



Mandate Compliance Monitoring System

Release 4.1

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System overview

Monitoring System for Investment Professionals

Blake Developments' investment Mandate Compliance Monitoring system (MCM) is designed for professional fund managers, boutique fund managers, and institutional investment managers and manager-of-managers. Leading Australian fund managers employ MCM as part of their investment administration, or within their compliance or audit function.

Core functionality

The core functionality of the system ensures that portfolio guidelines, typically specified in a client mandate, are properly adhered to. A comprehensive set of guidelines is supplied with the system and new guidelines are easily configured on the fly. Investment rules can be set to warn a manager that a guideline is approaching a breach position.

Schedule reports

MCM provides the compliance manager with the option to schedule a wide range of comprehensive reports to examine among others:

- Daily summary of breaches across all portfolios.
- Details of guidelines that are nearing a breach.
- Low-level detail of all portfolio positions relative to guidelines.
- Warning reports where unexpected custodian or portfolio data is encountered.

Fully automated

The MCM system is a fully automated, post-trade compliance monitoring system. Following the installation and configuration of requisite portfolio and guideline details, the day-to-day compliance monitoring process is fully automated and commands a minimum of user intervention only. The system is available in three versions:

Debt version

The debt (MCM-D) version monitors corporate / government bonds, mortgage / asset-backed bonds, index-linked bonds, cash / short-term and derivatives.

Equity version

The equity (MCM-E) version monitors equities, property securities and derivatives.

Premium version

Premium (MCM-DE) version provides the fund manager who manages portfolios across all asset classes and investment products with a sophisticated low maintenance tool for compliance monitoring.

User friendly

User-friendly forms and drop-down boxes ensure straightforward allocation of guidelines and authorised investment limits to portfolios.

Pre-configured settings

Pre-configured file settings from major custodians and futures brokers add flexibility and cut implementation time. Alternatively, the user can configure the system to source data from the internal portfolio management system or accounting system.

Data Import Wizards

MCM's powerful data import utility and wizard enables the user to draw portfolio and market data from a wide range of external data sources and interfaces. This includes multiple custodians, futures brokers and information feeds such as IRESS Market Technologies.

Programming logic

MCM's in-built programming logic provides the user with a flexible tool to set-up entire investment mandates for up-to-date on-line access/reference.

Security capabilities

Extensive security capabilities allow customised access-rights for different individuals or user groups, and control to specific system functions.

Quality assurance

Advanced programming intelligence and uncompromised quality assurance are the foundation for this highly consistent, 'single-cast' software solution.

Platform portability

MCM application and data are fully transportable across all Windows 95/98/NT/2000 platforms.

System architecture

MCM is based on a two-tiered client/server architecture with a Visual Basic developed client and a server based Microsoft Access relational database.

MCM operates in client/server-distributed networks, both local and wide area. The system requires less than 100MB disk space.



Benefits

Save costs and improve performance

Monitoring portfolio guidelines with MCM produces valuable cost savings and performance improvements through fully automated routines and automatic summary and breach reporting. Reliable day-to-day performance is assured through intelligent programming, high quality system design, consistent user interfaces and minimum user input requirements.

Added value

MCM ensures fund managers fulfil their clients' requests for compliance monitoring. Add value by conducting the monitoring process and portfolio position reporting on a day-by-day basis. Minimise losses associated with compliance breaches.

Automate monitoring process for unlimited portfolios

Employ MCM and its automated processes to monitor unlimited number of portfolio guidelines and investment limits against custodian data. MCM processing capacity is suitable for "Manager-of-Manager" environment.

Reliable, time efficient and cost effective

Portfolio values, set up during implementation, form a consistent and reliable basis for time efficient and cost effective monitoring. Adjust settings on forms and drop-down boxes to reflect modifications or amendments to investment mandates. Conveniently alter settings for changes to custodian data. MCM is specifically designed for minimal user interaction even for large fund managers.

Abolish spreadsheets – make use of smart MCM functionality

- Eliminate all individual spreadsheet based compliance verification.
- Utilize numerous default guidelines applicable to various asset classes.
- Draw text based guidelines from a centralised library.
- Make use of default import file settings from major custodians and futures brokers.

Use existing system platforms and hardware

Utilize your existing operating systems and hardware. MCM runs on any platform without dedicated server requirements.

Made in Australia

The MCM software is designed and developed in Australia. The software applications functionality is tailored for the Australian funds management industry.



Operational and technical highlights

Operational

- Choose from a library of more than 100 "unique" guidelines and several hundreds of issuers and issuer categories.
- Set-up portfolio specific guidelines/rules by index weights, credit rating, portfolio weight, effective exposure, etc using many combinations of security, issuer/counterparty, position, trade and other data.
- Flag guidelines as internal or external and of type monitored or sign-off required.
- Monitor guidelines with for instance non-quantitative rules such as the prohibition of soft dollars, and report for manual sign off.
- Create new portfolios on the fly using the Portfolio Set-up Wizard.
- Mirror new portfolios on existing once, including guidelines and authorised investment limits.
- Make use of multiple portfolio codes.

Debt version characteristics

- Make use of 8 in-built template tables to monitor Authorised Investment Limits of debt securities.
- Utilize asset-class related templates to allocate investment limits to specific issuers as well as broader categories and sub-categories.
- Allocate limits to different maturity bands via template tables applicable to Annuities, Cash and Short Term, Treasury, Inflation-linked, Fixed Interest, Credit Rating, Weighted Average Life and Duration Weighted Limits.
- Add corporate credit rating benchmarks in addition to static limits that are allocated to credit rating bands for the credit rating template table (add corporate benchmark to the static limit value and add any underweight of the first credit rating band to the second credit rating band).
- Add corporate fixed interest indices to the static limit value applicable to the Fixed Interest template table.

Technical

- Fully automated centralised file import, data consolidation and compliance monitoring processes.
- Data consolidation includes stress testing to evaluate guidelines that monitor "market movements under stress".
- Create new custodian file import specifications with the Data Import Wizard.
- Extensive data administration and missing data tracking capabilities.
- Specific security-access rights to differentiate personnel or business units
- File types supported include text files, CSV, MS Excel, fixed width and direct database interfacing.

Equity version characteristics

- Track and include contingent liabilities during compliance monitoring, e.g. Floats/IPOs, sub-underwriting, rights issues and placements.
- Monitor authorised investment limits for private equity with in-built template tables.
- Use templates to allocate specific investment limits in geographical sectors as well as limits for sub-classes.



Application interfaces

Accounting system interface

The interface to any accounting system is via MCM's standard "External Data Import Wizard". The wizard is a specifically designed module for importing accounts, positions and security information from various accounting systems.

The accounting interface module can receive numerous file formats as inputs and performs the necessary loading into the MCM database. File formats include ASCII, MS Excel, Comma separated value and text files and direct database interfacing.

MCM also supports a number of accounting system specific interfaces to facilitate implementation.

External data converter

An "External Data Translation" sub-system converts trade and accounting system values from external system formats and conventions into MCM internal data formats. Flexibility of this interface utility ensures that a trade from another system can use different reference tables for data elements, e.g. security type, country, exchange, account code, broker code, etc.

MCM / IRESS extractor

This interface automation tool extracts index data from IRESS Market Technologies (IRESS). The data extracted is user-driven and can include several indices (e.g. S&P/ASX 100, S&P/ASX 200 Property, etc). MCM also retrieves portfolio liabilities.

MCM / IRESS generator

The Custodian Data File Generator is an interface designed for clients using the IRESS system but do not obtain daily portfolio data from their custodian.

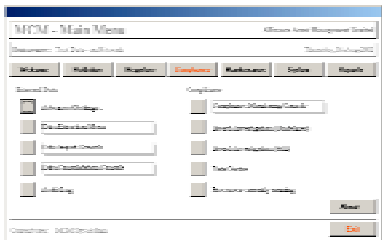
The file generator extracts holdings, open trades and cash items from IRESS for assigned portfolios and saves the data in MS Excel format for loading into the MCM system.



System functionality

Main Menu – The Compliance Section

The MCM Main Menu user interface provides easy access to all menu items including reports. Each section comprises a number of options that can be restricted to authorised personnel.

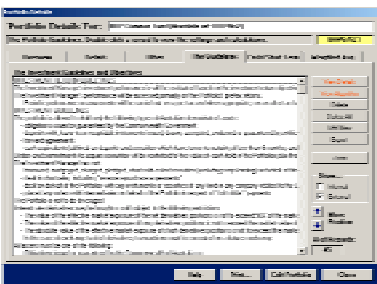


Compliance Menu Section Features:

- **Advanced Settings** incorporates external file settings, external files set-up wizard, external file translation settings and others.
- **Data Extraction Menu** provides interfaces to trading systems such as IRESS/DFS.
- **Data Import Console**, **Data Consolidation Console** and the **Compliance Monitoring Console** operate independently.
- **Audit Log** tracks detailed analytical process information as well as system requested user-interventions.
- **Breach Investigations** allows the review of flagged breaches and the flagging of false breaches.
- **Data Centre** provides easy access to ALL imported data/files, consolidated data, monitored guidelines and authorised investment limits as well as key portfolio data.
- All data can be printed, viewed on screen or exported to Microsoft Excel.

Portfolio Details screen

The MCM system keeps track of client mandates and associated mandate portfolios. Guidelines allocated to portfolios are sourced from the master library and displayed in text format.



In addition to guidelines, portfolios can also have authorised investment limits as determined by the mandate and allocated asset class of a portfolio.

Additional features of the Portfolio Details screen are:

- **Overview** page tracks changes made to the portfolio. It also provides key financial portfolio values and compliance statistics.
- **Details** page consists of portfolio codes (custodian, futures brokers and trading system), asset class and asset class strategy and the portfolio's cash definition.
- **Other** page captures the client's underlying fund (asset) and the benchmark allocated to a portfolio.

The **Guidelines** page consists of:

- Access algorithms to test and/or evaluate the guideline. Change quantitative limits/variables such as 30% to 35%.
- Add new guidelines to a portfolio by simply selecting from the Master Register/Library.
- Guidelines in text form present easy comprehension and authentication with master document.
- Choose between viewing internal or external guidelines.
- Export all guidelines to Microsoft Excel for review.
- Move text position of guidelines/rules up and down as outlined in the original mandate.

Authorised Investment Limits

Authorised Investment Limits are primarily applicable to debt securities. Although similar to investment guidelines in terms of evaluation, they are shown separately and different in MCM. This is due to the limits that can refer to multiple categories, sub-categories and issuers.

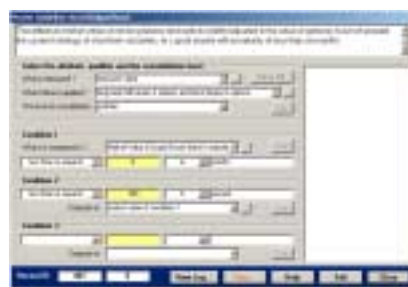
MCM provides a comprehensive debt issuer register as well as an allocation screen for user selection of any number of categories, sub-categories and issuers. These are allocated to one or more portfolios. Enter actual limits via the portfolio details form. Following the set-up of the first portfolio the same limits can be copied across to several other portfolios.

In addition to real issuers, create and allocate credit-rating bands to any category within the in-built template tables.

Master Guideline record (algorithms) screen

(Investment Guidelines – Settings and Test Facility)

Text-based guidelines are one of the main features of the MCM system. Creating new guidelines and allocating algorithms is displayed in text format. In addition, the algorithm screen incorporates the guideline test facility. Simply select an existing guideline or construct a new guideline and then press the button "Test...". This will display a list of portfolios for which external custodian data was imported. Select a portfolio selected and the guideline will be tested against that portfolio's data.



Other features include:

- Guidelines and rules are centrally kept in a register/library and allocated to portfolios.
- Quantitative variables of portfolio guidelines can be changed, for instance 6 months to 9 months.
- Track changes made to master or portfolio guidelines via the audit log facility.
- Interpret guidelines and/or rules via drop-down menus that provide vast numbers of combinations to choose from.
- Test the algorithms of a master or portfolio guideline against any portfolio.
- Definitions and tips provide insights into selections or evaluations.

Breach report - guidelines

Breached Investment Guidelines

The compliance process flags investment guidelines for three categories: Breaches, Warnings and Errors. Generate and view reports for each category for internal guidelines or external guidelines, or the results of all investment guidelines.

XYZ Investment Management Limited				
Investment Guidelines (External) – Flagged Breaches as at 29/1/2002 (Run-date) Thursday, 31 January 2002				
Asset Class				
...Asset Class Strategy				
Client				
	Portfolio (Custodian Code)	The Guideline	The Result	Breach
Australian Fixed Interest				
Fixed Interest Securities				
ABC Limited				
	XF752	Orders and commitments to acquire securities will be restricted to the value of Cash and Cash equivalents held in the Portfolio and monies due from sales and interest income.	Date: 31/01/2002, Closing Balance: - \$25,852,560.00, (>BREACH<), See separate Cash-Flow Forecast report.	Yes
FX Investment Services				
	M85501	Future Exchange traded futures and options on futures may be bought or sold subject to the following restrictions:		
		<ul style="list-style-type: none"> Minimum cash reserves must be maintained in the Portfolios to fund deposits and margin calls, equal to the impact of a 100 basis point movement in interest rates on the net futures position. 	105.34% of minimum cash - (>BREACH<)	Yes
		In order to enable ready liquidation of the Portfolio to meet redemption requests, no less than 25% of the Portfolio shall be invested at any time in readily realisable securities to provide funds for redemption at short notice.	24.69% - (>BREACH<)	Yes
Australian Fixed Interest				
Cash and Short Term Securities				
ABC Limited				
	XC702	The Investment Manager has the flexibility to determine the maturity pattern of the Portfolios, subject to and provided:		
		<ul style="list-style-type: none"> A liquidity constraint, being that at least 30% of the total Portfolio is to be invested in maturities of less than 90 days 	29.12% - (>BREACH<)	Yes
Source: Mandate Compliance Monitoring System			----- End of Report -----	



Breach report - limits

Breached Authorised Investment Limits

Separate reports exist for all authorised investment limit templates. The summary compliance report informs the user where breaches occurred and which report to view.

XYZ Investment Management Limited						
Authorised Investment Limits – Annuity– Flagged Breaches as at 29/1/2002 (Run-date) Thursday, 31 January 2002						
The following constraints of the exposure to different categories of securities or issuers will apply:						
	Maximum exposure (as a % of market value of the Portfolio)					
Category / Sub-Category / Issuer	0-7 Yr	8-15 Yr	Over 16 Yr	Total	The Result	Breach
Portfolio XV625						
State Government	80	80	80	80	Total (all): 65.45%; Total (0-7Y): 29.34%; Total (8-15Y): 17.24%; Total (16Y+): 18.86%	
Victoria	40	40	20	40	Total (all): 11.96%; Total (0-7Y): 11.96%; Total (8-15Y): 0.00%; Total (16Y+): 0.00%	
- Victoria State guaranteed debt	10	10	5	10	Total (all): 11.96% (BREACH); Total (0-7Y): 11.96% (BREACH); Total (8-15Y): 0.00%; Total (16Y+): 0.00%	Yes
Credit Rating Band						
- Per group: AA, AA+	10	10	10	20	Total (all): 24.56% (BREACH); Total (0-7Y): 0.00%; Total (8-15Y): 11.29% (BREACH); Total (16Y+): 13.27% (BREACH)	Yes
<i>Source: Mandate Compliance Monitoring System</i>					----- End of Report -----	



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