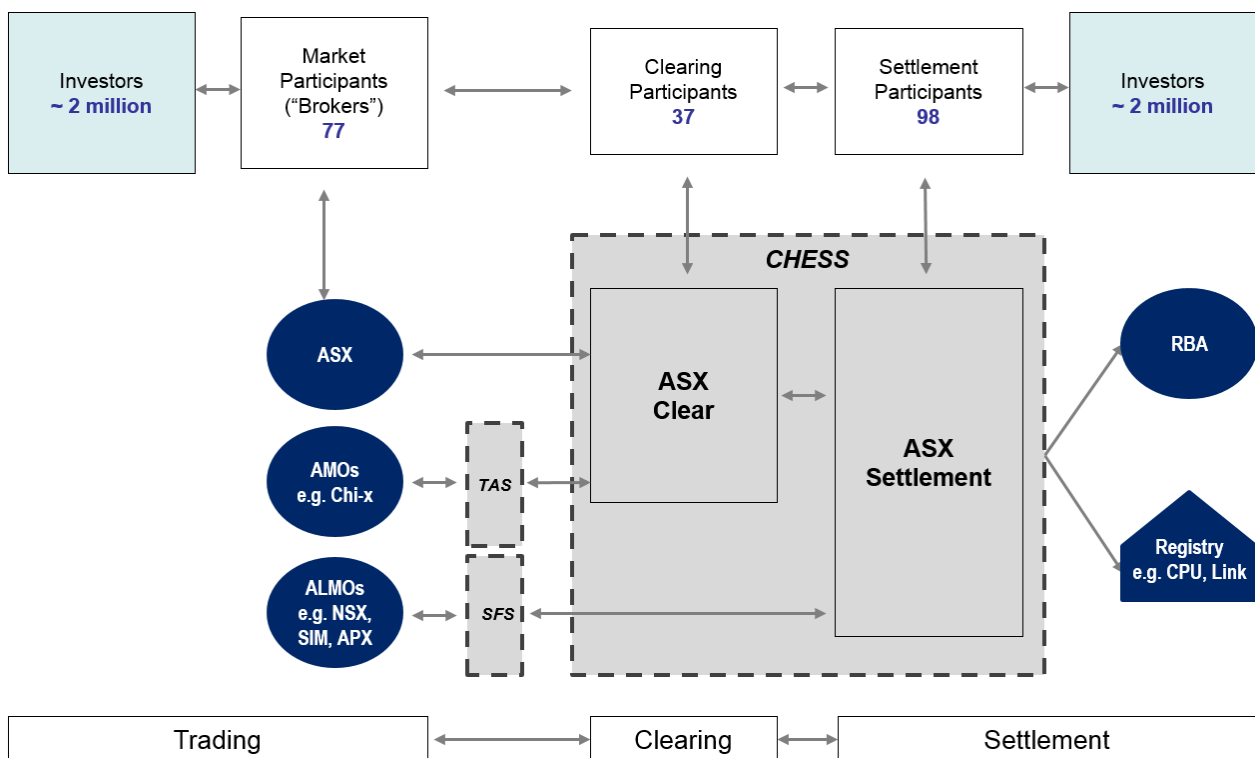


BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 2

Topic	Report on the operational performance of cash market clearing and settlement services
Date of the Meeting	31 August 2016
Purpose of this paper	To report on key performance metrics for ASX's clearing and settlement services.
Action required	To note the agenda paper.

BACKGROUND



The clearing and settlement of equities performs a critical role in the operation of Australia's financial markets, helping to reduce counterparty and systemic risk, and provide transaction efficiency and certainty for end investors.

Core processes that provide these benefits include novation, netting and settlement.

Novation

Through a contractual process known as novation, ASX Clear becomes the seller to every buyer and the buyer to every seller, making it liable for completing all cleared transactions on the relevant market. Novation is deemed to occur at the point of trade and performs two important functions:

- it replaces the clearing participants' credit exposures to other clearing participants by substituting the clearing house as the central counterparty; and
- it enables the netting of settlement obligations.

Through novation, ASX Clear provides protection to non-defaulting clearing participants (and, indirectly, their clients) from the inability of a defaulting clearing participant to meet its obligations.

A key metric for monitoring novation is the percentage of on and off market trading that is novated.

Prior to novation, CORE (for ASX) and the Trade Acceptance Service (for AMOs – other trade execution venues) perform verification functions for trades submitted to ASX Clear. Following verification trades are registered for clearing. If the verification conditions are not satisfied then trades are rejected and not submitted to CHES. Once a trade is registered it is novated. Novation is deemed to have occurred at the point of trade for all trade execution venues.

Netting

ASX Clear is approved as a 'netting market' for the purposes of the Payment Systems and Netting Act. This enables the netting of settlement obligations in each individual equity, providing greater market efficiency at the time of settlement and reducing participant transaction and funding costs.

A key metric for monitoring netting is the percentage by which novated value is netted down for settlement. This metric is termed "netting efficiency".

Settlement

ASX's model for settlement maximises efficiency, while minimising the risk of settlement failure. It does this by simultaneously transferring the legal ownership of shares and facilitating the transfer of money for those shares. This is done through a Model 3 multilateral net batch settlement mechanism with irrevocable settlement finality at the end of the processing cycle. The transfer of money occurs across the Exchange Settlement Accounts of payment providers in the RBA's Information and Transfer System (RITS).

A key metric for monitoring settlement is the percentage of scheduled settlement that successfully settles (i.e. the opposite of the "fail rate"). This metric is termed "settlement efficiency".

Service availability

ASX's critical processes of novation, netting and settlement and are supported in ASX's core system CHES. It is critical for market operations, that CHES remains stable and available for processing. A key metric for monitoring systems availability is the percentage of systems uptime as measured against target availability times. The service availability target for CHES is 99.80%.

For the September 2016 quarter¹, the average monthly system availability was 100% for CHES. The average monthly availability of CHES has been 99.99% between November 2011 and July 2016.

Trade Acceptance Service

ASX Clear's Trade Acceptance Service (TAS) provides a mechanism for Chi-X to submit trades into the clearing house. The CHES system performs the clearing and settlement functions.

The Trade Acceptance Service availability target for TAS is 99.80% (the same as CHES).

For the September 2016 quarter² the average monthly system availability was 100% for the TAS. The average monthly availability of the TAS has been 99.99% between November 2011 and July 2016 (which is the same as CHES).

REPORTING ON CLEARING AND SETTLEMENT SERVICE PERFORMANCE

The key metrics noted above on novation, netting efficiency and settlement efficiency for September 2016 quarter are reported in Attachment A. They are also supported by charts demonstrating a longer reporting period in Attachment B.

¹ Up to 29 Jul 2016

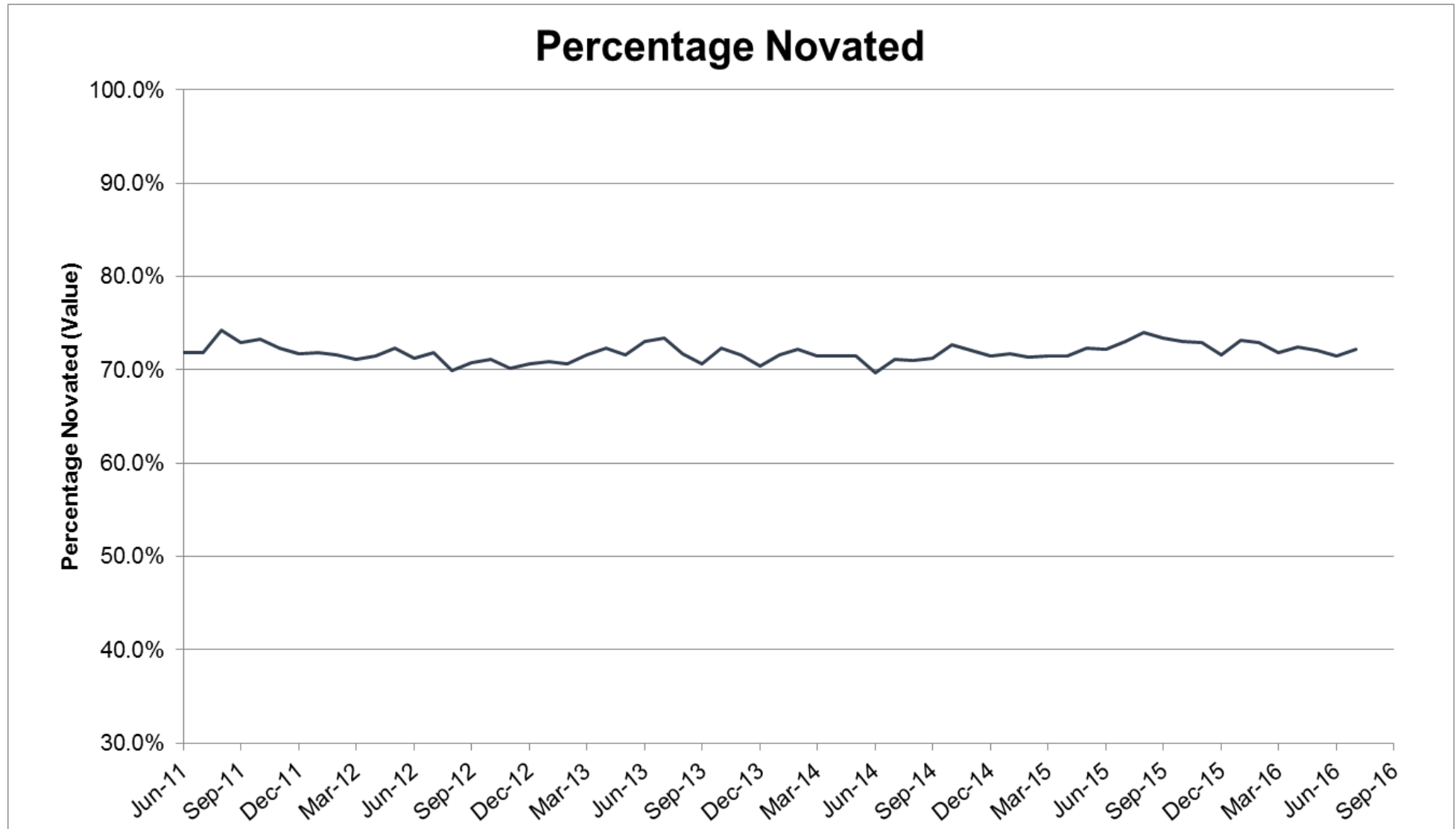
² Up to 29 Jul 2016

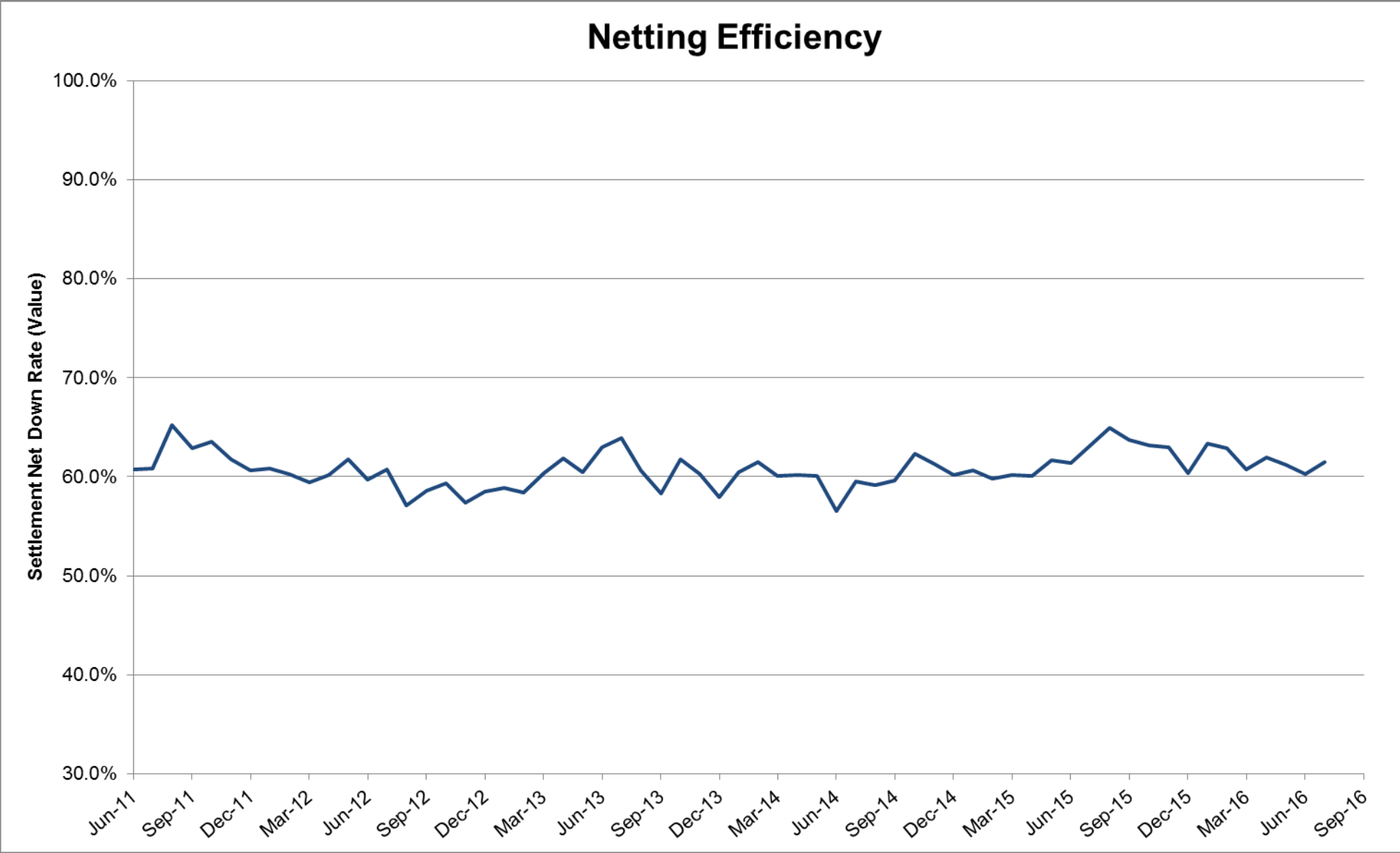
ATTACHMENT A – SUMMARY METRICS RELATING TO THE PERFORMANCE OF ASX'S CLEARING AND SETTLEMENT SERVICES

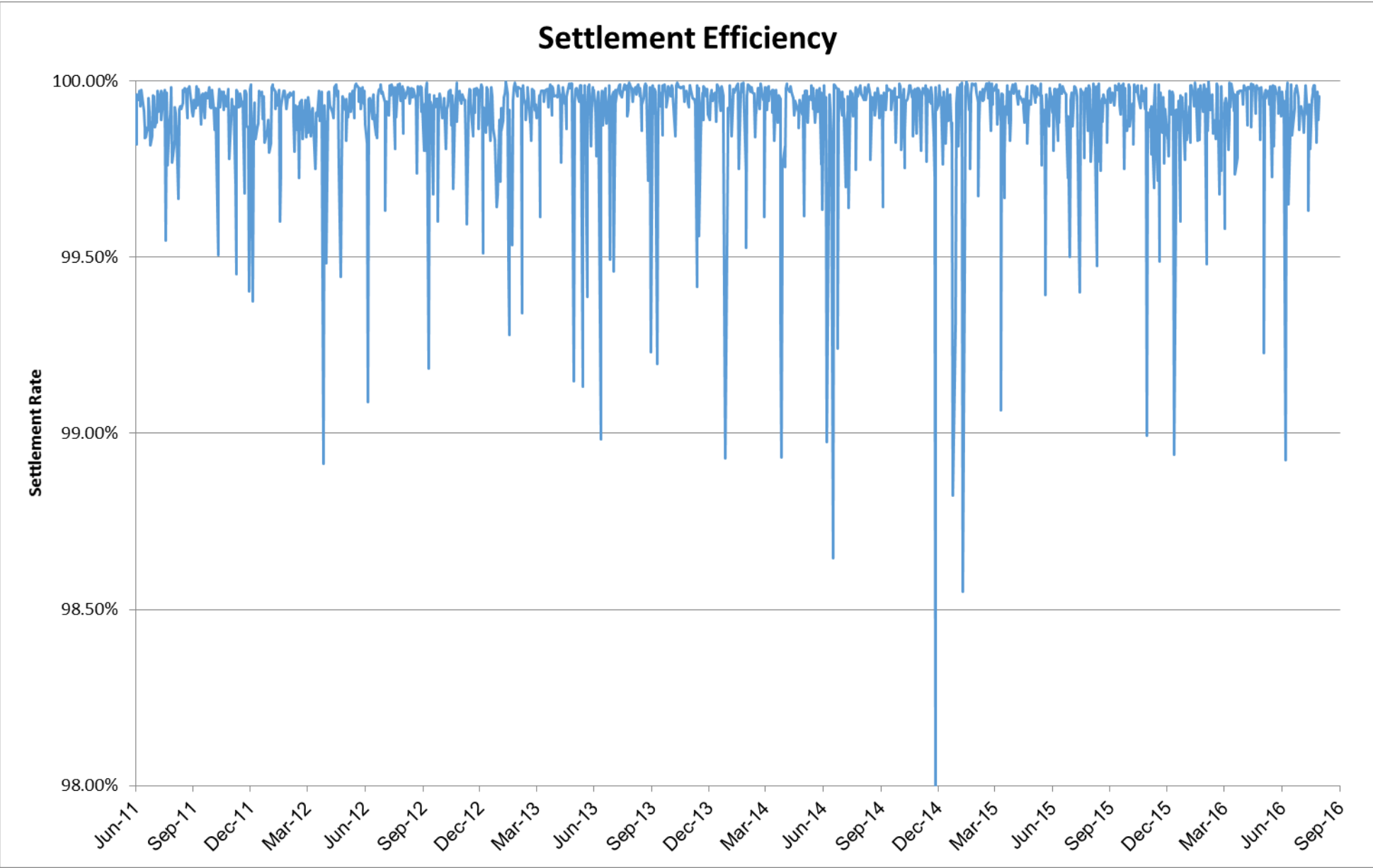
	September 2016 Quarter ³	June 2016 Quarter	March 2016 Quarter
System Availability (CHESS)	100%	100%	99.92%
System Availability (TAS)	100%	100%	100%
Total Trades Accepted (ASX)	20,801,595	64,811,380	62,629,492
Total Trades Rejected (ASX)	0	16	0
Total Trades Accepted (Chi-X)	6,183,989	18,265,912	16,654,594
Total Trades Rejected (Chi-X)	0	1	0
Total Settlements (SSX)	0	5	0
Total Value of Settlements (SSX)	\$0	\$6,744	\$0
Total Settlements (NSX)	80	342	502
Total Value of Settlements (NSX)	\$353,979	\$2,822,402	\$3,783,558
Daily Average Traded Value (On and Off Market)	\$5.8 billion	\$6.3 billion	\$6.3 billion
Daily Average Cleared Value	\$4.2 billion	\$4.5 billion	\$4.6 billion
Percentage Novated	72.2%	72.0%	72.6%
Daily Average Cleared Value Post-Netting	\$1.62 billion	\$1.77 billion	\$1.73 billion
Netting Efficiency	61.5%	61.1%	62.3%
Daily Average Settled Value (Including Non-Novated)	\$8.3 billion	\$9.1 billion	\$9.1 billion
Settlement Efficiency	99.91%	99.91%	99.91%

³ Up to 29 Jul 2016

ATTACHMENT B – PERFORMANCE OF ASX’S CLEARING AND SETTLEMENT SERVICES FROM JUNE 2011 TO JULY 2016







BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 3

Topic	Customer Service Survey Results
Date of the Meeting	31 August 2016
Purpose of this paper	Eloise Wett, EGM Customer Experience will present a summary of the outcomes of the ASX Customer Survey
Action Required	The Business Committee members are invited to provide comments on this item

CUSTOMER SURVEY OVERVIEW

ASX has completed its annual Customer Satisfaction Survey. The survey was conducted to measure our progress on engagement and alignment with customers and to measure our performance on day to day service levels. This survey was conducted by an independent provider.

The survey consisted of two parts. First, a series of interviews were conducted with a range of customers to measure alignment on two of our key priorities, that being the leader in A\$ and NZ\$ interest rate markets and the development of the Investment Supermarket. Second, an online survey to a broader range of customers was conducted to measure the customer experience in interacting with the ASX on a day to day basis.

The survey feedback indicates that sentiment has improved with customers, recognising ASX's efforts, but we still have work to do. Customers have given a clear indication of the key areas where they would like to see improvement, these are consistent with last year with the addition of improving communication.

This paper gives a summary of the outcomes and actions that will be taken as a result of this survey

OVERALL RESULTS AND ACTIONS

Customers acknowledged that ASX has made improvements, including the introduction of the Technical Account Management function, the focus on seeking feedback on new product and service developments and a greater willingness to engage more frequently and openly.

Customers also gave consistent feedback in areas where more work needs to be done. These areas include:

1. A need for deeper one on one engagement and knowledge of customers
2. Continued pressure on reducing direct and indirect operational costs
3. An improvement in processes and consistency of service
4. Increasing the consistency and transparency of communications.

In response to the survey results the following areas of focus have been identified and action plans in progress:

- A more sophisticated and structured approach to managing customers
- Providing standard change management including communication models for key initiatives
- Continuing to improve on consistent service levels including timely and one touch resolution
- Improving customer knowledge and data

NEXT STEPS

ASX management are currently sharing the outcomes of the survey across ASX's customer advisory committees and regular face to face meetings. These conversations will also provide further insight into the results.

Our roadmap will then be refined to ensure the right focus. The feedback we have received through the survey and our existing initiatives give us confidence that we are on the right path. They focus on the core components our customers have identified, ensuring we get the basics right first. While we have a lot of work ahead, we expect a positive outcome from the changes we will make.

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 4

Topic	Management Accounts
Date of the Meeting	31 August 2016
Purpose of this paper	To inform Business Committee members of the cash market clearing and settlement management income statements for the year ended 30 June 2016.
Action required	To note the agenda paper.

On 18 August 2016, ASX published, together with ASX Limited FY16 Financial Results, cash market clearing and settlement management income statements for the year ended 30 June 2016.

Both management income statements have been prepared as special purpose financial statements based on management information provided in accordance with the commitment ASX made in the Code of Practice and ASX's internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia. These management income statements have been audited by PwC, which has provided an Auditor Independence Declaration in accordance with the Corporations Act requirements.

The ASX internal cost allocation and transfer pricing policy is available on the [ASX website](#).

The cash market clearing and settlement management income statements for the year ended 30 June 2016, including supporting accounting policy notes and the independent auditors report, are provided in Attachments A and B.

Attachments

Attachment A – Cash Market Clearing Management Income Statement

Attachment B – Cash Market Settlement Management Income Statement

**CASH MARKET
CLEARING
MANAGEMENT INCOME
STATEMENT
FOR THE YEAR ENDED
30 JUNE 2016**

CONTENTS

	Page Number
Management Income Statement	3
Notes to the Management Statement	4
Directors' Declaration	7
Independent Auditor's Report	8

Management Income Statement – Cash Market Clearing

	FY16 \$ Million	FY15 \$ Million
Revenue		
Cash market clearing	57.0	50.7
Revenue sharing rebate	(3.2)	(3.6)
Participation fees	0.2	0.1
Technical services	0.3	0.3
Operating revenue	54.3	47.5
Expenses		
Staff	7.6	7.1
Equipment	1.6	1.4
Occupancy	1.1	1.1
Administration	1.2	1.1
Operating expenses	11.5	10.7
EBITDA	42.8	36.8
Depreciation and amortisation	1.9	2.1
EBIT	40.9	34.7
Net interest income	3.9	4.6
Profit before tax	44.8	39.3
Tax expense	(13.4)	(11.8)
Profit after tax	31.4	27.5
Capital charge	(21.7)	(21.9)
Economic profit after capital charge	9.7	5.6
EBITDA margin	78.9%	77.4%
Total Capital	238.1	218.1
Return on capital	13.2%	12.6%

Notes to the Management Income Statement

Summary of significant accounting policies

These statements are the management income statements for the ASX cash market clearing activities. They have been prepared following the commitment made in the Code of Practice for Clearing and Settlement of Cash Equities in Australia released by ASX on 18 July 2013.

These management statements were authorised for release by the Board of Directors of ASX Clear Pty Limited on 18 August 2016.

Basis of preparation

These special purpose management statements have been prepared on the basis of the Code of Practice for Clearing and Settlement of Cash Equities in Australia and the associated ASX internal cost allocation and transfer pricing policy between ASX Group entities for clearing and settlement of cash equities in Australia. As these are based on management information they do not comply with Australian Accounting standards.

The accounting policies adopted in the preparation of these statements are outlined below.

Revenue recognition

Consistent with the ASX financial statements, revenue is recognised when it is probable that the economic benefits will flow to these activities and the revenue can be reliably measured. Revenue recognition policies have been consistently applied in each financial year. The specific allocation of revenues is described below.

Cash market clearing represents fees earned for the central counterparty clearing of cash market trades transacted on ASX and other venues. Cash market trades include equities, interest rates, warrants and exchange traded funds. Fees are based on a basis point charge on the value of the transaction. These fees are recognised at settlement date.

Revenue sharing rebate represents the amount of cash market clearing fees rebated to clearing participants. The amount of the rebate represents 50% of the growth in revenue (pre-rebate) from cash market clearing for the current period over the prior comparable period. Rebates are recognised in the period the revenue is earned.

Participant fees represent annual and initial fees paid by clearing participants for membership in ASX Clear Pty Limited. Fees are recognised in the period earned.

Technical services represents fees paid for technology connectivity to the ASX clearing and settlement platform. Fees paid to access the CHES platform have been allocated between cash market clearing and cash market settlement on an equivalent basis.

Notes to the Management Income Statement (continued)

Expense allocations

Operating expenses have been attributed to cash market clearing based on the ASX internal cost allocation and transfer pricing policy between ASX Group entities for clearing and settlement of cash equities in Australia. Costs have been attributed as either direct costs, being those that can be directly attributable to the activities specifically undertaken within cash market clearing, or indirect or common costs. Indirect costs are those costs incurred that are not directly attributable to activities within cash market clearing but are undertaken to indirectly support these activities. Attributions of costs have been performed at the individual cost centre for the different divisions within the ASX group of companies.

The attribution of direct and indirect costs by expense categories are described below. The attribution has been consistently applied in each financial year. The cost allocation and transfer pricing policy is available on the ASX website.

Staff costs

Direct staff costs have been attributed based on an analysis by division within ASX of the amount of time involved in direct cash market clearing activities. In some divisions this has resulted in an attribution based on the number of full-time equivalent staff costed at actual staff cost for different functions. In other divisions the allocation has been based on the percentage of time on average spent by staff performing cash market clearing activities.

Indirect staff costs have been attributed in two ways: For divisions where the indirect or common activities cannot be specifically identified to cash market clearing, their costs have been allocated on the same percentage as total direct staff costs for all other divisions. For divisions where activities can be estimated based on analysis of functions performed, they have received a percentage allocation on that basis. These estimates are based on various activity drivers which differ among the different divisions.

Equipment costs

Direct equipment costs have been allocated on the basis of specific expenditure incurred on technology platforms supporting the cash market clearing activities. Where technology is shared with other activities, such as the cash market clearing and settlement platform, the allocation has been based on an estimate of the functionality related to each activity.

Indirect equipment costs, being those costs that support technology platforms that provide common services to many business activities, have been allocated on the same basis as total direct staff costs, as this is considered the most appropriate driver.

Occupancy costs

Occupancy costs have been allocated on the basis of direct and indirect staff costs attributed to cash market clearing, as the overall staff costs reflect the appropriate allocation of premises.

Notes to the Management Income Statement (continued)

Administration costs

All administration costs have been attributed as indirect costs, as there are no specifically identifiable costs in this category for cash market clearing. Administration costs are common across many business units and include items such as stationery, travel, insurances and marketing. As these costs are common to and support many activities, they have been allocated on the basis of indirect staff costs. This is considered to be the most appropriate driver of the majority of this expenditure.

Net interest income

Interest income reflects the investment earnings on the capital attributed to cash market clearing and the investment earnings from participant collateral lodged under cash market margining less interest paid to participants. Clearing participants receive the benchmark cash rate on balances lodged to support cash market positions. An interest charge has been applied on the difference between the liquidity requirement for cash market clearing and the default risk capital attributed, based on market interest rates for similar facilities. The liquidity requirement has been computed on a 'Cover 2' basis, consistent with the Financial Stability Standards. Interest income is recognised on an accrual basis.

Capital

The capital attribution to cash market clearing includes, default risk capital and operational risk capital supporting the clearing activities, as well as invested capital in the technology infrastructure.

The default risk capital attribution is based on the potential stress loss scenarios applicable to cash market clearing that are adopted in ASX's risk management framework. These allocate stress losses between cash equities and derivatives. Default risk capital is in accordance with the Financial Stability Standards, calculated on a 'Cover 2' default basis.

Operational risk capital represents the amount of capital required for operational risk under the Financial Stability Standards. Capital requirements are based on the ESMA methodology for calculating operational risk capital as ASX Clear has ESMA accreditation. Use of the ESMA methodology from FY16 has resulted in an increase in the operational risk capital requirement from \$15 million to \$35 million.

Invested capital represents the cost of infrastructure supporting the cash market clearing activities. Where technology infrastructure is shared with other activities, the allocation is on the same basis as that adopted in the allocation of equipment costs.

The capital charge in the management income statement reflects ASX's cost of capital applied to the capital attributed to cash market clearing and excludes any capital supporting infrastructure that is currently being depreciated.

The capital attribution methodology has been consistently applied in each financial year.

Tax

Tax expense represents a charge based on the applicable income tax rate.

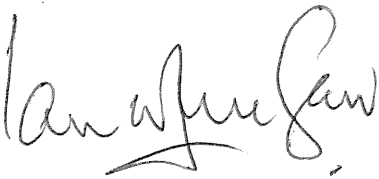
Directors' declaration

In the opinion of the directors of ASX Clear Pty Limited:

The management income statements and notes that are contained in pages 3 to 6 are in accordance with the Code of Practice for Clearing and Settlement of Cash Equities in Australia released by ASX on 18 July 2013, including

- (i) Presenting fairly the management information for the cash market clearing activities of ASX Clear Pty Limited, and
- (ii) Complying with the ASX internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia.

Signed in accordance with a resolution of directors.

A handwritten signature in black ink, appearing to read 'Ian McGaw', with a stylized flourish at the end.

Ian McGaw
Chairman
ASX Clear Pty Limited

Sydney, 18 August 2016



Independent auditor's report to the directors of ASX Clear Pty Limited

We have audited the accompanying Management Income Statement for the cash market clearing activities of ASX Clear Pty Limited (the Company), which comprises the Management Income Statement and a summary of significant accounting policies for the year ended 30 June 2016.

Directors' responsibility for the management statements

The directors of the Company are responsible for the preparation of the Management Income Statement and have determined that the basis of preparation described in the summary of significant accounting policies to the management income statement is appropriate to meet the requirements of the Code of Practice for Clearing and Settlement of Cash Equities in Australia which became operational on 9 August 2013 and complies with the ASX internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia.

The directors' of the company responsibility also includes such internal control as the directors of the company determine is necessary to enable the preparation of the Management Income Statement that is free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on the Management Income Statement based on our audit. We conducted our audit in accordance with Australian Auditing Standards. Those Standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the Management Income Statement is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Management Income Statement. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the Management Income Statement, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of the Management Income Statement in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates, if any, made by directors of the company, as well as evaluating the overall presentation of the Management Income Statement.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



Auditor's opinion

In our opinion, the Management Income Statement presents fairly, in all material respects, the results of the cash market clearing activities of ASX Clear Pty Limited for the year ended 30 June 2016 in accordance with the accounting policies described in the summary of significant accounting policies to the Management Income Statement.

Basis of Accounting and Restriction on Use

Without modifying our opinion, we draw attention to the summary of significant accounting policies to the Management Income Statement, which describe the basis of accounting. The Management Income Statement has been prepared to assist ASX Clear Pty Limited to meet the financial reporting requirements of the Code of Practice for Clearing and Settlement of Cash Equities in Australia which became operational on 9 August 2013 and complies with the ASX internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia. As a result, the Management Income Statement may not be suitable for another purpose. No opinion is expressed as to whether the basis on which the underlying Management Income Statement is prepared is appropriate to the needs of the users.

PricewaterhouseCoopers

PricewaterhouseCoopers

Matthew Lunn

Matthew Lunn
Partner

Sydney
18 August 2016

**CASH MARKET
SETTLEMENT
MANAGEMENT INCOME
STATEMENT
FOR THE YEAR ENDED
30 JUNE 2016**

CONTENTS

	Page Number
Management Income Statement	3
Notes to the Management Statement	4
Directors' Declaration	7
Independent Auditor's Report	8

Management Income Statement – Cash Market Settlement

	FY16 \$ Million	FY15 \$ Million
Revenue		
Cash market settlement	48.0	43.8
Revenue sharing rebate	(2.1)	(1.2)
Settlement access fees	0.1	0.1
Participation fees	0.4	0.4
Settlement fail fees	1.6	1.5
Technical services	0.5	0.5
Operating Revenue	48.5	45.1
Expenses		
Staff	8.3	7.8
Equipment	2.3	2.2
Occupancy	1.2	1.1
Administration	1.6	1.4
Operating expenses	13.4	12.5
EBITDA	35.1	32.6
Depreciation and amortisation	0.2	0.2
EBIT	34.9	32.4
Interest income	2.3	2.7
Profit before tax	37.2	35.1
Tax expense	(11.2)	(10.5)
Profit after tax	26.0	24.6
Capital charge	(13.5)	(14.7)
Economic profit after capital charge	12.5	9.9
EBITDA margin	72.4%	72.4%
Total Capital	142.8	140.9
Return on capital	18.2%	17.5%

Notes to the Management Income Statement

Summary of significant accounting policies

These statements are the management income statements for the ASX cash market settlement activities. They have been prepared following the commitment made in the Code of Practice for Clearing and Settlement of Cash Equities in Australia released by ASX on 18 July 2013.

These management statements were authorised for release by the Board of Directors of ASX Settlement Pty Limited on 18 August 2016.

Basis of preparation

These special purpose management statements have been prepared on the basis of the Code of Practice for Clearing and Settlement of Cash Equities in Australia and the associated ASX internal cost allocation and transfer pricing policy between ASX Group entities for clearing and settlement of cash equities in Australia. As these are based on management information they do not comply with Australian Accounting standards.

The accounting policies adopted in the preparation of these statements are outlined below.

Revenue recognition

Consistent with the ASX financial statements, revenue is recognised when it is probable that the economic benefits will flow to these activities and the revenue can be reliably measured. Revenue recognition policies have been consistently applied in each financial year. The specific allocation of revenues is described below.

Cash market settlement represents fees earned for the settlement of cash market trades transacted on ASX and other venues. Cash market trades include equities, interest rates, warrants and exchange traded funds. Fees are based on a fixed charge on the number of settlement messages. These fees are recognised for at settlement date.

Revenue sharing rebate represents the amount of cash market settlement fees rebated to settlement participants. The amount of the rebate represents 50% of the growth in revenue (pre-rebate) from cash market settlement in the current period over the prior comparable period. Rebates are recognised in the period the revenue is earned.

Participant fees represent annual and initial fees paid by settlement participants for membership in ASX Settlement Pty Limited. Fees are recognised in the period earned.

Technical services represents fees paid for technology connectivity to the ASX clearing and settlement platform. Fees paid to access the CHES platform have been allocated between cash market clearing and cash market settlement on an equivalent basis.

Notes to the Management Income Statement (continued)

Expense allocations

Operating expenses have been attributed to cash market settlement based on the ASX internal cost allocation and transfer pricing policy between ASX Group entities for clearing and settlement of cash equities in Australia. Costs have been attributed as either direct costs, being those that can be directly attributable to the activities specifically undertaken within cash market settlement, or indirect or common costs. Indirect costs are those costs incurred that are not directly attributable to activities within cash market settlement but are undertaken to indirectly support these activities. Attributions of costs have been performed at the individual cost centre for the different divisions within the ASX Group of companies.

The attribution of direct and indirect costs by expense categories are described below. The attribution has been consistently applied in each financial year. The cost allocation and transfer pricing policy is available on the ASX website.

Staff costs

Direct staff costs have been attributed based on an analysis by division within ASX of the amount of time involved in direct cash market settlement activities. In some divisions this has resulted in an attribution based on the number of full-time equivalent staff costed at actual staff cost for different functions. In other divisions the allocation has been based on the percentage of time on average spent by staff performing cash market settlement activities.

Indirect staff costs have been attributed in two ways: For divisions where the indirect or common activities cannot be specifically identified to cash market settlement, their costs have been allocated on the same percentage as total direct staff costs for all other divisions. For divisions where activities can be estimated based on analysis of functions performed they have received a percentage allocation on that basis. These estimates are based on various activity drivers which differ among different divisions.

Equipment costs

Direct equipment costs have been allocated on the basis of specific expenditure incurred on technology platforms supporting the cash market settlement activities. Where technology is shared with other activities, such as the cash market clearing and settlement platform, the allocation has been based on an estimate of the functionality related to each activity.

Indirect equipment costs, being those costs that support technology platforms that provide common services to many business activities have been allocated on the same basis as total direct staff costs, as this is considered the most appropriate driver.

Occupancy costs

Occupancy costs have been allocated on the basis of direct and indirect staff costs attributed to cash market settlement, as the overall staff costs reflect the appropriate allocation of premises.

Notes to the Management Income Statement (continued)

Administration costs

All administration costs have been attributed as indirect costs as there are no specifically identifiable costs in this category for cash market settlement. Administration costs are common across many business units and include items such as stationery, travel, insurances and marketing. As these costs are common to and support many activities, they have been allocated on the basis of indirect staff costs. This is considered to be the most appropriate driver of the majority of this expenditure.

Interest income

Interest income reflects the investment earnings on the capital attributed to cash market settlement. Interest income is recognised on an accrual basis.

Capital

The capital attribution to cash market settlement includes, operational risk capital supporting the settlement activities, as well as invested capital in the technology infrastructure.

Operational risk capital represents the amount of capital required and made available for operational risk as assessed by the Board having regard to global benchmarks.

Invested capital represents the cost of infrastructure supporting the cash market settlement activities. Where technology infrastructure is shared with other activities, the allocation is on the same basis as that adopted in the allocation of equipment costs.

The capital charge in the management income statement reflects ASX's cost of capital applied to the capital attributed to cash market settlement and excludes any capital supporting infrastructure that is currently being depreciated.

The capital attribution methodology has been consistently applied in each financial year.

Tax

Tax expense represents a charge based on the applicable income tax rate.

Directors' declaration

In the opinion of the directors of ASX Settlement Pty Limited:

The management income statements and notes that are contained in pages 3 to 6 are in accordance with the Code of Practice for Clearing and Settlement of Cash Equities in Australia released by ASX on 18 July 2013, including

- (iii) Presenting fairly the management information for the cash market settlement activities of ASX Settlement Pty Limited, and
- (iv) Complying with the ASX internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia.

Signed in accordance with a resolution of directors.

A handwritten signature in black ink, appearing to read 'Ian McGaw', with a stylized flourish at the end.

Ian McGaw
Chairman
ASX Settlement Pty Limited

Sydney, 18 August 2016



Independent auditor's report to the directors of ASX Settlement Pty Limited

We have audited the accompanying Management Income Statement for the cash market settlement activities of ASX Settlement Pty Limited (the Company), which comprises the Management Income Statement and a summary of significant accounting policies for the year ended 30 June 2016.

Directors' responsibility for the management statements

The directors of the Company are responsible for the preparation of the Management Income Statement and have determined that the basis of preparation described in the summary of significant accounting policies to the management income statement is appropriate to meet the requirements of the Code of Practice for Clearing and Settlement of Cash Equities in Australia which became operational on 9 August 2013 and complies with the ASX internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia.

The directors' of the company responsibility also includes such internal control as the directors of the company determine is necessary to enable the preparation of the Management Income Statement that is free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on the Management Income Statement based on our audit. We conducted our audit in accordance with Australian Auditing Standards. Those Standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the Management Income Statement is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Management Income Statement. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the Management Income Statement, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of the Management Income Statement in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates, if any, made by directors of the company, as well as evaluating the overall presentation of the Management Income Statement.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



Auditor's opinion

In our opinion, the Management Income Statement presents fairly, in all material respects, the results of the cash market settlement activities of ASX Settlement Pty Limited for the year ended 30 June 2016 in accordance with the accounting policies described in the summary of significant accounting policies to the Management Income Statement.

Basis of Accounting and Restriction on Use

Without modifying our opinion, we draw attention to the summary of significant accounting policies to the Management Income Statement, which describe the basis of accounting. The Management Income Statement has been prepared to assist ASX Settlement Pty Limited to meet the financial reporting requirements of the Code of Practice for Clearing and Settlement of Cash Equities in Australia which became operational on 9 August 2013 and complies with the ASX internal cost allocation and transfer pricing policy between ASX group entities for clearing and settlement of cash equities in Australia. As a result, the Management Income Statement may not be suitable for another purpose. No opinion is expressed as to whether the basis on which the underlying Management Income Statement is prepared is appropriate to the needs of the users.

PricewaterhouseCoopers

PricewaterhouseCoopers

A handwritten signature in black ink, appearing to read 'M Lunn', written over a horizontal line.

Matthew Lunn
Partner

Sydney
18 August 2016

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 5A

Topic	Roadmap for Post-Trade Service Infrastructure
Date of the Meeting	31 August 2016
Purpose of this paper	To provide the Business Committee with a progress update on ASX's potential use of distributed ledger technology for CHESSE replacement.
Action required	The Business Committee is invited to provide feedback.

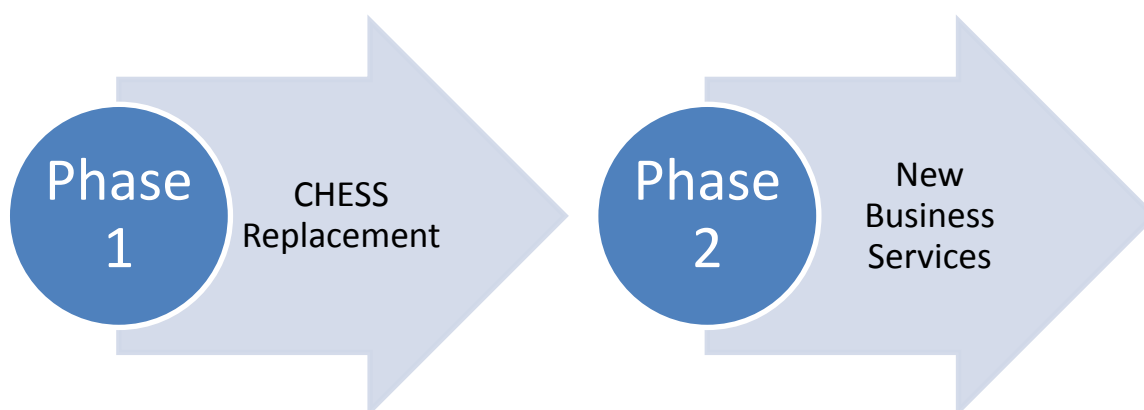
CHESSE REPLACEMENT ROADMAP AND STAKEHOLDER ENGAGEMENT

ASX will work with customers through distinct program phases to implement CHESSE replacement. Initially, ASX's focus is to define the requirements for the initial phase of CHESSE replacement, to investigate potential technical solutions for the replacement, and make a decision on the technical platform in or around the fourth quarter of 2017. Further discussion on the technology is provided below.

ASX has initiated the requirements elicitation phase, is shortly releasing an industry consultation paper and will be running a series of workshops with customers.

ASX will continue to engage with its customers and industry stakeholders throughout the project, with the form of engagement dependent on the program phase. Generally ASX will provide regular updates to the market via quarterly webinar and email updates. It will continue to keep customers informed of key decisions, including the decision on the technical platform, and the roadmap to implementation beyond that decision point.

ASX will focus the initial implementation phase on replacing the existing CHESSE system, with limited introduction of new features so as to minimise disruption to existing participants in the near term. Subsequent phases of implementation will seek to leverage the new technology platform to drive innovation, operational efficiency and a reduction in operational costs for ASX and its customers.



While ASX assesses a replacement system for CHESSE, ASX will continue to invest in and support the CHESSE system to maintain existing high levels of availability, reliability and performance of the system and to ensure continued compliance by ASX with its regulatory obligations.

TECHNOLOGY SOLUTION

As part of the CHESSE Replacement initiative, ASX is evaluating the use of a private permissioned blockchain, or Distributed Ledger Technology (DLT) in which all participants are known and meet regulatory standards. Blockchain is an append-only database of transactions with a shared, replicated ledger and a "consensus mechanism" or distributed database synchronisation log. Each transaction in this ledger references its predecessor and is cryptographically signed by its owner, thus forming a chain of transactions and ownership over time.

Although the technology allows for various implementation choices where the ledger is shared between either trusted or untrusted parties, regulated markets require known, reliable counterparties, rights of reversal and error correction, high levels of privacy and security and the operational benefits of net settlement in a system in which legal entities are responsible for the perfection of title to and legal standing of financial assets.

Cash will remain in the banking system and cash and or securities will not be able to be moved unilaterally. Multiparty authentication and authorisation will remain per today. Equivalent or better security of data at rest and in transit will be sought.

ASX sees benefits in this technology that are not readily available in traditional technologies, and has therefore partnered with Digital Asset Holdings LLC to build a platform that can replicate CHESSE functionality, has new features and can meet all the ASX's non-functional requirements.

ASX expects to make a decision around the fourth quarter of 2017 on the applicability of DLT as the technical solution for CHESSE replacement. ASX will continue to invest in the ongoing maintenance and smooth functioning of the CHESSE system in the transition to its replacement system.

DEPLOYMENT PLAN

The ASX preferred deployment plan, subject to deeper analysis and additional industry consultation, is for the replacement of the CHESSE system to take place with minimal disruption to ASX's customers. This will be achieved with a focus on the underpinning technology replacement, the possible continued availability of CHESSE messaging, and the initial optional introduction of ISO 20022 messaging. Once ASX makes a decision on the technology platform solution it will engage in further industry consultation on the deployment options and plan.

CONSULTATION

A Consultation Paper on CHESSE Replacement is being prepared and we are aiming to distribute this publically by September 2016, inviting review and response in a four to six week time frame.

Consultation will be available on our website and sent out "publically", including directly to key contacts at stakeholder organisations (e.g. Business Committee) and asked to coordinate and respond on behalf of their organisation.

The purpose of the consultation is to:

- Provide information on ASX's plans for CHESSE Replacement
 - Describe and validate the existing post trade processes
 - Describe the key CHESSE functionality to be preserved, any changes
 - Present potential new features for consideration
- Be solution technology agnostic
- Ask direct questions to understand the needs and opinions of our customers
- The responses will provide feedback to validate and enhance our own requirements definition process

ASX will seek market feedback on the requirements outlined in the paper, and in particular answers to a number of questions included. Submissions will be highly encouraged.

BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 5B

Topic	Cyber Resilience
Date of the Meeting	31 August 2016
Purpose of this paper	To provide the Committee with an overview of ASX Cyber Security controls and recent initiatives.
Action Required	None

OVERVIEW

The attached presentation provides the Committee with an overview of the following:

- The key data retained by ASX
- The controls and risk mitigation strategies employed by ASX to protect the data
- Key developments in the security landscape
- Recent regulatory developments
- Potential touchpoints for participant organisations
- Cyber security trends

ATTACHMENTS

Attachment A – Cyber Security Presentation

ASX Cyber Security Update

31 August 2016

Daryn Wedd, GM Technology Security and Governance

Tristan Geering, Chief Information Security Officer



Topics

- What is the ASX protecting?
- What are we protecting it from?
- How do we protect it?
- What are we hearing about?
- Framework and standard alignment
- Potential touchpoints for you
- Trends in cyber security

We are protecting.....

- Participant information
 - Trade positions and holdings
 - Financials
 - Commercial arrangements
 - Margins
 - Deposits
 - Bank accounts
- End customer information
 - Holdings
 - Financials
- ASX information
 - Personnel information
 - Financials
 - Internal parameters – e.g. for margining - ICR, margin scanning ranges
 - Trading, clearing and settlement information / history
 - Commercial / strategic information
 - Compliance and surveillance
 - IPO
- Transaction integrity
 - Trading, clearing and settlement

From

- Unauthorised trading activity / fictitious trade / HFT manipulation
 - Unauthorised transactions
 - Data manipulation
 - Denial of service
 - Phishing
 - Web based malware
 - Sniffing
 - Zero day virus activity
-
- Overall: Market integrity and confidence

By.....

Common Controls

- Services provided over private ASX Net network
- Encrypted communication
- Strong data integrity controls and operational processes
- Robust cyber security framework
- Denial of service (DDOS) protection for internet connectivity
- Strong authentication controls
- Intrusion detection and monitoring
- Applications such as Austraclear that are accessible over the Internet also require 2 factor authentication such as digital certificates

By

Control name	Explanation
Desktop patching	Patching of operating systems and layered applications (e.g. Java, Adobe, etc.). This aligns with best practice in most aspects and is regularly checked by vulnerability scanning.
End point protection	Anti-virus providing intrusion prevention, anomaly detection for network traffic, and some sandboxing capability (i.e. quarantine and review of traffic).
Web filtering	Filtering application provides intrusion prevention by performing activities such as blocking certain websites and restricting the ability for malware to connect externally (i.e. 'phone home') should it get through the other controls.
Application Whitelisting	Prevents user desktops from executing unknown software.
Email filtering controls	Email filtering security is in place for perimeter email filtering including Anti-Virus / Anti-SPAM. Other product provides anti-virus and spam detection capability over emails on internal email servers.
Restricted administrator rights	Desktop users do not have 'Administrator' access to their desktops to prevent the install of malicious or other software. Highly privileged access requires the use of separate 'privileged' accounts for higher level functions.
Automated alerting from SIEM	(SIEM – Security Information and Event Management) receives data from many log files for IT infrastructure and applications and provides alerts for suspicious activity and an analysis capability for investigating potential incidents.
Intrusion Detection	Intrusion detection system that assesses 100% of internet traffic for certain suspicious signatures and patterns in files.
Production environment access	Access to the production environment is restricted, logged and monitored via 'jump boxes' for some applications. Monitoring includes session recording and alerting for simultaneous access to a Production and Test environment.
Removable (USB) media lockdown	Majority of devices have USB port disabled for the transfer of files, exemptions are tracked and reviewed regularly. USB use is reviewed daily to ensure transfers align with ASX policy.

And

Control name	Explanation
Firewalls and Router ACLs	ASX uses firewalls and access control lists (ACLs) on routers to restrict access to ports and internet addresses. We rely on the other vendors for intrusion prevention and detection capability.
Vulnerability scanning	ASX Security performs a internal vulnerability scan using the Nexus application on a regular basis (approx. 6 monthly). The internet perimeter is scanned on a weekly basis and provides reports to the Security and Infrastructure teams.
External penetration test	ASX engages external security specialists to perform an annual penetration test against exposed infrastructure and applications.
Access controls	Every user has a unique userid and password governed by Active Directory domain level policies. The Sailpoint Identity IQ solution is place to track and manage user access centrally.
Encryption	Transport encryption (SSL) used for most web applications. System backups are fully encrypted to prevent loss of data if tapes are lost or stolen. Databases are rarely encrypted as the most likely threat vector is via privilege management breaches (as administrators can generally circumvent encryption also).
Virtual Private Network (VPN)	Provides encryption and authentication for Mobility remote access and partner connections across the internet (e.g. for market data or access to test environments).
Digital certificates	A range of systems (e.g. EXIGIO, TradeAccept) use client side digital certificates to provide 2 factor authentication of clients when accessing ASX web sites. Server certificates are also in place to enable SSL encryption for web sites.
Social engineering testing	Testing the awareness of staff through simulated attacks.

What's getting our attention?

- SPAM / phishing
- Unauthorised transaction risk (e.g. Bangladeshi Central Bank)
- Social engineering
- Increased sophistication to circumvent sandboxing or network monitoring
- Ecosystem weaknesses
- Standard application compromises – MS Office Macros, Adobe, Java
- Data leakage prevention
- False positives on alerts
- Denial of Service (DDOS) tapered off in Australia but

Standards and regulators

- Regulators have not mandated but
 - NIST Cybersecurity framework
 - Australian Signals Directorate's *Strategies to mitigate targeted cyber intrusions (ASD Top 35)*
 - ASIC Report 429 – Cyber resilience: Health check
 - ASIC Report 468 – Cyber resilience assessment report: ASX Group and Chi-X Australia Pty Ltd
 - CPMI / IOSCO – Consultative report – Guidance on Cyber Resilience for Financial Market Infrastructures → latest one for us and closest to a mandated guideline
- Coming: Mandatory data breach notification
- Others (not ASX related)
 - APRA PPG 235 – Managing data risk
 - APRA PPG 234 – Management of security risk

Touchpoints with your organisations

- Ecosystem concept
 - Participants
 - Critical service providers / vendors
 - Professional services providers
 - Business partners
 - Plan market level response for the unlikely event of cyber attack or manipulation of transactions
 - Build response relationships and capability between organisations
 - Improving collaboration between financial services providers in the exchange ecosystem
 - Expand assessments of third party vendors

Touchpoints with your organisations

Australian Government Cyber Security Health Check

- ARC Chairs interviewed by big audit firms
- Benchmark ASX top 100 against common criteria
- Driven by ASX, Federal Government, and ASIC
- Anonymous beyond the interviewing audit firm
- Aims to ensure ARC considers cyber

Some industry trends

- Consolidation of tools to extract greater value from existing data
- Best practices becoming more mature e.g. ASD Top 35, NIST Cyber Framework
- Greater focus on community and information sharing around cyber security
 - Also getting Government sponsorship – centres of excellence, ACSC, CERT information exchanges

Thank you



BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 7A

Topic	Forward Work Program Update
Date of the Meeting	31 August 2016
Purpose of this paper	To update the Business Committee on the forward work program extending to March 2017.
Action Required	The Business Committee is invited to review completed items and provide feedback on the future topics for discussion and the prioritisation.

OVERVIEW

The forward work program included in Attachment A covers the period of meetings of the Business Committee from February 2016 to March 2017. The Business Committee provided input into the forward work program at the 17 February and 15 June 2016 meetings and members have had further opportunity to add topics via e-mail.

The forward work programme has been amended to reflect requests to continue updates on - the developments on COFR review of clearing competition, capital and risk impacts, and infrastructure roadmap developments for Post-Trade services (in particular new technology opportunities and the eventual replacement of CHES). It also now includes an update on recent Customer Survey results.

The program is consistent with previous forward work program in that it has been developed around the following four major themes:

1. Capital efficiency and industry economics;
2. Participant structure flexibility and efficiency;
3. Service Innovation; and
4. Technology and Infrastructure enhancements.

QUESTIONS FOR THE BUSINESS COMMITTEE

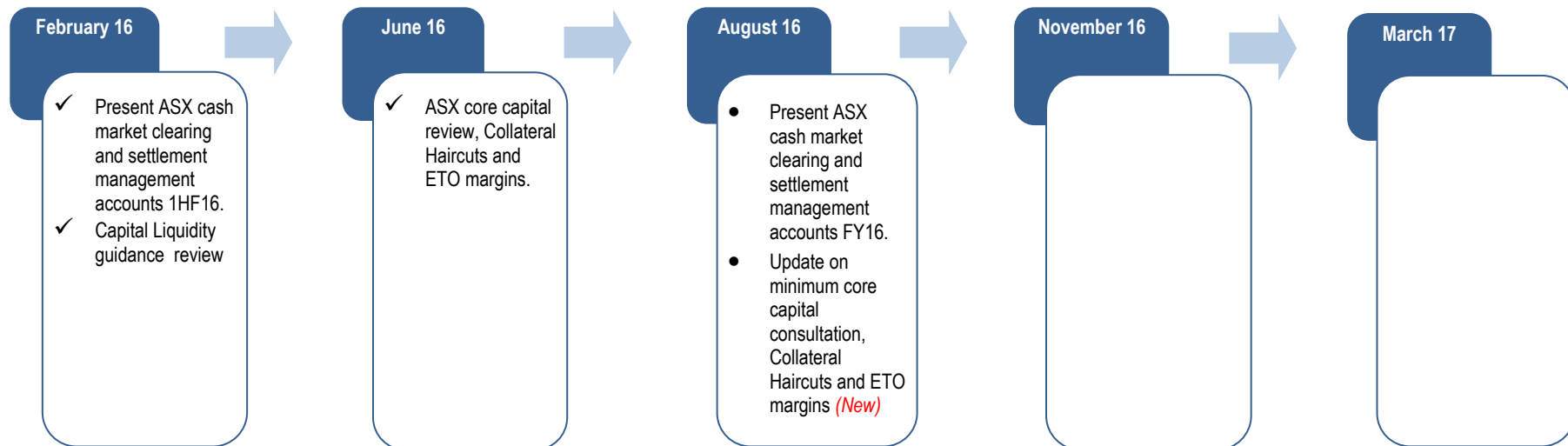
- Does the draft forward work program extending to March 2017 reflect industry priorities?
- Are there additional topics that could be considered for inclusion?

ATTACHMENTS

Attachment A – Forward work program draft – February 2016 to March 2017.

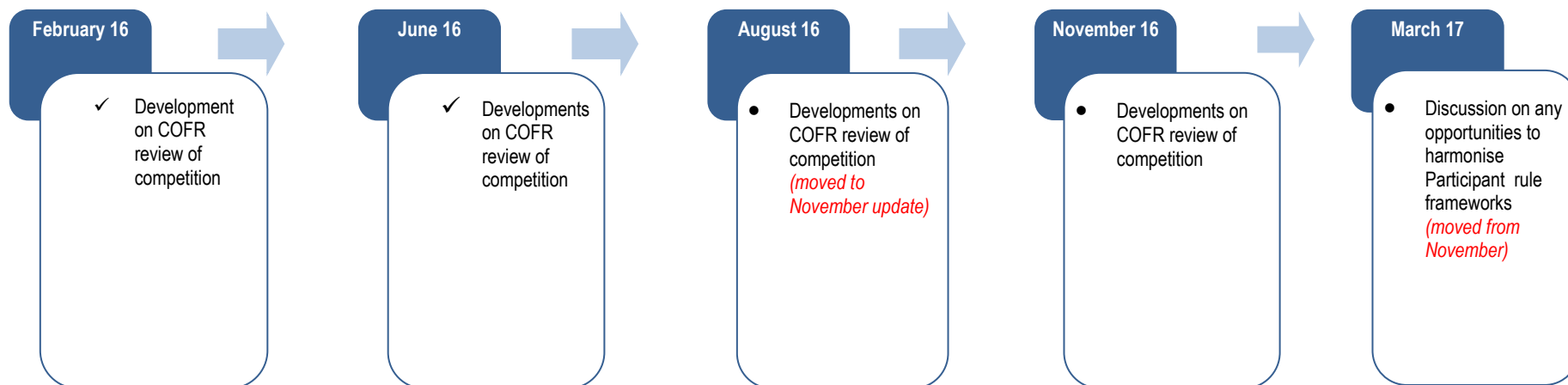
Theme	Objectives	Possible topics for discussion / agenda items	Description of topic
1. Capital Efficiency and industry economics	To minimise the capital costs for ASX's customers whilst maintaining robust CCP capital support	a. ASX cash market clearing and settlement economics	ASX to publish management accounts in respect of the clearing and settlement of cash equities in Australia at the same time that ASX reports its half and full-year results. ASX will provide a detailed briefing at the Business Committee meeting following publication of results.
		b. Minimum core capital requirements, Collateral Haircuts and ETO Initial Margins.	ASX will provide an overview and update on the minimum core capital consultation paper, changes being introduced to collateral haircuts and ETO margin enhancements to cover spread, liquidity and concentration risk.

Timing for Business Committee Consideration of Topics



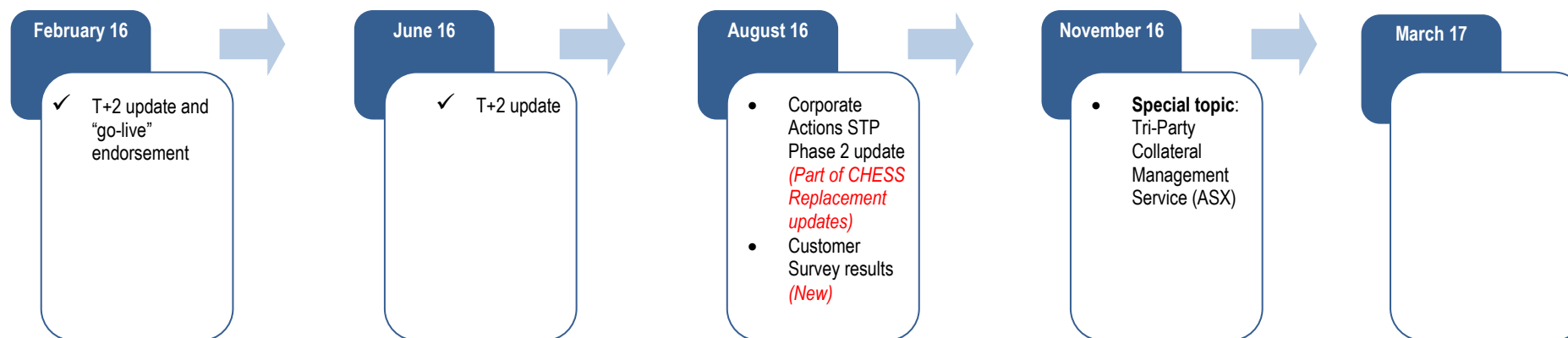
Theme	Objectives	Possible topics for discussion / agenda items	Description of topic
2. Participant Structure, Flexibility & Efficiency	To align ASX's participant access regime with its customers' evolving business models	a. Participant rule framework	ASX will continue to explore opportunities to harmonise and standardise the Operating Rules across markets and facilities as appropriate. ASX will continue to liaise with industry on key focus areas.
		b. Developments on COFR review of Clearing competition	ASX will update the Committee on any developments on the Council of Financial Regulators Review of Competition in Clearing Australian Cash Equities.

Timing for Business Committee Consideration of Topics



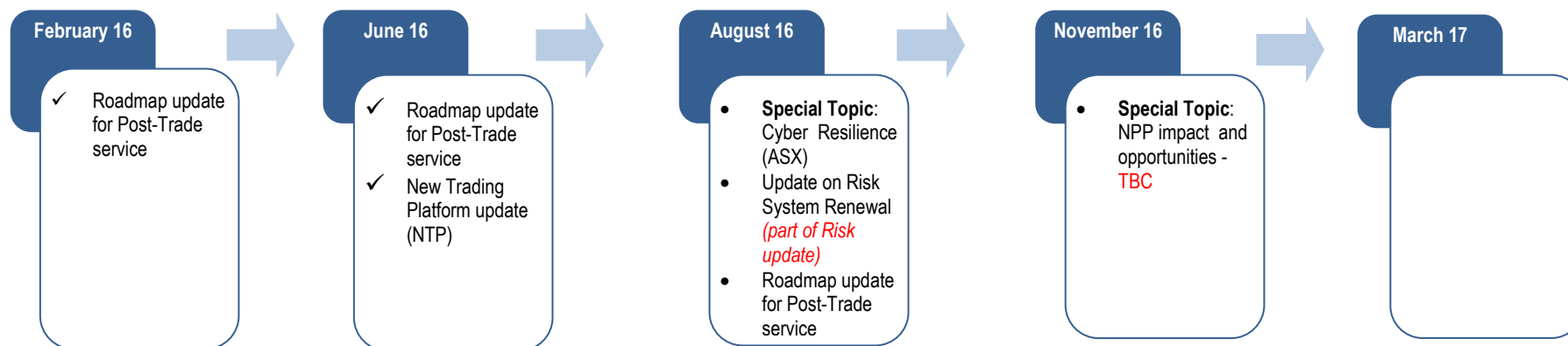
Theme	Objectives	Possible topics for discussion / agenda items	Description of topic
3. Service Innovation	To deliver global best practice cash market clearing and settlement services	a. Updates on the implementation of T+2 settlement cycle	ASX will provide regular updates on the industry’s readiness to meet T+2 settlement by 1Q2016. The Committee will be provided with opportunities to provide feedback and endorsement where required.
		b. Corporate Action straight through processing – Phase 2	The ASX will present plans for future and continued enhancements in streamlined processes for corporate actions in context of CHES replacement plans. Principles which will deliver further streamlined process for the announcement, data capture and delivery (using ISO 20022) of corporate action information.
		c. Customer Service Survey Results <i>(New)</i>	The ASX will provide results from the recent customer service survey and discuss the key areas of focus going forward.

Timing for Business Committee Consideration of Topics



Theme	Objectives	Possible topics for discussion / agenda items	Description of topic
4. Technology & Infrastructure Enhancement	To maintain and upgrade technology and infrastructure consistent with global standards	a. Roadmap for Post-Trade service infrastructure	ASX will provide an update on next steps following the recent announcement of ASX's intention to explore the use of distributed ledger technology (DLT) for CHESSE replacement.
		b. ASX Risk Systems Development	ASX will provide updates as required on the current Risk Systems development program.
		c. New Trading Platform (NTP) update	ASX will provide updates as required on the New Trading Platform replacement program.

Timing for Business Committee Consideration of Topics



BUSINESS COMMITTEE MEETING PAPER AGENDA ITEM 7B

Topic	Minutes from 15 June 2016 meeting
Date of the Meeting	31 August 2016
Purpose of this paper	To provide Business Committee members with a copy of the minutes and Business Committee report to the Forum from the 15 June 2016 meeting.
Action required	To approve the minutes and report to the Forum from the 15 June 2016 meeting.

Draft minutes and the draft report to the Forum from the 15 June 2016 Business Committee meeting were emailed to all members of the Business Committee on 27 June 2016 for comments by 4 July 2016.

There were no changes to the draft minutes or report suggested by Business Committee members.

The Business Committee minutes were signed by the Chair on 5 July 2016.

A copy of the minutes and report to the Forum from the 15 June 2016 meeting are provided in Attachments A and B.

ATTACHMENTS

Attachment A – Minutes from the 15 June 2016 Meeting

Attachment B – Business Committee Report to the Forum from the 15 June 2016 Meeting



MINUTES

BUSINESS COMMITTEE MEETING

Date	Time	Location
Wednesday, 15 June 2016	12.13pm – 1.10pm	ASX Offices – Level 1, 20 Bridge Street, Sydney

Agenda Item	
1.	Lunch is served on arrival
2.	Service Performance a) Operating Performance Report
3.	Business Matters a) Update on T+2 implementation b) Roadmap for post-trade service infrastructure c) NTP progress update
4.	Regulatory Updates a) Cash equities clearing competition decision b) Minimum Core Capital requirement, Collateral Haircuts and ETO Initial Margins
5.	Administration a) Forward work program updated b) Minutes from the 17 February 2016 meeting c) Other matters

NEXT MEETING: Wednesday, 31 August 2016, commencing at 12:00pm.



Members		
Company	Name	Job Title
ABN AMRO Clearing	Adrian Rubin (as delegate for Sean Lawrence)	Chief Commercial Officer ASIA Pacific ABN AMRO Clearing
ASX	Mr Peter Hiom	Business Committee Chair Deputy CEO, ASX
Bank of America Merrill Lynch	Mr Rhys Cahill	Global Markets Chief Operating Officer
Bell Potter Securities	Mr Dean Surkitt	Managing Director Retail
BNP Paribas	Mr David Braga	Head of Security Services
Chi-X Australia	Mr Mike Aikins	Chief Operating Officer
Citi	Mr Miles O'Connor	Director, Direct Custody & Clearing Securities & Funds Services
Commonwealth Bank of Australia	Mr Sheridan Thompson	Head of Strategic Development, CommSec
Deutsche Bank AG	Mr Russell Deal	Chief Operating Officer
Goldman Sachs	Mr Jeremy Follett	Executive Director Operations
HSBC	Mr Peter Snodgrass (as delegate for Andrew Bastow)	Head of Direct Custody & Clearing, HSBC Securities Services
J.P. Morgan	Mr Suneet Jain	Sales Business Manager, Markets & Investor Services
Macquarie Group	Mr James Indge	Cash Equities Business Manager
Morgans	Mr Peter Chisholm	Chief Operating Officer
Morgan Stanley	Mr Craig McGuire	Head of Operations
National Australia Bank	Mr Nathan Walsh	General Manager, Self Directed Wealth Products & Markets
Pershing Securities	Mr Paul LeRoy (as delegate for Rob Forbes)	Chief Operating Officer
Stockbrokers Association of Australia	Mr Andrew Green	Chief Executive Officer



Sydney Stock Exchange Limited	Mr David Lawrence	Chief Operating Officer & Company Secretary
UBS	Mr Conor Foley	Chief Operating Officer

Apologies		
Company	Name	Job Title
ANZ	Mr Peter Mullin	Managing Director, Pensions & Investments
Credit Suisse	Mr Andrew Farran	Chief Operating Officer
NSX	Mr Tom Price	Director
Patersons Securities	Ms Jane Irwin	Chief Operating Officer

ASX Management	
Name	Job Title
Ms Amanda Harkness	Group General Counsel & Company Secretary
Mr Tim Hogben	Group Executive, Operations
Mr Alan Bradwell	Chief Risk Officer
Mr Cliff Richards	General Manager, Equity Post Trade Services
Ms Diane Lewis	Senior Manager, Regulatory and Public Policy
Mr Richard Atkins	Senior Manager, Trade Execution Sales (Item 4(a))
Mr Rodd Kingham	Senior Manager, Equity Post Trade Services
Mr Michael Bradwell	Senior Legal Counsel

AGENDA ITEM 1: LUNCH

The Chair formally opened the meeting at 12.13pm.

AGENDA ITEM 2: SERVICE PERFORMANCE

a. Operating Performance Report

The Group Executive, Operations spoke to the agenda paper, noting that:

- CHES and Trade Acceptance Service system availability for the June 2016 quarter (to 31 May 2016) has been 100%



- In the March quarter (17 March) there was a delay in CHES start of day (6:00am) by 40 minutes due to the knock on impact of an overnight process failure in an upstream system. Customer CHES message queues were processed by 8:00am and there was no indication of an impact to settlement on that day. Fail rates were 0.25%.
- CHES availability for the March 2016 quarter was subsequently 99.92% which is different to the figure that had been reported at the previous meeting because of the timing of that meeting.
- For the June 2016 quarter (to 31 May 2016):
 - Total trades accepted through the clearing and settlement facility were in line with the March quarter for ASX; Chi-X was up about 9%; NSX number of settlements and value was down; there was some activity on SSX
 - Novation remains at 72%, with the balance of trades being crossings
 - Netting still very high, with approximately 2% of traded volume and 38% traded value going to settlement
 - Settlement fail rates remain low at an average of 0.22%
 - No settlement cut-off extensions were requested
 - Cash market margining averaging \$150m-160m a day in total
- There was an increase in business for the mFund service with 161 funds available across 48 fund managers (up from 36 fund managers in the previous quarter)

The Group Executive, Operations reported that 17 written submissions had been received in response to ASX's consultation on a proposal to cease declaring certain public holidays in NSW or Victoria as non-settlement days where trading continues on those days and noted that those submissions strongly supported the proposal. The Group Executive, Operations further reported that those submissions indicated that the system changes to accommodate the cessation would be manageable. It was reported that in accordance with the proposal, from 1 January 2017, Labour Day in Victoria, bank holiday in NSW, Labour Day in NSW and Melbourne Cup Day will now be settlement days.

The Group Executive, Operations reported that CHES Release 9 had been delayed and is now expected to be scheduled around 13 August 2016. The delay had resulted from uncertainty and extended consultation associated with FATCA, late feedback from participants regarding proposed mFund message changes and obtaining regulatory clearance to required rule changes. 6 weeks' notice of the release date will be provided.

AGENDA ITEM 3: BUSINESS MATTERS

a. Update on T+2 implementation

The Senior Manager, Equity Post Trade Services spoke to the agenda paper. The Senior Manager, Equity Post Trade Services expressed thanks to brokers, custodians and industry bodies for their support in the successful implementation of T+2 settlement and noted some of the benefits that had flowed including a reduction in risk, capital savings and operational changes. The Senior Manager, Equity Post Trade Services reported that around \$84m margin had been returned to participants or was not required.

The Senior Manager, Equity Post Trade Services requested that if Committee Members were aware of any issues for the market that had arisen from T+2 to contact him.



A Committee Member noted that ASX should be congratulated for its role in the implementation of T+2, noting that much of the 'heavy lifting' had been done by ASX.

b. Roadmap for post-trade service infrastructure

The General Manager, Equity Post Trade Services provided an indication of some of the work being done on the investigation of the possible use of distributed ledger technology (DLT) as a replacement for the existing CHES system including:

- Examination of the non-functional requirements of the system, which of about 20 categories includes 4 that have been identified as critical requirements, namely:
 - scalability – given the append only nature of DLT, does it get too big too fast
 - throughput capacity – needs to be able to handle volume of transactions
 - privacy – some aspects need to be completely private
 - security
- Identification of the core capabilities that DLT would need to be able to do, including replicate what CHES does today
- Looking at whether DLT would allow the ability to provide potential new services, for example, related to FATCA or anti money laundering.

The General Manager, Equity Post Trade Services reported that no 'show stoppers' had been identified from the work to-date. The General Manager, Equity Post Trade Services further reported that ASX is proposing an engagement framework with members of the Committee and other participants and will be seeking responses from participants and other stakeholders to gain their input and feedback.

The Chair and the General Manager, Equity Post Trade Services responded to questions from Members. The Chair noted that the timing of any decision by ASX to replace CHES is still some way off and that ASX has said that the decision is well into the end of next year before there is a landing on the technology to be used. The Chair noted that the expectation is that it will be beyond the end of next year before ASX has a platform to implement whether distributed ledger based or not. A Member noted that they would like a timeline for their own technology development.

c. NTP progress update

The Senior Manager, Trade Execution Sales provided an update on the new trading platform noting:

- The predicted go-live for derivatives is October/November 2016
- For equities, it is very early in the project, further work is required and go-live won't be before February 2017

The Senior Manager, Trade Execution Sales reported that for equities monthly updates are being issued about the project and that the next update will include a timeline for equities. A Member commented that awareness of the earliest time that go-live may occur is important to them. The Senior Manager, Trade Execution Sales confirmed that the timeline will be included in the next update. **[AGREED ACTION 1]**



AGENDA ITEM 4: REGULATORY UPDATES

a. Cash equities clearing competition decision

The Chair noted the 30 March 2016 announcement by the Government regarding competition in cash equities clearing. The Chair noted that ASX's platforms are being architected to allow for a competitor clearing house if a competitor were to arrive.

The Chair reported that amendments would be made to the Code of Practice as appropriate and necessary. The Chair noted that whether or not the Code of Practice changes substantially, ASX intends to continue with the Business Committee which has proved to be a very valuable source of feedback and a place to talk about issues.

The Chair enquired if Members had any questions or comments and there were none.

b. Minimum Core Capital requirement, Collateral Haircuts and ETO Initial Margins

The Chief Risk Officer spoke to the paper and explained the changes to minimum core capital proposed in the forthcoming consultation paper including the rationale behind the proposed changes to reflect the inherent risk profile of a participant. The Chief Risk Officer noted that although it is expected that the minimum core capital requirement of approximately 26 clearing participants will go up under the proposed changes, most of those participants will have existing capital to meet the new requirements. The Chief Risk Officer reported that ASX has spoken to the handful of participants who would have to increase their capital to meet the proposed requirements. The Chief Risk Officer responded to questions from Members about the proposed changes.

The Chief Risk Officer reported on the proposed collateral haircut setting changes and noted that the proposed tiered changes to replace the current flat rate will result in a lower amount of collateral that is required to be put up. The Chief Risk Officer noted that the proposed changes will go to a Board meeting in August 2016 and are hoped to be implemented in around September 2016. There were no questions on the changes.

The Chief Risk Officer reported in relation to the proposed spread, liquidity and concentration multiplier changes and noted that ASX is intending to take the proposal regarding liquidity and concentration risk multipliers to the risk consultative committees in detail. The Chief Risk Officer noted that ASX had engaged with participants on this and will continue this over the next few months. The Chief Risk Officer reported that he did not expect the changes to be implemented until January 2017 and that there will be further work undertaken by ASX including to make sure that from a customer's perspective there aren't any unforeseen circumstances and that the settings are right. The Chief Risk Officer agreed to provide further update at the next Business Committee meeting. **[AGREED ACTION 2]**

AGENDA ITEM 5: ADMINISTRATION

a. Forward work program updated

The Senior Manager, Equity Post Trade Services spoke to the paper and thanked Members for feedback on the forward work programme and noted that the main focus of the forward work programme is on DLT,



CHESS, infrastructure, competition and capital risk impacts. The Senior Manager, Equity Post Trade Services invited Members to nominate any topics that they wanted added to the forward work programme.

The Chair invited Members to inform the Senior Manager, Equity Post Trade Services if their organisation had any key technology change milestones that ASX needs to be aware of in planning any changes.

b. Minutes from the 17 February 2016 meeting

The minutes and the report to the Forum of the 17 February 2016 meeting were approved.

c. Other matters

There were no other matters.

NEXT MEETING

The next meeting will be held at 12pm on Wednesday, 31 August 2016.

As there was no further business discussed, the meeting closed at 1.10pm.

Signed as a correct record of the meeting.

A handwritten signature in blue ink, appearing to be 'Lee Han', written over a horizontal line.

Chairman

A handwritten date '5/7/16' in blue ink, written over a horizontal line.

Date



BUSINESS COMMITTEE REPORT TO THE FORUM

BUSINESS COMMITTEE MEETING

At its 15 June 2016 meeting, the Business Committee was updated on:

- Market consultation that supported Labour Day in Victoria, bank holiday in NSW, Labour Day in NSW and Melbourne Cup Day will now be settlement days from 1 January 2017.
- Benefits that had flowed from the implementation of a T+2 settlement cycle including a reduction in risk, capital savings and operational changes.
- Work being done on the investigation of the possible use of distributed ledger technology as a replacement for the existing CHES system. No 'show stoppers' had been identified from the work to-date.
- The indicative timing of the new ASX trading platform noting the predicted go-live for derivatives of October/November 2016 and for equities, go-live won't be before February 2017.
- ASX's proposed consultation on changes to minimum core capital requirements.
- ASX's proposed collateral haircut setting changes.
- ASX proposed spread, liquidity and concentration multiplier changes.

KEY RECOMMENDATIONS

There were no recommendations arising from the meeting.

KEY ISSUES DISCUSSED

- ASX's investigation of distributed ledger technology for CHES replacement. Timing around ASX's decision making on whether to proceed.
- ASX's proposed changes to minimum core capital requirements for clearers; collateral haircuts rates and Initial Margin.



AGREED ACTIONS

1. The next monthly update on the new trading platform for equities to include a timeline for implementation.
2. A further update in relation to proposed changes to minimum core capital requirements for clearers; collateral haircuts rates and Initial Margin to be provided at the next Committee meeting.