



NEW ZEALAND

FINANCIAL SECTOR ASSESSMENT PROGRAM

TECHNICAL NOTE—REGULATION AND OVERSIGHT OF FINANCIAL MARKET INFRASTRUCTURES

May 2017

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REGULATION AND OVERSIGHT OF FINANCIAL MARKET
INFRASTRUCTURES

Prepared By
**Monetary and Capital Markets
Department**

This Technical Note was prepared by Froukelien Wendt, Senior Financial Sector Expert in the IMF Monetary and Capital Markets Department, in the context of an IMF Financial Sector Assessment Program (FSAP) in New Zealand. It contains technical analysis and detailed information underpinning the FSAP's findings and recommendations. Further information on the FSAP program can be found at <http://www.imf.org/external/np/fsap/fssa.aspx>

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Glossary

ASX	Australian Securities Exchange
ASIC	Australian Securities and Investments Commission
CCP	Central Counterparty
CLS	Continuous Linked Settlement
CMG	Crisis Management Group
CPMI	Committee on Payments and Market Infrastructures
CPSS	Committee on Payment and Settlement Systems
CSD	Central Securities Depository
CSP	Critical Service Provider
DSS1	Policy document 'Designation and Oversight of Designated Settlement Systems'
DTCC	The Depository Trust and Clearing Corporation
ESAS	Exchange Settlement Account System
EU	European Union
FMA	Financial Markets Authority
FMCA	Financial Markets Conduct Act 2013
FMI	Financial Market Infrastructure
FMI1	Policy document 'Oversight of Financial Market Infrastructures in New Zealand'
FSB	Financial Stability Board
HVCS	High Value Clearing System
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
IRS	Interest Rate Swap
LCH	London Clearing House
MOU	Memorandum of Understanding
NZD	New Zealand Dollar
NZX	New Zealand Exchange
NZCDC	New Zealand Clearing and Depository Corporation
PFMI	CPSS-IOSCO Principles for Financial Market Infrastructures
PNZ	Payments New Zealand
OBR	Open Bank Resolution
OTC	Over the Counter
RBA	Reserve Bank of Australia
RBNZ	Reserve Bank of New Zealand
RBNZA	Reserve Bank of New Zealand Act 1989
RTGS	Real Time Gross Settlement
SBI	Settlement Before Interchange
SSS	Securities Settlement System
SWIFT	Society for Worldwide Interbank Financial Telecommunications
TR	Trade Repository
PFMI	CPSS-IOSCO Principles for Financial Market Infrastructures
DVP	Daily Versus Payment

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CECS	Consumer Electronic Clearing System
PCS	Paper Clearing System

EXECUTIVE SUMMARY

The regulatory and oversight framework for Financial Market Infrastructures (FMIs) in New Zealand is undergoing a major reform. The Reserve Bank of New Zealand (RBNZ) and the Financial Markets Authority (FMA) currently lack sufficient legal powers to identify and address risks building up in FMIs, partly because the regime is voluntary and the authorities do not have the appropriate toolkit to pursue their oversight objectives. This may give rise to negative externalities as the interests of members and shareholders of FMIs are not necessarily aligned with public interest objectives. Recognizing the shortcomings of the current regime, the authorities are proposing to develop a new regime. These reforms have been consulted on with industry during recent years.

The proposed reforms will bring New Zealand broadly on par with international standards. The proposed regime will provide the authorities with the legal basis for the oversight of all systemically important FMIs and with a graduated range of enforcement powers that enables them to induce change if needed. In addition, the authorities will receive crisis management and regulatory powers, providing the basis for FMIs to be assessed against the relevant international standards (the Committee on Payments and Settlement Systems (CPSS-IOSCO) Principles for Financial Market Infrastructures (PFMI)). However, planned oversight resources are very limited, which may hamper the use of the new regime to its full potential.

It is recommended that supervisory practices be formalized and staff resources increased. Although the quality of the oversight staff is high, the low number of staff results in an ‘ad hoc’ approach. Unlike oversight practices abroad, staff do not conduct supervisory standard assessments. As a result, the disclosure of self-assessments by FMIs may not necessarily reflect all relevant information for members to assess the risks of using the FMI. Staff have limited time for the analysis of broader themes that are relevant for financial stability, such as cyber resilience of FMIs, crisis management arrangements, and risks related to the use of overseas FMIs. Thus, significantly stepping up resources is key. Practices in other central banks may serve as a guideline.

It is also recommended that the PFMI be adopted in secondary legislation to provide for a transparent set of requirements. Detailed requirements support FMIs, their owners, and operators, in understanding oversight expectations and provide guidance in the drafting of public self-assessments. These detailed requirements also provide transparency to the industry and allow for a consistent implementation of international standards among all systemically important FMIs.

The role of the FMA should be further clarified. The cooperation between the RBNZ and FMA is effective and the authorities manage to ‘speak with one voice.’ How the FMA brings the market conduct perspective into the oversight of FMIs is, however, not clearly disclosed. A further translation of the authorities’ mandates into day to day oversight will increase the transparency of the oversight arrangements and the accountability of authorities. The FMA is encouraged to publicly disclose on its website its role and responsibilities in relation to the oversight of domestic and foreign FMIs.

Crisis management arrangements could be fine-tuned to address the specific features of FMI resolution. The proposed crisis management regime is broadly in line with the Key Attributes of the Financial Stability Board (FSB) and the statutory management regime combines various tools for the resolution of FMIs. As proposed, future legislation should include the specific objective of ensuring the continuation of critical operations of the FMI. Other specific matters that should be included are, for example, that a moratorium on payments would not apply to the ordinary flow of payments and settlements processed by a FMI and the need for continued application of the laws and contracts to ensure the finality of transactions, risk management arrangements, and other legal protections. The RBNZ could in addition pursue ways to protect assets of a FMI kept in bank accounts during a crisis.

It is recommended that crisis management arrangements also cover broader system wide risks, given the interdependencies of FMIs with their members and the broader financial system.

Crisis management arrangements may include an operational communication platform between New Zealand authorities and the industry. Such an arrangement could be tested, for example, as part of a future contingency test of the Trans-Tasman Council on Banking Supervision, with scenarios that include FMIs. It is also recommended that the RBNZ analyzes the exposure of New Zealand banks to global derivatives markets and foreign FMIs and takes action to promote the stability of the financial system, if needed. For that purpose, it should analyze the potential impact of recovery and resolution planning for foreign FMIs on New Zealand's banks. The RBNZ can take action as a member of cross-border cooperative arrangements, such as the oversight committees for CLS and LCH.Clearnet Ltd and through cooperation arrangements with the Australian authorities regarding ASX Clear (Futures).

Table 1. New Zealand: Recommendations for FMI Supervision and Crisis Management		
	Timing	Authorities
Recommendations for the oversight of FMIs		
Pursue the adoption and implementation of the proposed legislation to improve the regulation and oversight of FMIs in New Zealand.	ST	RBNZ, FMA, Treasury
Adopt the PFMI through detailed requirements in secondary legislation (paragraph 14).	MT	RBNZ, FMA
Formalize supervisory practices, in particular by conducting standard assessments, and regular monitoring of the FMI landscape (paragraph 17).	MT	RBNZ, FMA
Increase resources significantly (paragraphs 21, 22).	MT	RBNZ, FMA
Adapt the existing memorandum of understanding (MOU) between the RBNZ and Treasury by including FMIs, clearly stating the roles of each organization, and harmonizing cooperation between the authorities for the different types of supervised entities (paragraph 15).	ST	RBNZ, Treasury
Change, in the proposed regime, the frequency of FMI self-assessments from three to two years (paragraph 18).	ST	RBNZ, FMA
Publicly disclose oversight responsibilities and policies (paragraph 24).	ST	FMA
Enhance compliance of designated FMIs with PFMI requirements (paragraph 26).	MT	RBNZ, FMA
Translate mandates into day to day oversight responsibilities (paragraph 29).	ST	RBNZ, FMA
Streamline cooperation arrangements with Australian authorities (paragraph 31).	ST	RBNZ, FMA
Develop and publish formal policy for oversight of foreign FMIs (paragraph 32).	ST	RBNZ, FMA
Recommendations for crisis management and interdependencies		
Broaden the use of crisis management powers beyond a failure in business continuity plans / recovery and orderly winding down plans (paragraph 36).	ST	RBNZ, FMA
Reflect specific features of FMI resolution in the proposed legislation for FMI crisis management (paragraph 37).	ST	RBNZ, FMA
Pursue protection for assets of FMIs in bank accounts during crisis (paragraphs 41, 42).	MT	RBNZ
Establish and test an operational crisis management framework (paragraphs 43, 44).	MT	RBNZ, FMA
Analyze exposures to OTC derivatives market and foreign CCPs (paragraph 47).	ST	RBNZ, FMA

INTRODUCTION¹

1. FMIs are systemically important due to the central role they play in interbank, money, and capital markets.² FMIs provide the central infrastructure (comprised of institutions, rules, procedures, risk management frameworks, and technical platforms) to clear and settle payments, securities, and derivatives transactions and therefore lay at the core of the functioning of a sound financial system. If FMIs are not properly managed they can be sources of financial shocks and may potentially have a negative impact on economic and financial stability. For example, the failure of one of the payment systems or securities settlement systems can result, not only in losses spreading through the system, but also in an ineffective implementation of monetary policy and a loss of confidence in the financial system.

2. The regulation and oversight of FMIs in New Zealand is subject to important reforms. The RBNZ, in consultation with the FMA, is in the process of developing a new legislative framework for FMIs. The authorities have conducted several rounds of consultation since 2013. In addition, a consultation paper on crisis management of FMIs was issued early 2016. Subject to Cabinet approval, the results of the consultation process will result in new legislation that will replace the current regulatory regime. It is expected that the new legislation would come into effect sometime in 2018.

3. The main objective of this note is to analyze the proposed regulation and oversight regime for FMIs in New Zealand from a systemic risk perspective, using international standards and good practices. It analyzes the ability of the new regime to identify and manage vulnerabilities related to FMIs which may potentially impact on financial stability and to benchmark the regime against regimes in other developed markets. The note focuses on:

- a. Regulation and oversight of FMIs, including the regulatory framework, supervisory powers and practices, available resources, transparency, adoption of international standards and coordination and cooperation mechanisms among domestic and international authorities.
- b. Crisis management arrangements for individual FMIs as well as for system wide interdependencies. Crisis management arrangements for individual FMIs include recovery and resolution arrangements. In addition, given the high interconnectedness of FMIs and their members, crisis management arrangements may include mechanisms for the monitoring of system-wide interdependencies that may exacerbate a crisis and impact financial stability in New Zealand.

¹ The analysis in this technical note was based on information provided by the authorities, publicly available information, including self-assessments of New Zealand FMIs, as well as discussions with the RBNZ, FMA, Exchange Settlement Account System (ESAS), NZClear, New Zealand Clearing and Depository Corporation (NZCDC), PaymentNZ, banks, and other financial institutions. In addition, the assessor met with the Reserve Bank of Australia, and the Australian Securities and Investments Commission (ASIC), and ASX Clear (Futures). Excellent support was provided by Ben Huston, Research Assistant at MCM.

² See Introduction to the CPSS-IOSCO Principles for Financial Market Infrastructures (PFMI), April 2012. FMIs cover payment systems, securities settlement systems (SSS), central securities depositories (CSDs), central counterparties (CCPs), and trade repositories.

4. Recommendations in this note are based on the international agreed standards for FMIs, i.e., the PFMI. The analysis of the supervision of FMIs takes the five responsibilities for authorities of the PFMI as reference (Box 1). The note also takes into account guidance prepared by the FSB, and CPMI-IOSCO (Committee on Payments and Market Infrastructures) on resolution and recovery of FMIs, respectively.

Box 1. The Five Responsibilities of the PFMI

Responsibility A: Regulation, Supervision, and Oversight of FMIs

FMIs should be subject to appropriate and effective regulation, supervision, and oversight by a central bank, market regulator, or other relevant authority.

Responsibility B: Regulatory, Supervisory, and Oversight Powers and Resources

Central banks, market regulators, and other relevant authorities should have the powers and resources to carry out effectively their responsibilities in regulating, supervising, and overseeing FMIs.

Responsibility C: Disclosure of Policies with Respect to FMIs

Central banks, market regulators, and other relevant authorities should clearly define and disclose their regulatory, supervisory, and oversight policies with respect to FMIs.

Responsibility D: Application of the Principles for FMIs

Central banks, market regulators, and other relevant authorities should adopt the PFMI and apply them consistently.

Responsibility E: Cooperation with Other Authorities

Central banks, market regulators, and other relevant authorities should cooperate with each other, both domestically and internationally, as appropriate, in promoting the safety and efficiency of FMIs.

Source: CPSS IOSCO Principles for Financial Market Infrastructures, April 2012.

DESCRIPTION OF FINANCIAL MARKET INFRASTRUCTURES IN NEW ZEALAND

A. Overview of Financial Market Infrastructures

5. In New Zealand, several domestic FMIs can be considered of systemic relevance.

Commonly used indicators for an FMI's systemic importance are its size, interconnectedness, substitutability, and unique functions, such as facilitating monetary operations and collateral management. Table 2 contains a description per indicator for every FMI located in New Zealand. Furthermore, Appendix I provides a picture of the FMI landscape in New Zealand, illustrating the different interconnections, whereas Appendix 2 presents detailed statistics. Domestic systems are:

- a. **ESAS.** This is the real time gross settlement (RTGS) system, operated by the RBNZ, settling both large value and retail payments. ESAS settles each payment irrevocably and with finality. It is the backbone of the New Zealand financial system, providing ultimate settlement for transactions cleared by other FMIs, such as Continuous Linked Settlement (CLS), Settlement Before Interchange (SBI), High Value Clearing System (HVCS), and the securities settlement systems of NZClear and NZCDC. ESAS also hosts the reserve accounts of banks and provides

the mechanism for RBNZ's liquidity provision and monetary policy operations. In 2015 the average daily value of payments settled by ESAS was around 30 billion New Zealand Dollars (NZD), equivalent to 12 percent of GDP. By end-2015 ESAS had 19 members.

- b. **NZClear.** This is the SSS and CSD for a broad range of fixed interest securities and equities that are issued in New Zealand. It is owned and operated by the RBNZ. NZClear supports a Delivery versus Payment (DVP) model 1 settlement, with cash settlement in ESAS. NZClear links to the two main securities registrars Computershare and Link and settles a daily average of 7 billion NZD, representing nearly 1,800 transactions. By the end of 2015, NZClear had 128 members.
- c. **NZCDC** clears and settles all transactions that are conducted on the markets of the New Zealand Exchange (NZX). NZX is a limited liability company and the only licensed market operator in New Zealand, operating securities markets and a derivatives market.³ As of November 2014, NZX had a total of 258 listed securities with a combined market capitalization of 94 billion NZD. NZCDC is fully owned by NZX and operates an SSS, a CSD, and a CCP for the securities and derivatives markets. In 2015, the average daily value of securities transactions was 85 million NZD and derivatives transactions 900 thousand NZD. NZCDC had 20 members, of which 15 were clearing members. For 2015 the average size of initial margin collected was 25 million NZD equivalent; the size of the default fund was 20 million NZD, which consists fully of NZX capital.
- d. **SBI.** This is a retail payment system, consisting of a set of rules governing the exchange via SWIFT files of retail transactions. The net value of those files is settled in ESAS. SBI is operated by Payments New Zealand (PNZ). It is a multilateral set of arrangements between members covering rules and risk management procedures. It differs from a typical FMI as it does not provide a technical platform. In 2015, the average daily transaction value was 3.6 billion NZD, representing more than 2 million transactions. At the end of 2015, the SBI had 8 participants. This number is increasing, with membership being extended to non-shareholders of the PNZ.
- e. **HVCS.** It is a system to clear high value transactions between banks and customers. Similar to SBI, HVCS is operated by PNZ and consists of a set of rules governing SWIFT message instructions in ESAS and does not provide a technical infrastructure. In 2015, the average daily transaction value was 3.6 billion NZD, representing more than 2 million transactions. At the end of 2015, the HVCS had 13 participants.

³ In December 2002, NZX became a limited liability company, following a vote of member firms in favor of demutualization. Since June 2003, NZX's securities are listed on its main equity market.

Table 2. New Zealand: Systemic Indicators for FMIs

	ESAS	NZClear	NZCDC	SBI	HVCS
Size of daily settlement value 2015 (percent of GDP)	30 billion NZD (12 percent)	7 billion NZD (3 percent)	Securities: 85 million NZD; derivatives: 900,000 NZD (<0.5 percent)	3.6 billion NZD (1.4 percent)	24 billion NZD (9.8 percent)
Interconnectedness financial institutions	19 direct members, indirectly serving most financial and nonfinancial institutions	128 direct members, indirectly serving other financial and nonfinancial institutions	5–8 direct members (depends on service) and indirectly serving other financial and nonfinancial institutions	8 direct members, indirectly serving households, corporates and financial institutions	13 direct members, indirectly serving households, corporates and financial institutions
Critical to other FMIs	Critical to NZClear, SBI, HVCS, CLS	-	CCP depends CSD within NZX Group	-	
Substitutability	Commercial banks	NZCDC	NZClear	HVCS	SBI
Types of markets served	All interbank transactions	Bond and equity markets	Equity and derivatives markets	Interbank settlement retail trades	Interbank settlements
Other critical functions	Critical for monetary policy operations	Critical for monetary policy operations and collateral management	Relevant for collateral management	-	Settlements for housing market

6. An important player in the payments area is PNZ. PNZ, a legal entity established in 2010, is jointly owned by eight banks (ANZ, Westpac, BNZ, ASB, Kiwibank, TSB, HSBC, and Citibank) and operates with a staff of 15. It acts as an industry association, as well as payment system operator, setting the standards, and managing the membership of the SBI and HVCS. Its standard setting role also includes other, less systemic, payment systems, such as the Consumer Electronic Clearing System (CECS) and Paper Clearing System (PCS). In addition, it leads the Payments Direction project, developing views and identifying objectives for future development of the New Zealand payment system.

7. The functioning of the economy in New Zealand is increasingly dependent on FMIs that are operated abroad. Except for CLS, this increase is a direct consequence of the G20 mandate to clear standardized over the counter (OTC) derivatives through CCPs and report derivatives transactions to trade repositories. Although New Zealand is not a G20 member, and has not mandated central clearing, overseas legislation impinges on the activity of the larger New Zealand banks. Indeed, many of the derivative counterparties of New Zealand banks are required to centrally clear and so New Zealand banks are ensuring that they have the same capability. The following foreign FMIs are relevant for the New Zealand economy:

- a. **CLS.** This is a global multi-currency settlement system that aims to eliminate foreign exchange settlement risk due to time-zone differences. The CLS settlement service, provided by CLS Bank, allows both legs of a FX trade submitted by members to be settled simultaneously across the books of CLS Bank, thus eliminating principal risk, while guaranteeing finality of the settlements. It settles transactions in 18 currencies, including the NZD.
- b. **LCH.Clearnet Ltd.** This is a CCP based in the United Kingdom and operates Swapclear, the world's largest CCP service for the clearing of OTC interest rate swaps (IRS). The largest four New Zealand banks are increasingly using LCH.Clearnet Ltd for the clearing of NZD IRS, currently as indirect members but some potentially as direct members. Swapclear's total notional outstanding amount in NZD derivatives was 2.8 trillion NZD, as of 30 June 2015, representing about 63 percent of the NZD IRS market and 93 percent of NZD forward rate agreements.
- c. **ASX Clear (Futures).** It is an Australia based CCP and provider of clearing services in NZD interest rate futures, including 90-day bank bill futures, 3-year and 10-year Government Bonds, and New Zealand energy futures and options traded on the ASX24 market. Contracts are both exchange-traded as well as OTC. Several New Zealand banks are indirect participants and access ASX Clear Futures through international investment banks to clear NZD futures.
- d. **DTCC Singapore.** It is a trade repository where major New Zealand banks are reporting OTC derivative transactions, under Australian reporting rules and in line with G20 requirements.

Overview of the supervisory and oversight framework

8. The authorities responsible for the regulation and oversight of FMIs are the RBNZ and the FMA. The RBNZ is currently the responsible regulator for designated payment systems, i.e., ESAS, and other payment systems. The RBNZ and FMA jointly oversee securities systems that are not pure payment systems, i.e., NZClear and NZCDC. The RBNZ also monitors smaller payment systems as part of its day-to-day oversight. In 2013/2014, the RBNZ conducted a survey of the retail payment sector in New Zealand that enabled the RBNZ to assess the relative importance of various retail payment instruments. The proposed regime will maintain this allocation of responsibilities. Table 3 provides a summary of the responsible authority per FMI.

9. The oversight and supervision of FMIs is based on statutory laws. The Reserve Bank of New Zealand Act 1989 (RBNZA) provides that the RBNZ is responsible, among others, for promoting the maintenance of a sound and efficient financial system. The Financial Market Conduct Act (FMCA) contains the main objective of the FMA, which is to promote and facilitate the development of fair, efficient, and transparent financial markets. The RBNZA also contains provisions on the oversight of payments and settlement systems. Part 5B 'Oversight of Payment Systems' specifies the oversight powers of the RBNZ on payment systems and requirements for payment systems. Part 5C 'Designation Regime' governs oversight powers of the RBNZ and FMA on designated settlement systems and specifies requirements for these systems. Additional policies, standards and conditions are specified in two policy documents issued in March 2015, which are the "Oversight of Financial

Market Infrastructures in New Zealand” (FMI1) and the “Designation and Oversight of Designated Settlement Systems” (DSS1). Appendix 3 provides a comprehensive list of applicable laws per FMI and the authorities involved. The proposed regime will replace Part 5B and 5C of the RBNZA and will require modifications of the FMI1 and DSS1 documents.

Table 3. New Zealand: Overview of Responsible Authority per FMI

	RBNZ	RBNZ and FMA	FMA
Designated settlement systems (RBNZA Part 5C)	ESAS, CLS	NZClear, NZCDC	-
Non-designated systems	SBI, HVCS, other payment system operators and payment service providers (RBNZA Part 5B)	-	ASX Clear (Futures) (license ASX24) *
*The FMA has an indirect oversight over ASX Clear (Futures) Limited due to the requirements in the ASX market operator license that was issued by the FMA. The license states that the ASX must maintain its existing clearing and settlement facilities and notify the FMA of any proposed amendments to the rules and procedures.			

ANALYSIS OF SELECTED ISSUES

A. Oversight of FMIs

10. This section analyzes to what extent the current and proposed supervisory frameworks for FMIs are in line with the five responsibilities of the PFMI. The objective is to assess the authorities’ plan to revamp the supervisory framework, benchmark it against international standards and analyze whether there are any gaps that enable the buildup of systemic risk. Recommendations are made to further mitigate risks to financial stability and align the framework with international standards, taking into account the three pillars of the supervisory philosophy in New Zealand: i.e., self-discipline of financial entities, disclosure of key information to enable market discipline, and regulatory discipline through rule setting and requirements.⁴

Regulation, oversight, powers, and resources (Responsibilities A and B)

11. The setup of the current regulatory regime for FMIs leaves room for systemic risks to build up within FMIs. In particular:

- a. Section 1A of the RBNZA provides that the RBNZ is responsible for promoting the maintenance of a sound and efficient financial system. That gives the RBNZ an interest in the functioning of all FMIs. However, the current legislation provides only limited powers relating to FMIs. Although the current RBNZA prescribes that the RBNZ can require information to be provided by payment systems, and the RBNZ and FMA jointly administer the voluntary designation regime for settlement systems, there are no explicit powers relating to the

⁴ See ‘New Zealand’s evolving approach to prudential supervision’, speech by Toby Fiennes, September 1, 2016.

oversight of CCPs that are not part of a designated settlement system and of trade repositories. As a consequence, authorities have limited legal backing to engage formally in the oversight of foreign CCPs to identify and mitigate any potential risks that may harm New Zealand interests.

- b. The current regime is not mandatory. Certain important FMIs, i.e., SBI and HVCS, have chosen not to be designated. Authorities also lack the legal backing to induce change where necessary to mitigate systemic risks.
- c. Enforcement powers are very limited. Although the authorities have powers to require information to be provided by payment systems (RBNZA Part 5B) and designated systems (RBNZA Part 5C), powers to induce change for non-designated systems basically consist of moral suasion, which may take a long time and have proven to be less effective in the past.⁵ Enforcement powers for designated settlement systems are stronger, because the authorities may recommend the designation be subject to conditions, seek changes to those conditions, and disallow changes to the system's rules. However, there is a lack of a graduated range of oversight powers and there are no crisis management powers. Even so, non-compliance of a designated FMI with the designation conditions is not in itself an offence. Ultimately, the joint regulators can revoke a designation to deal with non-compliance, but they lack other "softer" powers to remedy the deficiencies.
- d. The authorities do not have regulatory powers, meaning that they cannot impose any detailed technical requirements on FMIs, other than the more general requirements in the RBNZA and the designation conditions, which differ per FMI. Therefore, although the authorities adopted the PFMI,⁶ these standards cannot effectively be imposed, nor consistently implemented across all systemically important FMIs.

12. Therefore, the current regime is not in line with the requirements of the PFMI and exposes society to negative externalities in case of a FMI's failure. The RBNZ and FMA currently lack sufficient legal backing and powers to identify and address risks building up in FMIs. This may give rise to negative externalities as interests of members and shareholders of FMIs are not necessarily aligned with public interest objectives. In practice, this may be less of an issue for the two most systemically important FMIs, ESAS, and NZClear, as they are operated by the RBNZ. However, SBI, HVCS, and NZCDC are privately operated FMIs. A failure of SBI or HVCS may result in a nationwide inability to settle retail and wholesale payments, which may create liquidity pressures within banks, social discomfort, and a general lack of trust in the financial system. A failure of NZCDC

⁵ The RBNZ has informal processes in place, using a combination of cooperation and consultations with the industry. However, the RBNZ cannot formally impose requirements or standards, disallow rule changes, do investigations or give directions. For example, the RBNZ attends meetings of the PNZ board, which operates the HVCS and SBI, and the RBNZ and PNZ management meet on a quarterly basis. In addition, the RBNZ may write formally, setting out its guidance and encouraging implementation of the recommendations, and may also comment publicly on FMI and infrastructure provider issues in speeches and the half-yearly Financial Stability Report.

⁶ In March 2015, following consultation, the RBNZ published a policy statement in the FMI1 and the RBNZ and FMA jointly published a policy statement in the DSS1, in which they stated to adopt the PFMI as a basis for their oversight, including the Annex F "Oversight expectations applicable to critical service providers" for the oversight of critical infrastructure providers.

may result in a closing of the NZX and credit and liquidity losses at the level of clearing members. Although clearing volumes are moderate, a failure of NZCDC may exacerbate an existing crisis and add to financial distress within banks. Also, NZCDC volumes may grow or NZClear may be sold to a private operator – these are future scenarios that would allow risks to build up within the system if FMIs are not subject to a solid regulatory regime.

13. The RBNZ and FMA recognize the current shortcomings and have proposed a new designation regime, which, if adopted in the form of legislative changes, would address the main shortcomings of the current regulatory framework. The proposed regime would provide the RBNZ and FMA with the power to identify systemically important FMIs based on relevant criteria using their power to obtain information from all FMIs.⁷ This allows the authorities to include also CCPs and Trade Repositories (TRs) in their oversight. FMIs that meet the criterion of systemic importance would be required to be designated, whereas other non-systemically important payment and settlement systems would be able to opt in for designation, in order to obtain legal protection for finality and netting arrangements. The authorities would have regulatory powers, allowing them to impose the PFMI on all systemically important FMIs in a consistent manner. They would have powers to obtain information from all FMIs, and in respect of systemically important FMIs have access to a range of powers to induce changes, including powers to disallow rule changes, require changes to existing rules, investigation powers, enforcement powers and crisis management powers. Appendix 4 details the main features of the current and proposed designation regime.

14. It is recommended to adopt the principles of the PFMI explicitly in the legal framework, with high level principles in the new Act and detailed requirements in secondary legislation. Clear and consistent requirements provide transparent guidance for FMIs, their owners, operators and members, supporting them to assess their risks in line with international standards, disclose self-assessments of good quality and reduce the need for the RBNZ and FMA to use enforcement powers.

15. Cooperation between the RBNZ and Treasury, as defined in the MOU of 2012, may explicitly include FMIs and state the responsibilities of the different authorities in normal and crisis times. It is recommended to change the current coordination arrangements between the RBNZ and Treasury regarding FMIs. Currently, every change in the designation conditions of a designated FMI is made through an 'Order-in-Council', which amongst other things, requires ministerial consent. Many of these changes are of a technical nature and the Order-in-Council process creates an inefficient use of time and resources. Instead, it is recommended to extend the scope of the existing MOU between the RBNZ and Treasury through the inclusion of FMIs. The MOU should clearly state the roles of each organization with regard to FMIs, for example, the MOU may outline that the RBNZ, together with the FMA, is the overseer and resolution authority of FMIs, whereas the role of the Treasury is to provide advice to the Minister on recommendations regarding resolution of

⁷ In assessing the systemic importance of an FMI, the RBNZ considers the size and concentration of financial risks within the FMI, the role of the FMI and the nature of the transactions processed, the degree of substitutability, and the interdependencies with other FMIs or markets.

systemically important FMIs.⁸ In normal times the RBNZ, together with the FMA, should be independent in exercising their oversight powers in relation to FMIs. In crisis times the Treasury would provide advice to the Minister on the recommendations of the RBNZ and FMA regarding the resolution of one or more FMIs (see also paragraph 34).

16. The new regime allows New Zealand authorities to catch up with international standards and practices, but more is needed for full convergence, particularly regarding the supervisory approach. The quality of oversight staff is high, combining a broad and deep knowledge of FMIs with a strong risk-based focus. However, staff resources are limited. This may result in a supervisory approach that is ‘ad hoc,’ led by developments within FMIs and at a national and international level. A main difference with international oversight practices is the fact that New Zealand authorities do not conduct standard assessments of FMIs themselves. Oversight staff has the opportunity to comment on self-assessments of FMIs, but disclosed self-assessments do not necessarily reflect authorities’ comments, nor do the self-assessments result in a plan to implement necessary changes to upgrade the entities’ compliance with the PFMI. To use resources efficiently, the New Zealand authorities’ oversight of non-domestic systemically important FMIs, such as CLS, is limited and in practice authorities rely fully on the supervision by the home authorities. Because of the scarce resources, authorities have limited time to analyze financial stability issues in a broader sense and may be unable to identify all relevant risks within the designated FMIs or system wide risks.

17. Therefore, it is recommended to formalize supervisory practices for FMIs. In any case, authorities should conduct standard assessments of FMIs, for example, on a two-year basis. Self-assessments of FMIs can be used as a starting point for conducting thorough supervisory assessments of the risk management, governance arrangements, and other relevant features of the FMI against the PFMI. Any resulting gaps and issues of concern would be the basis for a plan to implement improvements according to a defined timetable. FMI overseers should also develop a ‘horizon scanning’ approach to monitor developments within the financial system, with the objective to identify FMIs that would meet the designation criteria, but are not yet designated. A formalization of supervisory practices includes that the authorities develop an annual oversight plan that outlines the planned assessments as well as specific oversight themes to deepen understanding of certain practices and develop policies. The FMI overseers may also draft an annual report that is published, for example, as part of the annual reports of the RBNZ and FMA, reflecting on oversight activities, achievements and policies.

18. It is also recommended to change the proposed frequency of the disclosure framework publication in the proposed regime. A proposed condition to designation is the publication by FMIs of a self-assessment at least every three years or when there is a material change. To bring the requirement in line with the international requirements the proposed frequency of the disclosure framework publication of three years should be reduced from three to two years (see section 2.6 of the CPSS-IOSCO Disclosure Framework and Assessment Methodology, December 2012).

⁸ See also the recommendations made as part of New Zealand FSAP 2016 technical note on crisis management.

19. As part of a more formalized supervisory approach the following themes and topics may be subject to further analysis of the FMI oversight function:

- a. Cyber resilience of FMIs. Cyber security measures could be explicitly addressed within the supervisory approach for FMIs. The RBNZ has already developed an approach towards banks, with the RBNZ supporting industry-led solutions and strengthening the channels for enhanced cyber engagement and coordination amongst financial sector participants in cooperation with the other agencies responsible for implementing the Government's National Cyber Security Strategy.
- b. Implementation of a crisis management regime for FMIs. This could be implemented through, for example, the preparation of resolution strategies and operational plans (see also Section B on Crisis Management).
- c. Fine tuning of the approach to CCPs, by explicitly addressing CCP specific issues, for example as part of a standard assessment. Model validations by independent experts may be reviewed as well as monthly reporting requirements. The potential impact of the failure of a foreign CCP could be analyzed, for example, through transaction data from TRs (see also Section B on Crisis Management).

20. As proposed, the RBNZ should include critical service providers (CSPs) in its supervisory framework. The PFMI include oversight expectations for so-called CSPs (Annex F) and CPMI-IOSCO published an assessment methodology in December 2014. Outsourcing is a key issue for New Zealand FMIs. For example, the SBI and HVCS are highly dependent on SWIFT. Also, ESAS plans to implement a new settlement system from an external technology provider. As outlined in the RBNZ's final proposal designated FMIs are required to be reasonably satisfied that their core infrastructure providers meet certain principles-based requirements (that will be closely based upon Annex F of the PFMIs).⁹ It is recommended that the RBNZ and FMA include an assessment of CSP's explicitly in their regular standards assessments of designated FMIs.

21. Compared to international practices the number of staff overseeing FMIs is very low, especially within the RBNZ. Current resources include two FTE within the RBNZ and 0.5 FTE within the FMA. In addition, the RBNZ has one FTE dedicated to policy development for FMIs. Both authorities rely on a flexible approach, where staff could, if necessary, be re-assigned from elsewhere within the respective authorities. Countries with a comparable type and number of FMIs generally have a larger number of oversight staff dedicated to FMIs. For example, in Norway, the Norges Bank is staffed with eight staff members and the Norwegian FSA employs five FTE on FMI supervision.¹⁰ The FMI oversight department of the Reserve Bank of South Africa has a staff of at least 8 staff members with additional staff members in the securities regulator.¹¹

⁹ See RBNZ 'Summary of submissions and final policy proposals on the Consultation Paper: Oversight of Designated Financial Market Infrastructures', December 2015, <http://www.rbnz.govt.nz/-/media/ReserveBank/Files/regulation-and-supervision/financial-market-infrastructure-oversight/regulatory-developments/summary-of-submissions-and-final-policy-proposals-FMI-oversight-dec-2015.pdf?la=en>.

¹⁰ See Norway FSAP technical note 2015 <https://www.imf.org/external/pubs/cat/longres.aspx?sk=43267.0>.

¹¹ See South Africa technical note 2015 <https://www.imf.org/external/pubs/cat/longres.aspx?sk=42754.0>.

22. It is recommended to increase the number of staff assigned to FMIs in line with increased responsibilities under the new regime and to allow for more comprehensive supervisory practices. Under the proposed regime the number of designated FMIs will probably increase from four (three domestic and one foreign FMI) to nine designated FMIs (five domestic and four foreign FMIs). Accordingly, the RBNZ had provisionally indicated a possible need to increase the number of staff from 2 to 3–4 FTE from late-2017/early-2018 and the FMA from 0.5 FTE to 1 or 1.5 FTE. If supervisory practices are formalized, as recommended earlier in this note, more resources would be needed. Practices within other central banks can be used as a guideline.

Transparency (Responsibility C)

23. The RBNZ discloses its information related to FMIs in a clear and comprehensive manner. The RBNZ's website includes information related to FMIs, including its mandate, oversight responsibilities, policies, speeches, and other relevant information related to FMIs. The website also contains various consultation documents on the proposed supervisory framework for FMIs, on crisis management and a summary of responses to the different consultations, in which the response of the authorities is clearly and comprehensively explained. The various acts governing the supervision and oversight are also publicly available.

24. It is recommended that the FMA improves its transparency in relation to its responsibilities for FMIs. Even though the information disclosed by the RBNZ refers to the FMA's responsibilities where relevant, the FMA should also disclose its responsibilities on its own website. There is currently no information about the FMA's policies and activities in relation to FMIs available, neither for domestic FMIs nor for FMIs abroad. Transparency about regulatory policies, objectives, and standards is in line with the requirements of Responsibility C. It helps, among others, to establish clear expectations and promote accountability of authorities.

Implementation of the PFMI and Chinese Walls within the RBNZ (Responsibility D)

25. The authorities have publicly stated that they adopt the PFMI, but the current oversight framework and supervisory practices do not support a full and consistent implementation (See also Responsibility A and B). This is because: (i) not all systemically important FMIs are subject to oversight, and (ii) the authorities do not have sufficient resources to assess the FMIs against the PFMI and ensure that any gaps and issues of concern are addressed in a reasonable timeframe. The proposed framework should, in principle, allow the PFMI requirements to be adopted and applied to all systemically important FMIs. However, full implementation requires that the authorities have the resources to conduct regular standards assessments against the PFMI.

26. FMIs in New Zealand seem compliant with the different requirements in the PFMI principles to a large extent.¹² Further work is needed to ensure full compliance, in particular with the 'newer' requirements:

¹² As the scope of the FSAP does not include a detailed assessment of the different FMIs the findings in this paragraph are general, non-exhaustive, and based on an analysis of the self-assessments of the largest FMIs and discussions with their operators.

- a. Principle 19 on tiered participation: none of the FMIs are sufficiently able to identify risks related to indirect participants. Identification of material dependencies between direct and indirect participants is important because they can cause losses to the FMI. Thus a FMI should, at a minimum, identify the types of risk that could arise from tiered participation and monitor risk concentrations.
- b. Principle 3 on recovery planning: FMIs have not yet developed recovery plans to manage and sustain critical services of the FMI in extreme but plausible circumstances, with scenarios beyond the default of several clearing members, and operational failures. Also, not all FMIs have sufficiently identified the risks related to commercial banks that fulfil multiple roles towards the FMI, such as collateral agent, liquidity provider, and clearing member.
- c. Principle 13 and 17 both require FMIs, among others, to conduct default management and business continuity tests with stakeholders. Most of the FMIs do not conduct such testing with their participants.
- d. Principle 14: the CCP of NZCDC does not apply segregation of home and client accounts for clearing members active in the cash market.
- e. Principle 2: not all FMIs have established a risk management function and/or a Board risk committee.

27. The RBNZ organizational structure supports a consistent implementation of the PFMI through a solid separation of oversight and operational responsibilities, avoiding conflicts of interest to the best possible extent. Two FMIs, ESAS and NZClear, are owned and operated by the RBNZ, whereas the RBNZ is also the overseer of both FMIs. This may give rise to a perceived conflict of interest between the RBNZ's oversight and operator functions. The RBNZ manages this potential conflict through organizational separation with the oversight and operator functions residing in different departments within the RBNZ. Senior management of the different functions report to different Deputy Governors, with management lines coming together at the level of the Governor. The oversight function is transparent on its oversight approach, publishing its oversight policies to manage consistent expectations. Also, the FMA takes the lead in communications for the relationship with NZClear, whereas the RBNZ takes the lead in the relationships with the NZCDC.

Cooperation among authorities (Responsibility E)

28. Domestic cooperation between the RBNZ and the FMA is effective for day to day oversight and supervision of the designated settlement systems. There is no lead overseer for New Zealand, except for payment systems, which are only subject to oversight of the RBNZ. Where FMIs are overseen by the RBNZ and FMA jointly, the authorities would need to agree to an action before powers can be exercised. The RBNZ and FMA signed a MOU to formalize the cooperation for their joint oversight.¹³ The regulators bring different perspectives to issues given the different

¹³ See http://rbnz.govt.nz/regulation_and_supervision/financial-market-infrastructure-oversight/4621382.pdf

statutory objectives, with the FMA primarily responsible for conduct and the RBNZ for financial stability. Inconsistencies and gaps in the supervisory approach are avoided through frequent and constructive communication and consultation. Engagement with the system operators is carried out jointly, including meetings with senior management of the designated settlement systems. Information on system performance is provided to both regulators. Although the RBNZ took the lead in the recent consultation rounds, the FMA was closely involved and consulted.

29. It is recommended that the authorities further elaborate how their different mandates translate into day to day oversight of FMIs. This means in practice that authorities outline how their mandates relate to the different areas of FMI oversight, for example, by describing per PFMI principle which authority is involved, how, and which authority takes the lead. The responsibilities of the authorities should be reflected in the MOU between the RBNZ and FMA. This will not only increase transparency in general, but may also clarify expectations towards supervised FMIs and increase accountability of the authorities. For example, the Belgian authorities have agreed to act jointly in relation to PFMI principles 1, 2, 11, 13, 16, 18, 21, and 23, whereas the National Bank of Belgium will be solely responsible for the other principles.

30. International cooperation is typically facilitated by a MOU governing the exchange of information. A number of systemically important FMIs (CLS, ASX Clear Futures, LCH.Clearnet Ltd, and DTCC Singapore) are based in other jurisdictions. Steps have been taken to establish cooperative arrangements for the oversight of these FMIs. These steps have involved putting in place arrangements to facilitate the sharing of information and establishing direct contact with the home regulators of the various FMIs. The RBNZ is a member of the international Oversight Committee for CLS. The oversight of the CLS system is conducted cooperatively by the relevant central banks in accordance with the protocol for the Cooperative Oversight Arrangement of CLS.¹⁴ The RBNZ has also recently entered into a MOU with the Reserve Bank of Australia (RBA), setting out how they will cooperate on the oversight of cross-border clearing organisations.¹⁵ This MoU facilitates the exchange of information on ASX Clear (Futures). The RBNZ and the RBA currently meet annually to discuss matters related to the CCP. The RBNZ and FMA have recently entered into a MoU with the Bank of England in respect of the oversight of LCH.Clearnet Ltd.¹⁶ Having this MoU in place has enabled the RBNZ to participate in the global supervisory college for LCH.Clearnet Ltd. The RBNZ and FMA have yet to establish a formal agreement with the Monetary Authority of Singapore with regard to the oversight of DTCC Singapore. Appendix 5 contains an overview of the different cooperation agreements.

31. It is recommended that the arrangements for ASX Clear (Futures) are streamlined. The FMA has issued a license for the Australian trading platform ASX24 to provide services to New Zealand members. The license includes requirements related to ASX Clear (Futures) as CCP for ASX24,

¹⁴ See http://www.federalreserve.gov/paymentsystems/cls_protocol.htm

¹⁵ See http://rbnz.govt.nz/regulation_and_supervision/banks/relationships/5818099.pdf

¹⁶ See http://rbnz.govt.nz/regulation_and_supervision/financial-market-infrastructure-oversight/MoU-with-BoE-in-respect-of-CCPs.pdf

including information requirements. The FMA has not concluded a dedicated MOU with ASIC for the joint supervision of ASX Clear (Futures) nor developed other activities in relation to the license provided. For clarity reasons it is recommended to streamline the relationship with the Australian authorities, for example, by including the FMA and ASIC in the RBNZ/RBA MOU for CCPs located in Australia. This will allow both the RBNZ and FMA to receive information relevant for their respective responsibilities.

32. In addition, it is recommended that the New Zealand authorities develop and publish a formal policy approach for the oversight of foreign FMIs. Although the authorities, either jointly or solely, have signed MOUs with foreign authorities, they have not acted on these MOUs, except for the oversight of CLS with the RBNZ regularly attending CLS oversight committee meetings. For transparency and accountability reasons a public policy should outline the objectives of the cooperation agreements and the minimum activities that the authorities intend to undertake. The activities are expected to be limited, given resource restrictions and the limited powers that New Zealand authorities have in the international regulatory landscape. Nevertheless, it is recommended that activities should be conducted with the objective of identifying any risks that foreign FMI pose to New Zealand. National interests also need to be protected and subsequent actions taken (see also Section B on Crisis Management and Interdependencies, paragraphs 46 and 47).

B. Crisis Management and Interdependencies

33. This section analyzes crisis management arrangements for individual FMIs as well as for system wide interdependencies. The analysis starts with recovery and resolution arrangements for FMIs. In line with international standards, these measures have the objective to sustain critical operations and services in the event that an FMI potentially becomes non-viable as a going concern, while avoiding a bail out at the expense of taxpayers' money. The analysis also discusses: (i) crisis measures to manage the dependency of domestic FMIs on the four main banks in New Zealand, which all have Australian parents, and (ii) the potential impact of a crisis event in a non-domestic FMI on the New Zealand financial system.

Crisis management framework for FMIs

34. The New Zealand authorities are in the process of developing a crisis management framework for FMIs. Under the new regime, the RBNZ will be the resolution authority for payment systems and the RBNZ and FMA jointly for other systemically important FMIs. The framework includes resolution powers for the RBNZ and FMA, taking into account recent and ongoing international standard setting.¹⁷ The use of crisis management powers is subject to conditions such as the

¹⁷ See also the March 2016 issued 'Consultation Document: Crisis Management Powers for Systemically Important Financial Market Infrastructures.' In developing the crisis management framework for FMIs, the RBNZ has considered how the proposals would comply with key aspects of the FSB's Key Attributes of Effective Resolution Regimes for Financial Institutions and the CPMI and IOSCO's report on FMI recovery and resolution. Once additional guidance of the FMI Cross Border Crisis Management Group (fmiCBCM) is released, the RBNZ plans to incorporate that into the New Zealand FMI crisis management framework as appropriate.

insolvency of the operator, fraudulent activities, a breach of obligations, or if operations are threatening financial stability. The powers only apply where the business continuity plans, recovery and winding down plans are not implemented, fail or otherwise are inadequate. Powers include: (i) issuing directions to the operator(s) of a systemically important FMI, with the consent of joint Ministers; (ii) appointing, replacing or removing the directors of an operator, with the consent of the joint Ministers; and (iii) recommending that a systemically important FMI be placed into statutory management by an Order in Council made on the advice of joint Ministers (e.g., if the FMI fails to comply with the directions issued at an earlier stage).

35. The statutory management regime combines various tools proposed in the FSB Key Attributes for the resolution of FMIs. The regime allows the resolution authorities to appoint a person to resolve the FMI where the current operator is unwilling or unable to do so to the required level. The statutory manager will have the same basic capacities and powers as the statutory manager of a bank under Part 5 of the RBNZA 1989, including the power to place a moratorium on payments to general creditors and the power to sell or otherwise transfer to a third party the whole or part of the business of the FMI in statutory management. The statutory manager would be expected to respect the rules of the FMI, for example in applying loss sharing arrangements, except in very exceptional circumstances, as this will be necessary to maintain confidence in the operations of the FMI, and the continuity of critical services.

36. To align the crisis management approach further with the Key Attributes it is recommended not to limit powers to situations where business continuity planning and recovery and winding down plans have not been (sufficiently) implemented. Instead, powers should be applied more generally in case of any breach of law or regulations that may pose a threat to the stability of the FMI. A more general application may include a failure of the FMI to implement proper business continuity plans, recovery plans, as well as a proper risk management framework for credit and liquidity risks, which is particularly important for a CCP. Also, direction powers and powers to change the FMI's management may be used in other serious situations before a crisis materializes.

37. The planned legislation should clearly reflect the specific nature of FMI resolution. The consultation document about crisis management of March 2016 already mentions that the main objective of any resolution authority should be to maintain essential services being provided and that orderly winding down of FMI operations would only be applied if there is no significant impact on financial stability. Also, a moratorium on payments would only apply to payments to general creditors and not to the ordinary flow of payments, settlements and deliveries being processed by the FMI in the course of its core functions. In addition, the legislative proposals should reflect other relevant principles for FMIs as outlined in the FSB Key Attributes, for example, that recovery tools should generally be exhausted prior to entry into resolution of the FMI, possibility to pose temporary stays on termination of access rights and the continued application of the laws and contracts to ensure the finality of transactions, DVP arrangements, and other legal protections.

Dependency of domestic FMIs on four main banks

38. FMIs in New Zealand are heavily dependent on the four largest banks in New Zealand, which are all subsidiaries of Australian parents. They are part of an interdependent, interconnected network as discussed in Box 2. Settlement volumes are highly concentrated within the four largest banks representing nearly 80 percent of total settlement volumes of domestic FMIs (measured in NZD). Three out of the four banks are members of the main domestic FMIs (ESAS, NZClear, NZCDC, SBI, and HVCS). Figure 1 illustrates critical members for domestic FMIs. The largest banks are shareholders and members of PNZ. Some banks also provide commercial banking services to NZCDC, i.e., collateral management and settlement bank services.

39. A potential liquidation of one of the main banks would put severe stress on all FMIs and the market as a whole. All FMIs will have to manage the default of the bank by excluding them from membership and/or managing any implication of the resolution of the bank. Clients of the bank will need to find a substitute to clear and settle payments and securities in one of the FMIs. This will put pressure on surviving members in already stressed circumstances. NZCDC may also temporarily lose access to collateral managed by the bank or lose its settlement bank for U.S. dollar settlements. In addition, PNZ may have to manage any governance issues related to the default of one of its shareholders and members.

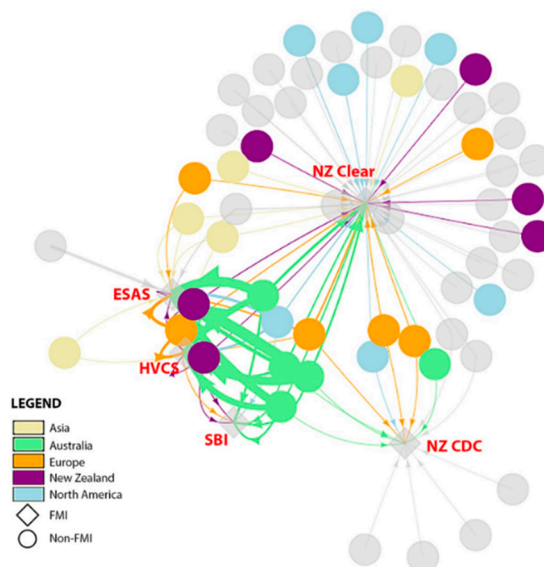
40. The authorities have developed significant measures to ensure the continuation of operations of New Zealand banks.¹⁸ The Open Bank Resolution (OBR) is a policy aimed at allowing a distressed bank to be kept open for business, while placing the cost of a bank failure primarily on the bank's shareholders and creditors, rather than the taxpayer. Instead of liquidating the bank, the bank is temporarily closed and reopens under a statutory management regime. Customers can access (part of) their deposits, which are now government guaranteed. Part of the available (i.e., unfrozen) assets in the bank are used to resolve the bank. A government guarantee, as envisaged by the OBR policy, allows the bank to re-enter the FMI. In the case of a New Zealand subsidiary, it should be able to continue operations, even if the parent fails, through full separation of businesses, including FMI operations. There are differences between banks to the extent that they are in practice able to separate functions within a reasonable timeframe. While some banks have full domestic backups for all operations, including a SWIFT gateway and general ledger, other banks are still sharing core banking systems with their parent.

¹⁸ Please refer to the New Zealand FSAP 2016 Technical Note on Crisis Management for a comprehensive analysis of the bank resolution frameworks in New Zealand.

Box 2. Network Analysis of FMIs and their Members

The domestic landscape for FMIs is densely interconnected, with many FMIs having the same members. Members can be banks, other financial institutions, and government agencies. High interconnectivity suggests that contagion from the financial or operational failures of a given FMI, or a critical member, could quickly spread through the financial system if proper safeguards are not in place.

The figure in this box shows different clusters within the network. The largest overlap of members exists between ESAS, SBI, and HVCS. NZ Clear and NZCDC largely form their own “network clusters.” Banking groups are most heavily centered in the ESAS/SBI/HVCS cluster, but are highly connected to NZ Clear as well. By contrast, nonbank financial groups are largely uninvolved with ESAS/SBI/HVCS but are connected to NZ Clear and NZCDC.



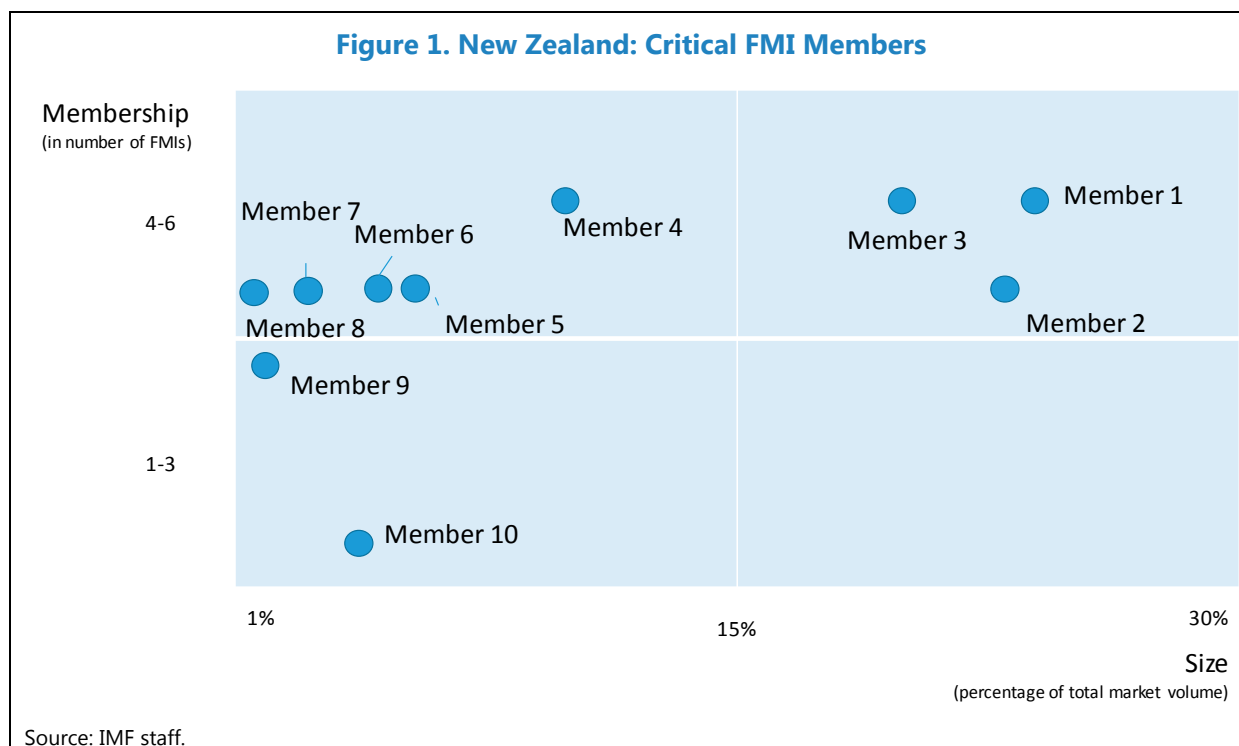
The size of the arrows between the FMIs and their members represents the settlement volume. Banking groups are responsible for the dominant share of New Zealand FMI transactions. Nonbank financial groups and domestic government bodies are the next most active sectors, but their share of transaction volume is low by comparison (measured in NZD). Overall, membership in New Zealand FMIs is dominated by Australian banks, followed by New Zealand banks. Three Australian banks have a membership in all FMIs, whereas the four Australian Bank represent 80 percent of total settlement volume. Although trading volumes of New Zealand members are lower, they are highly connected with all domestic FMIs.

North American and European members account for a notable portion of transactions as well. North America members are most involved with ESAS and NZ Clear and have little contact with SBI or NZCDC. By contrast, European members are the most active on NZ Clear and NZCDC.

Settlement volumes from Asian members is negligible.

Transaction activity is highly correlated among FMIs, meaning that an increase (decrease) in settlement volumes occurs in one FMI is likely also to occur in other FMIs (results not shown). This reflects a need for sufficient operational capacity in the different FMIs and joint contingency planning.

Source: IMF staff.



41. There are arrangements for banks to maintain access to FMIs in case the bank is placed under an OBR regime. However, there are details to be worked out, and implementation is highly dependent on case-by-case decisions of the statutory manager. The RBNZ could also develop special treatment for an FMI's assets kept at bank accounts. As set out in the Key Attributes, a financial entity in resolution should be able to rely on services provided by FMIs in which it participates, as long as it promptly performs its payment, clearing and settlement obligations towards the FMI, to support the orderly resolution of the entity. Vice versa, it is important that FMIs have continued access to their assets kept by the failing FMI, for example in the form of collateral. The CCP of the NZCDC will urgently need its collateral in order to cover any losses following the default of its participant. Under the current OBR arrangements, the statutory manager would have discretionary power to decide on a case by case basis whether or not he/she will exempt the FMI assets from a haircut. The RBNZ may develop ex ante provisions for FMI's assets to be excluded from the haircutting, given the systemic importance of FMIs.

42. Alternatively, FMIs may keep their assets at an account in ESAS. The RBNZ allows FMIs to hold a NZD account at the RBNZ. Presently, CLS and NZCDC have NZD accounts at the RBNZ, which are typically used for the settlement of payments. FMIs can also gain access to the RBNZ's standing facility for cash using the overnight reverse repo facility. As a result, FMIs can access cash from the RBNZ, if they hold security from a list of repo eligible securities. In practice, the NZCDC does not use the account to deposit collateral, as return on commercial accounts is higher. It is recommended that the RBNZ, in their oversight role, request the NZCDC to apply a more prudent investment policy, for example, by depositing cash collateral at their ESAS account.

43. It is also recommended to consider establishing an operational crisis management framework as adopted in other jurisdictions. The existing Council of Financial Regulators is not a crisis management body. While the authorities, when required, have quickly formed incident specific crisis committees, it would be preferable to have a committee pre-positioned. This would mean a predefined set of roles and responsibilities for different authorities to take on during a crisis as well as a set of coordination and cooperation mechanisms between authorities and the industry. Such arrangements may facilitate effective and timely communication and potentially avoid losses or reduce the size of financial losses following crisis events. Several countries, for example the United Kingdom, the Netherlands, and France, have a comprehensive set of national sector-wide crisis management arrangements in place that include operators and supervisors of FMIs. These arrangements typically include a framework for cross-sector authorities to communicate and coordinate their responses to major operational disruptions, including disruptions that originate from FMIs or from FMI members.

44. The framework could be tested during industry-wide contingency tests, for example, as part of the Trans-Tasman Council of Banking Supervision. In 2011, bank contingency testing took place as part of the Trans-Tasman Council of Banking Supervision, made up of regulators and the Treasuries from New Zealand and Australia. The testing focused on crisis planning for bank defaults. It is recommended that FMIs are included in any future contingency test. The scenario of the crisis event could include, for example, the failure of a New Zealand subsidiary of an Australian bank in different FMIs in which the bank participates, both in New Zealand as well as in Australia, including in ASX Clear Futures. Although the Trans-Tasman crisis simulation is focused on coordination among authorities, it may be useful to assume how communication flows would take place between authorities and FMIs.

Managing spillover risk from foreign CCPs

45. The largest New Zealand banks are increasingly moving towards central clearing of OTC derivatives transactions in Australia and the United Kingdom. Historically, New Zealand banks participated in the OTC derivatives market through direct trading with domestic counterparts and international dealers, clearing trades bilaterally. Although New Zealand banks are not subject to mandatory clearing requirements, they are increasingly clearing transactions through foreign CCPs, because their foreign counterparts are increasingly subject to mandatory clearing requirements under foreign legislation. This effectively forces the largest New Zealand banks to clear interest rate derivatives transactions via LCH.Clearnet Ltd in London or ASX Clearing (Futures) in Australia. For example, Australian regulators have central clearing requirements for IRS denominated in five currencies (not including the New Zealand dollar). New Zealand banks are currently indirect clearing members, but some are in the process of becoming direct clearing members of LCH.Clearnet Ltd.

46. The use of a CCP reduces risk exposures of New Zealand banks, but also exposes banks to potential losses at the CCP in extreme circumstances. Clearing through a CCP allows banks to benefit from multilateral netting, which reduces the bank's counterparty credit risk exposures. Another risk reducing feature of a global CCP is that it will support the orderly management of a

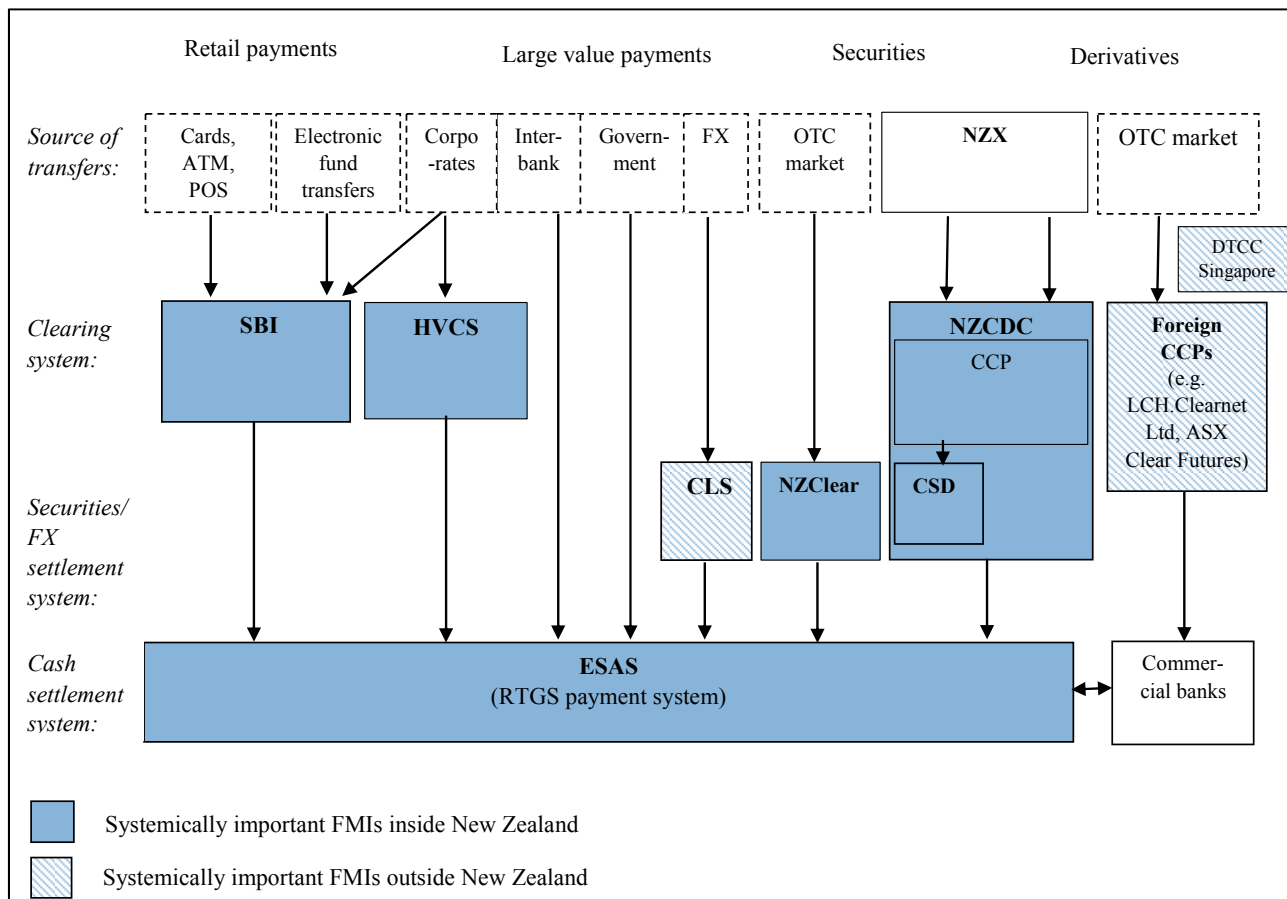
default. New Zealand banks will, however, as direct clearing members be exposed to the unlikely, but not impossible failure of one of the members of the CCP and may be confronted with residual losses through loss-sharing arrangements, such as the default fund or recovery and resolutions tools. The continued functioning of derivatives markets plays a significant role in the ongoing soundness and efficiency of its financial system. New Zealand has a globally interconnected derivatives market, which plays an important role in local banks' funding and risk management arrangements.¹⁹

47. It is recommended that the RBNZ analyzes the exposure of New Zealand banks to global derivatives markets and foreign FMIs and take action to promote the stability of the financial system if needed. Under the proposed regulatory framework, the RBNZ and FMA will have responsibilities regarding the supervision of CCPs, including ASX Clear (Futures) and LCH.Clearnet Ltd. As the New Zealand authorities are not the primary regulator, the execution of powers under the new framework is less straightforward in day to day supervision and crisis events. As a minimum, it is recommended to: (i) collect information about the trading activity of New Zealand banks in OTC derivatives and their exposures in bilaterally and centrally cleared markets; (ii) analyze the risk waterfall, recovery plans and resolution plans for the foreign CCPs to understand in what circumstances and how New Zealand banks will be confronted with loss-sharing; (iii) estimate the size of the potential losses for New Zealand Banks and thus the impact on New Zealand's financial system; and (iv) participate in fire drills of the supervisory college of LCH.Clearnet Ltd, and if possible of the Crisis Management Group (CMG), as far as relevant for New Zealand. Efforts should be made to obtain data from DTCC Singapore (or other trade repositories if needed).

48. The RBNZ may also consider to provide the foreign CCPs with a central bank account in ESAS for settlement in NZD dollars and deposits of collateral. As a condition to such access the RBNZ, through its cooperation agreements with the home authorities, should be convinced that the CCP is sound, well-supervised and able to comply with requirements to participate in ESAS.

¹⁹ Edwin Budding and David Murphy, 'Design Choices in Central Clearing: Issues Facing Small Advanced Economies', 2014.

Appendix I. FMI Landscape in New Zealand



Appendix II. Statistics of FMIs

FMI	Number of transactions		Value of transactions (NZD billion)		Number of participants (excludes the RBNZ)
	2014	2015	2014	2015	End of 2015
ESAS	2,734,136	2,958,700	7,060	7,355	19
HVCS	2,291,000	2,439,200	5,016	5,262	13
SBI	460 million	478 million	749	787	8
NZClear	339,488	385,219	1,841	1,832	128
NZCDC					5 Depository members only ¹
Of which:					7 Individual clearing member*
Securities transactions cleared and settled	194,952	200,821	15.4	18.7	8 General clearing members
Derivatives transactions cleared and settled	48,648	65,486	0.2	0.2	

¹ All Clearing Participants are automatically Depository Participants, the number provided represents those that are exclusively Depository only.

Figure 1. New Zealand: Average Turnover by FMI and Region

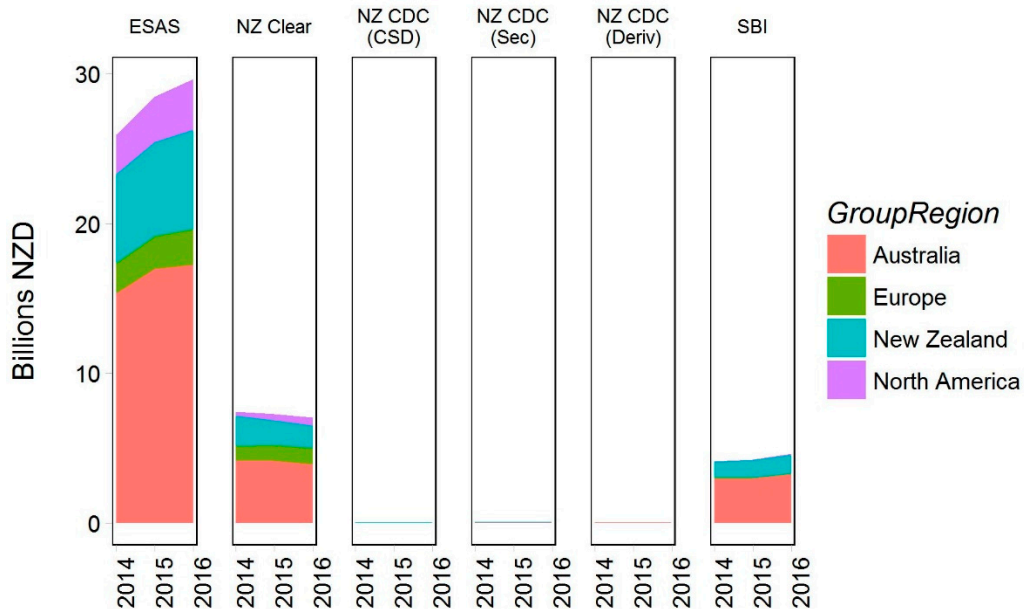
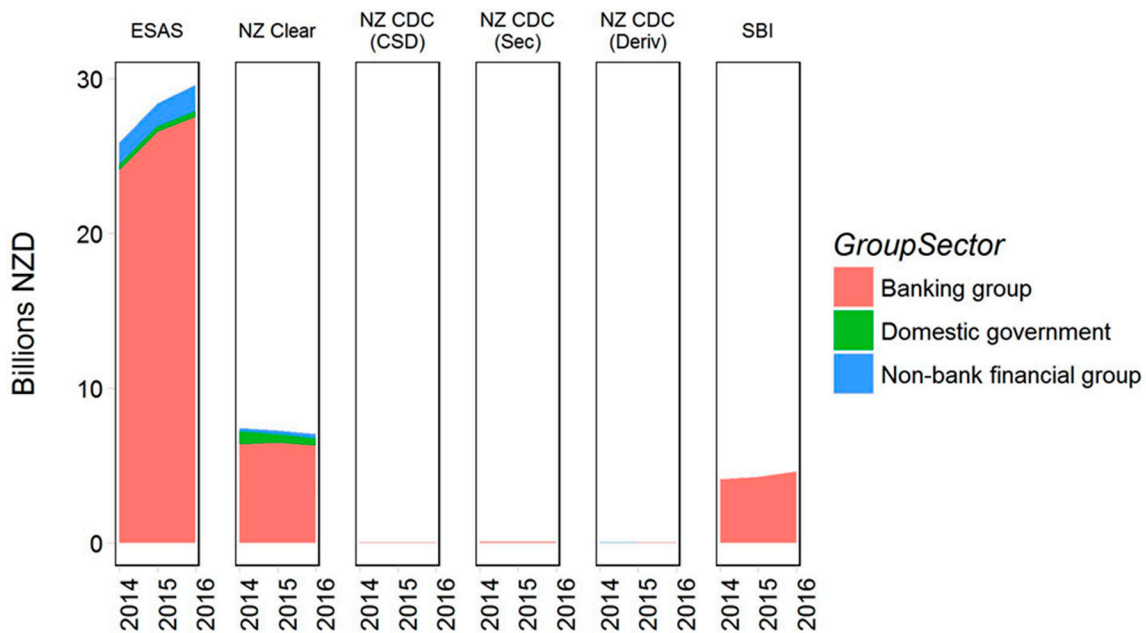


Figure 2. New Zealand: Average Turnover by FMI and Type of Institution



Appendix III. Laws and Guidelines for New Zealand FMIs

Law	Scope	Authority	FMIs
Reserve Bank of New Zealand Act 1989, Section 1A	The Reserve Bank's role in FMI oversight reflects its broader statutory purpose to promote the maintenance of a sound and efficient financial system.	RBNZ	
Reserve Bank of New Zealand Act 1989, Parts 5B and 5C	Payment systems in New Zealand: powers of the RBNZ and information requirements for payment systems.	RBNZ	Payment systems in New Zealand
Reserve Bank of New Zealand Act 1989, Part 5C	Designated securities systems in New Zealand: powers of the RBNZ and FMA, general requirements for designated systems. Legal protection of finality and netting arrangements.	RBNZ and FMA	ESES, CLS, NZClear and NZCDC
Financial Market Conduct Act	Interest in post-trade infrastructure to promote and facilitate the development of fair, efficient, and transparent financial markets.	FMA	
The Designation and Oversight of Designated Settlement Systems (DSS1), March 2015	Detailed requirements for designated settlement systems. Adoption of the PFMI.	RBNZ and FMA	ESES, CLS, NZClear and NZCDC
Oversight of Financial Market Infrastructures in New Zealand (FMI1), March 2015	Scope and policies of RBNZ oversight of payment systems and designated settlement systems.	RBNZ	Payment systems and designated settlement systems
Corporations (Investigation and Management) Act 1989 (CIMA)	General statutory management regime for corporations, that can be applied to payment and settlement systems.	FMA (with potential consultation obligation RBNZ)	Payment systems
Personal Property Securities Act 1999	Priority over security interest in personal property if a participant in a designated settlement system has, in accordance with the rules of that designated settlement system, granted a security interest in that property or transferred the property in order to provide collateral or effect a settlement.	NA	Designated settlement systems

Appendix IV. Key Features of Current and Proposed Oversight Regime for FMIs

	Current	Proposed
Systems	<p>ESAS, NZClear, NZCDC, and CLS (four designated systems).</p> <p>SBI (non-designated systemically important FMI).</p> <p>Other non-designated FMIs (e.g., HVCS, CECS, Visa, and MasterCard).</p> <p>For non-designated FMIs, the main tool for inducing change is moral suasion.</p>	<p>ESAS, NZClear, NZCDC, HVCS, and SBI.</p> <p>CLS, LCH.Clearnet Ltd, ASX Clear (Futures), and DTCC Singapore.</p> <p>Other FMIs (e.g., CECS, Visa, and MasterCard). Moral suasion will remain the main tool for inducing change for these FMIs.</p>
Criteria to identify FMIs	<p>The designation regime for payment and settlement systems is voluntary (RBNZA, Part 5C). System operators base their decision on whether to seek designation on a cost-benefit analysis.</p> <p>The regime in Parts 5B and 5C of the RBNZA, does not include CCPs and TRs.</p>	<p>The RBNZ and FMA would be able to recommend that an FMI be designated whether it operates in New Zealand or has (in)direct participants in New Zealand.</p> <p>They would assess an FMI's systemic importance based on its size, degree of market penetration, its role and nature of transactions processed, the degree of substitutability and its interdependencies with other FMIs or markets.</p>
Authorization / Designation	<p>The RBNZ and FMA may recommend the designation of a payment or settlement system to be subject to conditions, and seek changes to those conditions (RBNZA, Part 5C, section 156ZD).</p> <p>Only settlement systems that satisfy the requirements set by the joint regulators will be recommended for designation (RBNZA, Part 5C, section 156N(3)).</p>	<p>FMIs that meet the criterion of systemic importance would be required to be designated under the new Designation Regime.</p> <p>Non-systemically important FMIs would be able to be designated on a voluntary basis (to obtain legal protection for netting and settlement finality).</p>
Regulation	<p>The RBNZ and FMA are able to recommend that conditions of designation be varied and to disallow changes to the rules of a designated system.</p> <p>The regulators do not have powers for non-designated systems.</p>	<p>The RBNZ and FMA would have standard setting powers and set minimum standards, which relate to certain matters prescribed in legislation.</p>
Powers to obtain information	<p>The RBNZ can require that information be provided by operators or participants of a payment system. The RBNZ may require the information to be audited (Reserve Bank Act 5B).</p> <p>For designated systems the RBNZ and FMA can require information to be provided. Failure to supply information is an offence (RBNZA 5C 156ZL).</p>	<p>The RBNZ and FMA would have the power to obtain information from the operators, participants and infrastructure providers of FMIs, including from non-designated FMIs, where they believe that this would be necessary or desirable to perform their responsibilities under the legislation.</p>
Powers related to FMI rules	<p>The RBNZ and FMA must be notified by the designated FMIs of proposed amendments to rules (RBNZA 5C 156ZB). The joint regulators may</p>	<p>The RBNZ and FMA would need to be notified by the designated FMIs of any changes in the rules. The regulators would be able to disallow rule changes. Where the regulators determine that a</p>

	<p>disallow changes to the system's rules (RBNZA 5C 156ZC).</p> <p>(Note: although s156ZB requires the joint regulators to be notified of proposed rule amendments, failure to do so is not an offence.)</p>	<p>rule change or the establishment of a new rule is necessary to prevent any potential adverse impact on the soundness and efficiency of the FMI, they would have the power to request that the rules be changed to address the particular issue. In limited circumstances, if the proposed change is inadequate, it would be possible to direct a rule change.</p>
Investigative powers	<p>The RBNZ and FMA have no investigative powers.</p>	<p>The RBNZ and FMA would have powers to require independent reports on designated FMIs, and the power to enter and search places with a warrant, where they believe that this would be necessary or desirable to perform their responsibilities under the legislation, subject to specific constraints.</p>
Enforcement powers	<p>The RBNZ and FMA have the ability to issue a public warning. Note: This is an inherent power that regulators have under New Zealand law as a result of their supervisory role and does not require specific legal backing.</p> <p>Failure of designated systems to supply information is an offence, for which penalties can be imposed, i.e., imprisonment or fines (RBNZA 5C 156ZQ).</p> <p>Designated systems are required to comply with conditions of designation. However, non-compliance with the conditions is not itself an offence. Ultimately, the joint regulators can revoke a designation to deal with non-compliance (RBNZA 5C 156ZE), but they lack other "softer" powers to remedy the deficiencies.</p> <p>Moral suasion is applied for non-designated FMIs.</p>	<p>In addition to the ability to issue a public warning, the RBNZ and FMA have the ability to enter into enforceable undertakings.¹</p> <p>Administrative, criminal and civil remedies (based on the FMCA 2013) would also apply, including fines, terms of imprisonment and civil pecuniary penalties.</p>
Crisis management powers	<p>The RBNZ and FMA have no crisis management powers.</p>	<p>In case of a failure of the FMI the RBNZ and FMA would have powers to</p> <ul style="list-style-type: none"> - Issue a direction to an operator (with ministerial consent); - Remove, replace or appoint a director of an operator (with ministerial consent); - Recommend the appointment of a statutory manager to Ministers.
Resources	<p>RBNZ: 2 FTE oversight; 1 FTE policy FMA: 0.5 FTE</p>	<p>RBNZ: 3–4 FTE oversight; 1 FTE policy FMA: 1–1.5 FTE</p>
<p>¹ A legally binding agreement between a regulator and regulated entity requiring the regulated entity to take certain agreed actions, which can be enforced in the courts.</p>		

Appendix V. Cooperation Agreements between New Zealand Authorities and Foreign Authorities

FMI	Type	New Zealand authorities	Other authorities
Designated settlement systems, i.e., NZClear and NZCDC	MOU	RBNZ and FMA	NA
Cross-border clearing organizations, i.e., ASX Clearing Futures	MOU	RBNZ	RBA
Central Counterparties, i.e., LCH.Clearnet Ltd	MOU	RBNZ and FMA	Bank of England
CLS	Protocol for the Cooperative Oversight arrangement	RBNZ	Members of CLS Oversight Committee, with the Federal Reserve Bank of New York as lead overseer
DTCC Singapore (planned)	MOU (planned)	RBNZ and FMA	Monetary Authority of Singapore
Source: Reserve Bank of New Zealand			