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Change is on the horizon
Investment Management Risk
and the South African context

Executive summary

Investment management risk encompasses the possibility of losses which arise from unfavourable market movements, errors, negligence and the inability of asset managers to meet client expectations.

Asset managers are exposed to investment management risk in the execution of their investment management and operational activities. Failure to adequately identify, measure, manage and monitor this risk has adverse effects on earnings.

A sound investment management risk framework enables a proactive approach to the prevention of undue or extreme losses in client investment portfolios and thus contributes towards long-term performance and client retention.

It also creates a platform for consistency in the identification, measurement, management, monitoring and reporting of risks across all portfolios and therefore enable asset managers to translate their house view on market movements and their investment philosophy into a risk appetite statement, which clearly articulates the way asset managers see risk, to investors. Anticipated changes in local regulatory obligations, based on regulatory developments observed internationally, should be considered during the development or review of the investment management risk framework.

A number of practical factors unique to the industry often pose challenges to the effective implementation of a sound investment management risk framework. There is much room for improvement in terms of the collaboration between front, middle and back office with respect to risk management versus investment management activities. Practical challenges such as governance structures, data issues and silo-based risk cultures are common-place.

A robust investment management risk framework that takes into account all of the above aspects therefore holds significant benefits for both clients and the asset manager.

Introduction

The role of risk management in the investment management process cannot be underestimated. The industry designs products and makes client commitments based on the promises of future returns. Returns that can evaporate when risk management fails.

Consider the recent case of a medium-size South African asset manager which offers a money market fund benchmarked against the three-month Short Term Fixed Interest Index (STeFI 3 month). According to its mandate this fund aims to deliver stable positive returns in all market circumstances by investing in positions and hedges that allow for equity upside while providing downside protection. The fund's public disclosures confirmed an asset allocation of about 98% towards bonds and cash with remainder of the fund allocated to equity and other instruments, and thus as a resultant disclosed risk profile of a low to moderate risk fund.

However, the removal of the former Minister of Finance on 9 December 2015 triggered major losses in financial markets and exposed underlying vulnerabilities in the fund, resulting in a 66% loss in asset value. Investigations uncovered that, not only did the allocation to equities exceed 2%, but hedging call options on financial shares with put options on the JSE Top 40 Index derivatives failed to provide an adequate hedge when volatility spiked. The asset manager was forced to unwind its positions to comply with regulations – which only served to lock in losses, as the market had reached its bottom of the market and the fund could not participate in the rebound which occurred subsequently.

This and other similar events bring to light the importance of risk management at all phases of the investment process.

Indeed, global economic uncertainty and higher levels of volatility have become the new normal in today's financial markets, placing renewed focus on sound risk management. In investment management this should be no different; although asset managers often argue that the client chooses the risk profile and therefore assumes all the investment risk, extreme capital losses may result in client expectations not being met, with subsequent fund withdrawals and potential brand damage.

The reduction of assets under management presents an earnings risk which needs to be managed.

In addition, the reputational risk associated with poor risk management – even though the asset manager carries no outright risk on its own account – could be damaging to both short- and -long-term client retention and earnings.

We believe that a structured approach based on a robust risk management framework is sound practice and has numerous benefits; including improved risk response and alignment to foreseeable regulatory changes. This article focuses on how this can be achieved by:

- Defining investment management risk
- Explaining the importance of managing investment management risk and why it should be considered formally
- Describing the components of a sound investment management risk framework .

Defining investment management risk

Investment management risk is a broad term that encompasses all losses which arise from unfavourable market movements, errors, negligence or the inability of asset managers to meet client expectations.

This inadequate management of client assets may lead to unexpected financial or non-financial impacts on the value of client investment portfolios and consequently have unexpected impacts on an asset manager's earnings and reputation.

Investment management risk mainly arises from:

- Client portfolios which are inappropriately benchmarked or not managed in line with client risk-return expectations as per the agreed mandates
- Unfavourable movements in market factors (such as interest rates, inflation rates, currency exchange rates, equity or property prices) creating asset price risk in client portfolios, which, if inadequately evaluated or monitored, compromises effective investment risk management activities
- Operational issues stemming from investment management business operations. This includes losses caused by inadequate or failed processes, people, systems or external events in the undertaking of client interaction, client registry, unit registry and asset registry activities. It is common-place for asset managers to outsource the duties or functions performed by their front, middle or back office operations to third parties and this introduces dependencies and considerable counterparty risk

To manage or not to manage investment management risk

The need for a robust investment management risk framework is driven by effective client expectations management and expected changes in regulatory requirements.

There are, however, significant benefits to the asset manager itself. We discuss this in greater detail below.

a) Effective client expectation management

Ultimately it is the client who benefits from the effective management of investment management risk.

While clients assume the investment risk inherent to the agreed mandates, a holistic forward-looking framework pro-actively avoids undue or extreme losses and thus contributes towards long-term fund performance and client retention.

An investment management risk framework furthermore supports compliance with the agreed investment mandates, leading to the fulfilment of client risk-return expectations. For example, a client investing in a money market fund would accept low returns in exchange for the lower inherent risk in this type of investment product. However, should a fund manager not identify and manage credit default risk inherent to the portfolio, or not provide clear reporting on this risk to the client, it would be difficult for the manager to explain negative returns due to defaults, as this would be outside the client's expectations. Such an event could also pose financial and reputational consequences for the asset manager. The financial consequences relate to the possibility that the incurred loss in the underlying portfolio may have to be absorbed by the asset manager and not passed to the client. Reputational consequences could arise if the asset manager does not absorb the loss (and passes it on to clients), causing clients to withdraw their funds due to dissatisfaction.

A default event exacerbates risks that an asset manager is exposed to. Firstly, there is illiquidity risk since the asset manager may not be able to sell the defaulted security and therefore not be able to satisfy client redemption or withdrawal orders. Secondly, the market value of the defaulted security may differ significantly with the view held by the asset manager resulting in valuation risk. Valuation risk may also contribute to illiquidity risk because the market may be unwilling to accept the price offered by the asset manager for the security. The creation of a 'side pocket' would mitigate the illiquidity and valuation risk since it provides a way of separating illiquid assets from liquid assets in a portfolio until their values are realised. However, since side pockets are used only in the management of hedge funds, clients of institutional and retail asset managers remain exposed to illiquidity and valuation risk.

b) Benefits to the asset manager

An investment management risk framework also provides an asset manager with a means to systematically translate the house view on market movements and investment philosophy into a cohesive risk appetite statement.

In this context, risk appetite is the amount of risk that the investment manager is prepared to accept in pursuing the investment mandate (and perform relative to relevant benchmarks). The acceptable level of risk is defined in the risk appetite statement in terms of quantitative and/or qualitative measures. A clearly articulated risk appetite statement supports clear communication, of the asset manager's risk philosophy, to the client.

This risk appetite statement would consist of a risk metric, a time interval and a probability statement at enterprise level. The risk appetite is then cascaded to asset class or portfolio specific tolerances and further downwards to instrument-specific risk limits. This provides a clear structure of risk tolerances and limits to monitor the level of risk to which an asset manager is exposed and thus completes the picture sketched by performance measurement and attribution analysis.

The investment management risk framework also creates a platform for consistency in the identification, measurement, management, monitoring and reporting of risks across all portfolios.

Other benefits include:

- Formalisation and segregation of roles and responsibilities for the first and second line of defence[1]. This ensures that investment decisions are reviewed and challenged by independent and knowledgeable experts
- Improved risk reporting to all key stakeholders (both internal and external). Additional insight into the risk profile can be provided by scenario analysis and stress testing – also for high-level risks such as concentration risk and systemic risk
- Enhanced decision-making ability due to additional information
- Reduced revenue volatility, which leads to improved planning and capital requirement benefits
- The identification of key risk drivers across portfolios through the use of stress testing. This also results in an enhanced understanding of how these drivers respond to economic conditions
- The avoidance of disruptions to crucial front, middle or back-office activities due to third-party failures (through suitable disaster recovery and contingency planning).

c) Regulatory requirements

Unit trusts

The Collective Investment Schemes Control Act (CISCA) of 2002 regulates the establishment and administration of collective investment schemes within South Africa. Its main purpose (amongst others) includes:

- Preserving basic principles for the management and conduct of Collective Investment Schemes (CIS), i.e. fair business practice and investor protection
- Bringing previously unregulated types of CIS's within the scope of the legislation, thereby providing protection to a wider group of investors
- Imposing disclosure obligations on asset managers to provide potential investors with all relevant information before entering into an agreement
- Providing maximum levels for specific assets and minimum holdings of liquid assets to ensure a prudent spreading of investments and thereby containing risk
- Setting minimum risk requirements that must be maintained by asset managers to protect investors.

CISCA does not explicitly prescribe minimum requirements for risk management that fund managers must meet. However, the following guidance relating to fit and proper requirements per Government Notice 910 of 2010[2], is applicable:

- "A manager must execute periodic evaluation of risk management processes to ensure compliance with all relevant legislation through an independent third party
- A manager must effectively employ resources, procedures and appropriate technological systems that can reasonably be expected to eliminate the risk that investors may suffer financial loss through theft, fraud, other dishonest acts, poor administration, negligence, professional misconduct or culpable omissions, and to protect the interests of investors in general."

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1 First line staff refers to staff responsible for the active taking and management of investment risk. Second line staff refers to staff responsible for independent evaluation, monitoring and oversight of investment risk.

2 Government Notice 910 section 8 (1) and (2)

Further guidance is provided by Board Notice 90 of 2014, wherein an asset manager is required to have a risk management program. This risk management program must be designed to identify, measure (on a daily basis), and adequately cover risks emanating from the exposures of an investment portfolio. In particular, managers of money market funds are required to have a risk management program which has the capacity of performing stress tests on a quarterly basis; taking account of interest rate risk, liquidity risk, spread risk and credit risk. The minimum requirements of this risk management program are however not specified in detail.

Institutional asset managers
Asset managers in charge of segregated discretionary mandate portfolios, mainly for institutional clients, are especially required to comply with the Financial Advisory and Intermediary Act (FAIS); which aims to protect consumers of financial products and services by regulating the providers of financial services and their representatives as well as any person who gives financial advice or provides intermediary services. Similarly, fit and proper requirements and codes of conduct are in place to ensure that discretionary asset managers demonstrate (amongst others):

- Honesty and integrity
- Competence, appropriate qualifications and relevant experience
- Operational ability to manage financial records, maintain internal controls, keep client records and deal with client funds
- Financial soundness
- The identification of financial products that best suit client's objectives, risk appetite, limitations and restrictions
- That financial products or funds are dealt with strictly in accordance with the mandate at all times.

As is the case for unit trusts, specific requirements on how to identify, measure, manage and monitor risk are not provided.

Hedge funds
In contrast to the above, a detailed set of requirements are set out for hedge funds in Board Notice 52 of 2015. These regulations for hedge funds are in line with international practices, which are typified by the requirements placed on European mutual funds through directives issued for Undertakings for Collective Investment in Transferable Securities (UCITS). The risk management obligations underpinning this regulatory regime are captured by the February 2009 Risk Management Principles paper from the Committee of European Securities Regulators (now ESMA). The key principles outlined in this paper are principally consistent with Board Notice 52.

A unified model?
There is thus inconsistency in the current South African regulatory regime - complex portfolios such as hedge funds have onerous risk management requirements, while traditional funds only have principle-based and less strict requirements with respect to:

- Risk management requirements: Managers of complex portfolios are required to have an independent risk management function, with defined roles and responsibilities, whose effectiveness is reviewed regularly (at least yearly)
- Exposure and risk metrics: Managers of complex funds are required to disclose metrics such as the value-at-risk of their portfolios
- Frequency of risk measuring and reporting: Managers of complex funds are required to conduct active risk measurement as well as perform risk monitoring and reporting on a daily basis.

It appears that European regulators thus prescribe detailed risk management requirements to all forms of investment schemes, whereas in South Africa the risk management regulations for simpler schemes are vague compared to the risk management regulations for more complex schemes like hedge funds.

We elaborate on this in the figure below:

Risk Management Regulatory Environment	**A** **Fund Type A** **Vanilla Fund**	**B** **Fund Type B** **Moderately Complex Fund**	**C** **Fund Type C** **Complex Fund**
	• Traditional long only, single or multi-asset fund • Retail and institutional client base	• Single or multi-asset fund which features embedded guarantees • Mainly institutional client base	• Fund based on derivatives or other complex financial instruments or strategies • Mainly knowledgeable institutional clients
European Union	• **UCITS I:** Open ended fund to be subject to the same regulation within the European Economic Community • **UCITS II and III:** Resources requirements, European passport, simplified prospectus • **Directive 2007/16/EC:** Eligible Assets Directive • **CESR 09-178:** Risk Management Principles for UCITS • **UCITS IV:** Regulations and administrative provisions relating to UCITS. Harmonised depositary functions, remuneration policies and sanctions • **CESR 10-788:** Guidelines on Risk Measurement and Calculation of Global Exposure and Counterparty risk • **ESMA 2012/197 ESMA:** Guidelines on Risk Measurement and the Calculation of Global Exposure for certain types of UCITS		• Alternative Investment Fund Managers (AIFM) Directive 2011/61 (i.e. AIFMD level 1) published in the Official Journal of the European Union • Commission Delegated Regulation 231/2013 (i.e. AIFMD level 2) enters into effect
	Comprehensive risk management principles consistent for all fund types		
South Africa	• **CISCA:** Collective Investment Schemes Control Act, 2002 (Act No. 45 of 2002) • **Board Notice 90 of 2014:** Requirements for portfolios in a CIS; types of investments included in portfolios; conditions, limits and manner in which portfolios and securities are added to a CIS • **Regulation 28 and 29:** Limits on exposures • **Government Notice 910 of 2010:** Determination of Fit and Proper Requirements and Conditions for Managers of Collective Investment Schemes		• **CISCA:** Collective Investment Schemes Control Act, 2002 (Act No. 45 of 2002) • **Board Notice 52 of 2015:** Determination on the requirements for hedge funds • **Board Notice 71 of 2015:** Capital Requirements with which a Manager of a Collective Investment Scheme in Hedge Funds must comply • **Regulation 28 and 29:** Limits on exposures
	Comprehensive risk management principles not fully incorporated		**Comprehensive risk management principles consistent for all fund types**

Figure 1 *- Risk Management Legislation*

Figure 1 demonstrates that comprehensive risk management requirements have not been fully incorporated for type A and B fund managers in the South African legislation.

Insurers are currently preparing for the new Insurance Bill requirements, driven by the Solvency Assessment and Management (SAM) programme, which includes a comprehensive set of regulatory requirements relating to risk management frameworks, while the Banking industry, through the Banks Act regulations, has been subject to strict risk management requirements for some time.

In order to limit the opportunity for regulatory arbitrage and embed international best practice, we expect that the local regulators will in due course align the South African investment management regulatory landscape to international regulatory requirements, while taking into account any unique South African circumstances. Global regulators have been monitoring 'shadow banking' activities closely and are in the process of formulating a regulatory response to limit further regulatory arbitrage.

Local regulators are expected to align the South African regulatory landscape with that of Europe (to avoid regulatory arbitrage and embed best practices) and early preparation in anticipation of this would be beneficial to the investment management industry.

The investment management risk framework

The investment management risk framework should clearly articulate the risk management process, and should be tailored to asset managers specifically. The asset manager must identify the risks emanating from the activities performed during the investment process. This includes an asset manager's investment activities (which depend on the asset holdings across the manager's range of investment portfolios) and operational activities, as illustrated in Figure 2.

Operational Activities

Client Interaction

Initial and subsequent client interaction from all channels and platforms. The main activities are:

- Client take-on (relationship management and fee agreements)
- Governance and compliance
- Advice and expectation management

Client Registry

The capturing and storing of client information and mandates. This mainly includes:

- Account management and administration
- Understanding the client
- Data security management

Unit Registry

The capturing and execution of client instructions and transactions, includes:

- Fee and return calculations
- Contribution and redemption processing
- Third party processing management

Asset Registry

The processing of and reporting on investment instructions. This encompasses:

- Accounting and financial reporting
- Accounts processing (journal and ledger entries)
- Pre-and-post-trade management
- Treasury management

Investment Activities

Investment Management

This includes all processes associated with the making of investment decisions. Mainly, this includes:

- Investment research
- Investment analysis
- Risk management
- Remuneration management

Figure 2 *- Investment Management Value Chain*

The investment management risk framework covers the risk of the investment activities. An operational risk management framework should also be developed for the risks inherent in the operational activities.

Investment risk management

The initial risk identification process can be performed through an interactive workshop or survey approach using risk identification tools such as a comprehensive risk taxonomy. The risk taxonomy classifies and clearly defines each risk to ensure a consistent interpretation of risk across the business.

The set of identified risks should be documented in a risk register and this register should be updated at regular intervals.

Once identified and classified, risks should be measured using appropriate risk metrics and managed through a set of approved mitigating actions. The risk metric trends should be monitored and approved actions should be triggered if set thresholds or risk limits are breached in order to bring the metrics (thus the risk profile) to within an accepted level of risk (the risk appetite). Such risk metrics and mitigating actions should be documented in an investment management risk policy.

The investment management risk framework is illustrated below in Figure 3.

	Identify	Measure	Manage	Monitor
Investment management risk component	• The market factors which impact the market value of the investments are identified in terms of underlying asset classes • Risks that may arise from new instruments or products must be identified, and subsequently authorised and approved before investments in these are permitted. • Risks are identified and categorised using their underlying sources	• Assess the underlying contributors and magnitude of risks within their investment portfolios • Assess the impact and probability of market price risks under market stress events, adverse market liquidity conditions and highly concentrated risk areas • Involves using (mostly) quantitative methods to measure investment (management) risks with market-accepted metrics • Establish risk appetite statements, risk tolerances and limits in terms of metrics	• Establish set of actions appropriate to the extent of breach • Severe actions are taken in the event of risk appetite breach in order to avoid, reduce or transfer the risk	• The risk profile is monitored as measured by the chosen risk metrics • Limit utilisation and breaches are monitored • Inherent and residual risks are monitored, with further remedial actions being implemented if breaches still occur
Example: Relative perfor-mance risk	The risk a portfolio underperforms in comparison to similar portfolios offered by the manager or by competitors	• Maximum drawdown • Downside deviation • Information ratio • Sharpe ratio	• Refine asset allocation and (or) stock selection to adjust risk profile • Perform comparative attribution analysis • Manage client expectations	• Quarterly review of risk map

Figure 3 *- Investment management risk framework*

Practical considerations

Risk oversight -
A comprehensive governance framework, underpinning the investment management risk framework, with clear articulation of roles and responsibilities (relating to risk management) across the front, middle and back office is imperative to the effective functioning of an investment management risk framework. The definition of hand-off points, escalation criteria and areas where collaboration between these functions is required should be clearly documented in a policy and enforced by a cross-functional governance forum which has sufficient decision making power on both operational and investment activities.

Embedding a risk culture -
Organisational culture is at the heart of improved risk management outcomes for financial institutions, as it is 'the tone from the top', so to speak, that has the greatest impact on how a financial institution views risk management. Generally, the front office performs investment management activities and the main concern is the fund's performance according to the mandate. The middle and back offices are involved in the operational activities and are concerned with enterprise risk management – which mainly focuses on operational risks and regulatory compliance, and not enough on investment management risk. Improved independent review and challenge of investment management risk emanating from investment activities may limit the exposure of clients, and ultimately the asset manager, to undue risk.

Quality and availability of data -
The measurement of certain risks may require data which is currently not available. For example, probabilistic measures such as value-at-risk and expected shortfall may require loss data which may not have been consistently collected over time and will limit the ability of the asset manager to accurately model and measure the risk exposure.

Regulatory timelines -
As stated above, it can safely be assumed that the future South African regulatory framework will align to the UCITS framework used in the European Union. The speed and nature of such changes, however, are still uncertain at this point.

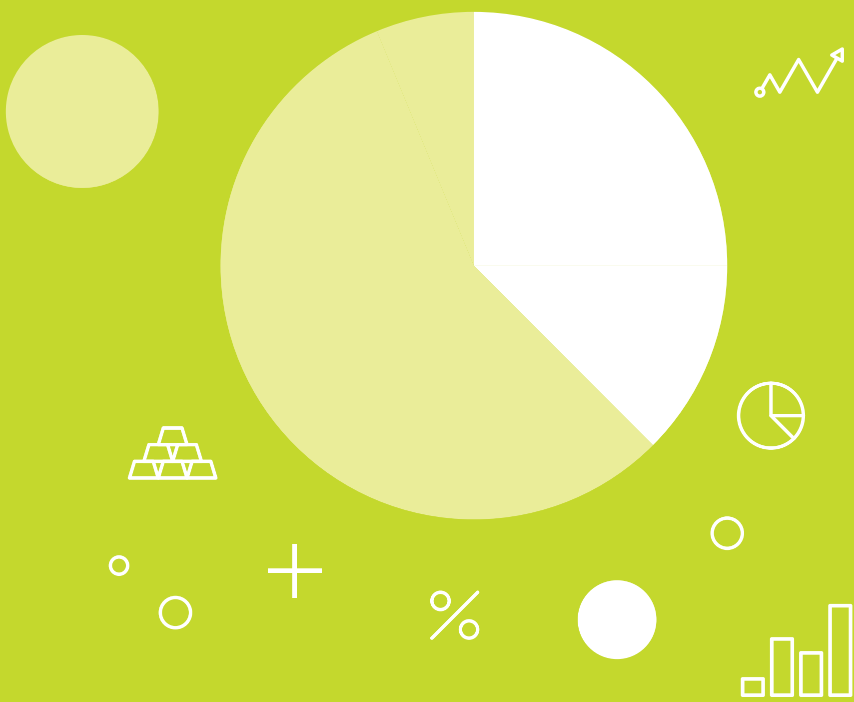
Conclusion

As the cloud of uncertainty continues to hover over financial markets, it is investors who bear the brunt of the consequences of the ensuing volatility which persistently reigns.

In addition to this, the tide of foreseeable regulatory development will culminate in the perfect storm for asset managers (mostly locally) and shelter is only found by proactively implementing a sound investment management risk framework.

There is, however, a silver lining - for asset managers who adopt a robust investment management risk framework. These asset managers stand to benefit from:

- Enhanced client satisfaction as expectations are better managed.
- Improved investor confidence arising from clearer, more informative risk disclosures which provide comfort regarding risk management practices.
- A reduction in withdrawals triggered by extreme market movements that were not adequately hedged or mitigated.
- Operational effectiveness resulting from:
  - Formalisation and clarity of roles and responsibilities for first and second line staff
  - Improved risk reporting to all key stakeholders (both internal and external).
  - Enhanced decision-making ability due to additional information.
  - Effective disaster recovery planning for counterparty risk events or third-party failures.
- Reduced earnings volatility leading to higher accuracy in earnings forecasts.



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