



association of the  
luxembourg fund industry

**guidelines**

# risk management

in association with





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### Fostering a holistic approach to risk management moving up the agenda

The financial crisis has demonstrated how important it is to have in place an effective and robust risk management organisation. In today's ever more complex business environment investment firms are required to implement sound risk principles and oversight mechanisms. This is not only of interest for individual entities, but for the financial groups overall. The global integration of markets, business and operations triggers an integrated risk management framework. Risk management has become a dominant topic in a number of recent regulations. Whereas in the context of UCITS IV risk management has been confirmed and clearly be expanded beyond the traditional focus on market risk, the AIFMD has now introduced this broad concept of risk management as an integral part of the responsibilities of the AIFM. In addition to the product specific risk management regulations, the EU regulator prepares new guidelines regarding the trading of OTC derivatives and central counterparties.

Besides fostering a risk awareness culture and a holistic approach to risk management as such, it has become apparent that risk governance is paramount to the successful business conduct.

As the European centre for UCITS fund domiciliation and distribution, Luxembourg is positioned as the crossroad of regulatory risk management requirements and distribution risk reporting.

In practice, the fund industry has organized its risk management processes in a centralized manner, supported by dedicated 'centers of excellence' defined within each major asset management group. The centralization is a consequence of the increased sophistication of the risk management as well as the economies of scale in terms of systems and data history.

We believe that the scope of risk management as required by the regulator does broaden the responsibilities of the management company and by such the risk management function. Due to its exposed positioning in product governance and international distribution, Luxembourg has developed the overall understanding of the entire value chain and is as such well placed to play a leading role in risk management.

In light of the holistic risk management approach, ALFI has created within its risk management committee which focuses and all aspects of risk management in relation to Luxembourg domiciled investment funds, proposes common interpretations, simplifications or market industry standards and prepares responses to consultations issued by national or international bodies.

The working groups (market risk, liquidity risk, credit and counterparty risk as well as operational risk) address the risk categories as outlined by the UCITS IV Directive and its implementing measures. In the present guidance paper, we hereby present the first results of some of these working groups. We attached a special focus on the key risk topics that are newly addressed by UCITS IV. It is the intention of this publication to assist the market players in the pragmatic operational implementation of these regulations.

#### 1 Liquidity risk

■ The liquidity risk is a risk which has been underestimated for quite a long period, in particular for certain asset classes 'assumed' to be liquid based on quotes from a limited number of market makers. Measuring the liquidity risk is subject to two main dimensions, (i) assets and (ii) liabilities of the UCITS. In particular the liability aspect is tricky due to the 'intransparent' and very complex distribution structure making a full assessment of the investor base impossible. The present guidance intends to propose practical measures to address asset liquidity management.

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## 2 Credit & counterparty risk

- The assessment of counterparty risk has undergone a complete reversal and has become a major risk to be managed for all UCITS dealing in OTC contracts. In particular the measurement of the risk as well as the changing market practice with regards to collateralisation put additional pressure on risk management and operational procedures for ManCo's. The role of the collateral managers in relation to the depositary is currently unclear and triggers additional issues one needs to take into consideration. The guidance paper summarises sound industry practices regarding counterparty risk mitigation and collateral management.

## 3 Operational risk

- The need to manage operational risk is well known and thus not a new aspect in the fund industry, but has become a focal point for regulation in the last years. The term itself refers to potential causes of loss arising from deficiencies in internal controls, human errors, physical systems failures, and other business execution risks as well as external events. Since Luxembourg is traditionally making use of delegations to third parties, the market participants have built up experience in managing outsourcing risks over many years. The guidance paper has summarised selected best practice measures to monitor outsourced functions and fund specific measures on operational risks.

However, the guidance given has to be put into perspective of the respective company environment and business model. Also, the risk management process is subject to the principle of proportionality as introduced by UCITS IV.

We would like to thank all the participants of the working groups for their dedication and most valuable input. We are very much looking forward to the new guidance papers currently in process as well as meeting you on the events we will organize in the next months.

We hope that you find these Guidelines interesting and useful.

Sincerely,

ALFI

Association of the Luxembourg Fund Industry

**Best Practice Proposals for the  
Organisation of the Risk Function of  
a UCITS Management Company or  
UCITS Investment Company**

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# Best Practice Proposals for the Organisation of the Risk Function of a UCITS Management Company or UCITS Investment Company

## Introduction and legal and regulatory framework

### 1 Introduction

Recent EU regulation, as implemented in Luxembourg by the Law of 2010, introduced in connection with the latest revision to the UCITS Directive, has focused attention on the requirement for management companies, pursuing the activity of management of a UCITS, and investment companies, that have not designated a Management Company (Self Managed SICAV), to have in place an adequate Risk Management ('RM') function that is proportionate to the business conducted by those companies and the risk profiles of the UCITS which they manage.

The aim of this document is:

- to highlight, in the first place, the **key legal and regulatory sources** in relation to RM in order to get a common understanding thereof and;
- to propose a set of **best practices** that the Boards and Senior Management of Management Companies and Investment Companies may wish to consider when developing, or reviewing the adequacy of, their RM functions.

Throughout this document ManCo will be used to refer to a management company, or a self managed investment company where no management company has been designated.

### 2 Key legal and regulatory framework

In relation to risk management a number of laws and regulations have been issued on European and Luxembourg level. In the following, please find a brief overview table including a non-exhaustive list of the key legal and regulatory framework in relation to risk management.

	Regulatory framework on Risk Management	
	European Union	Luxembourg
<b>Level 1 legislation</b>	<b>Directive 2009/65/EC</b>	<b>Law of 17 December 2010</b> on Undertakings for Collective Investment (2010 Law replaces the 2002 Law)
<b>Level 2 implementing measures</b>	<b>Commission Directive 2010/43/EU</b>	<b>CSSF Regulation No 10-4</b>
<b>Level 3 guidelines</b>	<ul style="list-style-type: none"> <li>• <b>ESMA Guidelines 09/178</b> as regards risk management principles for UCITS</li> <li>• <b>ESMA Guidelines 10/788</b> on risk measurement and calculation of global exposure and counterparty risk for UCITS</li> <li>• <b>ESMA Guidelines 11/112</b> as regards risk measurement and calculation of global exposure for certain types of structured UCITS</li> </ul>	
		<b>CSSF Circular 11/498</b> <b>CSSF Circular 11/508</b> <b>CSSF Circular 11/512</b>

For some further details see Appendix on page 25 to this document.



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## Risk Management Principles, Risk Management Function and Other Control Functions

### 1 Risk Management Function - Principles

Risk management should be an integral part of a ManCo's control framework and in addition to the regulatory obligations an effective RM function should assist the Senior Management and Board of Directors in:

- Optimising growth without exposing the organisation to undue risk;
- Demonstrating due diligence in daily management;
- Promoting proactive management and early identification of risk;
- Increasing accountability and responsibility in the organisation;
- Avoiding unnecessary risk exposures.

The management of risks is everyone's responsibility and needs to be enforced from the top of the organisation. A culture of risk awareness and risk management within an organisation is essential for a RM function to be effective.

The Board of Directors is therefore ultimately responsible for ensuring that the ManCo effectively manages its risk and the risks in the UCITS which it manages and that it has policies and procedures in place to measure and manage those risks.

A **risk management function** should be able to perform its role independently from operating units allowing the persons responsible for risk management to interact freely with all areas of the ManCo for the purpose of identifying and escalating risk issues or control gaps without any conflicts of interest. Its reporting line should be directly to the Senior Management and/or to the Board of Directors of the ManCo. Its resources should commensurate with the size of the institution, and the nature and complexity of its activities. The staff executing the function has to have appropriate expertise and knowledge of the ManCo business and of the UCITS that it manages.

If the performance of the risk management function is delegated to a third party, the external firm must have access to all relevant information and report to the Senior Management and/or Board of Directors of the ManCo. In case of a delegation Senior Management and/or the Board of Directors retains full responsibility for the effective and appropriate execution and monitoring of risk management. The entity providing the outsourcing service must have sufficient technical and professional expertise to execute the function. The entity providing the outsourcing service should be assessed regularly to ensure proper and effective supervision of the outsourced function.

ManCos, in particular those that are part of larger Group companies, may also **outsource specific risk management processes** to other areas of expertise (either internal or external). The role of the local risk management function in this case will be one of oversight on and coordination with the outsourcing partner, i.e., ensuring that the right risk information is received. In these cases, it is important that the local risk management function has sufficient knowledge to adequately oversee and challenge the outsourcing partner and provide adequate reporting to senior management and/or the Board.

As a ManCo may decide to outsource all or part of the risk management function, reference can also be made to the Chapter II "**Guidelines Paper for the Risk Monitoring of Functions Outsourced/Delegated By a Management Company or Investment Company**" which has been produced by the ALFI Technical Committee.

Each ManCo shall establish a **RM framework**, which comprise the following components:

- Governance and organisation of Risk Management;
- Identification of risks;
- Measurement and management of risks;
- Reporting of risks and related information.

# Best Practice Proposals for the Organisation of the Risk Function of a UCITS Management Company or UCITS Investment Company

Governance and organisation of Risk Management	Identification of risks	Measurement and Management of risks	Reporting of risks and related information
<ul style="list-style-type: none"> <li>■ Establishment of RM Function (structure, proportionality)/ Roles and responsibilities</li> <li>■ Risk management strategy</li> </ul>	<ul style="list-style-type: none"> <li>■ Identification of all relevant risks for the ManCo and the funds it manages.</li> </ul>	<ul style="list-style-type: none"> <li>■ Measure risks using appropriate methods</li> <li>■ Define risk limits</li> <li>■ Monitor compliance with risk limits</li> <li>■ Take appropriate actions in case of limit breaches</li> </ul>	<ul style="list-style-type: none"> <li>■ Effective reporting to Senior Management and the Board</li> <li>■ Reporting to regulators</li> </ul>

Each of the framework components will be explained below in the context of how to practically implement a risk management function and a risk framework in a ManCo.

## Risk Management and its relationship with other control functions

Already UCITS III asked for a permanent Risk management function. In addition, UCITS IV regulations also require a ManCo to have a permanent Compliance and Internal Audit function; in fact this set of control functions aligns UCITS with MIFID requirements in this regard.

In order to get a brief overview of each control function we have summarised the key aspects. There may be a perception that the three control functions are duplicating effort by carrying out similar controls, however in practice they fulfil different roles within a ManCo.

Risk Management has the following responsibilities as defined by CSSF Regulation 10-4 Article 13 paragraph 3:

- To implement the risk management policy and procedures;
- Ensure compliance with the UCITS' risk limit system including statutory limits concerning global exposure and counterparty risk;
- Provide advice to the Board of Directors as regards the identification of the risk profile of each managed UCITS;
- Provide regular reports to the Board of Directors on; the consistency between the current levels of risk incurred by each managed UCITS and the risk profile for that UCITS, the compliance of each managed UCITS with relevant risk limit

systems, and the adequacy and effectiveness of the risk management process including whether remedial measures have been taken;

- Provide regular reports to Senior Management outlining the current level of risk incurred by each managed UCITS and any actual or foreseeable breaches of their limits;
- Review and support the arrangements and procedures for the valuation of OTC derivatives.

Compliance has the following responsibilities as defined by CSSF Regulation 10-4 Article 11 paragraph 2:

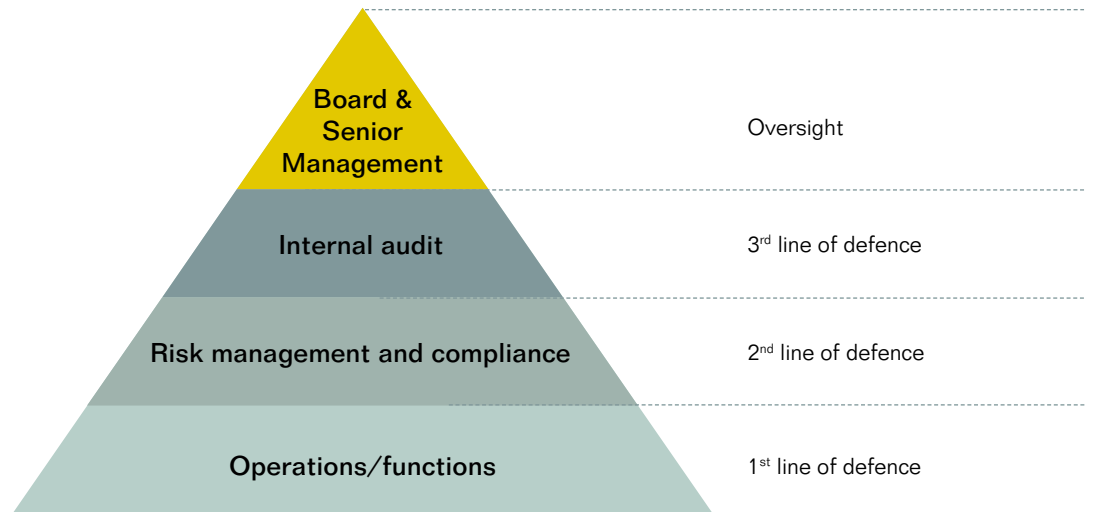
- To monitor and, on a regular basis, to assess the adequacy and effectiveness of the measures, policies and procedures put in place to detect any risk of failure by the ManCo to comply with its obligations under the Law of 17 December 2010;
- To advise and assist the relevant persons responsible for carrying out services and activities in compliance with the ManCo obligations under the Law.

Internal Audit has the following responsibilities as defined by CSSF Regulation 10-4 Article 12 paragraph 2:

- To establish, implement and maintain an audit plan to examine and evaluate the adequacy and effectiveness of the ManCo systems, internal controls mechanisms and other arrangements;

- 
- To issue recommendations based on the result of work carried out under the audit plan and to ensure the recommendations are complied with;
  - To report to Senior Management on a frequent basis in relation to internal audit matters, indicating whether appropriate remedial measures have been taken.

Illustration of the Risk Management function and its relationship with the other control functions



# Best Practice Proposals for the Organisation of the Risk Function of a UCITS Management Company or UCITS Investment Company

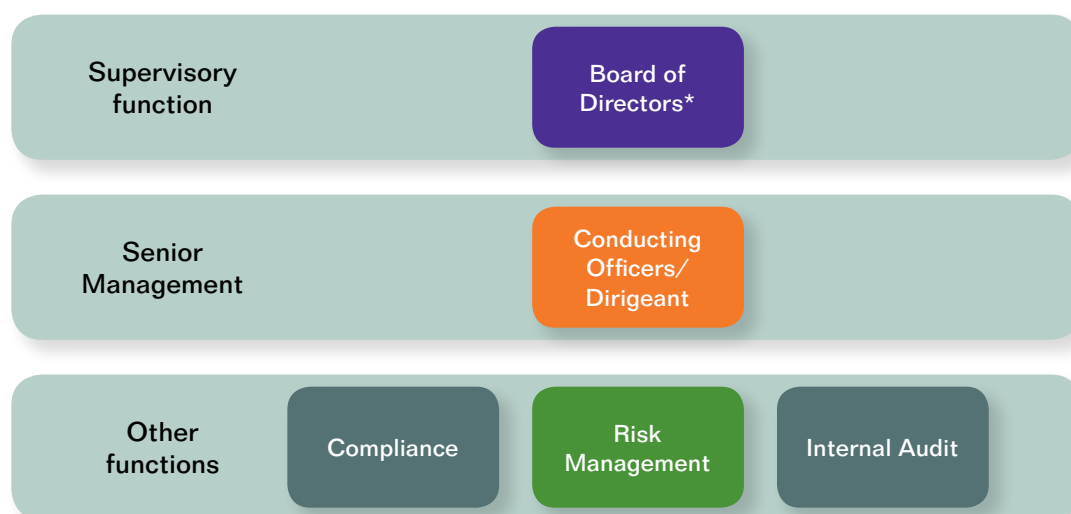
## Best Practice proposals on practical implementation of a Risk Management Function

In the following sections a number of examples are provided as to how practitioners may go about implementing and operating a UCITS compliant Risk Management Function.

### 1 Governance and Organisation

#### 1.1 Establishment of a RM function

As the diagram below shows, a Risk Management function, together with Compliance and Internal Audit, should support the Board of Directors and Senior Management of the ManCo in fulfilling their responsibilities towards internal control of the ManCo. In this section we look at the role of the Board and Senior Management in the establishment of a RM function.



\* Normally the BoD oversees the senior management – depending on the size and setup of the ManCo the BoD could be involved in executive functions.

#### 1.1.1 Role of the ManCo Board of Directors

To fulfil the requirements of the regulations and ESMA guidelines the ManCo Board of Directors may consider, or fulfil, the following roles:

- Definition/approval of the company's risk principles/strategy;
- Authorisation of Senior Management to set up the RM function;
- Promote the development of risk measures
- Periodic review of effectiveness of the RM function and policies;
- Review of how the company manages risk;
- Act as a direct line of escalation;
- Approve the documented Risk Management Process (RMP);
- Approve the risk profile for each UCITS as well as the risk limits and changes;
- Promote the implementation of a robust and pervasive risk culture;
- Approve and review the adequacy and effectiveness of the risk management policy.

#### 1.1.2 Role of Senior Management/Conducting Officers

Senior Management/Conducting Officers of the ManCo will typically be involved in the RM process either in a supervisory and oversight role, by assuring that the required regulatory tasks are performed in an appropriate manner and by the approval of the documented Risk Management Process (RMP). They will also be the first point of escalation for all RM matters and provide regular reporting to the Board of directors.

Collectively the BOD, Senior Management and the persons appointed to conduct risk management must have the competencies to understand and to be able to identify, measure and manage the risks in the ManCo and the UCITS that they manage.

## 1.2 Examples for RM governance structures

What do we have to do when setting-up a RM Function to ensure that it fulfils its mandate and is proportional to the business of the ManCo?

- Decide on structure
  - Do I need a separate RM department (proportionality aspects)?
  - If yes, do I create a fully-staffed RM department or do I use an external service provider?
  - If no, will this be performed by a CO or outsourced?
- Implement structure by defining roles and responsibilities within chosen structure

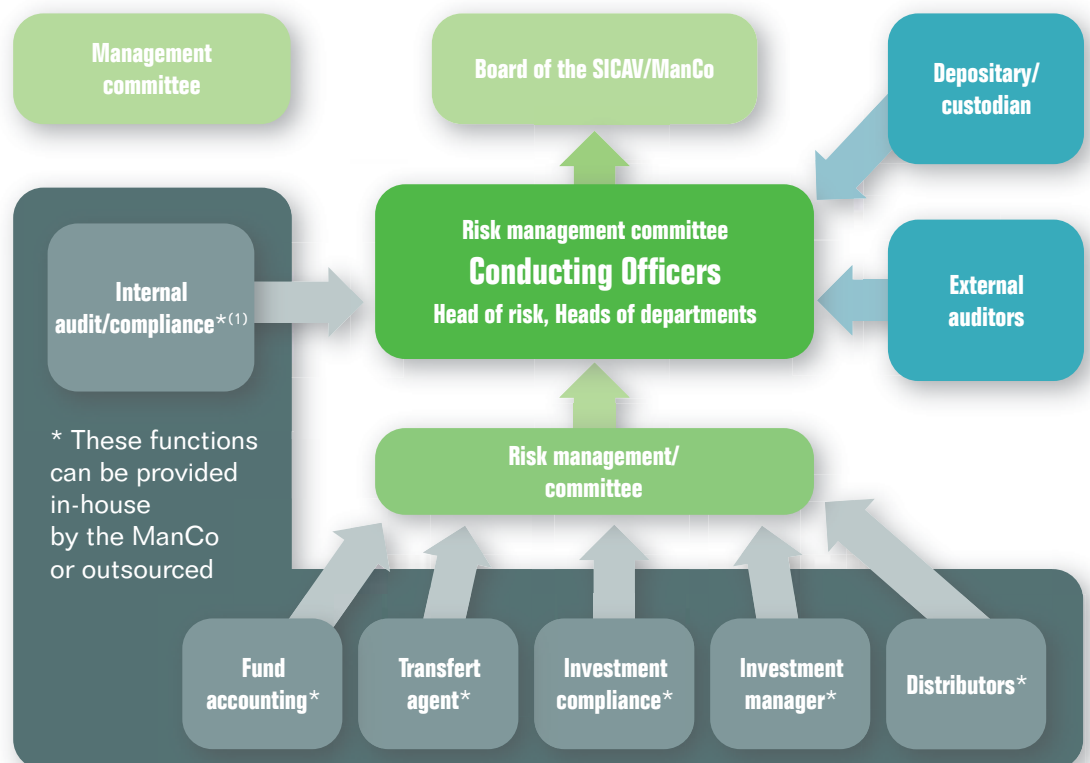
### 1.2.1 Larger/More Complex Management Company Structures

Such structures are likely to establish an independent risk management function managed by a Chief Risk Officer reporting to Senior Management or the Board. Larger or more complex organisations may require that a Risk Committee be established as a sub-committee of the Board to focus solely on risk management issues.

In accordance with CSSF Regulation all, or parts, of the risk management function may also be outsourced to other parts of the ManCo's Group Company or to a suitably qualified third party. If the outsourcing route is followed there will still need to be a Conducting Officer of the ManCo appointed as the responsible person for risk management and to whom the outsourced function reports.

Diagrammatically the RM function may fit into the ManCo structure as follows:

#### Sophisticated Structure



<sup>1</sup> However, a management company providing, in addition to collective portfolio management, one or more other services as referred to in Article 101 (3) of the 2010 Law may not delegate the compliance function. It should be remembered that, in accordance with item 5.4.9. f) of Circular IML 98/143, a management company having one or more branches is not authorised to use an external expert specialised in internal audit. This management company shall therefore have its own internal audit department on a permanent basis.

## Best Practice Proposals for the Organisation of the Risk Function of a UCITS Management Company or UCITS Investment Company

In larger ManCo structures different types of risk (see section 2 Identification of Risks) may be managed in different locations. For example:

Those risks - in particular the Portfolio risks - which are specific to the investment management of the UCITS may be managed by risk functions that are located geographically with the delegated investment managers for the UCITS.

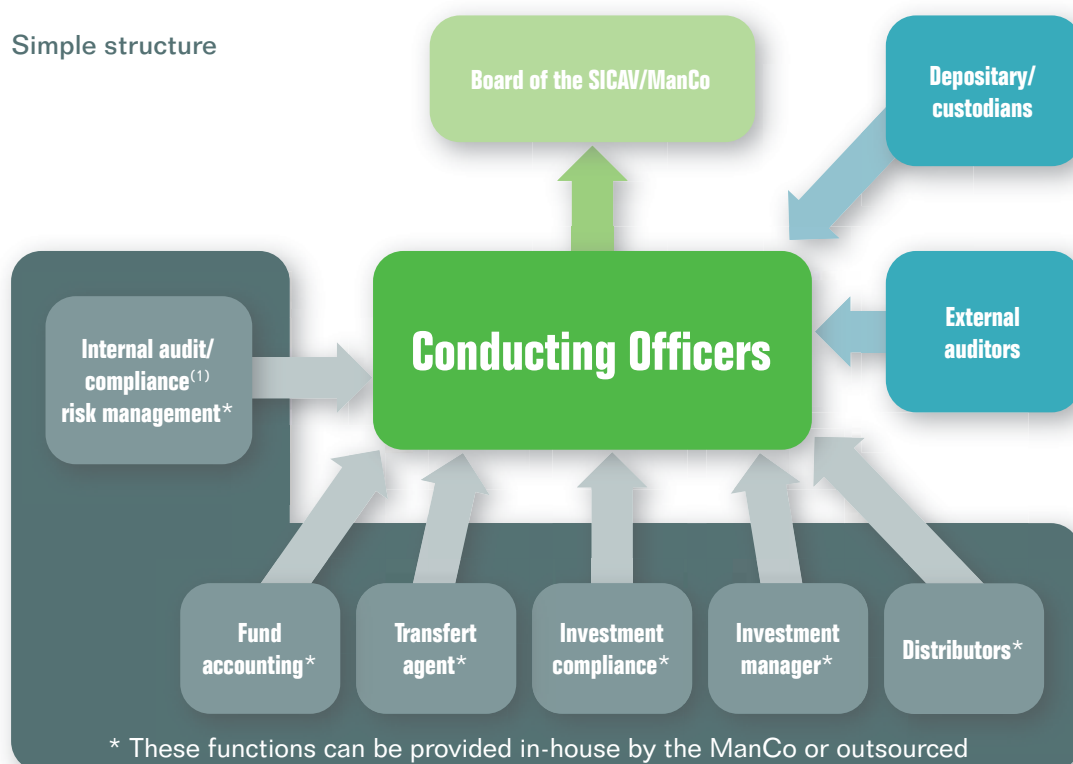
Operational risks are likely to be managed in the country of the ManCo where Fund Administration and Custody are domiciled. While Risk managers covering other risks, such as Technology, may be located in yet another location.

In such structures particular attention needs to be paid to the escalation and reporting processes to ensure that Senior Management and the Board of Directors are kept adequately informed (see section 4 Reporting).

### 1.2.2 Smaller Management Company Structures

Smaller firms may comply in different manners, depending on the risk profile and strategies of the UCITS that they manage. Outsourcing could in many cases be the preferred solution, provided that the Board/Senior Managers keep the responsibility of developing and controlling the risk management framework and the oversight of an outsourced task.

#### Simple structure



<sup>1</sup> However, a management company providing, in addition to collective portfolio management, one or more other services as referred to in Article 101 (3) of the 2010 Law may not delegate the compliance function. It should be remembered that, in accordance with item 5.4.9. f) of Circular IML 98/143, a management company having one or more branches is not authorised to use an external expert specialised in internal audit. This management company shall therefore have its own internal audit department on a permanent basis.

Examples of possible structures for smaller entities may be:

- The Board appoints a conducting officer responsible for Risk Management. The conducting officer may also be a Board member. This person will be in charge of ensuring that a complete risk management framework/process is in place as a separate document or as part of the company's procedures and that regular reporting to board and escalation is properly performed;
- A risk manager, reporting to the Board or a Senior Manager is appointed to ensure oversight of the delegated risk management function, as described above;
- The Board can appoint a non-executive committee, i.e. a Risk Management Committee, who will be in charge of ensuring oversight of the outsourced risk management function, reporting and escalation to the board and the conducting officer responsible for risk management.

### 1.2.3 Other organisational structures

Other combinations of the examples above could be put in place provided the mentioned core principle of keeping control and oversight at Board/Senior management level is respected.

For example:



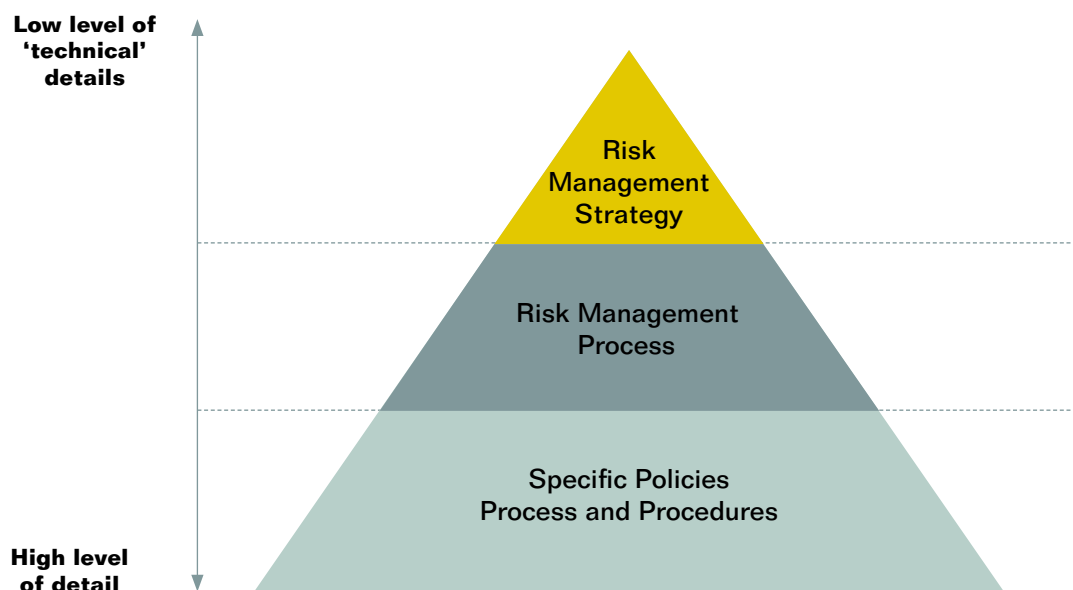
# Best Practice Proposals for the Organisation of the Risk Function of a UCITS Management Company or UCITS Investment Company

## 1.3 Risk Management Strategy

Having agreed an appropriate RM organisational structure - aligned with the overall ManCo risk strategies - the RM function must agree with the Board, and Senior Management, the risk strategy of the ManCo and the mandate of the Function. This will cover what is expected of Risk Management, which risk categories should be considered, what form escalation and reporting will take, etc.

The risk strategy of the ManCo should be formulated before the Risk Management Process is documented in detail for submission to the CSSF in accordance with Circular 11/512.

The definition of a Risk Management strategy of a ManCo is a useful tool for a risk management function (and/or for Senior Management) to agree with the responsible organisational body (i.e. the BoD of the ManCo) the scope of the mandate for Risk Management. The RM strategy can be a high-level description documenting the defined RM governance (including roles and responsibilities) as well as providing a statement on risk appetite and the expectations towards RM.



In addition to the general risk strategy, a ManCo must provide a Risk Management Process (RMP) to the CSSF documenting the detailed structures of Risk Management as well as the Risk Policy (which itself outlines the procedures implemented for the identification, measurement, management and reporting of risks).

It is required to have a holistic view on the risks a UCITS is exposed to as UCITS IV defines a broad scope for Risk Management. In addition to the RMP, further process documentation for RM processes and/or specific RM policies (or related documents) can help to clarify the tasks of the RM function.



## 2 Identification of Risks

The BOD and Senior Management of a ManCo may wish to ask themselves the following non-exhaustive questions:

How do we identify the potential risks within the ManCo and the UCITS that we manage? (Identification)

How do we know if these risks exist within our business? (Identification)

If they exist how do we know if they represent a significant risk? (Measurement)

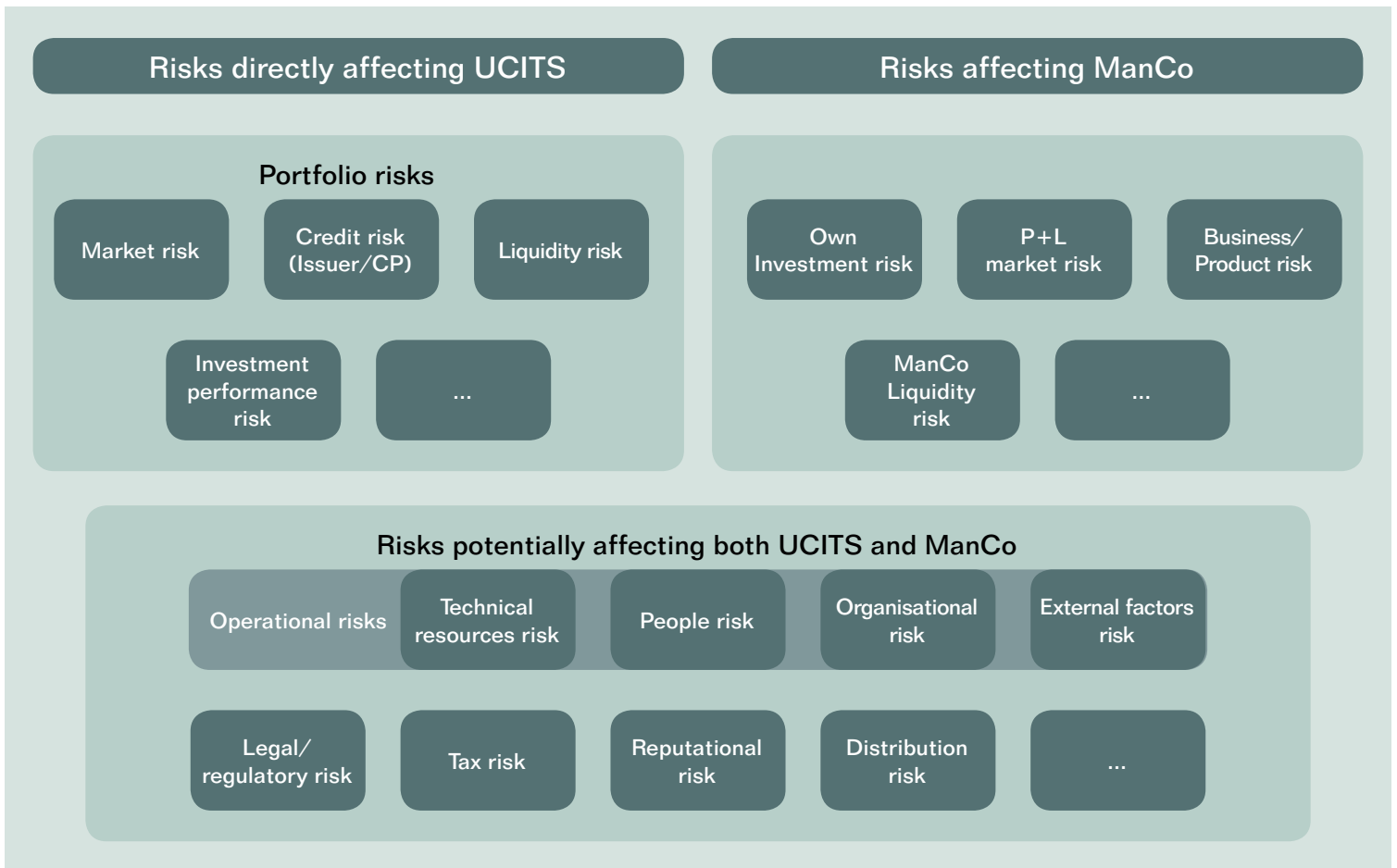
Is the risk exposure and/or potential loss acceptable to the ManCo? (Measurement and Management)

The risk strategy of the ManCo should be formulated before the Risk Management Process is documented in detail for submission to the CSSF in accordance with Circular 11/512.

Each ManCo will have to identify on on-going basis the specific risks to be covered within the risk strategy/risk management policy – based on the nature, scale and complexity of its business and the risk profiles and strategies of the UCITS it manages – the following aims to provide a non-exhaustive list of potential risks that a ManCo should be considering.

Example:

Framework of risk categories UCITS Management Company



## 2.1 Potential Risks directly affecting UCITS

Each ManCo will have to specify a framework for risks that have the potential to directly affect the UCITS it manages (in line with UCITS IV definition).

From the point of view of investors, UCITS are subject to financial risks and to certain operational risks that can materialize into capital losses or poor investment performance.

The framework may specifically include the following risk categories:

Investment related risks

- Market risk
- Credit risk (issuer and counterparty risks)
- Liquidity risk
- Investment performance risk (e.g. underperformance vs. benchmark/"Peer Group", etc.)

Among financial risks, market risk is typically referred to as the risk of fluctuations in the market value of the securities held by the UCITS, which may vary over time reflecting different market conditions. In efficient markets, market risk may be considered as the only value-related relevant risk factor, either at the level of each security held by the fund or at the level of the entire portfolio.

However since markets can have discontinuous flows of information (that is, information can be incomplete and asymmetrically distributed), or are dispersed and consequently not able to produce a robust stream of prices (in the case of OTC bilateral trades), financial exposure to some classes and types of asset (ABS, OTC derivatives etc.) eligible for UCITS investment cannot be addressed by a single risk driver. With such positions, market risk can still be thought of as capturing the exposure to standard movements in micro-economic and/or macro-economic variables (sales, profits, equity premium, interest rates and exchange rates).

Other risk factors, such as credit, counterparty and liquidity risk, may impair

the trading conditions of certain securities (illiquidity) or the credit rating of specific issuers (default) or counterparties of bilateral transactions (insolvency). Specific risks, such as credit or liquidity risk, may also refer to the exposure to sudden sharp changes in the macroeconomic environment (such as a widening of risk premium - a “flight to quality”- or a downgrading of a specific sector or sovereign exposures).

When factors other than market risk become relevant the overall financial exposure of an investment fund may depend also on additional specific risk drivers that emerge only at the aggregate portfolio level. This is the case, for instance, for concentration risk or for certain aspects of liquidity risk, when liquidity is understood as the ability of a UCITS to meet, at a reasonable cost, its obligations (redemptions or debt reimbursement) as they become due.

## 2.2 Potential Risks affecting both UCITS and ManCo

Operational risks which may materially affect the UCITS (these may also affect the ManCo)

- Technical resources/IT related risks
- People risks
- Organisational/Process risks
- External factor risks
- Fraud risks
- Delegated function risks

From the point of view of UCITS investors, operational risks are attached to the different features and quality of the trading, settlement and valuation procedures operated by ManCos and their service providers, which may increase the chances of losses due to human or technical errors. However, it must be noted that as the burden of operational risks is principally placed upon the ManCo, only those operational risks that also affect investors' interests by their direct impact on the fund's portfolio should be considered.

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Legal/regulatory risks (these may also affect the ManCo)

UCITS and any type of ManCo (Chapter 15 and 16 of the Law of 2010) must comply with a wide range of laws and governance - imposed or industry standards regulations. While compliance risk can be monitored and recognised, legal risks are sometimes unanticipated. Compliance-related risks shall be considered as a component in the risk management framework. The nature of those compliance-related risks needs to be communicated and understood through all levels of the ManCo. The compliance function should monitor all issues relating to legal and regulatory compliance and provide reports to Senior Management/Conducting Officers on a regular basis, if necessary in cooperation with the risk management function.

Model risk

Models are used to support risk management to measure and monitor various types of risks affecting a UCITS respectively a ManCo and thus are important tools to help risk managers. However, one also needs to understand the assumptions the various risk models rest on and thus the possible vulnerabilities respectively simplifications of their risk measurement techniques and models (e.g. back testing outlier can give indication on the quality a VaR model). Therefore, a ManCo needs to assess and review its risk measurement framework on an on-going base in order to ensure its viability and robustness; i.e. to understand sufficiently the shortcomings/risks of models.

Other types of risks

Risks evolve over time due to changes in the environment, in the product or changing circumstances. It is important that new risk exposures which can become significant are identified quickly, so these risks can be managed before they cause significant loss to the entity. There should be a mechanism to periodically assess whether risk

exposures have changed. For example, the recent financial crisis has demonstrated that custody risk and fraud risk may not have been adequately considered in some previous risk management frameworks applied to UCITS.

Potential Risks affecting the Management Company

The framework of risks will also include those risks that directly affect the Management Company:

- Reputational risk
- Own investment risk particularly in relation to the provision of seed capital
- Profit and Loss market risk
- Business/Product risk
- ManCo liquidity risk

The Management Company itself is faced with business risks linked to its specific activities (e.g. processing transactions, carrying out oversight, distributing products), and compliance risks due to increasing regulatory requirements in respect of, for example, investor protection measures. In addition, if part of the Management Company's cash is invested in market products, then market risk also become relevant.

Any of the risks relating to the Management Company's activities or relating to the investment fund's activities being managed, which leads to significant losses to stakeholders, will damage the reputation of the Management Company, and can jeopardize its existence.

A practical template which can be used by governance bodies to obtain an overview as to whether each relevant risk is properly addressed under each component of the framework is given below, using counterparty risk as an example.

# Best Practice Proposals for the Organisation of the Risk Function of a UCITS Management Company or UCITS Investment Company

Key risk	Identification of risks	Measurement and Management of risks	Reporting of risks and related information
<ul style="list-style-type: none"> <li>Counterparty risk</li> </ul>	<ul style="list-style-type: none"> <li>Identification covers the relevant sources of counterparty risk:                             <ul style="list-style-type: none"> <li>OTC derivatives</li> <li>Securities financing</li> <li>Structured products</li> <li>Cash</li> <li>Collateral</li> <li>Failed trades</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Measurement methods defined by type of product, and calculate aggregated positions by counterparty or connected group</li> <li>Limit setting (Diversification; Netting)</li> <li>Collateral</li> <li>Use of central counterparty</li> </ul>	<ul style="list-style-type: none"> <li>KRIs defined for counterparty risk</li> <li>Reporting of KRI on a regular basis to conducting officer</li> <li>Reporting of KRIs on a quarterly basis to Board.</li> </ul>

### 3 Measurement and management of risks

Having identified and documented the applicable risks, the RM function needs to come up with the means/tools to measure and manage those risks. The following need to be considered for each risk category:

- How do we measure the risk category (qualitative/quantitative criteria)?
- Document your measurement tool for each risk category
- Document risk limit based on measurement
- Ensure that risk limits are approved
- Determine required frequency of monitoring
- Ensure process for escalation

- Determine and document remediation/mitigation actions (e.g. interaction with portfolio manager, etc.)

When looking into the risks for each UCITS, the risk management function will define respective measurement approaches and limits for portfolio related risk categories based on an analysis of the risk profile of the fund, i.e., based on the fund characteristics that are detailed in the investment principles as outlined in the prospectus.

Below you find a non-exhaustive example how a simplified documentary overview of risk measurement and management approaches for some risk categories may look like:

Risk category	Identified Risk type	Approach to Measurement of risks	Entity/ department performing measurement of risks	Tool/ system used to measure risks [if any]	Approach to Limitation of risks	Entity/ department responsible for monitoring of risk limitations	Frequency of monitoring of risks	Approach to remedial actions (i.e. escalation of breach limits)
Portfolio risks	Market Risk	<ul style="list-style-type: none"> <li>Global Exposure</li> <li>VaR or Commitment approach</li> </ul>	Risk department	<ul style="list-style-type: none"> <li>Internal VaR calculation tool;</li> <li>Internal commitment calculation approach</li> </ul>	<ul style="list-style-type: none"> <li>Specific risk limit per UCITS according to approach used to measure risks.</li> <li>VaR: absolute (max 20%)/relative risk limit defined per UCITS.</li> <li>Commitment: maximum exposure due to derivatives of 100% of NAV (in line with CESR 10/788)</li> <li>Risk limits acknowledged by BoD in semi-annual BoD meeting.</li> </ul>	Risk department monitors risk limits on daily basis	daily	<ul style="list-style-type: none"> <li>Defined escalation process from Risk team to portfolio manager (PM) in case of breaches</li> <li>Defined escalation process from Risk team to conducting officer responsible for risk management upon identification.</li> </ul>

<b>Operational Risk and Outsourcing Risk</b>	<ul style="list-style-type: none"> <li>■ Operational Risk</li> </ul>	<ul style="list-style-type: none"> <li>■ Quantification of general operational risks per UCITS not feasible/efficient.</li> <li>■ Operational risk incidents are measured via operational loss database.</li> <li>■ In addition, operational risk assessments are performed on a regular basis.</li> </ul>	<ul style="list-style-type: none"> <li>■ Risk department</li> </ul>	<ul style="list-style-type: none"> <li>■ Internal loss database;</li> <li>■ Risk and Control Self-Assessment</li> </ul>	<ul style="list-style-type: none"> <li>■ Quantified operational risk limitation per UCITS is not feasible.</li> <li>■ All significant operational risk incidents per UCITS are documented, monitored and followed-up according to operational risk policy.</li> </ul>	<ul style="list-style-type: none"> <li>■ Risk department responsible for review of operational risk incidents and follow-up with respective business owners.</li> <li>■ Risk department responsible for operational risk assessments and related reporting.</li> </ul>	<ul style="list-style-type: none"> <li>■ ongoing</li> </ul>	<ul style="list-style-type: none"> <li>■ Operational risk incidents are monitored and followed-up according to operational risk policy.</li> <li>■ Escalation from Risk to Senior Management/BoD in place via defined reporting lines.</li> </ul>
⋮	...							

#### 4 Reporting

After having now built up a well-structured risk function, the risk manager needs to make sure that the responsible governance bodies are able to oversee risks the UCITS and/or the ManCo is exposed to, a holistic risk reporting is of utmost importance. How may this look?

##### 4.1 General principles on effective Reporting of Risks to Senior Management and the Board

Adequate risk reporting is integral part for a risk function and in particular for the Conducting Officers of a ManCo to ensure they can comply with their obligations and responsibilities of oversight. In order to ensure that the RM function obtain the necessary information from other departments as well as from outsourcing partners, a structured bottom up reporting is needed. Based on the information received

and the analysis performed by the (risk) department(s) a meaningful reporting to the COs or a Senior Risk Committee is key to making risks transparent as well to propose and finally decide on mitigating measures. For the case the ManCo has an own risk function, they should provide reporting on risk related topics to Senior Management/COs at least on a monthly basis e.g. as part of a Senior Risk Committee information package. The reporting contains detailed information on the different risk categories identified as being relevant for the UCITS (see section 2 Identification of risks).

# Best Practice Proposals for the Organisation of the Risk Function of a UCITS Management Company or UCITS Investment Company

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Below the paper gives a best practice example how a risk framework document could define a written standard/principles on risk reporting:

1. The CO/Board will receive a holistic report on all relevant risk types aggregated. This report will be based on the data gathered bottom up by risk function/COs.
2. The Head of Risk Management/CO is responsible to receive necessary bottom up reports from relevant departments and/or delegates.
3. The Head of Risk Management/CO will report at least quarterly to the Board of the ManCo.
4. The Head of Risk Management/CO will ensure that Risk Reports are holistic (considering all risk categories identified), timely and accurate.
5. The Risk reports will give info on current/new risks including a statement on severity (e.g. low, medium, high) and its evolution over time and measures to mitigate existing risks where possible.
6. The Risk Reports must provide the Board with all necessary information to decide on appropriate measures to be taken to control and mitigate all relevant risks.
7. The Head of Risk Management/CO must ensure that any relevant new risk issues deemed to be high will be reported ad hoc to CO/Board.
8. The Head of Risk Management/CO will oversee that entities report in a timely, accurate and clear manner and are consistent with the framework set by the risk function.

It is important to stress that the final responsibility of the day to day management and adequate conduct of the business, including the implementation of a sound risk management process relies on the COs, who are in turn responsible for ensuring appropriate reporting and escalation to the Board of Directors.

## 4.2 Content and Frequency of Reporting

### 4.2.1 Content and Frequency of reporting to the COs

#### **Frequency:**

As mentioned above the nature and complexity of a ManCo needs to be considered and there is no such standard either on the content or on the frequency of a reporting which fits to all ManCos equally.

For example it is advisable that the Head of Risk Management has, besides a formal reporting, a regular (weekly/bi-weekly) fixed meeting with the responsible CO. For the case where the responsible CO for RM is not supported by a local/group risk team the CO needs to establish clear standards concerning content and frequency of such reporting which in fact might ask for a weekly or at least monthly reporting.

The COs should meet regularly to review the reporting provided. The COs/relevant department would escalate immediately to the Board any critical issues. Meetings should be minuted and action points followed up regularly through an updated action list.

#### **Content:**

Reporting from the RM to the CO must be comprehensive and cover all risks. Sufficient detail must be provided to allow the CO to fully assess the implications of any issues, risk limit breaches, etc.

Reporting may be in a standard format that includes information on all risk categories identified and laid down in the risk framework (see section 2 Identification of Risks). In particular the following requirements in relation to UCITS IV need to be reflected in a risk report to COs:

- Overview of current levels of risk and the risk profile agreed for each UCITS;
- Overview of risk limit breaches for each UCITS;
- Information on back testing results (“outlier”);
- Information on stress test results;
- A statement on adequacy and effectiveness of the risk management process, models and methods used, indicating major

remedial measures taken in the event of any deficiencies (at least on an annual basis to CO/BoD);

- Any incidents worth to report on outsourcing risk issues;
- Short description of an issue/incident/claims occurred which could expose a ManCo to a certain risk;
- Any other material risks;
- ...

#### 4.2.2 Content and Frequency of reporting to the Management Company or SICAV Board

The COs should report to the Board of the ManCo at their regular meetings which should be at least quarterly. If the Board meets less frequently a report should be sent to the attention of the Board and a conference call held with representatives or delegates of the Board. The COs/relevant department should escalate immediately to the Board any critical risk or control issues. The content of the report would cover in general the same points

in the standard agenda discussed during the monthly/regular meeting with COs; however, it would be much more based on an “exception” principle, i.e. escalation of main issues (following a risk based approach/assessment). Boards may find a standard format useful. The table below is a non-exhaustive example of a summary report to the Board, the CO would provide additional explanation and details as necessary.

#### Reporting to regulatory authorities

The local regulatory authorities CSSF will be provided, according to requirements outlined in CSSF circular 11/512 and its appendix, with regular info/updates on the RMP.

Furthermore, the Risk function/CO assesses regularly (annual or, if required, on an ad-hoc basis) the adequacy and effectiveness of the RMP. The ManCo will provide information updates in relation to the RMP to the local regulatory authorities upon material changes or at least on an annual basis.

Risk Type	UCITS concerned	Key Risks identified/Status	Measures/Responsibilities	Risk Assessment
Market Risk/global Exposure	XY	<ul style="list-style-type: none"> <li>■ General market volatility remaining flat overall, only slight increase in Japanese Equities</li> </ul>	<ul style="list-style-type: none"> <li>■ Continue monitoring process of ...</li> </ul>	low
		<ul style="list-style-type: none"> <li>■ Portfolios well in line with regulatory VaR-limits (i.e internal thresholds and regulatory limits)</li> </ul>	<ul style="list-style-type: none"> <li>■ Back Test and Stress Test results listed in appendix XY of the risk report (see page xx)</li> </ul>	
		<ul style="list-style-type: none"> <li>■ Spreads on European government bonds, in particular Greece and Italy...</li> </ul>	<ul style="list-style-type: none"> <li>■ Monitoring of situation (Risk Management, CIO)</li> <li>■ Ongoing management of exposure by portfolio management (respective portfolio management)</li> </ul>	medium
Market Risk/global Exposure	AB Fixed Income	<ul style="list-style-type: none"> <li>■ Situation for assets like ABS, etc. improved, but still threaten portfolio liquidity in some UCITS ...</li> </ul>	<ul style="list-style-type: none"> <li>■ Continue selling of illiquid assets, in particular ...</li> <li>■ ...</li> </ul>	high
		<ul style="list-style-type: none"> <li>■ Overall Liquidity risk assessment revealed in general a sufficient level of liquidity</li> </ul>	<ul style="list-style-type: none"> <li>■ Stress testing on Liquidity done and results are in appendix XY (see general report on stress testing)</li> </ul>	low
				high



# Best Practice Proposals for the Organisation of the Risk Function of a UCITS Management Company or UCITS Investment Company

## Role of Risk Management in the Life-Cycle of a Fund

The risk management function should be deeply involved in all phases of a Life-Cycle of a Fund in order to fulfil the duty to identify measure and manage all risks relevant to the UCITS.

The list of tasks and responsibilities below is not exhaustive and should be customised to each Management Company.

Non-exhaustive example of tasks to be performed by a risk manager:

Phase	Process/Procedure	Risk related process/work step
<b>Initiation</b>	Product Development	Assess the product risks and impact on ManCo risk profile
		Assess adequacy of the investment strategy with regulatory risk requirements (CSSF, ESMA guidelines on risk management)
		Determine risk approach to be used (e.g., calculation methodologies, product mapping with risk systems, data sources), update the RMP as necessary
		Set internal and regulatory risk limits
		Analyse whether the new product can be managed in the current processes and systems
	Fund Documentation	Agree on the description of fund in the fund documentation
		Sign off of risk narratives on KIID
		Calculate and monitor the Synthetic Risk & Reward Indicator (SRRI) in the KIID
<b>Fund launch</b>	Fund registration/ distribution	Assist conducting officer in the oversight of the distribution network
		Assess country risk if required
<b>Ongoing</b>	Investment Management	Coordinate with investment manager to understand the portfolio allocation and pay-off structure
		Educate investment manager to seek for advice before new product/strategy launch
	Transfer Agency	Implement liquidity risk measures at ManCo level (matching cash flow forecasts with net subscription/redemption levels)
	Fund Administration	Interact with pricing/valuation teams
	Risk culture	Assistance to the Board on ad-hoc queries/assessments
		Risk trainings/education to the company senior management and staff
		Assistance to the communication of the corporate risk culture to clients
	Risk strategy/risk appetite	Periodic assessment of risk strategy and risk appetite adequacy
	Risk management infrastructure	Periodic review and validation of the risk management tools and systems adequacy (e.g., calculation methodologies, product mapping, data sources)
		Recruiting of risk experts with quantitative, qualitative and industry background expertise
	ManCo and product risk calculation and oversight	Calculate and monitor products investment risk on a daily basis
		Monitor on a regular basis ManCo risks and operational risks
<b>Fund restructuring/ Liquidation</b>	Service providers	Ensure service providers quality until final restructuring/liquidation
	Tax risk	
	.....	



## Appendix Laws and regulations

The appendices contain useful references which the management of a ManCo may find helpful in the establishment and running of a Risk Management function.

### European legal and regulatory framework:

- Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS)
- Commission Directive 2010/43/EU of 1 July 2010 implementing Directive 2009/65/EC of the European Parliament and of the Council (“Commission Directive 2010/43/EU”) as regards organisational requirements, conflicts of interest, conduct of business, risk management and content of the agreement between a depositary and a management company
- ESMA/CESR<sup>1</sup> Guidelines on Risk Measurement and the Calculation of Global Exposure and Counterparty Risk for UCITS dated 28 July 2010 (CESR/10-788)
- ESMA Final Report – Guidelines to competent authorities and UCITS management companies on risk measurement and the calculation of global exposure for certain types of structured UCITS dated 14 April 2011 (ESMA/2011/112)
- ESMA/CESR Risk management principles for UCITS dated February 2009 (CESR/09-178)

### Luxembourg legal and regulatory framework:

- Law of 17 December 2010 relating to undertakings for collective investment
- CSSF Regulation No. 10-4 transposing Commission Directive 2010/43/EU of 1 July 2010 implementing Directive 2009/65/EC of the European Parliament and of the Council as regards organisational requirements, conflicts of interest, conduct of business, risk management and content of the agreement between a depositary and a management company

- CSSF Circular 11/512 dated 30 May 2011 regarding:

- Presentation of the main regulatory changes in risk management following the publication of CSSF Regulation No. 10-4 and ESMA clarifications;
- Further clarifications from the CSSF on risk management rules;
- Definition of the content and format of the risk management process to be communicated to the CSSF;
- Replacing, as from 1 July 2011, CSSF Circular 07/308 on UCITS risk management and the use of financial derivative instruments.

- CSSF Circular 11/508 dated 15 April 2011 regarding:

- New provisions applicable to Luxembourg management companies subject to Chapter 15 of the Law of December 2010 relating to undertakings for collective investment and to investment companies which have not designated a management company within the meaning of Article 27 of the Law of December 2010 relating to undertakings for collective investment

In the following are quoted, without being exhaustive, some key texts of the laws and regulations in relation to risk management:

### A. European legislation:

- Article 10 (1) of the Commission Directive 2010/43/EU:

“Member States shall ensure that management companies establish, implement and maintain adequate policies and procedures designed to detect any risk of failure by the management company to comply with its obligations under Directive 2009/65/EC, as well as the associated risks, and put in place adequate measures and procedures designed to minimise such risk and to enable the competent authorities to exercise their powers effectively under that Directive”

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<sup>1</sup> European Securities and Markets Authority (“ESMA”), which has replaced the Committee of European Securities Regulators (“CESR”) as from 1 January 2011.

# Best Practice Proposals for the Organisation of the Risk Function of a UCITS Management Company or UCITS Investment Company

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- Article 12 (1) and (2) of subsection 1 of the Commission Directive 2010/43/EU:

“Member States shall require management companies to establish and maintain a permanent risk management function”.

“The permanent risk management function shall be hierarchically and functionally independent from operating units”.

- Recital (5) of the Commission Directive 2010/43/EU:

“To avoid the application of different standards to management companies and investment companies which have not designated a management company, the latter should be subject to the same rules of conduct and provisions regarding conflicts of interest and risk management as management companies [...]”

## B. Luxembourg regulation:

- Article 10 of the Regulation No. 10-4 – Control by senior management and supervisory function:

1. Management companies, when allocating functions internally, shall ensure that senior management and, where appropriate, the supervisory function, are responsible for the management company’s compliance with its obligations under the Law of December 2010 concerning undertakings for collective investment.

2. The management company shall ensure that its senior management:

- a) is responsible for the implementation of the general investment policy for each managed UCITS, as defined, where relevant, in the prospectus, the fund rules or the instruments of incorporation of the investment company;
- b) oversees the approval of investment strategies for each managed UCITS;
- c) is responsible for ensuring that the management company has a permanent and effective compliance function, as referred to in Article 11 of the

Regulation No. 10-4, even if this function is performed by a third party;

- d) ensures and regularly verifies that the general investment policy, the investment strategies and the risk limits of each managed UCITS are properly and effectively implemented and complied with, even if the risk management function is performed by third parties;
- e) approves and regularly reviews the adequacy of the internal procedures for undertaking investment decisions for each managed UCITS, so as to ensure that such decisions are consistent with the approved investment strategies;
- f) approves and regularly reviews the risk management policy and arrangements, processes and techniques for implementing that policy, as referred to in Article 43 of the Regulation No. 10-4, including the risk limit system for each managed UCITS.

3. The management company shall also ensure that its senior management and, where appropriate, its supervisory function shall:

- a) assess and regularly review the effectiveness of the policies, arrangements and procedures put in place to comply with the obligations in the Law of 2010 concerning undertakings for collective investment;
- b) take appropriate measures to remedy any deficiencies.

4. Management companies shall ensure that their senior management receives on a frequent basis, and at least annually, written reports on matters of compliance, internal audit and risk management indicating in particular whether appropriate remedial measures have been taken in the event of any deficiencies.

5. Management companies shall ensure that their senior management regularly receives reports on the implementation of investment strategies and of the internal procedures for taking investment decisions referred to in paragraph (2), points b) to e).

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6. Management companies shall ensure that the supervisory function, if any, regularly receives written reports on the matters referred to in paragraph (4).

■ Article 13 of the Regulation No. 10-4 – Permanent risk management function:

1. Management companies shall establish and maintain a permanent risk management function.
2. The permanent risk management function referred to in paragraph (1) shall be hierarchically and functionally independent from operating units.

However, the CSSF may allow a management company to derogate from that obligation where the derogation is appropriate and proportionate in view of the nature, scale and complexity of the management company's business and of the UCITS it manages.

A management company shall be able to demonstrate that appropriate safeguards against conflicts of interest have been adopted so as to allow an independent performance of risk management activities, and that its risk management process satisfies the requirements of Article 42 of the Law of 2010 concerning undertakings for collective investment.

3. The permanent risk management function shall:
  - a. implement the risk management policy and procedures;
  - b. ensure compliance with the UCITS' risk limit system, including statutory limits concerning global exposure and counterparty risk in accordance with Articles 46, 47 and 48 of the Regulation No. 10-4;
  - c. provide advice to the board of directors as regards the identification of the risk profile of each managed UCITS;
  - d. provide regular reports to the board of directors and, where it exists, the supervisory function, on:

- i. the consistency between the current levels of risk incurred by each managed UCITS and the risk profile agreed for that UCITS,
  - ii. the compliance of each managed UCITS with relevant risk limit systems,
  - iii. the adequacy and effectiveness of the risk management process, indicating in particular whether appropriate remedial measures have been taken in the event of any deficiencies;
- e. provide regular reports to the senior management outlining the current level of risk incurred by each managed UCITS and any actual or foreseeable breaches of their limits, so as to ensure that prompt and appropriate action can be taken;
  - f. review and support, where appropriate, the arrangements and procedures for the valuation of OTC derivatives as referred to in Article 49 of the Regulation No. 10-4.

4. The permanent risk management function shall have the necessary authority and access to all relevant information necessary to fulfil the tasks set out in paragraph (3).

■ Article 43 of the Regulation No. 10-4 – Risk management policy:

1. Management companies shall establish, implement and maintain an adequate and documented risk management policy which identifies the risks the UCITS they manage are or might be exposed to.

The risk management policy shall comprise such procedures as are necessary to enable the management company to assess for each UCITS it manages the exposure of that UCITS to market, liquidity and counterparty risks, and the exposure of the UCITS to all other risks, including operational risks, which may be material for each UCITS it manages.

## Best Practice Proposals for the Organisation of the Risk Function of a UCITS Management Company or UCITS Investment Company

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Management companies shall address at least the following elements in the risk management policy:

- a. the techniques, tools and arrangements that enable them to comply with the obligations set out in Articles 45 and 46 of the Regulation No. 10-4;
  - b. the allocation of responsibilities within the management company pertaining to risk management.
2. Management companies shall ensure that the risk management policy referred to in paragraph (1) states the terms, contents and frequency of reporting of the risk management function referred to in Article 13 of the Regulation No. 10-4 to the board of directors and to senior management and, where appropriate, to the supervisory function.
3. For the purposes of paragraphs (1) and (2), management companies shall take into account the nature, scale and complexity of their business and of the UCITS they manage.

■ Article 44 of the Regulation No. 10-4 – Assessment, monitoring and review of risk management policy:

1. Management companies shall assess, monitor and periodically review:
  - a. the adequacy and effectiveness of the risk management policy and of the arrangements, processes and techniques referred to in Articles 45 and 46 of the Regulation No. 10-4;
  - b. the level of compliance by the management company with the risk management policy and with the arrangements, processes and techniques referred to in Articles 45 and 46 of the Regulation No. 10-4;
  - c. the adequacy and effectiveness of measures taken to address any deficiencies in the performance of the risk management process.

2. Management companies shall notify the CSSF of any material changes to the risk management process.

CSSF Circular 11/512:

- In addition, a ManCo also needs to consider the more technical regulatory requirements laid down in CSSF Circular 11/512 which reflects ESMA's 'Principles on Risk management for UCITS, CESR<sup>2</sup>/09-178 issued in February 2009 when looking at the requirements for a RM function.

CSSF Circular 11/508:

- Further regulatory guidance is given by the CSSF Circular 11/508, which also introduces the requirement for a permanent compliance function and a permanent internal audit function.

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<sup>2</sup> As of 1 January 2011, the Committee of European Securities Regulators ("CESR") has been replaced by the European Securities and Markets Authority ("ESMA").

# **Guidance paper for the risk monitoring of functions outsourced/delegated by a management company or investment company**

# guidance paper for the risk monitoring of functions outsourced/delegated by a management company or investment company

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## Introduction

The scope of this chapter is to share within the Luxembourg Investment Fund industry “best practice” standards for ManCos when delegating services to third parties. ManCos as defined hereunder retain full responsibility to ensure that they have the adequate resources and processes in place to comply at all times to existing regulations and legal requirements.

Outsourcing occurs when a management company or an investment company that has not designated a management company makes arrangements for third parties ("delegates") to carry out some of their activities.

A ManCo delegating functions to third party service providers, including those which are part of the same group as the ManCo, should do so in accordance with an established policy that documents the due diligence and oversight standards that will be applied.

What functions may be delegated and location of the delegates is subject to the law of the jurisdiction in which the ManCo is located. Delegation will require notification to the ManCo's regulator and disclosure in the prospectuses of the funds managed by the ManCo.<sup>1</sup>

The topic of delegation to third parties is currently subject of a wide variety of different initiatives both from regulators and/or other industry bodies. In particular the EU Commission Directive implementing Directive 2009/65/EC ('UCITS IV') states:

*“As far as allowed by national law, management companies should be able to make arrangements for third parties to carry out some of their activities. The implementing rules should be read accordingly. The management company should in particular perform due diligence in order to determine whether, having regard to the nature of the functions to be carried out by third parties, the undertaking performing those activities can be considered as qualified and capable of undertaking the functions in question. The third party should therefore fulfil all the organisational and conflicts of interest requirements in relation to*

*the activity to be carried out. It also follows that the management company should verify that the third party has taken the appropriate measures in order to comply with the said requirements and should monitor effectively the compliance by the third party with these requirements. Where the delegatee is responsible for applying the rules governing the delegated activities, equivalent organisational and conflict of interests requirements should apply to the activity of monitoring the delegated activities. The management company should be able to take into account in the due diligence process the fact that the third party to whom activities are delegated will often be subject to Directive 2004/39/EC.”<sup>2</sup>*

There are different levels/degrees of outsourcing possible by a ManCo. Luxembourg ManCos are permitted to, and typically do, delegate several functions to third parties, including group companies, these include: transfer agency, fund accounting and administration, investment management and marketing & distribution. In addition the implementing directive for UCITS IV allows for an appropriate and proportionate view to be taken to the provision of a risk management and internal audit functions and this may include the outsourcing of these functions to external expert providers or internal group company centres of expertise. A non-exhaustive list of potentially outsourced functions is attached in Appendix I.

When delegating certain of its functions to a third party the ManCo always retains the ultimate legal responsibility for the outsourced functions. The final design of an outsourcing risk framework needs to be proportionate to and depends on the structure of the ManCo itself, in particular whether dedicated departments, a dedicated risk function or directly the conducting officers/designated directors are performing the day-to-day oversight of outsourced relationships.

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<sup>1</sup> See Art.110 (1) a) and i) of the UCI Law of 17 December 2010

<sup>2</sup> Recital 4 of the Commission Directive 2010/43/EU of 1 July 2010

# guidance paper for the risk monitoring of functions outsourced/delegated by a management company or investment company

## Classification of outsourcing relationships

Each ManCo shall have at any time a comprehensive overview of all outsourcing relationships.

Depending on the business model of the ManCo, a large variety of different services may be outsourced. Therefore a distinction should be made between different types of outsourcing relationships, i.e. material or non-material, depending on the risks associated with the outsourced function and the delegate.

Material outsourcing relationships may be those when a ManCo relies on the services of a delegate that are essential for conducting the business of the ManCo and where a partial or total failure of the outsourced function would materially impair the quality or continuity of its service, the financial performance or the continuing compliance with the regulatory requirements of the ManCo<sup>3</sup>.

A ManCo may consider using a standardised initial risk assessment for outsourced services to determine which delegations are considered material or non-material. Please refer to Appendix II for an example of a baseline risk assessment of outsourced functions.

The ManCo may consider appropriate thresholds related to each risk category for determining a high, medium or low exposures and therefore an overall risk assessment. In determining those thresholds the ManCo may consider the financial, commercial or regulatory impact of any failure of the delegate to perform the outsourced services adequately.

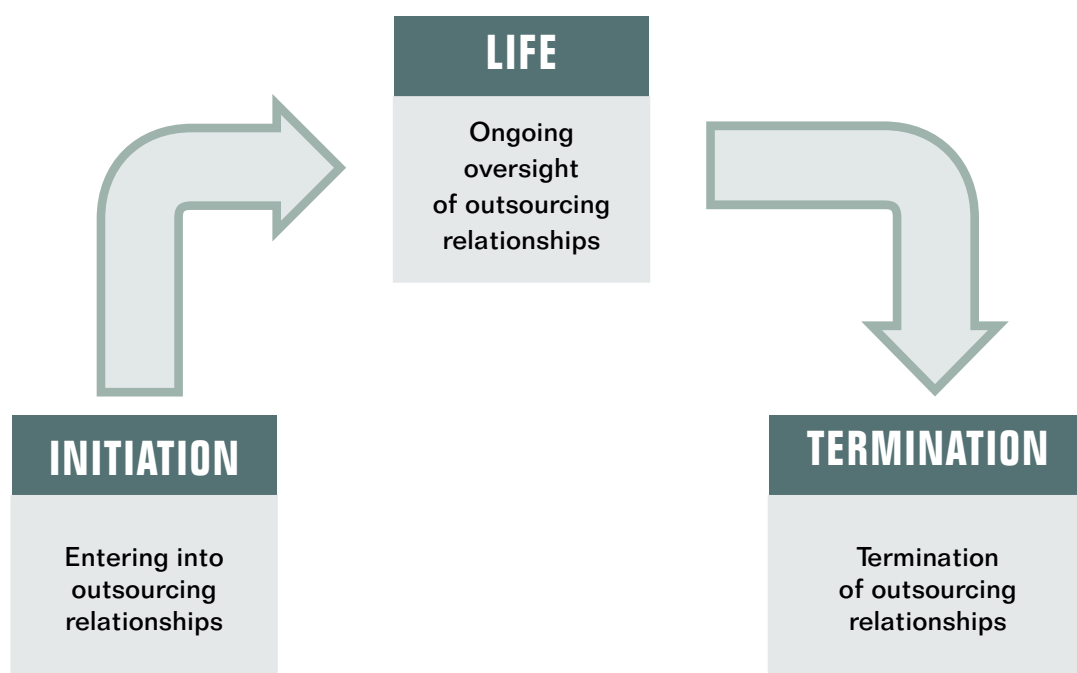
Different requirements should be set by the ManCo when entering into, monitoring or terminating outsourcing relationships depending on the classification of an outsourcing relationship.

The principles set out below are aimed at material outsourcing relationships. The standards described can also serve as a guideline when entering into non-material outsourcing relationships. A ManCo may simplify the requirements, where, due to the nature of the outsourcing relationship, there are specific reasons to do so.

<sup>3</sup> See also MiFID definition of 'critical and important operational function'

## Life cycle of an outsourcing relationship

Any outsourcing relationship can be characterised by three distinct phases.





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## 1 Initiation phase

All delegations should be subject to appropriate due diligence (prior to the delegation) and legal documentation (in the form of a signed agreement).

### 1.1 Viability of outsourcing

When planning to outsource activities of a ManCo, the ManCo has to analyse whether the activity should be outsourced based on an analysis of the risks associated with the outsourcing and taking into consideration other aspects such as cost benefits and data secrecy. Consideration should be given as to whether client and/or regulatory approvals will be required for the outsourcing. This may be particularly the case if the delegate is located in another jurisdiction. The ManCo may wish to consider discussing potential outsourcing arrangements with their regulators at an earlier stage. Agreement in principle to the outsourcing of a function should be given by the Board or Directors of the ManCo prior to detailed due diligence being performed on potential delegates.

### 1.2 Selection of potential delegates

It is the responsibility of the Board of the ManCo to ensure that only delegates who are suitably qualified and have the required level of professional expertise are appointed to perform functions on behalf of the ManCo. Having identified a selection of service providers who meet these requirements it is good practice to request the completion of a “Request for Proposal” (RFP) in order to identify a list of candidates on whom detailed due diligence will be completed.

### 1.3 Due diligence

The objective of a due diligence process is to determine whether, having regard to the functions to be carried out by the delegate, the potential delegate can be considered as qualified and capable of undertaking the outsourced functions.

The use of a due diligence questionnaire enables an assessment of the qualification and capability of the delegate and its

adherence to regulatory and other business requirements. A non-exhaustive list of items that may be considered as part of the due diligence process is included as Appendix III.

The due diligence process should be documented by the ManCo. The Board of the ManCo should approve the final selection of a Delegate.

### 1.4 Legal agreement

The relationship between the ManCo and the delegate should be governed by a legal agreement duly signed by both parties.

Particular attention should be paid to the clauses in the agreement that detail the liability of the parties. The ManCo should consider carefully, with their legal advisor, whether the potential damage to their business resulting from none, or erroneous, performance by the delegate is adequately covered.

A non-exhaustive list of items to be considered and included in a contract is outlined in Appendix IV.

### 1.5 Service Level Agreement or Operating Memorandum

Besides the legal agreement, it is recommended to further detail the service scope in an additional Service Level Agreement (SLA) or Operating Memorandum (OM) to be entered into with the delegate.

The SLA/OM shall serve to provide further details on the services, rights and obligations, as well as to define the responsibilities and process interfaces of the outsourcing relationship.

The SLA/OM may document further guidance in relation to:

- Operational details
- Cut-off times
- Agreed escalation process/penalty regime (if service levels are not met)
- Annual review of SLA/OM
- KPI/KRI
- Reporting content and frequency

# guidance paper for the risk monitoring of functions outsourced/delegated by a management company or investment company

## 2 Life phase - Ongoing delegate monitoring

### 2.1 Introduction

The Board of Directors of the ManCo is ultimately responsible for ensuring that an effective monitoring system is in place for all outsourcing arrangements.

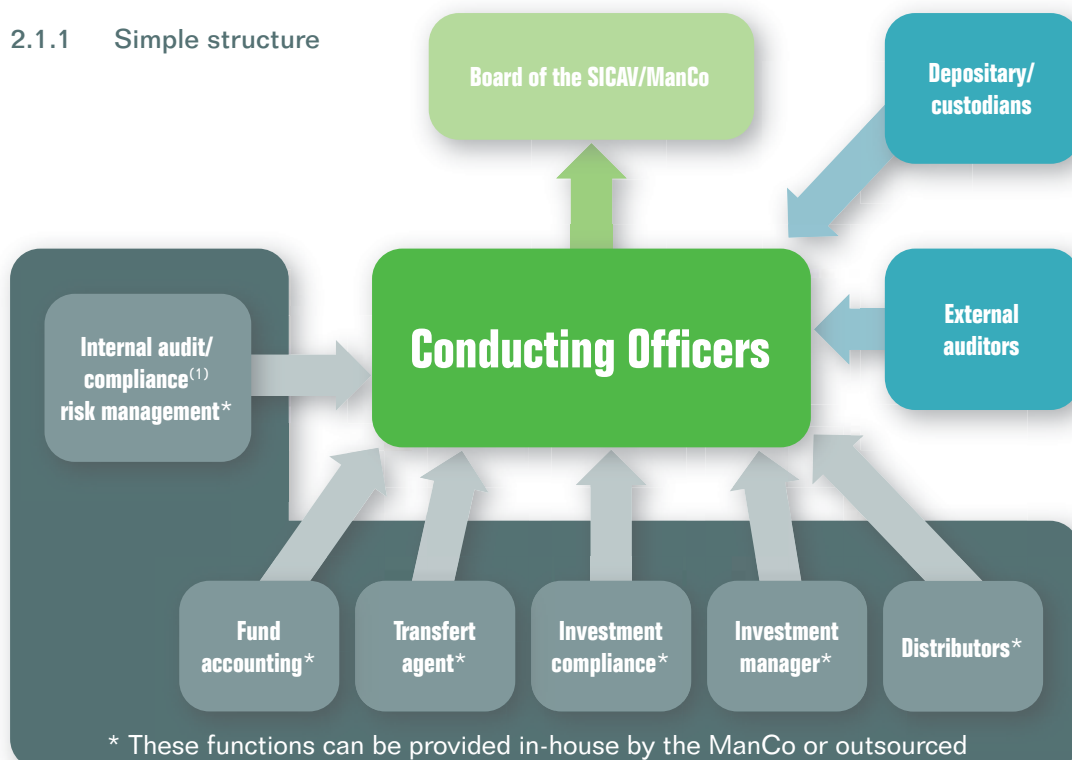
Ongoing monitoring of the Delegate is required to assess the standard of performance of the delegate, their continuing adherence to all regulatory requirements and in general to effectively supervise the outsourced relationship and manage the risks associated with the outsourced function.

It is important to clearly define within the ManCo the responsibilities in relation to the outsourced functions, i.e. to define who in the ManCo is taking care of the day-to-day oversight of the delegate for each outsourcing relationship.

The structure and governance of the ongoing monitoring of delegates may vary depending on the structure of the ManCo (e.g. size, internal organisation, degree of risk involved in the delegated activity, etc.). In all cases it is crucial that the conducting persons (CP), to whom the investment company or management company's Board has entrusted the day-to-day operation of the Fund receive regular reporting on the delegated functions. In turn the CP (or their delegates) report to the Board of the SICAV and management company.

Below are examples of the structure that could be put in place, depending on the size and sophistication of the ManCo.

#### 2.1.1 Simple structure

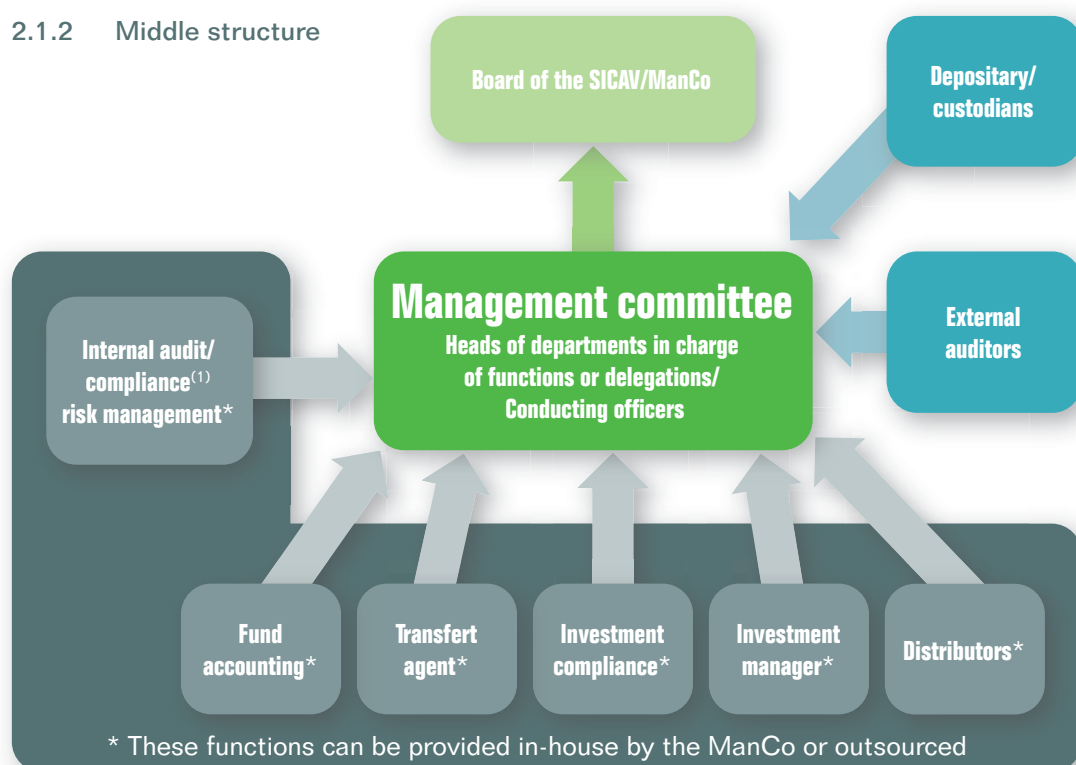


<sup>1</sup> However, a management company providing, in addition to collective portfolio management, one or more other services as referred to in Article 101 (3) of the 2010 Law may not delegate the compliance function. It should be remembered that, in accordance with item 5.4.9. f) of Circular IML 98/143, a management company having one or more branches is not authorised to use an external expert specialised in internal audit. This management company shall therefore have its own internal audit department on a permanent basis.

In this model the CP receive information directly from the service providers, and perform their own controls and reviews. The CP should meet regularly (i.e. monthly) to review such reports and agree actions, directions as fit. On a quarterly basis (at minimum)

they would report to the Board. Depending on the structure and remit given by the Board, the CP may also require reporting from the custodian and be the first point of contact for the external auditors.

### 2.1.2 Middle structure



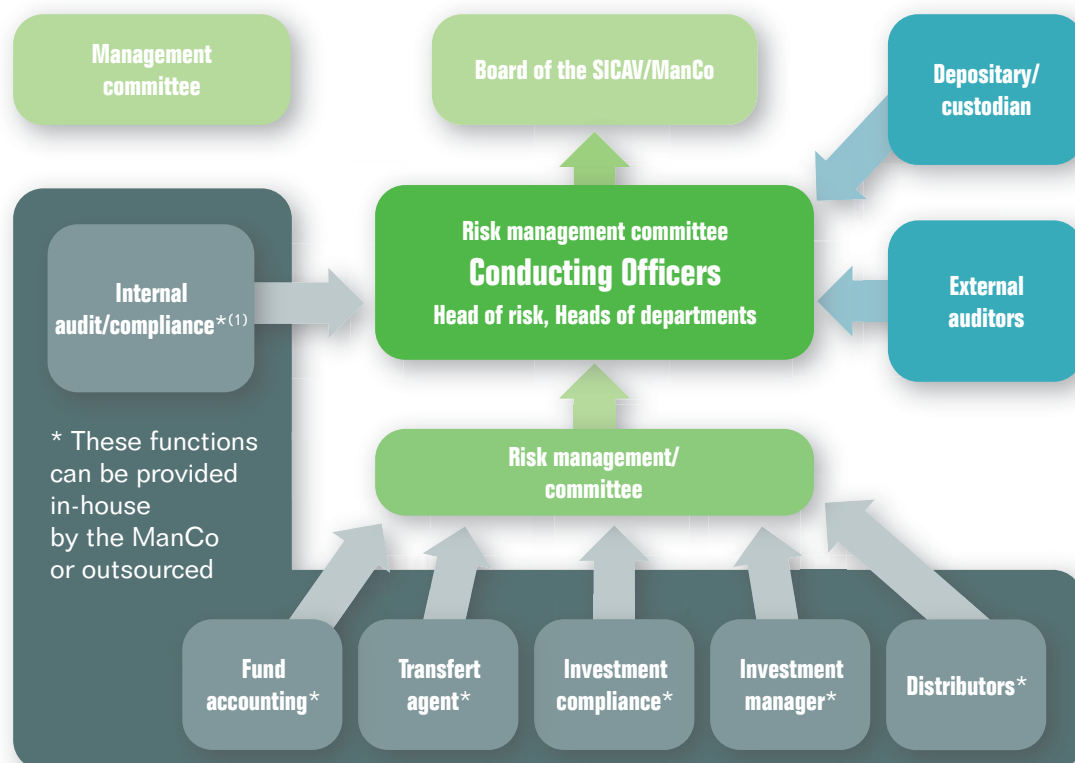
<sup>1</sup> However, a management company providing, in addition to collective portfolio management, one or more other services as referred to in Article 101 (3) of the 2010 Law may not delegate the compliance function. It should be remembered that, in accordance with item 5.4.9. f) of Circular IML 98/143, a management company having one or more branches is not authorised to use an external expert specialised in internal audit. This management company shall therefore have its own internal audit department on a permanent basis.

In this structure the responsibility for ongoing delegate monitoring and reporting is that of the different department heads that would be in charge of the delegated function, either directly or indirectly. The Management Committee (or similar) which would be comprised of, for example, the CP and heads of departments will meet regularly (i.e. monthly) to review such reports, to agree actions and to provide directions as necessary. On a quarterly basis (at minimum) the CPs would report to the Board.

Responsibility for interface, on behalf of the SICAV Board, to the custodian and external auditors is often given to specific departments who will report to the CP.

# guidance paper for the risk monitoring of functions outsourced/delegated by a management company or investment company

## 2.1.3 Sophisticated structure



<sup>1</sup> However, a management company providing, in addition to collective portfolio management, one or more other services as referred to in Article 101 (3) of the 2010 Law may not delegate the compliance function. It should be remembered that, in accordance with item 5.4.9. f) of Circular IML 98/143, a management company having one or more branches is not authorised to use an external expert specialised in internal audit. This management company shall therefore have its own internal audit department on a permanent basis.

The sophisticated structure is likely to have an independent risk management department which is in charge of ensuring that the proper risk framework is in place and that reporting to the CP and/or the Board is produced. In addition, a specific committee, for example a risk management committee may be appointed to specifically review risk issues on a regular, i.e. monthly basis.

### 2.2 Monitoring

The oversight approach needs to assure compliance with regulatory, and the ManCo's risk management, requirements. The level and detail of the ongoing monitoring should be derived from a risk assessment of the outsourcing relationships (e.g. material outsourcing relationships vs. non-material outsourcing relationships).

There is no one single standard to be applied for oversight of outsourcing relationships but rather a range of activities including reporting, meetings and visits. Appendix V provides a

non-exhaustive list of the tools that the ManCo may apply to fulfil monitoring requirements. The ManCo should ensure that procedures are established for the ongoing monitoring and periodic assessment of the delegate's ability to provide the delegated services.

A documented escalation procedure should exist to ensure that issues identified as part of the monitoring processes are promptly advised to the CP and, as appropriate, to the ManCo Board for review and action.

### 2.3 Reporting

Reporting on outsourcing relationships and the related controls performed by the ManCo should be provided on a regular basis to the responsible person/committees (depending on the internal structure of the ManCo).

Reporting is basically at two levels:

- agreed regular reporting from each delegate to the CP or other function within the ManCo that is responsible

- for the oversight, and
- periodic reporting from the CP, or other functions, to the management committee and subsequently to the Board of the ManCo.

Regular reporting on outsourcing risks may include:

- Any regulatory breaches and other issues such as; advertent/active investment breaches, NAV errors, illiquid securities, pricing or valuation issues, unsatisfactory KPI/KRIs, etc.;
- Information on material outsourcing risks identified, proposed mitigation measures, current status of follow-up;
- Information on new and terminated outsourcing relationships;
- Information on risk and quality assessments for material outsourcing relationships;
- Information on outsourcing risk oversight framework;
- Results of the monitoring process of delegates.

The frequency of regular reporting on outsourced functions to the CP should be at least monthly. It is unlikely that less frequent reporting would enable the CP to fulfil their responsibilities.

The CP should escalate immediately to the Board any significant or critical issues that have occurred within the functions handled by delegates.

A non-exhaustive list of possible KPI/KRIs is included in Appendix VI.

Any meetings held to review the results of the monitoring process and issues arising should be minuted and action points followed up regularly through an updated action list. Representatives of the Delegates should be invited to attend meetings at regular intervals.

CP should report to the Board of the ManCo at least on a quarterly basis. If the Board meets less frequently it is suggested that at least a report is sent regularly to the attention of the Board. Additionally a conference call may be held with representatives or delegates of the Board to review the report.

### 3 Termination phase

If an outsourcing relationship is terminated, either by the ManCo or the delegate, the Board of the ManCo must decide whether to:

- Bring the function back in-house;
- Appoint a new Delegate; or
- Discontinue the function as it is no longer required.

The termination of an outsourcing relationship has to be duly managed by the ManCo to ensure a continuance of the services of the ManCo. Consideration must be given to the fact that in the case of the delegation of specific material functions the regulator of the ManCo may not permit an agreement to be terminated until a new delegate has agreed to take on the function.

If notice to termination the agreement has been given to a Delegate based on unsatisfactory performance the ManCo must closely manage the potential impact to the business during the termination process.

Where the decision is taken to appoint a new Delegate the process as documented in the Initiation Section of this document should be followed.

In all cases specific attention should be paid to the following points:

- How will the ManCo ensure continued access to records, both hardcopy and IT systems, covering the period of the outsourcing relationship with the Delegate? Will all data retention and data privacy requirements as established by the laws of the ManCo and the delegates jurisdictions, where these are different, be observed.
- Has the continued liability of the Delegate for actions taken during their period of appointment been established in a legally binding agreement?
- What level of commitment is there for the retiring delegate to work with the ManCo and any new delegate to ensure a smooth transition of responsibilities?
- The ManCo may wish to consider the involvement of the external auditors in the validation of transferred activities particularly with regard to the reconciliation of account balances and assets.

# guidance paper for the risk monitoring of functions outsourced/delegated by a management company or investment company

## Appendices

### Appendix I – Examples of material outsourced functions

- Investment management
- (Fund) Administration
  - legal and fund management accounting services
  - client inquiries
  - valuation and pricing (incl. tax returns)
  - regulatory compliance monitoring
  - maintenance of unit-holder register
  - distribution of income
  - unit issues and redemptions
  - contract settlements (including certificate dispatch)
  - record keeping
- Tax services (e.g. German Tax)
- Marketing and distribution, including the handling of complaints
- Risk management
  - Portfolio risk management (calculation and monitoring)
  - Other Aspects of RM
- Compliance function or processes (e.g. investment restriction monitoring)
- Internal audit function
- IT and Infrastructure (including DR site)
- Client reporting (including statements, contract notes, shareholder mailings)
- Translation services
- Domiciliary agent
- Complaints treatment

### Appendix II – Example “Baseline risk assessment for outsourced services”

ManCo to define assessment categories (for risks in relation to delegated function and delegate company) and ranking method (e.g., low, medium, high)

Outsourced function [brief description]	Delegate company	Responsible specialist department/ business owner/ Conducting Person [ManCo level]	Risk related to delegated function						Risk related to delegate company				TOTAL risk assessment	
			Financial risk	Reputational risk	Regulatory risk	Impact on continuance of service	Extent of outsourcing for ManCo	[...]	Amount and significance of errors with outsourcing company (historic)	Risk management/ Compliance/Internal audit framework Audit results	Outsourcing company Risk re regulation status	[...]		
Fund administration														
Fund accounting/ Valuation	ABC Company S.A.	Ops department	Medium	Medium	Medium	High	High		Low	Low	Low		Medium	

Scoring card to define ranking basis for each category

Total risk assessment to classify outsourcing relationship

SCORING CARD							
CATEGORY	LOW	MEDIUM	HIGH	CATEGORY	LOW	MEDIUM	HIGH
Risk related to outsourced function				Risk related to outsourced function			
Financial risk	description of low risk threshold	description of medium risk threshold	description of high risk threshold	Amount and significance of errors with outsourcing company	description of low risk threshold	description of medium risk threshold	description of high risk threshold
Reputational risk	description of low risk threshold	description of medium risk threshold	description of high risk threshold	Risk management/ compliance/Internal audit framework audit results	description of low risk threshold	description of medium risk threshold	description of high risk threshold
Regulatory risk	description of low risk threshold	description of medium risk threshold	description of high risk threshold	Outsourcing company Risk re regulation status	description of low risk threshold	description of medium risk threshold	description of high risk threshold
Impact on continuance of service	description of low risk threshold	description of medium risk threshold	description of high risk threshold	[...]	description of low risk threshold	description of medium risk threshold	description of high risk threshold
Extent of outsourcing for ManCo	description of low risk threshold	description of medium risk threshold	description of high risk threshold				
[...]	description of low risk threshold	description of medium risk threshold	description of high risk threshold				

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### Appendix III – Items to be considered within due diligence process

The following items can be seen as a set of items to be considered during a due diligence process:

- Holds necessary licences/regulatory approvals
- On-site visit(s)
- Financial assessment
- Medium/long term business viability and dependency of outsourcer on key/dominant clients
- Controls review (including SAS 70 if applicable)
- Insurance coverage
- Capabilities and capacity (consider existing clients)
- References from existing clients
- Potential conflicts of interest (consider existing clients)
- IT (medium/long term viability and scalability of technology solution (vendor) used as well as BCP)
- Risk management function
- Internal & external audit reports
- Perform additional legal review if work is performed offshore
- HR issues (particularly if staff are to be transferred)

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### Appendix IV – Items to be considered for an outsourcing agreement

The following list of items shall be considered/ reflected in a contract with a delegate:

- Services covered
- Services not provided
- Giving & receiving instructions
- Fees & expenses
- Representations
- Liability clauses
- Right to audit
- Term and termination rights
- Intellectual property
- Confidentiality/data protection
- Force majeure provisions
- Business continuity
- Sub-delegation
- Reporting requirements

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### Appendix V – List of common tools for ongoing monitoring of outsourcing relationships (non-exhaustive list)

- 1 Review of SAS 70 and other control/audit reports
  - Internal audit
  - External audit reports (such as SAS 70)
- 2 Questionnaire/annual review
- 3 Review of KPI/KRI
  - Statistics
  - Reconciliations – number and value of outstanding items
  - Missed deadlines
  - Error rates
  - Non-Standard pricing
  - Accounts opened & closed
  - All figures provided year on year and month on month
  - All Figures provided in comparison to target performance
- 4 Service review meetings
  - Agreed agenda
  - Previous period's service level (Performance against SLA/D)
  - Issue log (including any errors)
  - IT issues (including any fixes or enhancements)
  - KPIs
  - Project pipeline
  - Frequency
  - Right level of participation
- 5 On-site visits
  - Agreed frequency at least annual
  - Meetings with key personnel
- 6 Reviews of internal control framework
- 7 Regular day-to-day oversight controls

## guidance paper for the risk monitoring of functions outsourced/delegated by a management company or investment company

### Appendix VI – Examples of KPI/KRI for asset management functions

This table presents a non-exhaustive list of Key Performance Indicators (KPI) and Key Risk Indicators (KRI) applicable to asset management activities.

It is based on the loss event type classification defined by the Basel Committee on Banking Supervision for the identification of operational risk.

Management companies should read this table either from the "Business line" column entry or from the "Category" column entry (people, process or system) and identify the applicable performance and risk indicators for their business and outsourced functions.

Business Line	Process	Risk	KRI	Category
<b>Corporate Level/Structure</b>				
	Employment practices and workplace safety (HR/facility management)	1. Impact of compensation, benefit, discrimination and termination issues 2. General liability (slip and fall etc.)	Number of pending lawsuits/claims against company	People
			Number of potential lawsuits/claims against company	People
			Monetary value of pending/potential items	People
	Facility management/HR	Natural disaster losses	Historic figures vs. actual figures	Process
		Human losses from external sources	Specific patterns of events	Process
	Business disruption and system failures	Breakdown of business/communication or production process	Number of system failures identified and resolved	System
			Recurrence of specific failures	Process
			Severity of IT issues	System
	All (fraud risk)	Risk of noncompliant bribes/kick backs		People
		Hacking damage/Theft of information	Number of hacking attempts/cases	System
			Monetary value of losses from hacking activities	System
		Theft/Fraud/Forgery	Number of events/number of fraud attempts	Process
			Monetary losses from events	Process
	Outsourcing (oversight)	Failure to perform oversight responsibilities for outsourced functions	Turnover of the employees	Process
			Press coverage	Process
			Profit/loss figures	Process
			Investments realised/Budget dedicated to projects	Process



Business line	Process	Risk	KRI	Category
<b>Investment management</b>				
	Portfolio analysis	Violation of ethical standards (insider dealing, market abuse)	Number of violations	Process
		Conflict of Interest	Number of conflicts logged/ approval obtained	People
	Investment decision	Breach of regulatory and other mandatory guidelines	Number of active breaches	People
			Monetary impact of breaches	Process
			Number of passive breaches	Process
		Disputes over performance of advisory activities	Number of complaints and value of claims	People
	Disclosure of information to clients	Unequal treatment of clients	Number breaches of disclosure rules	Process
	Risk management	Breakdown of controls performed	Number of controls not executed	Process
<b>Administration</b>				
Transfer agent	Client order	Incomplete application AML/KYC	Number of accounts with incomplete KYC	Process
		Late trading	Number of exceptions from standard cut off times	Process
		Market timing	Number of suspicious transactions (monetary amount)	Process
		Incorrect processing (manual errors)	Number of revised trades	Process
			Monetary impact of revised trades	Process
		Incorrect/incomplete registration details	Number of dormant accounts	Process
			Number of accounts with missing legal documentation	Process
	Electronic dealing	IT risk (SWIFT)	Number of incorrect/revised electronic trades	System
	Reconciliations/collection accounts	Accounts are not accurate	Material items > X days old	Process
		Unsettled subscriptions	Number of unsettled subs > X days	Process
		Returned redemptions	Number of returned transactions	Process
			Monetary value of returned transactions	Process
	Cash flow reporting to portfolio manager	Material overdrafts/active breaches	Number/amount of overdrafts	Process
		Reporting is late or inaccurate	Number of days target times not met	Process
			Number of days corrections required	Process
	Contract Notes/client reporting	Client complaints	Number of complaints received	People
			Number of late submissions	Process
	Commission payments	Incorrect payments to distributors	Number of payments reissued	Process
	Client payments	Claims from clients	Losses from incorrect payments	Process

## guidance paper for the risk monitoring of functions outsourced/delegated by a management company or investment company

Business line	Process	Risk	KRI	Category
	All	Data privacy	Number of breaches reported	Process
			Number of complaints linked to data privacy	Process
	All	Fraud	Number of events occurred	People
			Number of events prevented	People
			Monetary impact of fraud cases	People
Investment operations	Security pricing	Use of stale prices	Prices unchanged > X days	Process
		Breakdown of external price feed	Number of such events	Process
		Incorrect feed from external vendors	Number of such events	Process
		Illiquid/unquoted securities	Number of illiquid positions	Process
			Share write off's	Process
			Number of defaulted securities	Process
			Monetary Impact of write off/ defaults	Process
		Broker provided prices		Process
	Trading	Trades place incorrect in system	Number of revised/failed trades	System
			Financial loss on trades	System
		Use of non-approved counterparties	Number of deviations from Counterparty list	Process
		Breach of best execution policy	Number of complaints	Process
			Number of exceptions reported	Process
	Settlement	Incorrect settlement of trades	Financial loss from incorrect settlements	System
		Backlog of trade reconciliation	Settlements O/S > X days	Process
	Corporate actions	Accounts not accurate	Number of O/S dividend payments	Process
	Asset reconciliation	Accounts not accurate	Number of material items O/S > X days	Process
			Monetary value of O/S items	Process
	Collateral management	Collateral management failure	Number of incorrect booking entries	Process
	Asset reconciliation	Accounts not accurate	Number of Material items O/S > X days	Process
			Monetary value of O/S items	Process
	Collateral management	Collateral management failure	Number of incorrect booking entries	Process
	Fee calculation	Incorrect set up of performance fee calculation model	Number of revised fee statements	Process
			Fee accrual errors	Process
Fund accounting	NAV calculation	Financial/reputation risk arising from material NAV errors	Number of NAV material NAV errors	Process
			Monetary impact of errors	Process

Business line	Process	Risk	KRI	Category
		Frequent immaterial NAV errors	Number of NAV errors <10%	Process
		Incorrect application of swing pricing	Number of recalculated NAVs	Process
	NAV release process	Risk of incorrect/late price release	Number of incidents	Process
	Tax reporting	Submission of incorrect figures/claims	Number of calculation/submission errors	Process
			Monetary impact of reporting errors	Process
<u>Performed on behalf of the SICAV Board</u>				
Depository	Safeguarding of assets		Number of sub-custodians	Process
			Appointment of new sub-custodians	Process
			% of assets transferred to sub-custodian	Process
			% of assets not held with the main custodian	Process
<b>Distribution</b>				
Marketing	Preparation of marketing material	Misinformation of current/prospect clients	Number of client complaints	Process
		Errors in translations	Number of errors identified post internal reviews	Process
		Incorrect factsheets	Number of errors identified post internal reviews	Process
		Failure to comply with local regulations	Number and monetary impact of compliance breaches	Process
Sales	Distributor on boarding	Inadequate due diligence	Number of accounts affected	Process
		Incomplete AML/KYC	Number of accounts affected	Process
		Missing legal agreements	Number of accounts affected	Process
	Client on boarding	Misselling of products/services	Number of serious clients complaints	Process
		Incorrect set up of electronic controls for client orders	Number of incorrect transactions not suitable for the client/Losses from correction	System
		Incomplete Legal documents	Number of accounts affected	Process
		Incomplete AML/KYC	Number of accounts affected	Process
		Client permissions/disclaimers missing	Number of cases identified	Process

**ALFI industry work paper -  
collateral management**

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### Update on regulations and market

#### Regulation

The market turmoil since early 2008 and the failure of Lehman Brothers have raised particular anxiety in relation to counterparty risk. Regulators have increasingly called for major efficiency improvements in the credit default swap market to reduce systemic risk. The industry will be required to take further steps to limit the domino effect of lagging and uncertain post-trade processes in the event of a counterparty default or failure. This includes the use of legally enforceable netting and master collateral agreements between counterparties where possible.

In July 2010 the OTC derivatives market in the United States experienced significant regulatory change as the Dodd-Frank Financial Reform Bill was passed. From July 2011, swap dealers as well as major swap participants are required to comply with significant new regulatory requirements, including mandatory clearing, exchange trading, reporting, business conduct standards, and enhanced segregation and margin requirements. Moreover the CFTC/SEC are obliged to define rules and definitions governing qualified institutions as well as OTC derivative types requiring central clearing by July 2011. It is expected that a vast majority of OTC derivative transactions will require a central counterparty (CCP), however, a robust bilateral market will remain, e.g. for swaps too complex or illiquid to be cleared by a CCP.

In contrast to the United States much of the European legislation has yet to be finalised. In October 2008 the European Commission called upon the financial industry to reduce the risks inherent in the credit default swaps market, in particular by moving the clearing of the contracts onto European CCPs. CCPs are intended to allow for greater transparency on the one hand and on the other hand by acting as central clearer mitigate credit risk in order to allow greater stability of the financial system. In July 2009 the Commission announced that credit default swaps relating to European entities and indices based on these entities started clearing through CCPs regulated in the EU. Three European CCPs

(ICE Clear, Eurex Clearing and LCH.Clearnet) have obtained the necessary regulatory approvals and have begun to clear credit default swaps. Indeed, the CDS clearing through CCPs is still in a start-up phase, but due to the current policy sentiment within the EU, a rise in centralized CDS clearing can be expected. In order to monitor the rollout of the central CDS clearing the European Commission has set up a working group, involving dealers, the buy-side (e.g. asset managers, banks and insurance companies), CCPs and supervisors.

In July 2010 the Committee of European Securities Regulators (CESR) published its guidelines on risk management and the calculation of global exposure and counterparty risk for UCITS (CESR/10-788), which have considerable impact with respect to the credit risk calculation method. Additionally, emphasis has been put on the use of collateral for counterparty risk mitigation subject to distinct requirements to be fulfilled (e.g. liquidity, valuation, correlation, safekeeping, enforceability, operational risks, etc.).

As of 15 September 2010, the European Commission has put forward the European Markets Infrastructure Regulation for consideration and co-decision by the European Council and Parliament. Key elements of the proposal include mandatory reporting of all OTC derivative positions to the EU regulators, mandatory clearing of “standardised” OTC derivatives, and reduction of operating risk through automation and standardisation CDS clearing through regulated CCPs.

#### Market

Since the financial market crises and the above depicted rise in regulatory requirements the financial services industry has focused its attention towards active counterparty risk management. A recent study conducted by TowerGroup found that counterparty risk exposure was the second most frequently cited driver of operational improvement at the OTC derivative market participants surveyed; over 60% of respondents indicated that it is a major risk focus. Consequently,

market participants focus attention on the use and proper management of collateral to mitigate counterparty risks arising from transactions such as securities lending, repurchase agreements and OTC derivatives. An example of the industry focus on improvements is the recently best practices for the OTC derivatives collateral process, published ISDA (the International Swaps and Derivatives Association). These best practices for the collateral process summarise key elements of the previous ISDA publications (e.g. standards for the electronic exchange of OTC derivative margin calls) aiming to increase prudent practice.

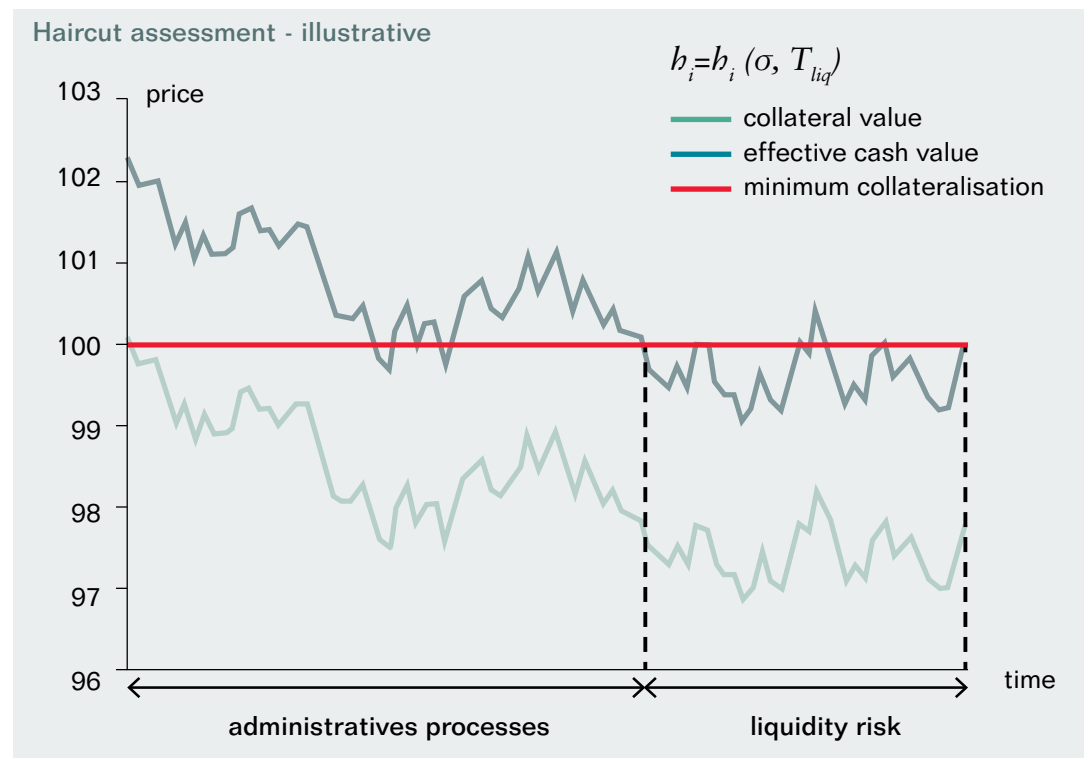
Moreover market statistics reflect the growing demand and importance of counterparty risk mitigation by using collateral

management. The estimated amount of collateral in use in connection with over-the-counter derivatives transactions grew from \$2.1 to almost \$4.0 trillion during 2008 (a growth rate of 86%). The OTC derivative exposure covered by collateral amounted to around 66%, whereas around 83% of the collateral was cash followed by government securities used as collateral (around 9% of collateral received and around 15% of collateral delivered). Furthermore the significant use of cash and government securities as collateral (around 95%) confirms a trend towards reducing collateral complexity as both types of collateral simplify collateral management tasks such as the collateral processing, reconciliation, valuation, etc.

**Collateral management in the context of UCITS and UCITS management companies**

The CSSF Circular 07/308 addresses practical issues regarding collateral usage as a technique to mitigate counterparty risk and it requires that leverage generated through the reinvestment of collateral in the context of repurchase transactions or the lending/borrowing of securities must be taken into account for the

determination of the UCITS global exposure. There is no possibility for UCITS to positively affect the probability of default for OTC counterparties. However, the loss arising out of the default risk can be reduced through the use of collateral as it provides additional protection in such event.



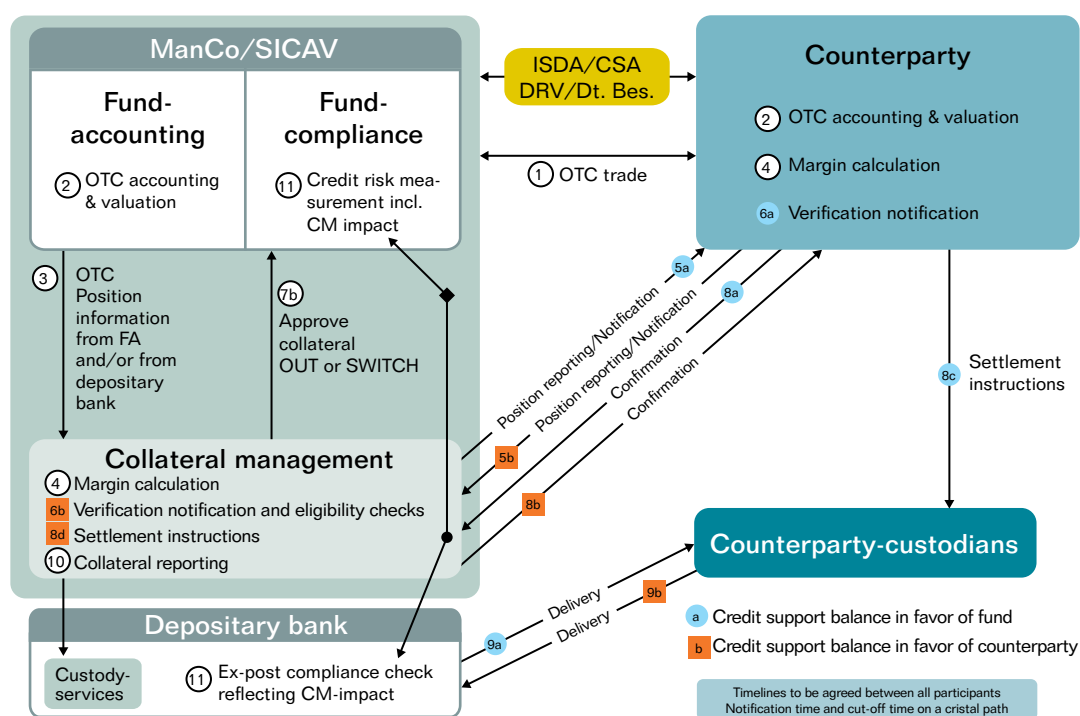
Counterparty credit risk is thus reduced, but replaced by the full range of risks related to the collateral management process: these are on the one hand financial risks related to the collateral itself and on the other hand operational risks as well as legal risks within related processes. To account for these risks and thus to measure the effective realisation value (in case of default), haircuts need to be applied for the valuation of collateral assets. For these haircuts to be meaningful, i.e. to assess the real level of protection, these haircuts need to reflect the variety of legal and operational factors, as well as correlation with the counterparty, the assets' volatility. Finally, the liquidity risk should be considered. Depending whether one needs to liquidate 0.1% or 200% of e.g. the average daily traded volume for a specific instrument, the proceeds of the collateral liquidation process will presumably be subject to considerable variations.

The CSSF Circular 07/308 requires UCITS and UCITS management companies to address the

risks resulting from collateral management through appropriate procedures and controls. The need for a sound infrastructure and organisation is restated by the CSSF Circular 08/356. Even though the extent of the CSSF Circular 08/356 is limited to securities lending, repurchase and reverse repurchase transactions, the application of these principles to other OTC transactions is considered a prudent administrative practice. However, the exact monitoring and supervision of collaterals, especially the permissibility of “non-segregated” collaterals held at the counterparty or the re-hypothecation of collaterals by the counterparty remain uncertain.

Different models can be set-up for collateral management purposes. The collateral management can be performed in-house by the management company or delegated/outsourced to a third party, typically the depository or other third party. For illustration purposes an exemplary process setup for each operating model is depicted below.

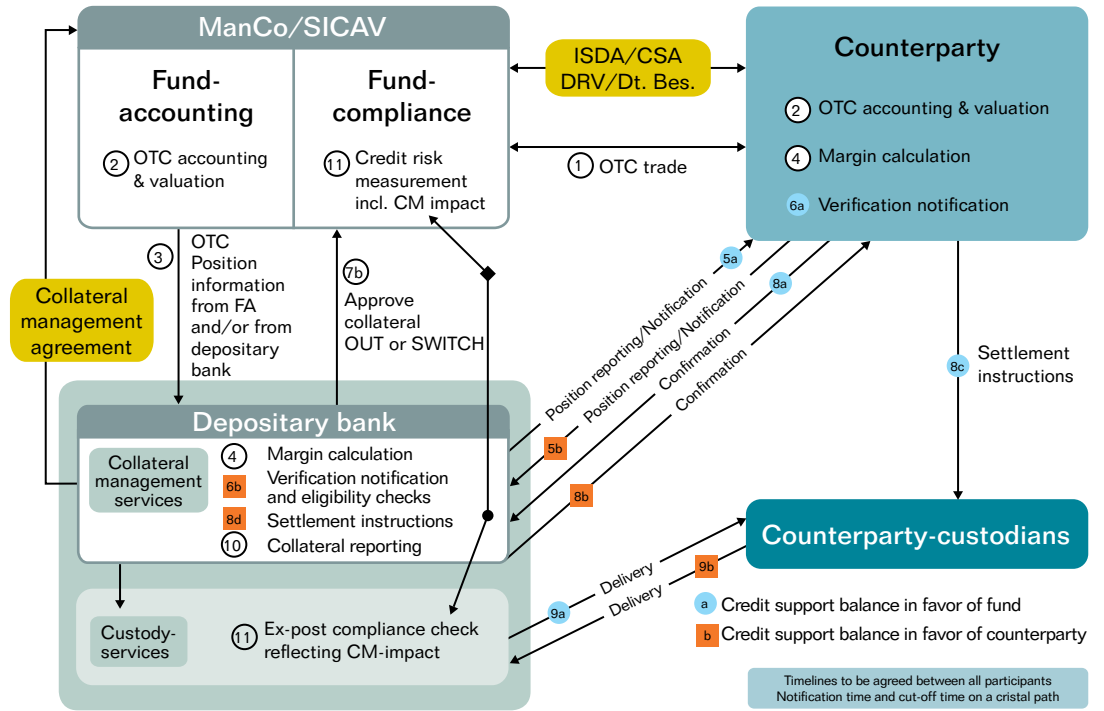
## 1 In-house



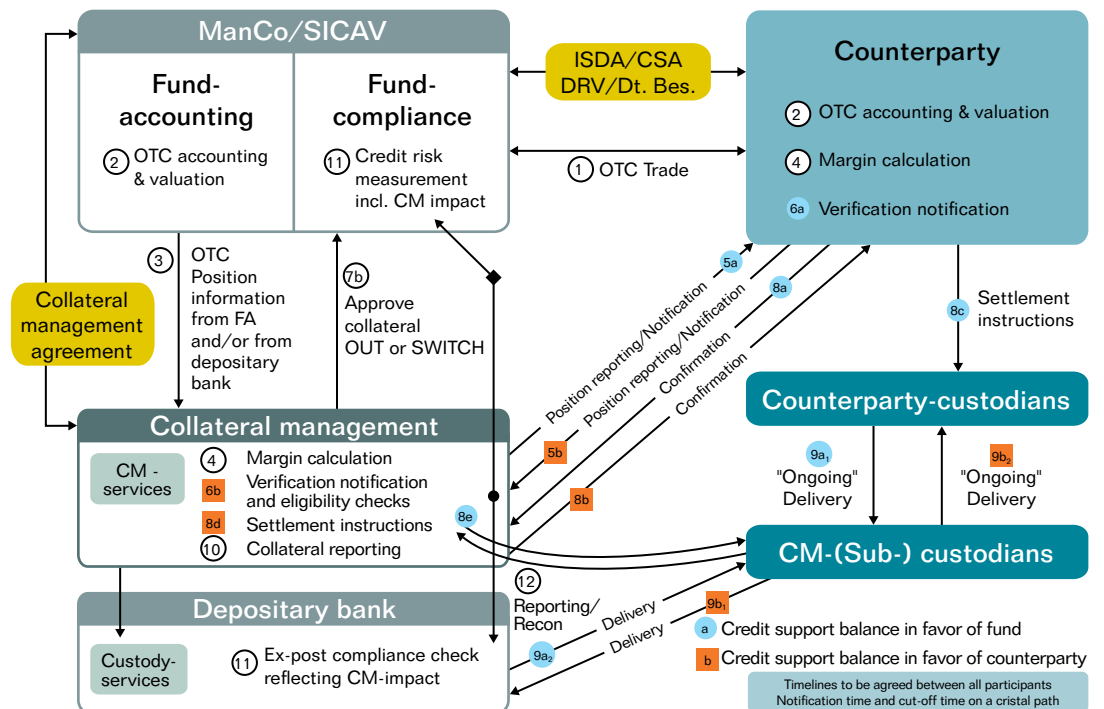


## 2 Outsourcing

### 2.1 Depository bank



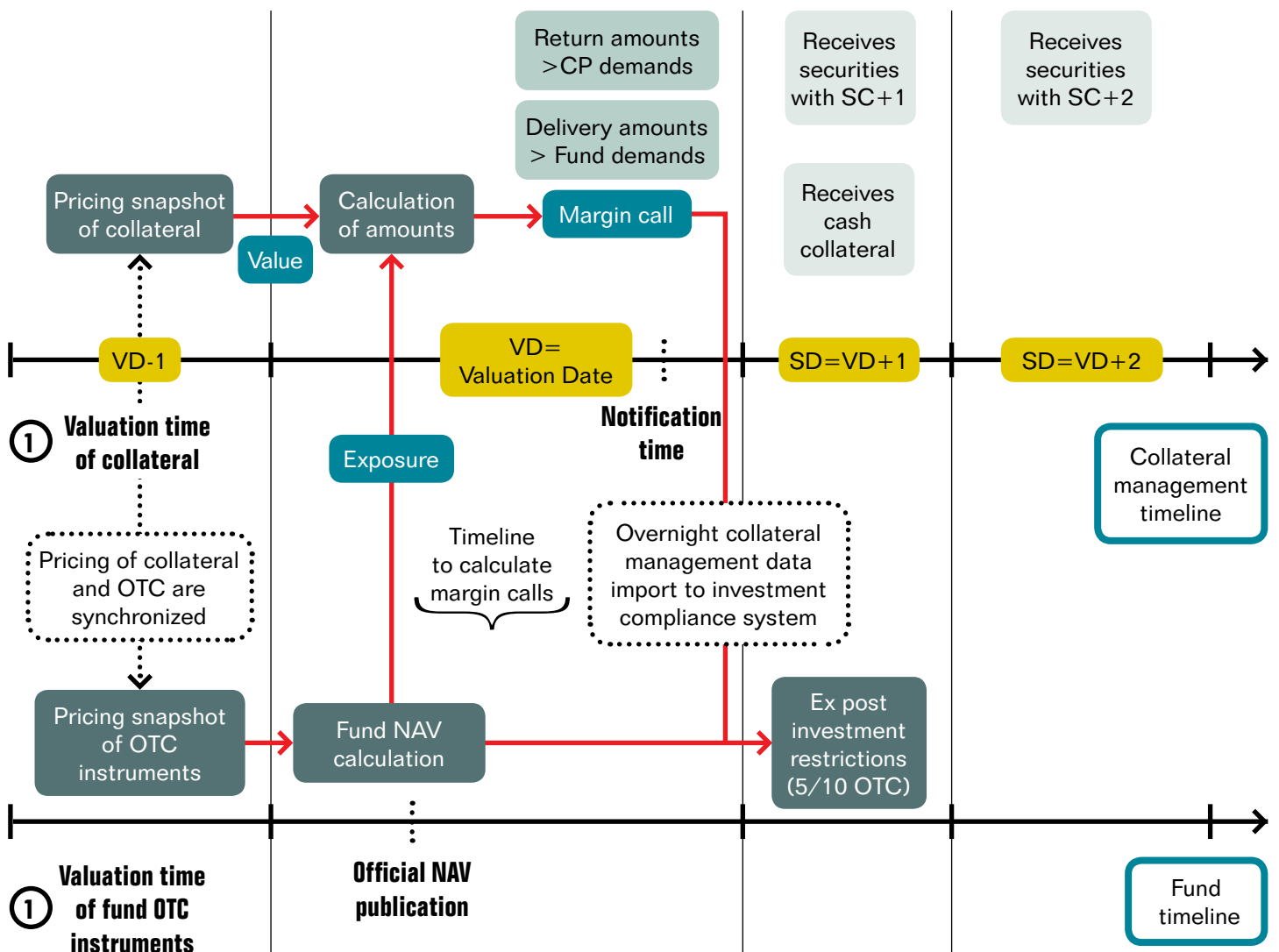
### 2.2 Other third party



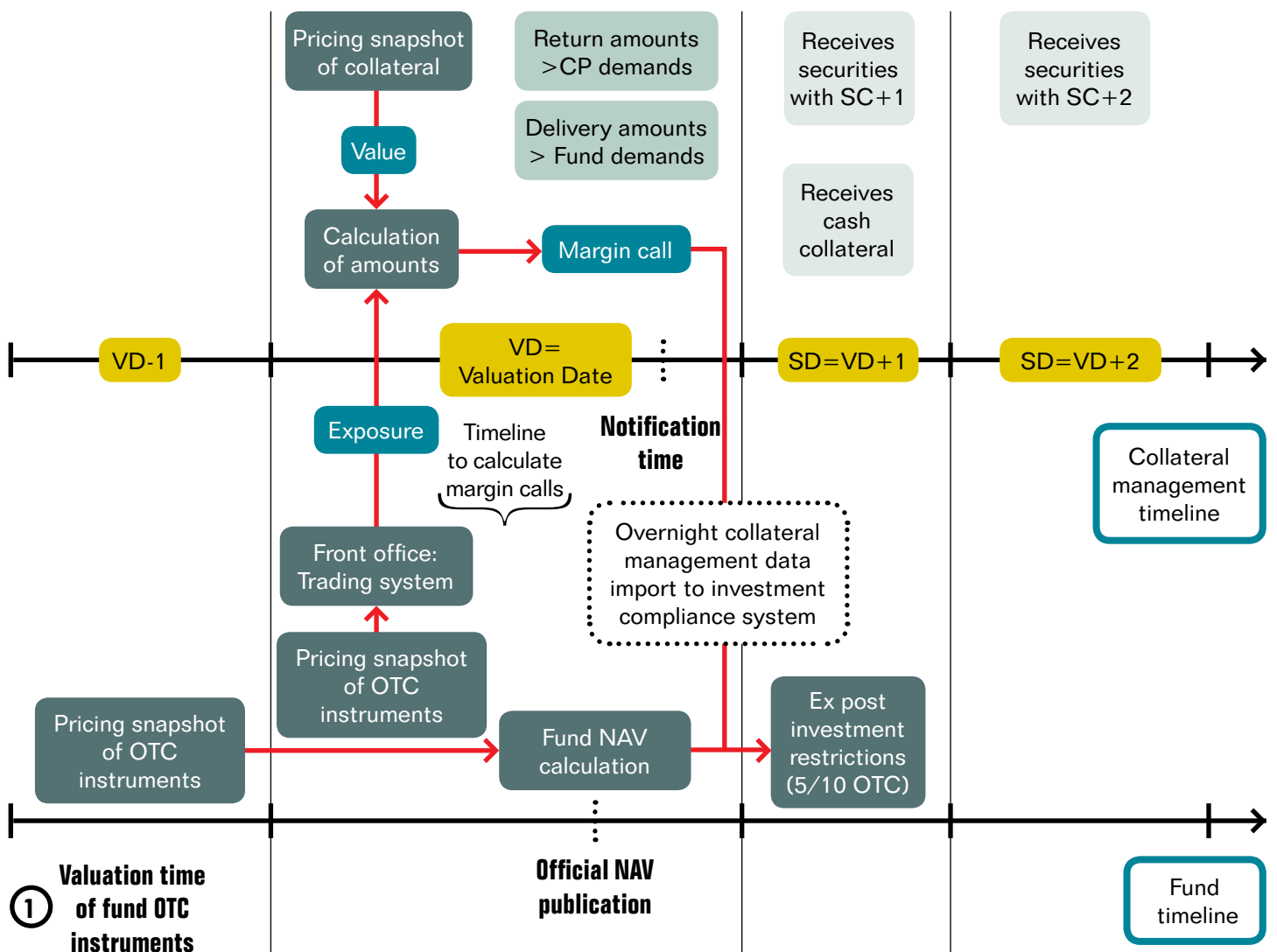
Generally the implemented collateral management process will depend upon the existing IT infrastructure, however automation (e.g. for collateral valuation, netting of exposures and margin calls) and adequate risk and exposure aggregation systems are strongly advocated. Collateral as a risk management tool should be integrated into the overall risk management framework. The operational challenge of managing collateral relates to tasks such as collateral processing (collecting and returning cash and other collateral, recalling and substituting collateral), mark-to-market valuation of collateral, assessment of relevant haircuts, collateral reconciliation, monitoring of collateral eligibility and the follow-up on disputes. Especially the accurate valuation

and haircut assessment of the OTC derivative position is crucial, as it ensures a precise calculation of the collateral coverage allowing for proper collateral management and effective counterparty risk mitigation. This valuation must be done by a unit independent from the counterparty, respectively the asset management department. Moreover, robust dispute resolution practices must be in place to address pricing discrepancies within the reconciliation process. Consequently timing and valuation method need careful consideration for OTC derivative positions collateral management. Below illustrative examples of two different setups for the timing of OTC derivative and collateral position valuation are depicted.

### 3 Synchronised setup



#### 4 Non-synchronised setup



As the objective of collateral management is to mitigate the counterparty exposure/risk, a non-synchronised setup offers the advantage of an intraday collateral management (i.e. no time lag), therefore allowing an exact matching of OTC derivative and corresponding collateral positions. On the other hand the synchronised setup allows matching OTC derivative and collateral valuations allowing for a consistent investment restriction.

#### 5 Legal challenges

The legal risks associated with collateral management are related to contractual risks in connection with master agreements (e.g. ISDA master agreement including Credit Support

Annex/Deed) and, in the case of delegation, collateral management agreements. Therefore a close collaboration with the portfolio manager and legal department is required to ensure an appropriate legal framework covering all collateral management tasks and responsibilities. Moreover a clear understanding of the contract terms (e.g. types of OTC derivatives covered by the agreements, definition of default events, etc.) is essential for an accurate legal set-up of the collateral management process.

The main other risks inherent to such process are:

- Concentration of collaterals with single "counterparty" (i.e. collateral manager);

- Valuation of collaterals and settlement cycle;
- Follow-up on disputes with counterparties;
- Segregation of collaterals from other holdings of collateral manager (in particular cash holdings).

The recommended controls to ensure a sound and efficient collateral management process are:

- Ensure timely and adequate information flow between organisational unit/entity responsible for contractual setup and organisational unit/entity involved in the ongoing collateral management process;
- Use standardised contractual framework;
- Apply consistent haircuts, which account for all risk-dimensions the collateral is exposed to;
- Define precisely the standard eligible collateral universe (e.g. cash: yes/no, security types, min. quality etc.);
- Apply consistent valuation principles (e.g. frequency, valuation time and source);
- Agree on consistent collateral exchange frequency - ensure practical viability;
- Define consistent thresholds/minimum transfer amounts/collateral selection hierarchy;
- Apply one communication standard
  - ideally allowing matching of instructions;
- Foresee exception handling scenarios and implement robust and proven escalation process, e.g.
  - extraordinary events in-between monitoring dates having a significant impact on contract/collateral value;
  - event of default.

### 6 Roles and responsibilities in case of outsourcing/delegation of collateral management

The previously-cited market trends and operational complexity of collateral management have caused a rise in outsourcing of collateral management by UCITS management companies. Nevertheless, as stated in Article 110 Section 2 of the Law 17 December 2010 the management company liability is not affected by the delegation of any functions.

If a UCITS management company plans to outsource the collateral management following preconditions set out in Article 110 Section 1 of Law 17 December 2010 clarified by CSSF Circular 03/108 have to be satisfied:

- notification of the CSSF in an appropriate manner, i.e.
  - detailed description of functions to be delegated as well as the measures available to the management company to monitor the outsourced duties;
- delegation/outsourcing does not prevent an effective supervision over the management company, i.e.
  - compliance with rules stated in Article 110 of the Law 17 December 2010 is ensured and can be monitored at any time by the management company;
- the management company has to implement measures to effectively monitor at any time the outsourced duties;
- contractual rights granting the management company discretionary powers as well as termination rights have to be agreed upon with the outsourcing provider;
- the outsourcing provider must be qualified and capable of providing the duties concerned;
- functions (CSSF may require specific outsourcing providers to be named) which the management company is permitted to outsource have to be disclosed in the UCITS' prospectuses.

In order to comply with the above-mentioned preconditions a management company has to perform a thorough due diligence before delegating collateral management duties. Particularly the requirement to implement measures in order to ensure a continuous and effective monitoring of the delegated functions necessitates the implementation of formal outsourcing controlling procedures. These procedures can be twofold:

(i) regular monitoring via reports from the collateral manager and (ii) spot checks complemented by an annual due diligence of the service provider based on internal documentation and external reports (e.g. SAS 70 control reports). Preferable the reports received from the collateral manager should include sufficient

information to monitor in particular the valuation of the assets or OTC positions and collateral assets, the collateral coverage, asset eligibility and open disputes (in case the collateral management has been contracted with this scope). Furthermore appropriate escalation procedures need to be defined as part of the monitoring process.

The exact frequency of the regular monitoring activity has to be determined by the management company based upon the volume and complexity of the collateral management activity. Finally, as the depositary bank of a UCITS has a responsibility of safekeeping as well as monitoring and supervising the assets of a UCITS, it is directly involved in the collateral management process. Thus it is advisable that both parties work closely together in performing an adequate supervision of the collateral manager.

### 7 Investment restrictions – The OTC counterparty risk exposure limit and the consideration of collateral

The Law 17 December 2010 relating to undertakings for collective investments sets two concentration limits that are applicable for the OTC counterparty risk exposure. According to Article 43(1) the risk exposure of a UCITS to a counterparty arising from OTC derivative transactions must not exceed 5% of its net assets and 10% in the case the counterparty is a credit institution. In addition, the OTC counterparty risk exposure has to be included in the 20% issuer concentration limit according to Article 43(2).

The CSSF Regulation N° 10-04 transposing Commission Directive 2010/43/EU of 1 July 2010 implementing Directive 2009/65/EC of the European Parliament and of the Council (Article 48) defines the OTC counterparty risk exposure calculation:

- The OTC counterparty risk exposure should be calculated by using the **positive mark to market value** of all OTC derivative transactions with the same counterparty;
- Provided that there are **legally enforceable netting arrangements** (e.g. ISDA) in place, the risk exposure arising from OTC derivative transactions with the same counterparty may be netted;

- A UCITS may reduce its OTC counterparty risk exposure through the receipt of **collateral**. The collateral assets used for risk mitigation need to be valued at market prices taking into account appropriate haircuts and must comply with further high-level principles (e.g. liquidity, collateral diversification, etc.) set by CESR.

It should be noted that the formula for the calculation of the counterparty risk (as previously defined in the CSSF Circular 07/308) has been changed significantly: When calculating the counterparty risk associated with the use of OTC derivatives as the positive mark to market value of the OTC derivative contract only, as described above, the potential future credit risk (“add-on”) and the weighting factor are no longer taken into account. Depending on the specifics of the respective OTC contract, the sole implementation of the new calculation method could increase the results of the counterparty risk calculation by factor five in the extreme case. The impact of this regulatory adjustment should therefore be assessed in order to pave the way for potential mitigating measures.

Also the Directive 2010/43/EU and CESR/10-788 defines the level high-level principles as to the use and eligibility of collateral in order to reduce the OTC counterparty risk for UCITS are set:

- collateral must
  - be sufficiently liquid;
  - have a short settlement cycle;
  - be capable of being valued at least on daily basis;
  - be of a sound credit quality or subject to appropriate haircuts;
  - display little correlation with the OTC counterparty;
  - be sufficiently diversified;
  - be held with a third party custodian for whom specific requirements (e.g. subject to prudential supervision) are stated in CESR/10-788 and;
  - be fully enforceable by the UCITS without prior consent or reference to the counterparty.
- non-cash collateral cannot be sold, re-invested or pledged;
- cash collateral can only be reinvested in risk-free assets.

These high-level principles are already for the most part reflected in CSSF Circulars 07/308 and 08/356. However, for example the requirements as to collateral being capable of at least daily valuation and certain requirements as to the third party custodian constitute a degree of variation that should be noted and if necessary processes adapted accordingly. In order to assess and monitor whether specific assets are eligible, it is essential to have qualitative policies and quantitative tools available in order to accurately measure liquidity, correlation and haircuts.

Besides the calculation of the OTC counterparty risk exposure, Article 48 of the CSSF Regulation N° 10-04 (Article 43 of Directive 2010/43/EU) gives further clarification on collateral netting effects. It is stated that on fund-level the net amount of the collateral passed to and received from the same counterparty can be taken into account provided that a legally enforceable netting arrangement is in place.

In this context it must be considered that – although the aim of a collateral management is to mitigate OTC counterparty risks – in some circumstances collateral management can also generate counterparty risk. This might be the case when the collateral value passed to the counterparty exceeds the negative mark to market value of the OTC derivative transactions (over-collateralisation). Such **over-collateralisation** exposes an UCITS to a counterparty risk and should be taken into account in calculating the OTC counterparty risk exposure.

One specification regarding the investment restrictions monitoring is given when a UCITS receives **cash collateral** and re-invests it in order to generate a risk-free return (according to CESR, cash collateral can only be invested in risk-free assets).

A risk-free asset is defined as per CESR, as an asset providing the return of a short maturity (generally 3 months), high quality government bonds or sovereign debt. Given the recent market turmoil, we suggest to enhance this definition by the following criteria:

- High quality sovereign debt and/or debt guaranteed by an eligible sovereign subject to a AAA-equivalent rating;

- Any other government bonds generally considered risk-free in reference to AAA-equivalent rating;
- Short-term money-market funds according to the definition of CESR subject to a AAA-equivalent rating;
- Or plain-vanilla corporate bonds or plain-vanilla money-market instruments with a short maturity (generally 3 months) from issuers within the OECD subject to a AAA-equivalent rating.

In such cases, the exposures created through the re-investments must be taken into account in calculating the 20% issuer-concentration limit as specified in Article 52(2) of Directive 2009/65/EC<sup>1</sup> on fund-level.

Example:

Fund holds German Government Bonds	15% of NAV
Collateral reinvestment in German T-Bills	5% of NAV
<hr/>	
<b>German Government Exposure</b>	<b>20% of NAV</b>

The investment restriction monitoring of the collaterals posted by the fund (i.e. transferred as collateral to a counterparty) is not changing, i.e. the issuer-concentration limits and the investment objective have to be applied. In relation to the collateral assets received from a counterparty the UCITS issuer-concentration limits and the fund-specific investment objectives are not applicable.

Per Commission Directive 2010/43/EU<sup>2</sup> and CESR/10-788, it is worth noting also the following:

- Initial margin posted to and (excess) variation margin receivable from a broker relating to both exchange traded and OTC derivatives (unless protected under client money rules) must be included in the OTC counterparty exposure limits;
- Position exposures of assets underlying financial derivative instruments must be included in the calculation of the issue concentration limits per [Articles 52 and 55 of 2009/65/EC<sup>3</sup>] using the commitment approach, except in the case of (qualifying) index based FDIs.

<sup>1</sup> Article 43 (2) of the Law 17 December 2010

<sup>2</sup> See also: CSSF Regulation N° 10-04 transposing Commission Directive 2010/43/EU of 1 July 2010 implementing Directive 2009/65/EC of the European Parliament and of the Council

<sup>3</sup> Article 43 and 46 of the Law of 17 December 2010

**Best practice for tasks and controls regarding collateral management**

To ensure UCITS management companies adequately implement the collateral management following tasks and controls along the process chain have been identified as best practice.



Tasks	Responsibilities					Controls	
	PM	ManCo	CUS	CM	FA	FA – Accounting	FA – Compliance
1.1. Selection of counterparty	X	X					<ul style="list-style-type: none"> <li>Monitoring of the approved counterparties (ex-post acceptance control)</li> </ul>
1.2. Negotiation and signing of the OTC and CSA agreements with counterparty (e.g. selection of eligible collateral, valuation and possibility of re-hypothecation of collateral)	X	X		X		<ul style="list-style-type: none"> <li>Agreement on accounting and valuation principles</li> </ul>	
1.3. Deposit of collateral assets on segregated accounts or with independent third party			X	X			<ul style="list-style-type: none"> <li>Review of custodian/ collateral manager agreements/ confirmations with regards to collateral safekeeping details</li> </ul>
1.4. Definition of default events in the ISDA agreement and the procedures applicable in such circumstances	X	X				<ul style="list-style-type: none"> <li>Set-up of accounting procedure relative to OTC defaults and collateral treatment</li> </ul>	
<b>Optional</b>							
1.5. Due diligence on collateral management service provider	X	X	X				
1.6. Notification of the Regulator (CSSF)		X					





Tasks	Responsibilities					Controls	
	PM	ManCo	CUS	CM	FA	FA – Accounting	FA – Compliance
2.1. Recording of transactions (collateral posted and received)			X	X	X	<ul style="list-style-type: none"> <li>Accounting of OTC transactions</li> <li>Filing of ISDA agreements/CAS in accounting records</li> </ul>	
2.2. Transfer of collateral assets posted (collateral accounts)			X	X	X	<ul style="list-style-type: none"> <li>Accounting of collaterals posted (i.e. on-balance)</li> <li>Accounting of collaterals received (i.e. off-balance)</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring of initial collateral postings</li> </ul>
2.3. Valuation of OTC positions and collateral assets			X	(X)	X	<ul style="list-style-type: none"> <li>Valuation of OTC positions</li> <li>Valuation of collaterals (i.e. in case of securities)</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring of variation postings on collaterals</li> </ul>
2.4. Reconciliation of collateral valuation with NAV					X	<ul style="list-style-type: none"> <li>Reconciliation of OTC valuation</li> <li>Adjustment of valuation (in case required)</li> </ul>	
2.5. Variation posting/reception of collateral assets			X	X	X	<ul style="list-style-type: none"> <li>Accounting of collaterals posted (i.e. on-balance)</li> <li>Accounting of collaterals posted (i.e. off-balance)</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring of variation postings on collaterals</li> </ul>
2.6. Monitoring proper collection/payment of interest on cash collateral			X	(X)	X	<ul style="list-style-type: none"> <li>Accounting of interest accruals</li> <li>Accounting on interest paid/received</li> </ul>	
2.7. Monitoring proper replacement of collateral (i.e. corporate action related switches)			X	(X)	X	<ul style="list-style-type: none"> <li>Accounting of collateral switches (i.e. in case of securities collateral)</li> <li>(potentially) accounting of corporate actions</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring of collateral switches regarding eligibility and collateral coverage</li> </ul>
2.8. Monitoring and processing default events			X	(X)	X	<ul style="list-style-type: none"> <li>Accounting of default events (e.g. write downs, impairments)</li> <li>Accounting of collateral "realisation"</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring of collateral "realisation" (i.e. reception of collateral due)</li> </ul>





Tasks	Responsibilities					Controls	
	PM	ManCo	CUS	CM	FA	FA – Accounting	FA – Compliance
3.1. Eligibility of collateral as laid down in the CSA			X	X	X		<ul style="list-style-type: none"> <li>Monitoring of collateral eligibility</li> </ul>
3.2. Eligibility of collateral as required in legal provision			X		X		<ul style="list-style-type: none"> <li>Monitoring of collateral coverage (i.e. sufficient collateral received/posted)</li> </ul>
3.3. Collateral coverage			X	X	X	<ul style="list-style-type: none"> <li>Monitoring of applied haircuts</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring of collateral coverage (i.e. sufficient collateral received/posted)</li> <li>Monitoring of CP exposure in case of over-collateralisation</li> </ul>
3.4. Compliance with investment restrictions laid down in the prospectus and/or legal provisions			X		X		<ul style="list-style-type: none"> <li>Monitoring of legal and contractual counterparty risk restrictions considering collaterals received and re-used (i.e. off-balance)</li> </ul>
3.5. Netting of OTC exposure			X		X		<ul style="list-style-type: none"> <li>Monitoring of legal and contractual counterparty risk restrictions considering collaterals netting provisions as per ISDA agreements</li> </ul>
3.6. Plausibility check of collateral valuations			(X)		X	<ul style="list-style-type: none"> <li>Reconciliation of OTC valuation</li> <li>Adjustment of valuation (in case required)</li> </ul>	
3.7. Supervision of sub-custodians for collateral and OTC related assets			X				

## ALFI industry work paper - collateral management



Tasks	Responsibilities					Controls	
	PM	ManCo	CUS	CM	FA	FA – Accounting	FA – Compliance
4.1. Disclosure of OTC related information in the financial statements			X		X	<ul style="list-style-type: none"> <li>Disclosure on value of OTC derivatives</li> <li>(optional) Note detailing mark to market value of collateral</li> </ul>	
4.2. Reporting on exceptions/breaches					X		<ul style="list-style-type: none"> <li>Escalation procedure (internal)</li> <li>Escalation procedure (external – CSSF 02/77)</li> </ul>
4.3. Follow-up on disputes		X		X	X	<ul style="list-style-type: none"> <li>Reconciliation of OTC valuation after dispute settlement</li> <li>Adjustment of valuation and collaterals</li> </ul>	<ul style="list-style-type: none"> <li>(potentially) Monitoring of dispute settlement</li> </ul>
4.4. Investor tax reporting					X	<ul style="list-style-type: none"> <li>Tax reporting including collateral income</li> </ul>	
4.5. Oversight reporting detailing collateral movements and end-of-day positions	X	X	X		X		



Tasks	Responsibilities					Controls	
	PM	ManCo	CUS	CM	FA	FA – Accounting	FA – Compliance
5.1. Reconciliation of collateral positions			X	X	X	<ul style="list-style-type: none"> <li>Reconciliation of security and cash collaterals</li> <li>Follow-up on un-reconciled collaterals</li> </ul>	

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**appendix I - glossary**

<b>AML</b>	Anti-Money Laundering
<b>BCP</b>	Business Continuity Planning
<b>Board of Directors</b>	Means the Board of Directors of the Management Company; The term “Board of Directors” shall not comprise the supervisory board where management companies have a dual structure composed of a Board of Directors and a supervisory board
<b>CCP</b>	Central Counterparty
<b>CDS</b>	Credit Default Swap
<b>CESR</b>	Committee of European Securities Regulators
<b>CESR/10-788</b>	CESR’s Guidelines on Risk Measurement and the Calculation of Global Exposure and Counterparty Risk for UCITS
<b>Circular 02/77</b>	Protection of investors in case of NAV calculation error and correction of the consequences resulting from non-compliance with the investment rules applicable to undertakings for collective investment
<b>Circular 03/108</b>	Luxembourg management companies subject to Chapter 13 of the Law of 20 December 2002 concerning undertakings for collective investment, as well as Luxembourg self-managed investment companies subject to Article 27 or Article 40 of the Law of 20 December 2002 concerning undertakings for collective investment
<b>Circular 07/308</b>	Rules of conduct to be adopted by undertakings for collective investment in transferable securities with respect to the use of a method for the management of financial risks, as well as the use of derivative financial instruments
<b>Circular 08/356</b>	Rules applicable to undertakings for collective investment when they employ certain techniques and instruments relating to transferable securities and money market instruments
<b>Circular 11/512</b>	This Circular clarifies the Risk Management requirements applicable to Luxembourg UCITS Management Companies and Luxembourg domiciled UCITS
<b>CM</b>	Collateral Management
<b>Conducting Officer/CO</b>	Means the Person(s) appointed by the Board of Directors to oversee the day to day operations of the ManCo
<b>Counterparty Risk</b>	Means the risk of loss for the UCITS resulting from the fact that the counterparty to a transaction may default on its obligations prior to the final settlement of the transaction’s cash flow
<b>CP</b>	Conducting Person
<b>CSSF</b>	<i>Commission de Surveillance du Secteur Financier</i> , the Luxembourg supervisory authority of the financial sector
<b>CTFC</b>	Commodity Futures Trading Commission
<b>CUS</b>	Custody Services / Depositary
<b>DR</b>	Disaster Recovery
<b>ESMA</b>	European Securities and Market Authority, known as CESR until 1 <sup>st</sup> January 2011

EU	The European Union
FA	Fund Accounting
HR	Human Resources
ISDA	International Swaps and Derivatives Association, Inc.
KPI	Key Performance Indicator
KRI	Key Risk Indicator
KYC	Know Your Customer
Liquidity Risk	Means the risk that a position in the UCITS' portfolio cannot be sold, liquidated or closed at limited cost in an adequately short time frame and that the ability of the UCITS to comply at any time with Article 11, paragraph (2) and Article 28, paragraph (1), point b) of the Law of 17 December 2010 concerning undertakings for collective investment is thereby compromised
ManCo or Management Company	Means, throughout the document, reference to management company or self managed company unless if not expressly said otherwise
Market Risk	Means the risk of loss for the UCITS resulting from fluctuation in the market value of positions in the UCITS' portfolio attributable to changes in market variables, such as interest rates, foreign exchange rates, equity and commodity prices or an issuer's creditworthiness
OM	Operating Memorandum
Operational Risk	Means the risk of loss for the UCITS resulting from inadequate internal processes and failures in relation to people and systems of the management company or from external events, and includes legal and documentation risk and risk resulting from the trading, settlement and valuation procedures operated on behalf of the UCITS
OTC	Over The Counter
PM	Portfolio Management
Regulation No. 10-4	CSSF regulation No. 10-4 transposing commission directive 2010/43/EU of 1 July 2010 implementing directive 2009/65/EC of the European Parliament and of the Council as regards organisational requirements, conflicts of interest, conduct of business, risk management and content of the agreement between a depositary and a management company
Relevant Person	In relation to a management company, means any of the following: <ul style="list-style-type: none"><li>■ a director, partner or equivalent, or manager of the management company;</li><li>■ an employee of the management company, as well as any other natural person whose services are placed at the disposal and under the control of the management company and who is involved in the provision by the management company of collective portfolio management;</li><li>■ a natural person who is directly involved in the provision of services to the management company under a delegation arrangement to third parties for the purpose of the provision by the management company of collective portfolio management.</li></ul>

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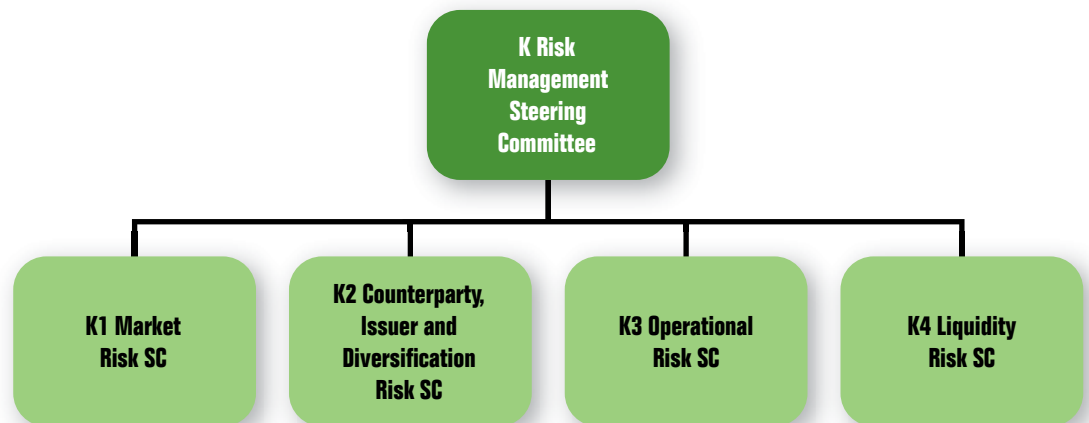
<b>Reputational risk</b>	Means the risk of damaging an entity's trustworthiness in the marketplace, i.e. the impact of specific events that could worsen or negatively affect the perception of an entity
<b>RFP</b>	Request for Proposal
<b>Risk Appetite means</b>	The amount of risk exposure (e.g. expressed as monetary), or potential adverse impact from an event, that a Manco is willing to accept/retain
<b>RM</b>	Risk Management
<b>RMP</b>	Shall stand for Risk Management Process
<b>SAS 70</b>	Statement of Auditing Standards No. 70
<b>SEC</b>	Securities & Exchange Commission
<b>Senior Management</b>	Means the persons who effectively conduct the business of a management company in accordance with Article 102, paragraph (1), point c) of the Law of 17 December 2010 concerning undertakings for collective investment
<b>Self Managed SICAV</b>	UCITS SICAV established under the Law of 2010 which has not appointed a Management Company
<b>SICAV</b>	Société d'Investissement à Capital Variable (investment company with variable capital)
<b>SLA</b>	Service Level Agreement
<b>Supervisory Function</b>	Means the relevant persons or body or bodies responsible for the supervision of its senior management and for the assessment and periodical review of the adequacy and effectiveness of the risk management process and of the policies, arrangements and procedures put in place to comply with the obligations under the Law of 17 December 2010 concerning undertakings for collective investment
<b>The Law of 2010</b>	Luxembourg Law of 17 December 2010 concerning undertakings for collective investment
<b>UCITS</b>	Undertaking for Collective Investment in Transferable Securities subject to Part I of the Law of 2010, as amended
<b>UCITS Directive</b>	Council directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) glossary

## appendix II

### ALFI Risk management committee and SC

**Chairman:** Jean-Christoph Arntz  
 Thomas Nummer  
 Olivier Carré

**ALFI Coordinator:** Alexander Fischer



K1 Market Risk SC
Cecilia Lazzari
Dominique Marchal
Laurent Denayer (Co-chairman)
Luc Neuberger (Co-chairman)
Michael Derwael
Stefania Serato
Xavier Zaegel

K2 Counterparty, Issuer and Diversification SC
Gabrielle Jamion
Guy Reiter
Henning Schwabe
Justin Egan
Kai Nemecek
Mario Koster
Olivier Carré (Co-chairman)
Peter Schmitt
Thomas Nummer (Co-chairman)
Utz Schüller
Valerie Bernard

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