



## **RISK MANAGEMENT DOCUMENT**

### **Foreign Reserves Management**

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#### Introduction

1. This document forms part of the Bank's policies and procedures and is part of the Risk Management Document.
2. This document contains the details for day to day management of the financial risks arising from Foreign Reserves Management and foreign investments from Liquidity Management operations.
3. Risks arising from the Asian Bond Funds and Securities Lending can be found in *Risk Management Document – Other Foreign Reserves*, and BIS share investments in *Risk Management Document – Domestic Operations*.
4. Compliance with limits is monitored daily by TU unless otherwise stated.

## LIQUIDITY RISK

### Strategic Objective:

To ensure that foreign reserves comprise assets which are:

- a. Diversified across US, Euroland, and Japanese currencies and instruments; and
- b. Readily able to be converted into cash, if the Minister's minimum foreign reserves were required to be liquidated within a month.

### B. Risk Management:

1. Foreign Reserves is the total foreign reserves assets, including ABF investments, less MTM FX forward, interest rate and currency swaps.
2. Government securities are those in the US, France or Germany and include cash deposits with Central Banks in the respective countries and the BIS, but excludes net repoed government securities and, deposits from liquidity management swaps and with Domestic Markets.
3. Near-Government securities comprise reverse repos with US, German & French government collateral and BIS securities (MTI's and FIXBIS), but excludes net reverse repos financed by short sold US, German & French government securities and net reverse repos from liquidity management FX swaps.
4. Concentration of any one issue is limited
5. Liquidation of assets should not impact domestic markets

### C. Limits:

1. Foreign reserves must include a minimum of:

SDR m	Government Securities	Govt. & Near-Govt. Securities	Total Foreign Reserves ex Japan
US / USD	585	1,170	1,755
EUR	390	780	1,170
Total ex Japan	1,287	2,574	4,100
Japan	100	100	100

2.
  - a. FRM must have due regard for the liquidity of the instruments in which they are investing.
  - b. Bonds and MTN's, excluding DM investments, must also meet the following requirements:
    - i. Minimum amount of bond issue or MTN facility size USD 250m, EUR 150m, JPY 25b.
    - ii. Maximum holding of a security: 10% of amount on issue (or facility).
  - c. Net open interest in a futures contract may not exceed 2 percent of the open interest in any contract, per delivery month.
3. FRM shall not have security issuer and deposit exposures to entities incorporated in Australia or New Zealand (excluding NZ Government exposures acquired by way of FX intervention).

## CREDIT RISK

### A. Strategic Objective:

- i) The Bank has sufficient capital to cover expected and unexpected losses across the entire Bank's portfolio resulting from Credit Risk.
- ii) The Bank seeks to avoid undue credit risk while meeting its policy objectives and balancing income and risk considerations.

### B. Risk Management:

1. The Bank seeks diversification benefits where appropriate through:
  - The use of aggregate limits by country and rating
  - The use of counterparty limits, which are calibrated on an expected loss basis
2. The Bank uses netting and credit support agreements and settles transactions through CLS or on delivery versus payment (DVP) basis where possible.
3. These credit limits apply to all exposures except those arising from i) ABF1 and ABF2 investments, ii) securities lending activities, iii) reinvestment of cash left at other central banks, and iv) any LLR operations.

### C. Risk Measurement:

1. Exposures are measured against counterparties and issuers, rolled up to the parent and countries based on incorporation of the parent.
2. Credit exposures measured in NZD on a credit equivalent basis, with netting allowed for under relevant agreements
3. Credit exposure windows:
  - a. Purchases from trade date.
  - b. Forward transactions from 2 days prior to settlement.
  - c. Sales and maturities until settlement confirmation.

### D. Risk Limits:

	Individual limits – weighted exposures (NZDm)					Aggregate Limits – un-weighted, Issuer exposures only	
	Corporate		Agencies	Supras	Sovereigns	Rating	Country
	Long term	Overall <sup>1</sup>	Long term	Long term	Long term		
AAA	400m	800m	800m	2.5bn	2.5bn	Unlimited	Unlimited
AA-, AA, AA+	300m	600m	300m	300m	1bn	8bn (incl. single A)	1.6bn
A, A+	80m	400m	80m	80m	250m	900m	
A-	40m	200m	40m	40m	100m		

- i) Individual limits refer to single counterparties or groups of counterparties.
- ii) No limits apply to US, German, French and New Zealand sovereigns.
- iii) Allowances up to NZD 10m (unweighted) exist for small exposures to other counterparties (lower than A- and unrated) such as central banks in the Pacific region.
- iv) Exposures from Reverse Repos (collateral issuer exposure) are weighted at 30%.

<sup>1</sup> Overall limit can be used either a combination of long (up to the long term limit) and short term exposures or fully on short term exposures (Herstatt risk). Short term exposures can replace long term exposures but not vice versa.

## MARKET (INTEREST & FX) RISK

### A. Strategic Objective:

- i) The Bank has sufficient capital to cover potential losses across the entire Bank's portfolio resulting from Market Risk.
- ii) The Bank seeks to avoid undue market risk while meeting its policy objectives and balancing income and risk considerations.

### B. Risk Management:

1. The Bank allocates capital to all 'non-discretionary', policy related and discretionary risks
2. Market risks arising from Active Management, DM Investments, Tactical open FX and Market Test activities are limited to no more than the Governor's outer loss tolerance of NZD 122m. This is achieved via effective duration, stop loss and VaR limits.

### C. Risk Measurement:

1. Stop loss limits are applied on rolling basis.
2. VaR is measured at a 99% Confidence Interval, with a one day holding period and zero decay factor, using 250 days of data. VaR includes diversification benefits of interest rate and currency correlations.
3. VaR on Active Management is a stand-alone VaR, and excludes foreign currency investments of DM swaps.
4. VaR on the *Smart Passive Portfolio (Tactical)* is a stand-alone VaR, and includes the foreign currency and the interest rate components.
5. VaR on the DM Investments includes external funding but excludes all NZD components. i.e. it is the VaR on the foreign currency components only.
6. Net open FX position is the long less short positions in that currency for all future dates.
7. Market risk is managed under effective duration, maturity and VaR limits
8. DM Investment duration limits apply to the asset only

### D. Limits:

1. VaR limits and stop loss limits apply at all times. Intraday exposures from core portfolio restructuring or customer FX orders can exceed VaR and net FX position limits. The exposure shall be brought within limits within one hour (except NZDMO FX orders, which are subject to a 5 day limit).
2. VaR & stop loss limits (excluding FX positions and FX losses arising from FX intervention):

	VaR Limits	Stop Loss Limits 20 Day	Stop Loss Limits 250 Day
Actual Portfolio	N/A	N/A	N/A
Smart Passive Portfolio (Benchmark)	N/A	N/A	N/A
Smart Passive Portfolio (Tactical)	NZD 5m	N/A	NZD 50m
Active Management	NZD 2m	NZD 6m	NZD 9m
DM Investments	NZD 2m	N/A	N/A

3. In addition to the VaR limits, the following thresholds apply to the Benchmark monthly, checked by Risk Unit as part of the monthly optimisation:

	Each currency
Interest Rate Risk – Effective Duration mismatch	0.25

4. The maximum allowable net open FX position in the market risk portfolio is set at NZD 100 million for the NZD and AUD positions individually. In addition, of that NZD 100m, proprietary net open FX positions in the NZD and AUD cannot individually exceed NZD 75m and AUD 70m respectively. Any non-proprietary net open FX positions will be closed out to within +/- NZD 500,000 within 5 business days (or are deemed to be proprietary positions)"
5. For each currency, including NZD, assets from the investment of proceeds of DM FX swaps have a maximum portfolio effective duration limit of four months.
6. DM investments have a maximum maturity of eighteen months; except for deposits which have a maximum maturity of six months.

7. The target FX position will be set as advised by the Governor, with allowable bands of SDR40m on either side.
8. The target currency composition of the open FX position in the *Smart Passive Portfolio (Benchmark)* will be; 25% USD; 25% EUR; 20% AUD; 15% GBP; 10% CAD; and 5% JPY. Composition weights are realigned daily.
9. The *Smart Passive Portfolio (Tactical)* can deviate from the *Smart Passive Portfolio (Benchmark)* currency's target composition by no more than +/- 5%.

### REFINANCING RISK

#### A. Strategic Objective:

To avoid material refinancing risk (borrowing concentrations).

#### B. Risk Management:

1. Concentration of funding requirements in any 12 month period (excluding Liquidity Management operations).
2. Core foreign reserves, includes Benchmark and ABF, net of internal loans between these portfolios

#### C. Limits

Foreign currency funding for foreign currency intervention capacity shall be structured at the time of new borrowing such that, after new borrowing:

-no more than an amount equivalent to SDR 800m (20% of SDR 4 billion\*) matures in any 6 month period beyond the next 12 months.

And so that on a continuous basis:

- no more than an amount equivalent to SDR 400m (10% of SDR 4 billion\*) matures within the next 12 months.

### LEVERAGE LIMIT

#### A. Strategic Objective:

To manage the political/headline risks from leverage in the bank's balance sheet due to Active Management.

#### B. Risk Management:

1. Leverage is measured as the aggregate (absolute) value of loans from external counterparties (other than the NZDMO), repos and short sales

#### C. Limits:

1. Leverage shall not be more than NZD 3.5 billion