



NZX Participant Guidance Note

Capital Adequacy

February 2018



The purpose of this Guidance Note is to provide guidance to NZX Participants in relation to Capital Adequacy encompassed by the NZX Participant Rules, NZX Derivatives Rules and Clearing & Settlement Rules.

This Guidance Note replaces the previous the Monthly Reporting and Annual Reporting Practice Notes published in April 2011.

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This Guidance Note has been issued by NZX to promote market certainty and assist market participants. This Guidance Note sets out NZX's general approach to the subject, but is not to be regarded as a definitive statement of the application of the Rules in every situation. Examples set out in this Guidance Note are limited and are not designed to cover all eventualities. NZX may replace Guidance Notes and Practice Notes at any time and an NZX Participant should ensure it has the most recent versions of these documents. Guidance Notes do not constitute legal advice. NZX recommends that NZX Participants take advice from qualified persons.



1. Introduction

The purpose of this Guidance Note is to provide guidance and best practice information for Participants in respect of the NZX Limited (**NZX**) and New Zealand Clearing Limited (**CHO**) Capital Adequacy requirements, including:

- Guidance and clarification for determining each element of the Net Tangible Current Assets and Total Risk Requirement calculations;
- Directions for completing the “Capital Adequacy Template”;
- Directions for reporting daily movements to NZX;
- Assistance with providing the information required for monthly, half yearly and annual reporting requirements; and
- A worked example (outlined in section 8 of this Guidance note, named the **GVBL Example**) applying the Rules and concepts to a Participant’s financial statements and exposures associated with a Broking firm conducting business on NZX’s Cash and Derivatives Markets.

Financially sound Participants with adequate policies and controls to maintain an acceptable level of liquidity are essential to investor confidence and promoting market integrity.

1.1 Scope of this Guidance Note

This Guidance Note provides assistance in calculating, recording, reporting and complying with Capital Adequacy requirements of:

- Section 19 of the NZX Participant Rules (the **Rules**);
- Section 16 of the NZX Derivatives Market Rules (the **Derivatives Rules**); and
- Section 9 Clearing and Settlement Rules (the **C&S Rules**).

Collectively “**Participant Rules Sets**” for the purpose of the Guidance Note¹.

Given the consistency of the Capital Adequacy requirements across the Participant Rules Sets, rule references throughout this Guidance Note apply collectively to the Rules, Derivatives Rules and C&S Rules with the section reference dropped. For example, references to Rule 1.1 apply to Rule 19.1.1, Derivatives Rule 16.1.1 and C&S Rule 9.1.1.

References to Participants in this Guidance Note include:

- A Market Participant Requiring Capital as defined in the Rules;
- A Participant Requiring Capital as defined in the Derivatives Rules; and

¹ Where applicable the Guidance Note also references the relevant Derivatives Market Procedures (the **Derivatives Procedures**), the Clearing and Settlement Procedures (the **C&S Procedures**) and the Depository Operating Procedures (the **Depository Procedures**).



- A Clearing Participant as defined in the C&S Rules;

Collectively “**Participants**” for the purpose of the Guidance Note.

Capitalised terms which are not defined in this Guidance Note have the same meanings as given to them in the above Participant Rules Sets.

2. The Capital Adequacy Ratio

NZX’s Capital Adequacy requirements apply the same fundamental principle as other recognised prudential supervision regimes, by which a Participant’s current financial health is measured by assessing its liquidity against the risks it is exposed to.

Accordingly, the Capital Adequacy Calculation is classified into the following components:

1. Net Current Tangible Assets (**NTCA**) – a Participant’s readily realisable liquid assets; and
2. Prescribed Minimum Capital Adequacy (**PMCA**) – being the higher of:
 - a. The Minimum NTCA for the category of Participant; or
 - b. The Total Risk Requirement (**TRR**) – capturing all a Participant’s current exposures associated with its business.

Rule 1.1 requires that a Participant must at all times maintain its NTCA at a level equal to, or greater than, its PMCA. Expressed simply as a percentage, NTCA must not be less than 100% of PMCA:

$$\text{NTCA/PMCA} \geq 100\%$$

Rule 3.1 requires a Participant to calculate and record as at each Business Day its *NTCA as a percentage of its PMCA* (the **Capital Adequacy Ratio**) by the close of the following Business Day.

In calculating the Capital Adequacy Ratio, Participants must complete all sheets in Appendix 2 – the Capital Adequacy Template (the **Capital Adequacy Template**) supplementing this Guidance Note.

3. Net Current Tangible Assets

As detailed above, NTCA is a Participant’s available liquid capital taking its tangible assets less its total liabilities. This is calculated in accordance with Generally Accepted Accounting Practice (**GAAP**) relying on the Participant’s “balance sheet” to determine the components detailed under Rule 4.

A Participant’s balance sheet should be categorised appropriately to adequately and transparently identify the Participant’s net assets and adjustments for non-liquid items as follows:

- Total Assets; less:
 - Intangible Assets (e.g. Goodwill, brand recognition, patents and trademarks)



- Plant, Property and Equipment (i.e. Fixed Assets excluding accumulated depreciation)
- Any asset not capable of being realised within the next 12 months (i.e. Deferred Tax Assets, Prepayments, long-term investments, or any other item considered a non-current assets under GAAP)
- Guarantees not approved under Rule 4.2(b)
- Total Liabilities; less:
 - Subordinated Debt approved under Rule 4.5.

Part 8.2 of the GVBL Example shows how this is derived from the balance sheet and the format in which the NTCA calculation should be reflected for recording and reporting purposes in the Capital Adequacy Template.

4. Minimum NTCA

The function of the Minimum NTCA requirement within PMCA is to establish the base level of liquid capital for the various Participant categories defined under the Participant Rules Sets. The Minimum NTCA requirements for all Participants are as follows:

Rule Set	Class of Participant	Minimum NTCA
C&S Rules	Individual Clearing Participant	\$ 1,000,000
	General Clearing Participant	\$ 5,000,000
	Default Clearing Participant	\$ 5,000,000
Rules	Trading Participant	\$ 500,000
	Advising Firm accepting Client Funds	\$ 500,000
	Advising Firm not accepting Client Funds	\$ 250,000
	Distribution and Underwriting Sponsor	\$ 250,000
Derivative Rules	Trading Participant	\$ 500,000
	Advising Firm	\$ 500,000
	Introducing Broker	\$ 250,000

Where a Participant falls under more than one of the above categories, the greatest value Minimum NTCA will be applied within PMCA.

5. Total Risk Requirement

The Total Risk Requirement (TRR) calculation aggregates a Participant's risk based exposures across a range of areas, based on the nature and extent of the activities the organisation is

engaging in. A Participant's risk based capital requirements are categorised to reflect the TRR as follows:

- *Operational Risk Requirement* – The risk arising from a breakdown of the Participant's business operations using past and expected revenue as a size proxy.
- *Counterparty Risk Requirement* – Aggregate exposure to the individual Counterparties associated with all the Participant's dealings.
- *Large Position Risk Requirement* – Exposures to individual Counterparties or issuers considered significant in relation to a Participant's size.
- *Position Risk Requirement* – Aggregate of the Participant's individual exposures to its principal positions in Financial Instruments.
- *Currency Risk Requirement* – Aggregate of the Participant's foreign exchange, or non-NZD denominated, exposures.
- *Primary Market Risk Requirement* – Aggregate of the Participant's exposures associated with each of its Net Underwriting Commitments.
- *Market Risk Requirement* – Additional exposures determined from time to time by NZX based on the Participant's risk profile and market volatility.

Taken together, the elements of TRR represent the level of liquid capital a Participant requires to cover the business it is engaging in.

5.1 Operational Risk Requirement

A Participant's Operational Risk Requirement is equal to 1% of the higher of:

- a) the Participant's budgeted total revenue for the month in which the calculation is made;*
- and*
- b) the Participant's average actual monthly total revenue of the three complete consecutive calendar months preceding the date on which the calculation is made.*

Operational Risk Requirement (**ORR**) accounts for the capital required for a Participant's exposures associated with the everyday running of the broking business which are not explicitly represented in the other risk requirement categories. Accordingly, this element of TRR captures the Participant's risk of financial loss resulting from a breakdown in key systems and controls, due to factors such as:

- Human error
- Inadequate authorisation and oversight processes
- Inadequate back-office functions
- Inexperienced staff
- Internal and external fraud
- Cyber risk and data security
- Legal/regulatory risk

To factor these exposures into TRR each business day, the Participant's forecasted revenue or recent actual earnings are used as a measure of the scale of the Participant's business operations by taking the Participant's:



- (a) Current month's budgeted revenue; or
- (b) Average total monthly revenue from the three previous months.

The higher of these two figures is then taken with 1% applied as the ORR.

For the purposes of calculating and recording ORR in the Capital Adequacy Calculation, Participants must complete tab '2. Operational Risk' of the Capital Adequacy Template.

Part 8.3 of the GVBL example provides further details of how the ORR should be calculated and recorded for reporting to NZX.

For the avoidance of doubt, all items classified as Revenue on a Participant's Profit & Loss, or Statement of Financial Performance, should be accounted for in 'total revenue' on a net basis.

5.2 Counterparty Risk Requirement

A Participant's Counterparty Risk Requirement shall be calculated in respect of each of its Positive Credit Exposures for each Counterparty. In calculating Positive Credit Exposures, the Participant shall, having regard to any relevant Guidance Note or Procedure:

- (a) include all trade and intragroup debtors;*
- (b) include all transactions in Financial Instruments; and*
- (c) exclude all transactions with CHO and all Net Underwriting Commitments.*

Counterparty Risk Requirement (**CRR**) reflects the capital required to account for the Participant's credit exposures to the external parties with which it engages.

5.2.1. Positive Credit Exposure

The fundamental principle behind whether a Participant has risk to a Counterparty is whether a Positive Credit Exposure exists. A Positive Credit Exposure (**PCE**) is defined as:

"an exposure to a Counterparty where, if the Counterparty were to default, the Participant would suffer financial loss and includes a Counterparty's aggregate gross liabilities to deliver Securities and cash."

Put simply, a PCE represents the loss a Participant would suffer if a Counterparty defaulted on any financial obligation. PCE arises not only from unsettled client contracts in Securities transactions but also broker balances, intercompany receivables, trade debtors and general receivables.

A Participant calculates CRR by aggregating the net of all Positive Credit Exposures for each individual Counterparty.

A Participant's CRR:

- Must include all general and intercompany receivables owed to the Participant;



- Must include all clients yet to settle with the Participant on any transaction;
- Must include all brokers yet to settle with the Participant for any transactions executed by the broker on the Participant's behalf;
- May only net buy and sell transactions where calculating PCE for an individual Counterparty;
- May net a Counterparty's liability against assets held by or under the control of the Participant in accordance with Part 5.2.6 of this Guidance Note;
- May exclude any cash or Securities receivable from CHO; and
- May exclude any Net Underwriting Commitments already accounted for as Primary Market Risk Requirement (**PMRR**).

5.2.2. Trade and Intragroup Debtors

While CRR for a Participant is predominantly made up of PCE arising from unsettled Securities and margin transactions, a Participant must also account for its intercompany and general receivables within the calculation. These are funds yet to be received by a Participant and must be captured under CRR.

This can be achieved by simply taking the appropriate general ledger accounts balances from the Participant's balance sheet, as per Parts 8.4.1 and 8.4.2 from the GVBL Example.

Participants may wish to consult their aged debtors report to determine where an outstanding item becomes Overdue.

5.2.3. Client and Broker Securities Transactions

With respect to exposure arising from a Participant executing Equity Securities and Debt Securities transactions, a Participant must calculate PCE for *each individual Counterparty* whose transactions it has been a party to. This must reflect both buy and sell transactions, where:

- (a) A Counterparty is yet to provide **cash** to a Participant for a **buy** transaction executed by that Participant; and
- (b) A Counterparty is yet to deliver **Securities** to a Participant for a **sell** transaction executed by that Participant.

In calculating a Participant's PCE to its clients, the client and broker ledgers can be used as a mechanism to capture where both cash (debit) and/or stock (credit) is deliverable from each Counterparty with respect to Securities Transactions. The ledger will also show PCE where a cash balance is owing from a Counterparty for any other reason, e.g. broking fees owing. As per the above, netting of debit and credit balances is permissible within each Counterparty.



The following table provides a general guide for how PCE can be reflected for an individual Counterparty using the client/broker ledger transactions and balance:

	Ledger Movement	PCE Created?	PCE Satisfied	Ledger Movement
Buy Transaction Executed	Debit <i>(Value of purchase)</i>	Client Liability to deliver cash for settlement	Client deposits cash to pay for Securities	Credit <i>(Value of deposit)</i>
Sell Transaction Executed	Credit <i>(Value of sale)</i>	Client Liability to deliver Securities for settlement	Securities uplifted from client to Participant	None
Cash Deposit	Credit <i>(Value of deposit)</i>	No client liability	N/A	N/A
Cash Withdrawal/ Fee Charge	Debit <i>(Value of withdrawal/fee)</i>	Only to the extent that ledger is in deficit	Client deposits cash to cover any deficit	Credit <i>(Value of deposit)</i>

Where the services of other brokers are utilised for conducting Securities transactions, exposure to these entities must also be accounted for, whether NZX Participants or not. Such services may include Clearing and Trading arrangements on a market offered by NZX or overseas Securities transactions (as agent and principal).

In these circumstances, a Participant will be exposed to its clients' PCE *and* also the broker's obligation to deliver cash or Securities following settlement with the relevant exchange. The following table provides a general guide for how PCE can be reflected for client and broker where transacting through another firm:

	Ledger Movement	PCE Created?	PCE Satisfied	Ledger Movement
Client Buy Transaction Executed	Debit Client ledger <i>(Value of purchase)</i>	Client Liability to deliver cash for settlement	Client deposits cash to pay for Securities	Credit Client ledger <i>(Value of deposit)</i>
	Credit Broker Ledger <i>(Value of purchase)</i>	Broker Liability to deliver stock following market settlement	Securities delivered by broker for client lodgement	None
Client Sell Transaction Executed	Credit Client ledger <i>(Value of sale)</i>	Client Liability to deliver Securities for settlement	Securities uplifted from client to Participant	None
	Debit Broker Ledger <i>(Value of sale)</i>	Broker Liability to deliver stock following market settlement	Cash delivered by broker for client settlement	Credit Broker Ledger <i>(Value of deposit)</i>

Parts [8.4.3](#) and [8.4.4](#) of the GVBL Example demonstrates how PCE is calculated for individual clients and brokers in a range of scenarios.

As the client ledger forms part of a Participant's trial balance and is consolidated into receivable and payable totals within the balance sheet, Participants may wish to incorporate the amounts directly into the CRR calculation.

Participants should note that this method is likely to include cash deposits from clients which need not be included in CRR. NZX is comfortable with this conservative approach.

5.2.4. Participants not accepting Client Assets

In the case of Clearing Participants, Trading Participants and Advising Firms accepting Clients Assets, the client ledger will be incorporated in the Participant's accounting and broking systems, naturally capturing the information required to determine each client's PCE.

With regard to an Advising Firm *not accepting Client Assets*, details of its clients' Securities transactions may not be readily available within the Advising Firm's in-house systems. NZX acknowledges that transactions effected on behalf of an Advising Firm not accepting Client Assets would be reflected in the CRR calculation of the Advising Firm's Clearing Participant. While Advising Firms not accepting Client Assets do not pose an immediate or direct risk to NZX and CHO, the Participant must account for any exposure to a Counterparty, where a Counterparty default may result in the Participant suffering financial loss. Given the Advising Firm not accepting Client Assets is ultimately responsible for its clients' transactions, such Participants must account for these transactions where a client liability remains outstanding.

Accordingly, an Advising Firm not accepting Client Assets must arrange with its Trading and/or Clearing Participant to have access to its clients' trading details to incorporate this information into its CRR calculation.

5.2.5. Margined Transactions

For margined transactions executed on behalf of clients, a Participant is exposed to:

- (a) The amount payable to the Participant by clients in respect of transactions in margined instruments (outstanding settlement, margin call, or premium obligations); and
- (b) Amounts owed to the Participant by any broker or Clearing Participant utilised for conducting transactions in margined instruments on a client's or the Participant's own behalf.

For the Participant's exposure to a client for an unsettled margin transaction, as with non-margined Equity and Debt Securities, the client ledger can be used to capture a client's liability in respect of collateral, premium and settlement obligations. In the same manner, amounts owing from an executing or clearing broker in relation to client and house margined transactions should be reflected in the ledger system.

With respect to the timing of when the PCE arises in respect of margin transactions, the PCE shall arise from the time that the relevant exchange or clearing house schedules payment to be due. For example, where a client executes a WMP Futures Contract through a Trading and Clearing Participant, the Participant's PCE to this client will arise;

- (a) At the time the Contract's initial margin requirement is called by CHO;

- (b) At the time any mark-to-market (or variation margin) amounts are called in respect of the Contract; or
- (c) Should the Contract expire (reach maturity), the time in which settlement of the full Contract falls due.

Where recognising PCE arising from margin calls, Participants are required to use the *Initial Margin Capital Requirement (IMCR)* of clients' margined transactions, meaning:

- (a) *"in relation to a Contract which has arisen from an Order by a Trading Participant, such initial margin amount as determined by CHO;*
- (b) *in relation to a Derivatives Contract which has arisen from a F&O Order placed with a F&O Executing Participant, such initial margin amount (howsoever described) as determined by the rules and regulations of the relevant F&O Exchange with whom the F&O Order was placed; or*
- (c) *in relation to a Derivatives Contract not captured under (a) or (b), such initial margin as determined by NZX or CHO in any Guidance Note."*

Therefore, under parts (a) and (b) of the definition of IMCR, the initial margin used to calculate PCE for *exchange traded* Derivative Contracts, whether through NZX or another F&O Exchange, will be the amount called by CHO or the relevant F&O Exchange.

Initial margin rates determined by the relevant exchange are established on a risk based approach for the relevant Derivative Contract independently from the Participant, and are therefore the appropriate rate to be applied to establish a Counterparty's liability.

Part (c) of the definition of IMCR applies to margin requirements for derivatives that are not exchange traded derivatives (also referred to as "non-centrally cleared" derivatives), i.e. where no central clearer or exchange, is providing an independent assessment of the risk associated with the product.

Accordingly, Participants engaging in such transactions must apply the rates specified by the International Organization of Securities Commission's (**IOSCO**) and Basel Committee on Banking Supervision's (**BCBS**) framework for margin requirements for non-centrally cleared derivatives (the **Public Report**) under Appendix 1 (<http://www.iosco.org/library/pubdocs/pdf/IOSCOPD480.pdf>).

The rates specified in this schedule should be multiplied by the applicable Contract's notional value to establish a client's PCE.

Where a Participant wishes to reflect PCE using an initial margin model that is applied on a 'portfolio' basis for the purpose of part (c) of the IMCR definition, it may do so where such a model:

- (a) Satisfies Requirements 3.1 to 3.12 of IOSCO and BCBS's Public Report; and
- (b) Has been expressly permitted and approved in writing by NZX.

Parts [8.4.3](#) and [8.4.4](#) of the GVBL Example demonstrate how PCE is calculated for individual clients and brokers in a range of circumstances involving margined transactions.



5.2.6. Netting PCE with Client Assets

Liability of a Counterparty to a Participant may be netted against:

- (a) assets held by that Participant pending settlement of that liability; and/or*
- (b) assets of that Counterparty under the control of that Participant in respect of which that Participant has a right or lien that may be exercised in order to satisfy that liability.*

Rule 7.2 specifies the manner in which a Counterparty's PCE may be netted, or off-set, by assets in the Participant's possession or control.

Part (a) of this Rule covers the circumstances where a Counterparty settles with the Participant prior to the market settlement being due for a transaction. For example:

- In the case of a buy transaction executed on behalf of a client, if cash was either held in the Participant's Client Funds Account on behalf of the client or deposited prior to T+2, the PCE to that client may be reduced to the extent that the amount held satisfies the value of the executed transaction; or
- In the case of a sell transaction executed on behalf of a client, if the relevant Security was uplifted from the client's CSN to the Participant's FTA prior to T+2, the PCE to that client may be reduced to the extent that the Security uplifted satisfies the sell side of the executed transaction.

NZX would expect a Participant's general ledger or broking system to account for and evidence any such netting applied by a Participant in its calculation of PCE.

For margined transactions, the PCE resulting from any unpaid settlement, margin call, or premium may be reduced by the amount of cash paid by the Counterparty or collateral held by the Participant on behalf of the Counterparty in the form of cash or appropriate Securities.

Part (b) of this Rule, in relation to where a Participant has a "right or lien" over a Counterparty's assets, covers an arrangement such as client assets held in a Custody Account or as collateral, where the Participant may apply those assets to cover the client's PCE should it default on its obligation to the Participant.

Should a Participant apply any off-set of PCE against client assets it has deemed as being under its control, as contemplated by Rule 7.2(b), it must be able to clearly demonstrate such netting for each Counterparty in its calculation of CRR, and also evidence the right or lien over those assets which may be exercised to satisfy the Counterparties' liability in the case of default.

Part [8.4.3](#) of the GVBL Example demonstrates how PCE can be netted for individual clients and brokers under Rule 7.2.

5.2.7. Overdue Counterparties

For aggregating a Counterparty's PCE for the purpose of a Participant's CRR to be applied in the Capital Adequacy Calculation, the exposures to that Counterparty are categorised into unsettled transactions and outstanding debts that are current and Overdue.

Overdue is defined as:

"an unconditional obligation of a Counterparty remains unpaid after the date on which the obligation was due for payment under the terms of the transaction, except that:

- (a) for trades in Financial Instruments, the transaction shall be considered overdue if unsettled 10 Business Days after the date on which Settlement was due;*
- (b) for a written Option, the transaction shall be considered overdue if the Counterparty has not paid the premium on the due date; and*
- (c) a transaction where the Participant holds on trust as security for the amount outstanding, Securities with a current market value of at least 140% of the amount payable, shall not be considered overdue."*

All PCE arising as amounts owing from trade debtor or general receivables, amounts will be considered Overdue if outstanding beyond the due date agreed under the Participant's normal credit terms.

With respect to PCE arising from unsettled trades in Financial Instruments, each unsettled trade will be considered Overdue if outstanding for 10 or more Business Days beyond that trade's Settlement Date.

Any unpaid Option premium will be considered Overdue if not satisfied by the due date.

Counterparty balances must be split between current and Overdue to be incorporated into the Capital Adequacy calculation template.

5.2.8. Aggregating PCE to Calculate CRR

The Positive Credit Exposure for an individual Counterparty shall be calculated as the sum of:

- (a) 4% of the value of all transactions with that Counterparty remaining unsettled, but that are not Overdue;*
- (b) 10% of the Initial Margin Capital Requirement for all clients in respect of margined transactions with that Counterparty;*
- (c) 50% of the value of all transactions with that Counterparty that are Overdue if the Counterparty is an AFSL holder, a financial market participant that is regulated in the United States of America, the United Kingdom, or other OECD country, a Bank or a Market Participant Requiring Capital, a Clearing Participant or a Participant Requiring Capital (as defined in the applicable rules of the NZX Market in which they participate); and*
- (d) 100% of all other transactions with that Counterparty.*

For the purpose this Guidance Note, a Counterparty falling in the categories detailed under (c) above will be considered a “**Recognised Counterparty**”.

A Participant’s CRR for each Counterparty’s transactions that are not Overdue will be:

- (a) 4% of the net aggregate of any cash or Securities owing from the Counterparty for the settlement of transactions in financial products, income receivable, or any other amount receivable; and
- (b) 10% of the Initial Margin Capital Requirement applied to margined transactions effected on behalf of clients for which the Counterparty is a party to;

A Participant’s CRR for each Counterparty’s transactions that are Overdue will be:

- (a) 50% of the net aggregate of any cash or Securities owing from the Counterparty if it is considered a Recognised Counterparty; and
- (b) 100% of the net aggregate of any cash or Securities owing from the Counterparty should it not be considered a Recognised Counterparty.

NZX acknowledges that Participants will each have unique internal procedures incorporating their systems and the manner in which its Counterparty transaction information is captured and interpreted, for example identifying current vs Overdue, where a Security has been uplifted, the value of assets held in custody, etc.

Accordingly NZX accepts that Participants are best placed to establish a timely and efficient process for consolidating their PCE data for the purposes of calculating CRR. However, for the purposes recording and reporting CRR in the Capital Adequacy Calculation, Participants must use the Counterparty Risk Schedule detailed in tab ‘3. Counterparty Risk’ of the Capital Adequacy Template.

Part [8.4.5](#) of the GVBL Example demonstrates how CRR is to be recorded and factored into the TRR calculation.

5.3 Position Risk Requirement

The Position Risk Requirement represents the aggregate of a Participant’s individual absolute net position risk amounts in particular Financial Instruments or transactions.

The Position Risk Requirement (**PRR**) reflects the capital required to account for the Participant’s principal positions in Financial Instruments. Where such positions are held, the Participant is exposed to the market risk associated with these investments, (being the potential movement in the prices or rates of the Securities) and must hold sufficient liquid capital to account for such positions.



Position Risk may arise from various activities, which should always be accounted for in PRR, including but not limited to:

- The Participant taking a proprietary position in a particular Security;
- The Participant engaging in facilitation trading in order to assist its clients to complete their Orders; or
- The Participant acquiring Securities due to an error.

Each individual principal position holding in a Security must be aggregated and reflected on an absolute net basis, i.e. a net short position will be reflected as a positive where summing a Participant's holdings for its PRR.

5.3.1. Equity and Debt Securities PRR

For Equity and Debt Securities held as principal by a Participant, the following table details the PRR percentage to be applied to the various categories in which these Securities may fall, as set out in Rule 9.1(a):

Rule	Category	Value of All	Risk Req.
(i)	Central Government and Bank Debt Issues	Central government issued Debt Securities	3%
		Bank Issued senior ranking Unsubordinated Debt Securities	
		Local government issued Investment Grade Debt Securities	
(ii)	NZX50, Market Indices & Investment Grade Debt	NZX50 fully paid Quoted Equity Securities	6%
		Fully paid Equity Securities Quoted on a Recognised Market Index	
		Fully paid senior ranking Investment Grade Debt Securities	
(iii)	NZ/Australian Listed, Unrated Government Securities and Bank Subordinated debt	Fully paid Equity and Debt Securities Quoted on a New Zealand or Australian Market (excluding Structured Finance Products)	8%
		Local government issued unrated Securities	
		Bank issued Subordinated Debt Securities (excluding Structured Finance Products)	
(iv)	Listed on a Recognised Market and Bank Issues	Other Securities Quoted on a Recognised Market (including Structured Finance Products)	15%
		Other Bank Issued Securities	
(v)	NZ/Australian non-listed	Equity and Debt Securities issued by New Zealand and Australian Issuers but not Quoted on a Recognised Market.	50%
(vi)	All other Securities	All other Securities not covered in one of the categories above	100%

As detailed under Rule 13.3, a Participant must mark to market each of its principal positions in Financial Instruments on each Business Day to value the holding in the TRR calculation. For the avoidance of doubt, NZX expects the Closing Market Price to be used for Quoted Equity and Debt Securities.

For the purposes of calculating and recording PRR in the Capital Adequacy Calculation, Participants must use the PRR Schedule detailed in tab '4. Position Risk' of the Capital Adequacy Template.

Part 8.6 of the GVBL Example demonstrates how PRR is to be calculated and recorded in the PRR Schedule for several scenarios where Participants may hold Equity and Debt Securities as principal.

5.3.2. Derivative Products PRR

A Participant entering into a derivatives transaction as principal can be exposed to the potential movement in rates and prices of the underlying Security or Commodity. Rule 9.1(b) takes a simplistic approach to capturing the potential downside faced for a Participant where entering into a margined transactions:

Rule	Category	Risk Req.
(i)	Bought Options that are margined	Any unpaid premium
(ii)	Sold Options that are margined	Twice the Initial Margin Capital Requirement and unrealised losses (including any unpaid margins)
(iii)	All other Margined Transactions	Twice the Initial Margin Capital Requirement
(iv)	Non-margined transactions	Amount calculated as set out by NZX ²

As per the CRR requirements, the IMCR should be applied as an independent and consistent rate of margin, as set out in Part 5.2.5 of this Guidance Note.

Where a Participant wishes to calculate its PRR to derivatives products on a 'portfolio' basis using an initial margin for the purpose of part (c) of the IMCR definition, it may do so where such a model:

- (a) Satisfies Requirements 3.1 to 3.12 of IOSCO and BCBS's Public Report; and
- (b) Has been expressly permitted and approved in writing by NZX.

Part 8.6 of the GVBL Example demonstrates how PRR is to be calculated and recorded in the PRR Schedule for derivative products.

² Note that NZX has not set out a basis for calculating these at this time.



5.3.3. Netting Physical Exposure with 'Like-for-like' Derivatives

In calculating the absolute net position in a particular Financial Instrument or transaction under Rule 9.1:

- (a) the value of each debt or equity Security position under Rule 9.1(a) may be off-set by a derivative product over the same underlying debt or equity Security, to the extent that the exposure to that debt or equity Security is reduced by that derivative product;*
- (b) a derivative product over an underlying debt or equity Security need not be taken into account in the calculation under Rule 9.1(b) to the extent that the exposure to that debt or equity Security from the derivative product has been off-set as permitted under Rule 9.2(a)*

NZX acknowledges that where a Participant is exposed to a particular Security as principal, it will in certain circumstances look to hedge that exposure from a risk management perspective using Derivatives Contracts. Rule 9.2 provides a mechanism for Participants to calculate the absolute net position in a Financial Instrument taking into consideration a Derivative Contract over that same Financial Instrument.

Under Rule 9.2(a), a Participant is permitted to off-set its exposure to an equity or debt Security it is required to account for under Rule 9.1 where it is directly hedged with an equivalent derivative product on a one for one basis. NZX considers a one for one basis to be where the physically held Security is the same as the Derivatives Contract's underlying Security, and the exposure to the Security through the Derivatives Contract can be reflected in like-for-like units.

A simple example of how this could be applied would be in the case of a 'long put option' strategy, i.e. buying equity Put Options to protect against the risk of a fall in price of shares held directly as principal. In this scenario the Participant can clearly demonstrate how exposure to the long shares are off-set by the option to sell those shares at a fixed price.

Where a Participant is calculating PRR under Rule 9.2(a), it must clearly demonstrate how exposure, whether long and/or short, to the Financial Instrument has been achieved.

Rule 9.2(b) clarifies that where a derivative product has been factored into the exposure of a Financial Instrument under Rule 9.2(a), it need not be accounted for under Rule 9.1(b) as an individual derivative product. Conversely, a Participant may not, for example, factor a bought option into Rule 9.2(a) where it has not paid the contract's premium.

Part 8.6 of the GVBL Example provides examples how this can be calculated and reflected in the Capital Adequacy Template.

5.3.4. Netting Exposure with Other Derivatives

In calculating the absolute net position in a particular Financial Instrument or transaction under Rule 9.1:

(c) if Rule 9.2(a) does not apply, but a particular debt or equity Security position is off-set in full or part by a derivative product where there is a demonstrable correlation between the exposure to that debt or equity Security position and the derivative product, the value of the debt or equity Security position under Rule 19.9.1(a) may be reduced to the extent expressly permitted and approved in writing by NZX.

NZX appreciates that in some circumstances, the Participant's hedge or exposure through a derivative product may not be evident on a one for one basis but there will be a relationship between the derivative's value and some debt and equity Securities. For example a Derivatives Contract over an index will provide indirect exposure to the index's underlying constituents.

Under Rule 9.2(c), a Participant may use a derivative product to reduce its exposure to a particular debt or equity Security in its calculation of PRR where permitted and approved in writing by NZX.

NZX will only permit such methods where the Participant can clearly demonstrate a correlation in the value of the debt or equity Security and that of the derivative product. Participants will also be expected as a condition of any such approval to reflect the detail of any such off-set performed under 9.2(c) in its daily calculation of PRR.

If a Participant wants a particular method of calculating PRR under Rule 9.2(c) approved, it should apply for a Ruling under this Rule in the manner prescribed in the Waivers and Rulings Practice Note.

5.4 Large Position Risk Requirement

The Large Position Risk Requirement is calculated as being the aggregate of the:

(a) Large Position Counterparty Risk Requirement; and

(b) Large Position Issuer Risk Requirement,

but must exclude any Net Underwriting Commitment.

Where a portion of a Participant's CRR or PRR is concentrated on one particular Counterparty or Issuer, the Participant must reflect this exposure within its Large Position Risk Requirement (LPRR). LPRR accounts for a less diversified spread of risk a Participant may have across the parties it transacts with or the Securities it is holding.

5.4.1 Large Position Counterparty Risk Requirement

Under Rule 8.2, a Participant is required to hold additional capital where it has significant exposure to an individual Counterparty. A Counterparty will be captured as a large position where the Participant's PCE to that Counterparty exceeds 19% of the Participant's Total Liabilities.

In setting the 19% threshold in each day's calculation, a Participant must use the Total Liabilities figure applied in its NTCA calculation.

In totalling PCE to individual Counterparties to be considered for LPRR, the Participant must total individual related accounts under the one Counterparty to be assessed against the threshold. For example, an organisation with a number of accounts open with a Participant through the same legal entity, and any other accounts opened by subsidiaries of that organisation, will be considered an individual Counterparty for the purposes of LPRR. An exception to this would be in the case of a fund manager which operates multiple funds, each of which is a separate legal entity, and the failure of one fund does not impact on the remaining funds. In this case, each fund can be considered a separate Counterparty for the purposes of calculating LPRR.

In each day's Capital Adequacy Calculation, Participants must detail each Counterparty, and its PCE, for which LPRR applies.

Once the Counterparties considered large have been identified, the Participants' LPRR will be the sum of:

- (a) 2% of the PCE applicable to transactions that are not Overdue; and
- (b) 10% of the PCE applicable to transactions that are Overdue.

Part 8.5 of the GVBL Example provides circumstances where Counterparties will be captured and PCE summed for LPRR to be reflected in the wider calculation of TRR.

5.4.2. Large Position Issuer Risk Requirement

Under Rule 8.3, a Participant is required to hold additional capital where it has significant exposure to an individual Issuer. An Issuer will be captured as a large position where the Participant holds a principal position, or principal positions, in Securities issued by the Issuer that either:

- (a) Exceed 10% of all the Securities in that particular class; or
- (b) Has a value that exceeds 19% of the Participant's Total Liabilities.

In calculating LPRR under (b) above, Participants must aggregate all Securities issued by the Issuer, e.g. a company's fully paid ordinary shares *plus* any bond issued by the company.

Part 8.7 of the GVBL Example provides circumstances where principal positions will be captured for inclusion under LPRR and how these should be reflected in the wider calculation of TRR.

5.5 Currency Risk Requirement

Where a Participant's Financial Assets and Financial Liabilities are denominated in a currency other than the Base Currency (**New Zealand Dollars** or **NZD**), the Participant is exposed to fluctuations in those currencies against NZD. Accordingly, all exposure to foreign currency must be accounted for in the Participants' Currency Risk Requirement (**CurRR**).

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The Currency Risk Requirement is calculated as the sum of the following adjustment factors:

- (a) 3% of the net of that Participant's unhedged Financial Assets and Financial Liabilities denominated in AUD; and*
- (b) 6% of the net of the Participant's unhedged Financial Assets and Financial Liabilities denominated in a currency other than the Base Currency or AUD.*

Within each Business Day's Capital Adequacy Calculation, Participants must incorporate a multi-currency trial balance for the purpose of calculating its Net Financial Assets in each currency which its general ledger accounts are denominated. The multi-currency trial balance must reconcile to the Participant's final trial balance when all are consolidated into NZD equivalents.

Participants must record the Financial Assets and Financial Liabilities in the CurrRR Schedule detailed in tab '5. Currency Risk' of the Capital Adequacy Template.

Each currency's Net Financial Assets must be produced as an absolute, regardless of the figure being a net debit or net credit.

Each foreign currency position must then be converted to NZD using the *closing* spot rate on the Business Day for which the Capital Adequacy Calculation is being completed. All rates used must be obtained through a readily available and reliable market source. The rates and the source used to acquire the rates must be specified in the CurRR Schedule for each Business Day's Calculation.

When each net foreign currency position is reflected as an NZD equivalent, a risk requirement of 3% for Australian Dollars is applied, and 6% applied to all other non-NZD currencies. The sum of these values will be the Participant's CurRR.

Part [8.8](#) of the GVBL Example demonstrates how CurRR from the multi-currency trial balance is recorded in the CurrRR Schedule, through to inclusion in the wider calculation of TRR.

5.6 Primary Market Risk Requirement

The Primary Market Risk Requirement is calculated in respect of all Net Underwriting Commitments and in relation to each Net Underwriting Commitment is the particular percentage applicable to the Securities the subject of the commitment under Rule 9.1(a)

Where a Participant commits to underwriting an initial or subsequent public offer of Securities, it exposes itself to the risk of acquiring any residual Securities as principal should it not be able to distribute its full allocation to its client base. A Participant must reflect this exposure in its Primary Market Risk Requirement (**PMRR**) for each of its Net Underwriting Commitments. A Net Underwriting Commitment is defined as:

“The aggregate of underwriting, sub-underwriting and firm allocation commitments of the Participant in respect of a particular Security less any sub-underwriting commitment, firm allocation commitment or legally binding applications from clients or other third parties in relation to that commitment.”

A Participant must therefore reflect for each underwriting, sub-underwriting and firm allocation commitment for a Security’s public offer:

- (a) The value of the underwrite commitment the Participant has undertaken in respect of that Security;
- (b) The value of all legally binding applications the Participant has received from clients and brokers in respect of the Security; and
- (c) The value of the Net Underwriting Commitment, being the difference between (a) and (b).

The PMRR for each Net Underwriting Commitment is then determined using the percentages applied for purposes of PRR in Section 5.3.1 above.

Once any sub-underwriting commitment, firm allocation commitment or legally binding application from a client has been received, the Participant has a PCE to that client or other third party, which must be accounted for in the CRR calculation.

For each Business Day’s Capital Adequacy Calculation, Participants must record all Net Underwriting Commitments in the PMRR Schedule detailed in tab ‘5. Underwriting Risk’ of the Capital Adequacy Template.

Part [8.9](#) of the GVBL Example demonstrates how Net Underwriting Commitments are to be recorded in the calculation of PMRR.

5.7 Market Risk Requirement

Under Rule 12, NZX may issue a Participant with Notice that it is required to include a Market Risk Requirement (**MRR**) in its TRR. In arriving at this decision NZX will consider the risk profile of the Participant, domestic and global market volatility, and any other factor that NZX deems relevant.

Notice will be provided in writing by NZX, specifying the manner in which MRR is to be calculated and recorded, with the reasons for which it has determined the Participant account for such risks in its Calculation.

6. Capital Adequacy Reporting and Notifications

6.1 Daily Notification Requirements

Participants are required to notify NZX and CHO of material movements in their Capital Adequacy Ratio between two Business Days in accordance with Rule 3.4. Under this requirement Participants have the obligation to notify NZX and CHO where their Capital Adequacy Ratio moves above or below any of the following thresholds between two consecutive Business Days:



100%, 120%, 150%, 200%, 300%, 500% and 1000%

This method of daily notification allows NZX and CHO to monitor Participants that have moved to lower levels of liquidity by applying tighter bands through to the minimum requirement of 100%. This risk based approach allows NZX to classify Participants at any given time based on prudential risk and adequately anticipate the effect certain market events may have on each Participant.

Where a notification is required to be made under Rule 3.4, Participants must submit to NZX the following information:

Date	<input type="text"/>	<input type="text"/>
NTCA	<input type="text"/> NZD	<input type="text"/> NZD
TRR/Minimum NTCA	<input type="text"/> NZD	<input type="text"/> NZD
Capital adequacy ratio	<input type="text"/> %	<input type="text"/> %
Factors that resulted in the change in Capital Adequacy Ratio	<input type="text"/>	

Under Rule 3.5, where a Participant's Capital Adequacy Ratio falls below 120%, in addition to the notification required for crossing for the reporting threshold, a full breakdown of the Participant's Capital Adequacy Calculations must be provided to NZX with the alert including but not limited to:

1. Full and complete details of the Participant's NTCA and TRR calculations in the form of NZX/CHO's prescribed template;
2. The Participant's trial balance and balance sheet verifying its NTCA;
3. Backing calculations for each element of the TRR (detailed under Rule 5.1); and
4. A further explanation as to when the Participant anticipates its Capital Adequacy Ratio will move to a level greater than 120%.

This detailed reporting must be provided to NZX each day until the Participant's Capital Adequacy Ratio has moved to a level greater than 120%.

Notifications under Rules 3.4 and 3.5 must be submitted to NZX on the Business Day for which the Capital Adequacy Calculation has been completed.

6.2 Monthly Reporting Requirements

Each Participant is required to provide NZX and/or CHO a monthly report of its Capital Adequacy Calculations performed throughout the month and a full breakdown of the Capital Adequacy Calculation for the last day of that month.

Monthly Reporting must be provided within *10 Business Days* of the end of each calendar month.

6.2.1. Documentation and Information

Participants must provide within each monthly Capital Adequacy report (to the extent that it is captured by the relevant Participant Rules Sets referenced):

1. Monthly Internal Control Checklist & Certificate in the form of Appendix A to the Rules;
2. Monthly Internal Control Checklist & Certificate in the form of Appendix Five to the Derivatives Procedures;
3. Depository Participant Monthly Compliance Certificate in the form of Appendix A to the Depository Procedures;
4. Clearing Participant Monthly Compliance Certificate in the form of Appendix A to the C&S Procedures;
5. Daily log of the Capital Adequacy Calculations for each Business Day of the month, in the form of the Liquidity Log detailed in tab '7. Liquidity Log' of the Capital Adequacy Template;
6. A copy of the Participant's consolidated trial balance reflected in NZD equivalents as at the last day of the month;
7. A copy of the Participant's multi-currency trial balance denominated in each separate currency as at the last day of the month;
8. A copy of the Participant's Balance Sheet (or Statement of Financial Position) as at the last day of the month;
9. A copy of the Participant's Profit & Loss (or Statement of Financial Performance) for that month ended and the financial year to date; and
10. The Participant's Capital Adequacy Calculation for the last day of the month in the form of the Capital Adequacy Template, with all relevant Schedules provided complete.

With respect to the Participant's Capital Adequacy Calculation for the last day of the month, this calculation will be a restatement of the Capital Adequacy Calculation for the last Business Day of the month factoring any month-end adjustments to the Participants general ledger accounts. In support of the Capital Adequacy Calculation, NZX expects the following information to be provided in support of the data in the Capital Adequacy Template:

- (a) A breakdown of the Counterparty balances making up CRR (sub-totaled as client, broker, intercompany, trade debtors, Overdue where a significant number of Counterparties are accounted for);
- (b) Breakdown of Counterparties and principal positions included in LPRR;
- (c) Any reports or breakdowns to support the information contained in the PRR Schedule (if required); and
- (d) Any further information NZX has requested a Participant to provide within its monthly reporting to support and verify the figures within the Capital Adequacy Calculation.



For the avoidance of doubt, when the final calendar day of a month is not a Business Day, NZX requests that Participants provide the month end calculation as an additional entry to its Liquidity Log. For example:

- For January 2017 the final business day was 31/01/17, therefore NZX expects an entry for calculation recorded as at 31/01/17, and the revised calculation for the month ended 31/01/17; and
- For April 2017 the final business day was 28/04/17, therefore NZX expects Participants to include a column for calculation recorded as at 28/04/17, and the revised calculation for the month ended 30/04/17.

6.2.2. Submitting Monthly Reporting to NZX

As detailed above, Monthly Reporting submissions need to be received by NZX on or before close of business of the 10th Business Day after month end.

Electronic versions of the Monthly Reports must be uploaded to the NZX Participant Portal (www.compliance.nzx.com) in accordance with the website's instructions.

Should respective components of the monthly return be completed by separate divisions, NZX asks that all information is submitted together and by the due date.

6.2.3. Late Submissions

If a Participant fails to supply its complete monthly Capital Adequacy report to NZX within 10 Business Days of the end of each calendar month, it will be liable for a late filing fee. Currently this fee is \$250 (GST exclusive), per Business Day that the submission is late. For the avoidance of doubt, an incomplete submission may also be liable for this late filing fee.

6.3 Annual Reporting Requirements

Each Participant is required to provide NZX an annual report of its Capital Adequacy, year-end financial statements, annual compliance certifications and other organisational information required under the relevant Participant Rules Sets (**Annual Reporting Return**).

The Annual Reporting Return must be submitted to NZX within *90 days* of the Participant's financial year end.

6.3.1. Documentation and Information

A Participant must provide within its Annual Reporting Return (to the extent that it is captured by the relevant Participant Rules Sets referenced):

1. Clearing Participant Annual Compliance Certificate in the form of Appendix B to the C&S Procedures;
2. Depository Participant Annual Compliance Certificate in the form of Appendix B to the Depository Procedures;



3. Copies of the Participant's annual audited financial statements³;
4. An independent auditor's report on the Participants annual financial statements⁴;
5. All Companies Office filings, or equivalent filing with another recognised organisation for an Overseas Participant;
6. Certificates of Currency for Insurances, including as a minimum:
 - a. Professional Indemnity Insurance; and
 - b. Directors' and Officers' Liability Insurance;
7. Graphical presentation of the Participant's group structure;
8. Current organisation chart of the Participant;
9. A copy of all bank audit confirmations requested and received by the Participant's auditor relating to financial statements⁵;
10. Reconciliation of the audited financial statements at year-end with the Monthly Reporting Return from the last month of the financial year (where applicable); and
11. If reconciliation is provided, a restatement of the Capital Adequacy Calculation provided to NZX for the last day of the Participant's financial year.

6.3.2. Submitting the Annual Reporting Return to NZX

As detailed above, the Annual Reporting Return submissions need to be received by NZX within 90 days of the Participants financial year end.

Electronic versions of the Annual Reporting Return must be uploaded to the NZX Participant Portal (www.compliance.nzx.com) in accordance with the website's instructions.

Should respective components of the Annual Reporting Return be completed by separate divisions, NZX asks that all information is submitted together and by the due date.

6.3.3. Late Submissions

If a Participant fails to supply its complete Annual Reporting Return to NZX within 90 days of the its financial year end, it will be liable for a late filing fee. Currently this fee is \$250 (GST exclusive), per business day that the submission is late. For the avoidance of doubt, an incomplete submission may also be liable for this late filing fee.

³ Statements are not required to be audited for Participants under the NZX Participant Rules that do not accept and hold Client Assets.

⁴ Not required for Participants under the NZX Participant Rules that do not accept and hold Client Assets per Rule 20.5.3.

⁵ Not required for Participants only accredited under the NZX Participant Rules



6.4 Half-year Reporting Requirements

Each *Clearing* Participant is required to provide CHO a half year report of its Capital Adequacy, with un-audited financial statements for the year to date (**Half-year Reporting Return**).

All Half-year Reporting Returns must be submitted to NZX within *60 days* of the Clearing Participant's financial half-year end.

6.4.1. Documentation and Information

A Participant must provide within its Half-year Reporting Return (to the extent that it is captured by the relevant Participant Rules Sets referenced):

1. Copies of the Participants financial statements for the first half-year that comply with C&S Procedure 2.21.1 (but which need not be audited);
2. Reconciliation of the financial statements for the half-year with the Monthly Reporting Return from the last month of the financial half-year; and
3. If reconciliation is provided, a restatement of the Capital Adequacy Calculation provided to NZX for the last day of the Participant's financial half-year.

6.4.2. Late Submissions

If a Participant fails to supply its complete Half-year Reporting Return to NZX within 60 days of the its financial half-year end, it will be liable for a late filing fee. Currently this fee is \$250 (GST exclusive), per business day that the submission is late. For the avoidance of doubt, an incomplete submission may also be liable for this late filing fee.

7. Capital Adequacy Approvals

Under the Participant Rules Sets, a Participant is permitted to enhance its NTCA calculation using certain liquidity facilities where approved by NZX and/or CHO. Subordinated Debt and guarantees will be considered by NZX and/or CHO where a Participant has applied and satisfied the provisions detailed in the following sub-sections.

7.1 Subordinated Debt

Under Rule 4.5, a Participant may exclude a Subordinated Debt from the calculation of its liabilities, for the purpose of calculating its NTCA, with the prior approval of NZX and/or CHO. Subordinated Debt is defined as:

“in respect of a Person, any indebtedness of that Person that, in terms of priority for payment and otherwise, would, on a winding up, dissolution or liquidation of the Person, rank behind claims in respect of general unsecured unsubordinated indebtedness of the Person and the terms ‘Subordinated’ and ‘Unsubordinated’ shall be interpreted accordingly.”

Rule 4.6 details the terms on which a Subordinated Debt must be issued from the lender to the Participant.



NZX will not approve the exclusion of Subordinated Debt from calculation of the Participant's liabilities unless the Subordinated Debt is issued on terms that include that:

- (a) the terms of issue of the Subordinated Debt are subject to these Rules;*
- (b) the terms of issue of the Subordinated Debt cannot be amended without the prior approval of NZX;*
- (c) any repayment of the Subordinated Debt is subject to the Participant holding Net Tangible Current Assets above 120% of its Minimum NTCA after repayment;*
- (d) no repayments of the Subordinated Debt can be made without the prior approval of NZX;*
- (e) the obligation to pay any amount owing in respect of the Subordinated Debt, including interest or distributions, is suspended during any period in which the Participant fails to comply with its obligations under Rule 1.1; or*
- (f) any other provision NZX considers necessary to protect the viability of the Participant's business and ensure Subordinated Debt is validly and effectively subordinated to the general unsecured creditors of the Participant.*

7.1.1. Approved Subordinated Debt

For a Participant to have any Subordinated Debt excluded from its liabilities, it must apply in writing to NZX/CHO and provide:

- (a) Details of the Subordinated Lender and amount of Subordinated Debt being lent;
- (b) The reasons for which the Subordinated Debt is required (e.g. for day-to-day liquidity or short term periods for large transactions);
- (c) A pro-forma Capital Adequacy Calculation, detailing the Participant's liquidity with and without the proposed Subordinated Debt being excluded from its liabilities; and
- (d) The Deed of Subordination, or equivalent agreement, between the Participant and the Subordinated Lender, that must contain the following provisions:
 - i. The terms of issue of the Subordinated Debt are subject to the relevant Participant Rule Set;
 - ii. The Deed of Subordination, or equivalent agreement, cannot be amended without the prior approval of NZX/CHO;
 - iii. Any repayment of the Subordinated Debt is subject to the Participant having a Capital Adequacy Ratio above 120% following repayment;
 - iv. No repayments of the Subordinated Debt can be made without the prior approval of NZX/CHO;



- v. The obligation to pay any amount owing in respect of the Subordinated Debt, including interest or distributions, is suspended where the Participant's Capital Adequacy Ratio is less than 100%; and
- vi. Any other provision NZX/CHO considers necessary.

When approved, the Participant must reflect the approved Subordinated Debt amount as an adjustment to its liabilities in its NTCA calculation, as detailed under Part [8.2.2](#) of the GVBL Example.

7.1.2. Repaying Subordinated Debt

As detailed under Rule 4.6, any repayments of approved Subordinated Debt will be subject to the conditions that must be stipulated in the Deed of Subordination. Accordingly, Participants must request and receive approval from NZX/CHO prior to making any repayments to the Subordinated lender.

In requesting approval to repay a portion of the entirety of Subordinated Debt, a Participant should provide:

- (a) The reasons that the Subordinated Debt is no longer required;
- (b) A pro-forma Capital Adequacy Calculation, detailing the Participant's liquidity prior to and following the proposed repayment of Subordinated Debt; and
- (c) If the Subordinated Debt is being repaid in full and the Deed of Subordination ended, a Deed of Discharge ending the arrangement between the Participant and the Subordinated Lender.

In considering a request for repayment, NZX/CHO will assess the Participant's NTCA, TRR and Capital Adequacy Ratio in the absence of the liquidity afforded by the Subordinated Debt. Repayments will not be approved where NZX/CHO considers the Participant's ability to maintain compliance with the Capital Adequacy requirements may be compromised.

7.2 Guarantees

In calculating NTCA, Rule 4.2(b) requires a Participant to exclude:

“guarantees, except guarantees approved by NZX/CHO where and to the extent to which the Participant has a Net Underwriting Commitment for the purposes of the calculation of the Primary Market Risk Requirement.”

While a guarantee from a parent company, bank or another reliable entity contractually covers the Participant's obligations where needed, it does not represent readily available liquidity to the Participant and cannot be relied upon in the same manner as Subordinated Debt. Accordingly, at NZX/CHO's approval, a Participant may include a guarantee in its NTCA calculation *only* for the purpose of covering exposure incurred through the Participant's Net Underwriting Commitments and reflected in its PMRR.



7.2.1. Approved Guarantees for PMRR

For a Participant to have a guarantee included in its NTCA calculation, it must apply in writing to NZX including:

- (a) Details of the guarantor and value of the guarantee;
- (b) A pro-forma Capital Adequacy Calculation, detailing the Participant's liquidity with and without the proposed guarantee being included in its NTCA calculation; and
- (c) The Deed of Guarantee, or equivalent agreement, between the Participant and guarantor that must contain the following provisions:
 - i. The guarantee is approved for the purposes of Rule 4.2(b);
 - ii. The guarantor unconditionally undertakes to pay to NZX/CHO, on demand, any sum up to a maximum aggregate amount of the guarantee; and
 - iii. Any other provision NZX/CHO considers necessary.

When approved, the Participant must reflect the approved guarantee amount as an adjustment to its assets in its NTCA calculation, as detailed under Part 8.2.1 of the GVBL Example.

8. Capital Adequacy Calculation Example

8.1 Introduction

This section of the Guidance Note provides a worked example to further assist Participants on performing the Capital Adequacy Calculation on a daily basis. The example:

- demonstrates to Participants how the data produced from Participants' accounting and broking systems should be incorporated into NZX's prescribed templates; and
- presents a range of scenarios to be applied to the underlying elements of the Calculation as referenced in previous sections of this Guidance Note.

8.1.1. The Example Participant and Scenario

The example calculation has been completed for Good Value Brokers Limited (**GVBL**). With regards to the Participant's business and operations background, the following is relevant:

- GVBL is a New Zealand based Participant accredited as a Trading and Advising Firm under both the Rules and Derivatives Rules, and as an Individual Clearing Participant under the C&S Rules;
- GVBL provides Securities advising, trade execution and clearing services for multiple categories of clients, including retail and institutional;
- GVBL utilises the services of international brokers where clients wish to trade on overseas Recognised Securities Exchanges;
- GVBL offers trade execution services in derivatives products, including NZX Contracts and OTC derivatives;
- GVBL trades as principal in Securities and derivatives products for the purposes of proprietary trading, client facilitation and hedging exposure;
- GVBL has in place a guarantee of \$3m, approved by CHO/NZX under Rule 4.2(b) to cover PMRR only;



- GVBL's Subordinated Debt of \$2m has been approved by CHO/NZX under Rule 4.5 to be excluded from total liabilities; and
- The example calculation is for the month ended 31 May 2018.

The scenarios and circumstances covered in the example are intended to capture the fundamental risks a Participant of this nature would encounter as part of its everyday broking activities, as well as the risk associated with more ad hoc dealings.

While the GVBL calculation provides examples for each element of the Capital Adequacy Calculation, it has not been designed to account for every conceivable scenario a Participant may encounter.

8.1.2. The Capital Adequacy Template

This example calculation has been completed in NZX's prescribed Capital Adequacy Template, and this section should be read in conjunction with the Excel spreadsheet Appendix 1 – GVBL Example.xls (the **GVBL Example**).

For the avoidance of doubt, the following sheets within the GVBL Example are mandatory items within each Participant's daily Calculation and are referenced as follows throughout this section:

- | | |
|---------------------------------|------------------|
| 1. Capital Adequacy Calculation | (Sheet 1) |
| 2. Operational Risk | (Sheet 2) |
| 3. Counterparty Risk | (Sheet 3) |
| 4. Position Risk | (Sheet 4) |
| 5. Currency Risk | (Sheet 5) |
| 6. Underwriting Risk | (Sheet 6) |
| 7. Liquidity Log | (Sheet 7) |

The following sheets within the GVBL Example have been included solely for the purposes of this worked example:

- | | |
|---------------------------------|------------------|
| A. Balance Sheet Summary | (Sheet A) |
| B. Trial Balance | (Sheet B) |
| C. Client Ledger | (Sheet C) |
| D. Principal Position Schedule | (Sheet D) |
| E. Multi-Currency Trial Balance | (Sheet E) |

NZX recognises that each Participant will produce its own reports unique to its systems and internal processes in place of tabs A-E. However this data must be standardised into the prescribed format of Sheets 1-7 for NZX/CHO records and reporting requirements.

8.2 Balance Sheet and NTCA

8.2.1. GVBL Balance Sheet

Sheet A contains GVBL's base balance sheet (**BS**) that has been derived from its trial balance (**TB**) on Sheet B.

The items in GVBL's BS have been produced in a manner that categorises the TB's general ledger accounts for the purposes of:



- (a) Calculating GVBL's NTCA in Sheet 1; and
- (b) Verifying the figures used to calculate the underlying elements of GVBL's TRR calculation.

As demonstrated by GVBL's figures in Sheet A and Sheet B, the BS must reconcile to the TB.

8.2.2. GVBL NTCA

Columns B:C of Sheet 1 contain GVBL's calculation of NTCA. GVBL's total assets and total liabilities are directly attributable from Sheet A, with net assets consistent across the BS, TB and NTCA calculation.

As required under Rule 4.2, the following adjustments have made to net assets to reflect GVBL's liquid capital (NTCA):

- (a) The full value of GVBL's approved guarantee has been applied in cell C8 as a positive;
- (b) The value of GVBL's approved guarantee less its Net Underwriting Commitments from Sheet 6 has been included as a negative in cell C9;
- (c) Intangible Assets value from the BS has been applied in cell C11, encompassing TB accounts for Goodwill, Customer List and Trademarks;
- (d) Property, Plant and Equipment in cell C12 accounts for 'Fixed Assets' from the BS, which is the cost of GVBL's fixed asset accounts less accumulated depreciation;
- (e) Assets considered unrealisable within 12 months have been accounted for in cell C13, which includes Prepayments and Deferred Tax Asset;
- (f) The value of GVBL's approved Subordinated Debt from the BS has been applied in cell C19 as a positive to negate it from total liabilities; and
- (g) The contingent liability in relation to legal proceedings not accounted for on the BS has been applied in cell C20 as a negative.

From these adjustments, Total Adjusted Assets of \$27,234,234 (cell C15) and Total Adjusted Liabilities of \$9,725,634 (cell C21) compute GVBL's **NTCA at \$17,508,600.**

8.3 Operational Risk Requirement

GVBL's calculation of ORR is detailed in the table on Sheet 2. Within this table:

- (a) GVBL's budgeted monthly revenue for 2018 is detailed in cells C8:C19;
- (b) GVBL's actual monthly revenue for the year to date is detailed in cells D8:D12
- (c) Cell D20 computes GVBL's average monthly revenue for February 2018 to April 2018;
- (d) Cell D24 produces May 2018's budgeted revenue figure, as it is greater than the average revenue for the past 3 months; and
- (e) Cell D25 applies the 1% risk requirement to the figure in cell D24 to produce GVBL's ORR.

GVBL's ORR of \$22,500.00 is then reflected in its TRR calculation on Sheet 1 in Cell F10.

8.4 Counterparty Risk Requirement

GVBL's CRR is detailed in Sheet 3, within the table in cells B6:H12. Positive Credit Exposure has been split into trade debtors, intragroup debtors, Client Positions, and Broker Positions.

8.4.1. Trade Debtors

PCE for trade debtors has been derived directly from 'Other Receivables' on the BS, and pulled through to cell F7 of Sheet 3. The \$1,587,947.48 is made up of sundry debtors, general receivables and interest receivable from the TB.

Note: Trade debtors have been reflected on the assumption that there are no overdue balances.

8.4.2. Intragroup Debtors

In a similar manner to trade debtors, total PCE for intragroup debtors is reflected on the BS as 'Inter-company Receivables', comprised of amounts owing from HG Partners Limited and GV Investment Management Limited. Further details of the amounts are shown on Sheet C at row 143, reflecting the details of these receivable balances. The \$50,000 due from HG Partners Limited on 20 March 2018 is now overdue and been reflected as such in cell E10 of Sheet 3.

8.4.3. Client Positions

On GVBL's BS, cash amounts owing to and from clients are reflected under 'Receivable from Clients' and 'Payable to Clients'. These items make up the sum of the Dr (receivable) and Cr (Payable) client ledger accounts, and include Employee accounts.

The client ledger is shown on Sheet C, detailing the transactions making up the individual client balances and used to calculate PCE for each in column I. The following client ledger accounts provide a range scenarios in which GVBL has been exposed to Counterparty Risk in respect of its clients but do not include all accounts reflected in Sheet C:

Client 1

Client 1 has bought SPK shares on 30 May 2018, for which payment has not yet been received by GVBL. GVBL therefore has PCE of \$220 until the funds are received from Client 1.

Client 2

Client 2 has sold their holding in FBU on 30 May 2018. Until GVBL uplifts the Securities from Client 2's CSN, it has a PCE of \$1,750.

Client 3

Client 3 has deposited \$20,000 with GVBL to conduct future trading. While this has resulted in a Cr balance on the client ledger, there is no PCE to GVBL.

Client 4

Client 4 has unsettled buy and sell trades outstanding on their ledger account from 30 May 2018. For the purposes of reflecting PCE, the value of these transactions have been netted.

Client 8

Client 8 has a transaction outstanding for a purchase of AIA010 on 4 May 2018. The transaction was due for settlement on 8 May 2018 and is therefore considered Overdue.

Client 9

Client 9 has three outstanding buy transactions, one of which is considered Overdue from 1 May 2018. PCE has been categorised into Current and Overdue in columns J and K.

Clients 13, 14 and 15

These clients are trading overseas securities through GVBL's overseas executing brokers. The transactions in these accounts are, therefore, also reflected in the broker receivables and payables.

Client 20

Client 20 has deposited cash on account as at 28 May 2018 and purchased securities on 30 May 2018. Given the cash on account is greater than the total of outstanding buy transactions, GVBL has no PCE to this client.

Client 21

Client 21 has been issued a margin call for Whole Milk Powder Futures contracts. The IMCR of US\$50,000 for the position has been converted to NZD and taken as PCE.

Client 22

Client 22 has been issued a margin call on Milk Price Futures and has enough collateral with GVBL to cover the IMCR, and therefore has no PCE.

Client 25

Client 25 has an unpaid option premium outstanding which was due on 30 May 2018. This has therefore been recorded as Overdue for the purposes of PCE.

8.4.4. Broker Positions

On GVBL's BS, cash amounts owing to and from brokers whose services it utilises are reflected under 'Receivable from Brokers' and 'Payable to Brokers'. For GVBL, these balances relate to trading overseas Securities on behalf of clients.

GVBL's broker balances are reflected on Sheet C at row 124. These balances include what is owed by the brokers in respect of Client 13, 14 and 15's transactions detailed above as well as collateral held with Broker 3 - Derivatives Clearers Limited. The balances are receivable and payable in currency for which the applicable Security is denominated.



Broker 1

The balance owing from Broker 1 (AU Brokers) relates to the buy and sell transactions on behalf of Client 13 and Client 14. The PCE has been netted to reflect the overall cash balance owing from Broker 1 once these transactions have settled.

Broker 2

The balance owed to Broker 2 (US Brokers) relates to the buy transaction on behalf of Client 15. The PCE in this instance reflects Broker 2's obligation to deliver Client 15's 1000 MFST following market settlement.

Broker 3

Collateral balances on behalf clients held with Broker 3 (Derivatives Clearers Limited) have been captured to reflect the amounts owing to GVBL.

8.4.5. Calculating Total CRR

As specified in the above, PCE for trade debtors, intragroup debtors, Client Positions, and Broker Positions has been fed through to Sheet 3. Within the CRR table in cells C7:H12, these counterparty exposures are categorised based on Rule 7.4 so the appropriate risk requirements can be applied.

The following should be noted with respect to PCE values derived from Sheet C:

- HG Partners Limited's invoice due at 31 March 2018, now considered Overdue, has been captured in Cell E10 for the 100% risk requirement to be applied;
- Unsettled clients transactions from Client 9 and Client 15 have been captured in cell C10 for the 100% risk requirement to be applied; and
- Client 8 is considered a Recognised Counterparty under 7.4(c), and its Overdue balance has been applied to cell C9 for the 50% risk requirement to be applied.

Total CRR has been computed in cell H12 of Sheet 3 and pulled through to cell F11 of Sheet 1.

8.5 Large Counterparty Risk Requirement

GVBL's LPRR for Counterparties is also detailed in Sheet 3 within the table in cells B17:H20 with the balances derived from Sheet C. The threshold of 19% of total liabilities for considering whether a Counterparty is large has been calculated in cell N3 of sheet C. Each Counterparty's PCE has been assessed against the **\$2,218,370.46** in columns M and N.

The following should be noted with respect to the large Counterparty positions derived from Sheet C:

- Client 6 (BB Brokers) and Client 10 (BB Asset Management) are from the same group with the same ultimate parent company, therefore PCE from both accounts has been totaled for LPRR; and
- Client 11's balance is considered a large position and the net amount has been captured in cell M56.

Total LPRR for Counterparties has been computed in cell H20 of Sheet 3 and pulled through to cell F12 of Sheet 1.

8.6 Position Risk Requirement

GVBL's principal positions are listed in Sheet D for its 'House Account' and 'Facilitation Account' for debt and equity Securities, and Derivatives Contracts. These holdings have then been categorised as per the requirements of Rule 9.1 within the Schedule contained in Sheet 4.

The value of these positions can be reconciled to the 'Investments' accounts in the BS (Sheet A), TB (Sheet B) and multi-currency TB (Sheet E).

The following items within the PRR Schedule have been selected as examples to demonstrate how GVBL has calculated PRR for the different Financial Instruments it holds:

New Zealand Government 15/04/23 5.50%

GOV410 is central government issued debt and has been applied the 3% weighting for PRR.

ANZ Bank New Zealand Limited Bonds 25/09/2020 4.03%

ANB100 is unsubordinated bank debt and has been applied the 3% weighting for PRR.

NZX50 Quoted

SPK, FBU, CEN and BLT are fully paid Quoted Equity Securities within the NZX50 index, and have been applied the 6% weighting for PRR.

Investment Grade Debt

FCG040 and SPF560 are both Investment Grade corporate debt issues and have been applied the 6% weighting for PRR.

Recognised Market Indices

BHP is listed in ASX200, AAPL is listed in S&P500 and MKS is listed in FTSE100. All of these are fully paid Quoted Equity Securities within Recognised Market Indices, and have been applied the 6% weighting for PRR.

Listed New Zealand and Australian Securities

ENS, FFW and SGH are fully paid Quoted New Zealand and Australian Securities which are not included in a Recognised Market Index, and have been applied the 8% weighting for PRR.

Quoted on a Recognised Market

HHS is quoted on a Recognised Market (NASDQ) and has been applied the 15% weighting for PRR.

Non-Listed New Zealand and Australian Securities

Shares held in Unlisted Holdings Limited are not quoted on a Recognised Market and has been applied the 50% weighting for PRR.

Bought Options

GVBL has bought SPK Put Options to hedge its physical exposure to SPK as detailed under NZX50 heading. GVBL has paid its option premium, therefore there is no PRR applied under this part, and the exercise value of the contract has been applied to net the overall exposure to SPK at row 15.

Margined Transactions

Twice the IMCR for all GVBL's written options and future positions has been taken under rows 61 to 63.

Total PRR has been computed in cell L74 of Sheet 4 and pulled through to cell F13 of Sheet 1.

8.7 Large Issuer Risk Requirement

GVBL's LPRR for Issuers is also detailed in Sheet 4 under columns N:Q. Consideration of each principal position for LPRR has been derived from the PRR Schedule in conjunction with each of the Securities' shares in issue and the 19% of liabilities figure.

The following holdings have been captured for the purposes of LPRR, with the additional 5% risk requirement applied:

- The value of GVBL's holding in FBU is greater than 19% of its total liabilities, as detailed under cell P16 of Sheet 4;
- The number of shares held in BLT is greater than 10% of the total number of shares issued in that Security; and
- The number of shares held in Unlisted Holdings Limited is greater than 10% of the total number of shares issued in that Security.

Total LPRR for Issuers has been computed in cell Q74 of Sheet 4 and pulled through to cell F14 of Sheet 1.

8.8 Currency Risk Requirement

GVBL's CurRR is detailed in Sheet 5, with the per currency values for Financial Assets and Liabilities taken from the multi-currency TB on Sheet E. This takes into account GVBL's client, broker and principal positions denominated in foreign currencies.

It should be noted that the multi-currency TB reconciles with the consolidated TB in NZD.

For each foreign currency, the net Financial Assets are converted to NZD in row 12 as an absolute value. GVBL has specified that the source of the exchange rates is Bloomberg in cell C17.

The appropriate risk weighting specified under Rule 10.1 is then applied to each foreign currency exposure, with total CurRR computed in cell I17 of Sheet 5 and pulled through to cell F15 of Sheet 1.



8.9 Primary Market Risk Requirement

GVBL's PMRR is detailed in Sheet 6. The firm is currently underwriting an initial public offering for Large Co-operative Limited and debt listing for Secure Bank Limited.

GVBL's Net Underwriting Commitments are calculated by taking the gross underwrite for each issue in column C and excluding the amounts allocated to its clients in column D, as allocated amounts are included as CRR. The appropriate risk weightings from Rule 9.1 are then applied to arrive at each issue's PMRR in Column G.

Total PMRR has been computed in cell G15 of Sheet 6 and pulled through to cell F16 of Sheet 1.

8.10 Minimum Capital Required

On Sheet 1, adjacent to the calculation of GVBL's NTCA in columns E:F is the calculation of GVBL's Prescribed Minimum Capital Adequacy.

8.10.1. Minimum NTCA

As an Individual Clearing Participant, GVBL is subject to a Minimum NTCA of \$1,000,000.

In Sheet 1, 'Individual Clearing Participant' has been selected from the drop-down box in cell E8, presenting \$1,000,000 in cell F8.

8.10.2. Total Risk Requirement

As specified under Parts 8.3 to 8.9 of this Guidance Note, the various elements that make up TRR have been pulled through to cells F10:F17 of Sheet 1. The items have been totalled in cell F18 to produce GVBL's TRR of \$5,029,839.

8.10.3. Prescribed Minimum Capital Adequacy

Cell F6, the greater of cells F8 and F18 is produced for GVBL's Prescribed Minimum Capital Adequacy of **\$5,029,839**.

8.11 Capital Adequacy Ratio

GVBL's Capital Adequacy Ratio is calculated in cells F20:F23 of Sheet 1. Cell F23 takes GVBL's NTCA over its Prescribed Minimum Capital Adequacy to produce a Capital Adequacy Ratio of **348%**.

