Reserve Bank of New Zealand
Te Pūtea Matua

FMA
FINANCIAL MARKETS AUTHORITY
TE MANA TATAI HOKOHOKO - NEW ZEALAND

A Framework for Identifying Systemically Important Financial Market Infrastructures

July 2021

CONSULTATION PAPER

Submission contact details

We invite submissions on this Consultation Paper by 20 September 2021. Please note the disclosure on the publication of submissions below.

Address submissions and enquiries to:
fmiconsultation@rbnz.govt.nz
Subject line: SIFMI framework Consultation [Date]

(Hard copy)

FMI Consultation Team
Financial System Policy and Analysis Department
Reserve Bank of New Zealand
PO Box 2498
Wellington 6140

Publication of submissions

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The Reserve Bank and the Financial Market Authority may also publish an anonymised summary of the responses received in respect of this Consultation Paper.

Contents

Introduction and Purpose

1. The purpose of this paper is to set out a framework that the Reserve Bank of New Zealand (Reserve Bank) and the Financial Markets Authority (FMA) (together **the Regulator**) under the Financial Market Infrastructures Act (Act), will draw on to make an assessment of whether a Financial Market Infrastructure (FMI) is systemically important in New Zealand (the Framework).

2. The Framework is intended to provide guidance on the factors that the Regulator will consider when exercising their regulatory discretion in making an assessment of systemic importance. It does not provide a prescriptive approach for determining whether an FMI is systemically important. This approach balances:

   - the need for flexibility in accounting for the specific circumstances of individual FMIs; and
   - the importance of ensuring transparency and clarity in the Regulator's decision-making.

Background

3. FMIs are multilateral systems that provide clearing, settlement and reporting services in relation to payments, securities, derivatives and other financial transactions. FMIs include:

   - payment systems (PSs);
   - securities settlement systems (SSSs);
   - central securities depositories (CSDs);
   - central counterparties (CCPs); and
   - trade repositories (TRs).

4. Well-managed and well-operated FMIs are essential to the operation of a sound and efficient financial system, and the day-to-day operation of financial markets and the economy. In particular, FMIs provide a significant portion of the underlying infrastructure that enables non cash payments, and the clearing and settlement of financial market transactions. FMIs can also reduce transaction costs for participants by supporting the management of counterparty default risk and fostering transparency.

5. Given the key role that FMIs play in the financial system, the disruption or failure of a systemically important FMI has the potential to cause significant adverse impacts on financial markets, businesses and consumers.

6. Disruption to an FMI's activities or default of some participants can result in the inability of participants or other financial institutions in other parts of the financial system to meet their obligations as they become due. Such a failure could cause widespread liquidity or credit problems and, as a result, could threaten the stability of the financial system, financial markets and the economy.

7. There is potential for market failures to occur, if for example, an FMI underinvests in infrastructure and risk management compared to the level of investment that is socially optimal to minimise systemic risk.

8. The Act provides for a new and enhanced regulatory regime for FMIs. The Act provides designated FMIs and its participants with legal protections relating to settlement, netting and the enforceability of an FMI's rules.

9. The Reserve Bank and the FMA are the Regulator of FMIs under the Act.[1] The Act allows the Regulator to take the following approach to regulating FMIs:

   - the Regulator has information gathering and investigative powers in respect of all FMIs to enable monitoring of the wider sector.
   - the Regulator has a comprehensive set of regulatory powers including issuing standards, enhanced oversight of an FMI's rules, and crisis management powers. These apply to FMIs that are deemed to be systemically important and are designated on the recommendation of the Regulator.
   - FMIs that are not deemed to be systemically important can apply for designation to access legal protections around settlement finality, netting and the legal enforceability of their rules. FMIs that opt-in for designation will be subject to a similar set of regulatory requirements as designated FMIs that are systemically important, except for crisis management powers under Part 4 of the Act.[2]

10. **Annex B:** provides a detailed description of the designation process for systemically important FMIs.

Design of the Framework

Overview

11. An FMI is systemically important, pursuant to section 28 of the Act, if one or both of the following apply to the FMI:

   - disruption to activities under the FMI could cause problems for one or more relevant persons that would threaten the stability of, or confidence in, the whole or a significant part of the financial system.
   - problems with one or more relevant persons could, because of the transactions or other interconnections under the FMI between relevant persons, cause problems for one or more other relevant persons that would threaten the stability of, or confidence in, the whole or a significant part of the financial system.

12. The Regulator will consider both quantitative and qualitative factors in assessing and deciding whether an FMI satisfies the conditions set out in section 28 of the Act.

13. This section introduces the basis upon which the Framework operates, in light of the contents of the Act and international best practice for regulating FMIs. The Framework emphasises the use of judgement of the Regulator when exercising their regulatory discretion and sets out the factors that are to be applied holistically when assessing systemic importance.

1 Except for pure payment systems, where the Reserve Bank is the only regulator.
2 Note that the regulation of designated FMIs can be also be tailored through tiers of standards. Annex B outlines the deemed in and opt-in designation processes.

The Act sets out the matters that the Regulator must consider

14. Section 24 of the Act outlines 5 matters that the Regulator must take into account for purposes of deciding whether an FMI is systemically important. The 5 matters are:
    - the FMI's size, including the number of participants and the number of indirect participants;
    - the types of persons who are participants and indirect participants;
    - the nature and scope of the activities under the FMI, including the way in which, and the extent to which,
        - the FMI interconnects (directly or indirectly) with other FMIs or other activities within the financial system;
        - participants and indirect participants transact or otherwise interconnect with each other (directly or indirectly) under the FMI;
    - the way in which, and the extent to which, financial risks are concentrated within the FMI;
    - were activities under the FMI to be disrupted, whether another FMI could promptly and effectively take them over.
15. The Framework is structured around these 5 prescribed matters.

Aligned with international best practices

16. The matters that the Regulator must take into account under the Act in deciding that an FMI is systemically important are closely aligned with criteria outlined by the Committee on Payments and Market Infrastructures and the International Organisation of Securities Commissions (CPSS and IOSCO, respectively) in the Principles for Financial Market Infrastructures (PFMI). The PFMI reflect international best practice for regulating FMIs.
17. The PFMI suggest that the criteria for assessing the degree to which an FMI should be subject to regulation, supervision and oversight include:
    - the number and value of transactions processed;
    - the number and type of participants;
    - the markets served;
    - the market share controlled;
    - the interconnectedness with other FMIs and other financial institutions; and
    - the available alternatives to using the FMI at short notice.
18. The PFMIs are widely followed in other jurisdictions. This provides some guidance about how the Framework outlined in this document will be applied. **Annex D:** provides a summary of how foreign regulators have identified the systemically important FMIs that operate in their jurisdictions.

Regulatory discretion

19. Most FMIs are unique and diverse in terms of the services they offer and the markets they support. Accordingly, it is not feasible to have a one-size-fits-all approach for deciding whether an FMI is systemically important. It also means the Regulator, in exercising their regulatory discretion, must exercise judgement when considering the relevant factors that point to whether an FMI is systemically important.

20. The 5 prescribed matters that the Regulator must take into account when making systemic importance determinations include a range of quantitative and qualitative factors. The diversity of FMIs and the interdependence of the 5 factors mean that it is not feasible to define specific thresholds or even ranges for the prescribed matters. Accordingly, the Regulator will seek to apply the 5 matters in a holistic manner when making systemic importance assessments.

21. Compared to a more prescriptive approach, this approach is adaptable to different types of FMIs that are important because of the different roles they play in the financial system and economy. It also permits the Regulator to be responsive to the emergence of new risks in the financial system. The diversity of FMIs and the need for judgement means that the Regulator will carry out their assessments of systemic importance on a case-by-case basis. The transparency of the process (including consulting with FMIs) that the Regulator will use for undertaking systemic importance assessments ensures that the Framework strikes a reasonable balance between the need for regulatory discretion and the desirability of clarity on the part of FMIs.

Summary of Framework design

22. In summary, the key features of this Framework include that it:

- describes the 5 factors in the Act, how they relate to systemic importance, and how they are applied to different types of FMIs;
- describes that the process for determining whether an FMI is systemically important is to provide transparency and clarity; and
- recognises that judgement by the Regulator is required in exercising their regulatory discretion in accordance with the provisions of the Act;
- does not include a systemic importance score or threshold;
- is designed such that systemic importance assessments are undertaken on a case-by-case basis;
- provides for consultation with FMI operators and participants.

Question 1: Do you have any comments on the design of the Framework (noting that it is based on the FMI Act, aligned with the PFMI, and balanced regulatory discretion with transparency and clarity)?

Further details on how the matters will be applied

23. This section explains in detail about the measures the Regulator will consider for different types of FMIs when making the assessment of systemic importance of FMIs. See Table 1 in **Annex C:** for a summary.

24. For the assessment of overseas FMIs, the Regulator will focus on the impact an FMI may have on the New Zealand financial system.

Size

25. The PFMI suggest taking into account the number and value of transactions processed and the number of participants in determining whether an FMI is systemically important.

26. Section 24(a) of the Act requires the Regulator to take into account the FMI's size, including the number of participants and the number of indirect participants. Box A sets out the factors that the Regulator will consider in their assessment of size.

Box A: Factors relating to size	
1.	Daily average and historical peak gross volumes processed, cleared or settled by the FMI over the last financial year
2.	Daily average and historical peak gross values processed, cleared or settled by the FMI over the last financial year
3.	The number of direct participants of the FMI
4.	The number of indirect participants of the FMI

27. FMIs often process significant transaction volumes and sizeable monetary values. The size of an FMI reflects the potential impact on financial stability if systemic risks to the FMI's operation materialised.

28. An FMI that processes relatively larger volumes and values of the transactions concentrates more risk in the operation and has a more significant impact on the financial system and economy following a disruption to its operations. Therefore, a useful indicator for systemic importance is the gross volumes and values processed, cleared or settled by the FMI over a period of time. In the case of overseas FMIs, the factors (1) and (2) above can be read as:

- the value and volume of transactions in New Zealand Dollars regardless of where the participant is domiciled; and
- the volume and value of transactions with New Zealand-based participants (regardless of the currency in which the value of transactions is denominated).

29. For FMIs that have had a relatively short tenure in New Zealand but potential growth in future, the Regulator may consider the estimated future transaction volumes and values in assessing the size of an FMI to determine the potential future risk to the financial system.

30. The number of participants also provides an indication of the systemic importance of an FMI. If an FMI has many participants, disruption of the FMI's activities may cause disruption to more financial markets participants, and the dispersion of impacts could significantly and adversely impact the wider financial system.

Question 2: Do you have any comments on the factors we suggest for assessing the size of FMIs? What other factors do you consider we should include in this category?

Type of participants

31. The PFMI suggest taking into account the types of participants in determining whether an FMI is systemically important. Section 24(b) of the Act requires the Regulator to take into account the types of persons who are participants and indirect participants. Box B sets out the factors that the Regulator will consider in their assessment of the types of participants.

Box B: Factors relating to the types of persons who are participants
1. Do the direct and indirect participants of an FMI include central banks?
2. Do the direct and indirect participants of an FMI include other FMIs?
3. Do the direct and indirect participants of an FMI include registered banks, especially G/D-SIBs
4. Do the direct and indirect participants of an FMI include large corporates?

32. Certain types of participants can increase the importance of an FMI to the stability of the financial system. For example, if a central bank is a participant of an FMI, the FMI may play an important role in facilitating the operation of monetary policy settings, supporting the provision of liquidity to the financial system or carrying out other critical functions.

33. Other examples of participants that may increase an FMI's importance to the financial system include:

- other FMIs – especially other systemically important FMIs. This is because disruptions to one FMI may also disrupt the operation of a linked FMI and its participants.
- registered banks – especially global or domestic systemically important banks (G/D-SIBs).
- large corporates – especially if they play a market-maker role in financial markets.

34. Both direct and indirect participants are relevant to this consideration. Further, the level of activity (volume and value of transactions) that an important participant or indirect participant undertakes through the FMI will be an important consideration.

Question 3: Do you have any comments on the factors we suggest for assessing the types of persons who are participants of FMIs? What other factors do you consider that we should include in this category?

Nature and scope of activities

35. The PFMI suggest taking into account the interconnectedness with other FMIs and other financial institutions. Section 24(c) of the Act requires the Regulator to take into account the nature and scope of the activities under the FMI, including the way in which, and the extent to which:

- the FMI interconnects (directly or indirectly) with other FMIs or other activities within the financial system; and
- participants and indirect participants transact or otherwise interconnect with each other (directly or indirectly) under the FMI.

Nature and scope of activities under an FMI (Subcategory C-1)

36. Box C 1 sets out the factors that the Regulator will consider in their assessment of the nature and scope of activities under an FMI.

Box C-1: Factors relating to the nature and scope of activities under an FMI	
1.	Is the FMI significant for the proper functioning of the market it supports? And is the market served by the FMI significant for the proper functioning of the wider economy?
2.	To what extent does the operation of the FMI serve to mitigate risk for participants?
3.	Does the FMI have multiple functions?

37. FMIs are more likely to be systemically important if they play a significant role in the operation of the markets they serve and if those markets are significant to the stability of the financial system and proper functioning of the economy.

38. For example, interbank payment services provided by wholesale payment systems (like ESAS in New Zealand) typically play a significant role on the daily operation of the financial markets and the wider economy. The potential disruption to these systems could be amplified through the financial system and ultimately destabilise the economy.

39. The important role that interbank payment systems play in the proper functioning of the economy is one reason that they are generally viewed as systemically important. Another example is FMIs that are used to facilitate the operation of monetary policy settings which are likely to be important to the proper functioning of the economy.

40. CSDs, SSSs, and CCPs often play significant roles for important markets. See Table 2 in **Annex D:**, which summarises the FMIs identified as systemically important in some jurisdictions.

41. Some FMIs, for example CCPs, play important roles in mitigating risks for participants. Disruptions to risk-mitigating FMIs could result in significant increases in credit and liquidity risk in the financial system. In contrast, some FMIs are designed to improve the transparency or efficiency of certain aspects of the financial system. Disruption to these types of services would be inconvenient and may decrease transparency and efficiency but is unlikely to have a direct adverse effect on financial stability.

42. Some FMIs have more than one function. For example, a CCP may also offer the services of a TR; or an SSS may also provide the services of a CSD. A wider scope of the activities provided by an FMI could indicate that they are likely to have a significant impact on the functioning of the financial system and the economy.

Question 4: Do you have any comments on the factors we suggest for assessing the nature and scope of activities of FMIs? What other factors do you consider we should include in this category?

Interconnectedness with other FMIs (Subcategory C-2)

43. Box C-2 sets out the factors that the Regulator will consider in their assessment of the nature and scope of activities relating to the interconnectedness with other FMIs.

Box C-2: Factors relating to interconnectedness with other FMIs
1. Does the FMI have vertical or horizontal system-based interdependency with other FMIs?
2. Does the FMI have institution-based interdependency with other FMIs?
3. Is the FMI interconnected with other FMIs through having common operational service providers?

44. Complex interconnectedness is a normal part of an FMI's structure or operations. FMIs may:

- be linked to or dependent on one another;
- have common participants; and
- serve interconnected institutions and markets.

45. These interdependencies raise the potential for disruptions to spread quickly and widely across institutions and markets. The CPSS identifies 3 types of interdependencies among FMIs: system-based interdependency, institution-based interdependency and environmental interdependency.[3]

System-based interdependency

46. If one FMI depends on the smooth functioning of one or more FMIs for its payment, clearing, settlement or recording processes, then the FMI has a system-based interdependency with those other FMIs.

47. Vertical relationships may develop between FMIs along the clearance and settlement chain. For example, a CCP may use the service of a CSD to complete the delivery of net securities positions. Another example is that CSDs rely on large-value payment systems (LVPS) to settle the payment leg of security transactions and achieve delivery versus payment.

48. Horizontal links may exist between 2 CCPs, 2 CSDs or 2 or more payment systems, which widens the scope of markets, instruments or institutions accessible through a particular system.

3 Committee on Payment and Settlement Systems (2008), The interdependencies of payment and settlement systems

Institution-based interdependency

49. FMIs may also be indirectly connected through common financial institutions as participants, or relying on the service provided by a common financial institution such as a common liquidity provider, settlement bank or custody bank. For example, if 2 FMIs rely on the committed backup liquidity facilities from the same bank, then any event related to the liquidity risk of the bank will be transmitted to both FMIs, which may increase the chance that a disruption to the common financial institution impacts the financial system.

Environmental interdependency

50. The interdependency among FMIs may also result from a common reliance on an operational service provider. For example, many FMIs rely on SWIFT services to conduct clearing and settlement. Another example is that some FMIs are operated by the same IT service providers. These types of indirect interconnectedness expose the FMIs to the risks of disruption or failure of their common operational service providers and also poses a risk to the financial system.

Question 5: Do you have any comments on the factors we suggest for assessing the interconnectedness of FMIs? What other factors do you consider we should include in this category?

Interconnectedness among participants (Subcategory C-3)

51. Box C-3 sets out the factors that the Regulator will consider in their assessment of the nature and scope of activities relating to the interconnectedness among participants.

Box C-3: Factors relating to interconnectedness among participants

1. Is there a tiered arrangement between direct and indirect participants? If yes, do indirect participants represent a large proportion of a direct participant's transactions and do indirect participants represent a large proportion of the total system's transactions?

52. Indirect participants rely on the services provided by direct participants to use an FMI's services. The dependencies between direct and indirect participants embedded in the tiered arrangements can present risks to the FMI and its smooth functioning, the participants themselves, and the financial system. If an FMI has few direct participants with many indirect participants with large volumes or values of transactions, it is likely that a large proportion of the transactions processed by the FMI depend on a few direct participants. This will adversely impact the FMI if a direct participant defaults or experiences an operational disruption.

Question 6: Do you have any comments on the factors we suggest for assessing the interconnectedness among participants of FMIs? What other factors do you consider we should include in this category?

Concentration of financial risk

53. The PFMI suggest taking into account the market share controlled in determining whether an FMI is systemically important. Section 24(d) of the Act requires the Regulator to take into account the way in which, and the extent to which, financial risks are concentrated within the FMI. Box D sets out the factors that the Regulator will consider in their assessment of the concentration of financial risk.

Box D: Factors relating to concentration of financial risk
1. Market share
2. Magnitude of credit exposure of the FMI
3. Magnitude of liquidity exposure of the FMI
4. Proportion of transactions by the 2 largest participants of the FMI

54. FMIs offer centralised services that allow participants to efficiently process financial transactions and mitigate certain financial risks. However, by offering these centralised services, financial risks become concentrated in FMIs. The typical financial risks concentrated within FMIs are credit risk and liquidity risk. Financial risk are most relevant for CCPs and FMIs that offer payment or securities settlement services.

55. When comparing the importance of FMIs that provide similar services (for example, 2 PSs), market shares can reflect the extent to which financial risks are concentrated in an FMI. Market shares can be measured by an FMI's volume as a proportion of total market volume of similar services or value as a proportion of total market value of similar services.

56. Participants are vulnerable to contagion risk, i.e. potential disruptions emanating from other participants of the same FMI. Contagion risk can lead to more severe impacts when the activities of an FMI are more concentrated in a small number of participants. The proportion of transactions by the 2 largest participants can indicate the extent to which risk is concentrated in the major participants of an FMI. The Regulator may also consider the potential impact that an FMI may have on the financial system in New Zealand, for example, the proportion of credit exposures that the domestic systemically important banks have to an FMI.

Question 7: Do you have any comments on the factors we suggest for assessing the concentration of financial risk of FMIs? What other factors do you consider we should include in this category?

Substitutability

57. The PFMI suggest taking into account the available alternatives to using the FMI at short notice in determining whether an FMI is systemically important. Section 24(e) of the Act requires the Regulator to take into account whether, were activities under the FMI to be disrupted, another FMI could promptly and effectively take them over. Box E sets out the factors that the Regulator will consider in their assessment of the substitutability.

Box E. Factors relating to substitutability

1. Can the range and scale of the services provided by an FMI be adequately substituted by available alternatives?
2. What is the expected cost (both time and money) associated with switching to an available alternative?
3. How much notice is required to switch to an available alternative?

58. The availability of substitute services is important for mitigating the potential impacts that an FMI failure can have to the financial system and economy. The systemic importance of an FMI will, therefore, all other things equal, be reduced where its critical services are substitutable and readily available elsewhere in the market.

59. If the range and scale of services offered to participants (and that lead to a concentration of risk) can be substituted quickly and with little cost, then liquidity and credit risk may not materialise and the impacts may not propagate through the financial system and economy. However, the extent of the potential mitigation depends on a number of considerations, including the number of substitutes, the speed at which services offered can be substituted, and the capacity of the substitutes to service the participants.

60. If an FMI has limited substitutes, or even imperfect substitutes, then disruption to the FMI may not be able to be readily mitigated and could still lead to adverse impacts to the financial system and economy. In contrast, readily available substitutes for the services of an FMI can reduce the systemic risk an FMI poses to the financial system. This depends on the operational practicality of switching to a substitute.

61. The ability of participants to switch to alternative service providers during a disruption may mitigate the systemic risk posed by an FMI, but only to the extent that the risks do not materialise before the process of switching to the alternative is complete.

62. Some alternatives only replace part of the functions of an FMI, either due to the operational capability of the alternative services or due to the unique nature of some functions of an FMI. In these cases, it may be that it may be hard to find a genuine substitute for an FMI.

63. Moreover, switching to an alternative service involves cost, both time and money, for the operators and participants, and also for the financial system and the economy.

Question 8: Do you have any comments on the factors we suggest for assessing the substitutability of FMIs? What other factors do you consider we should include in this category?

Next steps

64. Following the consultation, the Reserve Bank will publish the submissions received as per its policy on publishing submissions, as well as a summary of the feedback received and the Regulator's decision on the framework for identifying systemically important FMIs.

65. The assessment of FMIs will be carried out after the framework is confirmed. The Regulator will consult relevant FMIs about the result of the assessment before making recommendations to the Minister for the determination of systemically important FMIs.

Annex A: Consultation questions

Question 1: Do you have any comments on the design of the Framework (noting that it is based on the FMI Act, aligned with the PFMI, and balanced regulatory discretion with transparency and clarity)?

Question 2: Do you have any comments on the factors we suggest for assessing the size of FMIs? What other factors do you consider we should include in this category?

Question 3: Do you have any comments on the factors we suggest for assessing the types of persons who are participants of FMIs? What other factors do you consider that we should include in this category?

Question 4: Do you have any comments on the factors we suggest for assessing the nature and scope of activities of FMIs? What other factors do you consider we should include in this category?

Question 5: Do you have any comments on the factors we suggest for assessing the interconnectedness of FMIs? What other factors do you consider we should include in this category?

Question 6: Do you have any comments on the factors we suggest for assessing the interconnectedness among participants of FMIs? What other factors do you consider we should include in this category?

Question 7: Do you have any comments on the factors we suggest for assessing the concentration of financial risk of FMIs? What other factors do you consider we should include in this category?

Question 8: Do you have any comments on the factors we suggest for assessing the substitutability of FMIs? What other factors do you consider we should include in this category?

Annex B: The process of designation

The process for designation will differ depending on whether an FMI is considered systemically important following the Regulator making a recommendation on its own initiative or whether an FMI makes an application to opt-in to the regime. Figure 1 shows the steps in the process for the Regulator to make a designation recommendation on its own initiative and for FMIs that apply to opt-in to the regime.

Where the Regulator has a reason to consider that an FMI is deemed to be systemically important, the following designation steps will be taken:

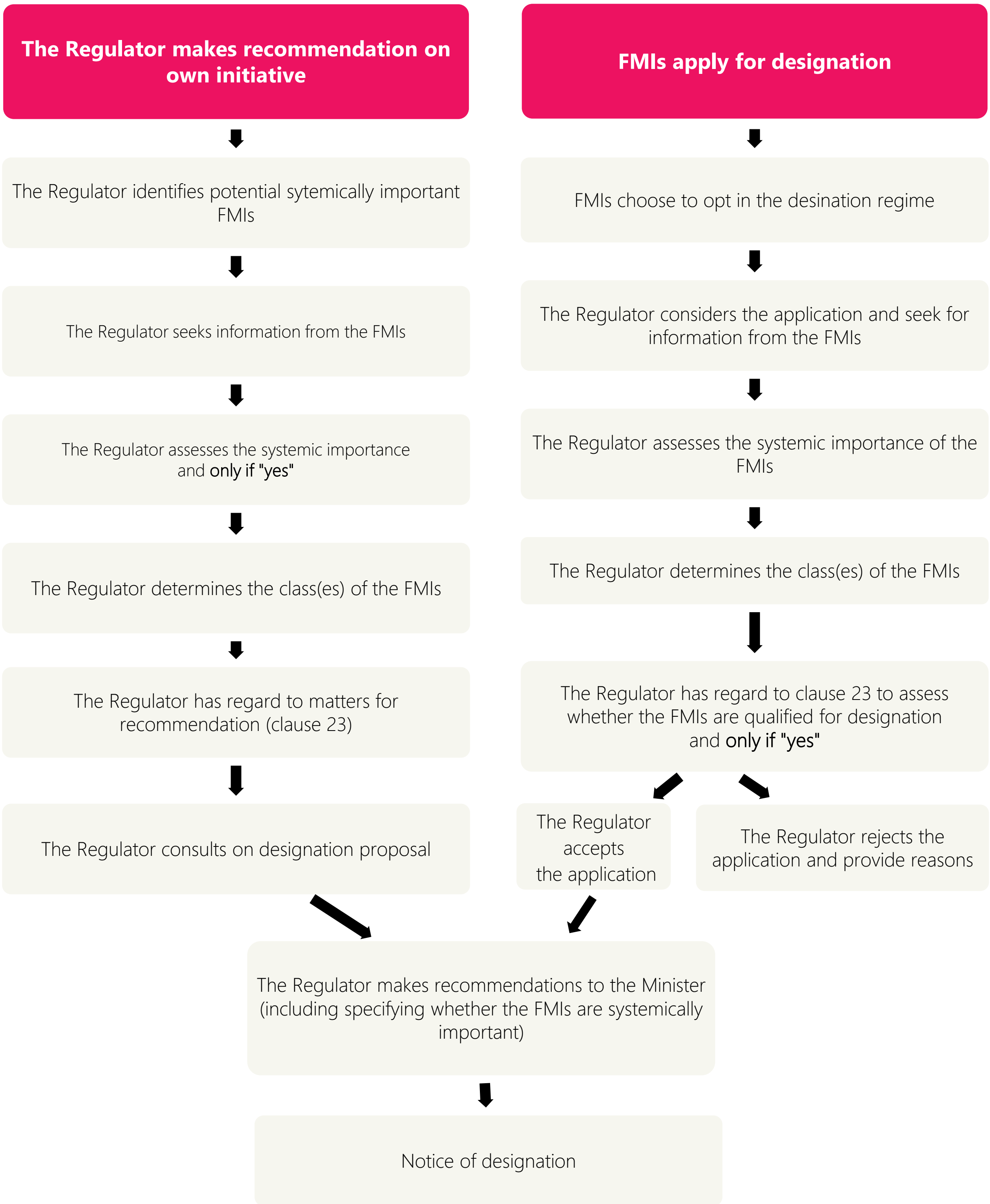
1. The Regulator will use relevant information collected from the sector, as well as knowledge of FMIs accumulated by the Regulator to identify whether an FMI may be systemically important.
2. The Regulator will seek information from the FMI relating to the factors it must consider.
3. The Regulator will assess the systemic importance of the FMI in accordance with the Act and the systemically important FMI framework, and only if the Regulator regards the FMIs as systemically important will the Regulator continue the following process.
4. The Regulator will determine the class(es) of the FMI and what standards would apply to the FMI following designation.
5. The Regulator will have regard to the matters set out in section 23 of the Act to identify any issues that will need to be addressed.
6. The Regulator will consult with the FMI on its designation proposal including the assessment that the FMI is deemed to be systemically important and the reasons for the assessment. The Regulator will seek feedback from the FMI operator and participants.
7. The Regulator will consider any submissions made by the operator and participants of the FMI and decide whether to proceed with the designation proposal. If yes, the regulator will continue the following steps.
8. The Regulator will make a recommendation to the Ministers to designate the FMI.
9. The Minister will issue a Notice of Designation for the FMI.

Where an FMI applies to be designated, the following designation steps will be taken:

1. An FMI may choose to opt-in to the designation regime by applying to the Regulator.
2. The Regulator will consider the application and seek any additional information from the FMI that will facilitate the assessment.
3. The Regulator will assess the systemic importance of the FMI.
4. The Regulator will have regard to section 23 of the Act to determine whether the FMI qualifies for designation.
    - If the FMI qualifies, the Regulator will accept the application and make a recommendation to the Minister to designate the FMI, specifying whether the designated FMI is systemically important or not.

- If the FMI does not qualify, the Regulator will reject the application and notify the applicant of the decision and of the reasons for the decision, according to section 25(5) of the Act.

Figure 1: Process for designation



Annex C: Further details on factors relating to systemic importance

Table 1 provides further detail on specific measures that the Regulator will use to assess the systemic importance of FMIs. The measures listed here are not necessarily exhaustive and the Regulator may consider others when making systemic importance determinations.

Table 1: Guidance of measures and implications for systemic importance

Category	Implication for systemic importance	Payment systems	CCP	SSS	CSD	TR
A. Size	Larger numbers indicate higher importance.	Daily average and historical peak gross volume and value settled over the last financial year. Number of direct and number of indirect participants.	Daily average and historical peak gross volume and value (notional for derivatives) cleared over the last financial year. Number of direct and number of indirect participants.	Daily average and historical peak gross volume and value settled over the last financial year. Number of direct and number of indirect participants.	Daily average and historical peak gross volume and value processed over the last financial year. Total value of securities held at the end of the last financial year. Number of direct and number of indirect participants.	Daily average and historical peak of volume and notional value recorded over the last financial year. Number of users.
B. Participants of high importance (direct and indirect)	Participants of high importance indicate higher importance.	Central banks; other FMIs; Banks (G/D-SIBs); Large corporates	Central banks; other FMIs; Banks (G/D-SIBs); Large corporates	Central banks; other FMIs; Banks (G/D-SIBs); Large corporates	Central banks; other FMIs; Banks (G/D-SIBs); Large corporates	Central banks; other FMIs; Banks (G/D-SIBs); Large corporates
C-1. Nature and scope of activities	Affirmative answers indicate higher importance.	Is the FMI significant for the proper functioning of the market* it supports? Is the market served by the FMI significant for the proper functioning of the wider economy?	Is the FMI significant for the proper functioning of the market* it supports? Is the market served by the FMI significant for the proper functioning	Is the FMI significant for the proper functioning of the market* it supports? Is the market served by the FMI significant for the proper functioning of the wider economy?	Is the FMI significant for the proper functioning of the market* it supports? Is the market served by the FMI significant for the proper functioning	Is the FMI significant for the proper functioning of the market* it supports? Is the market served by the FMI significant for the proper functioning of the wider economy?

Category	Implication for systemic importance	Payment systems	CCP	SSS	CSD	TR
		Does the FMI serve to mitigate risks for participants? Does the FMI have more than one function?	of the wider economy? Does the FMI serve to mitigate risks for participants Does the FMI have more than one function?	Does the FMI serve to mitigate risks for participants? Does the FMI have more than one function?	of the wider economy? Does the FMI serve to mitigate risks for participants? Does the FMI have more than one function?	Does the FMI serve to mitigate risks for participants? Does the FMI have more than one function?
C-2. Inter-connected-ness with other FMIs	More interconnections indicate higher importance.	Vertical or horizontal system-based links with other FMIs. Institution-based links with other FMIs. Reliance on common operational service providers.	Vertical or horizontal system-based links with other FMIs. Institution-based links with other FMIs. Reliance on common operational service providers.	Vertical or horizontal system-based links with other FMIs. Institution-based links with other FMIs. Reliance on common operational service providers.	Vertical or horizontal system-based links with other FMIs. Institution-based links with other FMIs. Reliance on common operational service providers.	Vertical or horizontal system-based links with other FMIs. Institution-based links with other FMIs. Reliance on common operational service providers.
C-3. Inter-connected-ness among participants	A greater extent of tiering indicates higher importance.	The extent and level of tiering between direct and indirect participants.	The extent and level of tiering between direct and indirect participants.	The extent and level of tiering between direct and indirect participants.	The extent and level of tiering between direct and indirect participants.	Not applicable.
D. Con-centration of financial risk	Higher market share, larger credit/liquidity exposure, and higher proportion of transactions by the largest 2 participants indicate higher importance.	Market share. Average daily and peak aggregate value of collateral posted to the FMI Average daily and peak aggregate intraday credit provided by the FMI to its participants. Average and peak daily	Market share. Mean and peak daily value of initial margin held by the FMI. Average and peak daily aggregate value of pay outs by the FMI to its counterparties.	Market share. Average daily and peak aggregate value of collateral posted to the FMI Average daily and peak aggregate intraday credit provided by the FMI to its participants.	Not applicable.	Not applicable.

Category	Implication for systemic importance	Payment systems	CCP	SSS	CSD	TR
		aggregate value of pay outs by the FMI to its counterparties. Proportion of transactions by the largest 2 participants in an FMI.	Proportion of transactions by the largest 2 participants in an FMI.	Average and peak daily aggregate value of pay outs by the FMI to its counterparties. Proportion of transactions by the largest 2 participants in an FMI.		
E. Substitut-ability	Less substitutability indicates higher importance. Higher cost indicates higher importance.	Can the range and scale of the services provided by an FMI be fully or only partially replaced by alternatives? Cost (time and money) associated with switching to the alternatives	Can the range and scale of the services provided by an FMI be fully or only partially replaced by alternatives? Cost (time and money) associated with switching to the alternatives	Can the range and scale of the services provided by an FMI be fully or only partially replaced by alternatives? Cost (time and money) associated with switching to the alternatives	Can the range and scale of the services provided by an FMI be fully or only partially replaced by alternatives? Cost (time and money) associated with switching to the alternatives	Can the range and scale of the services provided by an FMI be fully or only partially replaced by alternatives? Cost (time and money) associated with switching to the alternatives

*Market is defined by the nature of transactions an FMI provides or the products traded/settled/recorded in an FMI.

Annex D: Frameworks for identifying systemically important FMIs – practices from other jurisdictions

Table 2 compares frameworks for identifying systemically important FMIs in several jurisdictions. The key takeaways from Table 2 are:

- There is no universal approach to identifying systemically important FMIs.
- The United States and Canada have adopted a single framework that applies to all types of FMIs, while other jurisdictions have different criteria/framework for identifying systemically important PSs and other types of FMIs. New Zealand has followed the US and Canada's approach.
- The European Union and United Kingdom take a different approach to the oversight of payment systems and other types of FMIs.

Table 2: Approaches adopted for identifying systemically important FMIs, by jurisdiction

Jurisdiction	US	Canada	EU	UK	Australia	Singapore	NZ
Single regime for all FMIs	✓	✓	×	×	×	×	✓
Payment system specific regime	/	/	✓	✓	✓	✓	/
Regime for other types of FMIs (excl. PSs)	/	/	×[a]	×[a]	✓	✓	/

[a] FMIs other than payment systems are required to be authorised in the EU and the UK in some form (i.e. registration for domestic FMIs), either recognition (for foreign FMIs) or licencing. The EU is consulting on a two-tiered approach to the oversight of foreign FMIs, where Tier One foreign FMIs will be identified as systemically important.

Table 3 lists the systemically important FMIs identified by these jurisdictions. The key takeaways from Table 3 are:

- Wholesale PSs, especially real-time gross settlement systems, are generally identified as systemically important FMIs.
- It is fairly uncommon for retail PSs to be identified as systemically important FMIs:
    - The Bank of Canada adopts a two-tiered oversight regime: systemically important FMIs and prominent payment systems (PPSs). Automated Clearing Settlement System (ACSS) is identified as a PPS. Although PPSs are not systemically important FMIs, they are still subject to the oversight of the Bank of Canada with less stringent standards compared to systemically important FMIs; and
    - PSs in the United Kingdom are designated based on their systemic importance but are not referred to as systemically important FMIs.

- CCPs, CSDs, and SSSs are generally identified as systemically important FMIs.
- TRs are excluded from the assessment of systemic importance by definition in some countries. For example in the United States, only PSs, CCPs, CSDs and SSSs (referred to as financial market utilities) are included in the systemically important FMI framework. Similarly, in jurisdictions where there are different regimes for PSs and other types of FMIs, only CCPs, CSDs and SSSs are included in other types of FMIs, i.e. 'clearing and settlement facilities' in Australia and 'clearing facilities' in Singapore.

Table 3: Systemically important FMIs (SIFMIs) identified, by jurisdiction

SIFMIs	US	Canada	EU	UK	Australia	Singapore
Wholesale PSs	**CHIPs** (RTFS) **CLS** (FX)	**LVTS** (RTGS equivalent) CLS (FX)	TARGET2 (RTGS) **EURO1** (RTGS-equivalent) CORE(FR)	CHAPSb (RTGS)	**RITS** (RTGS) **CLS** (FX)	**MEPS+** (RTGS)
Retail PSs		**ACSS**[a] (Cheques, debit, direct deposit, etc.)	**STEP2-T** (Credit Transfers and SEPA Direct Debits) CORE(FR) (Card, ATM, Direct debit, Cheques, etc.)	**Bacs**[b] (Direct debit/ credit) Cheque & Credit[b] (Cheques) **FPS**[b] (internet and telephone banking payment) **LINK**[b] (ATM network) **NICC**[b] (Cheques) **MasterCard**[b] (card payment) **Visa**[b] (card payment)		
CCPs	**CME** (futures, options) ICE Clear Credit (CDS products) **NSCC** (securities on US exchanges) **OCC** (US listed options)	CDSX **CDCS** (fixed income securities, repos, OTC equity derivatives listed on Montréal Exchange) **LCH** (interest rate derivatives)	Recognition /authorisation regime[c]	Recognition / authorisation regime[c]	**CME** (OTC interest rate derivatives) **LCH** (OTC interest rate derivatives) **SwapClear** (AUD interest rate derivatives)	**APEX** (Derivatives) **SEDC** (Derivatives) **ICE** (Derivatives)

SIFMIs	US	Canada	EU	UK	Australia	Singapore
					ASX Clear (ASX quoted equities) ASX Clear (Futures) (futures, options)	
CSDs	DTC (debt & equity securities) **FICC** (fixed income market)	CDSX	Recognition / authorisation regime[c]	Recognition / authorisation regime[c]		Central Depository Ltd
SSSs	NSCC (securities on US exchanges)	CDSX	Recognition / authorisation regime[c]	Recognition / authorisation regime[c]	ASX Settlement (ASX listed equities) Austraclear (Debt securities)	
TRs	Not included in systemically important FMI assessment		Recognition / authorisation regime[c]	Recognition / authorisation regime[c]	Not included in SIFMI assessment	Not included in systemically important FMI assessment

[a] ACSS is identified as a prominent payment system (PPSs), a second tier after SIFMIs for oversight by the Bank of Canada.
[b] PSs in the UK are designated based on their systemic importance but are not named as 'SIFMIs'.
[c] FMIs other than payment systems are required to be authorised in some form (i.e. registration for domestic FMIs), either recognition (for foreign FMIs) or licencing. The EU is consulting on a two-tiered approach to the oversight of foreign FMIs, where tier 1 is systemically important.