is calculated at least daily, and the calculation triggers automatic margin calls and variation margin payments. Sufficiency or adequateness of initial margin vis-à-vis a participant's outstanding clearing orders is verified in real time every time a new clearing order is entered into the system. *Risk profile and systemic importance in multiple jurisdictions* Not applicable. *Additional financial resources* Additional financial resources include: • A settlement guarantee fund made-up of contributions from direct settlement members, and which is designed to cover at least the sum of the two largest losses net of initial margin (i.e. that were not fully covered through margin requirements) that could have occurred under extreme but plausible market conditions in the last 5 years • A Reserve Fund made-up with ComDer own resources. This fund is at least 0.2% of the sum of the two largest margin calls registered in the last 500 moving business days. Contingent resources: • Withholding of variation margin payments to participants

	• An additional settlement guarantee fund, which is basically the replenishment of the settlement guarantee fund in the event this fund was partially or totally depleted due to a participant default. *Supporting rationale and governance arrangements* The rationale regarding ComDer' holdings of total financial resources is documented at a high-level in its "General Policy for Credit and Liquidity", and in detail in its rulebook (annexes 2, 3, 4, 5 and 6). The Risk Management Committee of the board is the body responsible for risk management, and therefore approves the models and mechanisms through which the amount of total holdings of financial resources at ComDer are determined.
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.**
Description	*Stress testing* With regard to initial margin, the Risk Management Department monitors the USD dollar-Chilean peso exchange rate in real time, and in general all the relevant risk factors. Under stressed market conditions, in the event that the variation of any of the risk factors exceeds the standard deviation (adjusted to a 99% confidence level) in relation to its previous value, then ComDer makes a new valuation of the portfolios of all participants. If as a result of this the loss in a participant's portfolio exceeds 58% (i.e. one-day VaR) of the initial margin, then ComDer makes an extraordinary margin call. Likewise, ComDer can make an extraordinary margin call whenever the losses in a participant's portfolio exceed 30% of that participant's initial margin. With regard to the settlement guarantee fund, ComDer performs stress tests on a daily basis to assess the adequateness of this fund. ComDer calculates the sum of the two largest losses in extreme but plausible market

	conditions (see KC 4.6) and compares this amount with the size of the fund that was determined for the current month. If for three consecutive days the latter falls short in 10% or more to the sum of the two largest potential losses that were calculated (net of initial margin), or if in any single day this insufficiency exceeds 30%, then ComDer requires extraordinary contributions to the fund. Stress test results are communicated to the CEO and the risk management committee at least on a monthly basis. *Review and validation* The products cleared by ComDer are standard/plain vanilla and exhibit little model risk. Nevertheless, the Risk Management Committee reviews stress test assumptions and parameters and validates them scenarios at least on an annual basis. In particular, the committee makes an explicit statement on the relevance, adequateness and plausibility of stress test assumptions and parameters. In parallel, the Risk Management Department makes ad-hoc reviews, for example, whenever higher volatility market conditions are being experienced, or when a direct participant is believed to be under stress.
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	Criteria for selecting scenarios for stress tests is based on General Rule 258 of the SVS. This General Rule (section IX) states minimum requirements for stress tests that must be performed to determine the sufficiency of the settlement guarantee fund – which is created to cover extreme scenarios in which the collateral posted by individual participants may not suffice to cover losses in their net position(s). Hence, for stress testing the settlement guarantee fund ComDer holds a database of historical, hypothetical and prospective stress test scenarios that cover a significant diversity of financial crises and days showing extremely high Price volatilities. The Risk Management Department selects those scenarios it considers most appropriate for stress testing purposes, and submits them to the risk management committee for approval. ComDer initiated operations in late July 2015. From then and until now, the following stress test scenarios are being used (using 5-year data): • Highest increase in the US dollar in 5, 10 and 15 consecutive days • Highest drop in the US dollar in 5, 10 and 15 consecutive days

	• Highest increase in forward points in the UF in 5, 10 and 15 consecutive days • Highest drop in forward points in the UF in 5, 10 and 15 consecutive days • Changes in the prices/levels of these same risk factors during the week that followed the bankruptcy of Lehman Brothers
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.**
Description	*Allocation of credit losses* The rulebook (section 6.3.4) explicitly addresses credit losses that ComDer may face as a result of any individual or combined default. Uncovered credit losses (i.e. those that are not fully covered by a participant's initial margin) are allocated as follows: a) Contributions to the settlement guarantee fund (and the additional settlement guarantee fund – see below) made by the defaulting participant b) Contributions to the settlement guarantee fund (and the additional settlement guarantee fund) made by participants that choose not to participate in auctions of the positions of the defaulter c) Reserve fund d) Contributions to the settlement guarantee fund made by the non-defaulting direct participants e) Contributions to the additional settlement guarantee fund made by the non-defaulting direct participants f) ComDer's capital ComDer's board may decide to apply the Reserve Fund in a different order. This decision and the rationale behind it shall be communicated to the SVS immediately after this has been agreed. *Replenishment of financial resources* As mentioned in KC 4.4, in the event of a default, whenever the settlement guarantee fund has been used beyond the contribution of the defaulting participant, all other participants are required to replenish this fund via the creation of the so-called "additional settlement guarantee fund" (for additional details see principle 13). To cover losses, ComDer may also withhold variation margin payments (though this would be considered a liability of ComDer).

Key conclusions	ComDer incorporates best practices in its risk management system for identifying, measuring, monitoring and controlling current and potential future credit risk exposures. These practices are documented, and are revised and validated by the Risk Management Committee and approved by the board of directors. To measure and control its credit risk exposures, ComDer implemented the Calypso technological solution. ComDer determines margin requirements through the VaR methodology and determines their sufficiency by continuously recalculating participant portfolios (i.e. as new orders are entered into the system) and comparing them to collateral posted in the form of margin. Additional financial resources (i.e. the settlement guarantee fund) are stressed test on a daily basis to determine their adequateness. Sufficiency of total financial resources is tested with rigorous, frequent stress tests. ComDer's rulebook clearly states how losses will be allocated in case of a default, and the replenishment of financial resources in such an event.
Assessment of Principle 4	**Observed.**
Recommendations and comments	According to the rulebook (annex 6) the purpose of the settlement guarantee fund is to cover losses in the event of a default of direct participants. It does not explicitly provide for losses not fully covered by initial margin caused by a default of an indirect participant. This issue is not a high priority at present given that at present there are only direct participants in ComDer (i.e. ComDer relationship is only with direct participants at the moment, which means that it is not exposed to indirect participants' defaults. In the event ComDer does allow participation of indirect participants (planned for a second stage), the rules of the settlement guarantee fund should be modified accordingly.

Principle 5. Collateral An FMI that requires collateral to manage its or its participants' 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.	
Key consideration 1	**An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.**
Description	The list of acceptable collateral is specified in ComDer's rulebook (section 17.1 in Annex 4). The list is applicable to the margin system, the settlement guarantee fund, and the additional settlement guarantee fund (and also the reserve fund which consists of own resources). There are no provisions for accepting certain other assets on an exceptional basis. The general policy is to accept cash and financial instruments with very low credit risk, high liquidity, low market risk, and that ensure a reliable mark-to-market outcome. The list therefore includes: a. Cash in Chilean pesos b. Financial instruments issued by the BCCh or the National Treasury c. Debt instruments issued by foreign governments or foreign central banks as long as the relevant jurisdiction has a sovereign risk rating of investment grade or above and that are approved by ComDer's board d. Other instruments that are compliant with what established in applicable laws and regulations and that are accepted by the BCCh in connection with its intraday liquidity facility (i.e. "FLI") and that are approved by ComDer's board. e. Other instruments that are compliant with what established in applicable laws and regulations and that are approved by ComDer's board. The list of eligible collateral is loaded in ComDer's collateral management system (a module in Calypso), which ensures at all times that only eligible collateral will be accepted by ComDer Wrong-way risk is mitigated by not allowing participants to post as collateral any financial instruments issued by themselves. Moreover, participants may not operate as custodians or as settlement banks.
Key consideration 2	**An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.**
Description	*Valuation practices* ComDer marks-to-market collateral on a daily basis. For this purpose, ComDer uses asset price information provided by the Santiago Stock Exchange, to which some validations are applied. This is the only source of prices for the first 100 days of operation of ComDer, although later on it may decide to use other/additional sources (see Annex 2 - section 15.1.2 of the rulebook).

	In case validations of prices provided are not successful, the Risk Management Department Manager may decide to "mark-to-model" the collateral on the basis of discounted cash flows and no arbitrage principle. Usage of this alternative needs to be fully documented. *Haircutting practices* Haircuts are applied to all assets accepted as collateral with the exception of cash in Chilean pesos. At present, ComDer only accepts securities issued by the BCCh and the National Treasury, and for this reasons current haircuts focus on market risk. As described in annex 4 (section 17.4) of the rulebook, assets subject to haircuts are classified on the basis of instrument type, liquidity, term and volatility. Haircuts are determined at least once a year considering the worst daily logarithmic 10-day returns on the price of each asset, using 10-year historical data sets of internal rates of return (IRRs). The haircut for any instrument for which there are less than 1000 observations but more than 250 shall be subject to a 150% adjustment factor. Haircuts for instruments for which there are less than 250 observations will be applied on the basis of Basel III recommendations. If the resulting haircut is less than the one proposed in Basel III recommendations, then the largest haircut is applied. By using a 10-year data set for IRRs, haircuts incorporate episodes of crises. The risk management committee reviews the sufficiency of haircuts and validates haircut procedures at least once a year. Haircuts are adjusted if current levels are insufficient to cover price movements in one or more of the asset types that are accepted as collateral.
Key consideration 3	**In order to reduce the need for pro-cyclical 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.**
Description	To reduce the need for pro-cyclical adjustments, current haircut levels already incorporate episodes of crisis. This is because, as explained in KC 5.2, haircuts are calculated using 10-year data sets of IRRs for the various assets that are eligible collateral.
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.**
Description	Annex 4 – section 17.1 of the rulebook states the following with regard to diversification of collateral holdings: • At least 20% of the initial margin required to each direct participant shall be posted in cash in Chilean pesos

	• At least 30% of total collateral posted by direct participants shall be posted in cash and/or debt securities issued by the National Treasury or the BCCh with maturities of one year maximum. • At least 70% of total collateral posted by direct participants shall be posted in cash and/or debt securities issued by the National Treasury or the BCCh. Hence, only a maximum of 30% of total collateral may be posted in the instruments identified in items c), d) and e) of the list described in KC 5.1. Additionally, for the latter asset types, securities issued by the same issuer may not exceed 4% of total required collateral. ComDer mitigates the potential impact of concentrated holdings by only accepting highly-liquid instruments. Moreover, current holdings of the various assets types accepted as collateral by ComDer represent a very small share of the total outstanding amount of those instruments.
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.**
Description	For the time being ComDer does not accept cross-border collateral. If these assets were to be accepted as collateral in the future, once approved by its board and ensuring compliance with applicable laws and regulations, then ComDer would need to ensure there are mechanisms to mitigate any potential legal and operational risks.
Key consideration 6	**An FMI should use a collateral management system that is well-designed and operationally flexible.**
Description	*Collateral management system design* ComDer's collateral management systems is one of the modules of its Calypso platform. Main features include: • Real-time connectivity with the DCV and the Sistema LBTR • Visualization of balances in cash and securities in real-time • Reports on valuation/mark-to-market of collateral • Posting, release, substitution and liquidation of collateral • Integration of the collateral management module with the risk module and Headroom Check (the tool that assists in determining whether new orders should be accepted – see KC 4.2) • Segregation of collateral accounts can be done at the level of omnibus accounts or individual accounts • Collateral in the margin account and collateral in the settlement guarantee fund may be visualized separately or jointly • Availability of a set of analytical tools. With regard to securities accepted as collateral, these are structured as an electronic/book-entry pledge in favor of ComDer (in contrast to transfer of ownership). Pledged securities may not be re-used by the participants. Nor does ComDer re-use any of the collateral it receives from participants.

	Operational flexibility The Calypso platform, including the collateral management module, is highly parameterized. Hence, changes (e.g. new eligible assets, new limits, new haircuts, etc.) can be accommodated relatively easily and quickly without any noticeable impact in operations. Functions performed by the collateral management module are highly automatized.
Key conclusions	ComDer uses good and conservative practices with regard to collateral. Although in principle the list of acceptable collateral is fairly diverse, at present ComDer is only accepting cash in Chilean pesos and debt securities issued by the National Treasury or the BCCh, all of which have very low credit, liquidity and market risks. Collateral is marked-to-market on a daily basis. Conservative haircuts are applied, reflecting ComDer's very low tolerance to credit and market risks. Haircuts are regularly tested and validated, applying stressed market conditions. The collateral management system, which is a module within the Calypso technological platform, is highly functional and operationally flexible.
Assessment of Principle 5	**Observed.**
Recommendations and comments	

Principle 6. Margin A CCP should cover its exposure to its participants for all products through an effective margin system that is risk-based and regularly reviewed.	
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.**
Description	*Description of margin methodology* ComDer uses a traditional margin system, with initial margin requirements that aim at covering potential future exposures, coupled with daily calculation of profits and losses of the value of participant positions (i.e. variation margin), that triggers automatic margin payment or margin calls, respectively. The margin methodology is explained in detail in annexes 3 (valuation of participant positions and variation margin) and 5 (initial margin) of the rulebook, which is available to participants and to the general public. *Credit exposures* The risk factors of the two products that are currently cleared and settled by ComDer are: • Variation of the spot US dollar/Chilean peso exchange rate • The US dollar exchange rate forward curve • The UF forward curve • Interest rates, or more specifically the interbank swaps curve in Chilean pesos The basis for the calculation of the variation margin is the valuation of clearing orders (i.e. value on day "t" minus the value on day "t-1"). Clearing orders are valued on a fair price basis, which requires taking into account the aforementioned risk factors. In turn, the initial margin methodology takes into account the expected volatility in the fair price of cleared products, over a defined time horizon. Hence, margin requirements at ComDer are commensurate with the particular attributes of each of the products ComDer clears *Operational components* Annex 11 of the rulebook clearly states the timelines for margin collections and payments (from 8:30 am up to 9:45 am of the value date, plus a "grace period" of 1 hour for delayed participants). Participants that do not observe the deadline are subject to sanctions and fines. Delays are also subject to a fine (minimum of approximately US 5,000 per event). Moreover, participants with insufficient initial margin are not allowed to enter any additional clearing orders.

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.**
Description	*Sources of price data* For the valuation of participant open positions ComDer uses price data from brokers of OTC derivatives contracts. For the valuation of assets accepted as collateral ComDer currently (i.e. for at least the initial 100 days of operations) uses price data from the Santiago Stock Exchange. Historical data for the VaR model of the initial margin system and for stress tests is obtained from the Santiago Stock Exchange and price vendors. Regarding the selection of sources of price data, section 15.1 of the rulebook states the minimum criteria that should be considered: • Independence • Methodology used • Transparency and traceability • Market acceptance • Real time availability of price data • Operational reliability • Cost In the case of brokers, an additional consideration is that they handle a significantly large volume of transactions of exactly the same type than the ones that ComDer clears and settles. Brokers must also have intraday price data in addition to closing price data (e.g. to enable ComDer to make extraordinary margin calls). *Estimation of prices* Section 15.3 of the rulebook describes the process for validating price data received from vendors, and the process to be followed in case such validations are unsuccessful. Hence, when valuing participant open positions, in case price data on forward points is not available, the Risk Management Department will apply one of three alternative procedures described in that section (e.g. interpolation methods in the absence of price data for a specific maturity; use the forward points curve of the previous day in case several forward points quotes are missing; use a simple average of forward points of the last 5 days in which there were reliable quotes). For financial instruments, in case there is no reliable price information the Risk Management Department will determine an IRR based on expert judgment (e.g. based on the implicit prices of the day's transactions).

	In all cases, the failure and the alternative adopted must be documented and be reported to the risk management committee and to the SVS.
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 sub-portfolio 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.**
Description	*Initial margin model* The initial margin (IM) model is based on a VaR methodology with calibration and "fulfillment" ("*factor de cumplimiento*") factors, as follows: $$IM = VaR \cdot F_{calibration} \cdot F_{fulfillment}$$ More specifically, the VaR methodology used by ComDer considers the following: – 1-day weighted historical VaR – 3-day close-out period – 1251 days of historical data – 99% confidence level, single tail, which is the maximum allowed by rule 258 of the SVS – EWMA of 98.5% – Initial calibration factor of 1.00. This factor is adjusted in case the backtests of the VaR model indicate that the model is not performing as expected – Initial fulfillment factor of 1.00. This factor is adjusted in case one or more of the participants show signs of deterioration in their credit quality *Close-out and sample periods* ComDer selected a 3-day close-out period for the two products it clears, i.e. its CLP/USD and CLF/USD, and this close-out period is applied to all positions, i.e. those of direct and - eventually - of indirect participants. This

	period is deemed reasonable on the basis of the liquidity of the local foreign exchange market. Daily volumes in the spot foreign exchange market are much higher than ComDer's estimated maximum exposures to its direct participants. Hence, in the event of a default ComDer considers that it could close-out the open positions of a defaulting party within three days without significantly affecting the overall liquidity of the spot market. The sample period for historical data used in the margin model is 5 years/1251 observations. This period is long enough so as to include episodes of very high volatility in market prices. *Procyclicality and specific wrong-way risk* ComDer mitigates procyclicality by using a 5-year sample period for historical data used in its margin model, which, as mentioned earlier, is long enough to include episodes of high volatility. To mitigate specific wrong-way risk, ComDer does not accept as collateral any securities issued by an entity that is also a direct or indirect participant in ComDer. Moreover, ComDer does not hold the posted collateral with any of its participants.
Key consideration 4	**A CCP should mark participant positions to market and collect variation 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.**
Description	ComDer marks participant positions to market (i.e. fair value) on a daily basis. This calculation is the basis for the variation margin model: on the basis of the new values of participants positions (at the portfolio level), ComDer collects variation margin from those participants whose positions experienced a loss, and distributes those funds to those participants whose positions experienced a profit. All this is done automatically on a daily basis: margin calls are made at the end of the operational day and must be covered by 9:45 am of the next operating day. Variation margin may be paid in cash only. Via the Headroom Check tool, ComDer validates in real time that a participant has sufficient margin for any new clearing order it enters (and that the applicable limits are being observed). The rulebook (paragraph 141, further detailed in section 18.4) enables ComDer to make extraordinary margin calls (see the description on this specific that is provided in KC 4.5, first paragraph, of this assessment).
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 harmonised overall risk-management systems.
Description	*Portfolio margining* ComDer does not allow offset or reductions in required margin across the products that it clears. *Cross-margining* There is no cross-margining between ComDer and other CCPs. *Robustness of methodologies* Not applicable.
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.**
Description	*Backtesting and sensitivity analysis* The Risk Management Department performs daily backtests to analyze the adequacy of the margin system. The objectives of the backtest is to determine the number of exceptions, i.e. the times in which losses exceeded the initial margin for three consecutive days. The methodology for backtesting is described in section 18.3 of the rulebook. In essence, exceptions (as per the definition in the previous paragraph) are determined on a daily basis. Then, the backtest is performed over a period covering 250 observations. Three or more exceptions mean that the margin model is not fulfilling the 99% confidence interval. With regard to initial margin, some basic sensitivity analysis is performed by monitoring the behavior of risk factors used in the model (see KC 6.1) under stress conditions. A more substantial sensitivity analysis of the margin system is performed in the context of determining the adequateness of the settlement guarantee fund – for which purpose the two largest insufficiencies in initial margin are identified. In this last regard, ComDer performs stress tests on a daily basis to assess the adequateness of this fund. For this, ComDer holds a database of historical, hypothetical and prospective stress test scenarios that cover a significant diversity of financial crises and days showing extremely high

	Price volatilities.(For additional details on this exercise see the detailed description provided under KC 4.6). *Margin model performance* The Calypso platform calculates each day the theoretical profit & loss of the portfolio. If backtest results indicate that margin requirements are not consistent with the theoretical P&L, at a 99% confidence level, then ComDer will adjust the initial margin model through the calibration factor. With regard to initial margin, in the event that the variation of any of the risk factors used in the model exceeds the standard deviation (adjusted to a 99% confidence level) in relation to its previous value, then ComDer makes a new valuation of the portfolios of all participants. If as a result of this the loss in a participant's portfolio exceeds 58% (i.e. one-day VaR) of the initial margin, then ComDer makes an extraordinary margin call. Likewise, ComDer can make an extraordinary margin call whenever the losses in a participant's portfolio exceed 30% of that participant's initial margin. With regard to the adequateness of the settlement guarantee fund, if for three consecutive days the latter falls short in 10% or more to the sum of the two largest potential losses that were calculated (net of initial margin), or if in any single day this insufficiency exceeds 30%, then ComDer requires extraordinary contributions to the settlement guarantee fund. The Risk Management Department prepares a monthly report on these tests to the risk management committee, which reviews them in its monthly meetings. Results are also reported to the SVS.
Key consideration 7	**A CCP should regularly review and validate its margin system.**
Description	ComDer reviews and validates its margin system through daily backtesting. A more thorough analysis and review is performed at least on an annual basis. Since it started operations, ComDer has replicated (in Excel) the valuation, initial margin and stress test models embedded in Calypso platform to make sure that such models were implemented correctly in production mode. The Risk Management Committee of the board is responsible for validating the various parameters and methodologies that conform the risk management model ComDer, and to review performance of the model. This committee may then propose changes and improvements on these matters to the board.
Key conclusions	ComDer incorporates best practice in its margin system. Its margin model is risk-based and generates margin requirements that cover potential future exposure between the last margin collection and the close out of positions.

	ComDer's systems allow it to identify shortages in initial margin in real time, before any new positions are accepted for settlement. ComDer calculates variation margin at the end of the operating and makes automatic daily margin calls/variation margin payments accordingly. Under certain circumstances it is entitled to make extraordinary margin calls. Performance of the margin model is tested and analyzed frequently
Assessment of Principle 6	**Observed.**
Recommendations and comments	In line with international practice of CCPs for OTC derivatives, ComDer should consider adopting a 99.5% confidence interval for is initial margin methodology.[13]

[13] Subsequently to the preparation of this assessment of ComDer, which was performed in October 2015, ComDer has notified that it intends to adopt the 99.5% confidence interval in order to become EMIR-compliant.

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.	
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.**
Description	The general framework for the management of liquidity risk at ComDer is provided by its General Policy on Credit and Liquidity Risk. ComDer's general framework for managing liquidity risk covers its direct and indirect participants (although at present there are no indirect participants or customers), and its liquidity providers. With regard to its participants, the key liquidity risk is that ComDer is not able to pay positive variation margin and/or settlement of outstanding clearing orders on the value date. This could happen in the event one participant is delayed (or eventually defaults) in paying its margin calls, including extraordinary margin calls. In the event of a delay, ComDer first uses the collateral posted in cash by the delayed participant, and ComDer's own lines of credit with liquidity providers. At the same time, it blocks any attempt of that participant to withdraw any excess collateral in securities it may have. To ensure that collateral may be used quickly, as explained in KC 5.4 a minimum of 20% of the collateral for the initial margin must be cash, all variation margin is paid in cash, and securities that are currently accepted as collateral are highly liquid. ComDer's liquidity needs for its core operations are therefore essentially represented by the size of its committed lines of credit. ComDer has lines of credit with four different banks, three of which are committed (see additional details in KC 7.4) With regard to participants that play multiple roles, banks that are ComDer's liquidity providers are also participants in ComDer. However, they are not custodians as all collateral in cash is deposited at the BCCh (hence there is no liquidity risk in this specific regard). Likewise, all cash posted as collateral is held with the BCCh and all settlements are made through the Sistema LBTR of the latter institution.
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.**
Description	The operational and analytical tools that ComDer uses to identify, measure and monitor the settlement of clearing orders and funding flows are the following: • The Calypso platform allows ComDer to measure any potential shortfalls on an intraday basis ("intraday marking-to-market"),

	including at the end of the day when margin calls are normally made (ComDer may also make extraordinary margin calls - see KC 6.4). • In Calypso, and through the follow-up of SWIFT payment messages, ComDer monitors in real-time or quasi real-time the payments/funding of collateral, also including outgoing payments made by ComDer • There are operational arrangements with the Sistema LBTR for the timely settlement of margin calls • The market liquidity of securities accepted as collateral is monitored on a daily basis.
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.**
Description	Not applicable.
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.**
Description	*Sufficient liquid resources* If a participant is delayed in fully covering its margin calls to ComDer (a delay occurs from 9:45 am of the value date up to the initiation of the daily closing processes of the value date at 16:15 hours), then ComDer steps in and completes settlement with the collateral posted in cash by that participant and/or with funds from its committed lines of credit. It should be noted that with the exception of the last margin call and under normal market conditions, collateral already posted to ComDer by the delayed/defaulting member should have been sufficient to cover open positions with a 99% confidence level (considering a 3-day closing out period). The settlement guarantee fund then intends to cover those

	situations not covered by the margin system (i.e. under stressed market conditions – see KC 4.4). The minimum size of the committed lines of credit latter is established in section 6.1.5 of the rulebook. Minimum size should be equivalent to the sum of the two largest margin calls during the during the last 250 business days (as ComDer initiated operations only in late July 2015, the rulebook states that it will use current data until it is able to complete 250 days). Accordingly, at present, the estimated potential liquidity shortfall is the equivalent in Chilean pesos of approximately USD 8.5 million, plus any extraordinary margin calls. *Risk profile and systemic importance in multiple jurisdictions* ComDer clears only standard ("plain vanilla") instruments in Chile, and is not systemically important in other 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 transactions with) the relevant central bank. All such resources should be available when needed.**
Description	*Size and composition of qualifying liquid resources* To keep on making payments to its participants, if a participant is delayed ComDer may use the collateral posted by that participant and/or use funds from its committed lines of credit. Collateral posted in this context includes both margin and contributions to the settlement guarantee fund. For initial margin, as mentioned earlier, at last 20% must be constituted in cash in Chilean pesos. Regarding liquidity providers, ComDer has established lines of credit with four different banks, each for a maximum of CLP 5,000 million (approximately USD 7 million). ComDer is currently working with yet another bank to obtain a fifth credit line under this same conditions. At present, three of the available lines of credit are committed and are readily available, although not for the full amount in all cases. Currently, the total amount that is readily available is slightly above USD 10 million.

	In addition to the sources already mentioned, ComDer may also decide to use cash from its Reserve Fund. *Availability and coverage of qualifying liquid resources* ComDer does not have access to routine credit at the BCCh, namely to the FLI. ComDer does not reuse the collateral posted by its participants to obtain loans or for any other purposes. In the event of a delay/default, collateral posted in the form of securities must be liquidated by ComDer in the market, which due to operational reasons may take one hour or more even if the underlying securities are highly marketable/liquid. The amount available from committed lines of credit is sufficient to cover the estimated minimum liquidity resource requirement (see KC 7.4).
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 a part of its liquidity plan.**
Description	*Size and composition of supplemental liquid resources* Except for one uncommitted line of credit, ComDer does not have supplemental liquid resources as its qualifying liquid resources are sufficient to cover its identified minimum liquidity requirement. *Availability of supplemental liquid resources* Not applicable.
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.**
Description	*Use of liquidity providers*

	ComDer has established lines of credit with four different local banks. All these banks are licensed in Chile and therefore have access to routine central bank credit (e.g. the intraday liquidity facility "FLI" at the BCCh in Chilean pesos). Section 6.1.5 of the rulebook states the criteria for selecting liquidity providers. These include a regulatory capital of at least 10% and an external rating of short-term deposits of N1 or above from at least two credit rating agencies. *Reliability of liquidity providers* Regardless of the fulfillment of the minimum criteria mentioned earlier, ComDer place emphasis on diversifying its liquidity providers. Section 6.1.5 of the rulebook states that the line of credit to be obtained with an individual bank may not exceed 30% of the minimum liquidity requirement. As mentioned earlier, lines of credit have been obtained with four commercial banks and ComDer is currently working with yet another bank to obtain a fifth one. Despite ComDer started operations only recently, it has already made real-life tests of its three committed lines of credit. ComDer used up to the full amount, and the expected amount of funds was credited to its account at the BCCh within 20 minutes.
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.**
Description	ComDer uses all services from the BCCh for which it is currently eligible. ComDer holds a settlement account with the BCCh in order to effect all its settlements in central bank money. It also holds a "cash account" (i.e. *cuenta de garantías en efectivo*") where collateral posted in cash by participants is held overnight. ComDer is not eligible at present for the FLI. Additionally, ComDer believes that it could increase in practice the share of collateral that is posted in cash by its participants if the balances ComDer holds overnight at the BCCh were to be remunerated.
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 pressures 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.
Description	*Stress test programme* At present ComDer does not have a program for stress testing the sufficiency of its liquid resources (ComDer does stress test the sufficiency of its margin system though). Development and implementation of a stress program in connection with liquidity aspects is considered for 2016. Stress scenarios and other criteria would be defined at that time.
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.**
Description	*Same day settlement* The rulebook (section 6.3.1) states that if a participant is delayed in fully covering its margin calls to ComDer (a delay starts from 9:45 am of the value date) and after the "grace period" of one hour that is given to delayed participants, ComDer steps in in the same day to complete settlement. A delay event may not extend beyond the initiation of the daily closing processes of the value date at 16:00 hours. *Replenishment of liquidity resources* Section 6.3.1 of the rulebook states that a delay event that led to the liquidity contingency/stress event will only be considered overcome once the delayed participant has paid to ComDer the full amount of its margin calls, plus any costs, expenses and interests that may have been originated as a result of the delay. If necessary (i.e. if the delay event persists), the funds obtained from liquidity providers will be covered with the sale of the collateral posted by the delayed/defaulting participant.
Key conclusions	Overall, ComDer incorporates best practices in its management of liquidity risks, although some gaps remain. Policies and procedures are

	well-documented. The underlying arrangements, in particular liquidity providers, have been tested with satisfactory results. All collateral held at ComDer is cash or highly liquid securities. Largely based on this argument, ComDer has not yet launched a stress testing program to assess the sufficiency of its liquid resources under stressed market conditions. ComDer uses a number of services form the BCCh, in particular for all its settlements and for the custody of cash, but it does not have access to routine credit from the latter, in particular the intraday liquidity facility (the "FLI") used as part of the Sistema LBTR. This situation forces ComDer to rely on its liquidity providers before first exhausting all collateral already provided by the delayed/defaulting participant.
Assessment of Principle 7	**Partly observed.**
Recommendations and comments	In the event of a delay/default by one of ComDer's participants, out of total pre-funded resources available to ComDer securities may take one hour or more to be liquidated, regardless of those securities being highly liquid/marketable. This is because securities are pledged to ComDer at the DCV (i.e. they remain in the account of the owner), and for ComDer to get hold of those securities they must be transferred to ComDer's own account at DCV. Then, ComDer needs to sell them or repo them in the market via a broker-dealer. Access to the FLI could give ComDer an additional (and reliable) line of defense to deal with a settlement member delay/default before using the funds from its own credit lines with liquidity providers. In other words, ComDer could automatically repo the securities it holds as collateral of the delayed/defaulting member to obtain liquid funds promptly, before using its own lines of credit. Alternatively, through the FLI ComDer could have a reliable and expedite means to replenish its liquid resources. Granting liquidity to ComDer or other FMIs is currently not permitted by the legal framework. Hence, the BCCh and other financial authorities in Chile should discuss within a defined timeline the desirability, in terms of benefits and costs, of ComDer (and other relevant FMIs) gaining access to the FLI, and proceed with the necessary legal and regulatory changes. On a separate matter, ComDer should develop and implement with high priority a program to stress test the sufficiency of its liquidity resources.[14]

[14] Subsequently to the preparation of this assessment of ComDer, which was performed in October 2015, ComDer has notified that it will establish a liquidity stress test program for Risk Committee approval during the second quarter of 2016.

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	
Key consideration 1	**An FMI's rules and procedures should clearly define the point at which settlement is final.**
Description	*Point of settlement finality* A clearing order becomes irrevocable and unconditional once it is accepted for settlement by ComDer. In this moment ComDer becomes the irrevocable counterpart for all accepted trades. In practice, through the Headroom Check tool ComDer verifies online and in real-time that every new clearing order entered by a participant has, together with the rest of the participant's outstanding orders, sufficient margin, and also that the participant remains within the established limits. Only once these conditions are fulfilled, the clearing order is accepted. Otherwise the clearing order is queued. Article 24 of Law 20.345 underpins finality as earlier described. This provides a high degree of legal certainty within Chile, which is the only jurisdiction relevant for ComDer. *Finality in the case of links* Not applicable.
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.**
Description	*Final settlement on the value date* ComDer's CCP system is designed to complete final settlement on the value date, no later than by 9:45 am under normal circumstances (i.e. no delays). Since it started operations, ComDer has not experienced a deferral of final settlement to the next business day. *Intraday or real-time final settlement* ComDer provides final settlement on the value date, in a single settlement window. Information on final settlements are made available to participants via a restricted access microsite at ComDer's website ("WebPortal").
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.**

Description	Once clearing orders are accepted, they may not be revoked unilaterally by a participant. Section 6.2.2.2.3 of the rulebook states the exceptions to this general rule, which have to do mainly with operational errors and as long as there is agreement of all the parties involve. This part of the rulebook specifies what can be considered as an operational error, and the rules that apply to the parties involved in an event of this kind. Section 6.2.2.2.2 of the rulebook states that clearing orders pending acceptance by ComDer may be cancelled if the two parties to the transaction so agree. This is done via an option in the Calypso platform, or via another form of electronic message. At the end of the operational day, clearing orders pending acceptance are automatically cancelled by the system.
Key conclusions	The principle of settlement finality and the specific moment in which transactions become irrevocable and final (i.e. upon acceptance for settlement by the ComDer) are clearly defined at the level of the law and in ComDer's rulebook. ComDer achieves final settlement on the value date. Accepted clearing orders which remain unsettled may not be revoked by a participant, but only under specific circumstances clearly described in the rulebook – related to operational errors - and which require agreement of all the parties involved.
Assessment of Principle 8	**Observed.**
Recommendations and comments	

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 minimize and strictly control the credit and liquidity risk arising from the use of commercial bank money.	
Key consideration 1	**An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.**
Description	ComDer conducts all money settlements (variation margin, initial margin, payments associated with maturity of clearing orders) via its account at the Sistema LBTR operated by the BCCh. This is mandated by law. All settlement members must make settlement-related funds transfers to this account, and receive settlement-related funds transfers from this account. ComDer only conducts money settlements in Chilean pesos.
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.**
Description	Not applicable.
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.**
Description	Not applicable.
Key consideration 4	**If an FMI conducts money settlements on its own books, it should minimize and strictly control its credit and liquidity risks.**
Description	Not applicable.
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.**
Description	Not applicable.
Key conclusions	ComDer conducts all its money settlements via its account at the Sistema LBTR operated by the BCCh. This is mandated by law.
Assessment of Principle 9	**Observed.**
Recommendations and comments	

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.	
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 a default.**
Description	*Participant default rules and procedures* A default is defined on the basis of a delay event. ComDer's rulebook (section 6.3.2, paragraph 299) defines a default as follows: a) If by the initiation of the Daily Closing Process of the day in which the delay event occurred (i.e. by 16:00 hours of the value date), the direct participant has not: i. Covered any amount due to ComDer ii. Posted the required collateral iii. Posted new collateral to replace collateral that may have been liquidated to overcome the delay event b) If a direct participant is being subject to liquidation on the basis of law 20.720 or on the basis of the Banking Law The "Procedure for handling a delay event" covers in detail the following aspects, among others: • Any attempt to withdraw excess collateral is blocked • Calculation of the amount needed from liquidity providers • Usage of liquidity providers • Payment of the margin call of the delayed participant • Transfer of the securities of the delayed participant to ComDer's account at the DCV • The delay event is closed if the delayed participant pays its margin call before deadline • Accounting of the delay event The "Procedure for handling and event of default" is very detailed and covers all the key aspects of a participant default. Among other topics, it covers the convening of a Committee for handling the default event, the actions that the Committee and ComDer will take when a default is declared, actions that are automatic and discretionary, actions that ComDer may perform under exceptional circumstances to protect the system as a whole, the steps to be followed as part of the extraordinary settlement period including the way in which transactions will be managed, treatment of direct and indirect participant positions and collateral, auctions of positions of the defaulting participant, the roles, obligations and responsibilities of all other participants, and the mechanisms that will be activated to contain the impact of the default, use of financial resources, calculation of expenses incurred as a result of the default event, allocation of losses, etc.. *Use of financial resources*

	ComDer's rules and procedures allow it to promptly use the collateral in cash it holds from the delayed/defaulting participant, and ComDer's committed lines of credit with liquidity providers. To withstand liquidity pressures, ComDer may also withhold payments to participants with positive variation margin (this would be considered a liability of ComDer). In case those resources are not sufficient, then losses are to be absorbed in the following order: a) Initial margin (remaining portion) of the defaulting participant b) Contributions to the settlement guarantee fund (and the additional settlement guarantee fund – see below) made by the defaulting direct participant c) Contributions to the settlement guarantee fund (and the additional settlement guarantee fund) made by participants that choose not to participate in auctions of the positions of the defaulter d) Reserve Fund e) Contributions to the settlement guarantee fund made by the non-defaulting direct participants f) Contributions to the additional settlement guarantee fund made by the non-defaulting direct participants g) ComDer's capital Once the default event has been resolved, and once ComDer has calculated the final financial outcome of such an event, it will recalculate the size of the Settlement Guarantee Fund and require the remaining participants to make their respective contributions and by this means reinstate normal operations.
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.**
Description	As described under KC 13.1, ComDer has specific and detailed procedures to handle events of delay and events of default. These procedures clearly specify the activities the roles and responsibilities of the various staff and other parties (i.e. the chair of the risk management committee) involved. These procedures also specify the communications that ComDer must make to regulators (SVS, BCCh, SBIF), its board, the Risk Management Committee, other FMIs, etc. Annex 1 of the procedures provides a specific template for these communications, be it a delay or a default. The detailed procedures are reviewed at least on a yearly basis, or more frequently in the event it is verified in practice that they are inadequate or insufficient. The detailed procedures are approved by senior management. If changes are required at the level of the risk management framework or the rulebook, then involvement of the Risk Management Committee and the board (and in the latter case also regulators) is required.

Key consideration 3	**An FMI should publicly disclose key aspects of its default rules and procedures.**
Description	All key aspects of the participant default rules and procedures are described in the rulebook, which is a public document.
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.**
Description	ComDer has performed tests of its default procedures. The latest one was performed just before ComDer formally started clearing contracts. The test involved the actual usage of lines of credit from liquidity providers and the auction of the clearing orders of a supposedly defaulting participant (the defaulting participant was not known in advance to ComDer or to the participants). All other parties that have a role in a default event were also included, like the Risk Management Committee, internal audit and the SVS. The outcomes of these tests and any necessary revisions to the procedures for handling a participant delay or default are informed to the board, the risk management committee and the SVS.
Key conclusions	ComDer has effective rules and procedures to manage a participant default. This rules allow ComDer to take timely action to contain losses and liquidity pressures and continue to meet its obligations in the event of a settlement member delay or default.
Assessment of Principle 13	**Observed.**
Recommendations and comments	

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.	
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.**
Description	*Customer protection from participant default* ComDer started operations only very recently, and at present it does not have any indirect participants (or customer positions). Participation of indirect participants is planned for a second stage. In this second stage identification in ComDer of positions and collateral customers of direct or indirect participants could also be implemented (segregation is already required in the contracts that direct and indirect participants sign with ComDer) Nevertheless, the rulebook and the default procedures currently provide for segregation and portability. Indirect participant accounts at ComDer are segregated from those of their respective direct participant, both for positions (i.e. outstanding clearing orders) and margin. Section 5.1.5 of the "Procedure for Handling and Event of Default" states that after 16:00 hours and once daily closing processes are finished, if the action plan to deal with the default considers it appropriate, ComDer may transfer all the positions and associated collateral of indirect participants and/or customers from the defaulting participant to another direct participant(s). *Customer protection from participant and fellow customer default* In ComDer omnibus accounts are not used (though they are available in Calypso). Collateral posted by an indirect participant and/or customer can only be used for the positions of such indirect participant/customer, and cannot be used to cover the required collateral of any other indirect participant/customer or any other requirement of the relevant direct (or of the indirect participant that holds the customer accounts). *Legal basis* Segregation and portability is only provided for at the level of the ComDer's rulebook and associated procedures and is not provided for in Law 20.345.
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.
Description	In ComDer there are no omnibus accounts. Position accounts and margin of indirect participants is segregated in individual accounts. Moreover, in the contracts that direct and indirect participants sign with ComDer, the article on "Transactions with customers" (article 33 and 32, respectively) states that before a participant enters a clearing order of a new customer, that participant must provide ComDer the necessary information for the latter to open a new position account for that customer. Further, initial margin related to those position accounts of customers is also segregated individually (i.e. for each customer). Indirect participants/customers do not make contributions to the settlement guarantee fund.
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.**
Description	ComDer's system, i.e. Calypso, is prepared to handle transfers of positions and collateral from indirect participants/customers to other direct participants. Section 5.1.5 of the "Procedure for Handling and Event of Default" states ComDer may transfer all the positions and associated collateral of indirect participants and/or customers from the defaulting participant to other participants, before obtaining consent from those other participants. The defaulting participant is obliged (through the contract signed with ComDer) to accept this. The direct participant to which positions and collateral are ported is not obliged to accept those positions. If it is not possible to transfer positions to another direct participant, then the positions and collateral of indirect participants/customers shall be treated in the same manner as those of the original direct participant (i.e. the one in default) they are associated with. The relevant indirect participants/customers therefore have an important incentive not to oppose to the transfer arrangement.
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.**
Description	The key rules, policies and procedures relating to segregation and portability of customer positions are described in ComDer's rulebook and in model contracts, both of which are publicly available.

Key conclusions	ComDer's rulebook and settlement member contracts provide the mechanism for the segregation and portability of positions. There is no procedure in place to obtain consent from the direct participant(s) to which positions and collateral may be ported. At present, however, ComDer does not have any indirect participants (or customers) as this is foreseen for a second stage. The legal framework applicable to securities clearing and settlement systems does not provide a legal underpinning to segregation and portability of positions and collateral.
Assessment of Principle 14	**Partly observed.**
Recommendations and comments	Although segregation of positions and collateral is provided for in ComDer's rulebook and systems, there is no legal certainty that these arrangements will be upheld in a court of law if contested. Even if at present ComDer does not have indirect participants, as this is already foreseen for a second stage it is recommended that provisions on segregation and portability of positions and collateral (covering explicitly both indirect settlement members and customers) be included with high priority in the relevant laws. Also, ComDer should clarify in its rule the way in which it will seek and obtain consent of the participant(s) to which positions and collateral are to be ported.

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.	
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.**
Description	ComDer risk management framework is based on ISO 31000:2009. This framework includes general business risk. General business risks identified by ComDer include: • Deterioration of its financial positions due to an increase in expenses over revenue, or revenues being less than anticipated in the budget • Negative cash flow that translates into losses or payment of interest, or fines due to non-compliance with certain obligations • Unforeseen or uncontrolled overhead expenses that exceed the original budget • Errors in the production of the company's financial statements that could cause losses due to fines imposed by regulators ComDer monitors and manages its general business risks on an ongoing basis, just as any other risk the entity is exposed to (e.g. see principles 4, 7 and 17). In other words, ComDer applies an ongoing process to establish the context, assess risks (identification, analysis, measurement), treatment, ongoing monitoring of the situation and actions adopted, and communication of risks.
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 or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.**
Description	ComDer has a "Financial Investments and Custody Policy" where it defines liquid assets it may use/invest in its role as a business, i.e. different from its risk management activities as a CCP. In its "Financial Recovery Plan" (see KC 15.3), ComDer has determined the amount of liquid net assets funded by equity it will need to continue operations as a going concern in the event it does not obtain any revenues for a six-month period.
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 to**

	implement this plan. At a minimum, an FMI should hold 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.
Description	*Recovery or orderly wind-down plan* ComDer has developed a set of recovery plans as part of its business continuity management framework, which is based on ISO 22.301. As part of this set of plans, ComDer has a Financial Recovery Plan (coded SGCN 8.4_PLAN.8). The rulebook (section 6.3.6) also foresees that ComDer may find itself in a position in which it cannot cover its obligations to participants with the total amount of funds and collateral, including own funds, it has at its disposal. In this case, before declaring a default ComDer will try to agree with participants additional contributions from the latter to the settlement guarantee fund, or try to raise additional equity from its shareholders (see KC 15.5). *Resources* In its "Financial Recovery Plan" ComDer has established an amount of UF 90.000 (approximately USD 3.5 million) in liquid assets funded by equity to cover general business losses (i.e. 6 months without any revenues) and continue operating as a going concern. According to its 2014 audited financial statements, at that time ComDer held approximately CLP 4 billion (approximately USD 7 million) in liquid net assets (i.e. cash and short-term securities minus short-term liabilities). As ComDer was not yet operation by that date, the Reserve Fund made-up with ComDer own resources had not been constituted (i.e. should be at least 0.2% of the sum of the two largest margin calls registered in the last 500 moving business days). Initial estimates of the size of this Reserve Fund are that it would not exceed USD 100,000.
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.**
Description	Liquid assets are essentially term deposits in large local commercial Banks and securities issued by the National Treasury or the BCCh. ComDer's minimum regulatory capital (i.e. approximately USD 5.75 million) is invested in those securities. For additional details see principle 16.
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.**

Description	The "Financial Recovery Plan" contains provisions to raise additional equity. In this aspect, the plan follows the protocol established in Law 20.345 (article 16-19). ComDer identifies three different scenarios for attempting to raise additional equity. All three scenarios require provision of fresh funds by shareholders, but are handled differently from a corporate/administrative perspective (e.g. some require that an extraordinary shareholders assembly be convened and that new shares be issued, while other do not, etc.). Due to ComDer's ownership structure, whereby participants are also the shareholders and ownership is proportional to the volume of activity of each participant, it is likely that the shareholders will have an incentive to provide additional equity so that they can continue to benefit from using the FMI.
Key conclusions	ComDer has the necessary financial resources (i.e. liquid net assets funded by equity) that would allow it to continue operations as a going concern for more than six months. ComDer has developed a financial recovery plan to face a reduction in its capital as a result of the materialization of general business risks. The plan includes a procedure to raise additional equity.
Assessment of Principle 15	**Observed.**
Recommendations and comments	In addition to the amount of liquid net assets funded by equity allocated by ComDer to continue operations as a going concern in the event it does not obtain any revenues for a six-month period, it is recommended that ComDer also estimates the potential costs related to operational losses, fraud, claims and investment losses, and on this basis determine whether that amount of liquid net assets is still sufficient.

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.	
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.**
Description	ComDer has developed a "Financial Investments and Custody Policy". ComDer holds all securities posted as collateral and those securities of its own at the DCV, which is the only CSD in the country. DCV is supervised by the SVS. ComDer hold all cash posted as collateral by participants at the BCCh. With regard to its own holdings of cash, these are kept in term deposits at commercial banks or mutual funds. The criteria to select the latter is that they must have a minimum credit rating of N1, and maturity of deposits must be one year or less. Mutual funds should be Type 1 (debt securities, duration of the portfolio is 90 days or less).
Key consideration 2	**An FMI should have prompt access to its assets and the assets provided by participants, when required.**
Description	In practice, securities posted as collateral are pledged to ComDer, meaning that they remain in the account of the legal owner, though on a blocked status (or functional equivalent). This mechanism impedes in practice any re-investment of pledged securities by ComDer or by the legal owner. The contracts participants sign with ComDer and the rulebook state the circumstances under which ComDer can get hold of such securities to fulfill its obligations with other participants. Once ComDer needs to use those securities, it asks (electronically) the DCV to transfer the respective securities to ComDer's own account. These practices are supported by laws 20.345 and 18.876 (the latter on central securities depositories). Likewise, ComDer can get hold of cash posted as collateral immediately upon the occurrence of an event typified in the rulebook and are supported by the legal framework, the rulebook and contracts.
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.**
Description	ComDer keeps all participant assets with the DCV. Hence, its only exposure to custodian banks has to do with ComDer's own cash holdings. The "Financial Investments and Custody Policy" states the types of assets that can be used for short-term (i.e. "working capital") or long-term "Reserve Fund and minimum regulatory capital", but it does not specify

	rules for diversification of holdings of its own short-term assets with two or more banks or other financial institutions. As of end-2014, cash holdings of ComDer were less than 1% of its total liquid assets. Holdings of mutual funds were equivalent to 17% of total liquid assets and were held with two different Mutual Funds Operators.
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.**
Description	*Investment strategy* ComDer does not invest or re-use any of the assets pledged as collateral by its participants. In its "Financial Investments and Custody Policy", ComDer states that for investments with own resources, it shall use only financial instruments with minimum credit, market and liquidity risk in order to support its main objective which is have prompt access to resources to that it can fulfill its obligations as a CCP. *Risk characteristics of investments* Section VI of this policy states the types of assets in which ComDer can invest is own resources. Short-term investments for working capital purposes must be invested in term deposits (1-year maximum) at banks rated N1 or above, or mutual funds type 1. Other investments must be in securities issued by the National Treasury or the BCCh, with a maximum maturity of 5 years.
Key conclusions	ComDer holds its assets and those of its members with safe custodians which are heavily regulated and supervised. The legal framework and the operational reliability of custodians used ensure prompt access to both its own assets and those from participants that were posted as collateral. The investment strategy for own resources is conservative. In general, it is reasonable to assume that assets held can be liquidated quickly with any significant adverse price effect.
Assessment of Principle 16	**Observed.**
Recommendations and comments	ComDer should consider specifying rules for diversifying its holdings of short-term assets with two or more banks or other financial institutions

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 fulfillment of the FMI's obligations, including in the event of a wide-scale or major disruption.	
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.**
Description	*Identification of operational risk* Operational risk management is one of the six focus areas of ComDer. The framework for the operational risk management is provided by Circular Nº 1939 of SVS and ComDer's "General Policy on Operational Risk". The methodology to identify operational risks is based on ISO 27005:2011. ComDer has identified three broad categories of operational risk: business continuity, information security and process quality. These are further divided in internal and external risks (see below). *Management of operational risk* Management of operational risks is based on ISO 31000:2009. Hence, ComDer applies an ongoing process to establish the context, assess risks (identification, analysis, measurement through BIA), treatment, ongoing monitoring of the situation and actions adopted, and communication of risks. This general framework has been complemented with ISO 27001:2012 (information security), ISO 22301:2013 (business continuity) and ISO 9001:2015 (quality). *Policies, processes and controls* ComDer has developed high-level policies as well as detailed processes and procedures for each of the three broad categories of operational risks that have been identified. The detailed processes and procedures are as follows: • Assessment and treatment of information security risks (systems, persons and external events) • Assessment and treatment of business continuity risks • Assessment and treatment of risks in process quality ComDer has developed a Human Resources Policy. This policy provides for issues such as staff selection criteria, ensuring sufficient training to staff, promoting team work although at the same time rewarding outstanding individual behavior, and in general promoting a sustainable organizational culture (e.g. people being satisfied with their professional

	development, in order to reduce personnel turnover). Fraud prevention is addressed as part of the treatment of information security risks. ComDer's change management process is based on COBIT, specifically for new software releases (i.e. upgrades, changes, etc.). Participants are involved in testing for all changes that are not "transparent" to them (e.g. changes in operations, functionalities that are visible to them).
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.**
Description	*Roles, responsibilities and framework* Roles and responsibilities for operational risk are detailed in section VII of the General Policy on Operational Risk. This policy has been approved by ComDer's board of directors. *Review, audit and testing* Plans for the treatment of operational risks identified (i.e. information security, business continuity and process quality) are reviewed at least on an annual basis by the Committee on Non-financial Risks, which is an internal committee made-up by ComDer management and staff. Any changes are submitted to the Risk Management Committee of the board, which reviews the proposals and submits them to the board for final approval. Auditing of operational risk management is part of the annual pan of internal audit at ComDer. Results are reported to the Audit Committee and to the board. Moreover, as part of its strategic focus areas, ComDer is initiating the process to obtain ISO certification for its information security and business continuity processes, and in 2016 it will seek certification for its quality processes.
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.**
Description	All IT and telecommunications services are outsourced. ComDer has signed contracts that include service level agreements (SLAs) and operational level agreements (OLAs) with its vendors. These arrangements are in general terms consistent with best international practice in connection with critical service providers. In this regard, ComDer has established the following specific operational reliability objectives (among others): • Up time 99.5% (minimum)

	• RTO of 2 hours (minimum) From a qualitative perspective, ComDer's objective is to mitigate operational risks to ensure continuity and safety in the services it providers to its participants. Operational reliability objectives, metrics and plans to achieve these objectives are documented in the document "Link Strategic Objectives – Objectives Comprehensive Management System (SGI) and Process Objectives"
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.**
Description	In order to ensure the capacity of its technological infrastructure is consistent with business needs, ComDer has implemented a capacity management plan in connection with its IT infrastructure based on COBIT 5. Additionally, ComDer receives monthly reports from a vendor (i.e. SONDA) on capacity usage on all the critical elements of its technological infrastructure. For example, the Calypso platform used by ComDer was designed to handle 700 transactions per day (approximately 100 per hour) and currently it receives some 100 transactions per day. Capacity has been designed in a scalable manner, so that towards the end of the third year of operation of ComDer the Calypso platform is able to process some 1,200 transactions per day. There is sufficient excess capacity at the moment also in telecommunications (i.e. SWIFT messages, access to WebPortal via the RBI network, etc.).
Key consideration 5	**An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats**.
Description	*Physical and information security* Physical and information security are managed on the basis of ISO 27001:2012. There is a specific policy and detailed procedures and processes for identifying and handling physical and information security vulnerabilities and threats. On this basis, detailed plans have been developed to mitigate such vulnerabilities and threats. There is an Information Security Officer responsible for these functions, reporting to the Deputy Manager for Operations (*Subgerencia de Operaciones*) which is independent from IT functions.
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.
Description	*Objectives of business continuity plan* The objective of ComDer's business continuity plan (BCP) is to come up with a business continuity strategy that allows it to provide its services on a continuous basis and to meet its RTO and other reliability objectives established in the BIA. The plan refers to identifying and selecting recovery and continuity options that will allow ComDer to recover from a disruption before the effects of such a disruption expand and threaten the company. *Design of business continuity plan* The BCP is based on ISO 22301:2013. Specific plans have been developed in the following areas: • Incident response team (for events that could disrupt regular operations) • Response in case of non-availability of premises • Response in case of non-availability of staff • Response in case of loss of external components (DCV and LBTR) • Response in case of loss of ICT services • Recovery of documented information At the technological infrastructure level, there is redundancy at the level of the Calypso application and database, including real-time replication of data, of SWIFT messages, and of access to WebPortal (through RBI – see below). All these plans and arrangements ensure that ComDer is able to resume operations within two hours and that the status of all transactions can be identified in a timely manner *Secondary site* ComDer has a fully operational secondary site (TIER 3 certified) located at a sufficient geographic distance from the primary site. In the event processing of transactions needs to be switched to the secondary site, this is transparent to participants. In case SWIFT connectivity is lost, transactions may be entered into Calypso via file upload through WebPortal. The latter is accessed via the RBI network (a network owned and operated by Chilean banks). In case RBI is down, then participants can access Calypso from ComDer's premises or, in the future, via an Internet interface.

	Review and testing Business continuity and technological contingency plans are tested at least once a year following ISO 22301:2013. ComDer is expected to join the FMI business continuity committee created by the BCCh. This committee performed four business continuity tests across FMIs during 2014.
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.**
Description	*Risks to the FMI's own operations* Risks arising from other FMIs and utility providers are identified in the plan "Response in case of loss of external components". This plan covers DCV, Sistema LBTR, SWIFT and RBI. The plan includes ongoing monitoring of availability of these services. Risks of other critical IT service providers are identified in the BIA and are managed through SLAs and OLAs. *Risks posed to other FMIs* ComDer does not pose operational risks to DCV or to Sistema LBTR, as it is merely a user of those FMIs. ComDer uses applications and communications means provided by those FMIs. ComDer is expected to become a participant of the business continuity committee that is led by the BCCh and that brings together other FMIs like DCV, Sistema LBTR, ComBanc, etc.
Key conclusions	ComDer has established best practices and standards for the management of operational risks. Policies and procedures are comprehensive and are properly documented, and specific plans have been developed to address the identified risks. ComDer places a strong emphasis on continuity, information security, and process quality, and is working to obtain certifications on these operational risk components.
Assessment of Principle 17	**Observed.**
Recommendations and comments	It is recommended that ComDer ensure that its contracts, SLAs and OLAs with critical external service providers are consistent with best international practice. For this purpose ComDer should take as a basis the CPSS-IOSCO Assessment Methodology for the Oversight Expectations Applicable to Critical Service Providers.

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**.**	
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.**
Description	*Participation criteria and requirements* Law 20.345 (article 21) states that the following entities may become settlement members in a CCP: • Securities agents • Brokers-dealers (securities and commodities) • Banks • Other entities that the SVS may authorize through general rules Rule 256 issued jointly by SVS and SBIF states the minimum financial, technological and human resources of settlement members. In its rulebook, ComDer states that participation criteria is a means to control risks in a CCP. Hence, ComDer shall provide services to sound and reliable counterparties only. In this regard, participation criteria are stated in section 6.1.1 (part of Section 6.1 on risk management at the CCP) and include: • General requirements: signed contract, qualitative assessment, etc. • Capital requirements: a minimum requirement of UF 100,000, equivalent to approximately USD 3.75 million. • Liquidity and solvency requirements, by complying with regulatory requirements established by the SBIF or SVS. In case of the liquidity requirement, liquid resources equivalent to at least the average of margin calls made during the last 250 business days plus a standard deviation must be maintained. This requirement may be fulfilled by posting liquid collateral equivalent to at least 80% of the requirement with ComDer or with two sole-purpose credit lines with banks. • Technological and operational risk management requirements • Business continuity requirements • Human resources: at least two staff with relevant experience and a professional background that are consistent with their responsibilities vis-à-vis ComDer, and attendance of the training/induction course Indirect settlement members need only to comply with the general requirements, and with the technological, operational risk management and human resources requirements. These requirements must be met initially and in an ongoing basis (paragraph 77 of the rulebook). *Access to trade repositories*

	Not applicable.
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 be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.**
Description	*Justification and rationale of participation criteria* ComDer's participation requirements observe what established in Law 20.345 and Rule 256 of the SVS, and comprise solvency, liquidity, technological, human resources and other that are objective and risk-based. *Least restrictive access* The requirements are deemed reasonable considering the role of a settlement member in a CCP. Changes to access criteria would imply a change to the rulebook, and hence need to be approved by the SVS and the BCCh. Liquidity and solvency requirements are risk-sensitive. Participants must also comply with certain limits (see principles 4 and 7), and if necessary to continue clearing their OTC derivatives contract with ComDer may opt for reducing their risk exposures and/or volume of activities to remain within the limits. *Disclosure of criteria* Criteria for both direct and indirect settlement members are specified in the ComDer rulebook, which is publicly available through ComDer's website.
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.**
Description	*Monitoring compliance* The rulebook states that all participation requirements must be met initially and on an ongoing basis. ComDer has established a number of procedures to monitor continuous fulfillment of its participation requirements. These procedures involve verification of publicly available information (e.g. financial statements) as well as information that participants must submit periodically to ComDer. *Suspension and orderly exit*

	If a participant does not observe participation requirements as required by ComDer, then ComDer is entitled (paragraphs 190-191 of the rulebook) to set deadlines for participants to fix this situation and it also applies preventive measures. Preventive measures include restricting the acceptance of new clearing orders, reduction of operational limits and/or requiring additional collateral for that participant, adjusting the "fulfillment factor" of the initial margin formula (see KC 6.2), requiring the participant to transfer the positions of its indirect participants and customers to another direct participant, etc. Eventually, ComDer may opt for excluding that participant permanently.
Key conclusions	ComDer has clear, risk-based access and participation requirements for direct and indirect settlement members. These requirements are reasonable considering the role of settlement members in a CCP. ComDer monitors on an ongoing basis the fulfillment of the various requirements through publicly available information and other information that must be submitted periodically to it by it participants. ComDer has explicit procedures for managing situations in which a participant is not complying with the stated participation criteria.
Assessment of principle 18	**Observed.**
Recommendations and comments	

Principle 19. Tiered participation arrangements An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.	
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.**
Description	*Tiered participation arrangements* ComDer's rulebook already provides for tiered participation, i.e. indirect participants and customers. However, in the first stage of operations of ComDer only direct participants have been allowed. Indirect participation is considered for a second stage (not sooner than mid-2016). Moreover, the OTC derivatives market in Chile is essentially an interbank market. On this basis, this principle is currently deemed not applicable to ComDer.
Key consideration 2	**An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.**
Description	
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.**
Description	
Key consideration 4	**An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.**
Description	
Key conclusions	This principle is currently deemed not applicable to ComDer.
Assessment of Principle 19	**Not applicable.**
Recommendations and comments	

Principle 20. FMI links An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.	
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.**
Description	ComDer has established links with the DCV and the Sistema LBTR, both of which are essential for its operations, i.e. collateral management in both cases and cash settlements in the latter. Links with these FMIs are designed for ComDer to remain observant with other principles, i.e. DCV is the only CSD in the country, regulated by the SVS, and the Sistema LBTR operated by the BCCh allows settlement in central bank money. Risks are identified following the General Policy on Operational Risk and other specific policies (e.g. business continuity) and action plans derived from that one.
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.**
Description	ComDer has established links only in Chile with other regulated and supervised FMIs that are essential for its operations.
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 high quality collateral and be subject to limits.**
Description	Not applicable.
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.**
Description	Not applicable.
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.**
Description	Not applicable.
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.
Description	Not applicable.
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 risks of the collective link arrangement.**
Description	ComDer does not have links with other CCPs.
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.**
Description	ComDer does not have links with other CCPs.
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.**
Description	Not applicable.
Key conclusions	ComDer has established links with other FMIs only in Chile. Those FMIs are essential for its operations, i.e. the DCV and the Sistema LBTR. Both these FMIs are regulated and supervised, and allow ComDer to remain observant of the other principles.
Assessment of Principle 20	**Observed.**
Recommendations and comments	

Principle 21: Efficiency and effectiveness An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.	
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 cleared, settled, or recorded; and use of technology and procedures.**
Description	ComDer was created and designed to address a market need: the clearance and settlement of OTC derivatives contract in a safe and robust environment. ComDer current participants were heavily involved in the design of the FMI, including the risk management framework and the various technological platforms and telecommunications means it uses. To ensure ComDer continues to meet the requirements of its participants, its Comprehensive Management System (SGI) explicitly refers to achieving increased customer satisfaction by meeting product/service expectations. Fulfillment of these expectations is reviewed at least once a year.
Key consideration 2	**An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.**
Description	As mentioned under KC 2.1, ComDer has defined 6 strategic focus areas: the provision of a robust risk management system, high-quality services, mitigation of operational risks, mitigation of financial risks in the event of a participant default, ensuring compliance of laws and regulations, and transparency and timely communication to regulators, participants and the market at large. For each of these focus areas, measure and achievable objectives have been laid down. To ensure that these objectives are achievable, they have been linked to and aligned with the organization's processes. Detailed processes have been developed for all of the above-mentioned areas (some are cross-functional, like transparency and communication and compliance, and are therefore embedded in other procedures).
Key consideration 3	**An FMI should have established mechanisms for the regular review of its efficiency and effectiveness**.
Description	The SGI includes a periodical review of the performance of its management system, which naturally includes issues such as efficiency and effectiveness. This review is performed at least once a year. Specific (formal) feedback mechanisms with participants have not been specified as of yet.
Key conclusions	ComDer was created and designed to address a market need, and its participants were heavily involved in the design of the FMI.

	ComDer started operations only recently and so far the volumes channeled through are according to expectations, which reflects that it is serving participant needs satisfactorily. ComDer was created ComDer has included customer satisfaction and in general efficiency and effectiveness goals as part of its SGI.
Assessment of Principle 21	**Observed.**
Recommendations and comments	ComDer should implement formal feedback mechanisms with its participants.[15] ComDer is in the process to get ISO 9001-2015 certification by BSI on Q2, wish consider Customer satisfaction, monitoring, analysis and evaluation. In the medium-term, it is highly likely that ComDer will need to obtain a number of certifications, in particular being designated a qualifying central counterparty (QCCP) to ensure that its members – especially banks with headquarters in the USA and the EU – may continue to fully benefit from it (e.g. including lower capital requirements for exposures to the CCP).[16]

[15] Subsequently to this assessment, ComDer has notified that it is already engaged in the process to obtain ISO 9001-2015 certification during the second quarter of 2016. This certification considers customer satisfaction monitoring, analysis and evaluation.
[16] ComDer applied for TC-CCP recognition by ESMA under EMIR regulation on December 2015.

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.	
Key consideration 1	**An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.**
Description	*Communication procedures and standards* All transactional communications between ComDer and its participants and other FMIs is done via SWIFT network and messages. Access to WebPortal by participants is done via the banking network RBI which uses a standard TCP/IP communication protocol that ensures security, confidentiality, encryption, non-repudiation, etc. ComDer does not engage in any type cross-border operations.
Key conclusions	ComDer uses SWIFT for all transactional communications. Access to WebPortal uses internationally accepted communication protocols.
Assessment of Principle 22	**Observed.**
Recommendations and comments	

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 publicly disclosed.	
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.**
Description	*Rules and procedures* The rulebook and contracts comprise ComDer's rules and key procedures. Other detailed procedures that affect participants are contained in internal procedures and plans. The rulebook and other detailed procedures provide information on the procedures that ComDer will follow, including discretionary actions, in non-routine or critical events. The rulebook has been approved by regulators. Detailed procedures articulate the contents of several key aspects of the rulebook, thereby providing further clarifications and defining specific mechanisms and courses of action. *Disclosure* The rulebook and contracts are publicly available. Through WebPortal, ComDer makes available to participants other key policies and procedures The general mechanism for changing rules and procedures is described in section 13 of the rulebook.
Key consideration 2	**An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.**
Description	The rulebook contains detailed information about the system's design and operation. The rulebook and other procedures also describe in detail cases and areas in which ComDer may exercise discretion and the approach it will follow in such circumstances. The contracts signed by participants describe the general rights and obligations of participants. Rights and obligations as well as the risks participants incur through participation in ComDer are further explained in detail throughout the rulebook, for example in the description of ordinary and extraordinary settlement processes.
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.**
Description	Access and participation criteria include some human resources requirements, including a sound professional background and

	commensurate experience with the role a staff member of a participating entity will be playing in ComDer. There is also a requirement that these staff members or new staff pass a test on operating ComDer's systems as participants. So far, after nearly three months of operations, ComDer has not reported any relevant misunderstandings of the contents of the rules and procedures. In addition to the mandatory training, ComDer offers eLearning tools (e.g. tests, presentations, relevant documents) to participants to facilitate their understanding of the rulebook and the operation of the CCP.
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.**
Description	ComDer's fee structure is described in Section 12 of the rulebook. A more detailed description is provided in the Fee Study ("*Estudio Tarifario*") available at its website. At present, ComDer has approved a provisional fee structure for the initial 15 months of operations. The provisional structure consists of a full cost recovery mechanism plus a 12% return on equity for shareholders. Total amount to be covered through revenue includes a fixed element and a variable element. The fixed element represents 30% of the total amount to be covered and must be paid in equal shares by all participants. The remaining 70% is paid based on the volume of activities of each participant. The "volume of activities" was determined on the basis of outstanding contracts held by each participant during the period October 2012-September 2013. In addition, all direct and indirect costs that can be allocated to a specific participant (e.g. SWIFT messages) are passed on to that participant. After the transition period, ComDer will establish the final fee structure based on a new Fee Study. The current fee structure of ComDer does not allow for comparisons with the other CCP in Chile (i.e. CCLV). In any case, the two CCPs clear different products and in different market, and their ownership structure is different.
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.**
Description	ComDer has not completed the CPSS-IOSCO Disclosure Framework for Financial Market Infrastructures.

	ComDer publishes some statistical reports in its website. This includes daily and monthly reports with historical information on number of transactions that were accepted by type of contract. It also publishes a monthly report on the actual market prices and price estimates used for risk management purposes (e.g. for marketing-to-market). In addition to the rulebook and statistics, the following relevant documents are also publicly available at ComDer's website: • Corporate information • General description of the CCP • List of participants • Sanctions and fines to participants • Fee study
Key conclusions	ComDer makes extensive disclosure of its rules and key procedures to participants. The rulebook and essential data are also disclosed to the general public via its website. Although ComDer prepared a recent self-assessment based on the CPSS-IOSCO assessment methodology (not available to the public), it has not yet completed the CPSS-IOSCO Disclosure Framework for Financial Market Infrastructures. ComDer is currently using a provisional fee structure. A final structure will have to be determined after a period of 15 months from the start of operations (i.e. towards end-2016).
Assessment of Principle 23	**Broadly observed.**
Recommendations and comments	ComDer should complete the CPSS-IOSCO Disclosure Framework for Financial Market Infrastructures in a defined timeline and make it available to the general public through its website or other proper means. This should be updated at a minimum every two years.