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FINANCIAL SECTOR ASSESSMENT PROGRAM

CHILE

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

DETAILED ASSESSMENT REPORT
OF LBTR, SISTEMA DE
LIQUIDACIÓN BRUTA EN TIEMPO
REAL

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

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GLOSSARY

BCP	Business Continuity Plan
BCCh	<i>Banco Central de Chile</i> (Central Bank of Chile)
CCLV	<i>Contraparte Central S.A</i>
CCP	Central counterparty
CNMF	<i>Compendio de Normas Monetarias y Financieras</i> (compendium of financial and monetary rules)
CNF	<i>Compendio de Normas Financieras</i> (compendium of financial rules)
COSO	Committee of Sponsoring Organizations of the Treadway Commission
CPMI	Committee on Payments and Market Infrastructure
CSD	Central securities depository
DCV	<i>Depósito Central de Valores S.A.</i>
DNS	Deferred net settlement
DVP	Delivery versus payment
FLI	<i>Facilidad de Liquidez Intradía</i> (intraday liquidity facility)
FMI	Financial market infrastructure
FPL	<i>Facilidades de Liquidez Permanente</i> (Permanent liquidity facilities – overnight repos)
GDOF	<i>Gerencia de División Operaciones Financieras</i> (financial operations division)
GDPF	<i>Gerencia de División Política Financiera</i> (financial policy division)
GGERO	<i>Gerencia de Gestión Estratégica y Riesgo Operacional</i> (strategic management and operational risk department)
GIF	<i>Gerencia de Regulación e Infraestructura Financiera</i> (financial regulation and infrastructure department)
GSF	<i>Gerencia de Servicios Financieros</i> (financial services department)
IOSCO	International Organization of Securities Commission
IMF	International Monetary Fund
ISO	International Standards Organization
ITF	<i>Instrucción de transferencia de fondos</i> (funds transfer instruction)
LBTR	<i>Liquidación Bruta en Tiempo Real</i> (real time gross settlement)
LGB	<i>Ley General de Bancos</i> (Banking Law)
LOC	<i>Ley Organica de Constitución del BCCh</i> (Organic Law of the Central Bank of Chile)
PFMI	Principles for Financial Market Infrastructures
RTGS	Real time gross settlement
SBIF	<i>Superintendencia de Bancos e Instituciones Financieras</i> (superintendence of banks and financial institutions)
SOMA	<i>Sistema Operaciones Mercado Abierto</i> (open market operations system)
SPA	<i>Sitio de Procesamiento Alterno</i> (alternate processing site)
SSS	Securities settlement system
SVS	<i>Superintendencia de Valores y Seguros</i> (superintendence of pensions)
SWIFT	Society for Worldwide Interbank Financial Telecommunication
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 BCCCh 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. Khiaonrong 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. Sistema LBTR

1. Sistema LBTR is owned and operated by the Central Bank of Chile (BCCh) since April 2004. There are 25 direct participants (23 banks and 2 *Sociedades Administradoras*²)

2. Sistema LBTR is a real-time gross settlement system where participants can make transfers of funds in national currency (Chilean peso, CLP) to each other and settle operations under the regulations of the BCCh. Sistema LBTR is used for the settlement of the net balances originating from the high-value automated clearinghouse, and the money settlements of CCLV and ComDer. The net balances of the clearing of cheques and ATMs also settle in the LBTR. The BCCh itself, in its role as a participant in the system, settles its transactions through direct debits and credits in the accounts of the banks that participate in the system.

3. After growing by 14% in value in 2014 as compared to the previous year, the system recorded for the first semester of 2015 a daily average of 1,580 funds transfers instructions (*instrucciones de transferencias de fondos*, ITF) worth CLP 24 trillion in total (equal to USD 34 billion), representing an increase of 16% in value as compared to the same period of 2014.

4. All payments in the Sistema LBTR are settled through the accounts of participants in the BCCh, simultaneously debiting the sender's account and crediting the account of the recipient, after which the payment is final and irrevocable. The system has the following mechanisms and instruments to make the most efficient use of liquidity:

- The funds that participants keep in their accounts can be used freely throughout the day to settle obligations. Balances at the end of the day are used in the calculation to meet reserve requirements;
- Intraday Liquidity Facility (*Facilidades de Liquidez Intradía* - FLI), which are intraday repo operations. If at the end of the day the participant cannot honor the FLI, this can be transformed into an overnight operation (*Facilidad Permanente de Liquidez* – FPL) with no penalty fee. The overnight operation is subject to interest rate;
- Central queuing mechanism, (FIFO – first in first out) and the possibility for participants to prioritize payments and change priorities of payments standing in the queue;
- Online monitoring of the real-time balances in the accounts of system by participants;
- Liquidity optimization algorithm that can be applied periodically to settle the largest amount of payments standing in the queue;
- The BCCh processes its own operations in such way that contributes to liquidity in the system at the beginning of the day (Liquidity facilities to participants are settled early in the day, while the debits are processed later).

² Law 20.345 defines a “*Sociedad Administrada*” the operator of the clearing and settlement of financial instruments such as ComDer and CCLV.

5. The Sistema LBTR operates from Monday to Friday from 9 am until 17:15 for entering ITFs. From 17:00 until 18:15 the system processes the settlement of net balances reported by the high-value clearing house (ComBanc), and arising from the operation of CCLV and Comder, and removes the instructions in the queue.

6. Communication protocols between participants and the system are based on internationally accepted communication procedures. For the purposes of sending funds transfer instructions, the BCCh has established the use of SWIFT FIN Copy service in mode "Y". Communications between the Sistema LBTR and the participants, for the purpose of inquiries or reports, can be channeled through the SWIFT network or the private communication network of the Central Bank.

7. In relation to the governance arrangements, the Sistema LBTR relies different levels of governance responsibilities:

- The first level of decision is the Council of the BCCh (*El Consejo*). The Council consists of five members, appointed by the President of the Republic, with the agreement of the Senate. The Chairman of the Council is also the President of the BCCh and is appointed by the President of the Republic. The Council approves the Organization and Functions Manual of the Sistema LBTR and also all regulations related the System.
- The next hierarchical level is represented by the Financial Operations Division (*Gerencia de División Operaciones Financieras, GDOF*) which is responsible for proposing policies and plans for the provision of payment and securities settlement services to the financial sector. It also coordinates the provision of high-value payments services and intraday liquidity facilities.
- The Financial Services Unit (*Gerencia de Servicios Financieros, GSF*) operates under the GDOF. The Payments Department was established under the GSF and is responsible for managing and operating the Sistema LBTR.
- The oversight of the RTGS system is the responsibility of the Sistema LBTR Supervision Committee. The objectives are to review the operation of the system, analyze the events that require the application of contingency arrangements and other relevant developments. The members of the Committee are: the General Manager, Manager of the Financial Operations Management Division, Manager of the Financial Policy Management Division; Managers of Infrastructure and Financial Regulation Management, IT Management, National Markets and Financial Services Management, the head of Payments Department, the head of Systems Development and a representative of the Legal Department. Also, the Financial Policy Division (*Gerencia de División Política Financiera, GDPF*) through the *Gerencia de Regulación e Infraestructura Financiera (GIRF)* performs activities related to the monitoring of the payment system and the development of regulations in cooperation with the legal department.

8. The BCCh has a “Comprehensive Risk Management Policy” defined and documented in Internal Circulars No. 1431 and No. 1436. The Policy describes the objectives, scope, and the key processes that are under the umbrella of the general policy of the BCCh. The contingency scenarios are defined as situations that can affect normal access and operation of critical elements defined as part of the system, in isolation or simultaneously.

9. There is a business continuity plan (BCP) that contains a description of the procedures applicable to one or more contingencies that may have an impact on the system’s elements that are considered critical, specifically in situations that may affect connections, communications

or the system's operation. The plan includes specifications regarding the alternate processing site. The BCP is tested annually and includes the participants.

b. Regulatory, supervisory and oversight framework

22. The BCCh is the regulator of payment and settlement systems in Chile. BCCh 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.

23. 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.

24. 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.

25. 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.

26. 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

27. 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's becoming a CCP for exchange-traded derivatives.³

28. 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

29. In general terms, the Sistema LBTR is a robust and sound FMI. It has adopted international standards and best practices with regard to governance arrangements, risk management, efficiency and transparency, and fully observes twelve PFMIIs.

³ CCLV has been acting as a CCP for the equities market since 2011.

30. There are four principles that are assessed as “broadly observed”. These principles and the reasons for assigning this rating are mentioned below:

31. Principle 1 (Legal basis). The main issue with Sistema LBTR from a legal standpoint, as well as with any other FMI processing payments, is that no statutory act expressly contemplates finality and protection against insolvency in payment systems for participants or collateral. BCCh regulations as well the system’s rules do contain provisions on irrevocability and finality; however, as for any regulatory and contractual rules, these are only enforceable against the other participants to the system. The fact that only banks participate into Sistema RTGS reduces the urgency of the issue, since the Banking Law has insolvency rules that should reduce exposure, and the BCCh normative powers cover all banks; however, in the lack of express statutory provisions the legal risk cannot be fully ruled out. In particular, should non-banks be allowed to participate in the system, this issue would become a high priority for the BCCh. Also the lack of explicit recognition of repos at statutory level might jeopardize the soundness of the intra-day liquidity facility, as it is the case in general for any use of repos as a form of guarantee. Although it is believed that courts should be in a position to recognize the economic rationale behind this financial instrument and consider this as legitimate in financial markets, this risk – which is common to civil law countries – cannot be fully ruled out.

32. Principle 8 (Settlement finality). As noted in Principle 1, the systems rules do contain provisions on irrevocability and finality; however, those cannot be fully enforceable given the lack of coverage at the statutory level.

33. Principle 18 (Access and participation requirements). Based on the current legal framework, only banks (and *Sociedades Administradoras*) are admitted to the Sistema LBTR. Participation in the system does reflect risk-based considerations in the sense that banks must meet certain operational and risk-management requirements. Any restrictions to participation should be justified in terms of the safety and efficiency of the system, and result in the least-restrictive impact on access, provided that certain risk control standards are met. It is worth noting that financial cooperatives, securities brokers-dealers, and insurance companies – among other non-bank institutions – are subject to supervision.

34. Principle 23 (Disclosure of rules, key procedures, and market data) The Sistema LBTR has not completed the CPSS-IOSCO Disclosure Framework for FMIs

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

b. Recommendations for Sistema LBTR

Table 2			
Prioritized list of recommendations			
Principle	Issue of concern or other gap or shortcoming	Recommendation action and comments	Time frame for addressing recommended action
1	<p>No statutory act expressly contemplates finality and protection against insolvency in payment systems for participants or collateral. The CNF and the system's rules do contain provisions on irrevocability and finality; however, as for any regulatory and contractual rules, these are only enforceable against the other participants to the system. In the light of insolvency procedures as established in the Banking Law, Sistema LBTR is possibly protected against legal risk as long as this is only open to banks. However, this would become high priority in the event that participation to the system is also allowed to non-bank.</p> <p>No statutory act recognizes repos either. This might jeopardize the enforceability of the intra-day liquidity mechanism. Although it is expected that courts would recognize the economic rationale of such instrument, this risk would be fully eliminated only by expressly recognizing such instrument.</p>	<p>The issue of finality of payments and protection against insolvency should be addressed at the statutory level similar to systems processing financial instruments in Chile. The legal reform should also cover recognition of financial instruments such as repos.</p>	<p>In a defined timeline (1-2 years)</p>
2	<p>Although disclosure of major decisions and communication with participants are adequate,</p>	<p>The creation of a user committee is encouraged. It will provide a formal mechanism for participants' inputs to BBCh decision with regard to Sistema LBTR.</p>	<p>In the normal course of business</p>

Table 2			
Prioritized list of recommendations			
Principle	Issue of concern or other gap or shortcoming	Recommendation action and comments	Time frame for addressing recommended action
	there is no formal mechanisms for stakeholder inputs. ⁴		
8	The system's rules do contain provisions on irrevocability and finality, however, those cannot be fully enforceable in the law of such statutory measures	The issue of finality of payments and protection against insolvency should be addressed at statutory level (see Principle 1).	In a defined timeline (1-2 years)
18	Only banks (and <i>Sociedades Administradoras</i>) are admitted to the Sistema LBTR. Participation in the system does reflect risk-based considerations in the sense that banks must meet certain operational and risk-management requirements. On the other hand, there is no clear, risk-based rationale to restricting participation to banks only. In fact, any restrictions to participation should be justified in terms of the safety and efficiency of the system, and result in the least-restrictive impact on access, provided that certain risk control standards are met. It is worth noting that financial cooperatives, securities brokers-dealers, and insurance companies – among other non-bank institutions – are subject to supervision.	The BCCh should consider the risks that new prospective participants may pose to the system should this be open beyond banks, and assess market needs. On the basis of this analysis, the BCCh and the Ministerio de Hacienda should evaluate whether to lift the current barrier to entry for non-banks.	In a defined timeline (1-2 years)
23	Sistema LBTR has not completed the CPSS-IOSCO Disclosure Framework for FMIs	Sistema LBTR should complete the CPSS-IOSCO Disclosure Framework for FMIs and make it	In a defined timeline (1 year)

⁴ The BCCh has plans to establish a user committee by 2016.

Table 2
Prioritized list of recommendations

Principle	Issue of concern or other gap or shortcoming	Recommendation action and comments	Time frame for addressing recommended action
		available to the general public through its website or other appropriate means.	
5	Haircut percentages have not changed in 10 years and are published in the regulations of the FLI	The haircut methodology should be reviewed periodically to ensure it is still consistent with market conditions	In the normal course of business
7	The Sistema LBTR has not documented any stress test scenarios given that the BCCh is the provider of the liquidity to the system.	The BCCh should initiate studies on possible stress scenarios for managing liquidity risks. These scenarios may include indicators or dynamic management tools such as network topology in which the impact of each participant in the entire system is determined	In the normal course of business

V. DETAILED ASSESSMENT

<p>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.</p>	
<p>Key consideration 1</p>	<p>The legal basis should provide a high degree of certainty for each material aspect of an FMI’s activities in all relevant jurisdictions.</p>
<p>Description</p>	<p><i>Material aspects and relevant jurisdictions</i></p> <p>Material aspects for Sistema LBTR are: (i) finality and irrevocability of payments, (ii) protection against insolvency, both for the system itself and the collateral provided for its proper working, and (iii) repos through which the operator of the LBTR provides liquidity to the participants.</p> <p>Since Sistema LBTR is a real-time gross settlement system, rules on netting or other legal issues connected to the clearing phase do not bear here. No zero-rule exists under Chilean insolvency law.</p> <p>The only relevant jurisdiction for all aspects identified above is Chile.</p> <p><i>Legal basis for each material aspect</i></p> <p>Finality and irrevocability of payments are regulated in Chapter III.H.4 of the Compendium de Normas Monetarias y Financieras (CNMF) pointing that once an instruction to transfer funds is settled, this shall be deemed final and irrevocable and, therefore, may not be withdrawn, revoked, reversed or modified.</p> <p>Section II of Chapter No. 2.1 of the CNMF details the operating conditions under which the bank participants can apply to an intraday liquidity (<i>Facilidades de Liquidez Intradía - FLI</i>) provided by the BCCCh or a REPO, whose sole purpose is to facilitate settlement of transactions in the Sistema LBTR.</p> <p>Moreover, the same chapter of the CNMF establishes that the signing of the adhesion agreement by participants constitutes acceptance of all rules and conditions governing the system, including the Operating Regulations and its subsequent amendments.</p> <p>These provisions are implemented in the contractual terms of the system that participants adhere to.</p> <p>As a consequence, finality and irrevocability are duly regulated under the CNMF and further implemented by contractual agreements among participants. However, since these are regulatory and contractual provisions, they only bind participants and cannot protect the system against opposition by third parties.</p> <p>On the other hand, no specific provision exists at the statutory level on finality and protection against insolvency for payment systems, as opposed to systems processing financial instruments (Law 20.345). In the lack of such legislation, the legal risk exists that a payment be revoked, especially in the event of insolvency of a participant, or that a collateral transaction be reversed in the event of insolvency.</p>

	<p>Under the Banking Law, insolvency of banks is treated differently from general insolvency procedures and the BCCh has wide powers of intervention in that case. As a consequence, the BCCh is expected to apply finality and irrevocability in a way that ensures that these principles are enforced. While this fact reduces the immediate urgency of such a provision, should the system be open to non-banks, this matter would become of high priority.</p> <p>Similar conclusions can be drawn with regard to the legal basis for repos. While the repo is covered through BCCh regulations under chapter 2.1 CNMF, this is not contemplated in any statutory act.</p>
Key consideration 2	An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.
Description	<p>Regulations related to the Sistema LBTR have been designed and reviewed by various departments within the BCCh in order to ensure consistency with existing laws and regulations and avoid possible implementing issues.</p> <p>The BCCh legal department contributes to the design, adoption and implementation of those measures, as for reduction of legal risk.</p> <p>Finally, new regulations and amendments are subject to approval by the Council of the BCCh, all participants are informed of these, and the new provisions are posted in the BCCh website.</p> <p>Moreover, provisions that might materially impact the participants are placed in public consultation before final approval and entry into force, whereas informal consultations are contemplated as a general practice.</p>
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	<p>All regulations of the BCCh, including the Sistema LBTR, are available on its website. Additionally, all policy changes are communicated directly to participants through a circular letter, which is also published simultaneously on the website of the Central Bank.</p> <p>The Financial Stability Report discloses semiannually policies and measures related, among other aspects, to the normal operation of domestic payment systems. Also, the BCCh's Annual Report contains information about the most significant changes in financial regulations made during the respective year.</p>
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	<p><i>Enforceability of rules, procedures and contracts</i></p> <p>The BCCh has the exclusive power to issue regulations applicable to the Sistema LBTR, and this has regulated its operation by way of agreement,</p>

	<p>as well as rules and procedures, all of which ensures enforceability of the various provisions</p> <p><i>Degree of certainty for rules and procedures</i></p> <p>Rules, regulations, contracts and procedures for the Sistema LBTR are framed under the current legal framework of the country, particularly the Organic Law of the BCCh. Therefore, there is a high degree of certainty. The system deals only with the local currency and has no cross border activity.</p>
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	The only relevant jurisdiction for the Sistema LBTR is Chile.
Key conclusions	<p>The main issue with Sistema LBTR, as with any other FMI processing payments, is that no statutory act expressly contemplates finality and protection against insolvency in payment systems for participants or collateral. The systems rules do contain provisions on irrevocability and finality; however, as for any contractual rules, these are only enforceable against the other participants to the system.</p> <p>No statutory act recognizes repos either. This might jeopardize the enforceability of the intra-day liquidity mechanism. Although it is expected that courts would recognize the economic rationale of such instrument, this risk cannot be fully ruled out.</p>
Assessment of Principle 1	Broadly observed.
Recommendations and comments	<p>The issue of finality of payments and protection against insolvency of both the system and collateral need to be addressed at the statutory level. In light of insolvency procedures as established in the Banking Law, payment systems are possibly protected against legal risk as long as participants are only to banks. Hence, the gap identified may be addressed in a defined timeline. However, this shall become high priority in the event that participation to the system is also opened to non-banks.</p> <p>As in the most of civil law countries, conditional transfer of property as a form of guarantee or a financial instrument might conflict with general principles of law on transfer of property. Although it is expected that courts would recognize the economic rationale behind repos, a fully-fledged recognition of enforceability of such instruments in the financial markets would reduce any potential risk. Therefore, it is recommended that legal reform should also cover recognition of financial instruments such as repos.</p>

<p>Principle 2: Governance</p> <p>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.</p>	
<p>Key consideration 1</p>	<p>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</p>
<p>Description</p>	<p>The Sistema LBTR is governed in accordance with the rules issued by the BCCh.</p> <p>Based on its statutory law (<i>Ley Orgánica Constitucional del Banco Central de Chile</i>, LOC), the BCCh is responsible for ensuring the stability of the currency and the normal functioning of the domestic and cross-border payments.</p> <p>The objectives of the Sistema LBTR are identified in the regulation, which aims to ensure that its operation meets high standards for safety and efficiency, focusing on the identification and mitigation of risks involved. In particular, Chapter III.H.4 of the CNF, which regulates the operation of the Sistema LBTR and the system’s Rulebook (Chapter III.H.4.1 of the CNF) makes explicit reference to the safety of the system and the protection mechanisms.</p> <p>The above-mentioned documents are public and available at BCCh’s website.</p>
<p>Key consideration 2</p>	<p>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.</p>
<p>Description</p>	<p><i>Governance arrangements</i></p> <p>The Sistema LBTR has different levels of governance responsibilities:</p> <p>The first level of decision is the Council (<i>El Consejo</i>). The Council consists of five members, appointed by the President of the Republic, with the agreement of the Senate. The Chairman of the Council is also the President of the BCCh and is appointed by the President of the Republic. The Council shall elect from among its members the Vice President of the BCCh. The General Manager is also appointed by the BCCh President but is not a member of the Council. The Council approves the Organization and Functions Manual of the Sistema LBTR and also all system regulations.</p> <p>The next hierarchical level is represented by the Financial Operations Division (<i>Gerencia de División Operaciones Financieras</i>, GDOF) which is responsible for proposing policies and plans for the provision of payment and securities settlement services to the financial system. It also coordinates the provision of high-value payments services and intraday liquidity facilities.</p> <p>The Financial Services Unit (<i>Gerencia de Servicios Financieros</i>, GSF) operates under the GDOF. The Payments Department was established under the GSF and is responsible for managing and operating the Sistema</p>

	<p>LBTR, while the oversight of the RTGS system is the responsibility of the Sistema LBTR Supervision Committee.</p> <p>The Sistema LBTR Supervision Committee was established by a resolution of the General Manager of the BCCh, The objectives of this Committee are defined in the “Internal Manual for the Management and Operation of the Sistema LBTR”. The objectives are to review the operation of the system, analyze the events that require the application of contingency arrangements and other relevant developments. The Members of the Committee are: the General Manager, Manager of the Financial Operations Management Division, Manager of the Financial Policy Management Division; Managers of Infrastructure and Financial Regulation Management, IT Management, National Markets and Financial Services Management, the Head of the Payments Department, the Head of Systems Development and a representative of the Legal Department.</p> <p>Although in the absence of an explicit oversight policy over the national payments system in a broader sense, oversight functions are exercised by the Financial Policy Division (<i>Gerencia de División Política Financiera</i>, GDPF) through the Financial Regulation and Infrastructure Unit (<i>Gerencia de Regulación e Infraestructura Financiera</i>, GIRF).</p> <p><i>Disclosure of governance arrangements</i></p> <p>Governance arrangements are explained in detail in the report “<i>Gestión de Sistemas de Pagos de Alto Valor del Banco Central de Chile - 2012</i>” (Management of the high-value payment systems of the Central Bank of Chile) which is published on the BCCh’s website.</p>
<p>Key consideration 3</p>	<p>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.</p>
<p>Description</p>	<p><i>Roles and responsibilities of the board</i></p> <p>The roles and responsibilities of the BCCh Council are set in Article 18 of the LOC of the BCCh. These include defining the general policies and rules for the operation of the BCCh, overall supervision of its activities, assessing observance of policies and rules, and guiding the regular operations and activities of the institution.</p> <p>Ordinary Council sessions are held every week. Council sessions require the attendance of at least three members. All agreements require a majority of votes. In case of a tie, the Chairperson of the Council has the casting vote.</p> <p>Article 13 of the Organic Law lays out the procedures to identify, address and manage potential conflicts of interest of Council members.</p> <p>The Council has an external Audit and Compliance Committee. This committee assesses the observance of risk management policies and</p>

	<p>reports to the Council on the efficacy of internal control systems and procedures.</p> <p>A number of specialized committees made-up of internal staff, covering the various areas of responsibility of the BCCh, have also been set up. These committees regularly report to the General Manager, and occasionally make presentations directly to the Council.</p> <p><i>Review of performance</i></p> <p>There is no specific mechanism to review performance of Council members. However, Council members may be removed from their posts in case a conflict of interest or incompatibility according to the LOC, or may be removed by the President of the Republic for causes related to poor performance (e.g. voting on a decision that is against the objectives of the BCCh and that ended up having a direct harmful impact in the country's economy). Likewise, the President of Council may be removed by the President of the Republic – with the agreement of the Senate – based on a petition from a least three Council members that is based on the non-observance of policies and rules set by the Council.</p>
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	<p>Council members are elected according to the LOC. The Council is the highest authority of the BCCh and is responsible for the management and administration of the Bank, corresponding exercise all the powers and duties entrusted to the LOC.</p> <p>The Council members are of exclusive dedication and incompatible with any activity, paid or unpaid, that is provided in the public or private, except teaching or academic work sector and activities in non-profit institutions.</p>
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	<p><i>Roles and responsibilities of management</i></p> <p>The responsibilities of the General Manager are set in Article 24 of the LOC. The roles and responsibilities of the different managers are established in the Manual of Organization and Functions of the Central Bank (Internal Circular) and evaluated by the Internal Comptroller, which it reports directly to the Council.</p> <p><i>Experience, skills and integrity</i></p> <p>The selection of managers and senior officials is governed by the policies of recruitment of Human Resources Management.</p>
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	<p><i>Risk management framework</i></p> <p>The BCCh has a “Comprehensive Risk Management Policy” defined and documented in Internal Circulars No. 1431 and No. 1436. The Policy describes the objectives, scope, and the key processes that are under the umbrella of the policy.</p> <p>For the Sistema LBTR, discussions concerning plans, levels of acceptance and risk tolerance are conducted through the LBTR Supervision Committee in accordance with the overall BCCh risk management policy.</p> <p>The GGERO and DOF participate in the identification, analysis, evaluation, and management of the risks of high-value payment services and liquidity facilities.</p> <p><i>Authority and independence of risk management and audit functions</i></p> <p>The Internal Controller ensures that all the units in BCCh meet their objectives and functions. The Sistema LBTR is also subject to external audit processes.</p>
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	<p><i>Identification and consideration of stakeholder interests</i></p> <p>Regulations of the BCCh are placed in public consultation before final approval.</p> <p>For contingency management issues, the Sistema LBTR holds monthly meetings with representatives of the high-value payments clearinghouse (ComBanc), to discuss the general course of operations, the impact of changes in regulations, and coordinating the implementation of the annual test plan of contingency. Similarly meetings with representatives of the—<i>Depósito Central de Valores S.A. – DCV</i> (the central securities depository), <i>CCLV Contraparte Central S.A – CCLV</i> (the securities settlement system and central counterparty for corporate equities and exchange-traded derivatives, and ComDer (the central counterparty for OTC derivatives) are held.</p> <p>The rules of the Sistema LBTR include mechanisms for consultation and information disclosure (Chapter III.H.4. and III.H.4.1).</p> <p>Queries that participants made about general issues relating to access, connection or operation of the RTGS system are sent by email LBTR@BCENTRAL.CL.</p> <p><i>Disclosure</i></p> <p>Decisions taken by the Council are communicated to stakeholders through various means, such as Internal Communication, Circular Letters, Public</p>

	Announcements, BCCh website, Financial Stability Report, and Annual Reports.
<i>Key conclusions</i>	<p>The Sistema LBTR governance arrangements are in accordance with the objectives and rules of the BCCh established in the LOC and other internal regulations and manuals. The responsibilities of Council members and senior officials of the BCCh are clearly defined and documented.</p> <p>The comprehensive risk management policy for the BCCh and for the Sistema LBTR is appropriate and well documented.</p> <p>Disclosure of major decisions and communication with participants are adequate, although regular meetings are not held with the systems' participants (banks). The BCCh intends to establish a user group by 2016.</p>
<i>Assessment of Principle 2</i>	Observed.
<i>Recommendations and comments</i>	The creation of a user committee is encouraged. It will provide a formal mechanism for participants' inputs to BBCh decision with regard to Sistema LBTR.

<p>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.</p>	
<p>Key consideration 1</p>	<p>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.</p>
<p>Description</p>	<p><i>Risks that arise in or are borne by the FMI</i></p> <p>The regulation and design of the Sistema LBTR aims to ensure that its operation meets high standards for safety and efficiency, focusing on the mitigation of the following risks: a) credit risk, b) liquidity risk, c) operational risk arising from technical failures or operational error; d) legal risks, and; e) systemic risk, due to the impact of a failure of the Sistema LBTR on financial stability and the normal functioning of the payments.</p> <p><i>Risk management policies, procedures and systems</i></p> <p>The BCCh has developed a matrix identifying these risks, the probability of their occurrence, expected impact, and it has identified mitigating measures and an action plan. This matrix is based on the Comprehensive Risk Management Policy of the BCCh and is governed by internal circular No. 1431 and No. 1436. This policy is designed and implemented by the GGERO. The risk matrix must be completed by each of the managers of the BCCh and then evaluated by the GGERO. The matrix is composed by the following sections:</p> <ol style="list-style-type: none"> 1. Processes 2. Risk identification 3. Analysis and risk assessment 4. Risk management policies 5. Review of measures <p>Any change in the Policy is approved by the BCCh Council. The methodology for its implementation (procedures, IT department support and evaluation) is approved by the General Manager, who in turn will report to the Council. The Policy is reviewed by the Council every two years.</p> <p><i>Review of risk management policies, procedures, systems</i></p> <p>As part of the oversight activities, the GIRF has access to data on total exposures of participants in the system, in other payment systems and in the financial markets. This information is used for comprehensive risk management assessment of the Sistema LBTR and the payments system in general.</p> <p>In addition, the LBTR Supervision Committee meets quarterly, as described in Principle 2.</p>
<p>Key consideration 2</p>	<p>An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.</p>

Description	<p>Each participant of the system has at its disposal comprehensive information and a range of tools to manage the risk it poses to the system. At any time during operating hours, participants are able to monitor their real-time balances, credit and debit transactions performed throughout the day and their queued payments.</p> <p>In addition, BCCh has the power to suspend or revoke a participant, if they do not properly manage their risks or do not comply with the regulation. According to Chapter III.H.4 of the CNMF, the BCCh may suspend for a period of up to 90 days any participant of the Sistema LBTR when it does not comply with the regulations or faces problems or technical malfunctions affecting its connection or communication.</p>
Key consideration 3	<p>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.</p>
Description	<p><i>Material risks</i></p> <p>The BCCh, through the Sistema LBTR, does not undertake any credit or liquidity risk as a result of allowing other FMIs to settle in central bank money. Nevertheless, if one or more of these FMIs were to face problems to complete settlement, this could stress liquidity conditions in the Sistema LBTR.</p> <p>The BCCh identifies the following as sources of operational risk:</p> <p>(i) SWIFT communications network; Participants must comply with the rules and standards set by SWIFT in relation to contingency and recovery plans and IT systems compatible with SWIFT. Contingency scenarios:</p> <ul style="list-style-type: none"> - Participant is unable to send messages to another specific participant SWIFT; - Participants without access to the communications network SWIFT. - SWIFT network not available: <p>(ii) BCCh Private Network; Participants have a private network with the BCCh to send instructions, such as cancellation of messages, changing priorities of queues, and query of payment instructions. . Contingency scenario: one or more participants can not access the private network of the BCCh</p> <p>(iii) Sistema LBTR The Sistema LBTR is installed in a main processing site which features high availability of all components. This infrastructure is duplicated in the alternate processing site (SPA), which activates in case of contingency. Contingency scenario: the main site suffers a failure and the SPA does not operate.</p>

	<p>(iv) Sistema de Operaciones de Mercado Abierto (SOMA) for Intraday Liquidity Facility (FLI) The SOMA system is used to process requests for FLI has a main processing site and SPA Contingency scenarios: <ul style="list-style-type: none"> - the purchasing module SOMA is not available - the network communication is not available - the central securities depository (CSD) system is not available </p> <p><i>Risk management tools</i></p> <p>The BCCh has developed a Comprehensive Risk Management Policy and a business continuity plan (“Business Continuity Plans and Procedures”). A description of the procedures applicable in the case of one or more contingencies in the Sistema LBTR (and the SOMA system) are included in the BCP. For each contingency scenario, there is a detailed manual outlining the procedures, including time out to address the contingency.</p> <p>The risks posed by interdependencies are managed in the same manner as other risks, i.e. through the tools determined by the LBTR Supervision Committee, and according to the Comprehensive Risk Management Policy. BCCh staff managing the Sistema LBTR holds monthly meetings with other the FMI operators in order to identify and assess the risks posed by interdependencies, and propose measures to mitigate them.</p> <p>The LBTR Supervisor Committee reviews the different risk management tools least quarterly. Modifications to the Comprehensive Risk Management Policy need approval by the Council.</p> <p>To mitigate the risks that arise from dependency on the IT provider, the BCCh holds regular conference calls where any problems are reported and a follow-up is done. Additionally, all developments made by the IT system provider are rigorously tested before going live.</p>
Key consideration 4	<p>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.</p>
Description	<p><i>Scenarios that may prevent an FMI from providing critical operations and services</i></p> <p>The contingency scenarios are defined by the BCCh as situations that can affect normal access and operation of critical elements of the Sistema LBTR, in isolation or simultaneously, and require the activation of the BCP.</p>

	<p>The BCP for the Sistema LBTR contains a description of operational continuity procedures that become applicable in the event that one or more contingencies occur affecting elements that are considered critical, and specifically in situations that may affect the relationship between the participants and the system in terms of connection, communication, or operation.</p> <p>The BCCh has the necessary procedures to resolve, with a reasonable degree of security, contingencies in connection, communication and / or operations that could affect normal access and / or operation of the Sistema LBTR. Also, if contingencies arise, participants are required to adhere strictly to the instructions issued by the BCCh as well as to the procedures indicated in the Rulebook.</p> <p><i>Recovery or orderly wind-down plans</i></p> <p>The issue of the wind down is not considered by the BCCh, even if the demand for a high-value payment system managed by the Central Bank were reduced to a level below full recovery of operating costs. A scenario of sudden closure of activities is not anticipated.</p>
Key conclusions	<p>The BCCh has developed a Comprehensive Risk Management Policy that enables it to manage the risks associated with the operation of the Sistema LBTR appropriately.</p> <p>The BCCh analyses the risks arising from interdependencies with other FMIs. The Sistema LBTR does not bear any credit or liquidity risks in this regard, and has a robust framework for the management of operational risk.</p> <p>The Sistema LBTR provides its participants with the tools for them to manage appropriately their risks.</p>
Assessment of Principle 3	Observed.
Recommendations and comments	<p>As a way to further encourage participants' own management of risks incurred in the Sistema LBTR, the BCCh could consider price incentives. For instance, a differentiated fee schedule whereby payment instructions late in the operational day are penalized as opposed to instructions submitted earlier in the day could help to further smoothen liquidity management.</p>

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	<p>The Sistema LBTR was created as a real-time gross settlement system. Payments are processed if, and only if, participants have the necessary funds in their current accounts with the BCCh.</p> <p>The BCCh does not guarantee settlement and participants do not face credit risks vis-à-vis each other as a result of their participation in the system.</p>
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	<p>The BCCh provides intraday liquidity (<i>Facilidades de Liquidez Intradía - FLI</i>) to those participants that are banks. This facility is implemented through an intraday repo, to which haircuts are applied.</p> <p>If a system participant is not able purchase back the securities in the repo, this is automatically converted into an overnight repo (<i>Facilidades de Liquidez Permanente – FLP</i>). In the event that the same participant does not purchase back the securities for the overnight repo, the BCCh allows the rollover of the repo until the underlying security is not eligible. (see Principles 5 and 7)</p> <p>In cases that a bank participant cannot cover net balances resulting from the clearing of the cheque's clearinghouse, the BCCh may grant emergency liquidity loans for this purpose, according to Article 36 of the LOC and Chapter III.H.1.</p>
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	<p><i>Coverage of exposures to each participant</i></p> <p>To manage exposures arising from the provision of intraday liquidity, the BCCh accepts securities issued by the BCCh and some types of securities issued by commercial banks. Every day at 8:30 am the BCCh through the SOMA informs participants the financial conditions of eligible titles:</p> <ul style="list-style-type: none"> (i) The type of instruments issued by the BCCh; (ii) The type or securities issued by banks, initial conditions is to have the risk classification of long-term securities equal to or greater than the category A, (iii) Interest rates to discount titles, differentiated by way of eligible credit and residual term to maturity. (iv) Haircut. <p><i>For DNS payment systems and DNS SSSs in which there is no settlement guarantee</i></p> <p>Not applicable.</p>
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	<p><i>Coverage of current and potential future exposures to each participant</i></p> <p>Not applicable.</p> <p><i>Risk profile and systemic importance in multiple jurisdictions</i></p> <p>Not applicable.</p> <p><i>Additional financial resources</i></p> <p>Not applicable.</p> <p><i>Supporting rationale and governance arrangements</i></p> <p>Not applicable.</p>

<p>Key consideration 5</p>	<p>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.</p>
<p>Description</p>	<p><i>Stress testing</i> Not applicable. <i>Review and validation</i> Not applicable.</p>
<p>Key consideration 6</p>	<p>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.</p>
<p>Description</p>	<p>Not applicable.</p>
<p>Key consideration 7</p>	<p>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.</p>
<p>Description</p>	<p><i>Allocation of credit losses</i> The BCCh regulations for the FLI and overnight repo clearly establish the procedure for the BCCh to cover any exposure to risk. (See Principle 7: Liquidity Risk)</p>

	<p><i>Replenishment of financial resources</i></p> <p>The BCCh regulations for the FLI and overnight repo clearly establish the procedure for the BCCh to cover any exposure to risk. (See Principle 7: Liquidity Risk)</p>
<i>Key conclusions</i>	<p>The Sistema LBTR has been designed as a real-time gross settlement system thus mitigating the credit risk between participants and for the system operator. The BCCh, as the provider of intraday liquidity facilities, limits its exposures by using repos supported with high quality collateral.</p>
<i>Assessment of Principle 4</i>	<p>Observed.</p>
<i>Recommendations and comments</i>	<p>As noted in Principle 1, finality and protection against insolvency in payment systems are not covered at the level of the law; this affects both system's participants and collateral and has a bearing on the RTGS credit risk management.</p>

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	<p>Section II of Chapter No. 2.1 of the CNF details the operating conditions under which the bank participants can apply to a FLI provided by the BCCh, whose sole purpose is to facilitate settlement of transactions in the Sistema LBTR.</p> <p>The security acquired by the BCCh under a repurchase agreement must be under the custody of a central security depository (CSD) incorporated under Law No. 18.876 – the DCV, and registered in the individual deposit account of the Bank participant. Then the security underlying the repo is transferred to the account of the Central Bank in DCV.</p> <p>According to the FLI Regulation, the securities that are eligible as collateral are:</p> <ul style="list-style-type: none"> (i) Different types of securities issued by the BCCh (ii) Some types of securities issued by Commercial Banks. <p>In both cases, other conditions applied:</p> <ul style="list-style-type: none"> (i) The securities must be incorporated as eligible in the SOMA system (securities will be returned to the participants by the BCCh through this same system), or by any other means that the BCCh determine as satisfactory; (ii) The securities to be acquired by BCCh under FLI agreements, may not have maturity or coupon cut during the term of the corresponding operation and up to 3 banking days after the maturity of the repo for the BCCh securities and 5 banking days for securities issued by commercial 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	<p><i>Valuation practices</i></p> <p>The financial conditions for intraday operations are communicated daily to the participants through the SOMA system. These financial conditions include:</p> <ul style="list-style-type: none"> (i) Securities eligible for credit operations; (ii) Benchmark interest rates to discount the securities eligible for trading; (iii) Discounts or spreads on the valuation of eligible securities, differentiated by type and maturity of security; (iv) Haircut.

	<p>The FLI Rulebook clearly states the procedures for valuation of the bonds to be used in the repos and apply different conditions depending on the issuer of the security and whether or not it has an interest coupon.</p> <p><i>Haircutting practices</i></p> <p>The methodology for calculating the haircut is based on the risk classifications of at least two rating agencies for each type of instrument. Haircut percentages have not changed in 10 years and are published in the regulations of the FLI.</p>
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, the BCCh used a conservative approach to ensure that the discounts applied cover possible stress scenarios based on what was observed in the past in the local market.
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	More than 90% of the assets used as collateral are instruments issued by the BCCh.
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	The Sistema LBTR does not accept cross-border collateral.
Key consideration 6	An FMI should use a collateral management system that is well-designed and operationally flexible.
Description	<p><i>Collateral management system design</i></p> <p>The technology platform for processing requests for intraday liquidity facilities is provided by SOMA, and is owned and operated by the BCCh. There are no limits on the number and value of requests for FLI to an individual participant if the collateral is eligible and dematerialized.</p> <p>The SOMA system is automated and interconnected with the Sistema LBTR and the DCV. The securities entered by participants are checked for eligibility and valued in real time, then transferred over to the BCCh, making it impossible for the participant / FLI applicant to reuse the same security.</p> <p><i>Operational flexibility</i></p> <p>The SOMA is flexible to changes or can expand the list of eligible securities in case of situations of financial distress. The SOMA has reached an average of 99.86% technical availability in the last three years of its operation.</p>

<i>Key conclusions</i>	<p>The BCCh accepts high quality collateral for its intraday and overnight repo operations. The valuation methodology is clearly established in the operating regulations of the FLI.</p> <p>The methodology for calculating the haircut is based on the risk classification of at least two rating agencies for each type of instrument. Haircut percentages have not changed in 10 years and are published in the regulations of the FLI.</p>
<i>Assessment of Principle 5</i>	Observed.
<i>Recommendations and comments</i>	Even if most of the underlying securities are issued by the BCCh with low market risk, the haircut methodology should be reviewed to ensure that it still reflects market conditions.

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	<p>The Sistema LBTR settles participant payment instructions if, and only if there is sufficient balance in the accounts that those participants hold at the BCCh.</p> <p>The elements that represent sources of liquidity to system participants are: (i) the balances held at the BCCh; (ii) assets that can be transferred to the BCCh and turned into funds in the participant account; (iii) payments received, and (iv) payments received from deferred netting systems.</p> <p>In terms of value, about 75% of all payments sent by participants have been settled at 15:45 hours, thus leading to low rates of rejection after closing, mainly caused by hardware or software problems. This trend has been stable since the 2007.</p> <p>The liquidity management in the Sistema LBTR is supported through the following mechanisms:</p> <ul style="list-style-type: none">(i) The funds that participants keep in their accounts can be used freely throughout the day to settle obligations. Balances at the end of the day are used to meet reserve requirements;(ii) Intraday Liquidity Facility (FLI) i.e. intraday repo operations. If at the end of the day the participant cannot honor the FLI this can be transformed into an overnight operation (FPL), in this case an interest rate is applied;(iii) Central queuing mechanism (FIFO – first in first out) and the possibility for participants to prioritize payments and change priorities of payments standing in the queue;(iv) Online monitoring of the balances in the accounts of Sistema LBTR by participants;(v) Liquidity optimization algorithm that can be applied periodically to settle the largest amount of payments standing in the queue;(vi) Continuous monitoring of system liquidity by BCCh staff. <p>The BCCh processes its own operation in such way that facilitates liquidity in the system at the beginning of the day (e.g., credit operations to participants are settled early in the day, while the debits are processed later in the day).</p>
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	<p>The Sistema LBTR has a variety of operational tools to facilitate monitoring of liquidity by participants, as described in Key Consideration 1.</p> <p>The maximum daily liquidity needs index is used to monitor the level of use of intraday liquidity in connection with liquidity requirements. This index is the result of the sum of the maximum differences observed for each participant, including the value of payments received and the value of payments made during the day.</p> <p>Additionally, system performance is continuously monitored by BCCh staff in order to prevent the risk that liquid resources can be drained from the system.</p> <p>Finally, Sistema LBTR must comply with the risk management policy and risk management methodology of the Central Bank. Therefore liquidity risk is reviewed by all instances provided in the risk management policy described in Principle 3.</p>
Key consideration 3	<p>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.</p>
Description	<p>The only currency for the Sistema LBTR is the local currency and the liquidity provider is the Central Bank itself.</p>
Key consideration 4	<p>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.</p>
Description	<p><i>Sufficient liquid resources</i></p> <p>Not applicable.</p> <p><i>Risk profile and systemic importance in multiple jurisdictions</i></p> <p>Not applicable.</p>

Key consideration 5	<p>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.</p>
Description	<p><i>Size and composition of qualifying liquid resources</i></p> <p>The only currency for the Sistema LBTR is the local currency and the liquidity provider is the Central Bank itself.</p> <p><i>Availability and coverage of qualifying liquid resources</i></p> <p>The only currency for the Sistema LBTR is the local currency and the liquidity provider is the Central Bank itself.</p>
Key consideration 6	<p>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.</p>
Description	<p><i>Size and composition of supplemental liquid resources</i></p> <p>The only currency for the Sistema LBTR is the local currency and the liquidity provider is the Central Bank itself.</p> <p><i>Availability of supplemental liquid resources</i></p> <p>The only currency for the Sistema LBTR is the local currency and the liquidity provider is the Central Bank itself.</p>
Key consideration 7	<p>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.</p>

Description	<p><i>Use of liquidity providers</i></p> <p>Not applicable, as the liquidity provider for the Sistema LBTR is the Central Bank itself.</p> <p><i>Reliability of liquidity providers</i></p> <p>Not applicable, as the liquidity provider for the Sistema LBTR is the Central Bank itself.</p>
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	The Sistema LBTR settles all of its transactions in central bank money, through the accounts that participants hold at the BCCh.
Key consideration 9	<p>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.</p>
Description	<p><i>Stress test programme</i></p> <p>There is no documented stress test programme for determining and testing the sufficiency of liquid resources.</p> <p>As the liquidity provider for the Sistema LBTR is the Central Bank itself, in principle the sufficiency and availability of funds to support the system's operations are unlimited. The BCCh has nevertheless limited its liquidity support to the Sistema LBTR by implementing all associated liquidity injections through the use of repos.</p> <p><i>Stress test scenarios</i></p> <p>There is not stress test programme for measure determining and testing the sufficiency of liquid resources.</p> <p><i>Review and validation</i></p> <p>There is no stress test programme for determining and testing the sufficiency of liquid resources.</p>

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	<p><i>Same day settlement</i></p> <p>Due to the Sistema LBTR's design, participants cannot default on each other or on the system. Payments are settled on a real-time basis upon availability of the necessary funds. The rules, procedures and operational tools of the Sistema LBTR, including intraday repos, support the continuous and smooth settlement of payments throughout the operational day.</p> <p>All relevant rules and procedures are communicated to participants through system regulations, regulatory circulars and the account contracts.</p> <p><i>Replenishment of liquidity resources</i></p> <p>Not applicable. Sistema LBTR is a same-day settlement system and the liquidity provider for the Sistema LBTR is the Central Bank itself.</p>
Key Conclusions	<p>In its role as operator of the Sistema LBTR, the BCCh is not exposed to liquidity risks, which are borne entirely by system participants. The BCCh nevertheless supports the sound and efficient operation of the system and provides a variety of tools and facilities to promote its smooth operation and avoid a gridlock situation.</p> <p>These tools are also designed to assist participants in managing their liquidity risks. These tools have proved effective so far in reducing liquidity and overall settlement risks, and are monitored on an ongoing basis.</p> <p>As a central bank, the BCCh relies on the powers vested to it by law and on its own operational tools and systems to provide liquidity to participants. Therefore, it does not depend on third-party support to implement any of its relevant actions in this area.</p> <p>The Sistema LBTR does not conduct stress testing given that the BCCh is the provider of the liquidity to the system.</p>
Assessment of Principle 7	Observed.
Recommendations and comments	The BCCh should initiate studies on possible stress scenarios for managing liquidity risks. These scenarios may include indicators or dynamic management tools such as network topology in which the impact of each participant in the entire system is determined.

	<p>The Sistema LBTR could explore the possibility of introducing a differentiated fee schedule, whereby payments submitted earlier in the operational day would be encouraged thus avoiding that participants concentrate their payments towards the end of the day.</p>
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As noted in Principle 1, finality and protection against insolvency in payment systems are not covered at the level of the law; this affects both system's participants and collateral and has a bearing on liquidity risk borne by the participants to the system.

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	<p><i>Point of settlement finality</i></p> <p>The finality and irrevocability of payments or transfer instructions is regulated in Chapters III.H.4 and I III.H.4.1 of the BCCh' CNF, which regulates the Sistema LBTR. According to this regulation, any payment, transfer instruction or other operation indicated in the rules is considered final and irrevocable once the funds have been settled between the participants and the corresponding accounting records in such accounts have been made. Moreover, Chapter III.H.4 states that the signing of the adhesion contract by participants implies acceptance of all rules governing the system.</p> <p>This regulation is supported by articles 3, 35 and 55 of the LOC that gives the BCCh the exclusive power to regulate payment systems. The applicable legal framework for cases of insolvency in banks established in Chile is provided by Title XV of the General Banking Law (<i>Ley General de Bancos</i>, LGB) and Article 65.</p> <p><i>Finality in the case of links</i></p> <p>In the case of transactions involving transfers of financial instruments, finality and irrevocability of transfers according to the principle of delivery versus payment (DVP) is established by Law No. 20.345.</p>
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	<p><i>Final settlement on the value date</i></p> <p>All payment instructions processed through the Sistema LBTR are settled individually and in real time once the system verifies there are sufficient funds in the participant's account. Settlement is continuous throughout the operational day. Information on account balances that is made available to the participants is updated in real time.</p> <p><i>Intraday or real-time final settlement</i></p> <p>Sistema LBTR settles operation in real time.</p>
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	<p>According to CNMF (Chapter III.H.4.1, Titles IV and V), payment instructions sent to the Sistema LBTR that remain in the queue may be withdrawn by participants at the end of the operational day, as these have not yet been accepted for settlement by the system. Payment orders with future value day (seven days) may also be revoked by participants.</p>

	The Sistema LBTR application checks that only those payment instructions satisfying this condition may be withdrawn. Payment instructions that have not been settled by the end of the day are removed automatically by the system.
<i>Key conclusions</i>	The systems rules do contain clear provisions on irrevocability and finality; however, those cannot be fully enforceable given the lack of coverage at the statutory level. (see Principle 1- Legal basis)
<i>Assessment of Principle 8</i>	Broadly observed.
<i>Recommendations and comments</i>	As noted in Principle 1, the issue of finality of payments and protection against insolvency should be addressed at statutory level.

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	The Sistema LBTR settles all payment instructions in the accounts that participants hold at the BCCh.
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	The Sistema LBTR settles all payment instructions in the accounts that participants hold at the BCCh.
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	<p><i>Participant default rules and procedures</i></p> <p>The Sistema LBTR settles payments on a gross basis in real time, so that participants do not suffer from default on each other or against the system as a result of the settlement process. Payment instructions that have not been settled by the end of the operational day are removed from the central processing queue.</p> <p>The BCCh may face exposure to participants as a result of granting the FLI in the event of insufficient funds available to the participant at the time of payment. In these cases, the BCCh may grant an overnight loan (FPL).</p> <p>An overnight operation can be renewed unlimited times. The only limitation is related to the collateral, which should comply with the eligibility criteria set in the BCCh rules (see Principle 5)</p> <p>FLI is regulated through Section II, Chapter 2.1 of the CNF.</p> <p><i>Use of financial resources</i></p> <p>Based on FLI regulations, the BCCh (i) does not face the risk of lack of funds to meet its payment obligations (ii) does not depend on third parties for this purpose, and (iii) does not contribute to participants meeting their own payment obligations.</p>
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	<p>The BCCh is properly prepared from both a regulatory and operational perspective to address any default on intraday repos. The relevant rules are applied automatically with no discretionary procedures.</p> <p>According to current regulations for FLI, the BCCh may revoke a participant's authorization to access intraday liquidity facilities when it commits severe or repeated violations of FLI rules.</p>
Key consideration 3	An FMI should publicly disclose key aspects of its default rules and procedures.
Description	Chapter 2.1 of Title II of the CNF regulates the conditions of FLI and establishes the effects of a participant failing to meet a repo obligation. This regulation is available on the website of the BCCh and is disseminated to the participants of the Sistema LBTR.
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	The Sistema BTR design does not allow for defaults between participants, or between the participants and the BCCh, the only exception being a potential default on the repayment of intraday repos (rev 1).
<i>Key conclusions</i>	Sistema LBTR has effective rules and procedures to manage a participant default.
<i>Assessment of Principle 13</i>	Observed.
<i>Recommendations and comments</i>	

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	<p>The provision of clearing and settlement of payments is one of the main functions of the BCCh. For its risk management the BCCh maintains a Comprehensive Risk Management Policy.</p> <p>The BCCh maintains a policy of charging fees for services offered by the Sistema LBTR which is reviewed annually and allows covering all costs associated with its operation. In addition, the BCCh support the operation of the Sistema LBTR with its financial resources, powers and infrastructure.</p>
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	Not applicable. The Sistema LBTR is supported by the BCCh's total equity or net worth. There is no specific allocation of equity for the Sistema LBTR.
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	<p><i>Recovery or orderly wind-down plan</i></p> <p>Not applicable</p> <p><i>Resources</i></p> <p>Not applicable</p>
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	Not applicable
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	Not applicable
<i>Key conclusions</i>	<p>The provision of clearing and settlement payments services is one of the main functions of the BCCh.</p> <p>For its risk management the BCCh maintains a Comprehensive Risk Management Policy.</p> <p>The BCCh maintains a policy of charging fees for services offered by the Sistema LBTR which is reviewed annually and allows covering all costs associated with its operation. In addition, the BCCh supports the operation of the Sistema LBTR with its full operational and financial powers and infrastructure.</p>
<i>Assessment of Principle 15</i>	Observed.
<i>Recommendations and comments</i>	

Principle 16. Custody and investment risks	
An FMI should safeguard its own and its participants' assets and minimize 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	The BCCh holds its own financial assets in the DCV, which is supervised by SVS. In the case of assets held by the Sistema LBTR - also held in the DCV – these involve only assets received from banks as collateral for FLI operations. The Sistema LBTR does not make investments with the assets transferred under repo operations by other parties.
Key consideration 2	An FMI should have prompt access to its assets and the assets provided by participants, when required.
Description	The DCV guarantees prompt access to BCCh's assets.
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	Not applicable.
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	<i>Investment strategy</i> The BCCh as operator of the Sistema LBTR does not make investments with the assets transferred under repo operations by other parties. <i>Risk characteristics of investments</i> Not applicable.
Key conclusions	The BCCh holds its financial assets and those that have been pledged (repo) by other parties in the DCV, which guarantees safety and prompt access.
Assessment of Principle 16	Observed.
Recommendations and comments	

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

The BCCh has a Comprehensive Risk Management Policy and a BCP that identify the following as possible sources of operational risk:

- SWIFT communications network;
- BCCh Private Network;
- Sistema LBTR;
- SOMA system for Intraday Liquidity Facility (FLI)

The main operational risks that were identified by the BCCh are related to hardware and software problems, and communications networks used by the Sistema LBTR and the SOMA. To address these risks, various business continuity procedures were established aimed to restore the normal service levels or meet a certain level of service. In a case of contingency, participants are required to adhere strictly to the instructions issued by the BCCh, as well as to the procedures indicated in the Rulebook of the Sistema LBTR for such contingency cases.

Contingency processes and operational continuity are defined in Chapters III.H.4 of CNF and in the Rulebook of the Sistema LBTR. The document on the BCP contains a description of the procedures for operational continuity applicable to one or more contingencies that may have an impact on the elements of the Sistema LBTR and the SOMA that are considered critical, specifically in situations that may affect the relationship of the participants with the system in terms of connection, communication, or operation.

Management of operational risk

The GSF is responsible for identifying the risks associated with the Sistema LBTR. Once the risks are identified, they are analyzed to determine the residual risk, i.e., the level of risk remaining after applying the controls.

The assessed risks, the effectiveness of the mitigating measures and the implementation of the action plans are monitored through a process of self-assessment once a year.

All of the documentation associated with the implementation of the comprehensive risk policy, as well as its outcomes are made available in a SharePoint site internal to the BCCh, operated by GGERO and accessible by the relevant units.

	<p><i>Policies, processes and controls</i></p> <p>The operational risk management policy of the BCCh is based on the following commercial standards and best international practices: ISO 22.301 “Societal Security – Business Continuity Management Systems – Requirements”, ISO/IEC 27001:2005, ISO/IEC 27002:2007, Standard ISO 31000 Risk Management – Principles and Guidelines, Standard BS 31100 Risk Management, and “Enterprise Risk Management Framework” of the Committee of Sponsoring Organizations of the Treadway Commission (COSO).</p> <p>Both the methodology underlying the general risk management policy and the operational standards are reviewed periodically to check their validity and to incorporate new elements that are applicable to the BCCh.</p> <p>The BCCh personnel policy governs the human resource allocation to the Sistema LBTR.</p>
Key consideration 2	<p>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.</p>
Description	<p><i>Roles, responsibilities and framework</i></p> <p>The different roles regarding operational risk management have been defined and approved by the BCCh Council in the Comprehensive Risk Management Policy.</p> <p>The Policy establishes the roles of the BCCh Council, the various committees (Technology, Security, Supervision of the Sistema LBTR and Risk), the General Manager, and the operational areas. Quarterly, the General Manager meets with the Risk Committee for the purpose of coordinating the activities of risk monitoring and for determining action plans.</p> <p>The general methodology used for risk management at the BCCh consists in that each area is responsible for identifying, mitigating, and managing the risks that are inherent in the area, using the tools that the BCCh has established for this purpose. Operational risk is managed by each of the relevant managers, with the support of the GGERO. In order to identify and address risks, each area incorporates its processes into a standard risk management matrix designed by the GGERO (See Principle 3) which consists of the following steps:</p> <ol style="list-style-type: none"> 1. Processes 2. Risk identification 3. Analysis and risk assessment 4. Risk management policies 5. Review of measures <p><i>Review, audit and testing</i></p> <p>The Comprehensive Risk Management Policy is reviewed once a year.</p>

	<p>The BCP of all the BCCh systems is audited by both internal and external bodies every year.</p> <p>The Comptroller of the Bank (<i>Contralor</i>), which reports directly to the Board, examines the compliance of the operating cycle of the RTGS system, the existence of an adequate internal control, as well as various aspects of governance, risk management, information and communication.</p>
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	The operational reliability target of the BCCh for the Sistema LBTR is established at 99.80% availability of the system, with systems able to resume operations within 2 hours. The overall risk policy and operational continuity arrangements are intended to promote the achievement of these 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	<p>The Sistema LBTR is designed to settle a volume of up to 50,000 payments a day. Since the observed average daily volume for the first half of 2015 is 1,580 payments with a peak value of 2,410 payments, no problems arising from increased trading volume are anticipated.</p> <p>As part of the technical tests of the system, there are scenarios where thousands of payments are automatically sent to the system to check the response. This excess capacity corroborates the conclusion that the system currently has a high degree of scalability.</p>
Key consideration 5	An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.
Description	<p><i>Physical security</i></p> <p>The Payments Department issued internal procedures which regulate physical access to Sistema LBTR site premises, on the basis of the criticality of the relevant facility. A separate procedure exists for controlling access to computer/data centers.</p> <p><i>Information security</i></p> <p>In the area of information security, both SWIFT and BCCh have security mechanisms for data protection and for controlling access to the Sistema LBTR. The security mechanisms include, among others:</p> <ul style="list-style-type: none"> - Detection of duplicate transfer fund instructions, - Access through workstations browser and duplication of stored information.
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

	<p>end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.</p>
<p>Description</p>	<p><i>Objectives of business continuity plan</i></p> <p>The BCP contains a description of the procedures applicable to one or more contingencies that may have an impact on system's elements that are considered critical, specifically in situations that may affect connections, communications or the system's operation. The document includes specifications regarding the alternate processing site</p> <p><i>Design of business continuity plan</i></p> <p>The BCP is designed to provide a safe, albeit more limited in scale, RTGS functionality to its participants even in very difficult circumstances.</p> <p>While the goal established in the BCP is to resume operations within two hours, there are circumstances that require a strong component of manual operation; this refers to extreme cases where any of the communications networks works.</p> <p>In the occurrence of a disrupting event affecting both the main and the alternate site, the BCCh has a system called <i>Bypass</i> that allows reconstructing the balances of the participants before the moment of failure. The <i>Bypass</i> takes the balances of the participants at the close of the previous day and executes a routine reconciliation with SWIFT messaging to determine the payments that were settled during the day up to the moment of failure. Once the process has been completed (approximately 5 minutes), the system adds the net balances of each participant to the initial balance to determine the final balance. The <i>Bypass</i> system is run daily at the end of the day to verify its operation.</p> <p>According to the BCCh regulation (Chapter III.H.4.1 of the CNF) Participants must tested their contingency plans at least twice a year, having previously communicated to the Central Bank any evidence that could affect its ability to connect to the system.</p> <p><i>Secondary site</i></p> <p>The BCP includes specifications regarding the alternate processing site (<i>Sitio de Procesamiento Alterno - SPA</i>).</p> <p>In the SPA, there is duplicate equipment necessary for the operation of the Sistema LBTR. The SPA has security mechanisms for access control, fire and intrusion alarms, and centralized security monitoring.</p> <p>Communication between processing sites is done through a "<i>backbone</i>" with high availability. Equipment located at the main site also has the redundancy to avoid points of failure, and procedures to ensure continuity of operations in the SPA vis-à-vis major disruptions of the main site.</p> <p><i>Review and testing</i></p> <p>The business continuity plan is tested annually by the GGERO.</p>

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	<p><i>Risks to the FMI's own operations</i></p> <p>The Sistema LBTR regulation states that participants must keep their own contingency plans to ensure business continuity in cases of technical failures in their system and be responsible for ensuring the integrity and resilience of their internal systems related to the Sistema LBTR.</p> <p>In addition, each participant is responsible for putting their own backup plans in place, for physical security, procedures for monitoring their systems, and prevention and detection of fraud.</p> <p>Participants must test their contingency plans at least twice a year and communicate to the BCCh any evidence that could affect their ability to connect to the system.</p> <p>To manage the risks arising from the dependence of the Sistema LBTR on the IT supplier, the BCCh conducts regular conference calls where the problems are reported. Furthermore, all deliverables received from the supplier IT system are rigorously tested before being implemented.</p> <p><i>Risks posed to other FMIs</i></p> <p>For contingency management issues, the Sistema LBTR holds monthly meetings with representatives of the high-value payments clearinghouse (ComBanc), to discuss the general course of operations, the impact of changes in regulations, and coordinating the implementation of the annual test plan of contingency. Similar meetings with representatives of the <i>Depósito Central de Valores S.A. – DCV</i> (the central securities depository), <i>CCLV Contraparte Central S.A – CCLV</i> (the securities settlement system and central counterparty for corporate equities and exchange-traded derivatives, and ComDer (the central counterparty for OTC derivatives) are held.</p>
Key conclusions	<p>The BCCh has a comprehensive operational risk-management framework that includes the Sistema LBTR activities and services. The framework has been approved by the BCCh Council and includes clear roles and responsibilities in relation to operational risk management.</p> <p>Operational reliability objectives for the Sistema LBTR have been defined at the internal level. These objectives have been successfully achieved so far.</p> <p>The Sistema LBTR processing capacity is tested periodically. Recent tests show sufficient excess capacity even during peak hours.</p> <p>As a central bank, the BCCh has developed robust physical and information security policies. These cover the Sistema LBTR.</p> <p>A BCP has been documented which contemplates resuming operations within two hours from a disruptive event.</p>

<i>Assessment of Principle 17</i>	Observed
<i>Recommendations and comments</i>	

<p>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.</p>	
<p>Key consideration 1</p>	<p>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.</p>
<p>Description</p>	<p><i>Participation criteria and requirements</i></p> <p>Banks authorized and supervised by the SBIF that meet the operational and risk management requirements stated in regulation III.H.4.1 of the CNF can be participants in the Sistema LBTR. Banks should have an account in national currency at the BCCh.</p> <p>The “<i>Sociedades Administradoras</i>” governed by Law No. 20.345 may also be participants provided that they comply with the regulation III.H.4.1 and maintain an account in the BCCh. The use of that account will have the sole purpose of settlement of net balances of the clearing and settlement of financial instruments to be made through the Sistema LBTR. The “<i>Sociedades Administradoras</i>” do not have access to FLI by the BCCh.</p> <p>Based on art. 55 of the Organic Law of the Central Bank of Chile and art. 3 of Law No. 20.345, Central Bank current account services are restricted to banks and <i>sociedades administradoras</i>.</p> <p>The status of participants in the system is obtained after the approval of the BCCh and signing the contract.</p> <p>Currently there are 25 participants, 23 of which are banks and 2 are <i>Sociedades Administradoras</i> (CCLV and ComDer). Indirect participants are not allowed in the system.</p> <p><i>Access to trade repositories</i></p> <p>Not applicable.</p>
<p>Key consideration 2</p>	<p>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.</p>
<p>Description</p>	<p><i>Justification and rationale of participation criteria</i></p> <p>According to the BCCh, the criteria that define the type of institution that can be participant of the system are based on the objective of the Central Bank to ensure the normal functioning of internal and external payments. In that context, the regulation of the payment system aims to ensure that its operation meets high standards for safety and efficiency, focusing on the mitigation of risks involved: a) credit risk or counterparty, b) liquidity risks, c) operational risks arising from technical failures or operational errors, and d) legal risks associated with legal uncertainty.</p> <p>According to the BCCh analysis the only institutions that meet these conditions of risk management are banks supervised by the SBIF and</p>

	<p><i>Sociedades Administradoras</i> under the Law No. 20.345 and supervised by the SVS.</p> <p><i>Least restrictive access</i></p> <p>These requirements are identical for the different types of institutions within the same class.</p> <p><i>Disclosure of criteria</i></p> <p>The relevant regulations are available to the general public at the BCCh's website:</p> <ul style="list-style-type: none"> - Chapter III.H.4 CNF - Chapter III.H.4.1 CNF - Chapter 2.1 and 4.1 of the CNF - FLI Rulebook
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	<p><i>Monitoring compliance</i></p> <p>The SVS supervises the <i>Sociedades Administradoras</i> governed by Law No. 20.345 and the SBIF supervises banks under the Banking Law (LGB).</p> <p>Additionally, the BCCh monitors the compliance of the requirements to be participant of the system. If the requirements are not met, the Central Bank can revoke the authorization to a participant and close the respective account.</p> <p><i>Suspension and orderly exit</i></p> <p>Regulation III.H.4.1 defines the conditions under which a participant can be suspended or revoked:</p> <ul style="list-style-type: none"> (i) During operation hours, the BCCh may temporarily suspend a participant in the Sistema LBTR when it presents problems or technical malfunctions that may affect its ability to connect, communicate or the normal operation of the system. (ii) Also, the BCCh may suspend for a period of up to 90 days any participant of the Sistema LBTR that does not comply with the Rulebook or has repeatedly experienced problems or technical failures that affect its ability to connect or communicate. In these cases, the BCCh communicates this decision beforehand to the SBIF, in the case of a bank participant, or the SVS in the case of <i>Sociedades Administradoras</i>.
Key Conclusions	<p>Only banks and <i>Sociedades Administradoras</i> are admitted to the Sistema LBTR. Participation in the system does reflect risk-based considerations in the sense that banks must meet certain operational and risk-management requirements.</p> <p>Any restrictions to participation – including by law – should be justified in terms of the safety and efficiency of the system, and result in the least-</p>

	<p>restrictive impact on access, provided that certain risk control standards are met. It is worth noting that financial cooperatives, securities brokers-dealers, and insurance companies – among other non-bank institutions – are subject to supervision.</p> <p>It is understood that any modifications to the access criteria that broaden system participation beyond banks and <i>Sociedades Administradoras</i> require changes in the underlying the legal framework.</p>
<i>Assessment of principle 18</i>	Broadly observed.
<i>Recommendations and comments</i>	The BCCh should consider the risks that new prospective participants may pose to the system should this be open beyond banks, and assess market needs. On the basis of this analysis, the BCCh and the Ministry of Finance should evaluate whether to lift the current barrier (including legal barriers) to entry for non-banks.

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	<p><i>Tiered participation arrangements</i></p> <p>The Sistema LBTR only allows direct participants. Only (i) commercial banks authorized and supervised by the SBIF and (ii) <i>Sociedades Administradoras</i> under the Law No. 20.345 and supervised by the SVS can be participants in the system.</p> <p><i>Risks to the FMI</i></p> <p>The Sistema LBTR has only direct participants, no risks arising from indirect participants.</p>
Key consideration 2	An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.
Description	There are no indirect participants in the Sistema LBTR
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	There are no indirect participants in the Sistema LBTR
Key consideration 4	An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.
Description	There are no indirect participants in the Sistema LBTR
Key conclusions	There are no indirect participants in the Sistema LBTR
Assessment of Principle 19	Not applicable
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	The Sistema LBTR design and operation are based on best practices and international standards, including real time gross settlement, and a variety of liquidity facilities management and optimization mechanisms.
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	<p>The objective of the LBTR system are to operate with the highest standards of safety and efficiency. Objectives are reviewed annually by the Council.</p> <p>The BCCh has assessment methodologies that include measurable and achievable parameters. The only parameter which is publicly disclosed regards the system's availability which should be 99.8%.</p> <p>The Sistema LBTR is self-sustainable given the fee policy that applies to all participants.</p>
Key consideration 3	An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.
Description	<p>The Sistema LBTR Supervision Committee measures the efficiency and effectiveness of the system on a quarterly basis.</p> <p>The Sistema LBTR management has parameters for its internal use, allowing to measure levels of efficiency, including value and volume of payments processed, processing time, failure to settle, failure in connections and networks, extension of the settlement cycle, switching to external site, and time to process a FLI. Current measurements of these parameters are compared with historic data.</p>
Key conclusions	The Sistema LBTR is efficient from both an operational and financial perspectives.
Assessment of Principle 21	Observed.
Recommendations and comments	

<p>Principle 22: Communication procedures and standards</p> <p>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.</p>	
Key consideration 1	An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.
Description	<p><i>Communication procedures and standards</i></p> <p>The Sistema LBTR uses internationally accepted communication procedures.</p> <p>Communication protocols between participants and the system are based on internationally accepted communication procedures. For the purposes of sending funds transfer instructions, the BCCh has established the use of SWIFT FIN Copy service in mode "Y".</p> <p>Communications between the Sistema LBTR and the participants, for the purpose of inquiries or reports, can be channeled through the SWIFT network or the private communication network of the Central Bank (SINACOFI).</p> <p>The Sistema LBTR is not currently engaging in cross-border operations.</p>
Key conclusions	The Sistema LBTR communication protocols are based on international standards.
Assessment of Principle 22	Observed.
Recommendations and comments	

<p>Principle 23: Disclosure of rules, key procedures, and market data</p> <p>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.</p>	
<p>Key consideration 1</p>	<p>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.</p>
<p>Description</p>	<p><i>Rules and procedures</i></p> <p>The rules, regulations and contracts associated with the Sistema LBTR are posted on the website of the BCCh. These include:</p> <ul style="list-style-type: none"> (i) Sistema LBTR (Chapter III.H.4 of the CNF) (ii) Rulebook of Sistema LBTR (Chapter III.H.4.1 of the CNF) (iii) Business Continuity Plan (Circular No. 553 and Law No. 20.345) (iv) Participant Adhesion Contract (Circular No.458 and No. 435) (v) Intraday Liquidity Facilities- FLI (Chapter 2 of the CNF and FLI Rulebook) <p><i>Disclosure</i></p> <p>The rules and regulations are posted on the website of the BCCh.</p> <p>If rules modifications directly affect the system’s participants or their contracts, the BCCh also informs the participants through formal letter.</p> <p>The BCCh receives enquiries and/or consultations about the Sistema LBTR via phone; these are attended by the staff of the Sistema LBTR. So far, a few enquiries on rules and procedures have been received.</p>
<p>Key consideration 2</p>	<p>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.</p>
<p>Description</p>	<p>Chapter III.H.4, III.H.4.1 of the CNF are the basic regulations of the Sistema LBTR , as they include the system’s design and operations, technical requirements and participants’ rights and obligations. These and all other relevant regulatory documents are available at the website of the BCCh.</p> <p>Additionally, the document “<i>Gestión de Pagos de Alto Valor del Banco Central de Chile – 2012</i>” offers a detailed description of the state of development and the basic conditions of operation of the Sistema LBTR, along with identifying the risks to which it is exposed and the main mechanisms used to mitigate them.</p> <p>Also, since 2007 the Bank's Annual Report has been providing information on the operation of the Sistema LBTR. All these documents are available on the website.</p>
<p>Key consideration 3</p>	<p>An FMI should provide all necessary and appropriate documentation and training to facilitate participants’ understanding of the FMI’s</p>

	rules and procedures and the risks they face from participating in the FMI.
Description	<p>The rules and procedures for participation are clearly specified in the regulations and contracts and allow participants to identify the risks associated with their participation.</p> <p>When the BCCh makes any changes to the regulations that can affect the design or other technical aspects of the Sistema LBTR, it tests the preparedness of the system's participants. . The BCCh conducts training for new participants regarding the rules and procedures of the Sistema LBTR</p>
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	<p>The system's pricing policy is outlined in Chapter III.H.4 of the CNF. The regulations stipulate that the pricing policy of the services provided by the Sistema LBTR is intended to cover the costs associated with its operations and maintenance. These include:</p> <ul style="list-style-type: none"> (i) Opportunity cost of the resources invested in the initial establishment of the system and the expenses incurred in subsequent improvements; (ii) Costs associated with the operation and maintenance of the system, according to existing contracts, including hardware and software support, networking and connectivity contracts and wages of personnel directly involved in the operation and maintenance, and (iii) Depreciation of the platform on which the communications network SWIFT and the Sistema LBTR itself work. <p>The pricing policy is revised annually to make corresponding adjustments. The current fee structure is broken down into two components: a fixed monthly charge and a variable charge depending on the number of transactions settled in the system.</p> <p>There is no entrance fee for new participant or annual fees. The BCCh does not apply ad hoc fees for specific services such as employment rates for participants, test environment and training, and monthly statements balance, among others.</p>
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	<p>The BCCh did not complete the CPSS-IOSCO Disclosure Framework.</p> <p>The BCCh has prepared a self-assessment using the Assessment Methodology of the Principles for Financial Market Infrastructures, but</p>

	<p>this document is not disclosed to the public. Nevertheless, the BCCh is working on completing this document which should be available in 2016.</p> <p>Disclosure of Sistema LBTR basic data is done through the BCCh website together with other data related to the national payments system. (http://www.bcentral.cl/es/faces/ofinanciaras/sistemaspagos2)</p> <p>The BCCh also publishes payment system information in the financial stability report every six months and in the annual report of the central bank.</p>
<i>Key conclusions</i>	<p>The Sistema LBTR operates transparently. Its rules and procedures are clear and comprehensive and are fully disclosed to both the participants and to the general public. However, there is no formal information procedure for participants and/or a dedicated forum that would allow analyzing the implications of any regulation before these are approved.</p> <p>The Sistema LBTR has not yet completed and disclosed publicly its responses to the Disclose Framework for Financial Market Infrastructures.</p>
<i>Assessment of Principle 23</i>	Broadly observed.
<i>Recommendations and comments</i>	Sistema LBTR should complete the Disclosure Framework for Financial Market Infrastructures and make it available to the general public through its website or other proper means.