ASX Derivatives Clearing System

DCS OI/MCM 1.4.5 Technical Description Overview

Version 1.1 – March 2014

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1. Introduction

This document describes the changes to the Member Clearing Module (MCM)/Derivatives Clearing System (DCS) Open Interface (OI) and database schema required to support MCM/DCS v1.4.5.

MCM/DCS OI v1.4.5 is a **mandatory** release. The ASX supplied MCM 1.4.5 will be made available to Clearing Participants at no additional charge.

The changes can be categorised and summarised as follows:

Category	Changes	Impact
SPAN	The SPAN Period Code (PE) tag coding convention will be modified to better support the Over The Counter (OTC) equity service.	Participants that utilise or process the SPAN file or the Margin Prices Expanded file available on ASX Online Derivatix (PRIEX.CSV).
	The use of AUC (Australian cents) in the SPAN file will be decommissioned and replaced with a fully AUD denominated file.	Participants that utilise the AUC denominated SPAN file. Participants that currently use the AUD denominated file should note file name changes.
	Provision of SPAN drill down capability to account and combined commodity level.	All Participants. **Note**: This additional data can be ignored if not required.
	Addition of SPAN requirement column to relevant margin tables. Currently, the SPAN requirement must be inferred as it is not always explicitly stated.	All Participants. **Note**: This additional data can be ignored if not required.
	Participant specific SPAN files containing OTC contracts are currently only available over DCS messaging. These files will now also be available via the ASX's FTP portal.	Participants that use the OTC equity service and require access to their Participant specific SPAN file via an alternate to DCS messaging.
LEPO exercise	Exercise trade reporting and margining for LEPOs will be aligned to the ETO process. That is, prolong margining of LEPO's will be replaced with margining in the cash market.	All Participants.
Cash Equalisation Adjustments for contract size roundings	Calculation of cash adjustments and dissemination of the information to Participants.	All Participants. **Note** – the majority of Participants have already implemented this as it was released in 2012 as an optional upgrade.
Non-Functional Enhancements	Updated minimum environment requirements.	All Participants.
MCM enhancements (applicable to MCM users only)	Miscellaneous enhancements and bug fixes.	Participants that use ASX supplied MCM.

2. SPAN

2.1. SPAN Period Code (PE) Tag Changes

The following change to the PE tag convention will be introduced as part of this release to price better support for the ASX Equity OTC service. This change will only impact Participants that utilise the SPAN Period code tag in their processing.

2.1.1. New Convention

Convention	Details
Current	**yyyymmxx** where: ***yyyy*** = 4 digit year of expiry e.g. 2014 ***mm*** = 2 digit month of expiry e.g. 03 for March ***xx*** = Essentially a random number between 00 and 99 Note that the default PE of 000000 is used for the physicals product family <phyPf> and equity product family <equityPf>.
New	**Yyyymmddx** where: ***yyyy*** = 4 digit year of expiry e.g. 2014. ***mm*** = 2 digit month of expiry e.g. 03 for March. ***dd*** = 00 for standard ETO with monthly expiries but will contain the 2 digit day of expiry for contracts with non-standard expiries (e.g. OTC contract expiring 25/3/2014 would have dd=25). **x** = A digit to differentiate between SPAN series if there are more than one SPAN series in the same product family with the same underlying and expiry date but different contract sizes. This can occur under certain corporate action scenarios such as mergers and also with OTC contracts. If there is only one SPAN series for the same product family, underlying and expiry date then x = 0. If there are more than one series then the first series is *yyyymmdd0*, the second is *yyyymmdd*1, the third is *yyyymmdd*2, and so on. The allocation of x is done dynamically each day so x can change (refer to the examples in the table below). Note that the default PE of 000000 is used for the underlying product.

2.1.1.1. Examples of PE tag convention for selected SPAN series over date D, D+1, D+2

Date	Product Family	Under-lying	Expiry	Contract Multiplier	OTC?	PE Code	Notes
Typical PE code usage where there is a single SPAN series for a particular Product Family, Underlying and Expiry combination.							
D	BHP American	BHP	27/3/2014	100	No	201403000	
D	BHP European	BHP	27/3/2014	100	No	201403000	
D	BHP American	BHP	24/4/2014	100	No	201404000	
D	BHP LEPO	BHP	23/3/2014	100	No	201403000	
D	RIO American	RIO	27/3/2014	100	No	201403000	
D	RIO American	RIO	24/4/2014	100	No	201404000	
D	BHP OTC American	BHP	13/3/2014	100	Yes	201403130	
D	BHP OTC European	BHP	14/3/2014	100	Yes	201403140	
D	ASX American	ASX	27/3/2014	100	No	201403000	

Date	Product Family	Under-lying	Expiry	Contract Multiplier	OTC?	PE Code	Notes
Typical PE code usage where a) RIO merges with BHP, resulting in RIO options being converted to BHP underlying but with a different contract multiplier than original BHP options b) ASX is subject to an adjustment corporate action							
D+1	BHP American	BHP	27/3/2014	100	No	201403000	No change
D+1	BHP European	BHP	27/3/2014	100	No	201403000	No change
D+1	BHP American	BHP	24/4/2014	100	No	201404000	No change
D+1	BHP LEPO	BHP	23/3/2014	100	No	201403000	No change
D+1	BHP American	BHP	27/3/2014	95	No	201403001	This was previously a RIO series but after merger it is now BHP but with a different contractor multiple.
D+1	BHP American	BHP	24/4/2014	95	No	201404001	This was previously a RIO series but after merger it is now BHP but with a different contractor multiple.
D+1	BHP OTC American	BHP	13/3/2014	100	Yes	201403130	No change.
D+1	BHP OTC European	BHP	14/3/2014	100	Yes	201403140	No change.
D+1	ASX American	ASX	27/3/2014	100	No	201403000	The pre-adjustment series remains in DCS for COB of the day of the corporate action.
D+1	ASX American	ASX	27/3/2014	105	No	201403001	ASX adjustment results in new SPAN series due to new contract multiplier. The final digit of the PE Code is set to 1.

Date	Product Family	Under-lying	Expiry	Contract Multiplier	OTC?	PE Code	Notes
Typical PE code usage the day after a merger or adjustment (continuing with above examples.							
D+2	BHP American	BHP	27/3/2014	100	No	201403000	No change
D+2	BHP European	BHP	27/3/2014	100	No	201403000	No change
D+2	BHP American	BHP	24/4/2014	100	No	201404000	No change
D+2	BHP LEPO	BHP	23/3/2014	100	No	201403000	No change
D+2	BHP American	BHP	27/3/2014	95	No	201403001	No change
D+2	BHP American	BHP	24/4/2014	95	No	201404001	No change
D+2	BHP OTC American	BHP	13/3/2014	100	Yes	201403130	No change
D+2	BHP OTC European	BHP	14/3/2014	100	Yes	201403140	No change
D+2	ASX American	ASX	27/3/2014	105	No	201403000	The pre-adjusted series has now been removed leaving only the adjusted series. The final digit in the PE code changes to 0.

2.1.2. Changes to Derivatix Margin Prices Expanded File (PRIEX.CSV)

The Margin Prices Expanded file is currently available on Derivatix and is generally used by Participants or vendors who do not have access to the DCS database. This file contains a field called "SPAN_PE_ind". This field currently contains the value of "xx" from the current PE convention.

This field will now contain the value of "ddx" from the new PE convention. That is, the field will go from a two digit field to a three digit field. The specification of the modified field is below.

SPAN_PE_Ind	
Field Name	SPAN Period Code Indicator
Bytes	3
Format	Numeric
Description	The *ddx* portion of the SPAN Period Code for this contract. Refer to ASX Clear convention for SPAN Period Code usage.
Valid Values	N/A

In addition, to make it easier for non-DCS users of this data to map between an "ASX Code" and a SPAN contract ID <cId> in the SPAN file a new field "SPAN CID" will be added to the end of the record. Note that the SPAN CID is equivalent to the DCS entity ID which is readily available from the DCS database.

SPAN_CID	
Field Name	SPAN Contract ID
Bytes	6
Format	Numeric
Description	The SPAN Contract ID <cId> tag value for this contract. This is also equivalent to the DCS entity ID for this contract in the DCS database.
Valid Values	N/A

A further two indicator fields have also been added after the SPAN_CID to indicate whether a contract is OTC or not, and if is not OTC whether the listing frequency is monthly or weekly.

IsOTC	
Field Name	Is OTC
Bytes	1
Format	Char
Description	A flag that is set as follows: Y if a contract is OTC N if a contract is not OTC
Valid Values	Y or N
ListingFrequency	
Field Name	Listing Frequency
Bytes	1
Format	Char
Description	For non-OTC contracts this field indicates whether the product is listed monthly or weekly.
Valid Values	M – Monthly W – Weekly Empty for OTC

2.1.3. Changes to TradedEntity Table in MCM Database

A new field to store the SPAN Period Code associated with a contract has been added to the TradedEntity table. Refer to *Appendix A – Database Changes* for the new schema.

2.1.4. More Information

For further clarification on PE tag field, refer to CME SPAN documentation at:

http://www.cme-ch.com/span/span4_xml_dtddesc.htm.

An excerpt from the above is provided below:

pe

Period code. It must begin with a four-digit year and continue with a two-digit month. Optionally, it may continue with: - two zeros - W1 through W5 (week one, week two, etc.) - a specific day of the month, or (- some other two-byte code, for example SD for short-dated. A ninth byte may be added to make the period code more specific than the day. A period code of 000000 may also be used to identify the period for physicals and/or options on physicals.

Datatype: string

2.2. Decommissioning of AUC Currency within the SPAN File

ASX Clear (ASXCL) is currently using Australian Cents (AUC) in the SPAN file as the currency for some product families. This was required due to a limitation in CME SPAN at the time of development. This limitation has subsequently been removed.

The SPAN file that contains AUC as a currency is currently distributed via DCS messaging, ASX.COM.AU, ASX Online (Derivatix) and to CME.

An AUD only denominated SPAN file is currently available on ASX Online Derivatix.

Migrating ASXCL and all Participants to an AUD denominated SPAN file for all product families will ensure the SPAN file is more intuitive and reduce the operational risk associated with currency conversion.

The table below summarises the current and new file naming conventions for all SPAN file distribution channels.

After go-live of this release, all SPAN files distributed will **only** contain AUD.

Distribution Channel	Current Naming	New Naming
DCS messaging Access via DCS messaging and can be found in the MCM Folder: e.g. "MCM_Data\FileTransfers" OTC contracts are included.	SPAN parameter file download as: ASXCLEndOfDayRiskParameterFile<YYMMDD>_<PPPP>.zip Expands to: ASXCLEndOfDayRiskParameterFile<YYMMDD>_<PPPP>.spn SPAN position file download as: ASXCLEndOfDayPositionFile<YYMMDD>_<PPPP>.zip Expands to: ASXCLEndOfDayPositionFile<YYMMDD>_<PPPP>.pos	No change to naming convention.
ASX.COM.AU Webpage Access: http://www.asx.com.au/asxcl/span.htm Direct File Access: http://www.asx.com.au/data/ASXCLEndOfDayRiskParameterFile.zip **Note**: This is a public file so OTC contracts are excluded.	Download as: ASXCLEndOfDayRiskParameterFile.zip Expands to: ASXCLEndOfDayRiskParameterFileYYMMDD.spn	No change to naming convention.
ASX Online (Derivatix) Both an AUC and AUD denominated SPAN (.spn) file are available as part of the ReferencePoint Derivatix product. Customers subscribing to this service will be able to access the files at: https://www.asxonline.com/Marketinfo/Login Once logged on to the site, select the folder on the left hand side of the webpage entitled "ReferencePoint Derivatix". **Note**: This is a public file so OTC contracts are excluded.	Download as: SPAN.ZIP Expands to: ASXCLEndOfDayRiskParameterFileYYMMDD.spn for standard SPAN file that contains some product families denominated in AUC. AND ASXCLEndOfDayRiskParameterFileYYMMDD_AUD.spn for standard SPAN file that has been through a conversion utility to convert all product families to be denominated in AUD only.	The SPAN.ZIP will only include a single SPAN file that will be denominated in AUD only. This file will keep the same naming convention that is used by the AUC denominated file today. The existing AUD file that has the "_AUD" suffix will be discontinued.
CME FTP Site	Download as: ASXCLEndOfDayRiskParameterFile<Y	No change to naming convention.

Distribution Channel	Current Naming	New Naming
ftp://ftp.cme.com/span/data/asxcl/	YMMDD>.zip Expands to: ASXCLEndOfDayRiskParameterFile<YYMMDD>.spn	

2.3. SPAN Drill Downs

Additional data elements are provided in the database at account and combined commodity level in the SPANMargComboComm table as follows:

Field	Description
Scanning Risk	Drill down at account and combined commodity level for SPAN scanning risk.
Net Delta	The total delta (SPAN composite delta x number of contracts) for a combined commodity before any inter-commodity/interexchange spreading has been calculated.
Volatility Risk	Provision of Volatility Risk Volatility Risk = (Scanning risk of the active scenario + Scanning risk of the paired Scenario)/2.
Time Risk	Provision of Time Risk Time Risk = (Scanning Risk Scenario 1 + Scanning Risk Scenario 2)/2.
Price Risk	Provision of Price Risk Price Risk = Scanning Risk - Volatility Risk – Time Risk.
WPR	The price risk per delta = Price risk/|Net Delta|.

A new table SPANMargComboCommScenario provides a drill down capability from the above to view the scenario level scanning risk for an account and combined commodity combination.

The summary of database changes made to support SPAN drill downs is a follows

For a full reference of impacted tables, refer to *Appendix A – Database Changes.*

Table	Column(s) Added
SPANMargAcc	Portfolio (added to Primary Key)
SPANMargComboComm	Portfolio (added to Primary Key) NetDelta VolatiltyRisk TimeRisk PriceRisk WPR
SPANMargRepGrp	Portfolio (added to Primary Key)
SPANMargSegType	Portfolio (added to Primary Key)

The following new table have been added:

SPANMargComboCommScenario

Note:
The "Portfolio" field has been added to future proof against any requirement that requires part of a portfolio to be margined differently than another part. For example, if prolonged margining of exercised options was ever introduced then the exercised positions would be margined under a different methodology than the normal positions and they may not be eligible to offset against each other. For now though, the "Portfolio" field will always be set to "M" for normal **m**argin.

Refer to the *MCM Enhancements* section to see screen shots of the implementation of SPAN drill downs in MCM.

2.4. Addition of SPAN Requirement

A new field **SPANReq** has been added to the following files/tables to explicitly state the SPAN requirement in a separate field:

- SPANMargAcc
- SPANMargSegType.

For a full reference of impacted files/tables, refer to *Appendix A – Database Changes.*

2.5. Distribution of Participant Specific SPAN files over SFTP

2.5.1. Overview

In addition to existing SPAN file distribution channels, this release will introduce a Secure File Transfer Protocol (SFTP) alternative for downloading Participant specific SPAN files and Participant specific Derivatix "Margin Prices Expanded" files (i.e. OTC contracts included). These files are currently available only over DCS messaging.

SFTP provides end to end encryption of data between the SFTP client and server.

Authentication to the SFTP server will require creation of SSH keys that will be registered in the SFTP server.

The ASX production solution will have a replicated Business Continuity instance. ASX will have a single presentation of the domain name, meaning ASX Customers will not need to make any changes in an event of an ASX site issue.

It is the responsibility of the ASX Customer to validate access from their primary and secondary sites and ensure the SSH keys are configured correctly and access to ASX SFTP is regularly tested.

2.5.2. Requesting Access

ASX Customer Support provides support for the sFTP service. Customers requiring access to the SFTP environment are required to submit a sFTP Account Request Form. This is located at:

http://spasx/sites/ICT/ICT%20System%20and%20Services%20Documents/ASX%20Secure%20FTP%20-%20Request%20Form%20-%20v0.05.docx

Document:

to:

ASX Customer Service:

Phone: (+612) 131 279

Fax: (+612) 9227 0885

Email the completed form to info@asx.com.au.

Customers will also need to provide ASX Customer Service an SSH Public Key. Full details of the process are available in the SFTP External User Guide.

2.5.3. Connection Details

ASX Customers connecting to ASX SFTP solutions will need to allow the following configurations via their firewalls:

Environment	Domain Name	IP	Port
Test (IWT)	FTPtest.ASX.COM.AU	203.15.147.178	22
Production	FTP.ASX.COM.AU	203.15.145.110	22

2.5.1. Directory and Filename Conventions

The following structure will be assessable for ASX Clear (ASXCL) Derivatives Clearing Participants on the SFTP server:

ASXCL_SPAN_<*DCS PID*>

YYYYMMDD

ASXCLEndOfDayRiskParameterFile<YYMMDD>_<*DCS PID*>.zip

PRIEX_<DCS PID>.csv

The zip file expands to the following file name:

ASXCLEndOfDayRiskParameterFile<*YYMMDD*>_<*DCS PID*>.spn

3. LEPO Exercise Settlement and Margining

The process for settlement and margining of exercised LEPO contracts is changing to better align with other ASXCL derivatives contracts. This is now possible as a result of Cash Market Margining which provides a mechanism for margining post exercise outside of DCS.

The details of the changes are described below. E=Exercise Day. The table below assumes a T+3 settlement regime. Under a T+2 settlement regime replace E+3 with E+2.

LEPO Process	Current	New
Exercise	Reported to ASX Trade for settlement in CHESS on the morning of E+1 with an as-at-date of E. The value of the reported trade is equal to the LEPO strike price X Number of contracts exercised x contract size. Typically a LEPO strike is 1c.	Reported to ASX Trade for settlement in CHESS on the morning of E+1 with an as-at-date of E. The value of the reported trade is equal to the underlying's reference price on E X Number of contracts exercised x contract size.
Margining post exercise	The LEPO exercise is margined in DCS until settlement has occurred in CHESS. The cash trade reported to CHESS on E+1 is excluded from Cash Market Margining.	The LEPO exercise is no longer margined in DCS. The cash trade reported to CHESS on E+1 is margined under Cash Market Margining effective COB E. The details of these settlements will be included on E in the CMM Exercise Deals file available as part of standard CMM reporting on ASX Online.
Settlement	Settlement is split between CHESS and DCS. The strike is settled E+3 in CHESS. The balance, which is the reference price of the underlying on E minus the strike, is settled in DCS on E+3.	Settlement occurs exclusively in CHESS on E+3.
MCM Database	DelDays field in DerivProd table has value of 2 for all LEPOs. DelCurrQty and DelBfwdQty fields in OpenPos table for LEPOs contain the units pending settlement after exercise. ProcCode field in the TradedEntity table can contain values of 'U' (under delivery) and 'D' (delivered) for LEPOs.	DelDays field in DerivProd table has value of 0 for all LEPO's. DelCurrQty and DelBfwdQty fields in OpenPos table for LEPOs will be zero. ProcCode field in the TradedEntity table will no longer contain values of 'U' (under delivery) and 'D' (delivered) for LEPOs.

4. Cash Equalisation Adjustments for Contract Size Roundings

This majority of this feature has already been released as an optional upgrade effective 26 August 2013. It is now mandatory. The details of the release are included in ASX Clearing Corporation notice CLM05013 (imbedded below). The majority of Participants have installed this upgrade already and there are no changes to the way this currently works as part of this new release.

The feature provides the details of cash adjustments and an account level breakdown for Participant reconciliation.

This change consists of two new tables - **CAParam** and **CADerivProdAcc**. Refer to *Appendix A – Database Changes* for the table schemas.

Note:
As part of the 1.4.5 release, the **VMDerivProdAcc** table will now contain all contract postings including variation margin, premium margin and cash adjustment details by account and derivative product for the previous business day. Currently, it only includes variation margin.

For a full reference of impacted files/tables, refer to *Appendix A – Database Changes*.

5. Non-Functional Enhancements

5.1. Updated Minimum Environment Requirements

This table outlines the minimum operating system and database requirements for this release. Approval from DCS Support is required for any other configurations.

Product	Minimum	Notes
Database	SQL Server 2008	This release will also be tested on SQL Server 2012. SQL Server 2014 is yet to be tested and is not currently supported.
Server Operating System	Windows 2008 Server	This release will also be tested on Windows Server 2012.
Workstation (MCM) Operating System	Windows 7	This release of MCM client will also be tested on Windows 8.

For more information on VB6 run-time support, refer to the link below.

http://msdn.microsoft.com/en-us/vstudio/ms788708.aspx.

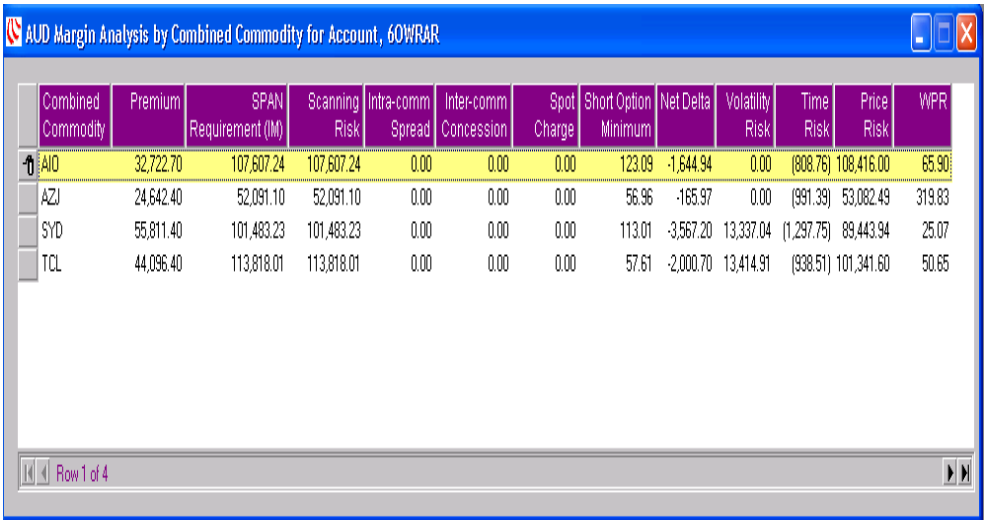
6. MCM Enhancements

This section is applicable to users of ASX supplied MCM product only.

Note:
Some vendors utilise some MCM components and will need to review this section for impact.

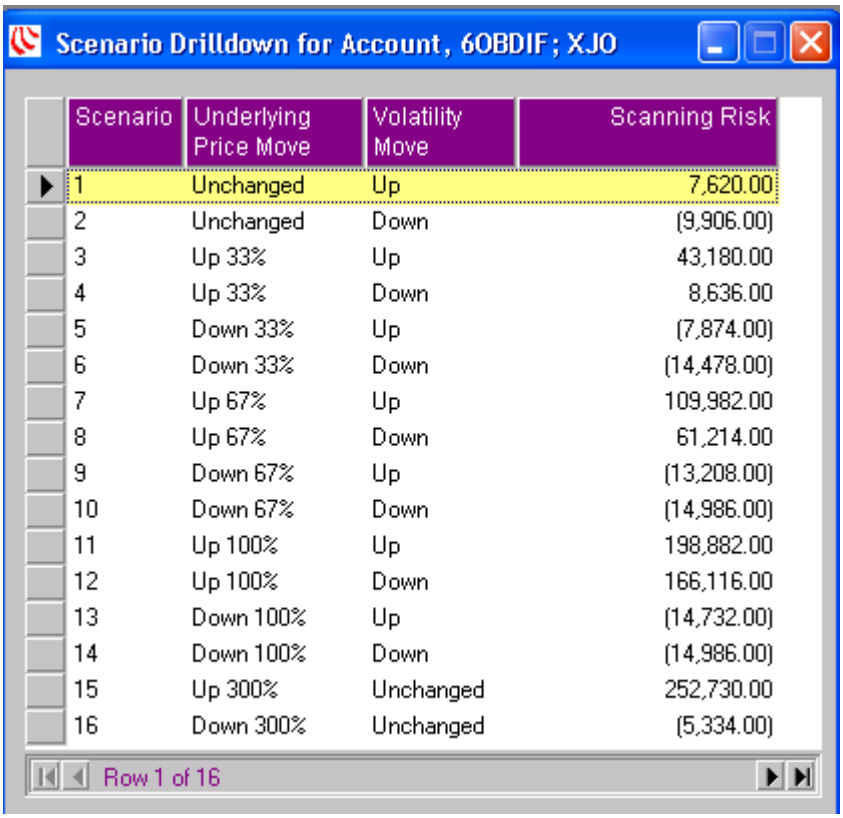
6.1. MCM GUI Enhancements for SPAN Drill Downs

To support SPAN drill downs, the existing **Margin Analysis by Combined Commodity** form has been enhanced to show the additional fields as seen in the screen shot below.



Combined Commodity	Premium	SPAN Requirement (IM)	Scanning Risk	Intra-comm Spread	Inter-comm Concession	Spot Charge	Short Option Minimum	Net Delta	Volatility Risk	Time Risk	Price Risk	WPR
AIO	32,722.70	107,607.24	107,607.24	0.00	0.00	0.00	123.09	-1,644.94	0.00	(808.76)	108,416.00	65.90
AZJ	24,642.40	52,091.10	52,091.10	0.00	0.00	0.00	56.96	-165.97	0.00	(991.39)	53,082.49	319.83
SYD	55,811.40	101,483.23	101,483.23	0.00	0.00	0.00	113.01	-3,567.20	13,337.04	(1,297.75)	89,443.94	25.07
TCL	44,096.40	113,818.01	113,818.01	0.00	0.00	0.00	57.61	-2,000.70	13,414.91	(938.51)	101,341.60	50.65

In addition, it is now possible to drill down further from the above screen to receive scenario level SPAN Scanning Risk, as seen in the screen below.



Scenario	Underlying Price Move	Volatility Move	Scanning Risk
1	Unchanged	Up	7,620.00
2	Unchanged	Down	(9,906.00)
3	Up 33%	Up	43,180.00
4	Up 33%	Down	8,636.00
5	Down 33%	Up	(7,874.00)
6	Down 33%	Down	(14,478.00)
7	Up 67%	Up	109,982.00
8	Up 67%	Down	61,214.00
9	Down 67%	Up	(13,208.00)
10	Down 67%	Down	(14,986.00)
11	Up 100%	Up	198,882.00
12	Up 100%	Down	166,116.00
13	Down 100%	Up	(14,732.00)
14	Down 100%	Down	(14,986.00)
15	Up 300%	Unchanged	252,730.00
16	Down 300%	Unchanged	(5,334.00)

6.2. Settlement Price Listing

As part of the SPAN release of MCM, the screen that allowed users to view theoretical prices was removed. This is because that screen displayed TIMS scenario prices which are no longer relevant under SPAN. However, the screen displayed the "at-the-market" price which is the settlement price of the contract.

As part of this release, the ability to view the settlement price of a contract will be reintroduced.

6.3. Acceptable Collateral View

A new screen will be developed to show currently accepted stock collateral.

To facilitate this, a new file/table has been created called **AcceptableCollateral**.

Note:
For a full reference of impacted files/tables please refer to *Appendix A – Database Changes.*

6.4. Notification of Processed RHCCA Forms

A new screen will be developed to show Registered Holder form authorisations. This will update on an end of day basis.

To facilitate this, a new file/table has been created called **RegHoldingAuth**.

For a full reference of impacted files/tables, refer to *Appendix A – Database Changes.*

6.5. Extend VM Posting View

The VM posting view will be extended to include other postings such as premium and cash adjustments.

6.6. Changes to SOD Processing

The method used to copy MCM databases during SOD processing has been changed to remove the use of SQL backup and restore commands. This will allow for the reduction of the PalionAutoUser privilege requirements.

The new method does not require exclusive database access. This will resolve the problem where SOD stalls due to a process having a read only connection still established to the database.

6.7. Review of Security

A review of MCM security will be carried out with the goal of:

- Removing sensitive information from log files.
- Investigating and if feasible implementing Windows Authentication instead of as an alternative to SQL Authentication.
- Enforcement of password complexity of user created accounts. **Note**: that this may not be required if Windows Authentication is supported.

6.8. Support for SQL Server 2012

The MCMDBSetup utility will be enhanced to support creation of SQL 2012 MCM databases.

Note:
No changes will be made to the application to take advantage of any features new to SQL Server 2012.

6.9. Bug Fixes

Miscellaneous bug fixes will be fixed with details being provided as part of the MCM 1.4.5 release notes.

7. Appendix A – Database Changes

This appendix contains files/database tables that have been created or modified as part of this release. Changes are highlighted in grey.

The PA_MCMC database contains tables that include indexes and columns. This section lists all of the PA_MCMC tables and the accompanying indexes and columns.

In this section, the following icon is used to highlight the name of the table. 

The tables have been listed in alphabetical order. The table indexes and table columns are listed below the name of the table.

AcceptableCollateral – The AcceptableCollateral table contains details of all collateral that is acceptable cover.

Index Name	Property		Number of Fields
PrimaryKey	Unique: Fields:	True CollCode,Ascending	1

Column Name	Description	Type
CollCode	The code that uniquely identifies this collateral. E.g stock code.	varchar(12)
CollType	The type of collateral S - Stock	char(2)
Haircut	The percentage haircut applicable to this collateral	Numeric(18,7)
SpecificCoverOnly	Is this stock acceptable for specific cover only Y(es)/N(o)	char(1)

CADerivProdAcc – The CADerivProdAcc table contains account level cash adjustments.

Index Name	Property		Number of Fields
PrimaryKey	Unique: Fields:	True AccId Ascending, DerivProd, Ascending , Cur Ascending	3

Column Name	Description	Type
AccId	Uniquely identifies each account	integer(4)
DerivProd	Unique code which identifies the derivative product	varchar(6)

Column Name	Description	Type
Cur	The currency of the adjustment amount	varchar(3)
SegType	Code that identifies the segregation type of the account	char(1)
Amt	The cash adjustment amount	money(8)

CAParam – The CAParam table contains details of corporate actions that may be subject to cash adjustments.

Index Name	Property		Number of Fields
PrimaryKey	Unique: Fields:	True BusDate Ascending, DerivProd, Ascending	2

Column Name	Description	Type
BusDate	Date of adjustment	datetime
DerivProd	Code for derivative product	varchar(6)
AdjustFactor	Adjustment factor used to adjust the price	numeric(18,7)
CashAdjFlag	Cash adjustment flag indication whether cash adjustment applies or not (Y/N)	char(1)
Style	Style of Adjustment R=Rights style N=Normal	char(1)

CollHeld: The CollHeld table contains details of all collateral lodged with ASXCL as at close of business on the previous day.

Index and Key Name	Property		Number of Fields
Primary key	Unique: Fields:	True SegType GroupLevel AccID CoverGrp, CollType, LodgeID IssuerCode. HIN	8

Column Name	Description	Type
SegType	Code that identifies the segregation type of the account.	char
GroupLevel	**Y** the collateral is lodged for a particular Cover Group or **N** the collateral is lodged for a particular account.	char
AccID	Uniquely identifies an account.	int
CoverGrp	If GroupLevel = **Y** the name of the Cover Group else *#N/A#*.	varchar(2)
CollType	Code that identifies the type of collateral lodged.	varchar(2)
LodgeID	Uniquely identifies the collateral lodgement. AllowZeroLength = TRUE Required = FALSE	varchar(12)
IssuerCode	The code used to identify the issuer.	varchar(6)
LodgeDate	Date that the collateral was lodged.	datetime
CollDetail	Any further details used to describe the lodged collateral.	varchar(60)
UnitCode	Currency in which the collateral is denominated or 'Shares' if stock lodgement.	varchar(6)
Units	Face value (or number of shares if specific cover).	money
CollValue	Value assigned to the collateral after any haircut has been applied.	money
ExpiryDate	If applicable, the date the lodged collateral ceases to have value.	datetime
Holder	For share lodgements, the name of the registered holder.	varchar(180)
HIN	The holder identification number of the registered holder.	varchar(10)
Specific	'Y' indicates the collateral lodgement is to be treated as specific cover, or else 'N'.	char
Cur	Code used to identify a currency.	varchar(3)

DerivProd: The DerivProd table contains details of all derivative products cleared by ASXCL.

Index Name	Property		Number of Fields
DerivProdTypeKey	Unique: Fields:	False DerivProdType, Ascending	1
MargGrpKey	Unique: Fields:	False MargGrp, Ascending	1
PrimaryKey	Unique: Fields:	True DerivProd, Ascending	1
UnderProdKey	Unique: Fields:	False UnderProd, Ascending	1

Column Name	Description	Type	Size
DerivProd	Unique code that identifies the derivative product.	varchar(6)	6
DerivProdStat	Active or Suspended.	char	1
DerivProdType	Code that identifies the type of derivative product.	varchar(2)	2
IssCode	Reserved for future use.	varchar(4)	4
SecType	Reserved for future use.	varchar(3)	3
DerivProdDesc	Description of the product.	varchar(60)	60
AllowExer	Allow the exercise of positions Yes or No.	char	1
UnderProd	Underlying product code.	varchar(6)	6
UnderProdType	Code that identifies the type of underlying product.	varchar(2)	2
DelDays	Number of business days in the delivery cycle.	smallint	2
Cur	The currency in which contract prices are quoted.	varchar(3)	3
PriceDec	Number of decimal places in the contract price.	smallint	1
StrikeDec	Number of decimal places in the strike price.	smallint	1
TickSize	Tick size.	money	8
TickVal	Tick value.	money	8
CommCur	Currency in which give-up commissions are charged.	varchar(3)	3
FeeCur	Currency in which fees are charged.	varchar(3)	3

MargGrp	The margin class group to which the derivative product belongs.	varchar(5)	5
DelMargRate	The margin rate for contracts under delivery.	money	8
ShortOptionPerc	The minimum short option percentage to be applied.	money	8
MinContractCharge	The minimum amount to be charged per contract.	money	8
PointPercType	Quantification of the margin interval as **P**oints or **%**.	char	1
MargIntAmt	Value of the margin interval.	money	8
SpotSpread	Margin rate used for spot contracts that are offset by other contracts.	money	8
NonSpotSpread	Margin rate used for non-spot contracts that are offset by other contracts.	money	8
SpotType	Code that identifies the method used to calculate the start of the spot period.	varchar(2)	2
SpotMonths	The number of month's value used in the calculation of the start of the spot month.	smallint	2
SpotDays	The number of day's value used in the calculation of the start of the spot month.	smallint	2
CondStat	Does the product have conditional status Yes or No.	char	1
DeList	Has the product been delisted Yes or No.	char	1
ContValType	Code that identifies the calculation method used to determine the contract value.	varchar(2)	2
FeeCategory	The fee category used to determine the fees to be charged for the derivative product.	varchar(20)	20
ExchId	Code that identifies the exchange on which the derivative product is traded.	int	4
MinVolatility	The minimum volatility used in margin calculations for the derivative product.	money	8
PremPaid	The premium paid at the time of trade. Includes Yes or No.	char	1
UnitsPerLot	Number of units per contract.	money	8
Multiplier	The multiplier used for contract value calculations.	money	8
RSCCCur DEPRECATED	The currency of RSCC swap point cash adjustments.	varchar(3)	3

CashSettPrice	The price used by the cash settlement process.	int	4
CashSettPriceText	The cash settlement price formatted for display.	varchar(10)	10
Basket	Indicates the type of basket. Valid values are: N = Not a basket S = Synthetic basket T = True basket.	char	1
ManAutoExer	Empty Initial value = N	char	1
DelAllowed	Are tenders allowed? Y(es), N(o).	char	1
CashSettle	Is this a cash settled contract? Y(es), N(o).	char	1
DPSUnderProd	The underlying product code used by the Derivatives Pricing System.	varchar(6)	6
DPSUnderProdType	The underlying product type used by the Derivatives Pricing System.	varchar(2)	2
MargAlert	For internal use.	money	8
DPSMarket	For internal use	int	4
TradingDec	Number of decimal places in the contract price received from the trading system.	smallint	4
Ledger	Code used to identify a ledger.	varchar(12)	12
ProcessFlag	Defines the processing of the contract. Can include: 0 – normal derivatives 1 - electricity monthly 2 – electricity calendar 3 - electricity financial 4 – electricity flat quarterly.	int	8
SettDelay	The number of days by which the cash settlement is delayed.	int	8
SubDerivProd1	Used for combination contracts (e.g. electricity annuals) to define the contract into which the combination is split.	varchar(6)	6
SubDerivProd2	Used for combination contracts (e.g. electricity flat) to define the second contract into which the combination is split.	varchar(6)	6
DelProd	The product code used to uniquely identify deliverable commodities	varchar(6)	6
DPSDerivProdType	The derivative product type used by the Derivatives Pricing System.	varchar(2)	2

AllowOTCs	Y/N indicates whether OTCs are allowed for this derivative product.	char	1
DividendPayable	For future use. Indicates whether ordinary dividends are payable for this contract. Y(es) or N(o).	char	
DividendUnderlying	For future use. The underlying stock for dividend payments	varchar(6)	
ListingFrequency	The frequency that this product is listed M – monthly W – weekly Blank for OTC	char(1)	

RegHoldingAuth – The RegHoldingAuth table contains details of all registered holding authorisations. i.e. processed Registered Holder Client Cover Authorisation (RHCCA) forms

Index Name	Property		Number of Fields
PrimaryKey	Unique: Fields:	True HIN,Ascending AccId, Ascesnding	2

Column Name	Description	Type
HIN	Holder Identification Number	varchar(10)
AccId	Identifier, uniquely identifying the account	int
InsertBusDate	The business date on which the RHCCA was processed	datetime

SPANMargAcc – The SPANMargAcc table contains details of margins by accounts.

Index Name	Property		Number of Fields
PrimaryKey	Unique: Fields:	True Ledger Ascending, Seg Type, Ascending AccId, Ascending Cur, Ascending, Portfolio, Ascending	5

Column Name	Description	Type
Ledger	Code used to identify the ledger.	varchar
SegType	Code that identifies the segregation type of the account. *Refer Chapter 3*	char
AccId	Uniquely identifies an account.	int
Cur	The code of the currency in which margin values are expressed.	varchar
PremAmt	The premium margin.	float
ScanRiskAmt	The SPAN scan risk margin.	float
IntraSpread	The SPAN intra-commodity spread margin.	float
InterSpread	The SPAN inter-commodity spread margin.	float
InterExchange	The SPAN inter-exchange spread (concession).	float
SpotCharge	The SPAN Spot Charge.	float
ShortOptMin	The minimum margin for short option positions.	float
MargVal	The total margin.	money
MargMove	The margin movement from the previous business day.	money
Portfolio	The code used to identify the SPAN portfolio	char
SPANReq	The SPAN margin requirement	numeric(25,6)

SPANMargComboComm – The SPANMargComboComm table contains details of margins by combined commodity and account.

Index Name	Property		Number of Fields
Primary Key	Unique: Fields:	True ComboComm Ascending AccId, Ascending Portfolio, Ascending	3

Column Name	Description	Type
ComboComm	Code that identifies the combined commodity.	varchar
AccId	Uniquely identifies an account.	int
PremAmt	The premium margin.	float
ScanRiskAmt	The SPAN scan risk margin.	float
IntraSpread	The SPAN intra-commodity spread margin.	float
InterSpread	The SPAN inter-commodity spread margin.	float
InterExchange	The SPAN inter-exchange spread (concession).	float
SpotCharge	The SPAN Spot Charge.	float
ShortOptMin	The minimum margin for short option positions.	float
MargVal	The total margin.	money
RepGrp	The SPAN reporting group associated with this combined commodity.	varchar
Portfolio	The code used to identify the SPAN portfolio	char
NetDelta	The SPAN net delta	numeric(25,6)
VolatilityRisk	The volatility risk	numeric(25,6)
TimeRisk	The time risk	numeric(25,6)
PriceRisk	The price risk	numeric(25,6)
WPR	The weighted price risk	numeric(25,6)

SPANMargComboCommScenario – The SPANMargComboCommScenario table contains details of scan risk margin for each scenario by combined commodity, account and portfolio.

Index Name	Property		Number of Fields
Primary Key	Unique: Fields:	True ComboComm Ascending AccId, Ascending Portfolio, Ascending Scenario, Ascending	4

Column Name	Description	Type
ComboComm	Code that identifies the combined commodity.	varchar
AccId	Uniquely identifies an account.	int
Portfolio	The code used to identify the SPAN portfolio	char
Scenario	SPAN Scenario number	smallint
ScanRiskAmt	The SPAN scan risk margin	numeric(25,6)

SPANMargRepGrp – The SPANMargRepGrp table contains details of margins by SPAN Reporting Group and account.

Index Name	Property		Number of Fields
Primary Key	Unique: Fields:	True RepGrp Ascending AccId, Ascending Portfolio, Ascending	3

Property Name	Description	Type
RepGrp	Code that identifies the SPAN Reporting Group	varchar
AccId	Uniquely identifies an account.	int
Ledger	Code used to identify the ledger	char
Cur	Code used to identify the ledger	varchar
PremAmt	The premium margin.	float

Property Name	Description	Type
ScanRiskAmt	The SPAN scan risk margin.	float
IntraSpread	The SPAN intra-commodity spread margin.	float
InterSpread	The SPAN inter-commodity spread margin.	float
InterExchange	The SPAN inter-exchange spread (concession).	float
SpotCharge	The SPAN Spot Charge.	float
ShortOptMin	The minimum margin for short option positions.	float
MargVal	The total margin.	money
Portfolio	The code used to identify the SPAN portfolio	char

SPANMargSegType – The SPANMargSegType table contains details of margins by account.

Index Name	Property		Number of Fields
Primary Key	Unique: Fields:	True Ledger Ascending SegType, Ascending Cur, Ascending Portfolio, Ascending	4

Column Name	Description	Type
Ledger	Code used to identify the ledger.	varchar
SegType	Code that identifies the segregation type of the account.	char
Cur	The code of the currency in which margin values are expressed.	varchar
PremAmt	The premium margin.	float
ScanRiskAmt	The SPAN scan risk margin.	float
IntraSpread	The SPAN intra-commodity spread margin.	float
InterSpread	The SPAN inter-commodity spread margin.	float
InterExchange	The SPAN inter-exchange spread (concession).	float
SpotCharge	The SPAN Spot Charge.	float
ShortOptMin	The minimum margin for short option positions.	float
MargVal	The total margin.	money
CollUtil	The value of the non-cash collateral utilised to cover the total margin.	money
MargMove	The margin movement from the previous business day.	money
Portfolio	The code used to identify the SPAN portfolio.	char
SPANReq	The SPAN margin requirement.	numeric(25,6)

TradedEntity The TradedEntity table contains details of futures contract months and option series that are cleared by ASXCL.

Index Name	Property		Number of Fields
EntityKey	Unique: Fields:	False DerivProd, Ascending DelMonth, Ascending OptType, Ascending Strike, Ascending Version, Ascending	5
PrimaryKey	Unique: Fields:	True EntId, Ascending	1

Column Name	Description	Type
EntId	Code that uniquely identifies a traded entity.	int
DerivProd	Code used to identify the related derivative product.	varchar
DelMonth	Delivery month of the traded entity.	datetime
OptType	Put or Call for option products.	char
ExpDate	Expiry date for the traded entity.	datetime
Strike	Strike price.	int
StrikeText	Strike price in display format.	varchar
Version	Version number of the traded entity.	smallint
VersionText	The display format of the version number of the traded entity.	varchar
SecCode	Underlying security code.	varchar
UnitsPerLot	Number of units per contract.	money
CashSettDate	Date that the traded entity is cash settled.	datetime
EntityShortcut	Code used to commonly identify the traded entity.	varchar
ExerStyle	Exercise Style - **A**merican or **E**uropean.	char
Multiplier	The multiplier used for contract value calculations.	money
TradingCeased	**Y** entity is no longer traded, or else **N**.	char

Column Name	Description	Type
Spot	Is this a spot month? Y(es) or N(o).	char
DelStartDate	Date that contracts can be tendered.	datetime
ProcCode	A code used to indicate special processing related to an entity. Valid values are space (no special processing) and 'T' the entity has been terminated.	char
DelMonthText	Month display string. For example, Dec12, 18Dec12.	varchar
IsOTC	Y – OTC entity N – Normal listed entity	char
PeriodCode	The SPAN Period Code	Varchar(10)

VMDerivProdAcc. The VMDerivProdAcc table contains all contract postings including variation margin, premium margin and cash adjustment details by account and derivative product for the previous business day.

Index Name	Properties		Number of Fields
PrimaryKey	Unique: Fields:	True Ledger, Ascending AccId, Ascending PostingCode, Ascending, DerivProd, Ascending Cur, Ascending	5

Column Name	Description	Type
AccId	Uniquely identifies each account.	int
DerivProd	Unique code that identifies the derivative product.	varchar(6)
Cur	The currency of the variation margin amount.	varchar(3)
SegType	Code that identifies the segregation type of the account.	char(1)
Amt	The variation margin amount.	money
Ledger	Code used to identify a ledger.	varchar(12)
PostingCode	The posting code assigned to the posting	varchar(6)

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