

**Public Quantitative Disclosure
Standards for Central Counterparties**

ASX Clear Pty Limited

September 2018



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Introduction

Overview

ASX Clear Pty Limited (ASX Clear) is the central counterparty (CCP) for the clearing of shares, warrants and exchange-traded funds traded on ASX Trade or via an Approved Market Operator (AMO).

As the central counterparty, the Clearing House becomes the seller to every buyer and the buyer to every seller, making it liable for completing all cleared transactions on the relevant market. This occurs through a contractual process known as novation, in accordance with the operating rules of the Clearing House.

Standard and Poor's (S&P)

ASX has obtained an S&P issuer credit rating for ASX Clear. S&P has assigned an AA- long-term and A1+ short-term credit rating to ASX Clear. The rating outlook on the long-term issuer credit rating is stable.

European Securities and Markets Authority (ESMA) recognition

The European Market Infrastructure Regulation ("EMIR") was adopted by the European Parliament on 4 July 2012. Under EMIR, a CCP established outside of the European Union may continue to provide clearing services to clearing members established in the European Union only if ESMA recognises the CCP as a 'third-country CCP'. In addition, under the European Capital Requirements Directive IV ("CRD IV"), European banks are permitted to apply concessional risk weightings to their group's novated exposures to CCPs if they are "Qualifying CCPs". To become a Qualifying CPP, a CCP established outside the European Union must obtain recognition as a 'third country CCP' under EMIR.

ASX Clear obtained recognition as a "third-country CCP" from ESMA with effect from 27 April 2015. Two important steps to obtaining such recognition were:

- (i) the adoption by the European Commission of its equivalence decision for Australia's regulatory regime on 30 October 2014; and
- (ii) the signing of a Memorandum of Understanding relating to cooperation between ASIC, RBA and ESMA on 27 November 2014.

Background

The CPSS-IOSCO *Principles for financial market infrastructures* (PFMI) states that financial market infrastructures (FMIs) should provide relevant information to participants, relevant authorities and the broader public.

Quantitative data is an important components of the set of public disclosures that is expected of FMIs as part of satisfying the PFMI.

Purpose of the disclosures

The disclosures are intended to support the objectives of enabling stakeholders, including authorities, participants (direct, indirect and prospective) and the public, to:

- compare Central Counterparty (CCP) risk controls, including their financial condition and financial resources to withstand potential losses;

- have a clear, accurate and full understanding of the risks associated with a CCP (in accordance with Principle 23, Key Consideration 5);
- understand and assess a CCP's systemic importance and its impact on systemic risk in all jurisdictions and currency areas for which it provides services, from which it has material membership or in which there are linked infrastructures; and
- understand and assess the risks of participating in CCPs (directly, and, to the extent relevant, indirectly).

Principle 23 states that FMIs should, at a minimum, disclose “basic data” on transaction volumes and values. Principle 23 also states that FMIs should disclose data on their financial condition, their financial resources to withstand potential losses, the timeliness of settlements, and other performance statistics. They should disclose sufficient information for participants and prospective participants to understand fully the risks of participating in the system. This disclosure is expected to be to the public rather than restricted to participants or members.

Frequency and type of disclosure

The matrix below details the quantitative disclosures as required in the Public Quantitative disclosure standards for central counterparties.

These standards can be accessed via the following link. <http://www.bis.org/cpmi/publ/d125.htm>

For each standard that requires a quantitative disclosure the matrix will display the following information:

- The principle number;
- The requirement of that principle (as specified in the standards);
- The quantitative disclosure as it applies to the CCP¹;
- The frequency period of updating this disclosure; and
- The period for which this disclosure relates

The common templates (csv files) and supporting documentation can be accessed via the following link:

<http://www.asx.com.au/regulation/regulatory-compliance/asx-clear.htm>

¹ All values are provided in Australian dollars unless otherwise indicated

Principle 4 – Credit Risk

Requirement	
4.1	<p>Total value of default resources (excluding initial and retained variation margin), split by clearing service if default funds are segregated by clearing service, split by:</p> <ul style="list-style-type: none"> (a) pre-funded <ul style="list-style-type: none"> i. own capital that forms part of the default waterfall (further split by whether used before, alongside, or after, member contributions) ii. aggregate participant contributions (both amount required and post-haircut amount posted, where different) iii. other (b) committed <ul style="list-style-type: none"> i. own/parent funds that are committed to address a participant default (or round of participant defaults) ii. aggregate participant commitments to address an initial participant default (or initial round of participant defaults) iii. aggregate participant commitments to replenish the default fund to deal with a subsequent participant default (or round of participant defaults) after the initial participant default (or round of participant defaults) has been addressed iv. other <p>[Refer to the explanatory note at the end of this document for additional details]</p>
Disclosure	
<p>ASX Clear has total default resources of up to \$550m. This is comprised of a paid in default fund that has \$250m paid in resources from ASX and the ability to call on recovery assessments from its participants of up to \$300m.</p> <p>In the event of a participant default, the Clearing House will use the margins of the defaulting participant together with any additional Initial Margins that had been collected from the defaulting participant.</p> <div style="text-align: center; margin: 20px 0;"> <p>ASX Clear* Total fixed financial resources \$250m</p> <p>\$178.5m ASXCC Equity</p> <p>\$71.5m Restricted Capital Reserve</p> <p>Any Additional Initial Margins called from the defaulting Clearing Participant including circumstances where stress testing losses exceed its Stress Test Exposure Limit</p> <p>Margins of the defaulting Clearing Participant</p> <p>Order of Application</p> <p>ASX Paid in resources</p> <p>*ASX Clear also has a \$150 million liquidity facility from ASX Limited</p> </div>	
Update Frequency:	Quarterly
Last Updated:	28 September 2018

Requirement			
4.2	<p>KCCP</p> <p>Kccp need only be reported by those CCPs which are, or seek to be, a “qualifying CCP” under relevant law.</p> <p>[Refer to the explanatory note at the end of this document for additional details]</p>		
Disclosure			
<p>The KCCP is a hypothetical capital requirement for a CCP, calculated for the purpose of determining the capital requirement on bank clearing member default fund contributions. A CCP’s hypothetical capital requirement is driven by its counterparty credit risk exposures from its clearing members.</p> <p>The KCCP does not represent the actual default resources for a CCP (the actual default resources are determined by the CCP’s supervisor). As a qualifying CCP, ASX is required to calculate the default resources on bank clearing member default fund contributions on a monthly basis.</p> <p>The KCCP (Hypothetical capital) for ASX Clear as at the reporting period was \$0 compared to actual default resources held of \$250m.</p>			
	Update Frequency:	Quarterly	Last Updated: 28 September 2018

Requirement			
4.3	<p>Value of pre-funded default resources (excluding initial and retained variation margin) held for each clearing service, in total and split by:</p> <ul style="list-style-type: none"> • Cash deposited at a central bank of issue of the currency concerned • Cash deposited at other central banks • Secured cash deposited at commercial banks (consisting of reverse repos of Australian and State Government bonds only) • Unsecured cash deposited at commercial banks • Non-cash <ul style="list-style-type: none"> • sovereign government bonds <ul style="list-style-type: none"> ○ domestic ○ other • agency bonds • state/municipal bonds • corporate bonds • equities • commodities <ul style="list-style-type: none"> ○ gold ○ other (please describe) • mutual funds / UCITs • other (please provide explanation of type of asset) <p>Amounts should be reported both pre-haircut (i.e. at market value) and at post-haircut value.</p>		
Disclosure			
<p>Pre-funded default resources of \$250m (repayable upon demand) are provided in cash from ASX. These funds together with margins from ASX Clear and ASX Clear (Futures), default fund contributions lodged by participants of ASX Clear (Futures) and the CCPs own funds are combined into one portfolio and invested into various assets through a Trust.</p> <p>As the default resources cannot be individually assigned to specific asset classes, a general allocation has been made based on the proportion of the default resources to the total portfolio and this % has been applied to each asset class.</p>			
	Investment	Pre Haircut (m)	Post Haircut (m)
	Cash		
	Cash deposit at central bank of issue of currency	0.6	0.6
	Secured cash deposit at commercial banks (reverse repos of Government and State bonds only)	109.5	109.5

Unsecured cash deposit at commercial banks	18.4	18.4
Investment	Pre Haircut (m)	Post Haircut (m)
Non- Cash		
Domestic Sovereign Government Bonds	-	-
Australian State issued securities	-	-
Bank issued securities	121.5	121.5
Total	250.0	250.0

Note: As haircuts are only charged on the equity and debt security non-cash collateral lodged by participants to cover their margin positions, both the pre-haircut and post-haircut values of the pre-funded default resources above will be the same.

Update Frequency:	Quarterly	Last Updated:	28 September 2018
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Requirement															
4.4	<p>1) State whether the CCP is subject to a minimum “Cover 1” or “Cover 2” requirement in relation to total pre-funded default resources.</p> <p>2) For each clearing service, state the number of business days within which the CCP assumes it will close out the default when calculating credit exposures that would potentially need to be covered by the default fund.</p> <p>3) For each clearing service, what is the estimated largest aggregate stress loss (in excess of initial margin) that would be caused by the default of any single participant and its affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions?</p> <p>4) Report the number of business days, if any, on which the above amount exceeded actual pre-funded default resources (in excess of initial margin) and by how much.</p> <p>5) For each clearing service, what was the actual largest aggregate credit exposure (in excess of initial margin) to any single participant and its affiliates (including transactions cleared for indirect participants)?</p> <p>6) For each clearing service, what is the estimated largest aggregate stress loss (in excess of initial margin) that would be caused by the default of any two participants and their affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions?</p> <p>7) Report the number of business days, if any, on which the above amount exceeded actual pre-funded default resources (in excess of initial margin) and by how much.</p> <p>8) For each clearing service, what was the actual largest aggregate credit exposure (in excess of initial margin) to any two participants and their affiliates (including transactions cleared for indirect participants)?</p> <p>[Refer to the explanatory note at the end of this document for additional details]</p>														
Disclosure															
	<table border="1"> <thead> <tr> <th>Ref</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>1)</td> <td>ASX Clear is subject to a “Cover 2” requirement</td> </tr> <tr> <td>2)</td> <td>ASX Clear assumes that it will close out a default within 3 business days</td> </tr> <tr> <td>3)</td> <td> <table border="0"> <tr> <td>Peak day amount in the previous 12 months (Cover 1)</td> <td>\$219.7m*</td> </tr> <tr> <td>Average over the previous 12 months (Cover 1)</td> <td>\$101.4m*</td> </tr> </table> </td> </tr> <tr> <td>4)</td> <td>The peak amount in the previous 12 months of \$219.7m did not exceed the pre-funded default resources of \$250.0m.</td> </tr> </tbody> </table>	Ref	Result	1)	ASX Clear is subject to a “Cover 2” requirement	2)	ASX Clear assumes that it will close out a default within 3 business days	3)	<table border="0"> <tr> <td>Peak day amount in the previous 12 months (Cover 1)</td> <td>\$219.7m*</td> </tr> <tr> <td>Average over the previous 12 months (Cover 1)</td> <td>\$101.4m*</td> </tr> </table>	Peak day amount in the previous 12 months (Cover 1)	\$219.7m*	Average over the previous 12 months (Cover 1)	\$101.4m*	4)	The peak amount in the previous 12 months of \$219.7m did not exceed the pre-funded default resources of \$250.0m.
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5)	Peak day amount in the previous 12 months (Cover 1) Average over the previous 12 months (Cover 1)	\$1.6m \$0.6m
6)	Peak day amount in the previous 12 months (Cover 2) Average over the previous 12 months (Cover 2)	\$362.0m* \$176.7m*
7)	The peak amount in the previous 12 months of \$362.0m did exceed the pre-funded default resources of \$250.0m.	
8)	Peak day amount in the previous 12 months (Cover 2) Average over the previous 12 months (Cover 2)	\$1.6m \$0.6m
<i>* Exposures are net of additional initial margins (AIMs) held.</i>		
Update Frequency:		Quarterly
Last Updated:		28 September 2018

Principle 5 – Collateral

Requirement			
5.1	Assets eligible as initial margin, and the respective haircuts applied [Refer to the explanatory note at the end of this document for additional details]		
Disclosure			
Subject to approval and on such conditions as ASX Clear may determine from time to time, the following may be provided in respect of margin:			
Instrument	Approved Cover	Valuation Haircut	Provided for
Cash Cover	AUD Cash	N/A	Initial Margin Additional Initial Margin
Cash Equities	Specific Cover	N/A	Initial Margin
	S&P / ASX 200 Securities	Tiered at 15%, 20% and 30%	
	SPDR S&P / ASX 200 ETF	10%	
Please refer to the link below for a list of acceptable Cash Equity securities and their relevant haircuts. http://www.asx.com.au/regulation/regulatory-compliance/asx-clear.htm			
Update Frequency:	When changes made	Last Updated:	28 September 2018

Requirement			
5.2	Assets eligible for pre-funded participant contributions to the default resources, and the respective haircuts applied (if different from 5.1)		
Disclosure			
The ASX Clear default resources do not contain any pre-funded participant contributions.			
Update Frequency:	When changes made	Last Updated:	28 September 2018

Requirements			
5.3	Results of testing of haircuts – please state the: <ol style="list-style-type: none"> confidence interval targeted through the calculation of haircuts assumed holding/liquidation period for the assets accepted, look-back period used for testing the haircuts, The number of days during the look-back period on which the fall in value during the assumed holding/liquidation period exceeded the haircut on an asset. [Refer to the explanatory note at the end of this document for additional details]		
Disclosure			
Back testing of Collateral haircuts is performed on a quarterly basis covering the previous 12 months.			
Ref	Item	Result	
1	Confidence Interval Targeted	99%	
2	Assumed Holding / Liquidation Period	3 days business days	
3	Look-back Period	262 days business days	
4	Number of days exceeded the Haircut	24*	
<i>*Note – The 13 breaches were over 56,420 observations giving a coverage of 99.99%</i>			
Update Frequency:	Quarterly	Last Updated:	28 September 2018

Principle 6 – Margin

Initial Margin

Requirement											
6.1	For each clearing service, total initial margin required , split by house and client (or combined total if not segregated)										
	For each clearing service, state whether initial margin for the positions of indirect participants must be provided for each indirect participant's own position (gross), or for the net position of a group of indirect participants ("net" or "net omnibus")										
	[Refer to the explanatory note at the end of this document for additional details]										
Disclosure											
ASX Clear faces each clearing participant as principal (e.g. House) for all Cash Market transactions. For Exchange Traded Options each client has their own individual Client Account (ICA).											
<table border="1"> <thead> <tr> <th>Type</th> <th>(m)</th> </tr> </thead> <tbody> <tr> <td>Cash Market - House (Gross)</td> <td>\$137.0</td> </tr> <tr> <td>ETO - House (Gross)</td> <td>\$73.4</td> </tr> <tr> <td>ETO – Client (Gross)</td> <td>\$724.9</td> </tr> </tbody> </table>				Type	(m)	Cash Market - House (Gross)	\$137.0	ETO - House (Gross)	\$73.4	ETO – Client (Gross)	\$724.9
Type	(m)										
Cash Market - House (Gross)	\$137.0										
ETO - House (Gross)	\$73.4										
ETO – Client (Gross)	\$724.9										
Update Frequency:		Quarterly	Last Updated: 28 September 2018								

Requirement			
6.2	For each clearing service, total initial margin held , split by house and client (if segregated).		
	For each of the overall house and client totals (or for just the overall total posted, if house and client are not segregated), the amounts of:		
	<ul style="list-style-type: none"> • Cash deposited at a central bank of issue of the currency concerned • Cash deposited at other central banks • Secured cash deposited at commercial banks (consisting of reverse repos of Australian and State Government bonds only) • Unsecured cash deposited at commercial banks • Non-cash <ul style="list-style-type: none"> • sovereign government bonds <ul style="list-style-type: none"> ○ domestic ○ other • agency bonds • state/municipal bonds • corporate bonds • equities • commodities <ul style="list-style-type: none"> ○ gold ○ other • mutual funds / UCITs • other (please provide explanation of type of asset) <p>Amounts should be reported both pre-haircut (i.e. at market value) and at post-haircut value.</p> <p>[Refer to the explanatory note at the end of this document for additional details]</p>		
Disclosure			
Cash margins and default fund contributions lodged by participants of ASX Clear and ASX Clear (Futures) and the CCPs own funds are combined into one portfolio and invested into various assets through a Trust.			

As the initial margins cannot be individually assigned to specific asset classes, a general allocation has been made based on the proportion of the initial margin lodged to the total portfolio and this % has been applied to each asset class.

This table also includes non-cash collateral (including any excess collateral) that has been lodged by any of the clearing participants.

Investments	House		Client	
	Pre Haircut (m)	Post Haircut (m)	Pre Haircut (m)	Post Haircut (m)
Cash				
Cash deposit at central bank of issue of currency	0.6	0.6	0.6	0.6
Secured cash deposit at commercial banks (reverse repos of Government and State bonds only)	96.8	96.8	106.4	106.4
Unsecured cash deposit at commercial banks	16.3	16.3	17.8	17.8
Non-Cash				
Australian State issued securities	107.4	107.4	118.1	118.1
Equities	12.3	9.8	610.7	485.6
Total	233.4	230.9	853.6	728.5

Note: Haircuts are only charged on equities and debt securities lodged by participants to cover their margin obligations.

Update Frequency:

Quarterly

Last Updated:

28 September 2018

Requirement

6.3 Initial margin rates on individual contracts, where the CCP sets such rates
[Refer to the explanatory note at the end of this document for additional details]

Disclosure

Refer to the link below for the ASX Clear SPAN margin parameters and Cash Market margin parameters

<http://www.asx.com.au/regulation/regulatory-compliance/asx-clear.htm>

Update Frequency:

When changes made

Last Updated:

28 September 2018

Requirement

6.4 Type of initial margin model used (e.g. portfolio simulation or risk aggregation) for each clearing service and the key model design parameters for each initial margin model applied to that clearing service – key parameters including, but not limited to:

- (i) single-tailed confidence level targeted;
- (ii) sample/data look-back period for calibrating the model;
- (iii) adjustments or scalars or weighting, if any, applied to historical data (e.g. to reflect changes in volatility);
- (iv) close-out/holding periods by product (or, if varying, contract type);
- (v) for risk aggregation models, the margin rate per contract and details of the offsets between different contracts [e.g. for SPAN style models this might include inter-month spread charges and inter-contract spread credits];
- (vi) the frequency of parameter reviews.

[Refer to the explanatory note at the end of this document for additional details]

Disclosure

Ref	Item	SPAN (Derivatives)	HSVaR (Equities)
(i)	Single-tailed confidence level targeted	99.7%	99.7%
(ii)	sample/data look-back period for calibrating the model	1 Year	HSVaR = 502 days Flat Rate = 1 Year
(iii)	Adjustments, scalars or weighting	Not strictly formulaic. Multiple look-back periods considered incorporating both short and long term periods (60 and 252 business days).	HSVaR contributions for securities are calculated on 99% confidence interval and then a portfolio add on factor of 30% is added to construct a reliable estimate of the desired 99.7% margin coverage.
			The "add on" factor is applied to account for statistical uncertainty and construct a reliable estimate of the desired 99.7% margin coverage.
(iv)	Close-out / holding Periods	1 and 2 Days	HSVaR = Top 500 = 1 day Flat Rate ASX Top 200 = 1 day Flat Rate ASX Next 300 = 2 day Flat Rate Interest Rate Securities = 3 days Flat Rate Warrants = 3 days Flat Rate Non-All Ordinaries = 3 days
(v)	Offsets between different contracts	http://www.asx.com.au/regulation/regulatory-compliance/asx-clear.htm	N/A
(vi)	Frequency of reviews	Monthly	Quarterly
Update Frequency:		Quarterly	Last Updated: 28 September 2018

Requirement																
6.5	<p>Results of back-testing of initial margin (where breaches of initial margin occurred). At a minimum, this should include, for each clearing service and each initial margin model applied to that clearing service:</p> <p>(a) Number of times over the past twelve months that margin coverage held against any account fell below the actual marked-to-market exposure of that member account – based on daily back-testing results*</p> <p>(b) Number of observations (i.e. number of accounts multiplied by number of days covered in the back test)</p> <p>(c) Achieved coverage level, i.e. [(b) – (a)]/(b)</p> <p>* Specify if measured intraday/continuously or only once a day. If once a day, specify at what time of day. Where breaches of initial margin coverage (as defined in 6.5(a)) have occurred, report on size of uncovered exposure.</p> <p>[Refer to the explanatory note at the end of this document for additional details]</p>															
Disclosure																
	<table border="1"> <thead> <tr> <th>Ref</th> <th>ETO's</th> <th>Cash Market</th> </tr> </thead> <tbody> <tr> <td>(a)</td> <td>4,791</td> <td>2</td> </tr> <tr> <td>(b)</td> <td>1,907,242</td> <td>8,362</td> </tr> <tr> <td>(c)</td> <td>99.75%</td> <td>99.98%</td> </tr> <tr> <td>Peak</td> <td>\$2.6m</td> <td>\$1.1m</td> </tr> </tbody> </table>	Ref	ETO's	Cash Market	(a)	4,791	2	(b)	1,907,242	8,362	(c)	99.75%	99.98%	Peak	\$2.6m	\$1.1m
Ref	ETO's	Cash Market														
(a)	4,791	2														
(b)	1,907,242	8,362														
(c)	99.75%	99.98%														
Peak	\$2.6m	\$1.1m														
Update Frequency: Quarterly																
Last Updated: 28 September 2018																

Margin Calls

Requirement			
6.6	Average total variation margin paid to the CCP by participants each business day.		
	[Refer to the explanatory note at the end of this document for additional details]		
	Disclosure		
	Average total variation margin paid to the CCP by participants each business day over the quarter.		\$24.5m
	Update Frequency:	Quarterly	Last Updated: 28 September 2018

Requirement			
6.7	Maximum total variation margin paid to the CCP on any given business day over the period.		
	Disclosure		
	Maximum total variation margin paid to the CCP on any given business day over the quarter.		\$70.5m
		Update Frequency:	Quarterly

Requirement			
6.8	Maximum initial margin call per clearing participant on any given business day over the period.		
	Disclosure		
	Maximum initial margin call per clearing participant on any given business day over the quarter.		\$28.7m
		Update Frequency:	Quarterly

Principle 7 – Liquidity Risk

Requirement													
7.1	<p>State whether the clearing service maintains sufficient liquid resources to 'Cover 1' or 'Cover 2'.</p> <p>Size and composition of qualifying liquid resources for each clearing service (or at aggregate CCP level if not managed at clearing service level) – for each relevant currency – split by:</p> <ol style="list-style-type: none"> Cash deposited at a central bank of issue of the currency concerned Cash deposited at other central banks Secured cash deposited at commercial banks (consisting of reverse repos of Australian and State Government bonds only) Unsecured cash deposited at commercial banks secured committed lines of credit (i.e. those for which collateral/security will be provided by the CCP if drawn) including committed foreign exchange swaps and committed repos; unsecured committed lines of credit (i.e. which the CCP may draw without providing collateral/security); highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements even in extreme but plausible market conditions; other (please specify). <p>State whether the CCP has routine access to central bank liquidity or facilities.</p> <p>If, in using qualifying liquid resources the CCP is required or allowed to give priority to meeting certain payment obligations, please provide or reference:</p> <ul style="list-style-type: none"> the schedule of payments or priority for allocating payments, if such exists; any applicable rule, policy, procedure, and governance arrangement around such decision making. 												
Disclosure													
	<p>As all cash received from both clearing houses together with the CCPs own funds are combined into one portfolio and invested into various assets through a Trust, a general allocation has been made based on the proportion of the portfolio lodged by each clearing house to the total portfolio and this % has been applied to the relevant asset class.</p> <p>ASX Clear maintains sufficient liquid resources for Cover 2.</p> <table border="1"> <thead> <tr> <th>Investments</th> <th>Value (m)</th> </tr> </thead> <tbody> <tr> <td>Cash deposited at central bank of issue of the currency</td> <td>1.8</td> </tr> <tr> <td>Secured cash deposited at commercial banks (reverse repos of Government and State bonds only)</td> <td>312.7</td> </tr> <tr> <td>Unsecured cash deposited at commercial banks</td> <td>21.8</td> </tr> <tr> <td>Highly marketable collateral held in custody & investments that are readily available and convertible into cash</td> <td>347.0</td> </tr> <tr> <td>Total</td> <td>683.3</td> </tr> </tbody> </table> <p>Any cash reinvestments are only in RBA eligible securities and ASX Clear is not required to give priority in meeting payment obligations</p> <p>ASX Clear has a committed standby (undrawn) liquidity facility of \$150m. This comprises of \$50m from ASX Limited and a further \$100m from ASX Limited backed by a commercial bank line.</p> <p>For Cash Market, in the event of a Clearing Participant default ASX also has the ability to enter into an Offsetting Transaction Arrangement (OTA) for any outstanding payment obligation with a non-defaulting Clearing Participant. It is expected that available resources would first be injected but, if it is not possible or prudent to rely solely on available liquidity, ASX could utilise OTAs.</p>	Investments	Value (m)	Cash deposited at central bank of issue of the currency	1.8	Secured cash deposited at commercial banks (reverse repos of Government and State bonds only)	312.7	Unsecured cash deposited at commercial banks	21.8	Highly marketable collateral held in custody & investments that are readily available and convertible into cash	347.0	Total	683.3
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Unsecured cash deposited at commercial banks	21.8												
Highly marketable collateral held in custody & investments that are readily available and convertible into cash	347.0												
Total	683.3												
Update Frequency:	Quarterly												
Last Updated:	28 September 2018												

Requirement			
7.2	Size and composition of any supplementary liquidity risk resources for each clearing service above those qualifying liquid resources above. [Refer to the explanatory note at the end of this document for additional details]		
Disclosure			
There are no supplementary liquidity risk resources beyond what has been detailed in principle 7.1 for ASX Clear.			
Update Frequency:	Quarterly	Last Updated:	28 September 2018

Requirement															
7.3	For each clearing service (or at the aggregate CCP level if not managed at clearing service level): 1) What is the estimated largest same-day and, where relevant, intraday and multiday payment obligation in total that would be caused by the default of any single participant and its affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions? 2) Report the number of business days, if any, on which the above amount exceeded its qualifying liquid resources (identified as in 7.1, and available at the point the breach occurred), and by how much. 3) What is the actual largest intraday and multiday payment obligation of a single participant and its affiliates (including transactions cleared for indirect participants) over the past twelve months? 4) What is the estimated largest same-day and, where relevant, intraday and multiday payment obligation in each relevant currency that would be caused by the default of any single participant and its affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions? 5) Report the number of business days, if any, on which the above amounts exceeded its qualifying liquid resources in each relevant currency (as identified in 7.1 and available at the point the breach occurred), and by how much. [Refer to the explanatory note at the end of this document for additional details]														
Disclosure															
	<table border="1"> <thead> <tr> <th>Ref</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>1)</td> <td>\$1,189.6m*</td> </tr> <tr> <td>2)</td> <td>0 days* \$0.0m*</td> </tr> <tr> <td>3)</td> <td>Peak \$36.0m</td> </tr> <tr> <td>4)</td> <td>Cover 1: \$1,189.6m* Cover 2: \$1,875.6m*</td> </tr> <tr> <td>5)</td> <td>Cover 1: 0 days* Cover 1: \$0.0m* Cover 2: 0 days* Cover 2: \$0.0m*</td> </tr> </tbody> </table> <p>* Would be covered by available liquidity including the use of the Offsetting Transaction Arrangements (refer 7.1) ASX Clear margins are in Australian Dollars only.</p>			Ref	Result	1)	\$1,189.6m*	2)	0 days* \$0.0m*	3)	Peak \$36.0m	4)	Cover 1: \$1,189.6m* Cover 2: \$1,875.6m*	5)	Cover 1: 0 days* Cover 1: \$0.0m* Cover 2: 0 days* Cover 2: \$0.0m*
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Update Frequency:	Quarterly	Last Updated:	28 September 2018												

Principle 12 – Exchange of Value Settlement System

Requirement											
12.1	Percentage of settlements by value effected using a DvP, DvD or PvP settlement mechanism										
	[Refer to the explanatory note at the end of this document for additional details]										
Disclosure											
	Only Cash Market transactions are settled through a Delivery vs. Payment (DvP) settlement mechanism as Exchange Traded Options are settled via the margining process.										
	Cash Market transactions are novated to the Clear immediately after bid/offer matched on the trading platform, or (for reported trades) transaction is recorded by the market operator ² . Then on the evening of Trade Date +1 (T+1) the novated transactions are netted ³ per security for settlement on T+2.										
	The balance of transactions include the movement of stock between clearing participants and their clients to facilitate the settlement of the DvP transactions.										
	<table border="1"> <thead> <tr> <th>Type</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>DvP</td> <td>100%</td> </tr> <tr> <td>DvD</td> <td>N/A</td> </tr> <tr> <td>PvP</td> <td>N/A</td> </tr> </tbody> </table>	Type	Percentage	DvP	100%	DvD	N/A	PvP	N/A		
Type	Percentage										
DvP	100%										
DvD	N/A										
PvP	N/A										
	Update Frequency:	Quarterly	Last Updated: 28 September 2018								

Requirement											
12.2	Percentage of settlements by volume effected using a DvP, DvD or PvP settlement mechanism										
	[Refer to the explanatory note at the end of this document for additional details]										
Disclosure											
	Only Cash Market transactions are settled through a Delivery vs. Payment (DvP) settlement mechanism as Exchange Traded Options are settled via the margining process.										
	Cash Market transactions are novated to ASX Clear immediately after bid/offer matched on the trading platform, or (for reported trades) transaction is recorded by the market operator. Then on the evening of Trade Date +1 (T+1) the novated transactions are netted per security for settlement on T+2.										
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Type	Percentage										
DvP	100%										
DvD	N/A										
PvP	N/A										
	Update Frequency:	Quarterly	Last Updated: 28 September 2018								

² In either case the transaction must subsequently be submitted to ASX Clear and validated for eligibility, if the transaction is eligible for clearing, the transaction is novated with effect from this point, if it is not, the transaction is rejected.

³ Excluding Broker / Broker transactions that have been novated but isolated from netting due to a corporate action etc.

Principle 13 – Default Rules and Procedures

Requirement					
13.1	<p>CCPs are encouraged, subject to legal constraints on timing and content, to disclose as soon as practicable quantitative information related to defaults, such as:</p> <ul style="list-style-type: none"> • Amount of loss versus amount of initial margin • Amount of other financial resources used to cover losses • Proportion of client positions closed-out/porting <p>Appropriate references to other published material related to the defaults may also be helpful.</p>				
Disclosure					
	<p>There were no ASX Clear Clearing Participant defaults in the reporting period.</p> <p>Refer to the following link for an overview on default management:</p> <p>http://www.asx.com.au/services/clearing/default-management.htm</p>				
	<table border="1"> <tr> <td>Update Frequency:</td> <td>Ad Hoc</td> <td>Last Updated:</td> <td>28 September 2018</td> </tr> </table>	Update Frequency:	Ad Hoc	Last Updated:	28 September 2018
Update Frequency:	Ad Hoc	Last Updated:	28 September 2018		

Principle 14 – Segregation and Portability

Requirement											
14.1	<p>Split, by clearing service, of total client positions held in:</p> <ul style="list-style-type: none"> (a) individually segregated accounts; (b) omnibus client-only accounts, other than LSOC accounts (see below); (c) legally segregated but operationally comingled (LSOC) accounts; (d) comingled house and client accounts; <p>as a share of notional values cleared or of the settlement value of securities transactions.</p> <p>[Refer to the explanatory note at the end of this document for additional details]</p>										
Disclosure											
<p>ASX Clear operates a principal to principal model for Cash Market and Exchange Traded Options.</p> <p>For Exchange Traded Options ASX Clear has an account structure that provides each client with an individual segregated accounts, whereas for Cash Market all positions are registered into the name of the Clearing Participant e.g. there is no look through to their underlying clients.</p> <table border="1"> <thead> <tr> <th>Ref</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>(a)</td> <td>100% (1)</td> </tr> <tr> <td>(b)</td> <td>0</td> </tr> <tr> <td>(c)</td> <td>0</td> </tr> <tr> <td>(d)</td> <td>N/A (2)</td> </tr> </tbody> </table> <p>(1) Relates to Exchange Traded Options only (2) Refer to the comments above regarding Cash Market</p>		Ref	Result	(a)	100% (1)	(b)	0	(c)	0	(d)	N/A (2)
Ref	Result										
(a)	100% (1)										
(b)	0										
(c)	0										
(d)	N/A (2)										
Update Frequency:	Quarterly										
Last Updated:	28 September 2018										

Principle 15 – General Business Risk

Requirement			
15.1	(a) Value of liquid net assets funded by equity (b) Six months of current operating expenses		
[Refer to the explanatory note at the end of this document for additional details]			
Disclosure			
(a) Capital to cover General Business Risk is held at the holdings company level and not the individual clearing house. \$75m is assigned for ASX Clear business risk. (b) \$99.3m*			
*Disclosures are based on amounts for ASX Limited and its subsidiaries (the group), which includes ASX Clear and ASX Clear (Futures), for the financial year ended 30 June 2018.			
	Update Frequency:	Annual	Last Updated: 30 June 2018

Requirement																	
15.2	Financial disclosures: including, but not limited to, <ul style="list-style-type: none"> total revenue, total expenditure, profits, total assets, total liabilities. <p>Explain if collateral posted by clearing participants is held on or off the CCP's balance sheet.</p>																
Disclosure																	
ASX Clear has entered into an arrangement with a related entity for the provision of operational services and assets in exchange for the assignment of clearing fees. Accordingly ASX Clear does not have any meaningful revenues or expenses within the entity itself.																	
The disclosures below are based on amounts for ASX Limited and its subsidiaries (the group), which includes ASX Clear and ASX Clear (Futures), for the financial year ended 30 June 2018.																	
<table> <tr> <td>Total Revenue</td> <td>\$1,012.9m</td> </tr> <tr> <td>Total Expenditure</td> <td>\$370.9m</td> </tr> <tr> <td>Net Profits before Tax</td> <td>\$642.1m</td> </tr> <tr> <td>Net Profits after Tax</td> <td>\$445.1m</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>Total Assets</td> <td>\$12,923.0m</td> </tr> <tr> <td>Total Liabilities</td> <td>\$8,977.5m</td> </tr> </table>				Total Revenue	\$1,012.9m	Total Expenditure	\$370.9m	Net Profits before Tax	\$642.1m	Net Profits after Tax	\$445.1m			Total Assets	\$12,923.0m	Total Liabilities	\$8,977.5m
Total Revenue	\$1,012.9m																
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Net Profits after Tax	\$445.1m																
Total Assets	\$12,923.0m																
Total Liabilities	\$8,977.5m																
Collateral posted by participants to cover ASX Clear margin obligations are held off the balance sheet.																	
	Update Frequency:	Annual	Last Updated: 30 June 2018														

Requirement			
15.3	Income breakdowns: <ul style="list-style-type: none"> (a) percentage of total income that comes from fees related to provision of clearing services; (b) percentage of total income that comes from the reinvestment (or rehypothecation) of assets provided by clearing participants. 		
Disclosure			
(a) % of total income from fees related to provision of clearing services: 20% (1)			

(b) % of total income from the reinvestment of cash margins: 12% (2)			
(1) Clearing fees for derivatives are bundled with trading and settlement fees. A portion of the total fees charged for trading, clearing and settlement has been allocated to clearing activities based on estimates by management.			
(2) The % of total income from reinvestment of cash margins disclosures are based on amounts for ASX Limited and its subsidiaries (the group), which includes ASX Clear and ASX Clear (Futures), for the financial year ended 30 June 2018. Re-hypothecation of collateral is not permitted.			
Update Frequency:	Annual	Last Updated:	30 June 2018

Principle 16 – Custody and Investment Risk

Requirement			
16.1	Total cash (but not securities) received from participants, regardless of the form in which it is held, deposited or invested, split by whether it was received as initial margin or default fund contribution		
Disclosure			
\$501.5m received from ASX Clear Clearing Participants as Initial Margin.			
Note – There are no Clearing Participant contributions in the ASX Clear default fund.			
Update Frequency:	Quarterly	Last Updated:	28 September 2018

Requirement			
16.2	How the total cash received from participants (i.e. the combined total of initial margin and default fund contributions in 16.1) is held/deposited/invested, including:		
	<ul style="list-style-type: none"> • percentage of this total participant cash held as cash deposits (consisting of reverse repos of Australian and State Government bonds only); further split into: <ul style="list-style-type: none"> • percentage held: <ul style="list-style-type: none"> ○ as cash deposits at central banks of issue of the currency deposited; ○ as cash deposits at other central banks; ○ as cash deposits at commercial banks; of which: <ul style="list-style-type: none"> ○ percentage secured (consisting of reverse repos of Australian and State Government bonds only); ○ percentage unsecured; ○ in money market funds; ○ in other forms (please specify). • percentage split by currency of these cash deposits (consisting of reverse repos of Australian and State Government bonds only) and money market funds - local currency, USD, EUR, other 		
	Also:		
	<ul style="list-style-type: none"> • weighted average maturity of these cash deposits (consisting of reverse repos of Australian and State Government bonds only) and money market funds 		
	<ul style="list-style-type: none"> • percentage of this total participant cash invested in securities; further split into: <ul style="list-style-type: none"> • percentage invested in <ul style="list-style-type: none"> ○ sovereign government bonds; of which: <ul style="list-style-type: none"> ○ domestic; ○ other; ○ agency bonds; ○ state/municipal bonds; ○ other instruments (please describe); • percentage split by currency of these securities - local currency, USD, EUR, other. 		
	Also:		
	<ul style="list-style-type: none"> • weighted average maturity of these securities 		

Provide an estimate of the risk on the investment portfolio (excluding central bank and commercial bank deposits) (99% one-day VaR, or equivalent)

State if the CCP investment policy sets a limit on the proportion of the investment portfolio that may be allocated to a single counterparty, and the size of that limit.

State the number of times over the previous quarter in which this limit has been exceeded.

Disclosure

Margins and default funding lodged by participants of ASX Clear and ASX Clear (Futures) and the CCPs own funds are combined into one portfolio and invested into various assets.

As the total cash received from Participants cannot be individually assigned to specific asset classes, a general allocation has been made based on the proportion of the cash received from Participants to the total portfolio and this % has been applied to each asset class.

The below disclosures include excess cash received from participants over and above their initial margin requirement.

Investment	Percentage
Central bank of issue of the currency deposited	0.26%
Secured cash deposits at commercial banks (reverse repos of Government and State bonds only)	43.79%
Unsecured cash deposits at commercial banks	7.35%
% of total participant cash held as cash deposits (incl. reverse repo):	51.39%

Domestic Sovereign Government Bonds	0.00%
Australian State issued securities	48.61%
% of total participant cash invested in securities:	48.61%

Weighted average maturity of these securities (WAM)	81.29 days
Estimated risk on the Investment portfolio (VaR = 2 day holding period calculated at 99% confidence)	\$253.7K

Counterparty	Limit (\$) per Counterparty
Australian Government	Unlimited
State Government	\$1,000m
New Zealand Government	NZD\$250m
New Zealand Deposit-taking Institution	NZD\$100m
Major Australian Deposit-taking Institution	\$75m
Other Australian Deposit-taking Institution (A1+)	\$75m
Other Australian Deposit-taking Institution (A1)	\$75m

Update Frequency:

Quarterly

Last Updated:

28 September 2018

Requirement			
16.3	Rehypothecation of participant assets (i.e. non-cash) by the CCP where allowed, split by initial margin and default fund:		
	<ul style="list-style-type: none"> total value of participant non-cash rehypothecated; maturities (overnight/one day; over one day and up to one week; over one week and up to one month; over one month and up to one year; over one year and up to two years; over two years); 		
	Disclosure		
	The value of participants' non-cash collateral re-hypothecated as at quarter end was nil as re-hypothecation of collateral is not permitted.		
	Update Frequency:	Quarterly	Last Updated: 28 September 2018

Principle 17 – Operational Risk

Requirement															
17.1	Operational availability target for the core system(s) involved in clearing (whether or not outsourced) over specified period for the system (e.g. 99.99% over a twelve-month period)														
	[Refer to the explanatory note at the end of this document for additional details]														
Disclosure															
	ASX Clear has four core systems for the settlement and margining of products.														
	<ul style="list-style-type: none"> • The Clearing house Electronic Sub-Register System (CHESS) for clearing and settlement of Cash Market; • The Derivatives Clearing System (DCS) for the clearing of Exchange Traded Options (ETOs); • RAZOR for the margining of Cash Market products; and • SPAN for the margining of ETOs 														
	<table border="1"> <thead> <tr> <th colspan="2">ASX Clear – Core Systems</th> </tr> <tr> <th>System</th> <th>Availability Target</th> </tr> </thead> <tbody> <tr> <td>CHESS (Clearing)</td> <td>99.80%</td> </tr> <tr> <td>DCS (Clearing)</td> <td>99.80%</td> </tr> <tr> <td>RAZOR (Margining)</td> <td>99.80%</td> </tr> <tr> <td>SPAN (Margining)</td> <td>99.80%</td> </tr> </tbody> </table>			ASX Clear – Core Systems		System	Availability Target	CHESS (Clearing)	99.80%	DCS (Clearing)	99.80%	RAZOR (Margining)	99.80%	SPAN (Margining)	99.80%
ASX Clear – Core Systems															
System	Availability Target														
CHESS (Clearing)	99.80%														
DCS (Clearing)	99.80%														
RAZOR (Margining)	99.80%														
SPAN (Margining)	99.80%														
	Update Frequency:	Quarterly	Last Updated: 28 September 2018												

Requirement															
17.2	Actual availability of the core system(s) over the previous twelve month period.														
Disclosure															
	All ASX Clear core systems have had 100% availability over the last 12 months														
	<table border="1"> <thead> <tr> <th colspan="2">ASX Clear – Core Systems</th> </tr> <tr> <th>System</th> <th>Availability</th> </tr> </thead> <tbody> <tr> <td>CHESS (Clearing)</td> <td>100.00%</td> </tr> <tr> <td>DCS (Clearing)</td> <td>100.00%</td> </tr> <tr> <td>RAZOR (Margining)</td> <td>100.00%</td> </tr> <tr> <td>SPAN (Margining)</td> <td>100.00%</td> </tr> </tbody> </table>			ASX Clear – Core Systems		System	Availability	CHESS (Clearing)	100.00%	DCS (Clearing)	100.00%	RAZOR (Margining)	100.00%	SPAN (Margining)	100.00%
ASX Clear – Core Systems															
System	Availability														
CHESS (Clearing)	100.00%														
DCS (Clearing)	100.00%														
RAZOR (Margining)	100.00%														
SPAN (Margining)	100.00%														
	Update Frequency:	Quarterly	Last Updated: 28 September 2018												

Requirement			
17.3	Total number and duration of failures affecting the core system(s) involved in clearing over the previous twelve month period		
Disclosure			
	There were no failures with the ASX Clear core systems for the last 12 months		

ASX Clear – Core Systems			
System	Number of Failures	Duration (Mins)	
CHESS (Clearing)	0	0	
DCS (Clearing)	0	0	
RAZOR (Margining)	0	0	
SPAN (Margining)	0	0	

Update Frequency:	Quarterly	Last Updated:	28 September 2018
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Requirement															
17.4	Recovery time objective(s) (e.g. within two hours)														
Disclosure															
All ASX Clear core systems are subject to a 2 hour recovery time objective.															
<table border="1"> <thead> <tr> <th colspan="2">ASX Clear – Core Systems</th> </tr> <tr> <th>System</th> <th>Recovery Time Objective</th> </tr> </thead> <tbody> <tr> <td>CHESS (Clearing)</td> <td>2 Hours</td> </tr> <tr> <td>DCS (Clearing)</td> <td>2 Hours</td> </tr> <tr> <td>RAZOR (Margining)</td> <td>2 Hours</td> </tr> <tr> <td>SPAN (Margining)</td> <td>2 Hours</td> </tr> </tbody> </table>				ASX Clear – Core Systems		System	Recovery Time Objective	CHESS (Clearing)	2 Hours	DCS (Clearing)	2 Hours	RAZOR (Margining)	2 Hours	SPAN (Margining)	2 Hours
ASX Clear – Core Systems															
System	Recovery Time Objective														
CHESS (Clearing)	2 Hours														
DCS (Clearing)	2 Hours														
RAZOR (Margining)	2 Hours														
SPAN (Margining)	2 Hours														
Update Frequency:	Quarterly	Last Updated:	28 September 2018												

Principle 18 – Access and Participation requirements

Requirements																																																																			
18.1	<p>Number of clearing members, by clearing service, split by:</p> <ul style="list-style-type: none"> category of membership (e.g. direct clearing member, general clearing member); type of participant (central bank, CCP, bank, other); and domestic or foreign participants. <p>[Refer to the explanatory note at the end of this document for additional details]</p>																																																																		
Disclosure																																																																			
<p>On ASX Clear there are two categories of Clearing Participants, “Direct: and “General”:</p> <p>“Direct Participant” means a Participant which is admitted by ASX Clear to clear a category of Market Transaction for itself, its own Clients and Market Participants that are Wholly-Owned Group Entities and their clients.</p> <p>“General Participant” means a Participant which is admitted by ASX Clear to clear a category of Market Transaction for itself, its own Clients, other Participants and their Clients and Market Participants and their Clients.</p>																																																																			
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Update Frequency:		Quarterly	Last Updated: 28 September 2018																																																																

Requirement			
18.2	<p>For each clearing service with ten or more members, but fewer than 25 members:</p> <ul style="list-style-type: none"> - Percentage of the top five clearing members by the largest open positions, including both house and client, in aggregate <p>For each clearing service with 25 or more members:</p> <ul style="list-style-type: none"> - Percentage of the top five and ten clearing members by the largest open positions, including both house and client, in aggregate <p>[Refer to the explanatory note at the end of this document for additional details]</p>		
Disclosure			
As detailed in 18.1 at the time of the update ASX Clear had 37 Clearing Participants. Percentage of open positions held by the largest five and ten clearing participants were:			
		Largest 5 Clearing Participants	Largest 10 Clearing Participants
Cash Market - Average		40.41%	69.93%
Cash Market - Peak end of day		48.85%	77.68%
ETO – Average		60.28%	80.76%
ETO – Peak end of day		61.95%	81.45%
Update Frequency:	Quarterly	Last Updated:	28 September 2018

Requirement			
18.3	<p>For each clearing service with ten or more members, but fewer than 25 members:</p> <ul style="list-style-type: none"> - Percentage of the largest five clearing members by initial margin, including both house and client, in aggregate <p>For each clearing service with 25 or more members:</p> <ul style="list-style-type: none"> - Percentage of the largest five and ten clearing members by initial margin, including both house and client, in aggregate <p>[Refer to the explanatory note at the end of this document for additional details]</p>		
Disclosure			
As detailed in 18.1 at the time of the update ASX Clear had 37 Clearing Participants. Percentage of initial margin held by the largest five and ten clearing participants were:			
		Largest 5 Clearing Participants	Largest 10 Clearing Participants
Cash Market – Average		38.70%	61.42%
Cash Market - Peak end of day		42.90%	67.28%
ETO – Average		50.10%	76.58%
ETO – Peak end of day		52.37%	78.36%
Update Frequency:	Quarterly	Last Updated:	28 September 2018

Requirement	
18.4	<p>For each segregated default fund with ten or more members, but fewer than 25 members:</p> <ul style="list-style-type: none"> - Percentage of participant contributions to the default fund contributed by largest five clearing members in aggregate <p>For each segregated default fund with 25 or more members:</p> <ul style="list-style-type: none"> - Percentage of participant contributions to the default fund contributed by largest five and ten clearing members in aggregate

	[Refer to the explanatory note at the end of this document for additional details]		
	Disclosure		
	At the time of the update the ASX Clear default fund of \$250m contained no ASX Clear Clearing Participant contributions.		
	Update Frequency:	Quarterly	Last Updated: 28 September 2018

Principle 19 – Tiered Participation arrangements

Requirement									
19.1	<p>Measures of concentration of client clearing:</p> <ol style="list-style-type: none"> 1. Number of clients (if known) 2. Number of direct members that clear for clients 3. Per cent of client transactions by clearing service (by total gross notional for derivatives or total cleared value of securities transactions or similar) attributable to the top five clearing members (if the CCP has ten or more clearing members) and top ten clearing members (if the CCP has 25 or more clearing members) <p>[Refer to the explanatory note at the end of this document for additional details]</p>								
Disclosure									
	<table border="1"> <thead> <tr> <th>Ref</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>44 ASX Market Participants, and 2 CHI-X Trading Participants that clear through a direct member</td> </tr> <tr> <td>2.</td> <td>10 Direct members clear for the above</td> </tr> <tr> <td>3.</td> <td>Top 5 = 31% Top 10 = 37%</td> </tr> </tbody> </table>	Ref	Result	1.	44 ASX Market Participants, and 2 CHI-X Trading Participants that clear through a direct member	2.	10 Direct members clear for the above	3.	Top 5 = 31% Top 10 = 37%
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Update Frequency:	Quarterly	Last Updated:	28 September 2018						

Principle 20 – FMI Links

Interoperability

Requirement			
20.1	Value of trades cleared through each link, by clearing service – as a share of total trade values/total notional values cleared in that service		
	[Refer to the explanatory note at the end of this document for additional details]		
Disclosure			
	ASX Clear has the following FMI Links:		
	<ul style="list-style-type: none"> ASX Settlement Pty Limited; and Austraclear Limited 		
	ASX Clear does not transact through either of these FMI Links.		
	Update Frequency:	Quarterly	Last Updated: 28 September 2018

Requirement			
20.2	Initial margin or equivalent financial resources provided to each linked CCP by the CCP to cover the potential future exposure of the linked CCP on contracts cleared across link		
Disclosure			
	Not Applicable		
	Update Frequency:	Quarterly	Last Updated: 28 September 2018

Requirement			
20.3	Initial margin or equivalent financial resources collected from each linked CCP to cover potential future exposure to the linked CCP on contracts cleared across link (at market value and post-haircut)		
Disclosure			
	Not Applicable		
	Update Frequency:	Quarterly	Last Updated: 28 September 2018

Requirement			
20.4	Results of back-testing of coverage of initial margin or equivalent financial resources on trades cleared through each link. At a minimum this should include:		
	(a) Number of times over the past twelve months that coverage provided by margin and equivalent financial resources held against each linked CCP fell below the actual marked-to-market exposure to that linked CCP – based on daily back testing results*		
	(b) Number of observations (i.e. number of accounts multiplied by number of days covered in the back test)		
	(c) Achieved coverage level i.e. $[(b) - (a)] / (b)$ *specify if measured intraday/continuously or only once a day. If once a day, specify at what time of day.		
Disclosure			
	Not Applicable		
	Update Frequency:	Quarterly	Last Updated: 28 September 2018

Requirement			
20.5	Additional pre-funded financial resources (if any) beyond initial margin and equivalent financial resources provided to each linked CCP, that are available to the linked CCP to cover exposures to the CCP and whether part of, additional to, or separate from the standard default fund (please specify)		
Disclosure			
Not Applicable			
	Update Frequency:	Quarterly	Last Updated: 28 September 2018

Requirement			
20.6	Additional pre-funded financial resources (if any) beyond initial margin and equivalent financial resources collected from each linked CCP, that are available to the CCP to cover exposures to the linked CCP and whether part of, additional to, or separate from the standard default fund (please specify)		
Disclosure			
Not Applicable			
	Update Frequency:	Quarterly	Last Updated: 28 September 2018

Cross Margining

Requirement			
20.7	(a) Value of trades subject to cross margining, by clearing service, as a percentage of total trade values/total notional values cleared (b) Reduction in total initial margin held by the CCP as a result of cross margining, as a percentage of total initial margin that would otherwise have been held.		
Disclosure			
Not Applicable			
	Update Frequency:	Quarterly	Last Updated: 28 September 2018

Principle 23 – Disclosure of Rules, Key Procedures and Market Data

Requirement																											
23.1	Average daily volumes and notional values of new trades cleared, by instrument/asset class, by currency, and split by OTC or exchange-traded																										
	[Refer to the explanatory note at the end of this document for additional details]																										
Disclosure																											
	The metrics below for Exchange Traded Options are based on trades, however for all other instruments the metrics below are based on the novated settlement instructions with a settlement date due in the reporting quarter.																										
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Equity OTC	0.0	0.0																									
	Update Frequency:	Quarterly	Last Updated: 28 September 2018																								

Requirement																	
23.2	Gross notional outstanding/total settlement value of novated but not-yet settled securities transactions per instrument/asset class and currency and split by OTC or exchange-traded																
	[Refer to the explanatory note at the end of this document for additional details]																
Disclosure																	
	The metrics below are the novated transactions with a settlement date after quarter-end (in line with normal settlement timings).																
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Requirement																
23.3	<p>Average daily volumes and notional contract values submitted by each execution facility or matching/confirmation venue</p> <p>[Refer to the explanatory note at the end of this document for additional details]</p>															
Disclosure																
<p>For Cash Market the metrics below are based on the novated settlement instructions with a settlement date between 01-Jul-18 and 30-Sep-18.</p> <p>For Exchange Traded Options the metrics are based on number of trades.</p>																
<table border="1"> <thead> <tr> <th>Execution Facility</th> <th>Cash Market Average Daily Volume (k)</th> <th>Cash Market Average Daily Value (m)</th> <th>Exchange Traded Options Average Daily Volume (k)</th> <th>Exchange Traded Options Average Daily Value (m)</th> </tr> </thead> <tbody> <tr> <td>ASX Trade</td> <td>1,122.0</td> <td>4,126.7</td> <td>328.7</td> <td>56.1</td> </tr> <tr> <td>CHI-X Australia</td> <td>356.0</td> <td>547.3</td> <td>Not Applicable</td> <td>Not Applicable</td> </tr> </tbody> </table>		Execution Facility	Cash Market Average Daily Volume (k)	Cash Market Average Daily Value (m)	Exchange Traded Options Average Daily Volume (k)	Exchange Traded Options Average Daily Value (m)	ASX Trade	1,122.0	4,126.7	328.7	56.1	CHI-X Australia	356.0	547.3	Not Applicable	Not Applicable
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Update Frequency:	Quarterly	Last Updated:	28 September 2018													

Principle by Principle Notes

Below are the principle by principle notes provided as part of the Public Quantitative Disclosure Standards for Central Counterparties

Principle 4: Credit risk

Item 4.1: This item seeks disclosure of default resources that are available to cover a member default should the margin or equivalent (for example sums paid in by participants to cover their options liabilities) paid by participants to cover their own liabilities to the CCP prove insufficient.

4.1(a)(i) should be identical to DFCCP as defined in BCBS 282.4 Where the CCP's own capital forms part of the default waterfall and potentially covers multiple clearing services with separate segregated default funds, the CCP will have to allocate its capital contribution to each of the segregated funds in proportion to the respective product-specific exposure at default in line with BCBS 282.

4.1(a)(ii) should be identical to DFCM as defined in BCBS 282.

Where commitments in section 4.1(b) are unlimited, state that these are unlimited. Commitments that are reserved to replenish the CCP's own capital or equity should not be included here, i.e. 4.1(b)(ii) and 4.1(b)(iii) seek disclosure of commitments to replenish the CCP's default fund, not the CCP's own capital or equity. Rules-based agreements to accept variation margin or other gains-based haircuts should not be disclosed as commitments, but CCPs should disclose details of such arrangements in line with the guidance on recovery planning (see CPMI-IOSCO *Recovery of financial market infrastructures*, October 2014).

Item 4.2: For a definition of KCCP, see BCBS 282. KCCP may be reported more frequently than quarterly if a CCP is required, under relevant law, to report it to supervisors of clearing members more frequently than quarterly.

Item 4.3: Disclosures should be based on the form in which default resources are held, not the form in which they were paid to the CCP. This item requests disclosures 'as at quarter end'. If a CCP does not consider the composition of collateral at quarter end to be representative, it is encouraged to provide explanatory notes outlining why this is the case, and to provide additional metrics such as quarterly averages, or maximums, minimums, and interquartile ranges. CCPs are also encouraged to disclose any limits on the amount of collateral of a particular type that the CCP will accept if this will assist in enabling a clear understanding of risks. For CCPs which do not specifically record whether asset holdings correspond to default fund contributions (whether provided by CCP participants or from the CCP's own funds) or to margin provided by participants, the CCP should provide an explanatory note to this effect, and explain its methodology for describing the form in which default fund contributions are held (for example by assuming the proportion of each asset accounted for by default fund is pro-rata to the proportion of total funding that comes from default fund contributions).

Item 4.4: This item is where the results of a CCP's stress-testing of its financial resources are expected to be disclosed. CCPs should specify in their supporting comments to the matrix whether they are subject to a "Cover 1" or "Cover 2" requirement in relation to their total pre-funded default resources, but should report both results so that both Cover 1 and Cover 2 metrics can be compared with actual default resources. These disclosures create no new regulatory obligation for CCPs subject to a Cover 1 requirement to also satisfy a Cover 2 requirement. The disclosures instead aim to support transparency between the CCP and its participants on how safety and efficiency considerations have been balanced in response to different stress scenarios and the decisions that have been made with regard to default fund coverage. Where a CCP is only required to meet a Cover 1 standard, providing disclosure also on its estimated cover 2 requirement may facilitate additional comparisons across CCPs. Nevertheless, because of certain factors, including the size of the market the CCP serves, the CCP's share of that market, and whether a small number of participants account for a disproportionate amount of the CCP's clearing activity, comparison between cover 1 and cover 2 metrics alone

will still give an incomplete comparison of relative default fund coverage. Accordingly, CCPs should provide a comparison with default resources – as in item 4.3, market share data – in accordance with part 23 of the matrix, and other clarifying remarks, as appropriate, alongside their disclosure related to Cover 1 and Cover 2 metrics to further help the reader understand the default fund coverage.

In order to aid clearing members' modelling of their exposures to the CCP, the CCP should consider disclosing further information on its default fund stress-testing methodology (e.g. underlying model parameters and assumptions) insofar as the CCP, in discussion with its participants and regulators, agrees is appropriate without providing confidential information about individual participant positions.

Principle 5: Collateral

Item 5.1: CCPs are encouraged to explain where concentration limits or charges are also applied in addition to normal haircuts. Recognising that the CCP is requested to disclose changes to haircut values as they are applied, where CCPs already publish information on haircuts elsewhere on their public website, a link to the relevant pages will satisfy the disclosure expectation.

Item 5.3: CCPs should consider adding explanatory notes if this would help to understand reasons why the fall in value of assets exceeded haircuts.

Principle 6: Margin

Separate disclosures should be made for each clearing service in respect of items 6.1, 6.2, and 6.5, and each margin model used in that clearing service in respect of 6.3 and 6.4. Disclosures should be on the basis of the form in which the margin is held by the CCP rather than the form in which it was provided by the participants (if different).

Item 6.1: In this item, CCPs should report initial margin **required** – at least at the level of each clearing service. CPMI and IOSCO acknowledge that practices for calculating initial margin requirements vary across CCPs, and propose that CCPs include all types of margin including 'base-line' initial margin; 'add-ons'; and 'retained MTM/VM' (where relevant). Items included under 'add-ons' should reflect any additions to margin required from base-line initial margin and routine scheduled collections – e.g. margin requested to cover specific risks (including, but not limited to liquidity risk, concentration risk, correlation risk, wrong-way risk) where these risks are not covered in the base-line calculation or margin requested on a 'non-routine' basis (e.g. ad-hoc intraday calls). Where add-ons to baseline initial margin are significant and variable, CCPs are encouraged to provide an explanatory note to this effect. CCPs are also encouraged to provide an explanatory note on the expiration period of products they clear where this would help to facilitate interpretation of the margin data, e.g. because margin is returned on or following particular contract expiration dates.

Item 6.2: Disclosures under this item should reflect the total value of initial margin actually **posted** by direct and indirect members and held by the CCP (as opposed to item 6.1, which asks for the total value of initial margin **required**). This should include initial margin provided through a security interest as well as through title transfer. For CCPs which do not specifically record whether asset holdings correspond to margin or default fund contributions fund (whether provided by CCP participants or from the CCP's own funds), the CCP should provide an explanatory note to this effect, and explain its methodology for describing the form in which margin is held (for example by assuming the proportion of each asset accounted for by margin is pro-rata to the proportion of total funding from margin contributions).

Items 6.1 and 6.2: If a CCP does not consider disclosures at quarter end to be representative, it is encouraged to provide explanatory notes outlining why this is the case, and to provide additional metrics such as quarterly averages, or maximums, minimums, and interquartile ranges.

Items 6.3 and 6.4: CPMI and IOSCO recognise that models and approaches to margining may vary across CCPs. In order to help participants understand how they might be affected by margin calls, and/or where the items listed are not specifically relevant for a CCP, other key assumptions and parameters should be disclosed and the items listed should be used as a guide to the types of disclosures and level of details that is expected regarding initial margin assumptions and parameters.

Item 6.5: At a minimum, CCPs are expected to disclose the achieved margin coverage ratio for each clearing service and margin model and the value of any uncovered exposures.

Item 6.6: This disclosure is seeking information on the potential liquidity impact of changes in marked to-market values. It is not seeking to provide information on changes in the level of initial margin that may be related to changes in the volatility of prices. CCPs are expected to disclose the total of variation margin called from participants each day (including for options CCPs, where variation margin is called but not paid out).

Principle 7: Liquidity Risk

'Relevant currencies' refers to currencies in which the CCP is obliged to make pay-outs. If the CCP considers disclosures for 7.1 and 7.2 "as at quarter end" to be unrepresentative, it is encouraged to provide explanatory notes outlining why this is the case, and to provide additional metrics such as quarterly averages, or maximums, minimums, and interquartile ranges.

Items 7.1 and 7.2: CCPs should refer to paragraphs 3.7.10 and 3.7.11 of the PFMI for a definition of 'qualifying liquid resources' and 'supplementary liquidity risk resources'. CCPs are not asked to disclose the names of providers of liquidity resources or investment counterparties. CCPs should not double count assets: for example, assets should not be listed as qualifying under 7.1(e) to the extent that they are required to offer to liquidity providers under 7.1(c). CCPs should add explanatory notes to describe how the CCP decides which payment obligations to prioritize if a schedule does not exist or if otherwise this would help to understand the CCP's procedures.

Item 7.3: This item requests high-level disclosure of the results of a CCP's stress-testing of its liquid resources, both in aggregate and by currency.

Principle 12: Exchange-of-value settlement systems

Items 12.1 and 12.2: The requested percentages refer only to exchange-of-value settlements to which the CCP is a counterparty, and not, for example, to settlement of variation margin payment obligations, or collection and return of initial margin. Gross and net settlement models may qualify as DvP, Pvp or DvD, providing that the final settlement of one leg of the exchange occurs if and only if the final settlement of the other leg also occurs.

Principle 13: Default rules and procedures

Item 13.1: CCPs should disclose quantitative information related to defaults as soon as is practicable, subject to constraints on disclosure such as ongoing legal cases.

Principle 14: Segregation and portability

Item 14.1: Disclosures under item 14.1 give quantitative data on the degree of segregation of client assets. Although some CCPs may be unable to disclose particular items (e.g. CCPs may not know the number of clients covered by omnibus accounts), CCPs should complete this item with as much information as is available. For clearing services where fewer than five clients have individually segregated accounts, the CCP should not disclose information on individually segregated accounts.

Principle 15: General business risk

A CCP that discloses these items in a publicly available annual report would meet this standard, but should also include the data in the quantitative disclosure report so that it is readily available in a single place. This information may be disclosed at the level of the legal entity for which published accounts are prepared, even if clearing services are only one part of the entity's activities. The CCP should note the legal entity or activity to which the disclosure relates. The disclosure may be made at the same time as the annual accounts are released.

Item 15.1: The PFMI states that a CCP should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. Under this item a CCP should disclose the amount of liquid net assets funded by equity which can absorb general business losses. This should, at a minimum, equal at least six months of current operating expenses in accordance with Principle 15. The CCP should not include in its disclosure for 15.1(a) such amount of its own capital as must be allocated or held for other purposes, such as "skin in the game" in the default waterfall, and is not therefore available to cover business risks.

Principle 16: Custody and investment risks

Items 16.1 to 16.3: These items request disclosures 'as at quarter end'. If a CCP does not consider the composition of its investment portfolio at quarter end to be representative, it is encouraged to provide explanatory notes outlining why this is the case, and to provide additional metrics such as quarterly averages, or maximums, minimums, and interquartile ranges. This disclosure looks at the reinvestment of cash received from participants, and not at how the CCP's own funds are held. If, however, participant cash is co-mingled with the CCP's own funds in the investment portfolio, the CCP should clarify how this is reflected in the data published to satisfy this disclosure, for example by specifying the proportion of the investment portfolio that is funded from the CCP's own funds.

Principle 17: Operational risk

Items 17.1, 17.2, 17.3 and 17.4: Core systems used in clearing are those that enable the acceptance and novation of trades, and enable the calculation of margin and settlement obligations. An incident that results in an interruption to the CCP's ability to perform its own functions in relation to trade acceptance and novation, or calculation of margin and settlement obligations is considered a loss of availability. An incident that compromises the CCP's ability to correctly perform the aforementioned functions is also considered a loss of availability, even if there is no actual outage. Successful failover to a back-up site without interruption to services would not count as a loss of availability. CCPs should make clear to which system or systems performance targets apply.

Principle 18: Access and participation

Item 18.1: It is assumed for the purposes of this disclosure that participants would be the legal entities with which the CCP has a counterparty relationship as a clearing member – CCPs should specify if they are using some other basis to define number of participants. Disclosures in this section would not therefore extend to clients. CCPs should report 'category of membership' as relevant to their business. Where relevant, CCPs should differentiate between clearing members that clear their own trades through a CCP and also offer access to the CCP to their clients (often referred to as 'general clearing members') and clearing members that only clear their own trades (often referred to as 'direct clearing members').

Item 18.2: Percentage of net open positions should be the percentage of gross notional for derivatives or the total cleared value for securities transactions or similar.

Items 18.2 to 18.4: For clearing services with fewer than ten members, this report does not make a disclosure recommendation.

Principle 19: Tiered participation arrangements

Item 19.1: For clearing services with fewer than ten members, this report does not make a disclosure recommendation.

Principle 20: FMI links

Items 20.1 to 20.5: These disclosures refer to arrangements in which trades clear over an interoperable link between CCPs, because clearing members are from different CCPs. CCPs should identify each link and cross-margining arrangement in their supporting comments so that quantitative disclosures can be tied to a specific link.

Items 20.2, 20.3, 20.5, 20.6 and 20.7(b): These items request disclosures 'as at quarter end'. If a CCP does not consider disclosures at quarter end to be representative, it is encouraged to provide explanatory notes outlining why this is the case, and to provide additional metrics such as quarterly averages, or maximums, minimums, and interquartile ranges.

Principle 23: Disclosure of rules, key procedures, and market data

Item 23.1 and 23.2: This item is intended to capture the daily *flow* of clearing activity, while item 23.2 is intended to capture the stock of novated trades that have not yet been settled.

Item 23.3: This information is to be disclosed to facilitate an understanding of which markets might be affected by a CCP being unable to clear. This information should only be provided where the relevant execution facility is content for the CCP to disclose.

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